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Shankaranarayana, Prof. Dr. Peter A. Wilderer, Prof. Dr. Lloyd C.
Williams,
And
Contribution by Ms. Roshni Udyavar

THE SUSTAINABLE (DEVELOPMENT) FUTURE OF MANKIND





Medosi, Korte, Slovenia, 2007

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The Sustainable (Development) Future of Mankind

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Acknowledgment:

To the sustainable future of mankind, and our families!

Medosi, Korte, Slovenia, 2007





1. Foreword – Executive Summary

For over 12 thousands or more years of Homo sapiens, the human society was firstly scattered along the most suitable environments which offered security, water and food, and later shelter and a fire place; humans experienced has progressed from a hunting and gathering tribal life, to antiquity, medieval, preindustrial, industrial, postindustrial, information, innovative and now to a global society. The synergy of this represents the leading edge of, current existence; a reality borne of a fast changing environment in terms of the quality of Planet Earth's environment. The biosphere and the living environment have been changing from a suitable one lasting some 12.000 years to a threatening one as a result of recent evolution.

A growing interest in deep ecology in the sixties was followed by an awakening of the postindustrial society during the second half of the 20th century. This includes the Club of Rome (1968) and its President Aurelio Peccei, their reports, and "The Limits to Growth", "Stockholm-72" UN Conference on Environment held in Stockholm, Sweden, 1972, "Our Common Future" or the "G. H. Brundtland Report" as report from the World Commission on Environment and Development, UN 1987, and the introduction of "sustainable development", UNCED "Rio Summit" 1992 with Agenda for Change, Agenda 21 etc, followed by 10 years after Rio, by "Johannesburg 2002" in South Africa and the recent evolution of human society towards a "Global Society". This could be a short CV of present human society concerning Earth's biosphere.

The notion of "Sustainable Development" has a history of rapidly growing use by all humans at the break of the third millennium and has resulted in common use of the word "sustainability" in many contexts and combinations. Probably it is the most often used terms by present politicians, bureaucrats and global society at large.

The result of the human global society's evolution from the above-mentioned turning-point, to its present position is nearing a point of catastrophe threatening the very existence of humans on the Planet Earth. Natural catastrophes are becoming more and more severe, with more and more people and properties suffering loss. Global human society is not learning from the past and, under the influence of daily needs fulfilling its needs, it has lost the ability to see, learn, and hear signs from Nature and the biosphere.

It is essential for the survival of mankind that we understand the present, learn from the past and, stop one-sided actions, attitudes, and practices etc.: that we stop the distressing results caused by the national elites, and vested interests which are hastening the final approaching catastrophic end of humanity. We need a new approach for a better tomorrow for humankind based on scientific knowledge and not on the feelings of individual politicians or "important" people. The only important thing is human global society and its civilized survival!

The sustainable future and harmony of global society and its coexistence with other creatures in nature and with the Earth's biosphere is the solution to the best of our knowledge, which should be adopted as the vision for its survival. We need a society wide global approach and not the dilution of scarce financial means, for **it is impossible to buy the survival of mankind with a financial approach however great.**

Authors



2. Executive Foreword by Sir Prof. Dr. Roger B. Haw

The title of this publication “THE SUSTAINABLE (DEVELOPMENT) FUTURE OF MANKIND” is trying to draw the awareness of mankind commitment and responsibility towards the changing world.

Therefore, we human beings have to be responsible to the effect of the changes that have been made by humankind and made our future generation to pay the highest premium while the present world is enjoying the benefits. It sounds as not logic, but we can see that the uncountable progresses in the world made by the human being are just to meet the needs of human beings’ desires.

They may not last eternally simply because the human being is trying to find room to improve and progress to meet the economic value. However, on the other hand we may neglect other things, which are beyond the human beings’ control; hence from this viewpoint this useful publication will give readers a platform of common understanding to embark, while we are working hard to make the world a better place to live in.

"The universe only exists when you are observing it," or so the popular theory goes.

This theory is an offspring of quantum physics. It says that, because the observer affects the outcome of experiments, the observer is the key to reality. The theory goes on to suggest that the universe only exists when you look at it; therefore you must be creating the universe from your consciousness.

This is actually not a new idea. The old Zen riddle, "If a tree falls in a forest with no one to hear it, then does it make a sound?" reflects the same style of thinking. It suggests that nothing happens in the universe without an observer being present.

There is some validity to this theory in that, at the deepest level of consciousness, you are Infinite Being. At that deepest level, you are that which creates the entire universe, and maintains it in motion.

However, at the everyday, human level of consciousness, the universe exists and runs quite happily without human intervention, whether or not anyone is watching it. The tree makes a noise when it falls, whether or not any human observers are present at the time.

Take, for example, the Pleiades, the star cluster which is also called the Seven Sisters. Often, on a clear night, you can see the Seven Sisters twinkling in the sky, even though they are five hundred light-years distant. Because of that distance, you are actually observing where the Seven Sisters were five hundred years ago; it took that long for the light image to reach your eyes. Basically, you are observing history in the night sky, not the actual, current position of the stars.

If you were creating the universe by virtue of being its observer, as the theory goes, then you would actually witness the Seven Sisters in their current position, and not in the position that they were five hundred years ago.



Nevertheless, the idea that we live in a conscious universe has been gaining ground steadily for a number of years. What does the term, "a conscious universe," actually mean?

The universe consists entirely of consciousness. The fabric of the universe is consciousness. The objects in the universe are all made of consciousness. Everything in the universe is fabricated from aspects of original consciousness, interwoven and set into motion.

Time is also a projection of consciousness. Time is a concept whereby the infinite parts of the All can engage in the appearance of movement. The underlying reality is still the eternal now, yet time makes change, and therefore an infinite variety of experiences, to be possible.

An everyday example of projected reality is a movie projected onto a screen. You know that the movie is just the projection of a recorded, dramatic scene, but it's easy to forget that as you become involved in the unfolding drama.

The movie appears like a real-life drama for as long as it absorbs your attention. Time and space were fabricated within the consciousness of the universe in order to set the stage for life as we know it. Because the universe is made of 100% consciousness, all things are within it, and therefore subjective.

Nothing is really "out there," even though life appears to be an objective experience.

All physical reality is a projection within your consciousness, not something outside of, or separate from, yourself.

I urge each reader to make a point to read this publication completely at least one time. After reading each chapter of this publication you will realize many things are inter-related and caused the authors to put all their thought and research works to show some useful facts for reference purpose to enable the publication will cover bigger scope towards the agenda of the "SUSTAINABLE (DEVELOPMENT) FUTURE OF MANKIND"

Happy reading! Have a nice day ahead.

Warmest regards,

Roger Haw



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4. Short about authors

John M Bunzl, after studying modern languages and business studies in France, Switzerland and Italy, John pursued a commercial career trading in raw materials for the paper industry and, more recently, in the sale of specialised technical papers primarily to the filtration, abrasives and medical supplies industries.

Having had only a passing interest in international affairs and in the thinking of E.F. Schumacher, in 1998 the idea for Simultaneous Policy suddenly occurred to him as a potential means for removing the barriers which prevent many of today's global problems from being solved. In 2000 he founded the International Simultaneous Policy Organisation (ISPO) and launched the Simultaneous Policy (SP) campaign. In 2001, he set out the campaign in his first book of the same name. The SP campaign has since steadily been gathering increasing attention, recognition and support amongst citizens, activists, non-governmental organisations, politicians, business people and many others.

In 2003 he co-authored his second book, *Monetary Reform – Making it Happen!*, written with the prominent monetary reformer, James Robertson. In 2007 he authored a third book, *People-centred Global Governance – Making it Happen!*

John is a company director living in London. He has three children.

Prof. Dr. Timi Ecimovic (1941), from Medosi, Korte, Slovenia, is an eminent international scientist, independent researcher, lecturer, first head of SEM Institute for Climate Change, retired in May 2004 and Chairman of The World Thinker's Forum. He is researcher working on The Nature, Space and Environment protection, the Climate Change System, System Thinking, Sustainability, and Sustainable Future. He was among the first researchers to apply nature, space, and environment protection in a local community by activities we call today Local Agenda 21 Processes – a holistic program for survival of our civilization under new challenges of the third millennium – **from local community sustainability to global civilization sustainable future or harmony with Nature of Planet Earth.**

With his research/work within the climate change system activities/problems recording/understanding/researching (he was nominated for The Nobel Prize 2003) he has been among the leading independent researchers with many international publications and talks. Together with many researchers in co-operation worldwide within case studies and complex problem solving research and learning he is assisting a holistic and a better understanding of the present. His latest research directed towards the system theory/system thinking may provide a possible answer enabling us to better understand our world. His The Information Theory of Nature is nomination for The Nobel Prize 2007 in Physics.

Dr. Timi Ecimovic is an active member of the European Academy of Sciences and Arts, the European Academy for Environmental Affairs, Doctor of Environmental Sciences (H.C.), the Chairman of World Thinker's Forum, and professor/chair of Environmental Sciences at Ansted University.



Prof. Dr. Mark Esposito, Associate Professor of Management, Swiss Management Centre; Associate Professor of Strategic Global Marketing, Dual DBA with ESEADE and SMC; Associate Consultant, The Institute of Transformative Thought and Learning; Adjunct Professor of Tourism Management University of Massachusetts Amherst; Advisor to the UNESCO: E – mail: m.esposito@ht.umass.edu

Dr Mark Esposito is a Tourism and Sustainability expert and he focuses on sustainable change and leadership in all industries. His attention in all projects and researches is on the development of sustainable thought and action in all facets of organizational and human performance. He currently works as Program Director & Adjunct Professor for the University of Massachusetts at Amherst in Switzerland, as Associate Professor of Management for Swiss Management Centre and as Associate Professor of Global Strategic Marketing in the first world Dual DBA with ESEADE and SMC.

Since 2004, he has been working also as Co-Professor of the first virtual classroom experiment, held among four universities in Switzerland, USA, China, and Gambia on behalf of East Carolina University and the Department of Psychology and Global Initiatives.

He is an active contributor to UNESCO, Asia-Pacific Regional Bureau for Education and serves the ICT Program as an Educational Advisor. In the past years and at present, he has been authoring textbook chapters, researched on educational journals, and explored the spheres of Emotional Intelligence, Cross Cultural Management and Sustainability within his publications and collaborative network.

He is involved in corporate consultancies and works as Director of European Client Development and Associate Consultant for the Institute of the Transformative Thought and Learning in Arizona and as Think Tank member for Prasena Knowledge Management group in Thailand. More information on Prof. Dr. Esposito's contributions, can be found at: www.mark-esposito.com

Prof. Dr. R. Warren Flint (1946) obtained his Ph.D. in Ecology from the University of California, Davis (1975). He has 25 years of university research, teaching, and administrative experience in environmental sciences (e.g., The University of Texas, the State University of New York, Xavier University, Old Dominion University), as well as 10 years of operating a consulting business in sustainable development (*Five E's Unlimited*; <http://www.eeeee.net>). His technical expertise includes: integrated watershed assessment, adaptive coastal zone management, comprehensive land-use planning, conservation-based community development, sustainability studies, sustainable urban revitalization, estuarine/coastal ecosystem research, community capacity facilitation/training, environmental justice, interdisciplinary environmental studies education, environmental conflict resolution, green building, and ecotourism planning.

Warren is an internationally-recognized expert on sustainability, who has worked on its theoretical foundations, its ecological design principles, and its practical, interdisciplinary implementation in many different global contexts including: Nigeria, Australia; Rathlin Island (Northern Ireland); Whistler (BC Canada); rural areas of Mississippi, Iowa, and Colorado; Scotland; the eastern shore of Virginia; coastal Louisiana; Puget Sound (WA) Islands; the Lake Tahoe-North Nevada basin; and the Great Lakes basin. He knows sustainability and can explain



it to others. Dr. Flint understands its theory and is able to apply this understanding “on-the-ground” to real world circumstances in his work around the globe. He focuses on environmental sustainability as it relates to the social and economic capacity concerns of people, and in this way can assist individuals, organizations, and community groups to achieve sustainability by design of integrative strategies that balance social, economic, and ecological issues.

Flint has published websites that are effective public learning and awareness tools (e.g., <http://www.aBetterFuture.org>). His more than 60 peer-reviewed publications include three books, the most recent being *Living a Sustainable Lifestyle for Our Children's Children* (October 2001). In his work at the nexus of science and real world application, Warren strongly promotes the concept of science accurately articulated to the public and decision-makers at the “tipping point” of real opportunities to implement change.

He is a strong advocate for the concept of “Citizen Science,” which is a process for integrating the expert-way-of-knowing with the public-way-of-knowing into analysis and decision-making. Dr. Flint can tell the story of sustainability in ways that make sense to everyone, and can vividly present innovative and reality-based sustainability strategies, fully appropriate to a specific place and culture. He recognizes and can effectively demonstrate that sustainability means transforming our ways of living to maximize the chances that environmental and social conditions in a place will perpetuate human security, well-being, and health.

H. E. Baron Col. Chev. Prof. Dr. Roger Haw is the Founder cum Chairman of the First kind of World Book of Records with a Focus on Corporate Social Responsibility aspects ‘**SRW RecordPedia**’ and Founded the Ansted Social Responsibility International Award (**ASRIA**) to recognize those Corporations, NGOs and individuals around the world. The publication, which has been distributed to over 80 countries, includes commendable messages from four Nobel Prize Laureates. The ASRIA Awards are known by 187 countries member nations to UNESCO commissions.

Prof. Dr. Roger Haw also serves as a Diplomat to the World Human Rights Service Council, USA to the United Nations. He has been selected as one of the International Biographical Centre, Cambridge, England TOP 100 EDUCATORS-2005. This accolade is credited to those individuals who have fulfilled a standard of merit in the eyes of their peers that is beyond the norm. It is a lasting tribute to that which can be achieved by a very select few for the benefit of many.

He has co-authored several books and research papers in the areas of Corporate Social Responsibility, Learning Organizations, Alternative Medicine, Culture & Peace and Distance/Virtual Learning Programmes which were published by various publishers in the UK, Europe, USA, India, Korea, Thailand, and Malaysia, etc.

He is one of the youngest founding members of Ansted University, established in the British Virgin Islands of UK, a private international open university with 40 affiliated campuses and training providers around the world with the support from more than 1,000 faculty members, scientists and researchers from more than 80 countries. He is also an Honorary Member of the Academic Board of Advisors and Board of Governors for 12 institutions in 12 countries.



Prof. Dr. (Econ.) Dr. (Man.) Matjaz Mulej (1941) is professor emeritus of systems and innovation theory. He is based at the University of Maribor, Faculty of Economics and Business, in Maribor, Slovenia, and active at six universities in Slovenia and Austria. He was a visiting professor at universities outside Slovenia or visiting researcher for fifteen semesters so far in six countries on five continents. He authored the Dialectical Systems Theory, the law of two-generation cycles, the law of requisite holism, and the paradigm of innovative business in transitional countries. He published +1.100 contributions in +40 countries. He is a member of three international academies of science and arts. Currently, he is president of the International Federations for Systems Research. On topics of the dialectical systemic approach he was in enterprises close to 500 times, mostly but not only in Slovenia.

Prof. Dr. H. A. Shankaranarayana (1955) is working as a professor in Indian Business Academy, Bangalore, India. He has masters in Economics and PhD is business administration. His thesis, ECONOMICS OF THIRD SECTOR MANAGEMENT IN INDIA, analyses the principles and workings of not-for-profit managements in India in particular and the world in general. He was the Professor and the Director of AIMS Centre for Research in Management (ACRM) in Acharya Institute of Management and Sciences, Bangalore, India. He is a member of International Society for Third Sector (ISTR) located in John Hopkins University, USA. He is a founder member of Third Sector Research Group India (TSRGI), Mysore, India. He is also national coordinator, SIMPOL, India for International Simultaneous Policy Organization (ISPO) UK.

Prof. Dr. H.A.Shankaranarayana has worked in many national and international research projects. He has produced a STATUS PAPER ON THIRD SECTOR IN KARNATAKA funded by Ford Foundation. He has conducted European Union Study on the ROLE OF SOCIAL CAPITAL IN INTERNATIONAL TRADE involving countries like France, Germany, Switzerland, Italy and Austria. This study was sponsored by TRADCO. He has also attended many national and international seminars and conferences, which have been sponsored by many international research bodies and organizations, and has presented papers.

Prof. Dr. –Ing. Dr. h.c. Peter A. Wilderer (1939) is an internationally well recognized scientist engaged in the development and demonstration of integrative approaches to water and wastewater management across the spectrum of fundamental research, applied research, technology implementation and sustainable water management.

Until 2004, he held a chair position at the Technical University of Munich, Germany, and was director of the Institute for Water Quality Control and Waste Management.

Professor Wilderer served as a distinguished professor in many universities in the world, which included the University of Karlsruhe, Germany; the University of California at Davis, U.S.A.; the Technical University of Hamburg-Harburg, Germany; Montana State University, U.S.A.; the University of Queensland, Australia; Massey University, New Zealand.

He holds two honorary doctoral degrees (University of Chemical Technology, Prague, Czech Republic; Technical University of Iasi, Romania), and he is honorary professor at the University of Queensland, Australia.



Since 2002, he acts as director of the Institute on Advanced Studies on Sustainability, funded by the European Academy of Sciences and Arts. In 2003 he received the prestigious Stockholm Water Prize.

He authored more than 300 scientific publications, co-edited the journal *Water Research* and the journal *Sustainability Science*, and acted as editor-in-chief of the journal *Water Science & Technology*. He is a co-founder of the European Water Supply and Sanitation Technology Platform (WSSTP), member of the Board and Chairman of the Horizontal Working Group on cross cutting issues, and he is a founding member of the European Water Partnership (EWP).

Prof. Dr. Lloyd C. Williams is an Organizational Psychologist, Consultant in the areas of Change Management, Educational Research, Multicultural/Multinational Development and Professor of Business, Organizational Psychology and Ethics. Dr. Williams holds two doctoral degrees -- Ph. D. in Organizational Psychology, Social Cultural Anthropology and Ethics from the Union Institute and University, a Doctor of Ministry in Personality, Culture, Marriage and Family from Christian Theological Seminary; two Masters degrees -- a Master of Divinity in Psychology and Theology from Yale University and a Masters in Psychology and Counselling from Southern Connecticut State University. His Bachelor's degree is from Earlham College. Lloyd is a Certified Consultant to Management, Certified Professional Consultant to Management; and a Certified Professional Congruence Consultant.

Dr. Williams is the Program Chair and Associate Professor of the Bachelors, Masters, Doctoral and International Business Programs at Argosy University in Phoenix, Arizona. He is also on the faculties of Capella University and Argosy University in Organizational Psychology, University of Phoenix in Research and Dissertations, U21 Global University in the Masters of Business Administration Program; Associate Professor in the Business Programs at the Swiss Management Institute, University of Massachusetts- Amherst, and has previously served as the Program Chair of the Psychology and Exceptional Children Program at Clark Atlanta University and the faculties of John F. Kennedy University, New College of California, California Institute of Integral Studies, and Tuskegee University.

His clients have included Case Corporation, the Mayo Clinic, SECME Programs of the Bill and Melinda Gates Foundation, the United Way of Los Angeles, Brown and Root, the Arizona Public Service Corporation, the Arizona Nuclear Power Project, Cable and Wireless, DCT University in Switzerland, Executive Managers at numerous corporations such as Glaxo Smith-Kline, and numerous governments and universities around the world. Over all, he has consulted with over 130 organizations impacting 44,000 employees worldwide. His research focus is in the areas of Ethics, Organizational Development and Change, Sustainability and its Influence on Human, Community and Political Capital, and Educational Research.

He is also Chief Executive Officer of the Institute for Transformative Thought and Learning, an educational research, consulting, and Think Tank firm. He is on Board of Spangy.com and think tank member for Executive-Balance, Inc. in Thailand.



5. Contribution by Prof. Dr. Timi Ecimovic - Sustainable Future¹

With commencement of awakening of mankind in sixties of 20th century, on needed quality of environment, as basis for life of mankind and all creatures on the Planet Earth, it is also commencement of sustainable development concept/strategy/vision.

First compliments are reserved for pioneers and among them The Club of Rome², with its first report and publication “The Limits to Growth”. Reports followed and awakening of global society commenced.

Stockholm -72 – UN Conference on the Environment in Stockholm/Sweden, 1972, achievement was establishment of UNEP – United Nations Environmental Program in Nairobi/Kenya. More research and reports followed and it took humanity 20 years to prepare global conference on sustainable development – Rio 1992.

1987 term sustainable development was introduced by report “Our Common Future” or “G. H. Brundtland Report” from The World Commission on Environment and Development to the General Assembly of the United Nations. “Our Common Future” report had strong impact to global society.

A Common Concerns report stated: “Those who are poor and hungry will often destroy their immediate environment in order to survive: They will cut down forest; their livestock will overgraze grassland; they will overuse marginal land; and in growing numbers they will crowd into congested cities. The cumulative effect of these changes is so far-reaching as to make poverty itself a major global scourge”.

“Failure to manage the environment and sustain development threatens to overwhelm all countries. Environment and development challenges are not separate challenges; they are inexorably linked. Development cannot subsist in a deteriorating resource base; the environment cannot be protected when growth leaves out of account the costs of environmental destruction. These problems cannot be treated separately by fragmented institutions and policies. They are linked in a complex system of causes and effects.”

Those statements have been overlooked by coming generations. The spirit of complexity was just talks, reality of issues was neglected. Environmental quality of Earth Biosphere was and is (2006) neglected. Interdependences, interaction and co-operation of all matter, energy, information, particles, rays, powers and forces and yet not known contents of Nature were overpowered by needs of individuals, national elites, security needs, money reproduction, bureaucracies, military needs, wars, riots, genocides etc up till now (2007).

¹ Sustainable Future Concept has been drafted by Prof. Dr. Timi Ecimovic

² The Club of Rome a nongovernmental and informal organization that earned a world-wide reputation thanks to its research project - reports to the Club of Rome with expertise on global studies. It has been established in 1968 by Aurelio Peccei, founder and first president. They established Standing Committee of thirty European scientist and the membership was limited to 100 members. With co-operation on the National Associations basis from 1987 onwards (at present there is about 30 of them), they assist The Club of Rome to fulfill basic goal - Global Studies – issues, to work out solutions for global problems, and to draw attention of world public to them.



At “Towards Sustainable Development” in Our Common Future the definition of it was stated as: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. It is very noble, humanitarian, cosmopolitan, global goal, which after it had been invented was generally misused by countless politician, bureaucrats and people of individual feelings and not humanitarian quality, knowledge or ethics’.

To continue with “Our Common Future” a nice statement was: “Many of us live beyond the world’s ecological means, for instance in our patterns of energy use. Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecologically possible and to which all can reasonably aspire”. Many means individuals, communities, countries, and we do not need to write more on this. The system characteristics of humankind are forgotten today!

“The world must quickly design strategies that will allow nations to move from their present, often destructive, processes of growth and development onto sustainable development paths”. This content was also completely neglected!

“Critical objectives for environment and development policies that follow from concept of sustainable development include:

- Reviving growth;
- Changing the quality of growth;
- Meeting the essential needs for jobs, food, energy, water, and sanitation;
- Ensuring a sustainable level of population;
- Conserving and enhancing the resource base;
- Reorienting technology and managing risk; and
- Merging environment and economics in decision making”.

Objectives stand even today criteria, and have not been ever taken into consideration of politicians, bureaucracies and nations agendas.

Most significant was statement on “The Urban Challenge” – “In 1940, only one person in eight lived in an urban centre, while about one in 100 lived in city with a million or more inhabitants (a “million city”)”

- “By 1960, more than one in five persons lived in an urban centre, and one in 16 in a “million city”. By 1980, nearly one in three persons was an urban dweller and one in 10 a “million city” resident”.

Hon. Tom McMillan, Minister of Environment, stated at WCED Public Hearing, Ottawa, 26-27 May 1986: “The challenge ahead is for us to transcend the self-interest of our respective nation-states so to embrace a broader self-interest the survival of the human species in a threatened world”.

Dr. Gro Harlem Brundtland talking on report stated: “This commission’s report, Our Common Future, contains a message of hope and opportunity”.

In 20 years after Our Common Future report was accepted, what is result of it? To us from this team the result is smaller as expected. So we are coming to 1992 Rio Summit.



2nd UN Conference on the Environment and Development CED-2, Rio de Janeiro 1992 or Rio Summit attended representatives from 179 countries. A huge document was approved; Agenda for Change and Agenda 21 were adopted. A number of documents were approved, but never implemented.

Finally at 10 years after Rio at World Summit on Sustainable Development failure of action was accepted by public of course.

The reason in our opinion was in wrong handling of Our Common Future report and its possible global impact to society.

UN at that time did wrong baby seating of the report, and it became agenda from UN to people, instead of agenda from UN to its **member states**. Member states never put in action sustainable development agenda due to national priorities (wealth of national elite and other national state priorities).

In meantime United Nations due to poor leadership and political mishap of member nations on one hand and global human society on the other hand were not ready for sustainable development.

The role of UN has not been adjusted to needs for challenges of time - end of second millennium and beginning of third one. Restructuring of UN under leadership of that time was impossible. Common practice was and is for individuals: politicians, bureaucrats, national elites, governments, media, show people, religious leaders, local community leaders etc., to meet their needs and needs of their family for wealth and employment, and after that, to look for humanitarian purposes. On top of it due to election practices, there has never been time for humanitarian results. They in practice never took care of building new profile of human for the third millennium, and with new education, ethics and profile with humanitarian values to be able to meet challenges of nature, as they are per now. Homo urbanus took over civilization and did not took over long term responsibility but only short individual needs.

And nice saying: “We are the only reason our ancestors existed. Our children are hope for touching the future. Let our children’s children be the reason we act”.³

At present sustainable development and more sustainability has become popular term for politicians and politicians-like⁴ people, who wish to make impression on listeners and public. It is habit to mention sustainable development, global warming, and climate change as important contents of present time, but without understanding them in reality. After “Katrina” unfortunate happenings in USA, President G. Bush acted with no understanding of anything⁵. He as president of USA should prevent tragedies occurring there after his taking over, and should not support/initiate national and international tragedies from natural ones to political, wars and riots. The action for mitigating New Orleans “Katrina” tragedy should be taken well in advance. After

³ Prof. Dr. Warren Flint, Five E's Unlimited, rwflint@eeeeee.net, and www.eeeee.net.

⁴ Politicians like are politicians, bureaucrats, individual leaders from industry and commerce, educators, researchers, military leaders, religious leaders etc., people of influence but without humanitarian values, education, and ethics needed for global leadership.

⁵ It was known threat for New Orleans – 2001 Scientific American. Also prof. Dr. Timi Ecimovic stated in 1998 at UN SD conference »New Orleans area should not be inhabited at all. Let it be Historical city and nothing else.« »Katrina« was one of disasters and future ones will definitely destroy New Orleans!



tragedy – the large New Orleans region should be declared unfit for humans to live there, because it was unfit before and after “Katrina”. After “Katrina” USA Government should declare and make clear statement on unfitness of the region for humans to live there. Scientists understand and have been familiar with risk and hazards of the lands such as New Orleans and alike, and society should take over positive issues, and government should prevent happenings which could be prevented.

Society as it is in New Orleans, is taking advantage from tax payer’s money and questionable government policy, not only because of “Katrina”, but floods and other related happenings are demanding a great government financial input every year.

Sustainable development as leading global society policy is questionable from many contents of present practices.

At time of awakening it was excellent, but did not change with challenges of present and past short term time values. The problems of sustainability of mankind and Earth are much more complex as it was understood during end of 20th century.

The first part of the sustainable development – sustainability is much more important and has value for future of mankind. Second part “development” is misused term from industrial revolution and economics, and has nothing to do with Nature of Earth. Development could be of product, construction, man made systems, repairs, machines, armaments, etc., and it is a part of human society of post-industrial era. The nature has no development what so ever and nature system is working on contents and interdependences, interactions and co-operation relations.⁶

With introduction of modern tools for thinking and researching of complex issues as human society is and many natural contents of the nature of Earth are, Information Theory of Nature, System thinking, analysis, synthesis and system theory, on top of many excellent tools used up till now, humanity has more possibilities for better tomorrow.

What is needed is New Approach⁷ as introduction of global society system relations, values, ethics, contents and mechanisms, which should assist transcendence to sustainable future of Earth global society.

What we find necessary for survival of humankind, is to introduce sustainable future of humankind as harmony of local and global human society with the other to us yet not fully known face of nature on the Earth.

It would be easy to write many pages on sustainable development concept, but the purpose of this book is not to do it, but to make transcend from sustainable development to sustainable future as technique needed for survival of mankind.

The follow up from sustainable development should be devised with all possible co-operation of mankind to sustainable future, and with mitigations of the climate change system impact to

⁶ System Thinking and Climate Change System – Against a big »Tragedy of Commons« of all of us, 2002, Ecimovic. Majur, Mulej and The Information Theory of Nature, and, 2006, Ecimovic, are opening discussions for understanding present by our civilization, and this book.

⁷ New Approach as needs for restructuring of global society has been introduced by Prof. Dr. Slavko Kulic, IOM, from Zagreb, Croatia, but it is still within science and is waiting for better time to be understood and used.



biosphere of the Earth.⁸ The goal of sustainable future is most complex issue, which could be undertaken with consent of all humankind and dedication for fulfillment of its content. Let us see what sustainable future concept is.

Indicative description is possible only by short definition: **sustainable future of mankind is harmony of the humankind system/civilization with system of nature/biosphere of the Planet Earth.**

It is a short description of a very complicated and complex content of present global human society and its basis – the biosphere of the Planet Earth.

We think up till now good work of many humans towards sustainable development should be transcended to more complex sustainable future concept.

Sustainable future concept includes:

- Redirection of scientific work towards researching systems of the nature of the Planet Earth, Solar System, Milky Way, stars and galaxies of the Cosmos/Universe and or the basic environment Cosmos/Universe as stated after introduction of the Information Theory of Nature.⁹
- Redirection of the climate change research towards researching of the climate change system as a part of the Planet Earth biosphere, and interdependences, interaction and co-operation within system itself and other systems of the nature of the Planet Earth.
- Transcend of present education system towards education for understanding use of human abilities, thinking processes as major tool for better work. Ethics, human values, tolerance, past and present achievements, knowing heritage, and many more should become a part of education system. Not to mention life long education, long distance learning and new methods of knowledge transfer allowed by new communication means.
- Transcend from Homo urbanus to Homo of sustainable future with new approach to life on the long term values and holistic system thinking.
- Establishment of global human society with direct democracy, World parliament, Constitution of the Federation of the Earth, and World government.
- Transcend of United Nations towards their integration with global society needs for problem solving in co-operation with global governing institutions.
- Decommission of national governments and bureaucracies towards meeting needs for new global human system/civilization/society.
- Rethinking of military and security needs and establishment of responsible attitude of humans within global human society.
- Rethinking of present living style practice, techniques, and technologies in use towards sustainable ones. Wars, transport, use of nuclear power and technologies, construction, land use, water use, air use, communications, energy, conservation practices, long term impacts of present to future possibilities, and many more should be looked at and proposed solution reviewed.

⁸ Please see complementary book »Our common Enemy«, latter in the book or at www.institut-climatechange.si.

⁹ The Information Theory of Nature, Ecimovic, 2006, please see at www.institut-climatechange.si



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- Rethinking of present research¹⁰ and industrial production practices of producing without knowing long term impacts over the biosphere of the Planet Earth,
 - Mitigation of the climate change system impact and its consequences in the biosphere as risk for present practices of humans on Earth, and present short and long term living practice changes.
 - Building up the new Homo sapiens for the third millennium in the education and knowledge needed for common performances under challenges of present and possible future evolvments.
 - Stop wars and riots, stop practices, which are harming human society and its chances for survival, build up tolerance and peace philosophy, transcend the present financial and money system, which have become our civilization *Monster*, to new more equitable system, transcend present media and free time practices and their influences on the global human society, and research long term impact of those on humans.
 - And many more changes, which should be worked out in co-operation of humans with abilities for it.

Of course it is an optimistic scenario, which we are supporting and initiating its enhancement and long term realization.

The path is to work with local communities and with sustainable future of local communities to enhance global society sustainable future or harmony with nature. The basis from Our Common Future, Rio Summit as Agenda for Change and Agenda 21 processes etc., New Approach, Our Common Enemy – The Climate Change System Threat and many more achievements of present and past humans should anchor new approach for global sustainable human society. Major goal is education for new profile of humankind's individuals, knowledgeable and thinking persons. It is our needed transcend from present to future.

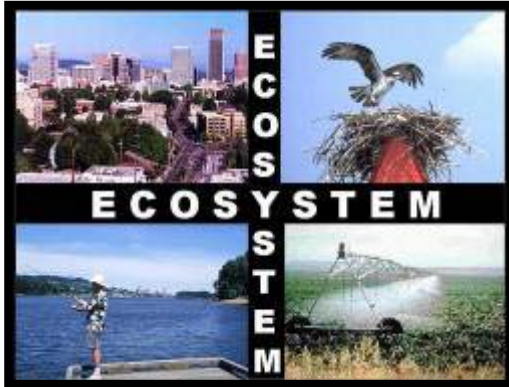
Of course people should not put heads into sand and dismiss gender equality and major role of mother as first and most important educationist of baby and children. Our prime target should be education of women for meeting demands of new challenges for better build up of ethics and knowledge of our children. It is full employment for them and many of present complex issues are result of needs for financial, food, cloth, medical, shelter, and education securities of present society. It is important to recognize contents needed for transcend to future human of the third millennium.

Many excellent achievements from the past and present as heritage of humanity should be rethought and put into new frame of needs for third millennium and present challenges coming from the difference between the global human society and nature. Our construction practice is not meant for the present disastrous conditions. Wind could reach a speed of 500 kilometers and more. The power of wind could increase much more, with lifting soil particles due to our practice in agriculture etc. Floods and droughts will reduce food production possibilities and new techniques should be invented for covering the demands for food and other fundamental needs to be secured. Earthquakes, volcano eruptions, tsunamis and larger floods will increase damages over human achievements. People may learn from other planets in our Solar system on environment or living conditions needed for life of human and other living creature's societies. Learning from research of the nature could be short cut to new solutions for sustainable future of mankind.

¹⁰ Any scientific research activities should be reviewed for long term effect over the sustainable future of mankind.



5.1 Contribution by Prof. Dr. Warren Flint - Is Our Global Society On-Track to a Healthy Future?¹¹



The Earth and all its resources is a closed system governed by irreversible energetic processes (Laws of Thermodynamics). As such it behaves as a single, self-regulating structure comprised of physical, chemical, and biological components, including humans (Robert, et al., 1997)¹². And all of these components interact in diverse, complex ways through the function of ecosystems that integrate (a) the level of energy and raw materials used, (b) the solid, liquid, and gaseous wastes produced, and (c) the collective socio-economic impacts imposed on

these pathways of system life support (Flint, 2004a).

Because of this closed system, over the last few decades people and institutions have come to better understand that Earth has limits to its ability to provide for the exponential growth in impact of its human population (Bartlett, 1999). According to the World Resources Institute (Matthews, et al., 2000), over the next 50 years, projections suggest that:

- The world's population may increase by 50 percent.
- Global economic activity may increase by 500 percent.
- Global energy consumption and manufacturing activity may rise to three times current levels.



These trends could have serious social, economic, and environmental consequences unless we find means to use fewer resources in more efficient ways (McDonough and Braungart, 1998). And in using fewer resources we must also guarantee that these savings are not just passed on for someone else's advantage, resulting in no savings (net gain) at all (Gibson, 2002).

A big part of our present environmental problem is society's loss of connection to nature (Flint and Houser, 2001). Amongst all the concrete, steel, pavement, and rooftops it is easy to see why this disconnection has occurred. We come out of our houses to shop, go to work, go to dinner, or perhaps even go to the gym for the more motivated ones. We are willing to walk 10 miles on a machine yet fight for that close parking spot. Our patterns are fairly predictable. Our consumerism almost occurs at a cellular level – tendencies that gravitate

¹¹ 5.1.; and 5.2. have been drafted by Prof. Dr. Warren Flint.

¹² New approach have been indicated/put into practice/invented by system thinking technique as interdependence, interaction and cooperation as system practice within the nature Ecimovic/Mulej/Mayur 2002 System Thinking and Climate Change System.



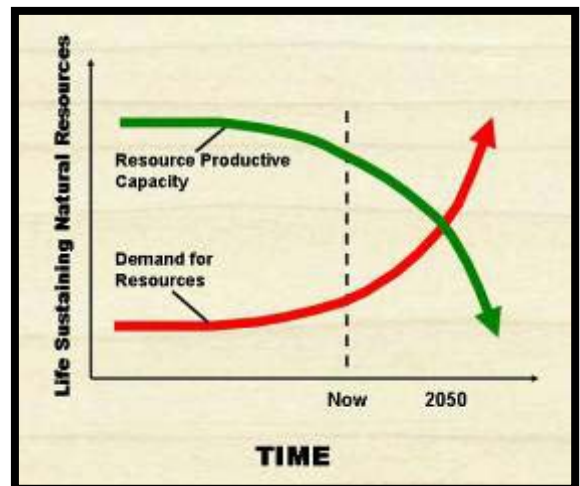
towards what we are told are an endless supply of everything. Why should we sacrifice the good life, decrease our consumption, or worry, since things seem to be OK?



But things are not OK! At the present time for example, food, fresh water, and energy shortages are sparking social tension and conflicts (Brown, 1999a; Lazaroff, 2000). Pollution problems persist. Garbage is accumulating. Deforestation, soil loss, and habitat destruction are extensive. Rates of species extinction are up, wetlands continue to disappear, and global fish stocks are declining. The global climate appears to be changing because of anthropogenic emissions of greenhouse gases (Vorosmarty, et al., 2000). This changing climate scenario is being equated by many as a cause to the increased intensity of Atlantic tropical storm systems in recent years. Environment-related health problems account for many of the illnesses in the world today. And, roughly half the world's population lives in poverty (Hartman, 1997).

No one of these problems can be called the single most important, because any of these if not addressed can do us grave harm, and **because they all interact with each other** (Diamond, 2005). Therefore, even if we solved all but one of these problems we would still be in trouble from whichever was the problem that went unsolved.

The totality of the human economy is measured by throughput. It is calculated as the total number of people multiplied by their consumption of resources and waste production. Thus, there is consistently a dependence of economic activity on human and natural resources. There is considerable evidence now that the use of natural capital by many parts of our economy, in the process of throughput, has exceeded the regenerative and absorptive capacity of the environment (Daly, 1996). The bottom line – society's collective demand on resources is greater than the productive capacity of the Earth (natural resource capital versus human demand projections illustrated in the adjacent diagram). The problems of climate change and global warming are commonly reported examples. These issues provide evidence that we have exceeded the capacity of the atmosphere to absorb our carbon dioxide, methane, and nitrogen oxide wastes. The state of many ocean fisheries is another genuine example of our world's limitations.



In summary, there are no limits to growth in wisdom and other forms of human development, but there are physical limits to growth in the consumption of resources, and there are physical limits to how much waste can be dumped in the biosphere. And these impacts continue to grow because of our numbers, technologies, and affluence (Gibson, 2002; Flint, 2004b). Social and economic disparities among the expanding global population are also wide and growing, resulting in more international conflict among the haves and have-nots. Much about



our current situation is clearly unsustainable, with dire consequences for our way of life if not addressed (Brown, 1999b). And the consequences for future generations are sobering.



The reality is that these circumstances will change toward some kind of equilibrium condition over time. The only question is whether changes will occur in pleasant ways of our own choice – through solidarity and the taking of stewardship for Earth systems – or in unpleasant ways not of our choosing – inhumane and natural earthly phenomena take over and do it for us at severe human detriment, such as warfare, genocide, starvation, epidemics, or failure of societies (Sagoff, 1997).

Historically many civilizations have collapsed from human activities such as over-farming and over-population (Diamond, 2005). There is much to be learned from understanding the history of past civilizations, the cultural attributes that have developed in different societies through time, the way their ancestors went about living, playing, working, and growing, and the fact that time of societal decline in different cultures through history has been decreasing as we move toward the present-day (Gore, 1992). We live in a time of significant global environmental change, the consequences of which remain poorly understood. Given current trends and uncertainty in future events, human's secure presence on Earth is not necessarily guaranteed over the next millennium (Marshall and Toffel, 2005).

5.2 What is required to Change Present Conditions?



Communities face enormous challenges as their social, economic, and environmental resources are damaged or depleted. Because these elements are interconnected, there are no simple solutions to the challenges. In older times survivors of dying communities could move on to less populated, more fertile areas. But today there is no such place left to go! Do those living today owe anything to the future? If "yes," then we must now determine what and how much we owe to future generations, lest our present course continues unabated too far into the

twenty-first century, eventually to destroy options for all generations to come.

In the ultimate analysis, a timely reversal of these resource depletion and natural Earth cycle disruption trends is contingent on human decisions. What economic, social, and political choices can we still make so that we don't meet the same ends as many past civilizations? And more importantly, how do we integrate these choices across sectors to be most effective in solving present problems? Consider the plight of many African countries now that are in



continual states of poverty, upheaval, and warfare. Are we really addressing their problems in an integrated manner when we concentrate on the apparent symptoms instead of attacking the many common causes of these very diverse issues? Decisions and actions guided by the patriarchal mindset of excessive consumption and wealth accumulation, excessive concentration of power, and excessive ego gratification, will only exacerbate the present destructive trends of our global society. Decisions and actions guided by the solidarity ethos of moderate consumption, non-violence, and ego-less collaboration, may reverse these trends.

One potential answer to global socio-economic and/or environmental decline can be found in the concept and application of sustainability. Whatever issues we find ourselves facing, be it disease, child abuse, crime, injustice, weakened economies, energy shortages, lack of good jobs, extinction of species, poverty, destruction of forests, pollution, breakdown of families, armed conflict, or nuclear power expansion, there are some common threads and interconnected steps that will offer solutions to these seemingly diverse problems. The interdependencies of economic, environmental, and social justice elements of our world require new ways of thinking about things and taking action (Gibson, 2006b) that will truly create a sustainable future where society and nature coexist with mutual benefit, and where the suffering caused by poverty and natural resource abuse is eliminated.



Most regions wanting an improved quality of life are economically driven. Therefore, economics becomes the necessary vehicle for change. The roadway upon which we are driving is our economy's ecological base of nature with its resources; and society is the driver (Maser, 1997). The only hope for sustainability then is a shift in societal ethics and culture which considers global population dynamics and more responsible consumerism, both of which if left unchecked are the factors most demanding of economic growth.

Because individual and collective economic vitality is an important element of any community, in order to advance economic security extant, sound economic opportunities must be preserved and new development encouraged. Generally, fiscal vitality is founded in "a healthy economy that diversifies and co-develops sufficiently to create meaningful jobs, reduce poverty, and provide the opportunity for a high quality of life for all in an increasingly competitive world" (President's Council on Sustainable Development (PCSD), 1996:15). Furthermore, sustainable development cannot be achieved unless jobs are environmentally "clean" in that they do not contribute to air or water pollution or create toxic wastes. Paying attention to ecological integrity ensures "that every person enjoys the benefits of clean air, clean water, and a healthy environment at home, at work, and at play" (PCSD, 1996:14). This goal is met, in part, through conserving natural resources and decreasing exposure to toxic substances and environmental hazards.

At the same time, scientists are acknowledging the increasing danger to people, plants, and animals from continued degradation of ecological life support systems (ecosystem services) and natural cycles (*e.g.* carbon cycle) by human economic activities that are proving to be unsustainable (McMichael, et al., 2003). Social scientists and policy makers are promoting



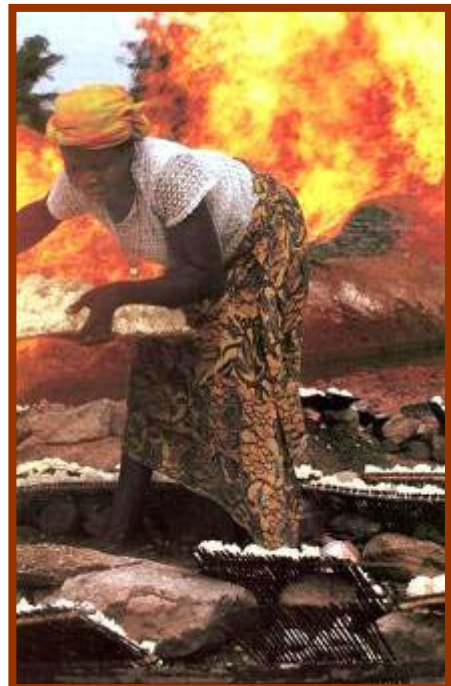
the need for societal and economic improvements so that all communities can implement better programs to alleviate poverty and protect material resources through more sound development, while taking charge of their own destinies (Gibson, 2002) – thus, the call for “sustainable development.”



But, the phrase "sustainable development" can be ambiguous. Many identify with the "sustainable" part and hear a call for ecological and social transformation, a world of healthy environments and social justice. Others identify with "development" and interpret it to mean more sensitive economic growth, a significantly reformed version of the status quo. But the minute one equates growth with development problems immediately arise. Politicians often call for continued economic growth to remain healthy. General failure to distinguish between true

development and mere growth is the basis of much confusion in our efforts to operationalize ideas about sustainability (Daly, 1996). To change the world we must meet head-on the differences between growth and development. Clarifying this confusion is essential in understanding sustainable development's true potential.

Development cannot be equated to growth because growth implies a quantitative increase in physical size of something (*e.g.*, population or economic expansion), which will always face limits (Daly, 1992). For example, sustainable growth implies increasing endlessly which can mean the growing quantity will tend to become infinite in size. We all understand how this is not possible in the context of earthly limitations. Earth is finite, one size, not growing. Thus, there is no such thing as sustainable growth because growth will inevitably hit physical limits. For example, consider the fate of oil in our world today.



In contrast, development is the realization of a greater potential – qualitative improvement, recognition of possibilities, transition to a fuller or better state, working with what we have and simply adding value for the benefactor's well-being. Growth means getting bigger while development means getting better – quantity versus quality (Maser, 1997). Sustainable development can be represented as a mode of improvement that preserves natural capital (Daly, 1996b) – enhancement in welfare without physical growth, progressive social betterment without growing beyond ecological carrying capacity. A sustainable society is one that lives within the self-perpetuating limits of its environment. That society is not a "no growth" society – it is, rather a society that recognizes the limits of growth and looks for alternative means of improvement. In this way humanity can



concentrate on developing its full potential instead of being distracted by unrealistic growth desires. In theory this should not be too difficult to envision. Each of us does much the same thing in the course of our individual lives. We grow early in life and when we reach adult maturity we develop mentally, socially, and culturally, instead of continuing to physically grow. Growth during adulthood is either obesity or cancer.

Additionally, in trying to get ahead, or as we say "grow," we often find ourselves in the unfortunate position of preventing our development from reaching its full potential by the patriarchal discrimination we attach to gender, race, class, religion, or ideology (Daly, 1996). Because of these disparities, in essence half of the world's population is in one way or another excluded from taking initiatives to contribute their skills and work toward the needs of the collective global society (Bernard and Young, 1997). If instead we could take full advantage of the potential co-development activities from all these different parts of humanity in solidarity, we might not feel so pressured to "keep growing" our economies.

Development can continue endlessly as we seek to improve the quality of life for humans and for the other creatures with which we share the planet. To fulfil these aspirations, we must recognize that human development is not about having more, but about being more. It seems then that "more is better" is an inherently frustrating game – a game that has been promoted by the fallacy of confusing the quantity of things with quality of life; a game that now has too many losers and so few winners (Flint and Houser, 2001). The idea of development must be separated from an economic and reductionism dimension of life. If we think of development as assuring a dignified level of existence – that is serving human basic needs, such as food, clear water, shelter, clean air, clothes, friendship, diversity of tastes, beliefs, preferences, etc. – we would take a giant step toward constructing a better world: healthier, happier and less unequal. This shift in attitude and behaviour is guaranteed to promote personal fulfilment and sharing, but will also reduce unfulfilling, unnecessary consumption. Through the actions of sustainable development, a new win-win scenario can be born.

6. Contribution by Prof. Dr. Warren Flint - Sustainable Development Concept

6.1 Planting the Seed

The concept of sustainable development was first articulated by the World Conservation Strategy (IUCN, 1980). But not until the work of the Brundtland Commission did the idea of sustainability first reach the global stage (World Commission on Environment and Development (WCED), 1987) when this Commission attempted to address two difficult and apparently conflicting problems, as summarized by Gibson (2002).

1. Increasing environmental degradation on both spatial and temporal scales was leading not only to resource depletion and damage to essential ecological functions in specific situations, but also to cumulative global effects.
2. Failure of initiatives to attack poverty conditions in many places around the world was leaving large numbers of people in destitution and insecurity while the gap between rich and poor deepened.



Discussion by the Commission about these key global problems led to agreement that the concept of "sustainable development" could represent a means of approaching what on the surface appeared to be very different problems. The Brundtland Commission (WCED, 1987) set forth that "sustainable development is improving people's life-enabling habits to meet our needs in the present without compromising the ability of future generations to meet their needs." Natural resources such as water, air, soil, plants, and animals are the basic assets upon which all life, human and otherwise, depends. Therefore, according to the Brundtland definition it is unwise to use up these supplies, or we will be threatening the security of all people, in the present and future.

This vague definition, however, has proven to be open to a host of interpretations (Parris and Kates, 2003). Let's explore more deeply the realm of possibilities for actually trying to articulate what sustainable development represents. **Sustainable** means that something is viable and can be continued (Woolf, 1975) over the long-term (*to keep something going*) without lessening the ability to support life, to comfort, to nourish, and to keep alive. For all of human history, the Earth has sustained human beings by providing food, water, air, and shelter. The concept of sustainability applies to our jobs, our homes, our relationships with people (close and far-away), our health, our children, nature and the environment in which we live, the food we eat, commercial trade with other regions and countries, our sources of energy and water, world peace, and any other concerns we confront on a daily basis.



Development refers to the way in which the interaction between elements (such as the economy, the environment, and society) progress and change toward improving or bringing a situation to a more advanced state (Woolf, 1975), such as in our efforts to improve local/regional transportation. Development happens everywhere and affects everyone. The measure of successful development is that it is sustainable, not putting the well-being of humans, including their social structure

or economic support, or nature, at risk. But in association with the word sustainable, "development" often causes misunderstandings that distract from its meaning of improvement or advanced state. For example, when people hear the words sustainable development together they often believe it is in reference to the focus of international development and donor organizations through their work in third world regions, rather than specific to all societies, cultures, and communities. For this reason reference to "sustainability" is probably less confusing than the often used phrase "sustainable development."

In trying to envision the big picture then, **sustainability** suggests working to improve people's well-being (often equated to economic condition) without damaging or undermining society or the environment – development that provides real improvements in the quality of human life and at the same time conserves the vitality and diversity of the Earth. Thus, sustainability is the science of stability between humanity and the human habitat. For example, business is about both improving the well-being of consumers and the company's financial bottom-line (Burns, 2001). Business's degradation of the environment, natural resources, or social capacity does not improve well-being. Instead, well-being is improved by



the development of methods to minimize energy, material use, noxious emissions, and social impact per unit of economic activity. But let's not get lost in environmental concerns alone! Commitment to human and societal well-being is as important as ecological commitment to the planet in addressing sustainability. We must preserve a planet fit to live on and also create organizations that sustain the quality of our socio-economic life.

The terms sustainable and sustainable development are often used as general descriptors to depict the desired state of societies or cultures. But without a clearer understanding and agreement with regards to what sustainability is really about and how you operationalized it, the use of these descriptors is problematic. Norton (2005) prefers to use these words as reference to the many precise sets of commitments on the part of specific societies, communities, and cultures to facilitate place-based values and project them into the future. While progressing on the sustainability front may require different actions in various regions of the world because of cultural differences, the efforts to build a truly sustainable way of life require the integration of action in three key areas.

- Economic Improvement – Today's interlinked, global economic systems demand an integrated approach in order to foster responsible long-term development while ensuring that no nation or community is left behind.
- Social Development and Equity – Throughout the world people require jobs, food, education, energy, health care, water and sanitation. While addressing these needs, the world community must also ensure that the rich fabric of cultural and social diversity, and the rights of workers, is respected, and that all members of society are empowered to play a role in determining their futures.
- Conserving Natural Resources and the Environment – To conserve our environmental heritage and natural resources for future generations, economically viable solutions must be developed to reduce resource consumption, stop pollution, and conserve natural habitats.

Based upon the Brundtland Commission's discussions, sustainability represents the parallel consideration of healthy environments, life, and human well-being. This includes issues of population, climate, economic prosperity, energy, natural resource use, waste management, biodiversity, watershed protection, technology, agriculture, safe water supplies, international security, politics, green building, sustainable cities, smart development, community/family relations, human values, etc. All these "pieces" are parts of the sustainable society puzzle, because they are the basic ingredients of everyday life. Sustainability provides a multi-dimensional way of thinking about the interdependencies among natural, social, and economic systems in our world that these puzzle pieces are part of. It represents a process in which economics, finance, trade, energy, agriculture, industry, community building, and all other policies are implemented in a way to bring about development that is economically, socially, and environmentally sustainable. And the ultimate goal is to meet the needs of the present without compromising the ability of future generations to meet their needs. Therefore, in practicing sustainability over the long-term (Flint and Houser, 2001) one will:





1. not diminish the quality of the present environment;
2. not critically reduce the availability of renewable resources;
3. take into consideration the value of non-renewable resources to future generations; and
4. not compromise the ability of other species, people in other places, or future generations to meet their needs.

Sustainability calls for improving the quality of life for all of the world's people without increasing the use of our natural resources beyond the Earth's twin capacities for regeneration (*e.g.*, trees and water) and waste absorption (*e.g.*, carbon dioxide and toxic chemicals). In this sense, sustainability implies long-term views, continuing far into the future (generations). It represents progressive social betterment without growing beyond the ecological carrying capacity of the Earth. The conventional economic imperative to maximize production is accountable to an ecological imperative to protect the ecosphere, and a social equity imperative to minimize human suffering. This is the foundation of sustainability.

It is important to recognize a sustainability framework as an essential way to organize our work on problem-solving. Sustainability stands for a process to define our problems and solve them in a way that is long-lasting. By following principles of sustainability we can overcome unanticipated consequences of short-sighted solutions that deal only with the symptoms of our problems rather than their underlying causes. Acting sustainably allows us to think and function outside our own boxes (disciplines, organizations, communities), and is a means that will encourage us to think in an integrative way (ecology, economics, equity). It is also about hard work; it is not about a "quick-fix" or simply jumping on the "band wagon." It means rolling up our sleeves and saying we are not going to be with this for a year or two, but rather for the next generation or several generations.

6.2 Challenges to the Meaning of Sustainability

Sustainability is a dynamic process which enables all people to realize their potential, meet their needs, and improve their quality of life in ways which simultaneously protect and enhance our Earth's life-support systems. These, however, are the main poles of tension. Social inequity, the material disparity in terms of needs not being met, as well as the question of why consideration for nature should come before the welfare of humans, are at the centre of the sustainability debate (Flint and Houser, 2001).

Ecological sustainability is the simple part of the concept. While there is considerable debate over where exactly the limits are, there is general consensus that we must learn to live together within the means of nature. Socio-economic sustainability, however, is a more difficult and potentially contentious concept. Mainstream economists do not worry about shortages of natural resources to supply our needs and receive our wastes because classical economic theory assumes that human resources can substitute for natural resources



(Montague, 1998). There is considerable evidence now, as discussed earlier, that the use of natural capital by many parts of our economy has already exceeded the regenerative and absorptive capacity of the environment (Daly, 1996). In addition, the question of who gets what (and how) from increasingly limited economic production, especially with China now seeking developed world standards of living, raises the spectre of potential conflict both within and between nations. The need for shared justice and the associated latent conflict is the most

scary and politically taxing part of the sustainability question.

As the World Commission on Environment and Development (1987) set forth, sustainable development is ensuring that our actions today do not limit the range of environmental, social, and economic options open to future generations. The majority belief is that this statement offers no substance for those really wanting to operationalize or implement actions that are believed to be sustainable (Marshall and Toffel, 2005). The meaning is unclear regarding the costs, benefits, and strategies of intergenerational sacrifice and transfers (Daly, 1992). It also seriously brings into question what the idea of needs really means, as stated by the WCED (1987). How do we distinguish between essential needs today and wants – those that are supplementary or excessive? And likewise, how do we distinguish between the needs of very different cultures?

Basic human needs have been defined by Manfred Max-Neef (Lahiti, 1998) an economist from Chile. But how do we even begin to know what the needs of future generations will be? Our deliberations can only go as far as to recognize that people do inevitably require what qualifies as the meeting of needs adequate for a respectable life (Gibson, 2002). As Norton (2005) states, the consideration of needs for future generations can realistically only go as far as maximizing their opportunities while minimizing their constraints by what we do in the present – the concept of limitations imposed by the state of technology and social organization we choose to implement on the environment's ability to meet "needs" (Daly, 1996).



Therefore, society is charged with using, developing, and protecting resources at a rate and in a manner that enables all people to meet their current needs and also provides that future generations can meet their own needs, simultaneously fulfilling environmental, economic, and community requirements. It means keeping the consumption of renewable natural resources within the limits of their replenishment; living on the Earth's income rather than eroding its natural capital (Patterson, 2000). And herein lays another problem: how often are we absolutely confident with regards to the limits of a resource?

Those devoted to some form of societal and ecological relief chose to emphasize the idea of minimum effects – "sustainability can be achieved by actions that minimize damage to our natural environment" (WCED, 1987). Another, possibly less problematic definition states



that “sustainability can be represented by patterns of production and consumption continued indefinitely without causing irreparable (lasting; beyond repair) harm to the ecosystem services we rely upon for life” (Bartlett, 1998). Actions that will move society toward goals of sustainability must encourage positive steps (Gibson, 2002) and therefore the minimization of negative effects or irreparable harm is not sufficient. The complexity of natural systems limits our information and ability to gauge “minimal damage” or “irreparable harm,” causing a certain degree of uncertainty with regards to scientific understanding, which then suggests the idea of precaution in the actions we take rather than the desire to “minimize” damage.

Many other critics feel the concept of sustainability is just too complicated to have any real meaning to either professionals or people in the general populous, and thus it does not provide a tangible foundation upon which to guide decision-making. There generally seems to be a lack of clarity in communicating what is truly meant by sustainable development. If ten people on the street, that might have actually heard of the phrase “sustainable development,” were asked what it means, seven different answers would likely be given (Flint and Houser, 2001). In addition, for everyone who has an understanding for some meaning of sustainability, there are probably ten times as many who do not, either because they are confused by the ideas embraced in its theory, or they just don't trust its concepts.



Likewise, numerous practitioners wanting to solve problems more immediately believe that “the big picture view” of sustainability is not specific enough for the problems facing them on a daily basis. They feel the need for guidance that is more narrowly focused and target-oriented on their particular environmental, economic, or social concern (give me a quick fix!). Causing most concern is the fact that in many situations the lack of balance in addressing the integration of environmental, social, and economic dimensions in planning and action leads to the interpretation of sustainability as mainly about environment and conservation issues. This plethora of views and concerns has nearly rendered the term meaningless and has severely distracted from the need to address the multi-dimensional nature of economic, social,

and environmental issues in our world today (Gibson, 2006b). New learning approaches are called for to promote more debate in society about what sustainability is. Yet few are trained or experienced in these approaches.

Because it is broadly based – cutting across all dimensions of human life, including such issues as energy shortages, species extinctions, pollution, disease, breakdown in families, armed conflict, child abuse, poverty, and corruption – sustainability requires participation by all of society in moving beyond the conflicts of debate. And it requires authentic solidarity among individuals and groups where the mindset allows people to make decisions seeking a fair balance between individual gain and the common good.



But, sustainability is not necessarily popular with the people who can most make a difference by understanding and carrying out its meaning. Problems come from two directions. First, it suggests unwanted sacrifices on the part of individuals craving to preserve the status quo. Secondly, the full unfolding of sustainability involves patience and the ability to look to the future. In this regard, there are often not instantaneous gratifications from actions we might take to fix what's going wrong, thus discouraging further efforts. Immediate solutions are not always apparent for problems people face in dealing with daily struggles. As we get caught up in wanting immediate solutions, we unintentionally end up creating even more problems.



In addition, sustainability is not strictly a problem of science or engineering or economics or proper management. It is all of these, and also includes the passion found in the values, ethics, and cultural heritage of people. Scientific data, laws, and economic incentives are not enough. Protecting the environment is inescapably a moral issue as well. Therefore, the process must remain flexible, because what works in one community may not work in another or may work for different reasons. One size does not fit all!

Acknowledgement for uncertainty must inevitably also be part of the sustainability notion. For decisions and actions to be sustainable, they must be ever flexible, adaptable, and creative. You can plan and plan, but then also leave yourself open to discovery! We must always be receptive to the fact that economic development, equal social access and benefits, and environmental health are inextricably linked and connected. Therefore, the choices we make must simultaneously advance concerns in these different sectors in order to minimize unintended consequences (the 3 Cs of sustainability).

Without acceptance of a common philosophy related to what sustainability represents neither the general public nor scientists with significant expertise share a universal model for understanding and addressing issues. It is this lack of a shared conceptual model that prevents communication among segments of society and encourages disciplinary experts to “talk past” their counterparts from different disciplines (Norton, 2005). The absence of a shared understanding sets the stage for ideological thinking to dominate because there is no flexibility for testing reality. The lack of flexibility in discussion of sustainability often allows dogma to influence the debate, and leaves no room for learning from the experience of others or from testing certain ways of proceeding.

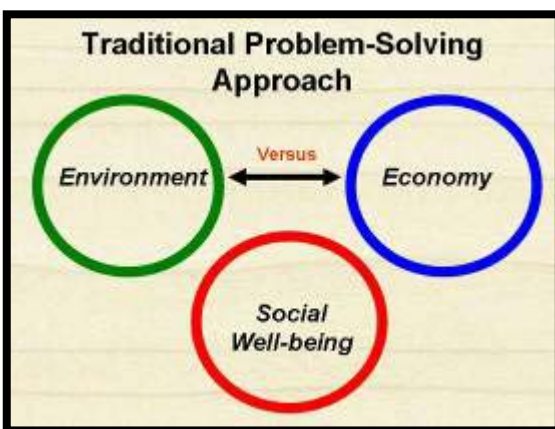
To make matters worse, ideological opponents can gravitate toward polarized theories of how benefits should be derived in socio-economic and environmental sectors to the point that dogmas can block communications and make agreement on common actions more difficult to achieve. Instead of this polarization, sustainability can be thought of as achieving economic health, environmental protection, and social equity objectives in an integrated, comprehensive way, as will be conceptualized in a later section. It is about equal consideration between



economic development and environmental quality, between technological innovation and community stability, and between investment in people and investment in infrastructure.

6.3 Sustainability's Triple Threat

The confusion about sustainability and the inability to act sustainably in today's world is related to the many variables that affect the way human beings live. These variables can be categorized into three major points of view: economic, social, and environmental (Flint and Danner, 2001). These points of view can be distinguished as the triple threat to sustainability because they are traditionally dealt with as separate, isolated structures in our world. Each corresponds to a set of components that has its own distinct driving forces and objectives.



- The economic structure is geared mainly toward improving human welfare, primarily through the production and consumption of goods and services.
- The social structure emphasizes the enrichment of human relationships and achievement of individual and group ambitions.
- The environmental structure focuses on protecting the integrity (reliability) and resilience (flexibility, toughness, ability to recover from change) of ecological systems.

But these structures (sectors) of our world can not be separated when analyzing for sustainable solutions to our global problems, as has been the case in traditional problem-solving (*i.e.*, see the circle diagram above). And in many instances, as the dual-pointing arrow in the diagram above suggests, there are often conflicts between perceived socio-economic needs and environmental conservation objectives, as suggested in the popularly cited conflict of “jobs versus environment.” The end objective of this traditional, piecemeal approach to problem solving is the “mitigation of adverse effects” (Hodge, 2004).

A new model of problem-solving must consider each point of view systematically and strategically, addressing primary concerns and how these relate to one another across the different points of view (Flint, 2004b). In other words, the success of any societal activity should be judged in terms of its contribution to human and ecosystem health together (Hodge, 2004). From this perspective, the concept of sustainability is much more than environmental protection in disguise. The seeking of sustainable solutions is going to require the consideration of relationships between:

1. **Economic concerns**, such as increasing resource needs due to population growth; growing income gaps between rich and poor sectors of society; and extreme poverty – about 3 billion people, roughly half the world's population, are estimated to earn less than \$2/day.
2. **Social and human health concerns**, such as widespread exposures to trace levels of persistent, bio-accumulating, toxic substances; social disintegration resulting from



displacement of traditional lifestyles; the lack of safe drinking water for approximately 1.5 billion people globally; unsanitary urban conditions where as many as 2 billion people lack access to sewers; lack of primary education for approximately 130 million children world-wide; and proliferation of both viral and bacterial infectious diseases.

3. **Environmental concerns**, such as the potential for climate change due to CO₂ and other global warming gases; degradation of air, water, and land in industrialized areas; depletion of natural resources, including freshwater, biomass, and minerals; loss of agricultural land due to deforestation and soil erosion; and threatened wildlife habitats, including forests, reefs, and wetlands.

Integrating these concerns through the application of sustainability calls for both human and ecosystem well-being to be preserved or enhanced. Maintaining one at the expense of the other is not acceptable from a sustainability point of view, because in either circumstance the foundation of life is undermined (Hodge, 2004).

Norton (2005) provides some excellent examples of how considering problems in isolation, usually from an economic stand point, sooner or later can bring about changes on temporal and spatial scales that were unpredicted and also found to be undesirable – thus reference to the “triple threat” to sustainability. For example, successful development of an economic activity may be a sign that the design and planning were good in addressing a particular social need. But as Norton (2005)



suggests it may also be a sign that we have not foreseen the longer-term consequences of the activity. He uses the story of Aldo Leopold to illustrate this point. Leopold suggested in the early 1900s that wolf and mountain lion populations be controlled in the Southwestern United States in order to provide more deer for hunters, significantly increasing the economic benefits from such activities. Unforeseen for many years, however, were the deteriorating aspects of the slow-changing arid physical systems that supported the deer populations prized by hunters. With time the deer populations that grew beyond the carrying capacity of the land because of lack of predators (wolves), overgrazed the vegetation on the plains and mountainsides, undermining economic success in the long-run through the crash in deer population numbers from lack of food. In addition, the loss of vegetation on the mountainsides resulted in extensive erosion and flooding to communities many years after the realization of minor economic benefits from deer hunting.

The lesson from Leopold’s story is that humans have the power and technology to be the dominant force on a landscape and therefore can’t ignore the long-term consequences from



trying to gain short-term economic benefits. In Leopold's case, he did not think about the long-term ecological impacts of his actions in wanting to produce large deer herds for hunters, not thinking about the nexus of environmental, social, and economic problems which can translate into a "triple threat" to sustainability.

As Norton (2005) effectively illustrates "humans are not only actors on the short-term economic stage, but also are increasingly dominant players on an ecological scale, capable of accelerating ecological change by removing a species, which in turn can impact geological formations, such as a mountain." The lesson for Leopold was to distinguish the importance of multiple temporal scales and the associated hidden dynamics that drive them (Norton, 2005).

Success in the short-term with regards to economic goals often overshadows triple threat issues that can set in motion both social and ecological processes undermining the foundation of a stable functioning environment.

Unfortunate lessons we have learned from not considering the temporal scale implications of solving problems as well as the impacts across sectors that result from too narrow a view to taking action include the regrettable outcomes from acid rain, CFCs, dredged and reconstructed waterways, forest harvesting, DDT, oil and gas exploitation, and numerous other activities to enhance our economies.

Consider the example where all the land owners in a region simultaneously clear-cut their forested areas in response to the significantly increased market value of wood, a strong economic incentive (Norton, 2005).

Once the land is cleared the community leaders believe the forest clear-cutting can be mediated by the development of an industrial park and retail stores on the cleared land, thus providing jobs not only for the present generation but also for those members of the community in the future. As Norton (2005) cites, "good investment has given the community a more mature, stable, and even more diverse economy" than taking a different forest harvesting strategy would have. The thinking is that people of future generations will be better off because they have more economic opportunities than a forest economy would offer them.



But what about those people and communities harmed according to "non-economic criteria," the constraints placed on their future choices from loss of forested lands? For example, the loss of the forests can translate into global climate change effects over the long-term, as well as increased erosion, impacts on water storage and recycling, increased flood threats, and the loss of aesthetic appreciation a viable forest ecosystem can provide many.

People thus have equal or better economic opportunities than their ancestors, but do they have more social and environmental benefits?

The concept of a triple threat to sustainability also can play itself out on a spatial scale. Mayer, et al. (2005) describe geographic situations where the importing of forest harvest



products by one country can result in the export of ecological impact to the countries supplying the timber. When a particular country promotes forest biodiversity and conservation while at the same time maintaining a significant demand for wood products, those products must be supplied through trade with others. In these instances the countries exporting timber products are not always able, or willing because of short-term economic gain, to promote similar policies of forest habitat conservation and biodiversity. Mayer, et al (2005) cite the example that increasing demand for both wood products and forest conservation in Asian (*i.e.* China) and European (*i.e.* Norway) countries has placed increasing pressure on forests in Russia.



Another example of socio-economic decisions playing out over a spatial scale comes from examining the fate of many persistent organic pollutants (POPs) in our world today. Through a process known as the "grasshopper effect," persistent chemicals can jump around, evaporating in warm conditions and then settling in cool spots (Flint and Houser, 2001). When the temperature is right, POPs will again take flight and continue hop-scotching travels that carry them anywhere and everywhere on Earth. Scientists detect them wherever they look in the world, even in regions where these synthetic chemicals have never been used. For example, the pesticide toxaphene, used to treat fire ant colonies and never applied further north than Texas, now contaminates fish in wilderness lakes in the Canadian Arctic. Persistent contaminants typical of industrial regions like the Great Lakes have been found in albatrosses on remote Midway Island in the middle of the Pacific (Auman, et al, 1997). The penguins in Antarctica have become contaminated with a

breakdown product of the pesticide chlordane and other persistent chemicals.

Unfortunately, assistance programs intended to help communities in developing countries today often only worsen circumstances for the poorest of the poor because of their isolated focus on a single element or specific problem, opening the door for unanticipated triple threat outcomes. For example, well-intended projects to help communities in achieving access to clean water, thus alleviating many common diseases and causes of death (*e.g.*, Africa), in and of themselves do not move the community to a better quality of life over the long-term. Short-term solutions to public health issues lead to decreased mortality rates, resulting in higher population numbers in many of these rural, isolated communities. These increased numbers require more food and other basic utilities such as adequate housing. Solving problems of disease without dealing with added stresses on nutrition and housing will discount the potential positive outcomes of decreases in disease alone (Pimentel and Morse, 2003).





Placing emphasis on decreasing the death rate from disease contracted from unclean waters while not also taking steps to meet the needs of increasing populations from decreased death rates would greatly exacerbate a region's social and economic problems.

In an effort to provide needed income and alleviate poverty the Nigerian government developed the idea of promoting agriculture of cassava in rural communities.

Without the concurrent development of markets, transportation systems, and/or storage capacities in these rural villages, however, the production of cassava will not translate into improved incomes for villagers.

And if incomes were elevated from successful production of cassava, what would this increased income mean to villagers if they could not spend their money on for example, improved housing, because the materials and skills for building new homes do not exist in these villages? These questions were never part of the formula in initial programming.

Threats to societal and ecological well-being are woven together in mutually reinforcing ways (Gibson, 2002).

If we can begin to judge proposed actions and policies for their economic value, as well as for their ecological and evolutionary affects, we will be following a model of sustainability by associating different human values (those wanting a strong economy and those valuing the natural environment) with the multiple dynamics of natural systems.

Corrective actions must be woven together to have positive outcomes for multiple objectives and informative feedback for needed changes to stay on-track, in contrast to the carrying out of policy that is based solely on short-term economic benefits.

Thus, sustainability involves the carrying out of activities that offer economic benefits in the present without negatively affecting social and environmental choices that are available to people in the future, or in other places.

Unsustainable activities are those that do not consider the "triple threat" to more slowly changing system dynamics such as ecological function, and thus change what today might be viable opportunities into constraints sometime in the future.

Sustainability is a strategy that fully considers the "triple threat" of economic, social, and environmental dynamics in a system context and acknowledges space-time relationships when making decisions that ultimately impact a complex, dynamic system (Norton, 2005).



6.4 Fundamental Truths

Robust and generally acceptable answers to the question “what is sustainability” have remained elusive because all the issues it touches are entrenched in systems that are chaotic and complex (Patterson, 2000).

We can try to understand how these systems operate but, because of significant scientific uncertainty, we can never be sure how they are going to behave as conditions change – leading to much debate about the meaning and implications of sustainability and criticism of the actions of institutions claiming devotion to it (Marshall and Toffel, 2005).

Nevertheless, the diversity of theoretical ideas and applications that point to the need for sustainability approaches has often been driven by a list of basic truths. How do we best use these truths to advance the concept in the mainstream of sustainability discussions where people represent different special interest groups or possess different experiences?

First, it is important to distinguish here between the meaning of truths and what we will discuss later, principles. The statement of a truth represents a reality in our world, a fact that is supported by scientific certainty, irrespective of whether it is natural, social, or economic science.

A principle, on the other hand, represents a belief that forms the foundation of a fundamental doctrine (like sustainability) or serves as a rule, law, or assumption about the nature of a policy.

The work of Ferguson (2005) indicates why a common set of fundamental truths about sustainability can move society forward on a sustainability agenda. He suggests that the human brain might possess pathways that operate in a manner to inhibit logical faculties when a topic of discussion is contentious, like the diverse special interest groups and their discussion of sustainability, where persons have different pre-conceived opinions or the



discussion subject goes against one's belief system. If this is the case then when the average person is presented with information about climate change, water shortages, natural resource declines, affects of population on global stability, pollution, energy problems, etc., there is ample reason to assume that active inhibition of a person's logic can be caused by heavily invested opinions, emotions, and belief systems (often in the form of dogma). As much as anything else this can arise from a feeling of self-preservation (avoiding hysteria) implying

that these issues are “somebody else's problem, not mine.”

The possibility that human logic can be affected in this way does not bode well for sustainability advocates to convince the populace at large that our global situation has problems.



Therefore it is important that we go back to the fundamental, non-refutable basis of why there is a sustainability crisis in today's world. The many examples of stressed natural resources and unstable human societies, in and of themselves, are viewed by many as doomsday paranoia that is unfounded because of ideologies or myths that are perceived as unsupported facts.

To overcome this distorted view our conversation on sustainability has to be in touch with the basic truths that form the foundation for a sustainable future – those facts that pull us back to the roots of the problem. After all, facts you can cling to; emotions just float away. It is important the public at-large recognize these facts as irrefutable truths supported by our understanding of social, economic, and biophysical science. And these basic truths must be presented in a calm, peaceful, and emphatic way so that logic can prevail over pre-conceived opinions and emotional belief systems that are mostly false, but easier to live with.

The fundamental truths that support the need for achievement of sustainability include the following.

6.4.1 Everything material on Earth has limitations.

Earth is a closed system with regards to material cycling (Daly, 1996) such that there is a thermodynamic irreversibility of natural processes (1st law of thermodynamics - nothing is created nor destroyed, just transformed). Obviously Earth will not grow and therefore the size of things, such as population, matters. The closed nature of material cycling on Earth implies there are ecological limits on human activity that dictate we consume less than Earth's natural resources can provide (living within nature's limits) in order to maintain resource sustainability (Hawken, et al., 1999). Sustainability is about recognizing and working within these limits. This includes biophysical limits, such as the amount of productive land, as well as our limited ability to manage complex systems. Biophysical limits inspire a sense of urgency, since there is no way to renew some resources or find substitutes in a reasonable timeframe. Therefore, natural resources must be maintained in persistent conditions and not be stressed by over-consumption beyond irreversible states. And because the limits of many resources are unknown there must be continual awareness for the dynamic, constantly evolving, and often unpredictable properties of natural systems. Our limited abilities suggest that, rather than pursuing options based solely on science and technology, we need to be humble and direct most of our attention to understanding and managing ourselves while avoiding feelings of hopelessness and despair.



6.4.2 Many components of our global system are interconnected.

Problems in the economy, environment, and society are interrelated and global in context (Gibson, 2002), to the extent that human and ecological well-being are effectively interconnected by the nature of the planet's abiotic and biotic components which are intimately intertwined and systemic. Sustainability is a means of addressing these complex



interconnections and interdependencies, such as issues that appear to be separate, like biodiversity conservation and social disparity. Actually these are linked by tangible, multi-dimensional factors that are relevant across a range of scales and interact through positive or negative feedbacks.

Anticipated change in one aspect of life, such as increased personal income, might affect changes in other aspects, such as the demand for food and other resources, type of housing,

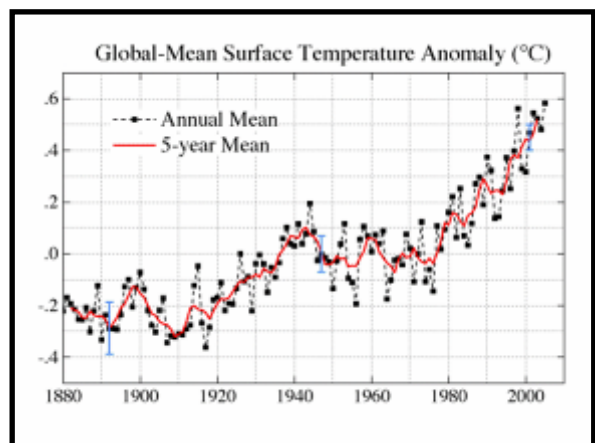


ability to travel between home and work, and so on. Thus, planning to intervene independently in the operation of a given “sector” can be ineffective or cause undesirable results to other sectors. For example, life expectancy of people as they move through time is affected by water, sanitation, and health care. But, improving sanitation and access to clean water and reducing infant mortality might only increase the number of hungry and discontented people in an area, unless the ability to produce or buy more food and better housing is also increased.

The objective of sustainability should not so much be focused upon specific interventions as wholeness of actions. A systems approach is needed in taking account of the relationships between different aspects of life. Consider the story of killer whales and Pacific Ocean kelp forests. The disappearance of massive kelp beds caused governments and conservationists initially to hypothesize that pollution and other man-made disturbances were potential culprits (Flint and Houser, 2001). It turned out to not be that simple. In recent years food of pacific sea lions and seals has decreased causing their population decline. These are a preferred prey of killer whales. With decreases in food, whales started preying on sea otters that live in the giant kelp forests along the Pacific coast. The sea otters prey on sea urchins, which in turn are a major consumer of kelp. By the whales switching to sea otters for food, the otter populations consequently decreased, and their feeding was no longer able to keep the urchin populations in-check. Thus, the kelp has been overgrazed by the urchins to the degree that these massive underwater forests are now declining.

6.4.3 Change is the norm, not the exception.

If we are to thrive in perpetuity, society and its economic systems must maintain a recurring, perpetual vigilance for change that is in harmony with the natural world. Nothing in our world is static. The dynamic, random pattern of natural processes maintains continual changing states of materials and energy (Maser, 1997). In carrying out actions intended to enhance society or protect the environment, because of the complexity and interdependent nature of these systems we must be concerned about the occurrence of unintended consequences from decision-





making (Jacobs, 2000). In particular, if things change for the worse we must be sensitive to the irreversibility of those changes. Mistakes will be made so the resiliency of systems to significant change is extremely important. Resilience can be characterized as the amount of disturbance in economies, cultural relationships, and ecosystems that can be sustained before a change in its structure may occur from outside influences (Axelrod and Cohen, 1999).

6.4.4 All socio-economic factors are grounded in a healthy environment imperative (directionality).

Environment is the plumbing of the planet. Nature is our life-support; there is simply no way around this reality. Without functioning ecosystems nothing else matters. Only when we have a healthy natural environment, coupled with healthy social systems, can we truly prosper economically. We must be cognizant of achieving human well-being without exceeding the Earth's twin capacities for natural resource regeneration and waste absorption (Daly, 1996). Sustainability suggests working to improve people's economic condition without damaging or



undermining society or the environment – development that provides real improvements in the quality of human life and at the same time conserves the vitality and diversity of the Earth. Thus, our economic desires/demands become accountable to an ecological imperative to protect the ecosphere and a social equity imperative to create equal access to resources and minimize human suffering. The interdependence of ecologic and socio-economic concerns requires a re-connection with nature – developing a profound

understanding for the concepts of care that underpin long-term stewardship of the places we call home (Flint and Houser, 2001).

6.4.5 Diversity within systems (natural or human) will contribute to the system's stability and resiliency (includes ecologic, economic, and socio-cultural diversity).

The multi-faceted make-up of society and nature are both important to long-term stability and resilience. Species diversity in nature's ecosystems, with all its varied functions, is one of the more important variables to sustaining the quality of the natural environment (Rees and Wackernagel, 1994) because of effects on biological community production, the stability of the ecosystem, its resilience (ability to resist change), and the effective production of ecosystem services vital to people. In high biodiversity situations the failure of one species does not necessarily mean a system's collapse because another species can probably assume the same ecosystem functions as the disappearing species. The same can be said for a particular culture, a form of





economy, or a human civilization in history. A sustainable human community possesses a healthy and diverse economy (variety of businesses, industries, and institutions which are environmentally sound) that adapts to change, provides long-term material security to residents, and respects ecological limits by maximizing income generation while also maintaining or increasing the assortment of natural assets (redundancy) that yield benefits (Jacobs, 2000). For example, the greater the number and variety of businesses in a community, the more immune that community will be to economic decline from one business failure. Likewise, a healthy human community is characterized as one that supports people of different cultures and ethnicities to offer a wide variety of social experiences (Bernard and Young, 1997). How able are our socio-economic and ecologic systems to develop systemic ways of responding to changes which can safeguard the community from failure? Resilience in human communities as well as natural ecosystems is dictated by the state of diversity and redundancy represented in different community characteristics or species' functions, in the context of a "complex system." Because of their interdependencies, economic policies and the maintenance of ecological integrity need to focus on developing resilience to external economic or ecological shocks. Diversity is the backbone of resiliency in nature. In addition, sustainable human communities develop resiliency strategies that price goods and services to reflect the full social and environmental costs of their provision and link area businesses, products and services, and resources and customers to increase the recycling of money and other resources that will remain in the community. A sustainable community is one that respects and preserves the many different cultural attributes developed over its history and truly commits to the idea of resiliency when it considers impacts on the community 175 years from the present (the Native American seven generation test).

6.4.6 Uncertainty and ignorance are often associated with complex systems.

There should be a general recognition that science and knowledge are intrinsically uncertain, with new information continually altering our perceptions and beliefs. Therefore, decisions based on scientific information must be made in the context of uncertainty (Norton, 2005), but with the recognition that further experimentation and monitoring could lead to more certain outcomes through learning-based management (*e.g.*, adaptive management). And of most concern is the fact that lack of public familiarity with scientific methods hinders a ready translation of science into personal choices (Bernard and Young, 1997). In order to deal with uncertainty and protect against unintended consequences, we must have appreciation for the precautionary principle (Gibson, 2002).

We must encourage the above fundamental (basic) truths that form the foundation of sustainability to become a part of normal public conversation in an effort to develop global solidarity in support of sustainable actions. These realities in our world are the reasons concern for sustainability has become a global phenomenon. By promoting the discussion of these general areas of strong consensus we can influence constituencies with vastly different viewpoints to focus upon facts they can commonly agree to because these truths are irrefutable according to scientific understanding for the way nature and society function. Using these areas of strong consensus as a starting point, it becomes much easier to have a dialogue about problems related to environmental and socio-economic sustainability, using these basic truths for guidance, especially when the true concerns of society are often messy and cross the traditional boundaries of economic, social, and environmental interests.



6.5 A Conceptual Understanding for Sustainability Philosophy

Sustainability is often viewed as a slippery slope, something to avoid approaching if possible because of feared conflict over differing points of view. Uncertainties about the world around us, as well as the contradictions many of them pose, suggest why debates about sustainable development often are reduced so quickly into disputes about whether or not continued material growth and consumption are feasible in what some perceive as a world with limited resources (Flint and Houser, 2001). But sustainability's promotion of holistic advances to problem-solving is important because the situation of declining global resources and accumulating wastes in our world can only be corrected with persistent (perennial; long-lasting), multi-dimensional changes in global socio-economic patterns that move us toward long-term solidarity, security, and resilience (Hodge, 2004).



Persistent is used here because it is important to imply more than just maintaining the status quo, more than just preventing further degradation. Living systems are not static; they are continually unfolding into new forms (Maser, 1997). This means the consequences of our effects on the ecosphere don't die away. They will continue to resonate into the indefinite future. Our task ahead is to shape a sustainable future, using resources less intensively by combining social, economic and environmental strategies that produce opportunities and

minimize constraints for future generations (Norton, 2005) and people in other places through the practice of sustainability.

The combining of economic and environmental considerations in planning and implementing strategies, however, is what seems to create difficulty and cause confusion, resulting in unsustainable actions. We must search for ways to be more open and flexible, examining our capacities to create co-action while doing no harm to the life-giving environmental elements that sustain the future of people (Gibson, 2002). Considering the undeniable truths listed above that cause us to think about sustainability in the first place, is a good way to begin the process, getting everyone on the “same page.”

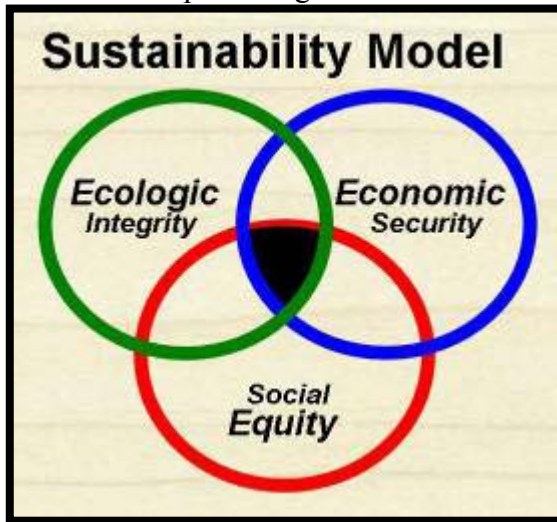
We must fully appreciate the environment's relationship to our economic and social systems. Misleading answers to questions and ineffective solutions to problems will be the outcome by looking at any one of these parts of our world in isolation. Moving towards sustainability therefore demands better understanding of complex, intertwined, and dynamic conditions – social, economic, and ecological. Economic activity can promote a healthy environment and healthy ecosystems can enrich their inhabitants. These elements are easy to talk about and conceptualize, as we will discuss below, but as Gibson (2006b) notes it is extremely difficult to take action with regards to the public view of issues and problems that often don't fit nicely into one of the three sectors of environment, economic, or social interest.



Therefore, it becomes important for us to take advantage of the power of conceptualizing (being able to visualize via diagrammatic linkages) the theoretical underpinnings of sustainability as a foundation for influencing cross-cutting actions that will best serve beneficiaries. Sustainability is not a "thing we do" or a "program we carry-out." Instead, it is a concept, a model, by which we reason in a "world of linkages and interdependencies" (Gibson, 2002) and a way we choose to live; a theory that uses common sense and intuition as a baseline. Sustainability should be viewed as a philosophy, or ethic, affording people the ability to consider long-term consequences of actions and encouraging them to think broadly across issues, disciplines, and boundaries. This encouragement can come from visualizing the interconnections that sustainability implies.

As an attitude, sustainable development exposes citizens to the ramifications of their thoughts and actions on others, their local environment, and the surrounding landscape, as well as motivating and organizing people to direct change within the context of responsibility for future generations. It would be absurd to care for human beings and not care for the human habitat. Therefore, sustainability is the stability between humanity and human habitat and it requires the actions of a social order guided by solidarity. This attitude is more easily understood if it can be visualized as a conceptual framework. For example, much of the literature attempts to construct an understanding for sustainability by presenting its implications through the use of overlapping circles which reflect traditional modern disciplinary categories. Gibson (2002) illustrates how some practitioners promote a two circle version (ecological and socio-economic) while others prefer three circles (ecological, social, economic), or five (ecological, social, economic, cultural, political).

Here a conceptual diagram of three overlapping circles (see adjacent diagram) is used to help



visualize the interconnectedness of modern humanity's economics within the dictates of its ecological and societal (human) bases of support, emphasizing that material gains alone are not adequate measure of human well-being (Gibson, 2002). By this model we are guided to operate under the rubric of sustainable action in which any project that focuses its efforts in a sustainable context, means it strives to link economic, social, and environmental parts of the community to strengthen its overall fabric – actions that attempt to simultaneously address issues of ecologic integrity, economic security (viability), and social equity (Flint, 2004b), resulting in well-being for all parts of the community (darkened intersection

of three circles in the adjacent diagram).

Projects that focus upon only one of these elements are usually not good examples of efforts to achieve sustainability. All resources – human, natural, and economic – are interrelated, and therefore must be addressed in concert with one another. Each element of the overlapping circles diagram is interconnected to demonstrate the interaction between all parts of life and illustrate the need for their equal consideration. To isolate one from the others is not an accurate depiction of the processes of sustainability and the values used to implement it. Members of a sustainable community realize that long term economic security depends upon having a sound, functioning

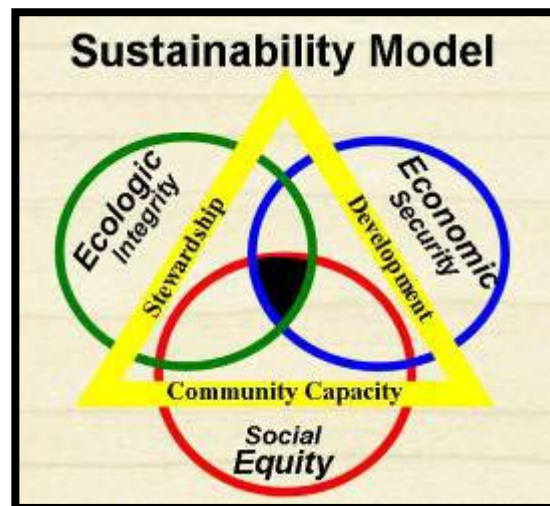


ecosystem, a healthy social environment, and full public involvement. Once the overlap and integration of sustainability elements is identified, accepted, and used as a guide in problem-solving design and implementation, people can begin working collectively, extending the area of overlap and integration demonstrated in the Sustainability Model (diagram above). The key to success of this strategy, however, is that we always treat one another with dignity, compassion, and equality while we explore the hidden potential of the almond-shaped region of circle overlap and the progress to be gained from serious integration of the different issues that challenge us. This happens through solidarity. Socio-economic problems can be resolved only with the help of all the forms of solidarity: solidarity of the poor among themselves, between rich and poor, of workers among themselves, between employers and employees in a business, and among nations and peoples. International solidarity is a requirement of the moral order; world peace depends in part upon this.

In considering the three overlapping circle Sustainability Model shown above, it is important to clearly articulate what each of the three circles implies (Flint 2004b). The definition of these three sustainability elements (sectors) is:

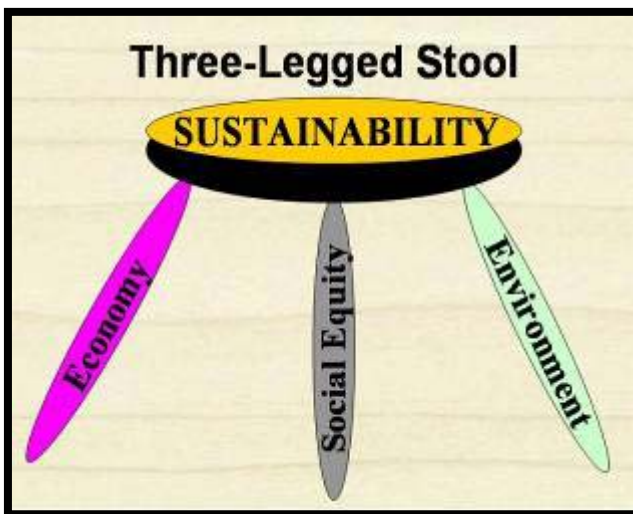
- Economic Security (*Compatible with Nature*) – development that protects and/or enhances natural resource quantities through improvements in management practices/policies, technology, efficiency, and changes in life-style.
- Social Equity (*Balancing the Playing Field*) – guaranteeing equal access to jobs (income), education, natural resources, and services for all people; total societal welfare.
- Ecologic Integrity (*Ecosystem Capacity*) – understanding natural system processes of landscapes and watersheds to guide design of sound economic development strategies that preserve these natural systems.

If communities are focused on developing a more sustainable economy and doing it in a way that seeks equal consideration for modern society, economics, and nature (the three overlapping circle model above), then stakeholders will be guided by the community development triangle (shown in yellow in the adjacent diagram). According to this representation the **development** of economic security for a place requires consideration of equal opportunities for all, diversity of economic structure, and environmentally sound production design to minimize economic leakage through the development of value-added processes and promotion of local consumption. The triangle illustration also suggests the closely linked elements of **stewardship** to enhance a locale's ecology, natural resources, ecosystem services, and people. Furthermore, in order to achieve sound support mechanisms between economic development and stewardship, there must be a healthy foundation of **community capacity** upon which to enact identified actions, which includes strong leadership, full public involvement (civic critical mass), and collaborative decision-making and action. Without the triangle base, the sides of the triangle will not be supported. Traditionally, ligaments connecting these sides have been torn and one side gets worked on without considering the others. Therefore, achieving sustainability involves connecting the sides of the triangle (Flint and Houser, 2001).





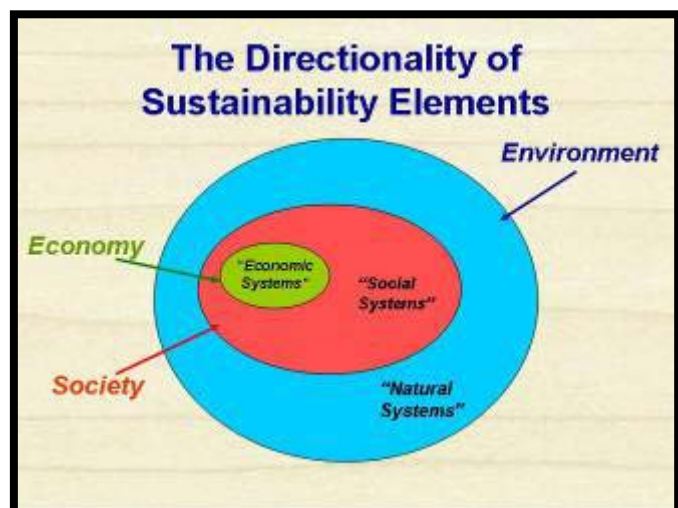
In this context sustainability, as implied by the three interconnected circles, not only embraces wisdom and stewardship in the management of natural resources, but also considers the responsibility of fulfilling basic human needs such as food, shelter, clothing, and the provision of economic means through which to achieve these needs for present generations, without compromising the ability of other species sharing our world or future generations to meet their own needs. In addition, the challenges humanity faces can only be met if people everywhere acquire an awareness of global interdependence. Then, as we identify with the larger world a sense of universal responsibility will follow suit with the awareness that things are entwined and must be acted on in concert as influenced by the understanding that conceptualization of the above Sustainability Model provides.



Another way of visualizing the integrative idea of sustainability is to consider a three-legged stool, where each leg respectively represents one of the basic elements – economic security, ecologic integrity, or social equity (see adjacent diagram). If one of the stool legs is removed, the stool falls over, emphasizing the importance of all three legs to maintaining the upright position of the stool – the importance of all three sectors to supporting the achievement of sustainability. The metaphor of the stool represents an easily imagined way of understanding how sustainability is built

upon a foundation of equally considering and simultaneously acting upon these three sectors of our world.

In these portrayals of the conceptual framework that represents the philosophy of sustainability, the depiction of the circles is to imply areas, especially in overlap of the circles, where damage must always be avoided and improvements always sought (Gibson, 2002). Thus, any strategy for sustainability must seek positive effects on ecological, social, and economic conditions over the long-term, preserving opportunities for and minimizing constraints on future generations (Norton, 2005). “Persistent negative effects in any one area mean that the potential for sustainability is being compromised” (Gibson, 2002).



Although it is true that all life depends on natural resources (Wackernagel and Rees, 1996) and that society is unavoidably dependent upon environmental conditions friendly to human life (Gibson, 2002), economy and society are no less important to humanity than ecology.



There is no serious strategy for preserving and enhancing ecological integrity that does not also involve improving human well-being, both its social and economic elements, as we learned from the work of the Brundtland Commission (WCED, 1987). It would be absurd to care for the human habitat and not care for human beings. This overall relationship however, is most accurately depicted as a "directionality" of dependence (Flint, 2004a); where economic and cultural activities are integrated into natural processes in a cyclic fashion so as not to degrade the environment upon which economic prosperity and social stability rest. This inevitable relationship between human cultures and the ecosphere can be depicted by a series of concentric circles – with the circle of economy inside the circle of society, which is in turn inside the circle of environment (see above diagram). As Gibson (2002) states, “this is not the dominant way of seeing the world in cultures where the economy appears to rule. But it is, arguably, the way things really are. The implication is that anything in the smaller circles that undermines the larger is weakening its own foundation.”

Why does environment play so strongly in our sustainable future? Because, as suggested by this diagram, the socio-economic spheres are inside of the ecosphere, which implies there is no economy outside of society, and no known socio-economic activity that is distinct from the surrounding environment. The totality of the human economy is measured by the total number of people multiplied by their consumption and waste. Thus, there is consistently a dependence of economic activity on human and natural resources (Daly, 1996). Think about it – we are the only inhabitants of the planet who have strained its resources so critically. Most species of plants and animals have built-in controls. They don't truly have an economy that they must continually grow. Their supply of food and habitat conditions limits their expansion, and if these become overburdened, their numbers suffer. Since most life forms are somewhere on the food chain, they often are rescued by predators that help to regulate their population, influenced by the many coincidences that shape their lives (Jacobs, 2000).

Not so with humans! Human populations through history always tended to outgrow subsistence, so disease and famine in the past would even things out (Diamond, 2005). Technology and the growth of cities, however, have thwarted this pattern of balance. Ultimately our present population could become stable by increasing the death rate beyond the human birth rate. This seems to most people, however, to be an untenable solution! Instead, we must begin assuming the stance that humans will always be affected by their surrounding environment, natural or artificial. Thus, to act sustainable we must always consider environmental change, because in the co-evolution of human and natural systems, humans are directly related to and affected by the environment around them. Changes in the



human system and its support system, and changes imposed upon humans by the environmental system, must be slower than corresponding adaptation processes in the human system and the natural system it depends upon. Once we can visualize the directionality of the three circles, the philosophy of sustainability begins to become clearer and can enhance our integrated discussion of problems and design of solutions.



Consider the production of electricity in the context of the concentric hierarchy of circles above. In order to have a prosperous economy, society demands the continued and added production of electricity. In order for electricity to be produced to power our economies, society must develop the appropriate technologies, as well as regulate its demand for this electricity, in order to effectively use the supply of water (environmental issues) in a sustainable way for producing electricity. Electricity requires sources of cooling water in traditional fossil fuel power production plants and also requires the continuous supply of flowing water in hydropower production facilities. Thus, the directionality of this scenario is that our economic ventures can not be driven by electricity if society does not provide the human capital resources and there are not adequate supplies of freshwater. In a feedback manner, the use of water as a natural resource for creating electricity requires that it does not impair other users of that water, by the electrical production discharging pollution or in other ways degrading water as an output.

The existence of economies is based upon the existence of societies and their capacity to add value to natural resources. Furthermore, society cannot exist without an acceptable environment and the resources that environment provides for basic human needs (Gibson, 2002). This directionality is analogous to a three-stage rocket ship propelling or building and enhancing natural capital (environment) first, which powers human capital (society) second, and finally, propels financial capital (economy) through the engines of society and the environmental resources society adds value to (Maser, 1997). Imagine for a moment, humanity – its economy and society – can't inhabit the moon independent of the Earth. The moon's environment will not allow it.

This conceptualization of sustainability's directionality across sectors or disciplines comes to the forefront when we consider all the media attention on world climate change and potential resulting dangerous economic and social impacts. If weather and global climate significantly change faster than life can adapt, major extinctions will occur, as when the dinosaurs disappeared from the Earth. Likewise, if changes in our environment affect our climate, evidence suggests these climate alterations will for example, impact coastal cities with flooding, change the makeup of whole bio-regions around the world, directly affecting the economies and comforts of society. This consideration for the well-being of all life is not only extended for those to enjoy in today's world, but for future generations as well.



It is important to emphasize that the preceding efforts to present in a visual form images to assist public and private sectors of society in better understanding the concept of sustainability should not be confused with activities intended to execute strategies that will be successful in moving society closer to a more sustainable world. Gibson (2006b) cautions that although sustainability is often characterized as the “intersection of social, economic, and ecological interests and initiatives,” when it comes down to people discussing and developing problem-solving approaches, these policies are most often derived by addressing the three sectors separately and



in isolation, which can result in unsustainable outcomes. In these instances he argues that in most cases the outcome actually ignores the interdependencies of social, economic, and ecological issues.

The brilliance of the sustainability movement is its demand for seeing things as interconnected and interdependent. As demonstrated by the conceptual framework presented above, the greatest power of the sustainability concept lies in its emphasis on integration – its ability to provide a bridge between disciplines and interests, between the pieces of the whole and the whole itself (Hodge, 2004). Traditional problem-solving, as described earlier, has always fallen short in this regard. For societies to act sustainable, they must first be aware of what sustainability is and theoretically understand its intentions with regards to “looking for links and seeking mutually reinforcing gains” in all sectors (Gibson, 2006b). The image of sustainability characteristics presented above is the first step in assisting humanity to identify a philosophy they can relate to. Once solidarity around this concept happens and these ideas are acceptable then, as described in following sections, other methodologies and packages of programming come into play to actually enhance the taking of actions that will move society toward goals of sustainability. But the acceptance of a philosophy or ethic is the first step! In other words, sustainability is tightly coupled with solidarity. And this acceptance is made easier through visualization exercises.

6.6 A Simple Interpretation of Sustainability to Proceed

Acting sustainable is about re-connection with nature, copying what nature does (McDonough and Braungart, 1998), and developing a profound understanding for the concepts of care that underpin long-term ecologic, social, and economic stewardship of the places we call home. In its simplest terms, sustainability means not turning resources into waste faster than nature can turn waste back into resources and securing people’s quality of life by maintaining an adequate advantage for these processes of nature (Wackernagel and Rees, 1996). Just how this is to be accomplished in light of continuing increasing global population numbers has been and continues to be a matter of debate and commands attention almost 20 years after the Brundtland Commission called for sustainable development, because many signs that alarmed the Commissioners back in 1987 are still with us and now other new global concerns have also grabbed our attention.

Practicing sustainability is broadly characterized by the integration of information from a number of different disciplines. Thus, developing a comfortable understanding for sustainability can often be messy, especially at the grassroots level where community values do not usually fit nicely into disciplinary boxes. Without commitment to a full understanding for the interdependent and linked nature of most issues of sustainability (Flint, 2004b), as visually implied by the three-legged stool and overlapping circles conceptual models discussed previously, one may find themselves adopting a discipline approach to planning and implementation (often associated with activities that wrongly focus on each of the three overlapping circles, one-at-a-time) with the hope these disciplinary elements will magically come together at some point. This kind of analysis can cause attention to focus on competing objectives, rather than on needs and opportunities for positive advancement of interrelated human and ecological interests (Gibson, 2006b).



An alternative is to not become bogged-down with a disciplinary approach. Instead begin developing a simply stated concept of sustainability that most can agree with. Then establish a community-based set of principles that integrate information characterizing human understandings, relationships, and activities, that will actually move across the traditional sector boundaries (Gibson, 2002) that must be integrated to successfully address sustainability issues.



Beyond the uncertainties that fuel this debate, to develop a simply stated concept for sustainability we need to think about and discuss the things that are important to our way of life in our communities and affect our core values: such things as our homes, our children, our jobs, nature, where our water comes from, the air we breathe, and the food we eat. These topics are what sustainability is really about, especially with regards to posterity, and believe it or not they are interconnected. Although variations in understanding sustainability may occur, a number of basic concepts almost always come to mind, including:

- awareness of the multi-dimensional impacts of any decision (broadly categorized as economic, environmental, and social);
- the need for harmony and solidarity among the different dimensions across sectors, themes, and scales of place and time; and
- concern for the well-being of future generations.

Amongst any group of people with competing interests, however, you rarely would observe agreement on a formal definition for sustainability. Everyone sees the world through their own pair of glasses and these glasses often present different views. Dialogue will always cause special interests to surface. To overcome the obstacles in agreement created by these special interests people need to begin by talking about the simple things they agree upon. The essence of sustainability therefore, is to take the contextual features of economy, society, and environment – the uncertainty, the multiple competing values, and the distrust among various interest groups – as givens and go on to design a process that guides concerned groups to seek out and ask the right questions that will help them progress through incremental improvements toward common goals despite challenges (Norton, 2005). This process should be characterized by features that include: flexibility; diversity and stability (ecologic, economic, socio-cultural); respect for other people's dignity; consideration of unintended consequences (change is the norm, not the exception); and notions of enoughness and reversibility. When not hindered by a definition for sustainability that has been derived someplace else and used in the context of "one-size-fits-all," community deliberations are free to consider many different concerns, including their own social values that will affect the opportunities of people in other places and future generations.

By employing a form of hierarchy analysis, where we



1. acknowledge the standard and responsibilities established for a sustainable society by the work of the Brundtland Commission,
2. recognize the short-comings of and challenges to the World Commission on Environment and Development (1987) definition,
3. agree on a set of fundamental truths that influence us to look for alternative lifestyles,
4. decide to holistically address the diversity of these irrefutable truths by developing a sustainability “philosophy” that promotes solidarity on the interdependent, linked nature of sustainability thinking and action through images that visually demonstrate these characteristics, and

5. then formulate a simple, schematic definition for sustainability, we can realign our



perceptions of socio-economic and ecologic systems with what we, as society, really think are important. Then we can begin to see how community-based deliberations freed of ideology and preconceived notions; can cut through most fact-value dichotomies (Norton, 2005). This can be assisted through the

inputs of mission-oriented science where scientists, policy-makers, and the public are all fully engaged in a form a “citizen science” that engages the expert-way-of-knowing with the public-way-of-knowing.

This hierarchical analysis, to truly establish the values important to a particular community through their own dialogue and struggle for agreement, must be developed from the bottom-up. In this way the community can avoid the trappings of trying to work with a “one-size-fits-all” sustainability definition conceived somewhere else. The hierarchical analysis will promote a community’s solidarity around a simplistic definition of sustainability. This simple, or as Norton (2205) suggests, “schematic,” definition of sustainability can be turned into specifics by real communities of people that choose important criteria and indicators based upon these particular values. So the details of a particular community’s sustainability criterion will have to be filled in by the community itself, in the process of choosing goals, priorities, and indicators in an open, deliberative, and democratic process (Norton, 2005). No definition from someplace else could include or dictate all of the locally driven value choices.

So what would a simple, graphic definition of sustainability look like for a community embarking upon this journey? We really have no way of knowing what the “needs of future generations” might be, as they are highlighted in the Brundtland Commission’s definition, which has left it fairly useless from an operational perspective. As defined by the dictionary,



however, sustainability implies a relationship among generations. And the nature of this relationship is such that the actions of the present to fulfil their wants and needs do not destroy or close off important and valued choices for generations in the future (Norton, 2005).

But in today's globalized society people in other places are just as likely to be impacted from the actions of particular parts of society, as are future generations. Sustainability is thus most basically acceptance of responsibility by people in a place and time for impacts of our sometimes violent actions on other places and the future. In a similar way, there is a notion of "faith development" found in a number of religions that involves moving beyond the self and seeking "to act in the world in a way that increases the total well-being of the rest of the world" (Walker, 2006). Most religious traditions, and most religious institutions, have always declared that humanity has a duty of stewardship toward nature and natural resources. These natural resources are a gift of God to humanity, and it is the moral duty of each human generation to preserve this gift for future generations. It is unlikely that many would attain such a state but it presents a level to try and achieve in terms of taking the whole idea of caring about people in other places and in the future right into the marketplace. In practice, however, to this point in time this duty has often been relegated to a very low priority.



Large-scale actions, in and of themselves, or combinations of actions by individuals or a particular community, usually related to some short-term economic prospect, can irreversibly change the many opportunities and constraints provided by much more slowly evolving natural resource conditions (Norton, 2005). Living sustainably is maintaining the important mix of options and opportunities while creating no new and onerous constraints; living unsustainably is losing them, narrowing the range of options that people in other places or subsequent generations can choose among in their attempt to adapt, survive, and prosper.

Instead of attempting to understand the potential needs of the future, present societal members should instead be concerned about making sure that the opportunities they have to achieve their own values, the things important to them, are not in any way constrained for other places or the future by actions they might take. To hold open options requires the complicated and difficult process of a community attempting to conscientiously specify what obligations toward people in other places and the future it accepts, which require protection of the stuff so designated as long as present society's costs are bearable, and to compare those ideals its members would like to project into the future with the very real and present needs of people in the present generation (Norton, 2005). The communities themselves are responsible for choosing what is important to monitor and what is important to protect, not inhibited by some kind of sustainability definition established somewhere else.



Can a culture survive for many generations with its current practices and institutions? Each generation has an obligation to regulate the long-term impacts of its activities (Norton, 2005). “An action or a policy is not sustainable if it will reduce the ratio of opportunities to constraints on people in the future” (Norton, 2005). If individuals fulfil their needs in such a way as to destroy important options, for example individuals in earlier generations over-consume and do not create new opportunities, and then they will have changed the environment that subsequent generations encounter, leaving more constraints and reduced opportunities, making survival more difficult. When we state a set of ideals (values) for what we want our community to be like in the future, we identify those options and opportunities that give meaning to life in a place (Norton, 2005). “Important options” represent a variable to be specified as particular communities articulate their values and decide what is important to save for posterity.



Thus, interpreting sustainability as simply as possible in order to move forward with cooperative planning and action is to see sustainability as a function of the degree to which members of society will not carry-on actions that decrease opportunities or increase constraints, in comparison to present conditions, for people in other places or in the future (Norton, 2005). And how do we achieve this aspiration? Sustainable futures are not clear in advance but must evolve from a program of participatory social experimentation and learning (Norton, 2005). And this process must encourage the connection of scientific information with cherished human values (Norton, 2005). Sustainability includes both a descriptive component – it says something about what will be left for people of the future – and an evaluative component – it expresses moral concern about whether our legacy is fair to future people (Norton, 2005). Therefore, communities must be willing to learn from experience and accept the initial uncertainty of situations in order to move toward sustainability. We can use the “schematic” understanding of sustainability as suggested by Norton (2005) and apply the process tools of adaptive management, described later in this presentation. In this way a community will set approximate goals and adjust them as new information comes in from science-based measurement and management experiments.

6.7 What Sustainability Is and Is Not!

With the amount of focus on sustainability these days, it is a good idea to make clear what it is and as importantly, what it is not. Sustainable development is not walking a tight rope, seeking some mythical balance between economics and environment (Bernard and Young, 1997). This leads to habitats half protected, economies weakened, and personal principles bargained away.



The primary characteristics of unsustainable behaviour include:

- lack of understanding for human's connection with nature;
- economic deprivation;
- concentration of money (in a few hands) and an imbalance of power;
- an economy driven by profits at any cost, by greed, by consumption;
- communities competing with one another for jobs;
- inaccurate perceptions of others;
- lack of accountability in government, in corporations, and in individual behaviour;
- placing blame "out there" rather than accepting responsibility at home;
- barriers between work, home, play – e.g., physical separation, sprawl, and isolation;
- lack of trust in "the other;" and
- conflicting goals, strategies, and analyses.

To some sustainable development is maintaining the status quo – “keeping things going” in some state which they presently exist in. Sustainability has been co-opted by organizations that are deeply vested in maintaining the status quo. Corporate policies that call for “sustainable economic growth” are a prime example. While some small economies may increase in size with insignificant consequences, sustainability is not about unbridled economic expansion, especially where our impacts are already causing social and ecological stresses. Maintaining the status quo is not what sustainability is about!

To mistake sustainability for environmental conservation, or vice versa, is also not helpful if we really want to be sustainable. Concerns around protecting or conserving the environment could be regarded as working to make it sustainable. This focus only on the environment, however, is not always effective. All too often sustainability is equated directly with environmentalism and the belief that advocates want to protect the environment at all costs, including people's jobs and general societal well-being. In contrast, advances in our scientific knowledge on a global basis have led us to the understanding that environmental, economic, and even social issues are more interdependent than we realized. No matter what it might be that we as humans' desire, consume, or appreciate in our socio-economic world, it has an origin from environmental resources. Therefore, other areas of our lives and our planet need to be included in the sustainability discussion. If we are acting sustainable from a broader, system-wide perspective the environment is preserved.

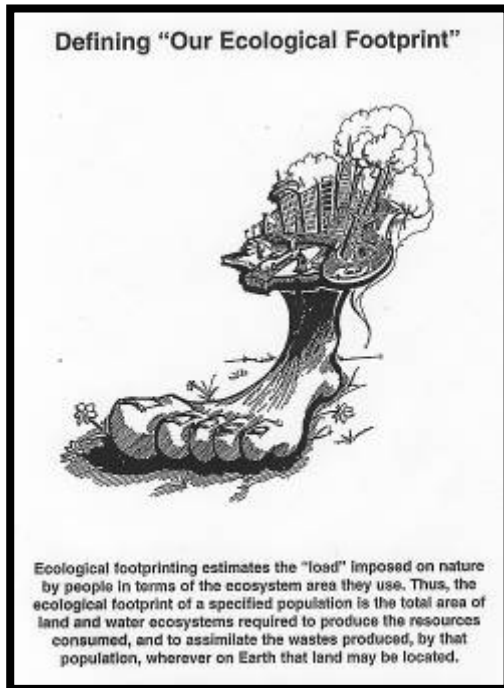
Achieving sustainability is also not merely about a series of technical fixes, about re-designing humanity or re-engineering nature, in our continuing desire to compete in the global economy. Even the best technologies, policies, and regulations will not put society on a sustainable course without a fundamental shift in our thinking and actions, along with extensive engagement of all global citizens. We can assume technology might eventually find a replacement for a disappearing valuable natural resource, but what if that particular natural product is the only thing that can cure a child's disease?

Likewise, the transference of a problem from one place or media (e.g., air, land, or water) to another is not a sustainable solution. Much attention today is paid to the idea of “carbon trading” (also known as pollution trading) where one industry might be allowed to produce more CO₂ by paying another industry to produce less of this greenhouse gas. This transference violates a basic premise of most sustainability meanings that we lessen our total impact on environmental resources. We are not lessening the impact in a situation like this,



but instead simply moving the impact from one place to another. The idea of pollution trading also goes against concepts of sustainability requiring we consider trans-boundary and cumulative impacts on the different sectors in our decision-making processes.

We have been less than sustainable to-date and maybe some now feel guilty about this. The upside is that we have the power to make changes, to make sure that we do not lose too much more from here on. Ours is a world that does have limitations and what we now have left we really do need. But, sustainability is not a trend or phase or even a conditioned pattern. It is



not a state in which a compromise (some win; some lose) can be struck. To be sustainable requires ultimate agreement, solidarity, on everybody's part (everybody is a winner). Only partially implementing sustainable development defeats sustainability altogether. Like two sides of a coin, solidarity and sustainability are tightly coupled. Sustainability is solidarity inside out. There can be no sustainability without a social order guided by solidarity. There can be no authentic solidarity without seeking sustainability. Likewise, leave one process out of the equation, or in some other way alter a connection between important economic and environmental or social elements, and the system as a whole will gradually be deflected toward an outcome other than that which was originally intended.

Sustainability is most fundamentally equity over time and place, making sure we consume less than

Earth's natural resources can provide. Economic development (the foundation of today's globalization pattern) that is sustainable must be both environmentally sound and shared fairly among all societal members. Members of a sustainable community promote development that is ecologically regenerative, socially stable, economically prosperous, and politically peaceful. Sustainability is about monitoring how we relate to our physical and social worlds and, in many cases, reducing the scope of our economic activities (ecological footprint) to ensure the well-being of current and future generations (Wackernagel and Rees, 1996).

Sustainability is more a philosophy than an actual scientific concept – a philosophy that is guided by scientific understanding. It's the focus for a new debate about the shape of the future, a signpost pointing to a general direction that we must take while the debate is carried on about the best path forward (Gibson, 2002), based upon sound science.

Sustainability is **anthropocentric**, with a sharp focus on interpreting and regarding the world in terms of human values and experiences. In contrast, animals don't think about sustainability, they just do what they know. But, sustainability must be approached by humans from an ecocentric perspective, where ecosystem health is a primary concern, because only with environmental health can we sustain conditions and circumstances that foster the well-being of our species. In other words, people must view themselves as part of the ecosystem. This perspective applies to all people everywhere, and draws heavily on science, ecological economics, and ecological psychology, but acknowledges that other points



of view are equally valid (e.g., religious). It requires that we respect different “ways of knowing” when focusing on world views that support various attitudes and actions because they shed light on how people relate to the world around them, what has meaning for them, and their beliefs about what lies within and beyond their control.

Sustainability involves planning for the well-being of future generations by **reflecting on the past**. A useful timeframe involves planning for the next three generations by reviewing what conditions were like over the previous three, and how those people adapted. Society can learn from human history on Earth by close examination of lessons learned from all the past civilizations that did not succeed, in particular looking at social and technological changes at the global level with an emphasis on the last 200 years.



At the heart of an ‘integrated’ or ‘holistic’ approach that characterizes sustainability is a determination to understand and take account of the relationships between different aspects of life through a systems approach (see diagram below). The socio-economic, cultural, environmental, and physical development of any place comprises a complex set of relationships between different factors. These interrelations need to be fully understood before the nature of any intervention can be determined. For example, in considering

strategies to reduce poverty there are several dimensions that require attention.

- We want to sustain communities as good places to live, that offer economic as well as other opportunities to their inhabitants.
- We want to sustain the values of society – things like individual liberty and democracy.
- We want to sustain the biodiversity of the natural environment, both for the contribution that it makes to the quality of human life and for its own inherent value.
- We want to sustain the ability of natural systems to provide life-supporting “services” that are rarely counted by economists, but which are estimated to be worth nearly as much as total gross human economic product.

If we recognize sustainability as the capacity of humans to harmoniously coexist in a manner that maintains wildlife, wildlands, decent environments, social equality, cultural freedom, economic well-being, and national security today and for future generations, then we must acknowledge that sustainable development is not only a scientific and technical challenge: it must also be approached as a moral/ethical question. In this way, sustainability encourages a re-connection with nature, developing a profound understanding for the concepts of care that underpin long-term stewardship of the places we call home, offering people an ability to fully appreciate the environment's relationship to our economic and social systems.



7. Contribution by Prof. Dr. Lloyd C. Williams - Moving Beyond Human and Organizational Incongruence¹³

This chapter explores the factors that block the creation of congruence in people and organizations and explores strategies that can simultaneously and congruently move people and organizations to a path of sustainability.

Creating a Context for Dialogue:

Developing a short treatise on congruence and sustainability may be seen as a daunting task. Daunting in the eyes of many, because on the surface, the two thoughts – congruence and sustainability – can be seen as anathemas to one another when trying to discuss healing and connected actions between people and organizational systems. Yet, the overarching purpose of this short treatise is to demonstrate the connection and pathway for understanding people in the world of work and play, and to give a congruence perspective for the development of sustainable thought and action in the lives of all.

Congruence and sustainability are two terms that are often viewed as “apples and oranges”. Congruence focuses on the ability of people and systems to align perfectly ensuring that words, actions and thinking match (Williams, 2002; Eckstein, 1997). Sustainability has historically been viewed as the tenuous balance in nature to ensure that life and nature are balanced for the long term (W. Li, 2005). Yet, when viewing these two concepts holistically, what has been considered anathemas...the human being versus the natural world..., actually represent the true connectivity of humanity and nature.

In *Creating the Congruent Workplace* (Williams, 2002), *congruity* and the process of *becoming congruent* was defined as the creation and embracing of balance, alignment, integration and transformation as the key anchors in understanding and reframing who we are, how we think, when we act and what *context* drives our personal and professional development – our being if you will – versus the compartmentalized *contents* and sound bite *processes* that drive living and corporate survival (p. xvii). The perspective from the definition focused on the thoughts and actions that often drive performance. When persons were asked to narrow their approach, provide their professional history in one page, give information in bullets, think only as the team thinks, dress only as the organization perceives, look like the predominant culture; each component of the required actions marginalizing humanity and its uniqueness. Revisiting this shall occur later in this treatise.

Sustainability, according to Wikipedia, is a system concept relating to the continuity of economic, social, institutional and environmental aspects of human society, as well as the non human environment (<http://en.wikipedia.org/wiki/sustainability>, 2006). Sustainability is a means of configuring civilization and human activity so that society, its members and its economies are able to meet the needs of people while preserving the biodiversity and natural ecosystems and planning acting for the ability to maintain these ideals in a very long term.

¹³ Moving Beyond Human and Organizational Incongruence has been drafted by Prof. Dr. Lloyd C. Williams, D. Min., Organizational Psychologist, Chief Executive Officer of the Institute for Transformative Thought and Learning.



Contextually, boundaries are created when dialogues occur on sustainability and congruence. The chart, following, details boundaries that frame dialogues on the two concerns.

SUSTAINABILITY BOUNDARIES	CONGRUENCE BOUNDARIES
Addressing cautiously risk, uncertainty and irreversibility	Clarity in all thoughts and actions
Ensuring appropriate valuation, appreciation and restoration of nature.	Collaboration as the baseline of self with others
Integration of environmental, social and economic goals in policies and activities	Complements or Anchors that ensure balance in thought and deed
Equal opportunity and community participation	Choices that effectively utilize beliefs and values to remain in balance and in sync with self.
Conservation of biodiversity and ecological integrity	Constants that create synergy and comfort with choices and decisions.
Recognizing the global dimension	Consequences that drive adherence to personal and communal values and beliefs deemed critical
A commitment to best practices	Change practices that adhere to underlying beliefs and values
No net loss of human and natural capital	Capacities that drive pathways for movement to expand and grow
Adhering to the principle of continuous improvement	Culture that sets the baseline for thinking and action; ensuring that beliefs and values are culture cantered
Good Governance	Congruence that all the characteristics that drive harmony are cantered in the person as an internal reference point
(http://en.wikipedia.org/wiki/sustainability)	(Williams, 2002)

Table 1: *The boundaries of Sustainability and Congruence*

The most poignant realization becomes the foci of the dialogues. Explicitly, congruence seems to focus on the internal referencing of humanity from an inside-out perspective, while sustainability's focus is on the external referencing of society and culture. Unfortunately, dialogues that occur among business, educational, government and community leaders often focus on the external concerns of sustainability without the inclusion of congruence, the essential characteristics of human interaction and human sustainability. To that end, the dialogue occurs here.

Balancing Sustainability and Congruence:

As the dialogues that historically and currently occur among business, education and governmental decision makers, when issues of sustainability arise, focus on the external factors of human and organizational performance; rarely is completeness a result of the discussion. This is not an indictment of the concept of sustainability, rather, the short-sightedness of the decision makers. The process of creating sustainable change, personally and organizationally, is about the understanding and creation of reasoned balance and



alignment, a strategy that I call congruence building. This process explicitly focuses on creating a metanoic shift –a change in thinking– that establishes different outcomes for the work, growth and change within organizations AND among people. The Society of Human Resource Management says that “employees will spend more than 70% of their year at work in the United States and somewhat less in Europe and more in Asia”. If that assessment is true, then organizations and their leaders are challenged to create a more balanced life that is aligned with the long term, sustainable needs of the employees, the community in which they reside, and the networks essential to healthy communal living, as well as attending to the critical issues of organizational success and sustainability. What blocks that movement is often the thinking and practice paradigms of organizations, leaders and stockholders. What would the shift look like? How would one shift their thinking? Where could one explore honouring self and others? Where would one develop a sense of culture and society? What is the key to understanding these issues? The key is Congruence Building; a new approach to personal, organizational, and business systems development.

We continually believe that we can separate what we do at work from who we are in the privacy of our lives. What we achieve instead is (1) lack of clarity about who we are and what we do, (2) an inability to effectively collaborate with one another because the rewards of individuation outweigh the nuances and enlightenments of joint or collaborative efforts and ventures, (3) a lack of awareness of the complements in our lives that create effective anchors for risking the development of change, (4) a retreating from creativity and change, (5) an abdication of personal and professional choice that creates co-dependency and systemic morose and the desire to make life and work simple, (6) an inability to understand and embrace complexity which enriches and challenges us to go beyond the known and conscious to the unknown and unconscious to bridge the past, present and future to be fully present in our personal AND professional lives. What organizations have lost is their direction, their connectivity to the entrepreneurship that created them, and to their responsibility to their partners - the people. What we have lost and need to create is congruence in our personal and professional lives, the seventh paradigm and in so doing we create the capacity to develop sustainability in our lives and in our work. We ensure that organizations, governments, communities and individuals all focus on the concepts of sustainability and congruence as essential for human and societal development.

One might ask what this focus on congruence and sustainability has to do with business and organizational development; with governmental success and societal cohesion. Paradigm thinking is critical to business and people development. Whether classical [no chaos, tight boundaries, company person], scientific dynamic [cause and effect driven, blame and shame – not my fault type of person], communication cybernetic [data driven to the point of no decision – give me more information to get it right type of person], field [test processes for decision making – prove it to me/show me type of person], evolutionary [change for change sakes – change now – change every day type of person] or process thought driven [a balance and alignment in thought and action to the outcomes necessary – if it works and if it moves me and others type of person]; the underlying thought process impacts, empowers, influences and directs the actions of organizations (Williams, 1996, 2002; Gibb 1982; Friere, 1999). When that thinking is compartmentalized, controlled, boxed; when that thinking is designed to protect and limit, rather than understand and grow, the process of imbalance, misalignment and incongruence occurs and people and organizations are the ultimate loser!



As stated earlier, congruity and the process of becoming congruent is the embracing and creation of balance, alignment, integration and transformation as key anchors to the understanding and reframing who we are, how we think, when we act and what context drives our personal and professional development, our being if you will, versus the compartmentalized contents and sound bite processes that drive American living and Corporate survival, and unfortunately more and more, global living and corporate survival. When one is asked daily to narrow one's approach, provide one's professional history in one page, provide all information to the leaders in "bullets because they will not read", think only as the team will think, dress only as the organization perceives appropriate dress, look as European Americans look in order not to offend or threaten; we are continually participating in strategies that dishonour the uniqueness and the congruence of each person for the sake of an ideal or belief that has little place in a world of Global Diversity and Global Differences. Everyone is asked to create more imbalance and misalignment in one's lives and the cost is the loss of the critical congruence essential to the fluidness and flexibility essential to organizational and business growth and development.

THE NEED FOR CHANGE:

Each and every day, organizational leaders report difficulties in their quest to create strategies that work, without an increase in dysfunction among employees of the organization (National Bureau of Professional Management Consultants (NBPMC) 1999-2004 Annual Reports). The issues cited that seem to contribute to the plethora of problems or barriers that haunt organizational leaders include:

- Alack of understanding of the organizational strategies by managers, thus, impacting the comfort levels of the employees charged with performing the strategies;
- Development of strategies that focus on one part of the organization without recognition of their impact on other areas of the company, creating problems that formerly did not exist;
- Continuation of unresolved issues, or one-way decisions, that only favour the organization, creating areas of mistrust and discomfort that prevent managers from effectively planning or developing strategies to resolve the organizational and human issues;
- Differing mindsets between executive managers and descending levels of accountability within the organization, creating tangents in strategies that veer off track from plans of the leaders; and
- Unclear or unsafe strategies that set employees up to fail, creating strategies for protection of employees rather than success of a product or service (NBPMC 1999-2004 Annual Reports).

Each issue seems to impact the healthy and sustainable development of organizational strategies. In addition, numerous theoretical concerns dating back to the periods of Karl Marx, Max Weber and Emile Durkheim regarding the role of the distribution of labour versus the needs of organizations impact the successful development of balance strategies within organizations. The initial understandings in our society of how and why division of labour should exist emerged from their writings, setting both the stage and the standards for modern-day thinking. However, there has been a continual division between people and organizational systems that continues even as this writing is being penned.

What is the real issue before us? What makes it hard for employees, managers and leaders to embrace one another to create strategies for success and sustainability? Somehow, there is a



perspective that there is no tangible connection in the minds of managers, leaders, employees or even theorists, that connectivity *must occur* between the actions and thinking of people and between the strategies and structures of systems. That is the underlying premise of this dialogue on congruence and sustainability.

In the book *The Congruence of People and Organizations* (Williams, 1993) the focus began on the issues of connectivity between people and systems. To address that connectivity, the issue was approached through the underlying values and belief systems that are created within organizations and societal systems. In *Organizational Violence, Creating a Prescription for Change* (Williams 1994) a strategy was presented to address the actions and thinking of organizations that create separation among employees. The premise of the book was that inconsistency of thought and action of organizational leaders create a sub-paradigm of systemic violence impeding the ability of employees to act, thus reducing the effectiveness of the organization as a whole. In *Business Decisions, Human Choices: Restoring the Partnership Between People and their Organizations* (Williams, 1996) focus on the integration of people and system issues to create an effective pathway for change and development was the direction of the book. The book introduced the Trinity System (the connection of people, business systems and congruence characteristics) and focused on the integration of Context, Content and Process as strategies for change.

What has grown out of 33 years of consulting practice, research and publication efforts is the belief that incongruity occurs, between people and organizations and among people within organizations instilling a less than sustainable strategy for long and short term performance of people and systems. When there is inconsistency between role prescription and role behaviour in the organization setting, both the organization and the person become disconnected, disjointed and dysfunctional. Such inconsistencies create historical and systemic dysfunction in organizations.

To test this belief, a Congruence Development Model was developed and published in *Business Decisions, Human Choices* (Quorum Books) in 1996. The model is a dual-process paradigm that requires the utilization of business and human characteristics to create effective alignment of thought and action in organizations, its leaders and managers. The model consists of six characteristics in each of two paradigms that create opportunity and capacity for people to sense completeness in their decisions, and the implementations of those decisions. The two paradigms in the Williams Congruence Model are referred to as the Business Process Paradigm and the Human Process Paradigm (Williams, 1996). The purpose of the paradigms was to establish connection points, for thought and action in business and human behaviour that create the emotional and systemic tensions necessary for change. The more connectivity between thought and action, the more congruence between people behaviour and organizational performance, the more sustainability occurs between societies, governments and people.

STATEMENT OF THE PROBLEM

Lived experiences of employees within organizations are often discounted as valid expressions of meaningful information that can be used by organizations and leaders to create change, movement and direction within an organization. Executive decisions are most often based on quantitative data provided by departments on performance and research within organizations. There are, however, other sources of information available to organizations as



they prepare strategies for change, growth and development. These information sources include e-mails, memos, reports, retreats, focused discussions, and other records of interactions within an organization. Organizations historically rely less, if at all, on these records of interactions to provide a lens of understanding about what happens within the organization. As a result, valuable qualitative data, generated from the lived experiences of managers and executives often take a back seat to more traditional quantitative data.

Every employee has a source for data collection. They are the conversations, coffee breaks, rumours, family experiences and dialogues that inform and shape the thinking while impacting the actions taken by people in work and play. These informal, non scientific data sets often influence the direction and actions of people more than the quantitative information that is available. Consider the number of times people have said – “*they can make numbers say anything – I don’t trust their data – they didn’t ask me, so they don’t consider what I have to say as important*”. In those statements is embedded the power of phenomenological inquiry – lived experiences – that are often not used in organization choices.

Within every organization, phenomenological (lived experiences and appearances) and hermeneutic (biased interpretive) data exist that can impact the thinking and actions of managers. What is often discounted is the utilization of these data to enrich and streamline the actions of organizational leaders in the decisions before them. These data were often suspecting, and therefore, were considered anecdotal – not for business consumption. Safety was generally the norm and quantitative information was generally the answer to data required for decision-making, structure development, environmental happiness or manager/employee satisfaction.

Corporations, governments and non-profits – in fact most organizations – are continually faced with struggles to develop approaches to achieving outcomes defined by organizational leaders and stakeholders *without* destroying the employees and managers charged with accomplishing those outcomes. Research (Burke, 1997, Mallinger, 1997, Maier 1997, Jennings, 1998) suggests that some strategies of organizations may create disruptions in the behaviour and thoughts of employees and managers, thereby reducing the effectiveness of that organization. Burke’s research focused on ethical issues; Mallinger’s, on decision making; Jennings’, on gender and employee performance, and Maier’s research focused on organizational transformation and its challenges in corporate strategy. Each researcher stated that there was a *central core missing* in creating organizational effectiveness.

Questions abound regarding the causes of organizational failure from Senge, Covey, Burke, Bennis, Sommerville, Goldsmith and numerous other researchers and writers. These questions centre on development of a core understanding of what creates organizational and employee success. Each speaks to the need for alignment of people with organizational outcomes; *none state what that sense of alignment or balance must look like*. As this discussion among theorists continues to evolve, it is believed that focusing on the concept of balance and alignment will generate the necessary strategy frame for how managers and organizations can create a better path for organizational and managerial success. It has been learned through years of consulting, that the lived experiences, stories, and accounts of employees are an important vehicle for discovery. Even with that belief, however, developing a perspective to identify or describe the issues without numbers was difficult.

The challenge in such an application is determined by the definition of terms used to frame the issues for exploration and discovery. *The challenge in this writing has been the*



exploration of a concept of congruence and sustainability applied to the development of more effective managerial and organizational performance, through the use of a thematic analysis methodology. The challenge was predicated on the assumption of a gap between organizational and people development postulated by Daniel Goleman in his book Emotional Intelligence (Bantam Books, New York, New York, 1995; pp. xiii-xiv), where he said,

If there is a remedy (to the dysfunctions of people), I feel it must lie in how we prepare for life. At present we leave the emotional education of our children to chance, with ever more disastrous results... I can foresee a day when education will routinely include inculcating essential human competencies such as self awareness, self control, empathy, the art of listening, resolving conflicts and cooperation.

In the Nicomachaen Ethics (a philosophical enquiry into virtue, character and the good life) Aristotle's challenge is to manage our emotional life with intelligence.

Our passions when well exercised have wisdom; they guide our thinking, our values, our actions, and our survival. The question of appropriate emotion is essential to effective being in the workplace, in society, and in our own lives. Somehow we have lost that connection, and in that loss, we have removed from our thinking and acting the necessity of emotion in our decisions and in our practice.

In effect, *congruity* and *sustainability* become the connection for thinking, feeling, acting and becoming.

Goleman's research and statements were explicitly directed at the actions of individuals; however, organizational leaders and managers are also confronted with the issues of human emotion, competencies, group and team awareness's, team and individual control, and the resolution of conflict. Goleman's statement speaks of the relationship between the structure and functioning of the human brain and human emotions and, thus, the consequences (of this relationship) for human behaviour and development as individuals and as groups. By implication, Goleman asserts that individuals, teams, businesses, governments, societies and cultures have a lack of understanding of this relationship and its impact on human learning and behaviour. Further, Goleman asserts that one's lack of understanding of the brain/emotion relationship and its impact on or consequences for group and individual development and behaviour is the missing piece of our definition of human intelligence, thus, causing a deficit in the education of the young. It seems fitting, therefore, to use Goleman's analogy to support the direction of this writing. If there is a connection between the human brain and emotion, can there be effectiveness in organizations without congruence and sustainability – as an analogy to Goleman's perspective? Can there be movement in the world of business through compartmental actions – disconnected actions, or does real movement require some level of understanding of both the concept of congruence and congruent actions and the strategy of sustainability and sustainable actions, in the creation of strategies for change and development? Can congruence occur within organizations if only the needs of the organization are met? If the needs of employees are also essential to the success of the organization, how might the organization ensure the balance and alignment of the employees and the organization to create effective sustainability? Can analysis of lived experiences yield the necessary information that governs the future of organizational change and development?

Similarly, can individuals achieve personal congruence where they sense that their sustainability in the workplace is based on acting like everyone in the workplace when they



don't perceive themselves as being themselves? What happens to personal/individual contribution in the workplace when one must operate through a personal facade? If one's family operates from a communal value set, yet the workplace focuses on individuation; what happens to one's ability to contribute?

A 2000 study conducted by the American Society for Training and Development examined the average annual training expenditures of more than 500 US based publicly traded firms. The study concluded that firms in the top half of the group (i.e. – firms that spent the most on training) had a total stockholder return 86% higher than firms in the bottom half – and 46% higher than the market average. Studies such as this revealed that the right kind of investment in people generate exponential returns. Yet, what happens each time the stock market hiccups? Look at any paper from any city, state, country or international marketplace and one will discover massive layoffs from corporations, increases in the compensation for executives because they cut people. When is there a review of the strategy? When does the concept of congruent and sustainable action drive the decision making of organizational leaders? Business, governments, educational institutions, service organizations and corporate entities are at that crossroad.

Creating Greater Sustainability and Congruence:

Given the aforementioned perspectives, one might consider exploring strategies that can move people and systems toward greater sustainability and congruence. First, one begins with an exploration of that *internal and external referencing factor* in one's life and actions. People throughout the globe are used to the external references that guide their action and thoughts. From educational institutions to governmental actions, others consistently state what is appropriate and right in the lives of human beings. These external references become ingrained to the extent that often people are unaware of what truly drives their thinking and feelings, their being. In Cuba, the external reference points of Fidel Castro and his perspective of Communism drive what is allowable in the minds, feelings and actions of the citizens of Cuba. In Africa, tribal edicts dictate what people of nations can consider as appropriate thinking. In America, the religious right and the conservative agenda work diligently to force Americans to see the world through an extremely conservative lens and often establish punitive outcomes for those with a liberal ideology. Throughout the world, addressing global warming through the lens of countries and nations that believe that nothing is proven, thus nothing is wrong, rather than adhering to the internal voice of each person who believes that what is seen represents a departure from sustainable action are all examples of external referencing. In the business world, group think (Janus) and a focus on the leaders and the strategy that demand that all appear and act the same is another form of external referencing. To move toward congruity and sustainability, one understands the external influences of a leader, boss, organization, government or family history; yet balances that external reference with internal referenced thoughts. The concept of individuation, thinking for one self, thinking according to guiding principles, living by one's values and beliefs, acting congruently where who one is matches what one does...are all internal references that can make a difference in how one proceeds in a world that often seeks to block uniqueness and individuation.

Second, one seeks *clarity* -- to understand what is clear and unclear about the life one experiences. Where is the confusion, the dissonance, the discomfort, the unspoken that creates disruptions in the thinking and feeling? Where has the process of gaining clarity



fallen short of one's expectations and was the shortfall based on fear of consequences, or the lack of data that was required for clarity to emerge? In delving further, were the actions, behaviours, expressions of thought consistent with the intellectual, emotional, social and spiritual realms that have heretofore appeared congruent? Were the actions too misaligned? What bargains have been agreed to that add to the obfuscation?

Third, if the old adage of "man is not an island" holds true, are actions and strategies focused on the creation of collaborative actions between self and others; or is *collaboration* an ideal, not a planned requirement for success. In today's business environ, much is heralded as essential about teams. Teams are seen as the coup de grace of successful business. In family businesses – family sustainability holds that same place of honour and criticality. The underlying perspective is that strength and wisdom are uplifted when more than one person, one ideal, one value is tested by the internal and external reference perspectives of members of a team, a family, a group, or a community.

Fourth, *complements or anchors* must be identified to ensure that when stressed to the point of abdication of a point of view that is centrist, one does not falter and lose footing essential to self-identity. One is often unsure of critical anchors that govern a perspective and belief. For some it is religion, for others family, for still others, past experiences; yet the concept of a complement allows one to stay on a path of sustainability or congruence.

Fifth, *choices* are essential to personal and systemic ownership. Just because a business wants to "rape critical minerals" does not mean that all businesses must follow suit. Sustainable and congruent action is always about the choices made and the perseverance that drives that choice. Too often, choice does not come into the decision processes, because organizations and their leaders have overcommitted to an idea or strategy, even when they recognize that the return on investment is less than desirable.

Sixth and critical for the levels of understanding is the concept of *constants*. Reliance on a perspective that some things will remain the same is essential to the risking nature of being congruent or acting in a sustainable manner. The idea of constants is also the forgotten or overlooked perspective in some field so sustainability. The President of the United States believes that his environmental and foreign policies will be constant that ensure a sustainable future for the planet and for the concepts of democracy. However, not understanding, exploring, dialoguing with others about their perspectives, their beliefs and assumptions can lead to disruptions of the constants because others may see the actions as anathemas to their own sustainability.

These six perspectives drive the *context analysis* that one considers when seeking to create congruent and sustainable actions from an internal and external reference system. Whether institutional, economical, financial or ecological sustainability; the analysis along congruence theoretical strands becomes essential to the concepts of sustainable thought and action; congruent thought and action. The two perspectives are irrevocably connected to one another and live collaboratively in the process of business and social development.

Understanding context analysis alone as a method of creating sustainability and congruence is insufficient to reach success that lasts. *Content analysis* is required to ensure that balance that is necessary for sustainable and congruent thought and action. Content, for the purposes of this dialogue, focuses on the specific factors that often alter and derail strategies planned by



organizations, families, communities, and leaders because attention to these areas are costly, time-consuming, and often of critical concern that inhibits performance and strategic direction.

Areas of concern for content analysis are *consequences*, *change*, *control*, *capacities* and *culture*. *Consequences* represent the actions that interrupt planned action when individuals and organizations make choices to operate “outside” of the congruent values, beliefs and assumptions that maintain the balance of congruence and sustainability. *Change*, in the content arena, focuses on the inappropriate actions and thoughts instituted by leaders to gain the antithesis of change – *control*, where boundaries are strictly created to ensure that everything remains as it has been allowing no growth and development within the system or among the people. *Capacities* represent the opportunities that exist for individuals, groups, teams, organizations, societies, and cultures to expand the sacred cows and totems to build new directions and expansions of existing knowledge. *Culture* represents the histories and traditions that frame the world-view that drive thought and action. The process of congruence and sustainability requires explorations of both context and content analysis to frame and identify pathways that allow for growth and movement, balance and alignment, movement from stagnation for people and systems.

Recognizing these characteristics and factors allow organizations and people to focus on the development of relationships that build new world-views that can shape new futures, new realities and new pathways for understanding and relationships.

The Future:

The crossroads that block incongruence have now been identified. Each person has the opportunity to create newness in their work and play. Each organization has the opportunity to identify the steps critical to sustainability. The realization of sustainability and congruence is based on the risks and challenges that one, not all can take to be fully present with self and others. Congruence – the balance of which one is with what one does – is always available. Only through challenging what is can one discover what can be. The challenge is up to all of us!

8. Contribution by Prof. Dr. H. A. Shankaranarayana - Sustainable Development: An Indian Eco-Cultural Perspective:

The dominance of economics in the development literature resulted in the neglect of environmental, cultural and ethical dimensions of development. Conventional Economics treats the cultural and environmental issues as ‘externalities’ and development is viewed as economic growth, which ensures material well being. Such an economic thinking is essentially western and is destroying many communities and societies, which are self-sustaining. The financial and technological leverage of the west is undermining the people’s capacity to think, to act and to produce spontaneously. Thus ‘culture of power’ is undermining the ‘power of culture’ in the development process. However, in recent years, due to Global Third Sector Movement (GTSM), the culture of power is being challenged by the power of culture. The post-war development has brought success for the privileged few (nations, national elite and bureaucracies) and poverty and deprivation for many. Therefore,



the time has come to explore the possibilities of evolving a people centered, culture embedded development process.

Whither Development?

The conventional development paradigm considers certain non-quantifiable, humanistic cultural, educational and ethical values as impediments to growth. It designates nearly sixty per cent of the global population as illiterate, ignorant, underdeveloped, poor, backward, etc., and views them as a drag on development process. It dehumanizes people in the development process and therefore it is inherently anti – developmental. Development thinking has colonised the minds of the people to think that they are under developed and incapable, hence they should be ‘developed’. The need of the hour is to redefine the development and to de-colonialise the mind. We have to assign positive values to cultural, social, educational, ethical and other factors in the development discourse. We have to view development from a holistic perspective. Many aspects, which the conventional development economics treat as irrelevant and negative need to be re-evaluated to construct a new paradigm of development (NEW APPROACH)¹⁴, which is; spontaneous, culture specific, localized and sustainable in the long run treating people as subjects and not objects.

Conventional economics views development as an atomistic and exclusive process. Such a view believes in the myth of sustained development. This results in reckless exploitation and exhaustion of resources that are limited in supply. This destroys life sustaining ecology and the freedom of the majority to think and to act creatively, resulting in mal-development. Therefore, we have to redefine development as a process of actualization of human existence in all its dimensions and its manifestations - Economic, social, political, cultural, ethical and spiritual. It should be the process of actualization of freedom. Development cannot be viewed in a narrow economic sense because there are limits to such a development process. Pursued beyond a threshold it results in the deteriorating quality of life of the people. Unless we understand the ‘limits to growth’ we cannot actualize development. But in many third world countries including Asian countries such an actualization is not easy, because of the colonisation of mind to the myth of possessing an increasing number of material goods.

Growth is essential to mitigate the problems of the poor. The limitless and reckless over consumption by the rich worsens the problem of poverty. In fact development is needed to both rich and the poor alike. For the rich development is needed to acquire the benefits of sustainable development. The same protects and reinforces their cultural and ethical mores of the poor. It also nourishes skills of the poor to communicate and to protect ancient wisdom and civilizations that is essential to actualize development.

The western concept of development is essentially interventionist and deeply rooted in Judeo-Christian myth of progress¹⁵. It views itself as ‘developed’ and others who do not belong to this as ‘underdeveloped’. It has brought about massive acculturation¹⁶ in the under-developed

¹⁴ New approach has been introduced by Prof. Dr. Slavko Kulic, Zagreb, Croatia and used by many authors, also in the book “Sustainable (Development) Future of Mankind”.

¹⁵ Divine mandate recorded in the ancient Genesis narrative : ‘increase and multiply, fill the Earth and subdue it’ (Genesis 1:28). This mandate gave divine sanction to Judeo-Christian-Moslem culture to become aspirants for unlimited expansion and quest.

¹⁶ Acculturation is a process of a culture of foreign origin profoundly influencing and taking over an indigenous culture. Acculturation is the core of neo-liberal development paradigm. Inculturation on the contrary is a process of



countries. The economic might of the west has made this interventionist project work globally. A deeper ethical question on which the right to intervene is based, has not been addressed at all. It is in this backdrop, people's organizations rooted in spontaneous and voluntary human actions are relevant, for they can effectively challenge this interventionist development project. "Twentieth century developmentalism is the new colonialism: its moral, educational and cultural credentials are no less-suspect than those of the older version" (Shiva Vandana)

Colonialism dominates economically in terms of controlling the production and wealth. It also effectively dominates and controls through its culture, political and economic dominance would not be effective without the cultural dominance. The process of colonization which was initiated with the strength of the sword and the cross has disappeared to a great extent after the Second World War. But the power of money remains. It is very difficult, though not impossible; to dismantle the myths that 'having material things means development' and 'not having means underdevelopment'. Therefore the process of decolonialising minds is one of the greatest challenges that the third sector in Asian countries is facing in the beginning of the new millennium.

The problem confronting us globally today is the problem of universal mal-development, which affects both the rich (over developed) and the poor (underdeveloped) in a wider connotation. It does not limit itself to subsistence, variety in choice of goods and information. It is the process of actualization of the power of creation, of freedom, of wisdom and good life. It is also concerned with fundamental human values such as protection, affection, understanding, participation, leisure and identity. Interventionist development is more directed manipulated non- creative and non-free. It ushers less variety and less prosperity inspite of it offering diversified consumers' choice and enhanced life styles. Therefore, in recent years 'people centered', 'putting people first', 'bottom up', development paradigms are gaining currency. There is growing awareness that people are the ultimate resource of development and 'people are not developed' but 'development is people'. People are not the problem but the solution. Development means 'humanization of landscape' and actualization of freedom and creation.

Culture and economic Development:

Since 1990s the development discourse has taken a cultural twist. This is not only deconstructing the conventional development paradigms but also is providing imaginative alternative theories of development. The cultural studies of development are the result of the deadlock in conventional studies. It entails a search for holistic meaning of development concerned with the production and control of knowledge and the resources. There is controversy regarding the inclusion of culture in development discourse. According to some writers such an inclusion reflects an inability to explain economic development in any other way. For those who are baffled by the plethora of conflicting explanations and contradictory evidences, there is a refuge in the cultural factor (Riedel 1988: 2). However there are others who opine that culture is a core factor in the development discourse. Gourevitch, writing about East Asia argues that the expression of culture is overwhelming. We find in this region

indigenous culture influencing a culture of foreign origin. For example, Japan has been able to integrate foreign technology while retaining their culture and in turn influencing foreign culture with its own culture, specially in the areas of quality management.



one of the oldest civilizations known, China, and some of the youngest. With such richness the possibility of exploring important phenomena through the causality of culture seems irresistibly tempting.... Culture has been mobilized to explain many if not all the phenomena of great interest to us (Gourevitch 1989:11). Therefore 'to ignore culture largely on the grounds that it is awkward to deal with is both intellectually unsatisfying and potentially costly' (O'Malley 1988:327).

Culture is amorphous according to Raymond Williams there are three types of culture: culture as art, an aesthetic definition of culture; culture as cultivation of mind and spirit; and culture as way of life, an anthropological conception (The Long Revolution, Raymond Williams 1961). In this presentation anthropological perspective has been taken as of culture for exploring the various practices that would explain the relationship of man and Nature. As such cultural analysis of development does not provide a comprehensive critique of development. This presentation highlights the role of culture in an anthropological sense. In this sense culture means various institutional practices through which man interacts with nature.

It is sets of beliefs and values relating to the way the communities interact with environment and produce material and symbolic forms. It is a binding element that ties individuals together through their integrated patterns of behavior and as such it acts to include some individuals within the group in question and exclude others from it (O'Malley 1988:28).

Unlike a machine an economy's behavior is not predictable and controllable. Therefore development thinking cannot be static and linear. An appropriate approach to development thinking is provided by Chaos Theory. Here chaos means unpredictability of the outcome due to variations in the conditions and not the absence of order. It highlights the necessity to distinguish existence of individual entities in a collective co-existence. In some social spheres where a Newtonian dynamics prevails the response would be stable and predictable, and strong interventionist policies might work. For example, fiscal policies might elicit Newtonian response from consumers and corporations and in such cases public policy is quite effective in regulating the behavior. However this policy might not work in the poor countries due to the unpredictability of outcomes in these economies. Outside intervention in the traditional societies might do more harm than good. In these societies development process being predominantly non-linear, chaos theory provides scope for complex range of action orientations. And this complexity necessitates cultural twist in development and the return of Anthropology in Development. It also provides an institutional analysis of development process.

Culture as social capital for sustainable (development) future:

Culture is a socially generated treasure of ideas that are transferred from generation to generation about how to live and make judgments about the specific domains of life. It is an information system nourished, practiced and transmitted by many generations. It is the culture that determines the nature and quality of social relations in a society. The quality of social relations, in turn, determines the society's capacity to generate resources of production through social relations. Social capital is a socially embedded resource that assists social production and reproduction. It is a resource embedded in social relations in the form of norms, trust, sanctions, authority and other structural features. These are the assets available collectively to all the members of the group, whether a social group or a community.



A culturally embedded economy is informed by culture and protects millions of marginalized and displaced persons. A disembedded economy is one which is disembedded from its socio-cultural roots due to the breakdown of vernacular society (Karl Polanyi). The spread of western culture is eroding the core values of many traditional societies such as those of China, India, and Africa. In fact, these societies nourish many of the ecologically sustainable practices through their oral culture and tradition. But these sustainable life practices are waning due to the rising prominence of 'literate culture' at the cost of 'oral culture' under the impact of western model of economic development.

Greater part of the human history is dominated by oral civilization. Literate civilization is only 5000 years old and judged from the time scale of history it is very recent. The western development paradigm assumes that written culture is superior to oral culture as it assists market-oriented capitalist development by fundamentally altering the mental and social organization. It should be noted that illiteracy is one of the factors of 'vicious circle of poverty' and the notion that literate creates a great divide in the intellectual abilities is deeply entrenched in the educational dogma of the industrialized countries (Scribner, 1984:14). The divide between the 'old' oral and the new literate world developed due to the 'alphabetization of human mind' on a massive scale. 'Letters by their own symbolism (got) under the culture's skin and (changed) social perception in terms of written word' (Illich and Sanders, 1988: 165). But literacy cannot fully replace Orality of a society, if it is dominated by oral culture. In fact, such a replacement would lead to destruction of oral culture of the society and so it is not desirable from the sustainable (development) future perspective. From the dawn of the human civilization, it is the 'illiterate' oral culture, which has practiced and nourished the sustainable life styles in these societies. The psychological tests have proved that the cognitive skills of an illiterate are not at greater variance in relation to a literate. Therefore, from the sustainable (development) future perspective the divide between literacy and illiteracy is relevant only technically. The most striking continuity in the history of the literacy is the way in which literacy has been used to solidify the social hierarchy, empower elites and ensure that people lower in the hierarchy accepted the values norms and beliefs of the elitists, even when it is not in the class interest (Gee 1988:28). Here again the meaning of development is universalized from the western perspective – literacy (development), illiteracy (underdevelopment). Culture by nature is dynamic and creative. Literate culture alienates people from the 'immediacy of experience', which is the origin for oral culture. The distinctiveness that characterizes human existence is our ability to make symbolic transformation of reality to enhance the control over our lives. Historically this capacity was rooted in Orality. *No one is orally illiterate and that there is no fundamental difference between the literate and the illiterate* (Freire, 1973).

Indigenous modes of communication and forms of social exchange have existed from times immemorial. Therefore, to conclude... the development is incompatible with traditional values is not only inhuman, but foolish, even on the grounds of pure efficiency. One practical consequence of this error is that few planners tailor development potentially attractive benefits to the dimensions of traditional existence, rationalities. Perceptive students have long known of course that certain traditional values are consonant with innovation (Goulet, 1971:211). It is high time that research should focus on culture as a binding force for human survival and a source of development, which regenerates itself.

Culture embedded sustainable development in India:



In India, there are number of ways in which tribes have contributed to the institutional pattern of the majority society. Strongly formed **totemism**, for example, is confined to a small tribal area in north-east of central India from where it radiated out, far into south India, westwards down to its estuary long before the Aryan invasions. Strong traces of totemism are found today among the lower Telugu, Kanara, Marathi, and central Indian castes. The precise definition of totemism is much disputed, but it may be described as a system of classification of cosmology whereby a tribe orders the species of nature and sees itself in relation to that order. ('By Totemism I mean ...an intimate relation supposed to exist between a group of kindred people on the one side and species of natural or artificial objects on the other side, or, expressed more psychologically, the self-protection of a social unit in a natural unit' - Geza Roheim).

According to Claude Levi-Strauss totem is a particular expression, by means of a special nomenclature formed of animal and plant names (in a certain code as we should say today), which is its sole distinctive characteristic, of correlation and oppositions... It is, he concludes a way to make opposition, instead of being an obstacle to integration, serve rather to produce it. (Levi-Strauss 1963:101) Now this throws light on the process of opposition-integration between Indian society and its social antipodes¹⁷. While Aryan society was evidently not totemic, there is evidence to suggest that before the commencement of detribalization around 6th century B.C. (at a time when all Indian social organization was still completely tribal) the principle of totemic complementarities was borrowed by Aryan tribes from non-Aryan societies, or at least influenced Vedic social theory. It is because man originally felt himself identical to all those like him (plants and animals)... that he came to acquire the capacity to distinguish himself as he distinguishes them, i.e., to use the diversity of species as conceptual support for social differentiation. (Levi-Strauss, 187-88)

The outstanding characteristic of primitive society is its sense of the unity of all life, the sense of solidarity and emotional sympathy with the various levels of nature. For this reason primitive man conceived the idea of co-operation with nature and its sacred powers by means of propitiatory sacrifice. The Vedic Aryans organized such a society, and evolved a sacrificial religion at the level of magic. At this early stage of Indian culture the relation between sacrificial lore, myth, and language was so close that it is now almost impossible to separate one from the other. It was so totally an *oral* culture that Vedic Aryans believed that a deity could be compelled by utterance of the correct verbal formula to do exactly what the worshipper desired. Here we have our first example of a primitive trait – the magical power of the word- which has at no stage in the cultural evolution of India been wholly abandoned... Providing the right formula is applied at the right time and with the right pronunciation, it is bound to succeed. The first and the most basic trait in the continuity of Indian thought could therefore by summarized as the absolute authority of the word as universal metaphysical principle.

¹⁷ Social antipodes are "para-communities" or groups who either occupy an interstitial position within the society or in a marginal terrain imprecisely located beyond the society's external boundaries. One might characterise the culture of antipodes as the 'underground' component in the Little Tradition. Here 'para' is a Sanskrit word meaning the potency of the non-structured flux, chaos, disorder, the irrational substratum. 'Para' may mean the unknown the strange, the remote, the alien, the hostile or simply the 'other'.



The legend of Krishna seeks not mastery and dominance, but liberation and peace, not exploitation of the earth by man, but ecological harmony, uniting man and nature, subject and object

One feature of universal significance is the importance which Indian civilization has attached to the simplification and reduction of needs through self-scrutiny. At its most positive a means to reduce the social conflict and the dehumanization inherent in the pursuit of material gains, this kind of humility is rare in western science and technology. It is also the touchstone of our success or failure to reduce tension even within the domain of our personal lives. In an overpopulated world with severely limited resources the current western method – expansion and civilization of needs- is plainly unrealistic. The wisdom of smallness and Zero principle, encouragement of small-scale pluralistic activity in community living, a non-violent ecological perspective, all of which originate in self-scrutiny, are age-old Indian responses to life's dilemmas – the fine flower of crisis.

Mahatma Gandhi's famous dictum: "there is enough for everyone's need, but never enough for everyone's greed" sums up the Indian cultural ethos of Development.

9. Contribution by John M. Bunzl¹⁸ - Pathways to Global Sustainability

I'd like to suggest possible pathways to global sustainability and to present the particular pathway that the Simultaneous Policy (SP) campaign offers.

Before starting, however, let me first be clear that to solve our many social, economic and environmental problems, we need to act at *all* levels. And by that I mean at the local, national *and* global levels. But today I want to focus solely on the *global* level; on action we can take to address global problems such as global warming, out-of-control financial markets, monopolistic corporate power and so on. I think because, the global level is where citizens are most in need, of ways to take action.

But before we can discuss pathways to sustainability at the global level, we need a far better understanding of the underlying dynamic that presently causes the global problems we want to solve. I will now tell you what that underlying dynamic in my view is and why our problems will only get worse until we address it. And the 'underlying dynamic' I am referring to is what I call *destructive competition*.

So how does this 'destructive competition' manifest itself? Since policies which encourage ecological and social sustainability generally cost industry more, governments resist imposing them for fear of capital or corporations moving elsewhere and of the knock-on consequences of capital flight, inflation, unemployment and a loss of votes. Businesses, too, resist the implementation of environmentally responsible technology, not because it cannot be done but because increased costs will reduce their competitiveness. Mergers and acquisitions and their attendant job losses also occur, not so much out of greed, but out of fear for companies to

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retain competitive advantage and relative safety from themselves becoming the targets of hostile takeovers. And national governments often permit increasing corporate consolidation against the public interest for fear of their own corporations becoming uncompetitive with those of other countries. Governments also pay vast sums of tax-payers money in corporate welfare to compete for inward investment and of course the corporations happily play one government off against another. And it is a net result? Corporations win - and society and the environment are losing. Developing countries too, must compete with one another to attract investment from foreign multinationals by submitting to IMF-imposed 'structural adjustment' allowing their raw materials to be plundered, their forests clear-cut and their indigenous peoples displaced.

Seen in this way, global warming, global poverty, monopolistic corporate power and over-population are not the problems. Because they are merely *symptoms* of a far greater underlying problem: the vicious circle of destructive competition.

Now this wouldn't be so bad if government could do something about it. But they can't, because the threat of capital or jobs moving to other countries keeps all governments locked into a spiral of having to down-level social and environmental protection in a bid to remain relatively more attractive to global investors and corporations. It keeps them locked in a mental and existential framework which is called "maintaining our international competitiveness". It's a kind of code-word for justifying worsening social and environmental conditions for the sake of attracting jobs and capital. It's a vicious circle: a game no nation can win and which all of us will ultimately lose.

To sum it up therefore, today, the main barrier to sustainability is destructive international competition and the fear it induces in national governments - a fear which prevents them from regulating in the social or environmental interest. The problem, in a nutshell therefore, is that democratic governance today remains essentially *national* whilst business and markets have already become truly *global*. Democratic governance urgently needs to catch up and to operate at the global level.

The creation of the World Trade Organization (WTO) can be seen as an attempt to close that governance gap. But because the WTO largely ignores social and environmental interests, favoring only the interests of trade, it perversely serves only to *exacerbate* destructive competition rather than reducing it.

The UN itself is also another focus for creating governance at the global level. But the UN, we must remember, embodies a critical contradiction. On the one hand, it has no binding authority over its member nations so it cannot possibly act as an institution of binding global governance. On the other, and from the point of view of its individual member nations, the UN possesses no democratically elected parliament, so there is no legitimate justification for nations to relinquish any of their sovereignty to the UN. So it's a 'chicken and egg' problem; a veritable 'Catch 22'. Meanwhile, nations with the most influence over the UN as whole - or over the Security Council in particular - are hardly likely to voluntarily give up their influence.

My personal view, therefore, is that trying to reform the UN - 'from the top down', as it were - so that the UN brings global democracy down to the world's people is unlikely to be



successful. Instead, in my opinion, the people will have to bring global democracy up to the UN, from the bottom up! By this I am not suggesting that efforts to reform the UN should be abandoned – far from it. What I *am* suggesting is that there is now an alternative, complementary and highly effective means at our disposal in the shape of the Simultaneous Policy (SP) campaign. We can support the work of UNAs but we can also support SP.

So, what is SP and why does it offer a credible alternative?

SP is two things at the same time: it's both a *policy* to solve global problems and it's a *process* by which citizens can drive politicians to implement that policy. As a policy, SP will contain the necessary measures to solve global warming, to enforce appropriate social and environmental standards across the world and to re-distribute wealth from rich to poor across national borders. In short, SP would contain all the necessary policies that we people know to be necessary to create a just and sustainable world. For SP is not a package of policies designed by politicians or by unaccountable global institutions, such as the WTO. Instead it is being designed by citizens around the world who support SP or with help from their chosen independent policy experts. The key point, however, is that SP is too implemented *by all or sufficient nations simultaneously*. Simultaneous implementation means that no nation, corporation or citizen loses out unduly to any other. Simultaneous implementation thus breaks the vicious circle of destructive competition, removes all excuses for inaction or delay, and allows us all – nations, businesses and individuals - to make the switch away from destructive competition to fruitful global cooperation.

But SP is also a process; a political process that is driven not by governments or political parties, but by *citizens*. To support the SP campaign, citizens all over the world are being invited to adopt SP. Adopting SP means we pledge to vote in future elections for *any* politician – within reason – who has pledged to implement SP alongside other governments. Alternatively, if we have a preference for a particular party, adopting means we encourage our party to make that pledge.

Many MPs are signing up to SP simply because they see it as a good idea. But since the outcomes of more and more parliamentary elections around the world are increasingly decided by a relatively small number of votes, not many SP adopters are required to make it in the vital interests of even reluctant or sceptical politicians to support it. So, by adopting SP, we citizens can create a situation where politicians who fail to support SP increasingly risk losing out to those that do. To date, 12 MPs from all the main UK political parties have signed the SP Pledge and we hope to increase this dramatically by the next general election. In parallel to this, we are also making progress in the EU and in other countries.

Commonly, we citizens expect our governments to solve problems for us. But citizens around the world are increasingly realising that we would be foolish to leave it to governments on their own. The present miserable progress with the Kyoto Protocol and other hoped-for agreements to solve global problems are either non-existent or unlikely to be effective. And the UN, as we have seen, is hampered by its own inherent contradiction. So that is why *citizens* must now take responsibility by getting behind a process which impels politicians to solve these problems, and yet does so in a way which is non-party-political, democratic, inclusive and harms no one's competitiveness. The Simultaneous Policy (SP), through its condition of simultaneous implementation and its citizens voting pledge, is perhaps the only



initiative that permits citizens to use their votes in *national* elections to drive politicians of all parties to implement *global* solutions.

Indeed, *citizen* action via SP is vital, not least because, without a mechanism such as SP by which citizens in the USA can force their government to cooperate, efforts led solely by governments, such as the Kyoto Protocol, will inevitably remain blocked or ineffective. So this is why SP offers citizens in all countries a potentially very effective alternative. And for politicians too, supporting SP is not in conflict with existing governmental efforts but is parallel and complementary to them.

So, whether it is corporate irresponsibility, global warming or any of our many others global problems, *none* of them are likely to be fully solved without simultaneous, transnational *citizen* action. If you agree with me that governments are likely to require electoral pressure to make that happen, adopting SP is the means we have at our disposal and I invite those of you here who have not yet adopted SP to do so. In fact I like to think that adopting SP is both our global democratic *right* and our global democratic *responsibility*.

In taking responsibility *as citizens* to solve our global problems, I am reminded of something that activist and campaigner, Marianne Williamson, once said: “Our deepest fear,” she suggested, “is not that we are inadequate. Our deepest fear is that we are *powerful beyond measure*. It is our light, not our darkness, that most frightens us. ... There is nothing enlightened about shrinking so that other people won’t feel insecure around you. We were born to manifest the glory of God that is within us. It’s not just in some of us; it’s in everyone! As we are liberated from our own fear, our presence automatically liberates others!”

SP, I suggest, is perhaps the first and only form of global electoral politics so I invite you also to adopt SP, and you can do so simply, and at no cost whatever, by visiting our website www.simpol.org. After all, in today’s age of globalisation; in this age of humanity’s increasingly dangerous species adolescence, it is through initiatives such as SP that we citizens can show that we are *powerful and responsible beyond measure* and can thus play our parts in helping all humanity to reach our long-awaited, but now urgently necessary, evolutionary species maturity.

10. Contribution by Prof. Dr. Mark Esposito - Why Sustainable Travel & Tourism¹⁹

Tourism is arguably the world's largest industry. It generates about 10% of total world GDP (gross domestic product) and employs over 10% of the global workforce, and it's on the verge of tremendous growth. In 2004, there were 760 million international tourism arrivals – an increase of 10% over 2003 and a figure that the World Tourism Organization expects to reach one billion by 2010.²⁰

¹⁹ Why Sustainable Travel & Tourism has been drafted by Prof. Dr. Mark Esposito.

²⁰ World Tourism Organization, World Tourism Barometer



In recent years, the negative environmental and socio-cultural impacts of tourism have become obvious. There is ample evidence to support the fact that transportation impacts global climate change. Host communities face resource use conflicts, land-use disputes, and the loss of their indigenous identity and values. Pollution, deforestation, and the alteration of ecosystems can result from shortsighted tourism development.

The purpose of sustainable tourism is to allow tourism to develop in a way that is fair and equitable for host communities. Sustainable tourism is economically viable in the long-term, and it avoids damage to tourist attractions and the physical environment.²¹ By focusing on the triple bottom line, it adds socio-cultural and environmental dimensions to the traditional economic benchmark for measuring success.

A positive triple bottom line means a net improvement in conservation of the natural environment, social benefit for local communities, profit for shareholders, and gain for national or regional economies.²²

A Broader Market Appeal

Successful travel companies offer quality service, new and exciting destinations, frequent traveler discounts, etc. to secure the loyalty of the clients they serve. But now customers are demanding more. 58.5 million Americans say they would pay more to use a travel company that strives to protect and preserve the environment. The majority (61%) of those who would pay more to use such companies would pay 5-10% more.²³ Responsible travelers are attracted to travel companies that employ sustainable business practices, and this target market represents a huge profit arena.

The estimated number of LOHAS (Lifestyles of Health and Sustainability) consumers is 63 million strong and growing and is in line with the number of responsible travelers. These consumers represent a market conservatively estimated to represent more than \$226 billion in annual sales in the U.S. and more than \$540 billion worldwide.²⁴

Improved Profitability

Systematically integrating sustainable business practices into your operations also lowers costs through resource productivity and waste reduction. The Sandals Hotel Group, for example, achieved savings of \$1.375 million and a significant reduction in solid waste and freshwater consumption since introducing an environmental management system to meet Green Globe 21 sustainable tourism certification standards over a period of four years.²⁵

Exodus, a UK-based adventure tour operator, developed a “Responsible Tourism Policy” in 2000. The policy formalizes the company’s commitment to environmental, social and economic sustainability and applies to its entire operations. Since the policy was implemented, Exodus has derived a number of benefits, including but not limited to

²¹ Tourism Concern, Tim Forsyth, 1996

²² Environmental Inputs and Outputs in Ecotourism: Geotourism with a Positive Triple Bottom Line?, Ralf Buckley, International Centre for Ecotourism Research, Griffith University, Queensland, Australia

²³ Geotourism: New Trend in Travel study, TIA, National Geographic Traveler October 2003

²⁴ LOHAS, Fall 2001, p. 13, Natural Business Communications and the Natural Marketing Institute

²⁵ Green Globe 21, www.greenglobe21.com



increasing bookings, attracting positive publicity in the media as well as industry recognition, and supporting destination stewardship.²⁶

Enhanced Quality

Sustainable tourism emphasizes contributing to the well being of local people by partnering with communities in the regions in which you operate. Such partnerships can create benefits for local communities by employing people living in or near the areas being visited and purchasing products and services from local businesses. Travel providers who take this participatory approach frequently enjoy greater community support and more genuine interactions between their clients and locals. This increased product authenticity often results in improved customer satisfaction and positive word-of-mouth marketing.²⁷

Case in point, the Hotelplan Swiss Group has gained competitive advantages among their staff and clients by improving the sustainability of their products, supporting environmental conservation, and increasing local communities' awareness of environmental issues. They've achieved these benefits by contributing about \$3 per customer to an Eco-Fund they've developed, representing 20-25% of their annual sales.²⁸

Minimized Impacts

Ensuring the preservation of destinations and cultures for future generations equates to more attractive environments. For example, the Little Nell Hotel in Aspen adds \$2 to their guests' lodging bills for the Aspen Valley Land Trust. Guests not wishing to pay this amount can ask for it to be removed from their bill but almost none do. Approximately \$30,000 is raised annually. The money helps preserve the quality of the surrounding environment and open space.²⁹

Sustainable Tourism ... An Opportunity

Once we accept the fact that travel and tourism is, essentially and inescapably, destructive, we can begin to determine how to take advantage of the benefits of pursuing sustainability.



10.1 Sustainable Travel: Educated Consumers³⁰

²⁶ Exodus: Development of a Responsible Tourism Policy, Tour Operator's Initiative

²⁷ Ecotourism Development – A Manual for Conservation Planners and Managers Volume II: The Business of Ecotourism Management and Development, The Nature Conservancy, 2004

²⁸ Hotelplan: An Eco-Fund to Support Sustainability, Tour Operator's Initiative

²⁹ Aspen-Snowmass, 2003-2004 Sustainability Report, Fifth Edition

³⁰ Sustainable Travel: Educated Consumers has been drafted by Prof. Dr. Mark Esposito.



One of the most significant steps you can take to support sustainable travel and tourism is to research and carefully evaluate your travel alternatives. At the same time, we understand that there is a lot of information out there and good information is often a scarce resource. Let us help...

Sustainable Travel Checklist

These are a series of questions you should consider asking when you're planning your next vacation:

- **Environmental or Sustainability Policy**

Looking at a company's marketing materials, what is their environmental or sustainability policy? Is it obvious? Does it take into consideration environmental, economic and socio-cultural impacts? Is the travel provider actively involved in supporting environmental issues and contributing to the well-being of local people, particularly in the areas visited? Do they raise environmental awareness by distributing environmental or sustainable tourism guidelines to consumers? Do they offer training for their staff in these areas?

- **Conservation**

Will you be supporting travel providers who have good conservation ethics? Will your trip strengthen the conservation effort for, and enhance the natural integrity of, the places you visit? Does it affect locals in a way that causes them to proactively support the preservation of their environment?

- **Environmental Impacts**

Do their guides foster a respect for the environment, particularly in the areas visited, and encourage their guests to do the same? Do guides ever intentionally disturb or encourage the disturbance of wildlife or wildlife habitats? Do they keep vehicles on designated roads and trails and abide by the rules and regulations of the natural areas they visit?

- **Local Economy**

Are locals benefiting financially from your trip, directly or indirectly? Is the travel provider or accommodation locally owned and operated? Are locals receiving sufficient economic benefits from them as guides, cooks, crew, suppliers, etc.? Will you be eating in locally owned restaurants and buying locally made crafts (that are not made from rare or endangered species) versus imported goods?



- **Public Transport**

Will you be using public transportation during your vacation? Will you take advantage of group taxis and vans? Or will you cycle or walk and see local communities and meet local people firsthand?

- **Natural Resource Use**

Is the travel provider efficient in the use of natural resources, such as water, energy and building materials? For example, do they use water and energy sparingly; taking into consideration that local people may not have sufficient clean water? Or that energy may be at a premium in less developed countries? Is low-impact, energy efficient technologies utilized in operations: e.g., fluorescent or other low-energy lighting, renewable and sustainable building materials, rainwater showers, composting toilets, and solar electricity?

- **Reduce, Reuse and Recycle**

Does the travel provider work toward cutting down on or eliminating waste? Do they purchase or produce items that use less material, have a longer life and can be readily recycled? Do they use an item again for its original purpose or for new purposes rather than throwing it away?

- **Respect Local Culture**

Are you prepared to immerse yourself in and accept cultures that are different from your own? Has your travel provider informed you of the local environments or social customs of the places you're planning to visit so you may avoid accidentally offending them or harming their environment? Does your travel provider advocate respect for local cultures, traditions and holy places? For example, are tour guides well versed and respectful of local cultures and environments? Do they encourage their guests: to ask permission before photographing local people, to dress a certain way, to be respectful of local norms, and/or to adopt local cultural practices without seeming patronizing?

- **Food and Dining**

Where will your food come from? Is it locally produced or organically grown by local farmers and ranchers? Are the locals educated about sustainable farming practices? Are you eating endangered species or beef from rain forest-grazed cattle that are exacerbating the rapid rate of deforestation?

- **Sustainable Travel Practices**

Here are some of the things you can do while you are travelling that we believe positively benefit travellers, the environment and the culture of host communities they visit. (And thanks in advance for every time you do these!)



- **Accommodations**

Seek out hotels, lodges and resorts that use environmentally sensitive, renewable energy, water and waste disposal systems as well as recycled building materials or those that are harvested in a sustainable manner.

Take the initiative to: reduce your water input by opting out of daily washing of linens and towels; and reduce your energy usage by turning off lights, television and air conditioners when not in use. Look for lodgings that emphasize local traditions, providing rooms and common areas that reflect the local culture and heritage.

- **Bargaining**

Although bargaining is expected in many cultures, don't pinch pennies when negotiating. You may get carried away when trying to find the best deal possible but keep in mind how this affects others. Pennies to you may mean as much as an entire family's meal. Remember that you are probably a lot more well to do than your hosts.

- **Educate Yourself**

Foster a true understanding of the natural and cultural environments visited, before, during, and after the visit. Choose destinations that are not overcrowded or overdeveloped. Read up on the communities you plan to visit ahead of time, chat with the locals, and try to speak their language. Put yourself in their shoes. Ask before taking photos and respect their wishes if they refuse.

- **Global Warming**

Consider ways to improve the state of the environment as a result of your visit. For example, take into account the amount of carbon dioxide emitted from your air flights.

You can plant trees to offset that amount or donate to an organization that will plant them for you. Calculate how much energy your travel consumes and how many trees you might plant to compensate for it. For more information, visit [My Climate Carbon Offsets](#).

- **Guidebooks**

Remember that your guidebook is just that - a guide. It is not your travel bible and it doesn't know everything. If you want to truly experience a place, head off-the-beaten-path a bit. Talk with the locals, visit the places where they spend their leisure time, and explore!

- **Home Away From Home**

Understand that our hurried concept of time is not the same in other cultures and that local people's thought patterns differ from your own. Learn to appreciate these differences.

And think about sharing some of yourself with the local people you plan to meet. Consider packing small gifts from home for your hosts, but be sure they are of personal and practical



manner and aren't sending the wrong message. Your travel provider should know or be in a position to ask the local community what would be of most use to them.

- **Protected Areas and Wildlife**

Be sure to familiarize yourself and follow all advisories, rules and regulations when visiting protected areas and wildlife habitats. Whether they're voluntary or required, the fees you pay to enter these areas support local efforts to conserve them. Stay on the trails and leave these areas cleaner than you find them. In viewing wildlife, do not disturb it or its habitats, as animals lose quite a bit of feeding and breeding energy while fleeing from human approach.

- **Spending Money**

Be thoughtful of your purchases. Spending money with community or locally run/owned businesses benefits local people, their families and communities. The money you spend on local artists and performers also encourages the preservation of their cultural heritage.

However, take care not to buy souvenirs made from old-growth trees or derived from endangered forests, such as teak. Or items made from endangered species, like ivory or tortoise jewellery. Ask whether products are made from renewable resources or if local authorities approve the trade.

And be sure not to discriminate against small-scale, community-based programs that can't afford some of the newer, energy-efficient technologies, yet may have fewer impacts than their competitors.

- **Support Sustainable Tourism**

Remember that your travel choice makes a difference. Provide feedback to travel providers and accommodations as well as government agencies that manage the areas you visit. Fill out their comment cards and suggest steps management might take to integrate sustainable business practices into their operations, providing examples whenever possible. Promote and support conservation from abroad after returning home.

- **Transportation**

Travelling by your own muscle power where possible has unsurpassed health benefits and reduces already obnoxious levels of Carbon Dioxide that travelling puts into our atmosphere. Otherwise, public transportation is a much better way to interact with the locals and is better for the environment.

Good alternatives include travelling by train, which only requires half the energy per passenger mile than planes do or renting a low-fuel consuming, hybrid electric/gasoline powered vehicle. When driving, ensure that your rental car is well tuned and tires are fully inflated. This will increase your mileage and cut gas costs up to 15%.



- **Waste Disposal**

Be conscientious of your waste disposal. Many places don't have recycling programs and few pristine places have adequate waste disposal systems. Try to carry out anything toxic like batteries and/or non-biodegradable waste. Avoid using containers made of Styrofoam or non-recyclable plastic and consider packing a water-filtering bottle.

- **Animal Welfare**

Worldwide, many animals serve travellers by carrying baggage and serving as transportation. Sadly, some are badly cared for, overworked and/or overloaded. Keeping animals that serve tourism interests in good health is costly. However, travellers can promote animal welfare by rewarding their patronage to tourism providers who take care of their animals.

Travellers should always pay a fair price, usually \$100 USD/Euro per person per day, which may include a meal and outside of the U.S., overnight accommodation. Travellers should also make responsible decisions related to animal-based tourism (e.g. heavy people should not ride on thin horses) and report animal abuse to major animal welfare programs like PETA (People for the Ethical Treatment of Animals).

- **Web Resources**

There are many web resources available to help you prepare for your next responsible travel experience or in finding businesses and organizations who are eco-friendly. Some of the better ones follow:

- Business Enterprises for Sustainable Travel: www.sustainabletravel.org
- Conservation International: www.conservation.org/xp/CIWEB/programs/
- Green Globe: www.greenglobe21.com
- Responsible Travel: www.responsibletravel.com
- The International Ecotourism Society: www.ecotourism.org
- Tour Operator's Initiative: www.toinitiative.org
- World Surface: www.worldsurface.com
- World Tourism Organization

10.2 Travel, Tourism and Global Climate Change: Our Impacts³¹

Global climate change, caused by greenhouse gas emissions - such as carbon dioxide (CO₂) - from industrialized human activity, is recognized as one of the most serious global threats we face. Although travel is inevitable, the impacts from travel activities are one of the main culprits of climate change.

Currently, travel and transportation related activity accounts for up to one third of all greenhouse gas emissions, with air travel being the fastest growing contributor of these

³¹ Travel, Tourism and Global Climate Change: Our Impacts has been drafted by Prof. Dr. Mark Esposito.



emissions. The average domestic flight, for example, emits nearly a ton of CO₂ *per passenger*.

And the average American, who takes one or two trips abroad, emits 19,841 pounds of carbon a year. If everyone in the world emitted this much carbon, we'd need 2 1/2 planets to support us all.³² With annual international tourist arrivals expected to reach one billion by 2010, you can easily see where we're headed.

Impacts on the Industry

The impacts of global climate change are beginning to seriously threaten the tourism industry. From off-season hurricanes in the Gulf of Mexico and rising sea levels in Hawaii to melting ski resorts, polar ice caps and a warming Alaska, both our inbound and outbound tourism industry faces serious repercussions. In fact, many of the most sought after ecotourism destinations exist in our most sensitive and coincidentally biologically rich places.

Balancing society's growing demand for transport and the need to mitigate the impacts associated with travel-related emissions poses a fundamental challenge. Aircraft emissions have been significantly reduced over the years. According to IATA, today's aircraft world fleet is around 70% more fuel efficient than in 1970.³³ With current technology, however, further reductions in emissions are cost prohibitive, and regulatory efforts outside of the Kyoto Protocol, which hasn't been adopted in the U.S., are virtually non-existent.

As a result, voluntary initiatives create excellent opportunities to pursue alternative greenhouse gas and carbon offset strategies. It should be noted, however, that carbon offsetting is just one step toward sustainable travel when done properly.

My Climate™: A Case Study

My Climate™ promotes climate-friendly products and services through international partnerships by fostering the broad involvement of the tourism industry, the public sector, concerned individuals, and non-governmental organizations through market-driven means.

My Climate's™ mission is to offer a turnkey solution for individuals and organizations that wish to neutralize the impacts of their travel related greenhouse gas emissions by "offsetting" their carbon emissions.

Why My Climate™?

One ton of carbon dioxide (CO₂) has the same impact on climate change wherever in the world it is emitted – or saved. You can use less energy, travel less, or use public transport, but some emissions are unavoidable. Through My Climate™, you can offset the environmental impact of your air travel-related emissions by investing in climate-friendly projects that reduce emissions elsewhere.

³² *Guardian Unlimited* February 8, 2001.

³³ International Air Transport Association, www.iata.org



How does My Climate™ work?

After entering your departure and arrival cities into the My Climate™ carbon calculator, it determines the CO₂ emissions released during your air travel. You then have an opportunity to neutralize your impact on climate change by purchasing offsets from climate-friendly projects for all or part of your emissions. The offsets you purchase are then permanently 'retired' and taken out of the market. To do so, My Climate™ invests in renewable energy and energy efficiency offsets, the majority of which come from projects in developing countries. The funding, construction, and operations of these projects are derived directly from offset purchases.

The money goes to a local community or business to help fund more environmentally friendly development options. The investments in the projects directly double as a sustainable development tool benefiting local communities while offsetting emissions, thus neutralizing negative climate impacts elsewhere.

Project Verification

My Climate™ project criteria act in accordance with international standards, including complying with the "Project Design Document" of the Clean Development Mechanism, the directives for projects in developing countries under the Kyoto Protocol. All projects also have to verifiability reduced greenhouse gas emissions according to WWF Gold Standards (www.panda.org/climate/goldstandard).

Furthermore, they have to satisfy Sustainable Travel International's (STI) own criteria, which focus on the projects' economic, ecological, and social impacts as well as the proficiency of our project partners. This approach ensures long-term comprehensive solutions.

In summary, all My Climate™ projects must:

- Be in the field of energy efficiency and renewable energy, be developed according to the WWF Gold Standard, and be independently certified either through Kyoto mechanisms or through an expert panel at the Swiss Federal Institute of Technology;
- Generate additional benefits for local communities, including improvement in quality of life, pollution mitigation, creation of job opportunities, etc.;
- Support regional capacity building and know-how transfer in technical and institutional skills to support social and economic improvements;
- Respect local cultural values to assure a good integration of the project in local communities;
- Generate leverage effects by creating incentives for new projects and local initiatives;
- Increase local awareness of environmental problems and sustainable resource management;
- Generate financial benefits for local communities due to the long-term economical feasibility of the project;
- Serve as a demonstration of resource evaluation, technology application, system shaping, etc. to be applied in other projects;
- Be realized and accompanied by a competent local partner.



My Climate™ Project Examples

Solar energy in Costa Rica

The Instituto Centroamericano de Administracion de Empresas (INCAE), the leading Central American business school, is located in Costa Rica. The local students have now the possibility to experience renewable energy: solar collectors heat the water used in the school (e.g., in the cafeteria and showers).

The student's sustainability club and a local engineering company (Swissol de Centroamerica) develop and supervise this project together with My Climate™. Together with the Costa Rican business school, My Climate™ has replaced the diesel burner - used as water heater - by an installation of solar collectors. The collectors' surface has 16.4 m², and additionally, a gas boiler is used as backup. The renovation of the water pipes as well as other measures has contributed to an enormous improvement in terms of energy efficiency. This leads to considerable savings of fossil fuels: up to 2500 liters of diesel are saved in one single month, even if the gas consumption for the back-up boiler is considered.

A revolving fund-mechanism is part of the project's concept. The financial savings - achieved by the reduced consumption of diesel - shall be used for new local projects. The projects' fixed target is to ensure a total reduction of 650 tons of carbon dioxide within 5 to 7 years.

Students as well as professors of the INCAE are actively participating in this project. They administer the revolving fund and are involved in the monitoring of actual projects and the selection of new ones. This project has a vast demonstrational potential, and it may be easily duplicated, due to its academic environment.

Biomass energy in India

Numerous rural communities do not have an ensured power supply in many parts of India. In areas like these, My Climate™ seeks to produce clean power using agricultural bio-waste and locally grown biomass.

In collaboration with Indian partners, DesiPower and The George Foundation (TGF), My Climate™ is working on implementing a new 100 kW biomass gasification power plant. Local farmers provide bio-waste from agriculture and controlled biomass cultivation, which is converted into power. Thereby, power that is generated mostly out of diesel generators is replaced by climate neutral biomass power. Throughout the crediting of the project, which corresponds to ten years, CO₂ emissions can presumably be reduced by 5000 tons.

The project comprises a broad concept for rural development and improvement of the local living conditions. Simultaneously to the construction of the power plant, local micro-enterprises, such as a rice mill or other agro-processing enterprises, will be formed. These micro-enterprises ensure the supply of sustainable grown biomass to the power plant and purchase adequate amounts of electricity at agreed prices.

The Indian company, DesiPower, constructs and operates the power plant. DesiPower has developed this broad concept for power supply in rural areas on the basis of biomass



gasification, and during the last few years, the company has gathered invaluable experience with similar projects.

Clean power in South Africa

The wastewater treatment plant in Sebokeng Township, approximately 30 km southwest of Johannesburg, purifies 65 million liters of sewage water every day. This process sets free sewage gas with a high concentration of methane, a potent greenhouse gas and valuable fuel. At present this gas is being exhausted into the atmosphere. My Climate™ seeks to capture the sewage gas and use it as a fuel for power generation.

The infrastructure for capturing the gas as well as the generators for power production were once available at the site, but they haven't been operating for more than ten years now due to the lack of spare parts and investment capital. Our project comprises the repair of these generators, as well as the financial resources for the maintenance of the system. Three local engineers are trained for this purpose. The project design aims also at recovering waste heat from the generator sets in order to achieve better energy efficiency.

The two main project activities: sewage gas capturing and electricity generation, which will replace coal based electricity from the grid, will presumably lead to a total emission reduction of approximately 58,000 t of CO₂ equivalents over 10 years.

The project triggers new investments in township Sebokeng, an economically disadvantaged region. Further, it helps increasing the quality of the sewage water purification process, which is crucial to the health of the people that live there. In addition, training and work places for the local engineers are created.

My Climate's™ local partner for this project is an experienced South African engineering company.

Pricing Structure and Calculation

The price of My Climate™ tickets depends on the distance flown. The My Climate™ carbon calculator determines the average quantity of greenhouse gases that are emitted per passenger. For a short distance of 62 miles (100 km), approximately 66 pounds are discharged. On long-distance flights of 1000 miles (1609 km), 1052 pounds are discharged.

The My Climate™ carbon calculator also takes into consideration greenhouse gases other than CO₂ and uses a RFI factor of 2. At the same time, it computes the average cost to compensate for of a ton of CO₂ in a climatic protection project based on current offset volume. These two factors – the emissions and the costs of the emission reduction – result in our current pricing, which is expected to decrease as our sales volume increases:

- Short Distance: approximately US\$7.50 per 500 miles
- Long Distance: approximately US \$15.00 per 1000 miles

With proceeds from the My Climate™ ticket sales, we finance climatic protection projects in different countries (as previously mentioned); affording buyers with an opportunity to compensate for 100% of the impact their flights have on climate change. That is, the same



quantity of emissions as those released by a given flight are neutralized through one of our climate protection projects.

Who is behind My Climate™ and how is the funding it receives allocated?

My Climate™ is a Switzerland-based registered charity that falls under the strict requirements of Swiss law, which state that at least 80% of the money it receives must benefit the projects it endorses. The My Climate™ Charitable Foundation Board defines the standards, criteria and processes to ensure the integrity and credibility of all My Climate™ transactions.

Sustainable Travel International (STI) is a 501(c)(3) not-for-profit organization and is the provider of My Climate™ in North America. STI also contributes 80% of the gross revenue it generates through My Climate™ to carbon offsets projects. However, to provide travel agents and other resellers with a monetary incentive, as little as 70% of gross revenue is allocated to these projects when a third-party travel service provider sells My Climate™ tickets directly to the public.

500 PPM GmbH is based in Germany and operates a service and technology platform that facilitates documents and processes all My Climate™ transactions. The company also offers solutions to integrate the My Climate™ offering into the standard booking process of participating travel service providers.

The balance of 20% of the revenues invested in My Climate™ by North American-based buyers is split between 500 PPM and STI and is used to cover overhead expenses.

Why doesn't My Climate™ support reforestation projects?

There are two primary issues regarding reforestation (planting trees in an area that previously contained forest) and a forestation (planting trees on lands that have not been recently forested) as a means to sequester carbon.

First, there are arguments about the permanence of reforestation and a forestation projects (i.e. oftentimes they are temporary carbon storage sinks), and as such don't currently meet the criteria of the My Climate™ foundation, but these arguments could be applied to some other types of emission reduction projects as well. Second, there are technical concerns regarding reforestation and a forestation related to the science of calculating the carbon offsetting amounts, but methodologies are being developed to address these concerns and ensure that related projects satisfy Kyoto Protocol.

Stakeholders are now beginning to realize the need to address all human-related sources of greenhouse gas emissions simultaneously to help reduce global climate change. This includes adding reforestation and a forestation into emission reduction portfolios since it's proven to be a cost effective approach that delivers value-add benefits like protecting biodiversity and creating jobs.

Once the science for calculating the carbon offsetting amounts related to reforestation and a forestation is sound and is globally accepted by those organizations that certify the quality of emission reduction projects, My Climate™ will re-evaluate the opportunity.



Challenges and Critical Issues

In the U.S., there several major challenges surrounding carbon offsetting as an effective tool to address travel related global climate change impacts:

- Education and outreach and the public's lack of understanding regarding global climate change and related solutions, including addressing the disconnect in the public's mind between travel and global warming;
- Integration of U.S.-based renewable energy programs into the My Climate™ and or STI project portfolio;
- Issues surrounding carbon sequestration and land use policies (i.e., reforestation and a forestation) as well as questionable carbon offset initiatives;
- Pricing creates barriers to entry due to My Climate's™ high standards when compared to other "cheaper" alternatives.

11. Contribution by Ms. Roshni Udyavar - Ecotourism³⁴

Investing in Eco-Tourism

Eco-tourism is a concept that is grounded in the natural and socio-cultural resources of a region. The concept is known to have originated in East Africa sometime in the 1970s. However, it became popular less than a decade ago when conservationists and environmentalists began to realize the potential of combining people's love for nature with the concern to protect it. Eco-tourism came to be accepted internationally in 2002, when the United Nations celebrated the "International Year of Eco-tourism".

Eco-tourism is numerously defined and understood. It bases itself on local cultures, traditional means of employment, development of surroundings and harnessing technology to enhance the existing strengths of the surroundings. It draws on the natural strengths of the traditional skills of the local population to sustain themselves and their natural resources and environment. Classically, it can be defined as travel to destinations where the flora, fauna, and cultural heritage are the primary attractions. In the field, well-planned and managed eco-tourism has proven to be one of the most effective tools for long-term conservation of biodiversity when the right circumstances such as market feasibility, management capacity at local level, and clear and monitored links between eco-tourism development and conservation are created.

Global overview of Eco-tourism:

Australia, New Zealand and South Africa have been in the forefront of Eco-tourism for several years. In countries like Mexico and, Bolivia, Eco-tourism is a growing industry. Eco-tourism in Kenya, Nepal, Costa Rica, Ecuador, Madagascar and Antarctica represents a significant portion of the gross domestic product or economic activity. Eco-tourism represents a major portion of the economies of these countries and the engine through which tourists are

³⁴ Ecotourism has been drafted by Roshni Udyavar, from Academy of Architecture in Mumbai, India.



attracted to these countries. Sri Lanka, Zanzibar and Ghana have also made significant progress in the field. In recent years, environmental organizations and aid agencies the world over, including the United Nations, regard Eco-tourism as a vehicle to sustainable development.

Although academics argue about who can be classified as an 'Eco-tourist', and there is precious little statistical data, some estimates indicate that there are more than five million Eco-tourists - a majority from the United States, with others coming from Europe, Canada and Australia.

Destination India:

A number of tourists who choose to travel to India are attracted to both pre-colonial and post-colonial lifestyles. Eco-tourism could be fashioned in locales that can bring these out: pre-colonial forts, colonial recreation areas and parks, sea-side resorts and hills that are rich in flora and fauna, and the like.

The growth in the economy and the increasing number of global companies that have established their presence in India has spawned a new profile of Eco-tourists. Multi-national corporations have their international executives posted for considerably long durations in India. These along with the growing number of executives and professionals in India's growing corporate sector could be developed to partake in the benefits of Eco-tourism. Internal or local tourism will, in time, be a major asset for Eco-tourism considering the growing Indian middle class with increased purchasing capacity living in stressed urban locations such as Mumbai, Bangalore and Hyderabad.

The Tourism Ministry of the Government of India, through its corporate entity, the Indian Tourism Development Corporation, which has state-wise representation, should promote Eco-tourism as part of the package of promoting tourism both internally and internationally through its Incredible India campaign. With its unique natural and cultural diversity as well as the large tracts of flora, fauna and wildlife – along the warm humid belt of the western coastal region and the untouched beauty of its north eastern states, India could well lead the world as an Eco-tourism destination.

New forms of environmental technology and communication could be adapted to enhance these destinations, and the local population could be increasingly used to manage and operate these facilities. Better infrastructure facilities such as improved access through pucca roads and transportation systems, special routes for jeeps and heavy duty vehicles, bicycle paths, as also trekking routes, appropriate signage's and information centres with advanced communication facilities, should be set up for tourists.

Greening the Hospitality sector:

Setting up environmentally responsible hotels is an important component of Eco-tourism. The concept of "green hotels" - hotels, motels, bed and breakfast facilities, lodges, and inns that use energy and other natural resources in environmentally responsible ways - is one that can be adopted in regions proposed for Eco-tourism development. Hotels that adopt green practices help reduce the negative impact that the hospitality sector now has on the environment as they utilize renewable resources whenever possible, make efficient use of



non-renewable resources, and ensure that any by-products that result from their operations are reused or recycled.

Examples of green practices some hotels have adopted include re-routing waste water to irrigate their golf courses or lawns and salvaging the sludge to use as fertilizer for the landscaped areas, reducing laundry water temperatures from 90 °C to 60 °C, replacing incandescent lights with compact fluorescent lamps, installing low-flow shower heads and low-flow toilet flushes, offering a sheet and towel reuse program whereby guests have their linens exchanged every two to three days instead of daily, installing solar panels to heat water, implementing a hotel-wide recycling program, and replacing individual soaps and lotions with wall dispensers.

Hotels are certified as 'green' through a rating system developed by international agencies such as the Green Globe and Ecotel, which have provided simple guidelines for hotels to adopt environment-friendly practices. The Ecotel, an international voluntary grading system, ranks hotels based on 5 points: water and energy conservation, waste recycling, community participation and training hotel staff in environmental management.

In addition hotels can adopt the following measures to make themselves environment-friendly: use locally-grown organic food, use energy efficient and recycled materials, use non-toxic chemicals, insecticides, pesticides, and non-VOC paints, phase out CFC refrigerants and halons for fire-fighting, plant indigenous trees and reduce water-consuming lawns, train staff in environmental management, involve community by conducting awareness programs on cleanliness, health and protection of existing forests in the region.

It is possible for hotels to further reduce their ecological footprint by introducing passive solar architectural features at the planning stage itself. These measures such as having the right size and orientation of fenestrations and providing the right floor to window ratio for a particular climate have the potential to reduce the energy consumption during use by nearly half.

Although the number of hotels adopting green practices is growing, many have not yet embraced the concept. All travellers can support green hotels, encourage non-green hotels to adopt environmentally responsible practices, or engage in such practices themselves. There should be a concerted effort to encourage the establishment of green hotels and linking them to the promotional plans for Ecotourism in the country.

Involving the local population:

One of the basic tenets of eco-tourism is to engage local communities in enterprises related to conservation and economic development. By bringing residents into the business of eco-tourism, not only can local people meet their economic needs, but they also can maintain and sustain the growth that is required for guaranteeing long-term conservation. Investment in eco-tourism should therefore include sharing of socio-economic benefits with local communities and indigenous people. This can be done by with their informed consent and participation in the management of eco-tourism enterprises.

The opportunities that can be generated by Eco-tourism will emphasize the significance of local flora, fauna, biodiversity and culture, and their close association in a balanced system;



local architectural styles and cuisines, and finally the active involvement of the populace in providing hospitality services. For example, the Municipal Council of Sawantwadi, a town located 60 km from Panji, has planned the conversion of hundred-year old wadis into three star resort and bread/breakfast facilities for tourists. New revenue opportunities could be created for local inhabitants on Eco-tourism projects which could be initiated and managed by them.

Local inhabitants could be encouraged to get actively involved in Eco-tourism in a variety of ways: initiating attractions to tourists like special fishing ponds / lakes; agro-tourism projects with local guides; establishing nurseries of flowers, fruits and vegetables fields; establishing special local industries like ornamental fish, lotus ponds, and centres that feature the plant and animal life of the region. Locals could provide ready meals to tourists, encourage them to visit model local homes, so that tourists could imbibe the traditional ambience, get involved in traditional art and craft that is unique to the place, hold cultural events like folk dances, music festivals and drama that is representative of the locale. They could also serve as guides for treks in the region.

Opportunities for Investment:

With a view to catalyzing investment in townships, housing, built-up infrastructure and construction-development projects as an instrument to generate economic activity, create new employment opportunities and add to the available housing stock and built-up infrastructure, the Government of India has decided to allow FDI up to 100% under the automatic route in townships, housing, built-up infrastructure and construction-development project (which would include, but not be restricted to, housing, commercial premises, hotels, resorts, hospitals, educational institutions, recreational facilities, city and regional level infrastructure), subject to fulfilment of prescribed conditions. A minimum capitalization of US\$ 10 million for wholly owned subsidiaries and US\$ 5 million for joint ventures with Indian partners is permitted. The funds would have to be brought in within six months of commencement of business of the Company.

It is estimated that there is a potential to absorb Foreign Direct Investment (FDI) of US\$150 billion in next 5 years in infrastructure alone. According to a report in the International Herald Tribune, private participation in Indian infrastructure has the potential to become an important source of financing. In August 2005, the Indian government announced rules for ‘viability-gap funds’ or the monetary support it would provide to private entrepreneurs who undertake infrastructure investments. Indeed, one of the major setbacks for the growth of the Indian economy, as compared to neighbouring China, is considered to be the grossly inadequate infrastructure for transport and communication in its non-urban areas.

Conclusion:

Sustaining the natural resources of a place, while preserving its cultural heritage, and supporting the economic growth of its people, is the objective of Eco-tourism. India has a long way to reach this destination, and begin its journey towards nurturing a sustainable lifestyle for its people.



Reference:

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12. Contribution by Sir Prof. Dr. Roger B. Haw - Corporate Social Responsibility³⁵

The consequences of corporate behavior, especially the negative ones, have been described in detail by many people in academia, the media, and other walks of life. One outcome, however, which is being felt throughout the world, is a concern for what has come to be known as corporate social responsibility (CSR).

Many of us would have been spared many tears, if only we had had the wisdom to take into consideration the pros and cons of the situation before we do anything. Having adopted a course of action without thinking, we find at once too many difficulties, small or big, impeding our progress. This becomes a source of regular worry. Most of us fail to earn a decent livelihood because we have selected an appointment for which we have no inclination or no special bent. Without taking into consideration our means and capabilities for a particular venture we should not run headlong into it. It is always advisable and prudent to examine and study thoroughly the details of a procedure before accepting or rejecting it. It is equally a mistake to hesitate or delay action when instant action is called for. Foresight and forethought, combined with courage and confidence in taking unavoidable risks are essential. We must rise to the occasion and ensure success.

I have the opinion that an organization depends much more on its people. If the people were not satisfied with an organization, all the systems it applies would fail. However a good system may be whether it is accounting, finance or other, people are still the important assets required to put the system into proper functioning. I feel that the theories of management are not far stretched enough to reach the hearts of the people of an organization to give them a sense of want, care and kindness so that the people know they are wanted. Many managers or leaders fail to see that love, care and kindness towards their people has a lot to do with their organization's success and to ensure that it continues to grow from strength to strength.

Love, care and kindness for people is the key that the religious leaders have taught and had set as examples for us to follow in order to have things function in proper order and not in chaos. But today we see internal politics being so severe in organizations that each tries to outwit the others thereby leading to much wasted energy and battle fatigue and causing the systems of an organization to run in chaotic conditions.

³⁵ Corporate Social Responsibility has been drafted by Sir Prof. Dr. Roger Haw.



Who should learn the Corporate Social Responsibility practice?

The challenge:

The theme of Corporate Social Responsibility continues to grow in importance. Sustainable development and business ethics are now high on the public policy agenda.

For business, CSR is enlightened self-interest. Companies exist to make a profit and good CSR pays. Credibility and trust, the focal points of any CSR strategy, are also the key to hiring – and retaining – the best and brightest staff, and the key to branding, which consumers and investors can identify with. It is a clear 'win-win' strategy, which goes straight to the 'bottom line'.

For the public at large, CSR plays another role. Trade liberalization and technological change have opened up unprecedented business opportunities over the past twenty years. Yet the speed of change brings concern about globalization, economic restructuring and the ever-growing power of multinationals. If corporations demonstrate a sense of social and environmental responsibility, they help to ease the transition towards the new economic order.

For government, the task is to make sure that the process of global economic and social change is managed properly and fairly. If CSR can assist this change, all will benefit. CSR can contribute to Asia's reform goals of full employment, better jobs and to reduce poor community. But CSR can also play a role in developing better global governance and improving living and working standards worldwide.

Corporate Responsibility Executives

You will maximize your effectiveness and save your company money.

Public Affairs and Corporate Communications Executives

You need to get your company message accurate and on the money with external stakeholder interests.

Corporate Risk Managers

You need to know about the latest assessment, tracking and management techniques for minimizing risk and maximizing ROI.

Social Reporting Managers

You need to find out what internal and external stakeholders are looking for in your non-financial report.

Business Strategy Managers

You need to hear the latest advances in strategy from leading edge companies who are embedding responsibility in the core of their operations.

Investment, Fund and asset Managers

You need to know what to look for, how to read the ethical balance sheet and how your investors can bring onside.



Investor Relations Executives

You need to know what mainstream and SRI analysts and fund managers are looking for before they invest.

Corporate social and environmental executives

You need to keep up to date with the new issues, techniques and process structures within corporate responsibility and sustainable development.

Corporate branding and marketing executives

You need to know how CSR issues can affect your role, your company message and that all important 'License to operate'.

Others who will benefit from CSR practice include:

Human Resources and Internal Communications Executives

You need to know CSR issues and laws in order to properly communicate and carry them out at your organization(s).

Consultants

You need to have up to date knowledge about laws and issues dealing with CSR so that you can give proper and correct advice to workers, etc.

Public Relation Firms

You need to be abreast of the current CSR issues and rules so that you can properly communicate them to the public.

Non-Governmental Organizations

You need to be informed about CSR issues to assist you in preparing and enforcing your organization's CSR rules and future goals.

Government Agencies

You need to make and enforce rules and laws for CSR (at the state, national, and international levels, etc.) that relate to the environment, human health, and other areas of concern.

Academic and Research Institutions

You need to prepare and carry out appropriate rules in order to provide social responsibility to your employees.

Last but not least, we must keep in mind that CSR can enable all of us to benefit from living in a world in which common, positive, standards are respected by all.

If you come across those companies or institutions in any part of the world, which are practicing Corporate Social Responsibility (CSR), please inform the person in charge of that organization to contact us at bnhaw@tm.net.my or write to us at ASRIA Dept, P O Box 1067, 10840 Penang, Malaysia.

We highly appreciate your assistance. Perhaps your organization may be nominated for this nomination process. In addition if you are aware of an organizational directory that would be of help to our nominating committee or you can provide a list from the organizations you are



associated with this would be a tremendous help to the ASRIA's ongoing search for CSR practicing companies. The worldwide web is ever growing. If you know of websites that feature the names and addresses of CSR professionals, Companies, please let us know and our Board will review the site.

Let us see the list of individuals stated below from various countries, who have had contributed their efforts to society at large in line with the Social Responsibility in direct or indirect ways of approach.

13 famous people whose fierce determination and unique vision of life, helped change the course of history, created a common ground for people of different backgrounds and made the world a much more pleasant place for everyone.

Let's make the world an even smaller place, where all of us can feel a little closer to each other.

Date of birth: 4th January 1809

Louise Braille; he was blind from the age of 4 and was determined not to let his disability lock him out from the vast world of thought and ideas. Inspired by a "night writing" code developed for (and rejected by) the army, he developed a raised dot alphabet (where the position of each dot represented a letter of the alphabet) that was as easy to write as it was to read. Braille, as the system is called, has enabled and continues to enable blind people to communicate with each other and with the rest of the world. It has been adapted to almost every known language, from Albanian to Zulu. The blind may not see like the rest of us do, but with Louis Braille's help, nothing can stop them from maintaining a clear vision of their lives.

Date of birth: 11th February 1847

Thomas Edison; he is the perfect example of what an inquiring mind can achieve if it is driven by an unrelenting determination. Starting out as a newsboy and candy butcher on railroad trains, Edison was named America's "most useful" man by a 1913 survey of independent magazine. He became the man with the most patents (1,093) and the most companies ever. Edison gave us some of the world's greatest inventions: the light bulb, the battery, the phonograph and, despite lawsuits on patent infringement, the motion picture. By connecting electricity to a wide range of inventions, Thomas Edison connected humanity to a brighter, livelier, new and improved world.

Date of birth: 3rd March 1847

Alexander Graham Bell; "Leave the beaten track occasionally and dive into the woods." That's how Alexander Graham Bell once summed up his approach to life and invention. By taking the road less traveled, Bell struck new paths that connected and still connect people the world over. Alexander Graham Bell invented the multiple telegraph, the Photo phone (which resembled the fiber-optic communications we use today), and the Hydrofoil-the fastest watercraft in the world. 4 days after his 29th birthday, he received the patent for the telephone. On 25th June 1876, the telephone was exhibited for the first time in Philadelphia and the world has been in closer contact ever since.

Date of birth: 24th April 1952

Jean-Paul Gaultier; he is known for his outrageous creativity; he is a designer who has brought several worlds together. Through his wild, shocking, surreal and quirky designs, the world of high fashion has come together with street life, urban life, past eras and sailors. He has seduced the movie world with his costume designs for films like "The Fifth Element" and "Kika." In the



mid-1980's, men sported his platform shoes, feathers as well as naked chests. He introduced space helmets, metal breastplates and men's skirts. But the enfant terrible of fashion is perhaps best known for his connection with the pop music world, for his design of Madonna's notorious cone bra.

Date of birth: 12th May 1820

Florence Nightingale; she was born into a wealthy family and grew up to become a lively and attractive woman, expected to make a good marriage. She, however, had her mind set on a nobler calling: nursing. In those days, nursing was not considered a suitable profession for a well-educated woman but she went ahead to become one, despite objections from her parents. Miss Nightingale, as she was affectionately known, is famous for her work during the Crimean War and most remembered as a pioneer of nursing and a reformer of hospital sanitation methods. Her main principles were careful observation and sensitivity to the patient's needs. Her greatest achievement is raising nursing to a level of a respectable profession for women

Date of birth: 11th June 1910

Jacques Costeau; without him we would only know a fraction of the world we live in. Together with engineer Emile Gagnan, Costeau designed an underwater breathing apparatus based on compressed air contained inside a cylinder called the "Aqua-Lung" (SCUBA). Before that, divers had to wear suits connected to the surface of the water by an air tube, limiting their movements. The Aqua-Lung allowed divers to roam freely underwater and was used by the allies after World War II to remove enemy mines from international waters. Costeau also developed techniques to make underwater movies. Much of what we now know ocean life came from Costeau's films, 2 of which won the Academy Award for documentary filmmaking.

Date of birth: 13th July 1944

Erno Rubik; every once in a long while, the world unites to fix its attention on one thing. In the late 70's, it was Rubik Cube. The Cube's inventor, Erno Rubik, was an Interior Design Lecturer in Budapest. Realizing that even the simplest elements, cleverly duplicated and manipulated, yield an abundance of multiple forms, he came up with the idea of the Cube. He patented it in 1974 and demonstrated it to his students and friend, completely mesmerizing them. In 1978, interest in the Cube began to grow, even without promotion or publicity. By 1979, everyone of every age, occupation, wealth and social standing was working the Cube everywhere, trying to restore all 6 sides to their original colors. By disconnecting the elements of the Cube, Erno Rubik single-handedly connected people around the world.

Date of birth: 27th August 1910

Mother Teresa; her actual name was Born Agnes Gonxha Bojaxhiu. Mother Teresa took her name from Saint Teresa of Lisieux, the patron saint of foreign missionaries. In 1928, she traveled to India to teach in a convent school but was so moved by the sight of the sick and dying on the street of Calcutta that she left the convent in 1948 to work alone in the slums. Her selfless devotion to those in need inspired others to join in her work. In 1950, the Missionaries for Charity was formed, a sisterhood that would in 1957 start work with lepers and in many disaster areas of the world. In 1979, she was awarded the Nobel Peace Prize and she accepted it, as she accepted all other awards, on behalf of the poor. By serving them without regard for themselves, Mother Teresa showed and shared with the world the true meaning of humanity.



Date of birth: 24th September 1936

Jim Henson; every week, “The Muppet Show” plays to 235 million viewers in over 100 countries. And not all of them are children. That’s because Jim Henson, the creator of the Muppets, had always had a way of connecting with the kid in all of us. Even though his work champions the qualities of warmth and consideration, it is also sly and satirical. So, Bert and Ernie quarrel; Miss Piggy behaves unbecomingly; Kermit is sometimes exasperated. Children learn from Sesame Street (in which the Muppets have starring roles) and we learn from Jim Henson. We learn to dream. To wonder. To delight. And be optimistic. Perhaps, “someday we’ll find it. The rainbow connection. The lovers, the dreamers and me.”

Date of birth: 23rd October 1940

Pele, his actual name is Edson Arantes do Nascimento, age 8, was playing football one day when a boy called him “Pele.” Nobody knew what the word meant, so Edson took it as an insult and started a fight with him. But the name stuck and it’s now synonymous with the world’s greatest footballer.

Pele is the only person to have won 3 world cups as a player (1958, 1962, and 1970), and scored 1,281 (or 1284) goals in 1,363 professional games, which is probably the all-time record in soccer. More than just a great footballer, Pele has the power to move masses. In the late 1960’s, a Nigerian Civil war was put on hold for 48 hours so that both sides could go watch him play a round of exhibition matches. Fittingly, he started the No Violence campaign to stop violence among football supporters and when, at last, he found out what “Pele” meant, it turned out to be the Hebrew word for “miracle.”

Date of birth: 27th November 1940

Bruce Lee; he was born in San Francisco. His mother gave him the name “Sai Fong” (Small Phoenix) but later renamed him “Jun-Fan” (Return again) because she hoped he would return to his birthplace someday. But most of us know him as “Lee Siau Lung” (Little Dragon Lee), a nickname given by his sister Ages. Bruce Lee became a household name when he started in “The Big Boss” and “Fist of Fury.” He created a new form of martial arts called Jeet Kune Do and taught actors like Chuck Norris, James Coburn, Steve McQueen and Lee Marvin. Because of his untiring work in film and in martial arts, Bruce Lee created a meeting point between the East and the West, bringing eastern movies to the west and spawning a global industry of the martial arts.

Date of birth: 20th December 1925

Tun Dr Mahathir Bin Mohamad, he is affectionately known to Malaysians, has been active in politics since 1945. On 16th July 1981, he became Malaysia’s 4th Prime Minister. Now, 23 years on, Malaysia has grown from a commodity-based economy into a manufacturing centre and heading steadily towards a knowledge-based economy. During this period, the country has also enjoyed some of its proudest achievements: being home to the world’s tallest building as per the 2002 record, producing our own car, setting up a Ministry for Women and an entire new administrative city, Putrajaya. Our roads, ports and airports are world-class. Thanks largely to Dr M’s foresight and intuition, Malaysia today has become a role model for many Third World countries. As for Dr. M himself, our longest-serving Prime Minister has built a global reputation as one of the most outspoken, thoughtful and though-provoking leaders of our time.



Conclusion:

I therefore appeal to all managers, directors and top management to adopt a wider scope of management than just a few theories like Management by exception, Management by walking around, Management by leadership, Management by example etc. They should see that “Management by love, care and kindness” should be as important if not more important than the Management philosophies that we practice today. Various writers have failed to explain the term “duty”. Some have defined it as a moral or legal obligation, while others say that it is the expression of respect for a superior. It is something expected from all despite obstacles, as Emerson puts “so high is grandeur to our dust, so near is good to man, when duty whispers low, thou must, the youth replies, I can.”

Duty to our parents is important. In early times, filial attachment was respected and cherished by the people. As a result, the younger generation seldom went against their parents’ wishes, not even in marriage. Even in the wild lands of early Mongolia, duty was prevalent. A love story ended in tragedy because of duty. Duty, as heir and successor to the throne, duty to her country, people and aged father, deterred a woman from following her lover to his homeland to be married.

Next comes duty to our country; many countries expect every man to do his duty. In a time of war it is the duty of the men folk to get them-selves recruited into their country’s army. On the other hand, it is the duty of the wives and parents to let their husbands and sons join the army and fight for their country. Nowadays, parents are trying their utmost to give their children the best of everything, especially in education. Their philosophy is to teach their children not to do anything disgraceful and so be a curse to society. These are real dutiful parents.

The employees’ duty is having single-minded loyalty to their company. However, the employer’s duty is taking care of the employees’ welfare. All this requires a kind of management by love, care and kindness to keep the operation going on.

From all these it can be seen that duty is considered by most of us to play an important part in our lives. It is something which governs every action. Whenever we want to venture upon something new, we always think, “Is it right and dutiful of me to do this?” In fact the Bible, the Dharma, the Quran are there for us to read and to use as a guide in our daily lives and to provide us with solutions to many problems that we face today. Yet most of us have ignored these teachings whether on purpose or through our ignorance. To deploy the powerful tools of these holy books to provide us with solutions, even in the management of an organization. Lack of love, care and understanding of the people and the pressure of internal politics coupled with work pressure have caused high absenteeism and in extreme cases high staff turnover. People have emotions and I am very sure that love can attract love and lack of love and kindness can attract dislike and dissatisfaction.

There are many phrases in the Bible, the Quran and the Dharma that we can rely on to build a successful organization. I find that many chaotic conditions are man made like internal politics, high rate of staff turnover, negativism and even the external environmental disasters. Take time to reflect on these and I am sure a better organization will emerge. No organization systems can function well without people who are satisfied by the care, love, kindness and understanding which the managers and top management as well as people at all levels can radiate.



**"The future belongs to those who believe in the beauty of their dreams."
-Eleanor Roosevelt**

It is possible to teach a turkey to climb a tree, but it is a lot easier to hire a squirrel.

If you want one year of prosperity, grow grain.

If you want ten years of prosperity, grow trees.

If you want one hundred years of prosperity, grow people.

All this we need: love, care, efforts, time, money and more importantly we have to be a responsible person to ourselves, our family and society at large.

----- Chinese Proverb

13. Contribution by Prof. Dr. Timi Ecimovic - Agenda 21 Processes³⁶

Discussion

Many people understand Agenda 21 as agenda for better life in the 21st century. Actually it is questionable, what has been the basic reason for establishment of the term Agenda 21. Early understanding was agenda for protection of nature, space and environment. During post Rio Summit era it was taken as non governmental organizations' activities towards processes of sustainable development. Due to not acceptance by leading national politicians³⁷, bureaucracies and national elites, Agenda 21 processes did not have a chance to play a more important role within our civilization during the end of the second millennia. This was clearly seen during Johannesburg Summit in 2002, 10 years after Rio.

At present many national political leaders and accompanying people desire their personal confirmation/promotion/cleverness/richness etc and are inventing "new"³⁸ agendas. As one of such cases we may mention Lisbon Declaration as EU principal development strategy document and others. It is unfortunate that there is a persistent intention of national elites not to accept the reality that our civilization needs to change toward interdependences, interaction and co-operation with nature, and not to continue with "*Monster*" money leading philosophy, which has been fatal to us up till now.

Agenda 21 processes commencement could be placed at the end of eighties of the 20th century, what is seen from the following presentation:

THE ENVIRONMENTAL PROGRAMME AGRICULTURE - TOURISM - ECOLOGY

The paper has been presented at IFOAM World Scientific Conference, Christchurch, New Zealand, in December 1994.

³⁶ Agenda 21 processes has been drafted by Prof. Dr. Timi Ecimovic.

³⁷ Agenda 21 was accepted by UN Rio Summit and national leaders never accepted it. Consequently there was a general lack of promotion within majority of UN member nations. Due to switch to NGO's activities Agenda 21 become even less popular within politicians, bureaucracies and national elites.

³⁸ To invent Columbo's egg!



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AGRICULTURE - TOURISM - ECOLOGY PROGRAMME AND ITS IMPLEMENTATION IN THE AREA OF CENTRAL DALMATIAN ISLANDS

The Abstract:

The Agriculture - Tourism - Ecology Programme is discussed in all points from commencement during 1986 to the end of 1994.

The case study of the implementation of the programme at Central Dalmatian Islands region in Adriatic Sea, Croatia, has been presented.

One of first environmentally oriented declaration in Europe is presented.

The Paper:

THE ENVIRONMENTAL PROGRAMME AGRICULTURE - TOURISM - ECOLOGY

The Agriculture - Tourism - Ecology Programme appears in its 6th edition. The first issue of the Programme was written in 1989, and the issues that followed reflected the new developments in environmental protection. The Programme on 11 pages is provided in Croatian, Slovenian and English. It has been 5 years already that it is being implemented in the area of Central Dalmatian Islands in Croatia. The progress report on the implementation presents the actual status of the area as well as the application of provisions of the Declaration of Central Dalmatian Islands, an Ecologically Free Zone.

The Programme offers guidance for a long-term development of the regional ecosystem. In comparison to conventional agriculture, the organic agriculture and IFOAM Standards are powerful tools in protecting the environment. The ecotourism is an advanced form of tourism, basing itself on local eco tourist facilities designed to enhance the historic, cultural, architectural and natural heritage of the area.

According to the Programme, the long-term protection and development of the environment commences with the preparation of an ecostudy and proceeds with development projects and monitoring of the state of the environment.

The Environmental Programme

THE ENVIRONMENTAL PROGRAMME
AGRICULTURE - TOURISM - ECOLOGY
6th EDITION
DECEMBER 1993



Introduction

The 6th revised edition of the programme AGRICULTURE-TOURISM-ECOLOGY presents the functional possibilities of the co-operation with a region interested for such development.

At the beginning of 1989, Timi Ecimovic, dr. vet. med., with a business group of companies, due to their acquired knowledge and experience, self-initially started working on solving environmental problems. Day by day these problems are becoming more significant in preserving man's lifestyle, since the environment is increasingly threatened by devastation and pollution from various sources.

The work on environmental problems is geared toward Slovenia and Croatia, the new-established countries which have emerged out from former Yugoslavia.

Those two countries are included in the project ALPE-ADRIA.

By developing a programme basis for the ecostudy and by performing continual surveillance of the human environment, viz. monitoring, of its soil-water-air parameters, we obtain a ground on which we determine the conditions of the human environment as well as the prospects for development of the region into an environmentally clean zone or healthy environment.

Solving the problems of infrastructure when the environmental conditions and particularities are well known for certain area, is not only much easier but also generally and environmentally better. Within this programme we present a solution for all problems of infrastructure and other communal conveniences while maintaining an adequate living standard.

Activities in agricultural production: cultivation, livestock, and fruit production, all conditions afforded by an environmentally clean zone, give rise to the cultivation and production of organic, wholesome food, and in turn, form the basis for advanced development in the domain of TOURISM. As the numbers of consumers of such food are growing the economic feasibility of food production increases accordingly. Tourism becomes an effective means of establishing a market for wholesome food inside the very area of production.

In the domain of tourism, we concentrate our activities on ECO-TOURISM, starting with eco-resorts and including investment methods, financial arrangements, etc.

This sixth revised edition of our activities in the field of environmental protection was conceived, as an answer to the numerous requests of organisations and individuals from the Alpe - Adria region. This material should disclose the essential facts about the work of our group on the programme AGRICULTURE-TOURISM-ECOLOGY.

Present experience is a result of our co-ordinating and organisational capabilities to manage team work of many interdisciplinary experts. Realising that environmental pollution is one of the hardest problems facing our world, we have organised teams of various experts to work together on these problems. The strength of our programme lies in its capability to execute the plans it proposed. The realisation of investment needs, and all other needs is based upon the



co-ordinative role of the programme with the companies and organisation from various fields of activities.

Environmental technologies, apart from those concerned with agriculture, provide solutions to the various problems of local communal service, to the development and enhancement of tourism as well as various solutions of environmental pollution problems.

We thus solve the problems arising from water bodies being contaminated by industry, by waste waters of oil refineries, by residual gases, etc.

We turn special attention to the revitalisation of already afflicted regions of our environment. For example, we are solving the problem of polluted forests and of their revitalisation. Part of our work is geared toward restoring balance to the proportion of land cultivation and livestock production, as well as recycling, or rather, sanitising waste water for subsequent use in irrigation.

The development programmes focused on solving the everyday living problems of island communities whose life is based on ecotourism and the production of wholesome food in an unpolluted environment, are exceptionally suitable for the island region of the Croatian coast and for Dalmatia. By channelling the islands into environmentally clean zones, new development possibilities are created. By joining the individual environmentally clean island areas, there is a possibility of creating an even larger environmentally clean region. This region could one day be the area of Central Dalmatian Islands. Such work has to be conceptualised according to the existing work on the protection of the Adriatic Sea known as “Adriatic Initiative”.

We have succeeded to organise the representatives of the Central Dalmatian Islands to sign the Declaration, which is directing development of the area as an environmentally clean zone. That is one of our referential works.

Description of the programme

The Programme was first published in 1989. At that time we were well known for our work in agriculture development. While devising means to accelerate intensive production at the “peasant yard” level, we became acquainted with the actual conditions of the village life, with the standard of living as well as with the possibilities of bringing technical means and technologies to bear on both on social and economical problems, specifically cohabitational difficulties of village life. We are now well acquainted with the operative means of modern sustainable agriculture as well as with the actions, which have to be undertaken to ensure reduction in both the rate and actual extent of degradation of the Earth’s natural resources and of resources present in the village environment.

While working on the region Alpe-Adria, it was impossible not to notice the state of the environment, which plays such an important role in tourism. With respect to the ever increasing presence of land and sea pollution, our possibilities for development of tourism, that is marketing of tourist capacities to Europeans, who increasingly desire cleaner environment, are in themselves continually decreasing. The examples such as Kastela Bay, Bakar, Mali Ston and others within Adriatic Sea clearly point out the level of pollution. This has a very negative effect on the development of tourism.



Industrial and agricultural pollution as well as pollution from transportation due to unsolved problems of the local communal services give rise to ever increasing degradation of the attractive Adriatic regions for tourism. If, in addition to all this, we consider the slow and inappropriate spatial planning and improper realisation of the existing plans, then we realise the extent of the devastation and deteriorating conditions of the coastal and island region of the Adriatic Sea.

The situation on the Adriatic Sea as part of the entire Mediterranean region has also been recognised by international institutions (UNEP, MAP), which have concentrated their activities toward protecting the very threatened areas. With their help and as part of those activities, work on solving the Kastela bay problem has begun. Monitoring of the Adriatic is being carried out as well as other activities geared toward the protection of the Adriatic Sea from further pollution (Adriatic Initiative).

However, the basic and essential partners of environmental protection are people; in fact it is their relationship toward the environment. As long as the individual is unaware of the correct relationship with the environment, and of need for its protection, it is impossible to protect the environment from pollution. People know what they were taught by their mothers, school and by life itself. If mothers do not teach their children from the very beginning the proper relations toward the environment, children will not know it. We feel that it is necessary to teach man throughout the life the relations toward natural environment and his surroundings. That is the only way to achieve results. Therefore, education of local inhabitants is one of the most essential factors in the protection of the environment.

In order to achieve harmony between the living of human beings and their environment, it is necessary to reach compromises among industrial pollutants, the technologies applied in agriculture, and the local inhabitants.

Thus, a necessity for continuous survey of the conditions of the environment, whether polluted or not, arises. In case of pollution we talk about rescue operations, while we call the continual surveillance of normal environmental conditions monitoring. Only those environments, which have known and acceptable soil - water - air parameters can be termed ecologically sustainable area. Therefore, only accurate facts about the level of pollution, which is very low in the Adriatic, may convince even more tourists to visit, possibly even the ones, who believe the Adriatic is polluted.

Through changes in the lifestyle of local inhabitants new living conditions are introduced, and the tourist attractiveness of a region changes. The production of organic food, eco tourism facilities and other natural heritage make the basis for higher quality of tourism. Those changes make better offer for tourist. This might lessen the number of tourists, but increase profits due to the marketability of tourist attractions. This doesn't depend on the origin of the tourist, but on his needs and willingness to pay for them.

Therefore, production of organic-wholesome food, solving the problems in local communal services, insurance of an adequate standard of living as well as the development of ecotourism, all constitute the basis of the AGRICULTURE-TOURISM-ECOLOGY programme.



Organic agriculture

Organic agriculture and IFOAM standards are powerful tools in protecting the environment. Our activities in agriculture include the following principles and technologies:

- A. Land and livestock farming based on the use of natural organic techniques according to the IFOAM standards.
- B. Development of livestock production through the introduction of environmentally-clean, energy-efficient, and economically-viable organic technologies for the following:
 - Cattle production: beef and milk production,
 - Pig production: pork meat and piglet production,
 - Domestic fowl production: the production of chicken and eggs for consumption,
 - Horse breeding: use of horses for tourist entertainment, sport and recreation,
 - Sheep production: development of extensive and intensive production of mutton and milk,
 - Goat production: intensive production of goat meat and milk,
 - Alternative technologies: as part of domestic fowl production, intensive and extensive production of geese, ducks, turkeys, exotic breeds of fowls, the game fowls such as pheasants, Cornish hens, etc.
 - Alternative technologies: intensive large production of rabbits on co-operative basis,
 - Alternative technologies: intensive recycling, fish farming, etc.
- A. Development of farming toward growth of organic healthy food.
- B. Development of fruit production toward growth of organic healthy food.
- C. Development of forests according to the demand for forest revitalisation.
- D. Monitoring of soil-water-air parameters for agricultural production by means of a mobile ecological unit/laboratory.

Tourism

Our activity in tourism is concentrated on the development of ecotourism.

The ecotourism is advanced form of tourism, basing itself on local eco tourist facilities designed to enhance the historic, cultural, architectural and natural heritage of the area.

It is a major advancement in the tourist trade in general.

The Alpe-Adria region is an infinite source of historic and cultural heritage, with natural beauty and many tourist attractions. If we add organic wholesome food, eco-resorts and environmentally clean and healthy surrounding to those great advantages, then the quality of the attractions gets a higher level.

Within the framework of improved tourist attractiveness in the given region, we offer:

- Introduction and development of eco-resorts,
- Both planning and construction of new or reconstruction of existing accommodation,
- Both conceptualising and actually revitalising the village environments and transforming them into tourist centres,



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- All forms of financial advice pertaining to tourism,
 - Integration of organic food into local and regional tourism attractions,
 - Monitoring of soil-water-air parameters,
 - Creating of authentic souvenirs.

Ecology

Our ecological activities consist of two principle components: conducting the eco-study and monitoring the conditions of the environment.

An eco-study for individual region (e.g. Eco-study for the Island Hvar finished in September 1990) is conducted in three phases. The first phase – PROSPECTION – determines the conditions of the region. In this phase, all aspects of the life of inhabitants in a region are studied, including their past and present lifestyle. The system of local, communal and other services, the economic possibilities and opportunities (those in cultivation of land and livestock, forestry, commerce, tourism, restaurant and lodge management) as well as possibilities for other endeavours are completely examined. All types of other elements important for the cohabitation of inhabitants of the region such as education, health and veterinary services, social services as well as demands and possibilities for the future are established. On the basis of all those facts and figures the preliminary report “PROSPECTION” is made.

The second phase is educational campaign organised for the population of the area. It is necessary to acquaint the local population with various problems involved in living in an environmentally clean region. We feel it necessary to acquaint as many people as possible with the necessity for development of a specific region toward an environmentally clean zone, as only through local people’s support and co-operation one can implement the programme. During the course of education all actual data about the region have to be presented. With a synthesis of both, positive and negative, but most importantly, real data, communication with the inhabitants becomes possible.

The inhabitants have to be informed about all circumstances, which appear from the orientation of their region into environmentally clean zone, as well as about all positive and negative aspects of living there.

The third phase consists of preparing the eco-study, which elaborates the existing state of the area, and the possibilities for future development of the region into an environmentally clean zone. Thus, the eco-study gives suggestions and solutions for the environment problems of the region. We devise projects which guide a region toward an environmentally clean zone.

The other aspect of our work is planning and conducting monitoring.

The basic function of monitoring is to acquaint one with the actual condition of the environment. Only on the basis of real data about the conditions of soil, water and air, devise plans can be given for the development and for solving the problems of living in a region. Monitoring must be performed continuously, as only on the basis of current, actual data, we may say that a region is, or is not, an environmentally clean and healthy area.



By monitoring, we are surveying continuously the conditions of a region. Should a significant deviation from the normal values of parameters be detected, it would become necessary to begin solving the problem which causes the pollution.

This calls for professional expertise, since monitoring doesn't solve the problem of pollution itself. It simply serves to warn on it. For example, after monitoring a spring of water, we detect the presence of arsenic. Then it becomes necessary to eliminate the source or cause of this pollution and afterwards to resume monitoring.

The value of monitoring increases over a period of time in which it is performed. Only a large number of samples taken over a long period of time establish the real state of regional environmental conditions. The methods of extraction and analysis of samples must not vary.

We feel that it is necessary to perform monitoring at least once a month for a ten years period on a given region.

An environmentally clean zone may be proclaimed only on the basis of a continued monitoring of the soil-water-air parameters.

Only on such a basis it can be said that a region is environmentally clean and healthy. The other way of creating such a region and achieving this objective lies in proper attitude of the inhabitants and visitors toward the environment and nature.

A high contribution to regional pollution comes from local population, a source which may be eliminated through aforementioned education. Where protection from pollution by other regions is concerned, such as global pollution, each region depends on common integral protection.

As with the example of the Island Hvar, we can conclude that the development of a region into an environmentally clean zone will not be successful, if it is not co-ordinated with the development of a larger area. In our example the entire Adriatic Sea must be dealt with to achieve success on Hvar.

Successful implementation of monitoring requires laboratory facilities appropriate for measuring soil-water-air parameters. It is also important to have samples taken by a well-devised plan. Our monitoring programme is based on the employment of a mobile ecological unit.

The unit consists of a motor home equipped with a laboratory, communication system, and equipment for taking samples. To be able to take samples of water from rivers, lakes and sea, the unit comes equipped with a boat on a trailer.

Ways of co-operation

The programme AGRICULTURE-TOURISM-ECOLOGY is open to all ways of co-operation in the realisation of programme.

The most complete programme of co-operation is in the field of ecology, which includes all other elements of the programme. Co-operation in that field is possible by contract with



representatives of local or regional community, or with a company whose technology will be applied to the area. Those companies have to be accepted by both coordinators and by local authorities of a region.

The companies which may work on the programme are:

- In Slovenia:
 - DALEAS, Zadružna 9, 61218 KOMENDA, Slovenia
 - KOROTAN, Struzevo 20, 64000 KRANJ, Slovenia
- In Croatia:
 - AGROPHAROS, DOL, 58460 STARI GRAD, HVAR, Croatia

The business contract between the legal representatives of a region (Municipality or Executive Council of Municipality) and the company may include the complete job, or only parts of it, as:

- A contract for surveying the region,
- A contract for education programme for population of the region,
- A contract for both, surveying and education,
- A contract for preparation of eco-study of a region,
- A contract for surveying, education and ecostudy,
- A contract for monitoring of relevant parameters of a region,
- A contract for comprehensive agriculture development,
- A contract for comprehensive tourism development.

The ways of co-operation should be performed on the basis of the contract between two parties upon the following principles:

- The contract includes payment on the basis of agreed work expenses;
- The contract for an ecostudy, surveying and education includes the period necessary to complete the work programme, i.e. 6 to 12 months. The contract for monitoring runs up to a 10-years period due to its long-term programme and specific nature;
- The payment under the terms of the contract includes advance payment of 70 % without interest upon signing the contract, and 30 % upon completion of work;
- The payment for monitoring (10 years' contract) means advance payment of 70 % without interest upon signing the contract, 2 % of the total amount at the end of each year, and remaining 10 % at the end of the 10 years;
- All facts and data collected are considered “confidential”, while the monitoring data are the property of the contractor, and only the contractor has the right to publish or disclose these facts and findings to the public;
- Special guarantees are not given except in the case of monitoring where non payment reflects with break of contract;
- Any dispute arising out or in connection with the contract will be settled by negotiations; in case that fails either part may request the arbitration of the Court;
- The contract is effective upon payment of the advance.



Economic basis

The AGRICULTURE-TOURISM-ECOLOGY programme has to be considered as orientation to the development of people living under conditions of an environmentally clean zone. All programme components are economically feasible as they include only environmentally clean, economically acceptable and energy efficient production technologies.

The specific contents of a region are characterised by means of economic indicators. The programme provides a basis for revitalisation of cultural and historical heritage, for preservation of natural beauty of a region, for production of organic food, for revitalisation of the countryside through restoration and reinstatement of the “peasant yard” as the focus of village life, together with other elements already mentioned.

It is possible to develop special technologies to enhance a region's economic potential in a manner which conforms to the requirements of an environmentally clean zone.

It is possible to rationalise consumption of natural resources, e.g. water conservation, consumption of energy resources and all other resources.

As an example - intensive recycling technology of fish production enables abundant production of those consumer-destined fish of both sea and fresh-water fish species, for which we can obtain progeny. Recycling production can be organised without any direct communication with external waters, either fluent or stagnant, e.g. river, lake, or seawater, thereby rendering it completely environmentally clean and healthy.

Considering that the means and conditions of production are optimised for the special requirements imposed by each different fish species, such fish crop is not only environmentally clean and healthy but also very profitable. Under conditions of normal demand, the market for such production is certain due to their superior quality which we ensure with organic feeding.

In addition to all other advantages of the programme AGRICULTURE-TOURISM-ECOLOGY, the introduction of new technologies into region will bring new knowledge and development to those regions. The new technologies have to meet the needs and possibilities of the tackled area.

Although the region of Alpe-Adria, with its multinational population and heterogeneous needs and possibilities, makes the economic basis for this programme, its application is possible on other areas and regions throughout the world.

Conclusion

In case you have, by reading our programme oriented toward development of AGRICULTURE-TOURISM-ECOLOGY, noticed that you are interested to learn more about our work and to know us better, we can tell you that you are on your way to establish a successful co-operation.

Instead of a conclusion, we would like to restate a thought we used in Ecostudy for the Island Hvar:



IF YOU DON'T GET GOING, YOU WON'T MOVE FUTHER!

The Case Study

THE CASE STUDY OF THE IMPLEMENTATION IN THE AREA OF CENTRAL DALMATIAN ISLANDS

Introduction

The beginning of co-operation for the implementation of the programme Agriculture - Tourism - Ecology with the region of the Central Dalmatian Islands was back in the year 1989. The resolution of Municipality of Hvar, no. 351-01-89-01/9 set the basic path of developing Island Hvar according to the Programme.

Island Hvar, being one of the Central Dalmatian Islands, possesses heritage from Neolithic, Hellenic and Roman eras, mixed with achievements of present Croat inhabitants of the island.

The beginning of modern tourism was during 1860s when the tourist association was established. With such tradition, Hvar is among the European first tourist resorts and with the longest experience in tourism.

The surrounding islands, Brac, Solta, Korcula, Vis, Lastovo, Mljet and Peljesac peninsula, are of similar attributes.

The eco-study of island Hvar has been developed and presented during 1990. Other islands followed the example and signed agreements during following years (see separate schedule).

The major achievement of the Programme was the declaration “The Central Dalmatian Islands - Ecologically Clean Zone”, signed on May, 21st, 1991, upon the initiative of the local authorities. The text follows.

Pic29.jpg – please see at www.institut-climatechange.si

Declaration

For the purpose of co-ordinating their common needs and the development possibilities of the region of the Central Dalmatian Islands:

The Municipality of the Island Brac
The Municipality of the Island Hvar
The Municipality of the Island Korcula
The Municipality of the Island Lastovo
The Municipality of the Island Vis, and
The Joint Council of the Island Solta

Did agreed upon and jointly signed the



DECLARATION

THE CENTRAL-DALMATIAN ISLANDS - ECOLOGICALLY CLEAN ZONE

The Declaration directs the development and the growth of environmental protection in the region of the Central Dalmatian Islands, first to establish an ecologically clean zone and later to maintain the achieved qualities.

The Declaration directs the development and the positive growth of living conditions for the inhabitants and the visitors of the Central Dalmatian Islands. Under living conditions all the following elements are incorporated: environmental conservation, protection of land from future devastation and pollution originating on the Central Dalmatian Islands, and a higher standard of living (energy, water, communal waste, wastewater, communications, etc.)

The Declaration protects the traditions, the civilisation and the cultural heritage of the Central Dalmatian Island region.

The Declaration directs the development and growth of agricultural production towards the production of organic food, i.e. without using pesticides and industrial fertilisers whose impact stresses nature.

The Declaration directs the development of tourism and other business branches present in the Central Dalmatian Islands region within the framework of working and living in an ecologically clean zone.

The Declaration establishes the joint need to safeguard the Central Dalmatian Islands region from pollution originating from other regions.

The Declaration covers two time periods. They are:

- The time needed to establish an ECOLOGICALLY CLEAN ZONE, and
- The period following in which the achieved conditions of the ECOLOGICALLY CLEAN ZONE are maintained.

The Central Dalmatian Islands region becomes an ecologically clean zone when the continuous monitoring of soil-water-air parameters gives results within the international recommended levels for the human environment.

The Declaration accepts that directing the development of the Central Dalmatian Islands region should be in accordance with the laws of the Republic of Croatia, with the Adriatic Initiative, an integrated protection programme for the Adriatic Sea, and with the programme of Agriculture - Tourism - Ecology by "Agropharos" - TJE Business Advisory Center.

The subject of this Declaration is the region of Central Dalmatian Islands. The region as a coherent whole consists of the large islands: Brac, Hvar, Korcula, Lastovo, Solta, Vis, and a part of Peljesac a peninsula, including all the smaller islands in the area, and of the coastal zone and sea.



The Declaration gives a solution for financing the project by means of a joint fund for financing the development and the growth of the Central Dalmatian Islands region into an ecologically clean zone.

The consignees of the Declaration are members of the fund.

The Declaration is effective from the date of its signing by the legal representatives of the Central Dalmatian Islands region.

Signed: 21st of May, 1991

Results

The co-ordination of the activities was trusted to Dr. Timi Ecimovic.

War in the years 1991 to 1993 made the work much more difficult. The results of the activities were as follows.

Hvar

- The prospection, education and the eco-study in 1991.
- Communal waste, 1992.
- Organic agriculture, 1992.

Brac

- The education (partly) in 1991.
- Communal waste, 1992.
- Organic agriculture, 1992.
- Monitoring, 1992.
- Alternative sources of energy, 1992.
- Integral transport, 1992.

Korcula

- The prospection, education and eco-study in 1992.

Lastovo

- The prospection, education and eco-study in 1993.

Solta

- The prospection (partly) in 1991 - 1993.
- Communal waste, 1992.
- Organic agriculture, 1992.
- Monitoring, 1992.
- Alternative sources of energy, 1992.
- Integral transport, 1992.

Vis

- The prospection (partly) in 1992 - 1993.



-
- Communal waste, 1992.
 - Organic agriculture, 1992.
 - Monitoring, 1992.
 - Alternative sources of energy, 1992.
 - Integral transport, 1992.

Peljesac

Minor part of the peninsula was under Municipality of Korcula Island. The major part is under consideration to join the declaration.

Mljet

Island Mljet has two parts, municipality and national park (major part). Both are under procedure to join the declaration.

Other events

Other events were as follows:

- March 1991, the first co-ordination meeting of presidents of Central Dalmatian Islands municipalities (5+1=6 subjects), town Korcula, Island Korcula.
- 21st of May, 1991, the second co-ordination meeting and inaugural signing of the declaration “The Central Dalmatian Islands - Ecologically Clean Zone”, town Hvar, Island Hvar.
- June 1992, the third co-ordination meeting and inaugural handling over of Ecostudy of Island Korcula, town Vela Luka, Island Korcula.
- October 1992, the fourth co-ordination meeting, town Bol, Island Brac.
- November 1992, the visit of the presidents to Slovenia and Austria in connection with communal waste and waste water treatment, Ljubljana, Maribor, Graz.
- During summer 1993, local government was reorganised from 5 municipalities and Island Solta, (previously part of Municipality Split, big town in Dalmatia), into 21 new municipalities.
- September, 1993, inaugural handling over of ecostudy if Island Lastovo, Lastovo.
- From January 1994, the co-ordinator writes monthly reports to all presidents and other subjects linked with the declaration.
- May, 1994, eco-centre, Island Scedro, has been discussed, the financial position was reviewed and demand for finance was put forward. The credits for development needs were considered.
- The co-ordination of the declaration “The Central Dalmatian Islands - Ecologically Clean Zone” goes on.

Conclusion

Co-ordination of sustainable development of Central Dalmatian Islands is long term project and long term work for the inhabitants, professionals, governmental and other organizations, international institutions, donators and the people of good will who are taking care of the future of Central Dalmatian Islands and may help sustainable development of the region.

The constant research and development of solutions to interdisciplinary problems of living conditions has to be applied as soon as it is known and applicable.



Up to date work, documents and experience and possible co-ordination are available for all who might be interested to assist in development of Central Dalmatian Islands.

Municipalities

The municipalities included in the declaration

“The Central Dalmatian Islands - Ecologically Clean Zone” as of July 1994.

Island Brac

Bol, Milna, Nerezisce, Postira, Pucisca, Selca, Supetar and Sutivan (to be inaugurated).

Island Hvar

Hvar, Jelsa, Stari Grad and Sucuraj.

Island Korcula

Blato, Korcula, Smokvica and Vela Luka.

Island Lastovo

Lastovo.

Island Mljet

Mljet and National Park Mljet under consideration.

Peninsula Peljesac

Orebic and Ston under consideration.

Island Solta

Solta.

Island Vis

Vis and Komiza.

Organisations

The list of organizations involved with co-operation for the sustainable development of Central Dalmatian Islands:

- Agropharos, Stari Grad, Dol, Croatia,
- Municipalities according to Appendix of the municipalities,
- Governmental organisations of the Republic of Croatia,
- Co-operative Association of Dalmatia, Spalato, Croatia,
- Vela International, co-ordinator for the tourism, Split, Croatia,
- Bios, co-ordinator for organic agriculture, Zagreb, Croatia,
- ANT Laboratories, co-ordinator for monitoring, Zagreb, Croatia,
- University of Split, Faculty for Construction, the programme holder, Split, Croatia,
- Vedeco, urbanisation according to TM standards, Zagreb, Croatia,
- Saubermacher, co-ordinator for communal and other waste, Graz, Austria,
- Vestas Danish Wind Technologie, Lem, Denmark,



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- Cavee Coveco, livestock supplier, Velp, Netherlands,
 - ZPC, potato seed supplier, Netherlands,
 - IFOAM, Okocentrum Imsbach, organic agriculture standards source, Tholey-Theley, Germany,
 - UNEP/MAP/PAP, environmental information source, Nairobi/Athens/Split,
 - ICC - ecomanagement information source, Paris, France,
 - Slovenian Innovators Association, information source and co-ordinator for ecotechnologies, Ljubljana, Slovenia,
 - Concentre, waste water treatment (ozonization) and other ecotechnologies, Celje, Slovenia,
 - Dr. Dani Vrhovsek, waste water treatment by wetlands sanitation, Ljubljana, Slovenia,
 - Hidroinzeniring, planing and construction of ecoprojects, Ljubljana, Slovenia,
 - VAB commerce, bricketing co-ordinator, Split, Croatia, and many others.

Projects

The list of projects:

- Whole region of Central Dalmatian Islands
- Communal and special waste,
- Organic agriculture, organisation and projects (eco-wine, eco-olive oil, eco-olives for consumption, etc.),
- Monitoring,
- Electricity production (wind technologies),
- Integral transport,
- Waste water treatment,
- Eco tourist facilities,
- Irrigation.

Some of the projects from ecostudies of individual islands

- Eco-centre Scedro, Hvar,
- Protection of Mediterranean seal, Lastovo,
- Lobster Centre, Lastovo,
- Production of queen bees, Lastovo,
- Eco-wine, Korcula,
- Eco-olive oil, Korcula,
- Olive Centre, Solta,
- Medical Herbs Centre, Hvar,
- Pyretrum production, Brac,
- Irrigation of island Korcula, Korcula,
- Recycling production of sea fish, Vela Luka, Korcula,
- Trade-free zone, Hvar,
- Urban centre, according to TM standards, and many others.



Standards

List of legal and international standards governing the declaration:

- Legal system of Republic of Croatia,
- Barcelona convention with relevant protocols,
- Genova convention with relevant protocols,
- Basel convention,
- Adriatic initiative,
- ISO standard,
- Black Code -- EAN international,
- Business charter, ICC, Paris,
- Basic standards of organic agriculture, IFOAM,
- UN framework convention on climate changes,
- Agenda 21 -- atmosphere, sustainable agriculture, the role of agriculture, etc.

Literature:

- The Programme Agriculture-Tourism-Ecology 6th edition, TJE business research centre, DALEAS, Agropharos, Ljubljana/Dol Hvar, Slovenia/Croatia, 1989-1994,
- Ecostudy of Island Hvar (Prospection, Education and Ecostudy), TJE centre, 1990,
- Ecostudy of Island Korcula, Agropharos, 1992,
- Ecostudy of Island Lastovo, Agropharos, 1993,
- Communal and other waste, organic agriculture, monitoring, integral transport, alternate sources of energy, as appendices of ecostudies for islands Brac, Solta, Vis and Municipalities of Kutina and Garesnica, Croatia, 1992-1994,
- Recycling fish production programme, Agropharos, 1992,
- Irrigation of Island Korcula, Agropharos, 1992,
- The Declaration "Central Dalmatian Islands, Ecologically Free Zone", Los Angeles, USA, 1991,
- Basic standards of organic agriculture, IFOAM, Sao Paolo, Brazil, 1992,
- Organic agriculture products in EC no. 2090/91, Gazzete EC no. L 198/1, 20/07/91,
- UN Framework convention on climatic changes,
- The Business charter for sustainable development, ICC, Paris, France,
- Our Common Future, World commission on environment and development, 1987,
- State of the World, 1993/1994, Lester R. Brown, New York, USA,
- MAP Technical Reports 1-80, UNEP, Athens, 1986-1994,
- Message From Dr. Mostafa K. Tolba, UNEP, Nairobi, Kenya, 1991,
- The Environmental Programme for the Mediterranean, World Bank, The European Investment Bank, 1990,
- Blue Plan, The Future of Mediterranean, UNEP/MAP, Athens, Greece,
- Organic Agriculture, Dr. Timi Ecimovic, 1994, Ljubljana, Slovenia.

Interesting: the result of the pioneer action at the region of Central Dalmatian Islands in Croatia comes to end in 1993 when governmental action was directed to capitol Zagreb development and Dalmatia as whole was put aside for any development actions. Work on environmental quality of Central Dalmatian Islands has been halted and up till now was not restored. Thanks to president of Croatia late Dr. Franjo Tudzman and his unique policy to became history.



After Rio Summit the world was full with enthusiasm, and in many countries actions were taken towards Agenda 21 Processes. But because a majority of world nations' governments did not accept Agenda 21 processes as theirs, work on most important segment of present civilization's future - the quality of environment - was handed over from UN to NGO's.

Great work by The Centre for Our Common Future, and Michael Keating publishing of Agenda for Change 1993 was a well prepared action, and many people have benefited from their work.

Republic of Slovenia's NGO's did prepare Agenda 21 for Slovenia during 1995. It was a nicely prepared small booklet, with many useful ideas and propositions for change for better. Final result of their action was ZERO.

At UN action for sustainable development was well organized. Many meetings and great work was done. Final result did not meet expectations.

Number of individuals from many countries took part at conferences and information exchange. Many extremely important issues were discussed and many propositions for complex problem solving were put forward.

Ten years after Rio Summit at SD Summit in Johannesburg, South Africa, the UN failure to get ahead the sustainable development was seen.

Sustainable development was action for future, but it was not making money, but intended to consume money, and not to give in return great profit. National governments, national elites and politicians were inventing new actions for better environment improvement; global warming, climate change impacts, floods, droughts, wind storms, uragans and tsunamis were taking more and more tolls in lives and property damages, but still the official attitude was to NOT PREVENT but better to deal with issues at hands and to put blame on invisible causes.

Let us see from this point of thinking the Katerina disaster at New Orleans.

New Orleans large area should be declared unfit for humans living many years ago due to its environmental qualities – River Missisipi delta, living level below sea level, geographical characteristics etc.

Year by year US government was meeting large damages dues due to floods. Even if they declared region unfit in 2000, the people of US would benefit with prevention of disasters occurred after 2000.

Unfortunately US government and people are still reconstructing area and encouraging people to live there. That is paradox of today.

Similar situations may be seen in many countries with leading Netherland, closely followed by Bangladesh (Dakha is likely going to be one of largest cities in the world in coming years) where large tsunami may have up to 15 million and more dead humans, Spain, Italy, England, Germany, to mention some, etc.



14. Contribution by Prof Dr. Emeritus Matjaz Mulej at all - A Model to make Sustainable Future Happen³⁹

14. A Model to make Sustainable Future Happen

(Matjaz Mulej, with Nastja Mulej, Vojko Potocan, Damijan Prosenak, and Zdenka Zenko – by ABC order)

14.1 The selected problem and viewpoint in Ch. 14

I view this book as a next step in my work and co-operation after the conferences on environmental innovation (Mulej, Jan, eds., 1994) and environmental problem solving (Vezjak, Stuhler, Mulej, eds, 1995) and the related book (Vezjak, Stuhler, Mulej, eds., 1997), and the book by Ecimovic, Mulej, Mayur and coauthors (2002). The environment related contributions to STIQE conferences (Rebernik, Mulej, eds., since 1992 biannually) can also be added. It would be much better for humankind, if findings and conclusions of those efforts and their +200 authors were realized much more than they actually are. On this basis and on the basis of similar conclusions made by several coauthors of this book, I find it makes sense to add to this book a chapter on the way how to realize so important suggestions. As a basis for it, let me first remind you, that in our book (Ecimovic, Mulej, Mayur and coauthors, 2002) we state that environmental problems are, first of all, mental problems – they result from current human knowledge and values. In them, there is a lack of systemic, i.e. requisitely holistic thinking and feeling, which should replace the exaggerated narrow specializations by adding to the unavoidable specialization of profession and location of living the equally unavoidable capability of interdisciplinary creative co-operation and long-term thinking rather than the short-term one only. These requirements demand a crucial change of human behavior and its mental background: it makes sense to approach the topic as an invention that is aimed at becoming innovation.

14.2 Suggestions on providing a sustainable future as inventions aimed to become innovations: the crucial role of systems thinking and the ‘law of requisite holism’

Like the references mentioned above, this book reminds humankind of a very critical situation and dangerous trend, which the humankind of today and its natural preconditions of life are facing. But the book’s authors go beyond that toward making suggestions. Though, there is a long way from the first ideas to suggestions and an even longer way and more troublesome way from them to innovations, which means: to a new benefit of the users of a new idea and from here to a new benefit of the authors and owners of the new idea. We shall tackle the invention-innovation process. But we cannot tackle it well, if we do not use systems thinking. Because the latter has many definitions and has grown from a single General Systems Theory and single Cybernetics to a long list of very diverse contents called systems theories (François, ed., 2004), I must first explain my own, and my coauthors’ definition of systems

³⁹ A Model to make Sustainable Future Happen has been drafted by Prof. Emeritus Dr. Matjaz Mulej, with Nastja Mulej, Vojko Potocan, Damijan Prosenak, and Zdenka Zenko – by ABC order.



thinking according to my Dialectical Systems Theory (Mulej, 1974; and later, the most recent version in English: Mulej, Zenko, 2004).

Systems *thinking* as the *practice* of *holistic* rather than one-sided *thinking* had been many millennia old practice of the *successful* humans, before systems *theory* as its theoretical generalization was created. Like most other human capabilities, the practice of systems thinking was *informal*, first, and then received the form of theory to make easier the transfer of good practice through teaching (Mulej et al, 1998; Mulej et al, 2003; Mulej, N., ed, 2004; Potocan, Mulej, Kajzer, 2002). See Figure 14.1 for our definition of holistic thinking (Mulej, in Mulej et al, 1992, reworked in 2006). Holistic thinking requires more holism than the human natural capacity can cover.

<i>Interdependent actual general groups of real features' attributes</i>	<i>Interdependent attributes of the requisitely holistic consideration of real features</i>	<i>Considered attributes of thinking about real features</i>	<i>Attributes of participants of consideration at stake</i>	<i>Surfacing of all these attributes in a given case</i>
Complexity	Systemic	Consideration of whole's attributes that parts do not have	Interdisciplinary team	The final shared model resulting from research as a dialectical system of partial models
Complicatedness	Systematic	Consideration of the parts' attributes that the whole does not have	One-discipline group or individual	Partial models resulting from one-viewpoint based investigation
Relations - basis for complexity	Dialectical	Consideration of interdependences of parts that make parts unite into the new whole – emerging (in process) and synergy (in its outcome)	Ethics and practice of interdependence – path from one-discipline approach to the interdisciplinary teamwork	Shared attributes and complementary different attributes, which interact to make new synergetic attributes, i.e. from systematic to systemic ones
Essence - basis for requisite realism and holism of consideration	All essential	Consideration that selection of the systems of viewpoints must consider reality in line with the law of requisite holism for results of consideration to be applicable – by reduction of reductionism	Capability of researchers to deviate from reality as little as possible in order to understand reality, including systemic, systematic and dialectical attributes of it	Findings applicable in practice, although resulting from theoretical considerations

Figure 14.1: Dialectical system⁴⁰ of basic attributes of requisite holism/realism of thinking, decision making, and action

An author (usually tacitly!) *selects a viewpoint*, to consider the object dealt with on the basis of *limitation* to one part of the really existing attributes only. When specialists of any profession use the word system to call something a system inside their own selected viewpoint – it makes a

⁴⁰ A dialectical system comprises in a network all crucial viewpoints in order to help the observer attain a requisite holism, once a total, i.e. real holism with all viewpoints, synergies and attributes reaches beyond the human capacity. See Figure 14.2 for definition of requisite holism.



system *fictitiously holistic*. It does not include all existing attributes that could be seen from all viewpoints and all their synergies. See Fig. 14.2; details in Fig. 14.8.

←-----→		
Fictitious holism/realism (inside a single viewpoint)	Requisite holism/realism (a dialectical system of essential viewpoints)	Total = real holism/realism (a system of all viewpoints)

Figure 14.2: The selected level of holism and realism of consideration of the selected topic between the fictitious, requisite, and total holism and realism

A brief summary of the *law of requisite holism* may thus read:

The law of requisite holism says that one must always try and do, what many, but not all, have the habit to do in their thinking, decisions, and actions – do one's best toward avoiding the exaggeration of both types: 1) the fictitious holism, which observers cause by limiting themselves to one single viewpoint in consideration of complex features and processes; 2) the total holism, which observers cause by no limitation to any selection of a viewpoint or system (= network) of viewpoints in consideration of complex features and processes. Instead, the middle ground between both exaggerations should be covered, which can be achieved by using a "dialectical system", made by the author/s as a system as entity or network of all essential and only essential viewpoints. Thus, reductionism is reduced.

For the requisite holism to be achieved three *preconditions*, at least, matter:

- 1) Both specialists and generalists are needed, in teams that feel *ethics of interdependence* and co-operate to attain the requisite holism.
- 2) They include professionals from *all and only requisite* professions or disciplines.
- 3) Their values are expressed in their *ethics of interdependence* and practiced in a creative teamwork, task force, session(s) based on an *equal-footed cooperation* rather than top-down one-way commanding.

Requisitely holistic thinking *cannot* include the *global attributes only*, because they make a part of the really existing attributes only, although they matter very much and tend to be neglected by specialists' oversights. *Neither* can holistic thinking include the *parts' attributes only*, although they matter very much and tend to be subject of focus by specialists of single disciplines and professions. Oversight of *relations*, especially interdependences causing influences of parts over each other, may not be forgotten about in requisitely holistic thinking; especially specialists, who have not developed the habit to consider specialists, who are different from themselves, tend to make crucial oversights in this respect. This experience means that they are not *realistic* enough. See Fig. 14.1, 14.2, and 14.8.

Take a look at experience around you and discover (again): *Success* has always resulted from *absence of oversights* with crucial impact. And failure has always resulted from crucial oversights, be it in business, scientific experiments, education, medical care, environmental care, invention-to-innovation processes, etc., or wars, all way to World Wars of the 20th century, and all other wars and crises.

*Holism of thinking is aimed at avoiding crucial oversights. Systems thinking should better be called holistic thinking and be the worldview and methodology of holism.*⁴¹

⁴¹ L. v. Bertalanffy, the father of the General Systems Theory, said explicitly (1979, p. VII ff) that he had created the Systems Theory (actually: Teaching about Systems) against overspecialization of the modern times. According to him, General Systems Theory is not supposed to be one of many specializes scientific disciplines, but a worldview of



Systems, i.e. holistic, thinking matters for scientific reasons, for individual success in whatever activity, and for economic reasons, too. See Figures 14.3 and 14.4 for a quick look at the changes requiring holistic thinking more and more today e.g. in relation to humans' natural environment, on which humankind's survival depends, but humankind threatens it by one-sided thinking, decision-making, and action, which cause its destruction. (See www.climatecrisis.net; Ecimovic, Mulej, Mayur, 2002; Vezjak, et al, eds, 1997; chapters in this book; etc.).

Viewpoints Type of Market	Basic Relation/s Between Production and Consumption	Impact of Humans on Natural Environment	Humankind's Interdependence with Natural Environment
RANDOM MARKET	Producers' own consumption and occasional exchange of random surpluses	Minimal impact, growing as humankind grows in number and needs / requirements	Intuitive human consideration of nature based on experience in agriculture, gathering, hunting, wood cutting, fishing and mining
SELLERS' / PRODUCERS' PREVAILING POWER = PRODUCERS' MARKET	Growing production for poorly considered, known/unknown, customers, who lack impact over suppliers	Specialization and narrow thinking grow and so does the humans' detrimental impact over nature (espec. by industrialized production)	Nature is subordinated to profit, jobs depend less on nature, more on growing urbanization and manufacturing as well as industrialized agriculture
BUYERS' / CUSTOMERS' PREVAILING POWER = BUYERS' MARKET	Growing impact of customers requiring satisfaction / total quality of products and services, and conditions of life	Specialization and its bad one-sided impact over nature keep growing, so does biased application of science, causing need for interdisciplinary cooperation	Nature is still subordinated to profit, but nature is thought of more due to cost, caused by backlash of oversights caused for profit; inter-disciplinary insight grows
STATE / GOVERNMENT SUPPORTED BUYERS' MARKET	Increasingly organized / legalized impact of customers demanding total quality of products, services and conditions of life	Growing awareness about the terrible impact of humankind's one-sided impact over nature & its dramatic consequences for humans' survival	Same as before, but world wide official documents and actions urge governments and businesses as well as humans to be more holistic; so does a part of market

Figure 14.3: Development of market relations and environmental care quality – a case of growing awareness of the requisite holism as a precondition of humankind's survival

Why are facts in Figures 14.1-14.3 so *alien* to so many contemporary people?

For most time of the 100.000 or millions of years of its history (Bryson, 2005), humankind has lived in self-sustained economy with a random market, e.g. in the form of fairs. *Innovation* did not matter; *requisite holism* was reduced to local and family relations, mostly, so was *ethics of interdependence*. In producers' market these attributes and/or *sustainable development* did not matter either, because *competition* was negligible; cases may include medieval guilds, strong trade unions, or market monopolists of other types. Once their power had been broken, after 1870s (Rosenberg, Birdzell, 1986) innovation and hence requisite holism and ethics of interdependence gradually became crucial – in the emerging

holism and methodology supportive of it. He speaks of wholeness and never defines it exactly in what I had a chance to read. Because Bertalanffy attacked the over-specialization, Davidson (1984) used in the title of his book about Bertalanffy the words 'uncommon sense'. The practice of environmental problems, endangering the sustainable future of the humankind, belongs to a rather long list of troubles resulting from the narrow specialization with no or too little interdisciplinary co-operation, without which the requisite holism cannot be attained in a big majority of the human practical experiences. For very few jobs one single profession is enough to cause no oversights and resulting troubles rather than successes.



customers' and state supported customers' market. Hence, in a *very short period of time* people have become supposed to change millennia old habits – add innovation to routine, and requisite holism to growing narrow specialization, as well as interdisciplinary co-operation to self-sufficiency of specialists. Narrow specialization that is unavoidable today, may add to either ethics of interdependence or ethics of self-sufficiency, depending on *human values*.

Prescribed standards, such as ISO 9000 (quality), ISO 14000 (environment), are cases of the related change in the customers'-market situation. In addition, in recent decades market changes became much quicker (Fig. 14.4). People of today are *overwhelmed* by market demands for change and they must match these changes with innovation and hence requisite holism and hence ethics of interdependence, like never before. Changes happened in one-generation time, rather than as slowly as people were used to earlier, and are keeping their speed, at least.

Over the decades after the 2nd World War, market requirements have been changing more quickly than the human capacity to unlearn the old and accept the new culture. In every next decade, rather than a two-generation cycle of about 70 years⁴², new attributes preconditioned success in addition to the previous ones. Every phase after 1960, in the West (and Japan, Taiwan, South Korea, Hong Kong, Singapore, Australia and New Zealand) with their 20% of population of the world, expresses the customers'/buyers' and state supported buyers' market (in Fig. 14.3). Competition keeps causing *lower cost*, including a lack of care for natural environment, if short-term and one-sided views prevail. Monopolies are no better. A need results for costly eco-remediation, health care, organizational, managerial, business and technological innovation causing the development toward the *sustainable enterprise*.

Decade	Market & Social Requirements	Enterprise's Ways To Meet Requirements	Type of Enterprise
1945-	Covering of post-war conditions of scarcity, rebuilding, etc.	Supply anything; supply does not yet exceed demand	Supplying Enterprise
1960-	Suitable price (as judged by customers)	Internal efficiency, i.e. cost management	Efficient Enterprise
1970-	Suitable price X ⁴³ quality (as judged by customers)	Efficiency X technical & commercial quality management	Quality Enterprise
1980-	Suitable price X quality X range (as judged by customers)	Efficiency X technical & commercial quality X flexibility management	Flexible Enterprise
1990-	Suitable price X quality X range X uniqueness (as judged by customers)	Efficiency X technical & commercial quality X flexibility X innovativeness management	Innovative Enterprise
2000-	Suitable price X quality X range X uniqueness X	Efficiency X technical & commercial quality X flexibility X innovativeness X SD	Sustainable Enterprise

⁴² Historical data about how much time has passed between the critical historic events, such as from the liberation of USA from United Kingdom and USA becoming a country of its own until USA civil war, and then to the great depression, and to the current role of USA as the only superpower in the world, demonstrate that the critical modernization of the prevailing culture has tended to last two generations in the transition from the pre-industrial to the modern society. This can be seen in other countries too (M. Mulej, in Mulej et al, 2000, pp. 108-116). We call this the law of two-generation cycles (Mulej, 1994).

⁴³ X denotes interdependence. No attribute is avoidable any longer for a longer-term success. The original table (Bolwijn, Kumpe, 1990) did not contain X, but +. The sign + denotes that interdependencies and resulting synergies are not considered; elements are only summed up. Experience shows summation is an oversimplification. The original did not contain the decades of 1950 and 2000 either. Note: SD = sustainable development.



	contribution to SD (as judged by customers)		

Figure 14. 4: From a supplying to a sustainable enterprise – and a new definition of the concrete contents of requisite holism

Consequently, with full right, humankind needs the development level of *sustainable enterprises* (in Fig. 14.4: ‘decade of 2000-’). It requires requisitely holistic understanding of the current reality and of the role and importance of all humans in that reality, especially of the critical entities such as enterprises. This means that humans must use requisitely holistic thinking (Figures 14.1, 14.2 and 14.8) in their perception, thinking, decision-making and action for humankind to survive; they cannot use it with no ethics of interdependence (For details see: Knez-Riedl, 2000a; Knez-Riedl, Mulej, Zenko, 2001; Mulej, 1979; Mulej et al, 2000; Mulej, Kajzer, 1998 and 1998a; Potocan, 2000; and Potocan, Mulej, Kajzer, 2005).

How can enterprises and other organizations of so far *become* sustainable enterprises? According to data in Figures 14.1-4, especially Fig. 14.4 - ‘decade of 2000’, humans, as consumers, buyers, citizens, and competitors need and require enterprises to take a *new, more/requisitely holistic and future-anticipatory, criterion* of their own long-term *viability*. Consequences of one-sidedness in enterprises’ decisions are clear: the economic and other *crises* of recent decades, which include *high cost* of sustainable development that has become unavoidable. It is much easier to make decisions than to think requisitely holistically. More attention must be paid to a requisitely holistic preparation, definition and realization of goals including long-term SD in order for humankind to *overcome* its permanent and costly economic crises and to *survive*.

Bosses and other members of modern enterprises are, hence, facing a *basic question*: How should they define their new development and future business? By *sustainable development principles* (Potocan, Mulej, 2006): the most probable *alternative of requisite holism* is one-sidedness including *crucial oversights* and hence *new crises* due to which very few new firms live more than a few years (Gerber, 2004). Enterprises exist and develop best if their actions are requisitely holistic. However, in both theory and practice, we detected *no holistic model of business* that provides a requisitely holistic, harmonized, and goal-oriented development. The sustainable development concept offers a (possible) solution, at least, to achieve a sustainable orientation of human activities (Potocan, Mulej, Kajzer, 2005).

On the basis of theoretical cognitions and our own experiences in business practice, one can define sustainable enterprise, in the most general sense, as an enterprise attaining a *synergetic whole of economic, ecological, social, and ethical dimensions* (e.g. goals) of its business, along with the requirements listed in Figures 14.4 - ‘decade of 2000’, 14.5 and 14.6 (Ackoff, Rovin, 2003; Brandon, Lombardi, 2005; Breu, Hemingway, 2005; Drucker, 1985; EU, 2005; Goerner, 2004; Lunati, 1997; Potocan, 2002; Schermerhorn, Chappell, 2000; WBCSD, 2004; WCED, 1987).

Figure 14.5 shows the basic aspects and resulting *criteria* of what are sustainable enterprises, and possible *means* of implementing market and social requirements as imperatives in and beyond the decade of 2000. A sustainable enterprise tries to conceive and run its working and behavior in a way that meets both human and environmental needs and requirements (For details concerning each aspect and its criteria, see also: Ackoff, Rovin, 2003; Brandon, Lombardi, 2005; Cooper, Vargas, 2004; Daft, 2000; Dees, Emerson, 2002; Drucker, 1985; Ecimovic, et al, 2002; Edwards, Orr, 2005; EU, 2005; Florida, 2002; Goerner, 2004; Koch, 1998; Lunati, 1997; McIntyre, 2005; Mulej et al., 2002; Potocan, Mulej, 2003, 2005; Schermerhorn, Chappell, 2000; UNESCO, 2000; WBCSD, 2004, 2005; and WCED, 1987).



Humans namely live on *four basic levels* to be considered in sustainable development, therefore by *sustainable ethics*: Individual level; Enterprise (e.g. corporate) level; *closer* environment (e.g. natural, social, and ethical) level; and *broadier* (i.e. global) environmental level. On all four of them four main criteria make the dialectical system considered: Fig. 14.5.

Aspect	General Criteria
Economic imperative	Competitiveness
Ecological imperative	Habitability
Social imperative	Community
Ethical imperative	Legitimacy
All aspects	Combined criteria

Figure 14.5: Sustainable enterprise's basic aspects and main criteria of its quality level

The needs, which we have summarized in Fig. 14.5, require sustainable enterprises to conceive, formulate, to apply requisitely holistic criteria, and to evaluate their business practices critically.

Figure 14.6 summarizes some basic criteria to evaluate sustainable enterprises' business from some critical viewpoints. Hence, a sustainable enterprise attains the *highest level* of requisite holism and destroys the human condition for survival *the least* of all enterprises.

A sustainable enterprise does not only command with the most modern and comprehensive *knowledge*, but uses ethics that allow sustainable enterprises to do no / to do the least *harm*, such as sustainable ethics resulting from sustainable development principles.

Criteria Aspects	Individual Performance Criterion	Corporate Performance Criterion	Societal Performance Criterion	Global Performance Criterion
Economic Imperative	Individual prosperity	Corporate profitability	Societal wealth	Global wealth
Ecological Imperative	Individual eco-efficiency	Corporate eco-efficiency	Societal eco-efficiency	Global eco-efficiency
Social Imperative	Individual quality of life	Corporate reputation	Societal quality of life	Global quality of life
Ethical Imperative	Individual values	Corporate values	Societal values	Humankind values
All aspects in synergy	Individual sustainable life index	Corporate sustainable behavior index	Societal sustainable development index	Global sustainable development index

Figure 14.6: Basic criteria for evaluation of sustainable enterprise – a suggestion

There is an interesting view of *economic development phases* that stresses the notions that are summarized in Figures 14.1-14.6. It sees four phases: (1) the *factors phase* means that a nation or region lives on natural resources and cheap labor, providing for a rather poor life for millennia; (2) the *investment phase* means that a nation or region lives on foreign investment into its economic development and can hardly compete; (3) the *innovation phase* means that a nation or region lives on its own progress and attains a better and better standard of living; (4) the *affluence phase* means that people have finally become rich, which makes them happy, but also lose ambition. Thus, the phase 4 is not the highest development phase only, but also the phase of *growing problems* of employment, supporting everybody etc. (Porter, quoted in Mulej, 2006). Conclusion: one must either attain and keep capacity of requisitely holistic thinking in order to enter the *innovation phase* quickly and remain in it as long as possible, or return to it from phase 4 as soon as possible.



Sustainable enterprises command with the most modern and comprehensive knowledge; they use ethics that allow them to do no or the least harm, such as sustainable ethics resulting from sustainable development principles. This means, among the other points, that the traditional economic criteria can no longer express reality, because they oversimplify (Forbes, in Mulej, N., 2006, provides a good case of an oversimplification). Criteria of sustainability diminish the impression of success of the socio-economic development to hardly any betterment of life over the recent decades (Bozicnik, in process). Sustainable enterprise criteria are more realistic, but not enough, perhaps; criteria concerning well-being may serve, too.

Diener and Seligman (2004) offer a further new promising model. It includes important non-economic predictors of the level of well-being, such as social capital, democratic governance, and human rights; all of them influence work satisfaction and productivity well. Supportive social relations are necessary for well-being; well-being on its part also leads to good social relationships with crucial economic policy implications. Desirable outcomes, even economic ones, often result from well-being rather than the other way around. People high in well-being later earn higher incomes and perform better at work than others. They also have better relationships, are healthier, and attain longer lives. Therefore Diener and Seligman (2004) suggest measuring well-being with variables such as positive and negative emotions, engagement, purpose and meaning, optimism and trust, and life satisfaction.

Hornung (2006, p. 338) states that happiness is the permanent goal of humans and a holistic indicator of holistic well-being, well-functioning, and the physical, psychological, and social health of an individual.

Thus, sustainable future should be a future of happiness, which is not measured by the traditional economic criteria only or mostly, but by well-being in a much broader conception, a more or even requisitely holistic one.

Holism is an easy word to use, as long as we do not try to exactly define it (See Figures 14.1 and 14.2 again; add Figure 14.8). Different authors tend to have different definitions (See: Checkland, 1981; Delgado, Banathy, 1993; Dyck, Mulej, 1998; Flood, 1999; François, 2004; Frank, 1962; Jackson, 1991; Miede, Mahieux, eds., 1989; Mulej, 1979; Mulej et al., 1992; Mulej et al., 2000; Mulej, 2007; Schiemenz, 1994; Wilby, 2005; etc.), implicitly or explicitly.

*In a strict sense, a whole contains everything, all parts, all their relations, all resulting attributes, all viewpoints and all their relations, and resulting synergies.
But: which – everything?*

Experience demonstrates, as we already have noticed, that humans do not seem to be either able or willing to think in the *breadth*, which von Bertalanffy goes for. To specialists of other disciplines the entire biosphere does not mean as much as it does to von Bertalanffy, who was a biologist and a philosopher (Chroust, Hofkirchner, 2006; Drack, Apfalter, 2006). It turns out that everybody feels entitled to *define what is a whole to them on their own criteria*.

What can we do? The *mathematical* basis, which was introduced for some help, said that a whole (= system) is an ordered set, which means that it is made of two sets, the set of elements (parts) and the set of relations (interdependencies). This is a generally valid isomorphism. It serves very well, as long as *contents* are less important than the mathematical basis for its description. Then we see, that the same piece of reality can be described with many different 'systems', i.e. as many different 'wholes'.⁴⁴ If wholes can be so many and so

⁴⁴ Let us take the simple case of the watch. One viewpoint can be the technology to produce each of its parts. Another viewpoint can be assembling the watch from parts in terms of technology, another in terms of economics, another in



different in concrete contents – when it is the approach, thinking, decision-making, and action *holistic*, and when is it *one-sided*?

If the Bertalanffy's concept of GST has not taken roots in the *real practice* of the contemporary humankind, which one has?

No one did with a general validity, as the conferences about systems thinking and theory as well as their application let us find out. *Specialization* is too important to be forgotten about and sacrificed to a kind of holism, which might tend to leave specialization aside. Though, it is *not enough to be specialized*; specialization causes too many oversights, because each and every specialization can cover only a single viewpoint or a few of them, at best, while other attributes remain outside the scene and the screen. (But they do not stay outside reality and influence!)

Consequences include the *dilemma*:

- Shall we have a *complex* approach, which causes quite a lot of work for insights to be rather holistic and provide for a realistic basis for thinking, decision-making, and action? This is difficult, but this work may predominantly result in outcomes, which are requisitely holistic and do not cause unpleasant side effects and surprises; in other words: *a complex approach and work have simple consequences*.

- Shall we have a *simplified and simplifying* approach, which does not cause lots of work for insights, thinking, decision-making, and action to be rather holistic, but most probably not requisitely holistic? This is easy, but may predominantly result in serious oversights, because its outcomes cannot be holistic enough; in other words: *a (too) simple approach can have complex consequences*.

Obviously, in each and every case a decision has to be made on: *which level of holism is good enough* to solve the above dilemma well enough. One should avoid both exaggerations (Figures 14.2 and 14.8):

- The *total* holism is trying to include *all attributes from all viewpoints, and interlink all viewpoints into the system of all viewpoints with no selection*. The result may be a lack of focus and hence a lack of response, which outcomes of thinking, decision-making, and actions are making the point, i.e. are *essential*;
- The *fictitious* holism is trying to limit *the concentration to one single viewpoint, which might be too much of a selection of a narrow kind*. The result may be a good focus, leading to a lot of knowledge about nearly nothing.

A *middle* way is close enough to reality in both terms of need and possibilities. This is what we called (Mulej, Kajzer, 1998b) the *requisite holism*. It turned out to be a law: successful persons and organizations (tacitly) live with this law (See: Zenko, 1999). See Fig. 14.8.

APPROACH TO DEALING WITH AN OBJECT AS A TOPIC OF THINKING ETC.	One-sidedness by a single viewpoint	Requisite holism by co-operation of all essential professionals and only them	Total holism by consideration of totally all viewpoints, insights from them and synergies of them

terms of supply, another in terms of organizing, etc. Several more viewpoints can have to do with legal affairs, marketing, human resources, accounting, safeguarding, patents and similar rights, etc. Last, but not least: there can also be the issue of interlinking all those aspects for the whole business to emerge as their synergy. Another case: the mathematical formula $a=b+c \cdot x$ means what ever in mathematical theory; it expresses the general model of cost in economics, and the one of lever in civil engineering. Hence: the *selected viewpoint must always be explicit*.



TYPE OF APPROACH	(Too) simple	Requisitely simple	Very entangled
TYPE OF SYSTEM	Single-viewpoint based system	Dialectical system	Total system
ATTRIBUTES OF OBJECT INCLUDED IN SYSTEM	(Very) few	All essential	All
RESULT OF APPROACH	Fictitious holism (in most cases)	Requisite holism (good in most cases)	Total holism
FOCUS MADE POSSIBLE	(Too) Narrow focus (in most cases)	Requisitely holistic focus	Lack of focus
NUMBER OF PROFESSIONS	One single	Requisitely many	Literally all
TYPE OF WORK	Individual	Mixed team of requisite and different experts	All humankind in co-operation
CONSEQUENCES	Complex due to crucial oversights, dangerous	No problem due to no crucial oversights	Simple due to no oversights
AVAILABILITY	(Too) Frequent in real life	Possible in real life	Not possible in real life

Figure 14.8: Law of requisite holism (Figure 2) in some details

What is the point of Figures 14.2 and 14.8? *Reality* has many attributes, and they are many more than *thinking* about reality, the tangible or the intangible one, can cover. We are trying to condense reality and thinking in four interdependent groups of attributes (Figure 14.1). Every entity under consideration has them, and every researcher, manager, or customer should better consider them in order to *avoid oversights*, the crucial ones at least, by attainment of requisite holism.

What is *the way to meet the law of requisite holism* (Figures 14.1, 14.2 and 14.8)? Rarely, a single person can know, and have time, enough to meet it, perhaps in the case of a very simple activity, such as a job on the assembly line, a partial book keeping, etc.; such jobs are less and less around (Florida, 2005). More normally, several specialists will need to co-operate as representatives of several viewpoints, e.g. professions different from each other. – This applies to the invention called sustainable future as well. – But: what is the basis for them to agree to enter into such a co-operation, which is much less simple to do than working inside a single discipline and alone? See Figure 14.7.

14.3. The Invention-Innovation Process (IIP)

A requisitely holistic – DS – approach to IIP, according to our starting points for this chapter of this book, is depicted in Figure 14.9. It shows that many kinds of knowledge are needed for the IIP to be mastered requisitely holistically and hence yield success. The vast amount and variety of knowledge (and values!) requires transformation of bosses from a one-way commanding style to co-operative leadership, even several transformations of leadership (Rooke, Torbert, 2005). It is obviously worth to pay attention to knowledge management in the IIP (Basadur, Gelade, 2006). Human resources management must be adapted to the innovation rather than to routine-loving way of handling processes (Bukovec, 2006; Svetlik, Ilic, 2004). Leadership plays an essential role in creation of the innovative culture (Pucelj, Likar, 2006).

The hard side of innovation management is visible (Sirkin, Keenan, Jackson, 2005). Effects can only sometimes be measured (Palacios-Marqués, Garrigós-Simón, 2005; Fatur, 2006). Lots of stress may have to be mastered (Treven, 2005), but less than in a neocolonial subordination to



the more innovative ones⁴⁵. The IIP can be no more simple and easy to master in the case of the making of sustainable future than in cases of local production etc. problems, but harder.

IIP Phases	Crucial inputs	Usual outputs	Usual creators of outputs	Usual economic situation
<i>Creation of ideas, especially invention from knowledge and values of authors</i>	Creative thinking, expertise, ambition, values, time and research conditions	Promising ideas resulting from a part of research, tacit knowledge and values, such as interest etc.	Inventive and professional humans and groups, and (non)-professional researchers	Cost of work and research conditions, no revenue or profit from market
<i>Creation of suggestions from inventions</i>	Writing etc. - ones' expression of invention	Promising idea written etc. (i.e. made available)	Inventors and advisors about writing etc. the idea	Cost of message preparation, no revenue/profit
<i>Optional diffusion of suggestion/s</i>	Offer to the market of inventions - suggestions in or outside 'the home' organization	Partly sale, partly giving up, partly transition to development of suggestions	Owners of suggestions (authors and/or others) and their co-workers	Cost of offering; revenue and/or profit from sold suggestions
<i>Creation of potential innovations from suggestions</i>	Creative thinking, expertise, ambition, values, time and conditions for development of a suggestion to a potential innovation	Usable new product, method, procedure, managerial style, potential market, and/or business item	Inventive and professional humans and groups, (non)-professional researchers and developers (incl. market developers)	Cost of work and conditions of development, no revenue and/or profit
<i>Optional diffusion of potential innovations</i>	Offer to the market of potential innovations inside or outside organization	Partly sale, partly giving up, partly transition to application	Owners of potential innovations (authors and/or others) and co-workers	Cost of offering; revenue and/or profit from sold potential innovations
<i>Creation of innovations from potential innovations</i>	Creative thinking, expertise, ambition, values, time and conditions for development of potential innovation	Beneficially used new market / product / method / procedure / management style / organization /	Inventive/innovative and professional humans / groups developers of the novelty and its market, (non)-	Cost of offering; revenue and/or profit from sold innovations (inside or outside organization)

⁴⁵ It is still found worth warning in Europe, including Slovenia, that innovation is not a technological topic only, as one used to think on the basis of old perceptions, and many still need awareness building that business style innovation is even more crucial than technology innovation (Menih, 2006); three essential quotations:

“The financial markets require an increasingly rapid growth; our survival depends on innovation. This is why we decided to concentrate on innovation in the 10th IBM Forum” (Biljana Weber, IBM general manager for Slovenia and South-Eastern Europe).

“Technology itself is no innovation yet; it provides only a suitable tool enabling enterprises to become innovative once they combine technologies with optimizing their business process” (Herbert Kicker, conference speaker).

“On the basis of IBM’s Global CEO Study 2006 emphasizing innovation, first of all, and including responses by 765 executive managers from eleven geographic regions and twenty industries, one sees: eighty percent of them see potential for cooperation in innovation processes, but only 21 % practice it. What really matters is the innovation of the business model, since the focus has moved from products and services to the innovation of business. The latter includes responsibility for innovation. On average only 35 % of executive managers feel responsible for the business model innovation. The percentage grows in countries with developing markets. All executive managers included in the survey agree that the basic responsibility does rest with them, but making the innovation process effective requires an environment in which there will be more team work and motivation of single inventors and innovators; integration of technology and business will also require attention.”

(Summary by Mrs. Menih, translation mine). See also: (IBM, 2006).



	to innovation, incl. the entire business operation	business item – with users' decision and experience	professional, including entire business operation	
<i>Optional diffusion of innovations</i>	Offer to the market of innovations inside or outside organization, especially to additional customers (after the first ones)	Beneficially used new market, product, method, procedure, management style, organization, business item – with users in broader circles	Owners of innovations (authors and / or others) and co-workers, especially in marketing and sales; the entire business process matters equally	Cost of offering; revenue and/or profit from additionally sold innovations (inside or outside organization)

Figure 14.9: Simplified Picture of IIP from Several (Networked) Essential Viewpoints

14.4. Innovation Typology – an Additional Factor of Complexity of Requisitely Holistic IIP, as well as Mastering of it

The official international definition of innovation is very general:

»Innovation is the renewal and enlargement of the range of products and services and the associated markets; the establishment of new methods of production, supply and distribution; the introduction of changes in management, work organization, and the working conditions and skills of the workforce« (EU, 2000, p. 4).

Economic historians (Rosenberg, Birdzell, 1986) found that it was the

Innovation of management, which has been the most crucial one in humankind's modern history.

It was going in the direction toward *democracy* as the relation fostering holism and creativity (Mulej et al, 1987) rather than merely limiting the power (Jez, 2006). Thus one can structure the quoted definition of innovation in Figure 14.10 (Mulej et al, 1992). Its summary reads:

'Innovation is every (!) novelty, once its users (!) find it beneficial (!) in practice (!)'.

Three networked criteria of inv., suggestions, pot. innov., and innovations	(2) Consequences of innovations		(3) On-job-duty to create inv., sugg., potent. innovations, and innovations	
(1) Content of inventions, suggestions, potential innovations, and innovations	1. Radical	2. Incremental	1. Duty exists	2. No duty
1. Business program items	1.1.	1.2.	1.3.	1.4.
2. Technology (products, processes, ..)	2.1.	2.2.	2.3.	2.4.
3. Organization	3.1.	3.2.	3.3.	3.4.
4. Managerial style	4.1.	4.2.	4.3.	4.4.
5. Methods of leading, working and co-working	5.1.	5.2.	5.3.	5.4.

Figure 14.10: 20 basic types of inventions, suggestions, potential innovation and innovations

In another language (Afuah, 1998): innovation is equal to invention plus commercialization. The latter includes the entire business process, of course, not the marketing phase only.

This definition includes sustainable development and future, which in terms of Fig. 14.10 belongs to the management innovation, in its first phase, after the UNO's (1992) resolution,



because governments of UN-member countries and leaders of all other organizations are supposed to change their management style to give the word to environmentalists etc. In later phases it combines in a synergy all other types and includes the management innovation in every organization, including every family, where it is applied. Business program items are innovated, if products and processes are included that support the sustainable future. Technology is innovated for products and processes to be able to support the sustainable future. So is the organizational style, and so are methods of leading, working and coworking. Consequences of each and every new product and process introduction may be either radical or incremental. They may radical in terms of technology and incremental in terms of market or marketing, or vice versa, too. All these novelties may result from work included in authors' duty or from work outside of it.⁴⁶

For success, every one of the 20 types of inventions, suggestions, potential innovations, and innovations depends on a specific type of knowledge, values, and conditions. But, first of all, it depends on making preconditions for IIP process to flourish, which depends on innovation of management (14.1.-14.4. in Figure 14.10) and culture:

From the style 'Division in the thinking bosses and the working subordinates' to the style 'We all think and we all work and create, invent and innovate, being bosses and their coworkers with all requisite various and different specializations' (Mulej, 1979).

This is the management part of the DS of preconditions for IIP. Preconditions are very well summarised in Five Pillars of Total Quality (Creech, 1994) in Fig. 14.11 and Fig. 14.12.

Perfect product				↔				Perfect processes			
↕								↕			
O	R	G	A	N	I	Z	A	T	I	O	N
↕								↕			
Leading (= managing by example and co-operation)				↔				Commitment			

Figure 14.11: Five Pillars of Total Quality

But there is also a business part to IIP. It may apply to sustainable future as well.

14.5. DS of Basic Preconditions for Invention to become Innovation

From the business and organization viewpoint, the IIP can be seen as a process dependent on all factors in Figure 14.12, including their interdependences. The sign X denotes that for success none of them may be zero (for details see: Mulej et al, 1997; Mulej, Ženko, 2004a, b). In the case of sustainable future the process cannot be any simpler. If it was, all the decades of efforts that are described in other chapters of this book, would already provide for a general acceptance.

⁴⁶ The difference in terms of job duty often causes a difference in pay to inventors, which become innovators. This is a stupid and damaging habit. It can be nobody's duty to make an innovation, but only to present inventions as suggestions. Innovation is not about the idea, although it matter a lot, but rather about the new benefit from the idea and the entire long and complex process of commercialization, including the entire business process. Hence, the new benefit is co-created by all involved in the business process converting a suggestion to an innovation. See Fig. 14.12.



Innovation = (invention X entrepreneurship and entrepreneurial spirit X requisite holism X management X co-workers X innovation friendly culture X customers X competitors X suppliers X natural environment X socio-economic environment and other outer, i.e. objective conditions X random factors, such as luck)

Figure 14.12: Equation of preconditions of innovation – a case of a dialectical system

- *Invention* includes all new ideas which might become innovations. But only one per cent of inventions that already have become suggestion in terms of Figure 14.9 are able to become a radical innovation, and seven per cent incremental innovations. They are not necessarily results of R&D processes, especially not only of R&TD (technological development) ones, but many are. (Likar et al, 2006). – For most humans, the sustainable future is a radical invention, which is imposed over them and requires them to give up their established style of living and to accept new habits.
- *Entrepreneurship* is a human characteristic and activity of persons working continuously on conversion of inventions in innovations on both the internal and external, as well as in local and global, markets by new combinations of business factors (material resources, knowledge, business opportunities, creativity, markets etc.) (Rebernik, Repovž, 2000). – It is not enough, if activists and researchers speak for sustainable future, because most of us have not learned much about being entrepreneurial, including taking a prudent risk. UNO failed in this point, as other chapters in this book let us see.
- *Requisite holism* is a precondition meaning consideration of all essential elements and relations in the process of making inventions and transforming them in innovations. It is based on dialectical (or other contemporary) systems thinking and hence on networked interdisciplinary creative cooperation to meet the law of requisite holism (Mulej, 1979; Mulej et al., 1992; Mulej et al 2000; Mulej, Kajzer, 1998; Mulej, 2006; Mulej, 2007; Rebernik, Mulej, 2000). – In the case of sustainable future, the team is not holistic enough, if UNO has not been able to get governments of the most influential countries to join the action of promotion of it in practice.
- *Management* is different from entrepreneurship. It involves efforts at a total and profitable exploitation of all resources, which have earlier been created by entrepreneurship. Both managers and entrepreneurs need requisite holism (Rebernik, in Dyck, Mulej, 1998). – If UNO has acted as the initiator in the case of sustainable future, it acted close to the role of the entrepreneur, but with no managers, once neither UNO member countries did not take the concrete action for sustainable future in their active program nor did so requisitely many influential enterprises, such as multinationals of energy, food, chemicals, vehicles, etc.
- *Co-workers* matter, because neither entrepreneurs nor managers can know nor timewise and physically do it all alone. They need coworker's creativity and routine (without allowing routine to turn into routinism, i.e. refusing of everything new in the name of established skills and habits) (Peters, 1995; Peters, 1997; Treven, Mulej, 2005; Udovičič, 2004; Udovičič, Mulej, 2006). – In the case of sustainable future, neither UNO nor its member countries have created teams of environmentalists, economists, technologists of several strands, lawyers, psychologists, sociologists, theorists of IIP management etc. to run the action on a permanent basis.
- *Culture* (values – culture – ethics – norms) is embodied in the subconsciousness and tells us rules of right and wrong (Mesner Andoljsek, 1995). If the culture does not support



invention and innovation, it is an obstacle in the contemporary market situation (Albach, 1990; Sirkin, Keenan, Jackson, 2005). – In the case of sustainable future, the innovation of culture is even more crucial and radical than in the cases of most other innovations: it is not a tool, which is subject to IIP, but a life style and related culture. One must develop a new mental concept – an *environmental* one, and one must become able to be *sustainable*. Learning alone is not enough, persuasion is neither, ones' own experience helps most. Other topics let us learn this lesson, such as The Economist's survey 'The new organization' (2006), or Sawhney et al. (2006).

- *Customers* used to be overlooked, when the notion still prevailed that innovation is creation of something new. Then, they oversaw the second part of its contemporary definition saying that the novelty also must be accepted in the market, to deserve the label of innovation. Therefore, knowledge of marketing, etc., is as important as knowledge of production. This is true also of internal customers (Zahn, 1995). – From data I have access to, UNO did not think concretely enough about the customers of the invention called sustainable future, nor did other promoters, such as the Club of Rome, quoted in other chapters of this book.
- *Competitors* used to hardly exist in pre-entrepreneurship times. Guilds, usual associations of handicraft producers in the medieval Europe, used to limit the common supply of their members to the quantities and qualities of demand. Thus, innovation was neither necessary nor making sense in economic terms (Fig. 14.3). Free entrepreneurship changed this situation (Rosenberg, Birdzell, 1986). It did produce many new technologies, including the ones about environment, but it did not sufficiently innovate the culture toward the case for sustainable future, while it had grossly increase the quantity of products, transportation, urbanization and related business and personal services. Thus, much more damage to natural preconditions of the human life has resulted and keeps resulting, reaching beyond the carrying capacity of the planet Earth.
- *Suppliers* influence cost and quality due to their own good or poor level of innovating. In a monopolistic position, they may lack care for innovating (Linden, 1990). – In the case of sustainable future, UNO and other promoters do not seem to have considered all narrowly behaving people, organizations and nations as competitors of the idea. If this was not the case, EU would hardly feel the need to link innovation with systems thinking in an official document (EU 2000, and later again). But it is denoted as a need rather than as a prevailing practice, which is a correct statement, unfortunately.
- *Natural environment* has been neglected in economic calculations and policies for very long. Especially in terms of the sustainable development it is to be considered equally important as other factors of innovation: survival in a poisoned natural environment is not possible (Ecimovic, Mulej, Mayur, 2002; Ecimovic, 2006; Vezjak, Stuhler, Mulej, eds., 1997; etc). – UNO oversaw from this viewpoint: the natural environment is the victim of the concept of external economics rather than internalization of all cost, which a company, another organization or an individual causes directly or indirectly.⁴⁷

⁴⁷ This book, or another book, would do a good job with a chapter on external economics as a problematic cause of culture and behavior causing the profit to kill profit: the narrow thinking about profit makes deliberate oversight of cost covered (better: put out of sight) by external economics cause big cost for eco-remediation later on, for health services etc.



-
- *Socioeconomic and other outer - objective preconditions*⁴⁸ include what the traditional economic theory used to consider most or even exclusively: investment, money, allocation of resources, and other economic viewpoints, R&D institutions, legal norms, etc. These remain important, but far from enough (Mulej ed, 1995). Therefore traditional economics, especially the neoclassical economics, is no longer good enough (Dyck, in Dyck, Mulej, 1998; Mulej, 2006a). – The case of sustainable future is a very clear one.
 - *Unforeseeable, random features* might be considered a part of objective preconditions, but not necessarily. They cause probability rather than determinism (Hwang, 1997). Good or bad luck, unforeseen synergies, etc., remind us that even with the best information system one only can do a better or poorer informed guestimate once it comes to innovation effort (Knez-Riedl et al, in Dyck, Mulej, 1998). – In the case of sustainable future this is no different. It is impossible to consider everything in advance or even in the course of action.

Innovation is obviously a topic which belongs neither to *any single science* nor to *any single profession or person*, but requires all of them to share the effort of innovating and its yield (after a success in market). Therefore innovation must be integrated in the *entire business process* as well as in the support provided by the measures of the national *economic system and national policy (not only the economic one, but also education etc)*. After all, in the modern situation, not only companies, but also regions and countries compete. They will, hopefully, co-operate more and compete less in a postmodern society (Dyck, in Dyck, Mulej, 1998). – In the case of sustainable future this is no different.

Every component in Fig. 14.12 requires its specific knowledge, values, and conditions, as well as their managerial co-ordination making a networking synergy emerge from interdependent requisite various and different specialists. It is obviously no easy task, but there are methods around making it easier to master. There are very many methods supportive of creativity and knowledge management, including values management (EU, 2004; Mulej, 2006a; Rosi, 2004; Rosi, Mulej, 2006; Udovicic, 2004; Udovicic, Mulej, 2006).

A very new method supportive of creative co-operation of requisite and mutually different and hence interdependent specialists, e.g. from different units/sectors of an organization, or different organizations, etc. surfaced in our research recently; we used it in several workshops with very satisfactory responses from participants (Mulej M. and N., 2006).

14.6. Application of USOMID-SREDIM/6 Thinking Hats Method

USOMID (Mulej, 1982) and Six Thinking Hats (De Bono, 1985, 2005) have been applied in separation for +2 decades, before (Mulej, M. and N., 2006) made a synergy – see Figure 14.14.

In USOMID methodology of applied dialectical systems thinking aimed at innovation by creative co-operation the procedure of working together in a team was elaborated, but the emotional viewpoints were not covered well enough. In terms of the 6 Thinking Hats methodology one could say, that USOMID covers the ‘blue hat’ (see Fig. 14.13) better, it cover the ‘white hat’ well, too, but not the other four emotions – hats.

⁴⁸ The attribute “objective” means that these conditions are difficult to influence for individuals, companies or other organizations, and imposed over them in the form of law. Lobbying has developed as a legitimate job making such influencing possible both in business and in political life.



In 6 Thinking Hats methodology all team or circle members think in the frame of the same hat at the same time and switch to another later on. De Bono calls this manner »parallel thinking« that provides for the same orientation, i.e. looking for ideas and proofs. It lets *nobody* fight each other too much and still attain the requisite holism. Hats enter the scene as phases, ruled by *emotional* accents of thinking, thus providing the power of focusing, time saving, neutrality and objectivity, removal of »ego«: one viewpoint in one moment (by phases – hats). For hats' essence see Fig. 14.13. (Details in: De Bono, 2005, or any other edition of the book).

- White = neutral, objective, facts without interpretation, like a computer;
- Red = feelings, emotions, intuition, irrationality, unproved feelings, no justification;
- Black = watching out, caution, pessimism, search for danger, doubt, critique; it all works well against mistakes and weak points of proposals;
- Yellow = optimism, search for advantages of proposals, search for implementation ways, sensitivity for benefit of the idea, constructive approach;
- Green = energy, novelty, creation, innovation, in order to be able to overcome all obstacles;
- Blue = organization, mastering, control over procedure, thinking about thinking.

Figure 14.13: Essence of each of the six thinking hats

The process that is used in USOMID (Mulej, 1981; Mulej, 1982; Mulej et al, 1986) provides for synergy of the 6 thinking hats (6TH). It is based on completing up the SREDIM procedure, which has been used in Work Simplification (Mogensen, 1981) for decades. It covered well the process of work, but not at all the process of co-operation. The four steps of it were added by authors of USOMID. The procedure was therefore renamed to USOMID-SREDIM. Now, it is completed up with the emotional aspects of co-operation and work in creative efforts – see Fig. 14.14.

In the case of the creative effort to make the sustainable future happen, there are many different opinions to overcome by finding a common ground. The USOMID-SREDIM-6TH procedure can help representatives of the opposing opinions come from arguing with no or poor capacity of reconciliation to a common ground. Unification is difficult to expect, if it must be total and one-sided. This kind of reconciliation would bring a fictitious holism anyway and make no sense therefore. The point of the methodology of creative co-operation that I am suggesting here, reaches much further. It reaches beyond the western tradition of no synergy and no reconciliation, but fighting each other like solicitors before the court of law. Hence, it reaches to the role of the judge and beyond it, when it is limited to accepting the arguments of the one or the other party: it reaches from systematic to systemic thinking based on dialectics, expressed as ethics of interdependence (See Fig. 14.1) and leading to meeting of the law of the requisite holism (See Fig. 14.2 and 14.8).

According to the USOMID-SREDIM-6TH procedure the representatives of the opposing views say to each other everything, but they also listen to each and hear each other:

- They follow the procedure of USOMID-SREDIM to use the blue hat;
- They bring to table the plain facts with no opinions of any kind to use the white hat;
- They express all their irrational 'arguments' etc. to use the red hat;
- They express all their fear and cautions etc. to use the black hat;
- They express all their bright expectations etc. to use their yellow hat;
- They create new solution with all their energy etc. to use their green hat;
- And they put all their tabled data and opinions in synergy with the USOMID-SREDIM.



SREDIM Phases USOMID Steps Inside SREDIM Phases	1. Select problem / opportunity to work on in an USOMID circle	2. Record data about the selected topic (no 'Why')	3. Evaluate recorded data on the topic ('Why is central')	4. Determine and develop chosen solution/s to the topic	5. Implement chosen solution to the topic in reality	6. Maintain implemented solution for a requisitely long term
1. Individual brain-writing by all in the organisational unit / circle	All 6 hats	White hat	All 6 hats, red, black, yellow, green first of all	All 6 hats, red, black, yellow, green first of all	All 6 hats in preparation of implementation	All 6 hats in preparation of maintenance
2. Circulation of notes for additional brain-writing by all	All 6 hats	White hat	All 6 hats, red, black, yellow, green first of all	All 6 hats, red, black, yellow, green first of all	All 6 hats in preparation of implementation	All 6 hats in preparation of maintenance
3. Brain-storming for synergy of ideas / suggestions	All 6 hats	White hat	All 6 hats, red, black, yellow, green first of all	All 6 hats, red, black, yellow, green first of all	All 6 hats in preparation of implementation	All 6 hats in preparation of maintenance
4. Shared conclusions of the circle	All 6 hats	White hat	All 6 hats, red, black, yellow, green first of all	All 6 hats, red, black, yellow, green first of all	All 6 hats in preparation of implementation	All 6 hats in preparation of maintenance

Figure 14.14: Synergy of USOMID/SREDIM and 6TH methodologies in procedure of USOMID

The USOMID-SREDIM/6 Thinking Hats method of creative co-operation can be completed up with many another methods of creative work and co-operation (EU, 2004). Use of them can support the one in Figure 14.14 according to the concrete topic at stake.

14.7. Action rather than Thinking Alone Makes Innovation from Knowledge and Invention – Diffusion of Novelties

14.7.0. The Selected Problem and Viewpoint of Dealing with It in Ch. 14.7

If a single user appreciates an invention as innovation, the situation meets the international definition of innovation, but the author or owner does not really cover the cost and make revenue and profit. This fact makes us think of diffusion of novelties. We use Rogers (1995 or 2003).

14.7.1 Action Based on the Theory of Diffusion of Innovation

In our experience, the weak point of the Six Thinking Hats Method is its limitation to thinking; action is not included. Action is included, if one uses USOMID. On the other hand, USOMID covers well enough only the blue hat, while the other hats complete USOMID up very well. Among them, the phases of Implementation and Maintenance change inventions / suggestions / potential innovations to innovations. Here, thinking is far from enough, while it is very helpful in



the preparation part. In the action part, change agents aiming at innovation receive a good advice from Rogers (1995). See Figure 14.15. for a condensed summary.

VIEWPOINTS TO BE CONSIDERED		Stages of users' decision making about a novelty				
		1 Awareness	2 Persuasion	3 Decision	4 Implement- ation	5 Confir- mation
Novelty custo- mers (po- tential)	Customers - innovators					
	Early customers					
	Early majority					
	Late majority					
	Laggards					
Opinion leaders						
Attributes of novelty	Relative advantage					
	Compatibility					
	Complexity					
	Testability					
	Visibility					
Communicati on channels	Public					
	Interpersonal					
Nature of the social system of customers						
Decision type about novelty	Optional					
	Group					
	Authority					
Conseque- nces of novelty	Desired					
	Undesired					
	Indirect					
	Direct					
	Anticipated					
	Unanticipated					

Legend:

No impact by change agents needed

Poor impact by change agents needed

Medium impact by change agents needed

Bigger impact by change agents needed

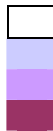


Figure 14.15: Matrix of Essential Attributes of Diffusion Process from the Viewpoint of Change Agents (A case)
(Germ Galič, 2003; Leder, 2004)

14.7.2. Need for Spreading of the Novelty

Innovation management, following invention management (See Figure 14.9) includes also the *process of spreading* new solutions or novelties among potential users. Inventions - suggestions become innovations, when consumers perceive them as useful and actually use them. The main measures of success are not only dollars earned, but increasingly the benefit for the humanity, including in the case of sustainable future.⁴⁹

⁴⁹ It is true that managers of e.g. a big oil company, must consider interest of their owners and employees. But these interests can hardly be met well enough, if they are not met on a requisitely holistic basis, reaching beyond the very narrowly defined profit to include the broader and more long-term and indirect consequences of their decision and actions, too. Otherwise, the profit kills the profit by causing very expensive side-effects.



Rogers (1995 or 2003) studied on the case of agriculture, and on many others later on, the whole process of diffusion of novelties from the research laboratories or companies to their potential and end users – farmers and others. There are several organizations world wide, on which a similar case study could be made. A society is so convinced of the greater benefit for everyone, that governmental agencies are acting as promoters of inventions – in the areas of public health, safety, education, agriculture... - One sees from other chapter of this book, that this applies to sustainable future as well.

14.7.3 Diffusion and Its Preconditions

14.7.3.1. Innovation Process as a Communication Process

Theory on diffusion of novelties is dealing with the *difficulties* when trying to implement the new solutions *among people* as well as with methods to support activities of the owners and authors of the novelty. Diffusion does not tackle the technical contents of the novelty only, but it is at the same time:

1. *Communication process* among people who know a novelty well (inventor, producer, their agent) and act as change agents, and its potential users;
2. *Exchange of information* and preparation for decision making;
3. Including *uncertainties and risks*;
4. Including a process of *changing the society*.

This fact requires the necessity of the sustainable future to be put in a lot of communication world wide and locally again and again for all five phases in Figure 14.15 to be covered requisitely holistically and hence be accepted as a new culture.

14.7.3.1.1. Novelty

Novelty is a new idea, service, process, solution or method that the possible user considers something new and worth considering as *potentially useful*.⁵⁰ Some novelties are easier accepted by the possible users, when:

1. Users can see the possible *advantages*.
2. Novelty can be applied together with the *established* methods (similar technology, same equipment can be used).
3. *Less complicated* it appears, more likely is it accepted.
4. *Verification* stage. Possible user can study the novelty - samples, testers, model plants.
5. *Results* of the novelty are *easily seen*, measured, being already applied somewhere.

This culture makes sustainable future difficult to accept for many humans and organizations that prefer a short-term benefit to a longer-term one.

⁵⁰ Novelty is the shared name of all of its features in Figure 14.9.



14.7.3.1.2. Decision Making Process about the Novelty

Decision about the novelty can be of three basic types and their combinations:

- *Individual* decision,
- *Group* decision, and
- *Governmental* decision.

All three of them seem to be necessary in the case of sustainable future. Individuals can act by reducing their energy wasting habits, their waste materials habits, by using more public transportation, bicycles etc. Organization can act similarly and add promotion of sustainable behavior in order to become and remain sustainable enterprises and other organizations, as we have briefly described in Ch. 14.2. Governments can act as societal authorities with the right and duty to prescribe and enforce requisitely holistic behavior of citizen and organizations; they can also support these demands with their own examples of correct, i.e. requisitely holistic behavior and as big buyers in the contemporary buyers' market, which require all their suppliers to be the most innovative one, including the topic/viewpoint of sustainable future.

Every decision making process, including the one about using e.g. Agenda 21 or any other new suggestion concerning the sustainable future on a given location, includes dealing with uncertainties and risks and includes several *stages* in Fig. 14.15, first line.

14.7.3.1.2.1. Awareness about the Novelty

This is a process in which potential users are gathering data and information about the novelty at stake. It is a social process of spreading the news about something new, what kind of problems it solves or is designed for, and how it works or why it can work.

14.7.3.1.2.2. Convincement

In this step the potential users make an informed position, assessment about the novelty. They are prepared to make a stand – accept or reject the novelty at stake.

14.7.3.1.2.3. Decision Making

Potential users are selecting among the possible options. The novelty with many advances is easier to accept. Change agents like to prepare informative meetings or presentations of the novelty to support the decision making process.

14.7.3.1.2.4. Use of Novelty

In this stage users have the working novelty. They are observing how it works for them or in their organization. Data are being collected to assess the advantages and the difficulties connected to the novelty at stake.

This is also a stage to adapt the novelty for our one's use, supplement it with one's knowledge, and changes may be called re-invention.⁵¹

14.7.3.1.2.5. Reaffirming of Decision

Once a novelty is well used, its users still analyze and think about possible improvement or replacement with a newer novelty or even rejection of the applied novelty. Disappointment with the quality of the novelty, e.g., encourages search for new solutions and other novelties.

⁵¹ This seems to be the main area of the invention-innovation processes known as 'Suggestion System' Or 'Submit Your Idea System' (Mulej, 2006a).



14.7.3.2. Communication Channels

Communication channels in innovation process have a few specific characteristics:

1. They are about novelty;
2. Involved parties are at least two groups: one well informed about the novelty and with a clear subjective views, and the other person or group without such information or standpoint;
3. There are established ways, paths or means of communications among them.

Change agents can use:

- The channels for mass communication or
- Interpersonal channels.

For some types of novelties specialized trade fairs or magazines are more appropriate. For the sustainable future both types of communication channels are necessary and the data and messages applied must be very persuasive to become information, i.e. an influential message.

14.7.3.3. Time

Not only takes the process time from the problem identification to the idea and its development to a working solution. The process of diffusion, too, takes time to accomplish at least the following activities, the case of sustainable future included and requiring its agents to never give in:

1. Information about the existence of the novelty,
2. Process of preparation of the possibilities (confirming, gathering more information, verifications, ...),
3. Decision making process (yes, no, wait),
4. Use of the accepted novelty,
5. Re-confirmation of the accepted solution (keep in use, change, reject).

14.7.3.4. Social System

This system (= entity) comprises members of a given social group or community with their relations and connections including their influences. Important are social structure, borders among the given sub-groups (higher class, medium, lower; per gender, profession, age, etc.). One can often observe a formal and beside it an informal social structure. Norms of the social system inform us about the rules or prevailing culture inside community. – This is equally crucial in the case of sustainable future: entrepreneurs and managers and employees living on abusing the economics of external economics theory will hardly accept sustainability as their new culture, etc. But they will pay a high cost or their one-sidedness later on.



14.7.3.4.1. Possible Users of Novelties

Several statistical methods are being used to calculate the number of early users, late uses and the median ones.

INNOVATORS – VENTURESOME – are the earliest users (2.5% of all population) and have:

- Enough financial funds,
- Enough knowledge to understand and use the early complicated novelties,
- More ability to manage great risk,
- More cosmopolitan habits,
- More active practice in information gathering,
- Many connections,
- More years of formal education,
- Higher social status,
- Higher ambitions,
- Higher (possible) mobility – including promotions,
- Larger units (companies, farms, hospitals, schools).

EARLY ADOPTERS – RESPECTED – (13.5% of all population) are:

- Less different from others,
- More local,
- Having enough knowledge to understand and use novelties,
- Respected in community,
- Having a higher level of empathy,
- Less dogmatic,
- More rational,
- More intelligent,
- More ambitious,
- More in contacts with change agents.

Other people often observe them and ask them for an advice and opinion – they are often the *opinion leaders*.

EARLY MAJORITY – DELIBERATE – (34% of all population) members are:

- Just before the majority,
- In many contacts with their coworkers,
- Seldom opinion leaders,
- Important as network,
- The largest early group.

LATE MAJORITY – SKEPTICAL – (further 34% of all population) members are:

- Just after the majority,
- Cautious, have doubts,
- Observing the social norms of their system,
- Having limited financial possibilities,
- Unable to take great risk,
- In need to feel safe.



LAGGARDS – TRADITIONAL – (the last 16% of all population) are:

- Traditional,
- Having many doubts,
- Having bad experiences from the past,
- Seldom opinion leaders,
- Having very limited financial means,
- Sometimes isolated.

14.7.3.4.2 Social System is no Political Term here

As you see, it is a community that is called a social system by Rogers. Local Agenda and Local Agenda 21 apply quite directly in the case of sustainable future.

14.7.4. Change Agents

Change agents have many contacts with members of the community – social system, but are usually no members of it. This is important in the case of sustainable future, too: alien agents tend to be felt as imposing their novelty, which makes them quite easily refused or doubted, at least. They are well informed of the novelty and are economically motivated to have people implement novelty. They have a high social status. They accept novelties before others do, and have a lot of formal knowledge; they are innovative. They enjoy respect from others, if and once they are accepted.

Most of them are heterophilic (= different in knowledge etc.). They need a balance of heterophily and of homophily (= equality in knowledge etc.) with potential users. That is why they try to have good contacts with opinion leaders.

14.7.5. Opinion Leaders

Opinion leaders are very important for the diffusion of novelties. They are members of a social system (= community with potential users; See Ch. 14.7.3.4). Their opinion is important for other members, they act as role models; they are often asked about their opinion, position. They are more similar to majority of people and are more homophilic than change agents are. They have good contacts with change agents to be able to understand and use novelties. In the group of opinion leaders, too, one can find common characteristics such as:

- Higher formal education,
- Higher social status,
- Reading more magazines and newspapers,
- Being more open for novelties,
- Being more cosmopolitan than majority,
- Being more innovative users or customers,
- Being not too different to be strange to majority.

Opinion leaders are obviously crucial in the effort for a sustainable future as well.



14.7.6. Concluding Comments on Diffusion of Innovation

It is far from enough to detect talents, neither is it enough to collect their ideas as inventions – suggestions and to develop them to potential innovations (See Fig. 14.9). But it is usually neither enough to sell a novelty to a single customer, even if she is satisfied. This act allows the novelty to be called innovation, but it most probably does not cover cost of and yield profit for novelty's owners and authors.

Innovation management includes therefore the diffusion process. Many different people are involved. It includes efforts, financial means and risk. It takes time to make an innovation and it is at the same time also a process of changing the society by communication and action.

We tackled only a few factors important in the process of diffusion of novelties. While striving to make an innovation, change agents try to convince a critical mass of 5-20% of all possible users, i.e. the venturesome customer - innovators and respected early customers (See Fig. 14.15). Once their activities have convinced such a part of their market, the convinced ones will become opinion leaders and contribute to the change agents' effort to change the social system / community with improved new products, services, solutions, organizational methods, management methods = all types of innovations. (See Figure 14.15 for summary again.)

IIP as a communication process for the potential innovation to be accepted by its potential users and thus to become innovation, turns out to be very complex and to require another long set, or even DS, of specific types of knowledge, values, and knowledge management for IIP to succeed. (See also: Risopoulos, 2005).

In the case of sustainable development IIP is no less complex and complicated than in the business cases. One might use several steps, perhaps:

- (1) Persuasion of governments to take the role of innovation agents on the basis of conclusions of UNO. Governments can use their roles of legislators, role models and big buyers.
- (2) Persuasion of enterprises to join the group of enterprises, which exist world wide and share efforts for sustainability, sustainable development and future. They can help others to develop market relations and government roles supportive of sustainable development and future.
- (3) Persuasion of families and individuals to act the same way in their private life.

In the communication process, the change agents and their partners (opinion leaders, para-professional aides, etc.) try to persuade their potential customers about the customers' potential benefit. This process is not requisitely holistic, if one forgets about human emotions/values. We therefore turn to Jensen (2003), who developed the notion of heartstorming to be added to brainstorming. See Figure 14.16 for our very brief summary of some of it.

Jensen's cases in his book (2003) relate to advertising. On the contemporary market and technology level e.g. watches of very different prices serve comparably well, technically. Thus, the heartstorming issue reads: 'What will you be, if you have wristwatch of that and that brand?'

In the case of sustainable development and future the same logic might be applicable: 'What will you be, if you promote and use sustainable development and future?' 'What will you be, if you in a healthy natural environment?' 'What will you be, if you stop abusing the short-term perspective and accept the long-term one as well?' 'What will you be, if you stop abusing



external economics?' 'What will you be, if you stop fishing beyond natural capacity?' 'What will you be, if you stop littering beyond carrying capacity of nature around you?' Etc.

Drama is more persuasive than an advertisement text or a lecture with no involvement.			
Story wheel depicts the protagonists' moving from order to chaos and back, but changed.			
Order: Peace like at home. Quiet despair. Nothing new. No new sources to cover current and new needs, poor chances for survival.	Separation: Leaving home to explore the wide world in search for the Grail (= the value / goal worth fight and risk), following the Call to attain something (Grail). But there is a price to it. - The driving idea and story supporting it for persuasion and success come on stage.	Chaos: Unknown, dangerous situations and many battles before one eventually wins one's Grail (if). To enter chaos, one must pass the Dragon Gate: 'Are you ready, aware of risk, and determined; did you double-check it all?'	Return: Changed by initiation following separation and experience of chaos. Perhaps with the foreseen Grail, or with another, such as new experience from challenge, danger, fear, battle, and exploration.

Figure 14.16: Knowledge and Values Management in Heart-storming

After millennia of preferring order, called routine and logic of the tradition, to chaos, including innovation and the resulting new benefit from it, most people around the world are poorly capable of accepting and realizing the new innovation-based model of life, including its attributes summarised and networked here. One must become able to practice innovative business and innovative society rather than a routine-based, even routine-loving one, for the first time in history. We can only briefly tackle innovative business and society here. This phase of history requires its specific definition of requisite holism and ethics of interdependence, including the sustainable future.

14.8 Innovative Business

14.8.0. The Selected Problem and Viewpoint of Consideration of It

This is the alternative to the traditional business style, which used to be based on self-sufficiency and routine-loving way of doing business, when conditions still did not require much innovation (Figures 14.3 and 14.4). Until recently we had quite hard times, when we suggested that innovation of business and management style matters more than the technological innovation, although the latter is crucial as well (Mulej et al, 1987; Mulej et al, 1994; as disciples of Alan Mogensen who worked on it since 1926). IBM (2006) surveyed world top companies to find and publish this: innovation of business as at least as crucial as the technological one. This finding applies very much to the issue of sustainable future, as well. But rare managers work on it.



14.8.1. Definition of the Innovative Business as a Dialectical System

Innovative business can be simply defined in the following ten interdependent sentences. They may apply to sustainable development as well, if it is considered an effort to innovatively change habit of humans and their conditions of work and life including making the requisite holism and requisitely long-term horizons a new culture and practice replacing the current established ones:

1. In principle, every cost is unnecessary. In reality it is so, if we work smarter, not harder, and produce innovations. See Fig. 14.14.
2. Today, every product and process becomes obsolete, sooner or later. That's why we must know their life cycles, do research, do development (connecting research results with the daily needs and practices), create other inventions and make from them innovations as a new, useful / beneficial basis of survival, on a continuous basis. See Fig. 14.17.
3. Survival, and therefore both good and poor work, is everybody's business. Nobody, neither the superiors nor the subordinates, are entitled to be irresponsible and oppose or disregard innovation in their own life reality. Everybody must be a co-worker. See Fig. 14.10-12.
4. Therefore let us continuously, all the time and everywhere, search for possible novelties! Only a small portion of them can become *inventions*. Some of them will be registered as *suggestions*. From some of them, by research and development, or connect and develop concept (Huston, Sakkab, 2006), sometimes something both usable and new might be created, *a potential innovation*. Customers will accept only a fragment of them as useful / beneficial and worth paying for, hence making a benefit to both customers and suppliers, therefore deserving the name of *innovation*.⁵² They can be diffused, too. See Fig. 14.15.
5. The entire business policy and practice is innovation oriented, not just a fragment of it. See Fig. 14.17.
6. Results pay, not efforts. Hence, let us work like the clever ones, not like fools. Diligent stupid humans are dangerous: they do it wrong all the time. So are clever criminals.
7. These six sentences no longer apply to the producing part of the organizations only, but to all activities and all parts of life in all organizations. See Fig. 14.9-12.
8. The effort must be broadly disseminated and permanent, because the pressure of competitors is permanent. See Fig. 14.3-5 and 14.7.
9. For competitiveness the quality must be systemic, which is impossible without continuous innovation. See Fig. 14.11.
10. Innovative business is a regular practice of the sustainable enterprises with sustainable ethics and systemic quality. See Fig. 14.4-6.

⁵² Business Week of 8/15 August, 2006, in its Special report Get Creative, reports of empirical data saying that the all-industry innovation initiative success rate is 4,5%. This includes innovation initiatives only, which tend to be many less than inventions showing up in anybody's head without ever being written to become suggestions. This experience means that even more than 96% of inventions fail, if 96% of all new projects fail. The 'Creative corporation toolbox' following this statement does not seem to include the sustainable future; only products are mentioned, mostly. Thus: it is not normal to succeed, but to fail and keep trying.



The effort for innovative business must be broadly disseminated and permanent, because the pressure of competitors is permanent, and for competitiveness the *quality must be systemic*, which is impossible without continuous innovation. How can one make the effort rational rather than too expensive?

14.8.2. Framework Model for Continuous Implementation of Innovative Business

Once we have identified the system of preconditions, which seems to be quite complex, we may try to offer also a framework model about how to meet them. We will brief the model for an organization as it usually functions nowadays. Several hundred cases, which we know of, seem to confirm our model.

A framework model may in general be the same, while details require specialized analysis and planning in every organization. The model always includes vision, mission, policy, strategies, and tactics, before operations (Mulej et al, 2000, and earlier). We must consider that implementation of a strategy is at least as complex as its making; it is here that we confront the established old habits (Feucht, 1995). – This applies to sustainable future and development as well.

The phases are briefed in a logical sequential order, but in reality the process is not linear at all, but dialectical, i.e. full of interdependencies and interactions as follows (Fig. 14.17).

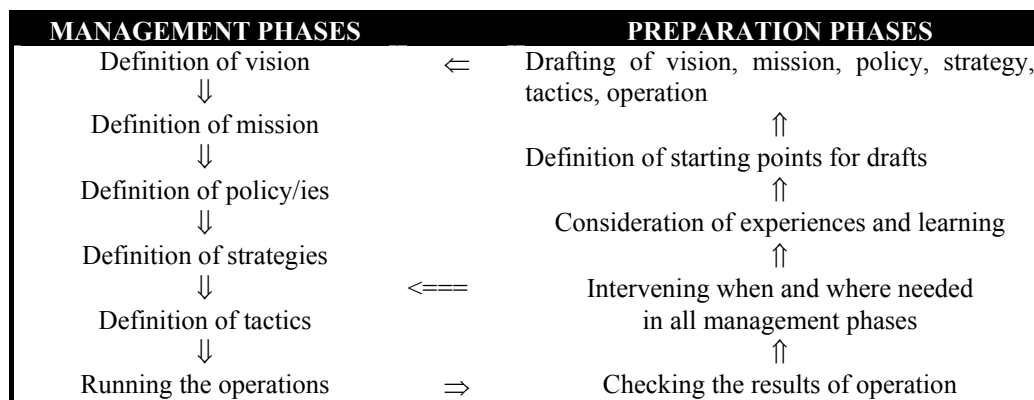


Figure 14.17: The cybernetic circle of the preparation and implementation of the management process (a simple model)⁵³⁾⁵⁴

- *Vision* may be briefed as “survival on the basis of competitiveness by holistic creative work and cooperation aimed at a systemic quality in accord with customers’ requirement, including sustainable future and development.”

⁵³ Consideration of the *environment* - business, political, natural, etc. - is not visible directly in Fig. 14.17, but it is part of consideration of experiences and every other information entering the process in Fig. 14.17, as well as information going out of this process.

⁵⁴ All phases in the model are linked by *information* and *information requirement*: the foregoing phase produces, in a best case scenario, all/requisite information required by the next following phase and only that information. In the case of innovation management this precondition is even harder to meet than in the case of a routine-loving management because decision must be made while all information cannot be available: the future market/customers’ reaction to the supply offered will determine what is a *failure* and what is an *innovation*. (See: Peters, 1997).



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- *Mission*: “delight customers with an excellent systemic quality, including sustainable future and development, and attract them as sustainable customers.”
 - *Policy*: “implement innovative business as a source of a continuous systemic quality, including sustainable future and development, in all parts of the business process and all units.”
 - *Strategy* towards implementation of such a policy may employ continuous self-assessment of one’s own quality in terms of the Deming Prize of Japan, the European Quality Award, or Baldrige Award of USA, or (as a first phase) attainment and retainment of International Standards Organization’s rules ISO 9000 and ISDO 14000 certificate or something similar⁵⁵.
 - *Tactics* for implementation of such an innovation strategy include *organized critique*, followed by teams and task forces work on solution of the selected problems (on a *free-will* basis and on company time, one hour a week) with awards for inventions (symbolic in value, but with no delay) and innovations. *Innovation reward* is foreseen for all of the innovative team, all members of their own organizational units, every organizational member including managers, while a half of the value created by innovation enters the company business funds (Mulej, 2003a, b, c). Criteria for reward include sustainable future and development.

In the daily practice therefore the first step toward continuous innovation is the entrepreneurial and managerial capability and readiness to see their subordinates as *coworkers capable of innovating*, and both sides of the coin: cost and waste on one hand, and their causes (which are frequently hidden), on the other hand. *Cost* is namely, according to the authors’ +30 year experience of consultancy and field research concerning innovation, the easiest topic to handle by innovating and a first step toward an innovative culture and innovative business. Once this is usual, work on better *quality* follows more easily than before, then *range*, and then *uniqueness*, and then *sustainability*, finally, in general (See: Fig. 14.4). Again, this may be no linear paradigm. As we have said, they are all interdependent.

And we must not rely on traditional economic and business data only: they tend to leave about half the factors of competitiveness out of sight (Grayson, O’Dell, 1988). They do not include sustainable future and development.

⁵⁵ Japan lost the 2nd World War and had a USA control over their government for a while. Americans were not happy with the quality of Japanese supplies and brought experts to teach Japanese about *quality control*. Edward Demming wrote his instructions in the form of 14 sentences; the first sentence required continuous innovation as the source of excellent quality. In 1951, the Japanese government introduced a nation-wide reward for companies achieving excellent quality (the Deming Prize). This was a crucial step toward the Japanese conquering the world markets in many products due to their permanent link between quality and innovation. A similar quality award was introduced in USA 36 years later (the Baldrige Award); in European Union even later (European Quality Award, EQA). In Slovenia, the EQA was made a law in 1998. Another incentive is provided by the ISO 9000 certificates for total quality management, which is less demanding than EQA, but useful as a first step. Unfortunately, quite often, the organizations try to acquire the ISO 9000 certificate without using the incentive for innovation behind its scene. ISO 9000 was therefore updated in 2000, but those a bureaucratic approach can meet criteria technically and formally only, and keep a lot of the old *non-innovative culture*. (See: Mulej et al., 1997, Pivka and Ursic, 1998; Pivka and Mulej, 2004; etc.). ISO 14000 does not seem to be much more considered by the narrow-minded firms (Škafar, 2007).



14.8.3. Total / Excellent Quality and Hence Success in Market – Consequences of Innovation Process Based on Requisite Holism and Ethics of Interdependence

Times of the surplus of demand over supply are over, in the advanced world. The basis of competitiveness has even changed in periods of only decades; see Fig. 14.3 and 14.4.

No single basis of competitiveness in the Fig. 14.4 is sufficient anymore, if alone, in the modern global market. Their *synergy* can be achieved by innovating as a continuous activity. The model is briefly presented in Figure 14.17. Cases in the book (Dyck, Mulej, 1998) and other experiences (Mulej, 2006a) tell us the results clearly:

Business must result in *excellence* to be accepted by the market. Excellence depends on five pillars of total quality which are interdependent and each of them must be excellent (Creech, 1994). They are (See Fig. 14.11):

1. The *product* must be perfect to be accepted by the market.
2. *Processes* both in production and other parts must be perfect for the product to be perfect.
3. *Organization* is the central precondition for perfection in all parts and processes of the entire business.
4. *Management* must be leadership, not managership, i.e. cooperative rather than commanding for organization, processes, and products to be excellent.
5. *Commitment* of co-workers can then be reached and their capabilities activated as needed.

Perfection includes sustainable future and development unavoidably sustainable future and development today.

Methods which change the current way of management and organization may be many, not only the way of Total Quality Management, so we will not discuss them here (references abound; many methods are collected in: EU, 2004).

A product is perfect, if it meets criteria of “*systemic quality*” (attribute of sustainable enterprises in Fig. 14.4) as found acceptable by *customers*. No criterion can be missing; they are interdependent. This is a clear experience in advanced countries. If we take a closer look at the “*systemic quality*”, we can see three attributes, at least:

- Attainment of systemic quality depends on innovation in *all business functions* and by all or most, at least, *co-workers*.⁵⁶
- A given level of systemic quality can be continuously improved all the way to top world standards of excellence – by *continuous technological and non-technological innovation*.
- Systemic quality includes sustainable future and development.

Most probably, every activity – managerial, informational and basic (supply, production, sales) – can be (1) made *cheaper*; (2) *improved* in terms of reliability etc. of products and services supplied to internal and external customers; (3) *adapted* to their requirements in range offered; (4) done in a way making the supply *unique* for the customer and (5) preserving humans' natural environment (See Fig. 14.4 - 6). In the West, therefore, *continuous*

⁵⁶ We do not speak of subordinates, because this notion implies expectation of bosses, that they are not capable of creativity, even less so of innovation. Co-workers accept more, and are granted more, responsibility/authority.



innovation is the contemporary culture and necessary for businesses to survive (including the jobs in them). With the forgotten four-fifths (= 80%) of humankind it can and must yet be developed (as cases prove in: Dyck, Mulej, 1998). But the continuous innovation does not include sustainable future and development requisitely often and it hence lacks the requisite holism, which makes it fail rather than succeed, at least in longer term.

If innovation is the precondition of excellence, which is a precondition of systemic quality as a precondition of the market success, let us consider the preconditions of innovation. We took a look at the management model in Figure 14.17, but the most essential is *innovation of the management style* (IBM, 2006; McGregor, 2006 Mulej, ed., 1984; Reich, 1984; Rosenberg, Birdzell, 1987).

14.8.4. Innovation of Management Style

Management practice is millennia old, since people lived in communities with a division of roles and jobs to be organized and co-ordinated, of course, although the science of management is about a century old in USA and much less in Europe (Zenko, 1999). It went through several phases of innovation in order to match the ever-new difficulties of bosses with their subordinates, who were not coworkers. It seems that bosses have not been able to perceive that their problems result more from their imposing than from trying to have a novelty taken care of.

The oldest *innovation of management* may well have been the *hierarchical subordination* of the less qualified members of an organization to the more qualified and experienced ones (Schmidt, 1993). It is said to have been introduced, when they were building the Egyptian Pyramid's. It made and makes sense as long as (1) the superiors do not abuse their position; (2) the subordinates would not be able to perform well enough in their jobs with no supervision and instruction, due to their lack of expertise and interest. It survived all way to the 20th century and is still around.

In the course of the 20th century, the equipment has been more and more introduced that has required more skill, education and training. This has made the traditional hierarchical subordination less and less useful and needed, with the much higher level of education and culture in the 20th and 21st centuries.

Though, in the 19th century, when factories were introduced and employed many people with a poor education, the model of *hierarchical subordination* was still acceptable – under the same precondition of no abuse of the subordinates by bosses. To power lovers this precondition has usually been a hardly acceptable one for all millennia since the building of Egyptian Pyramid's until today.⁵⁷ In the course of the 20th century the general level of education has been growing all the time in the advanced areas of the world, at least.

The next *innovation of management* may hence have been the

- (1) *Human relations*, between the two world wars, and
- (2) *Human resources*, in recent decades.

⁵⁷ In November 2006, in USA republicans lost elections to the parliament. The minister who was the first one to be dismissed was publicly said to be unable to listen to his professional advisers; hence he made wrong decisions, which have caused many troubles to his country. – This is a clear case of a lack of requisite holism and ethics of interdependence. See public press.



Under the human resources model the main difference from the old tradition is the supposition that *subordinates are capable of creativity and responsibility*. This finding has had a lot to do with the practical experience as well as with the growing need that the companies and other organizations both develop and activate as much of their personnel's creativity, inventiveness and innovativeness as possible.⁵⁸

Gradually, a next *innovation of management* entered the scene, which we may call *innovative business* (Mulej et al, 1987), which we have discussed briefly here.

All four steps demonstrate a trend toward more holism and ethics of interdependence in bosses' views at their subordinates, who become hence coworkers increasingly.

The invention called sustainable future and development includes, or even exposes, the requisite holism and innovative business. The related ethics of interdependence includes all people, including the ones belonging to different generations: 'we are borrowing our natural environment from the future generations'. We must innovate to find new ways to preserve our own natural environment and create sustainable future and development.

The next step is spreading of the innovative business from a few companies' model to a prevailing one is society, turning such a society into an innovative society. It provides room the sustainable future and development in the fullest extent so far.

14.9. Innovative Society

The processes in Figures 14.3-4 brought the socio-economic development to prevailance of the innovative society. In the advanced countries, the innovative business has become the prevailing culture; others are mostly trying to catch up with them (in our observation of practice):

- The market ratio of supply and demand passed the transition from
 - (1) The *random market* - they produce for themselves and sell only incidental surpluses, to
 - (2) The *producers market* in which they the supply is smaller than demand (»queuing economy«, buyers cannot find everything they want), to
 - (3) The *buyers market* in which supplies exceed demand (»market economy«, suppliers cannot find buyers for all what they offer, innovation is necessary), and further on to
 - (4) The *state supported buyers market* in which supplies exceed demand a lot (»advanced market economy«, innovation is unavoidable).
- The continuous need for innovation encourages creativity of everybody, and therefore causes the evolution of democracy as a societal mechanism making room for *creativity*

⁵⁸ In 1926, Alan Mogensen was working as an industrial engineer of a motion study in order to innovate the way a worker was doing his job in Kodak, Rochester, NY. He filmed the worker. The worker happened to see the film, although this was not foreseen; he asked Mogensen to not use it, 'because he is able to do a better job'. Thus, the industrial engineer detected, that he had been miseducated. In reality, the worker was able to think and innovate, which he was not supposed to, and has never been asked to. 'Work Simplification' is the name of methodology resulting from this and many more similar experiences. Mogy was using it with good success for six decades. But many managers and owners and commanding officer refused his services – in order to remain the untackled boss. – This is another clear case of a lack of requisite holism and ethics of interdependence. Lack of efficiency and /or effectiveness results all around the world, where bosses are persons, who lack ethics of interdependence.



and holism, not only as *democracy in politics* (with many parties, civil society, arguing for one-sided benefits of the governing groups rather than for the requisite holism, etc.), but also in *economics* (with free entrepreneurship, choice of job, profession etc.), *on shop floor* (with invention and innovation circles, quality circles, leadership instead of managership, i.e. co-operative instead of commanding management etc.), *in family, education, local community life, everywhere*.

The *innovative society* differs from the (foregoing, historically) *routine-based society*:

- It applies all achievements of development of the worldwide civilization.
- It accepts and applies its own and foreign inventions and innovations rather quickly.
- It applies foreign knowledge to upgrade its own knowledge in order to effectively develop and use all the technologies of production, organization, education, etc.
- On this basis, it attains both a high international competitiveness and quality of life.
- Its inventiveness and innovativeness, both as attributes and activities, reach the West-European level, so do their preconditions (at least).
- The creative co/workers, scientific and other inventors and innovators are well appreciated because they are the most useful co/citizens and co/workers.
- The uncreative individuals are in trouble, especially the ones under-using their natural and learned capabilities.

Achievements to be applied and/or created include sustainable future and development.

The dialectical system of attributes of an innovative society includes, therefore:

1. A contemporary, creativity-based, and creativity-and-holism supporting, *democracy* both in the entire society and in all organizations from families on.
2. A contemporary, creativity enhancing *market* in which, as well as in the democracy, innovative persons and organizations prevail and reign.
3. A contemporary perception of *ownership*, which tells clearly the responsibility and includes creative and innovative ambitions rather than seeking rent (as an income based on owning without creating) only.
4. A contemporary perception of *innovation*, which says that innovation is every beneficial novelty accepted as such by customers and granting the suppliers a suitable profit / benefit, too.
5. A contemporary way of running the business, the *innovative business*, which continuously strives on innovation of any kind discussed here earlier.
6. A contemporary perception of entrepreneurship, i.e. *innovative entrepreneurship*, which means, that not every owner of an enterprise is an entrepreneur, but only the one who combines his or her business factors in an innovative way in order to produce innovation and live on it. Hence, private ownership is not enough, if owners are not entrepreneurial.
7. Education and other societal subsystems, which are not economy and business, but rather create human resources, circumstances and preconditions for them to flourish, and therefore also *support innovation rather than too much routine or even routine-loving*.
8. The sustainable future and development is a permanent topic of invention and innovation efforts.

Again, one sees that many types of knowledge, values, and conditions are needed. This fact requires complying with the law of requisite holism and a well-developed ethics of interdependence of all specialists who must co-operate in the process.



14.10. Some Conclusions

The very crucial efforts of the Club of Rome, United Nations and others to promote the idea of sustainable future and development as a very important alternative of humankind in its attempt to survive on the planet Earth, might have had more success,

- If they had been viewed as inventions, which should become innovations; and
- If the Mulej/Kajzer law of requisite holism had been taken in account, which would result in an approach with the steps suggested in this chapter.

It is possible, that a crucial share of the current problems with the Earth's climate change results from processes on our Sun. But this may be no excuse for humans to go on making the crucial oversights of so far, such as:

- Abusing the external economics to include the abuse of the humankind's natural environment, because this yields fictitious profit only;
- Forgetting about the law of requisite holism and behaving on a narrow and short-sighted basis, because this causes very big cost for eco-remediation, health renewal, etc.

Thus, thinking along the principles in the left column in Fig. 14.18 would be much more helpful than thinking along the principles in the right column in Fig. 14.18. (Mulej et al, 2003). The left column allows for many less oversights, it allows its users to perceive more of the really existing complexity and complicatedness rather than self-bluffing oversimplification, which does not simplify the existing reality as much as it simplifies one's image (= 'system') of the reality at stake. Reality is never simple (Bryson, 2005), but it seems so to the ones, who chose a too narrow viewpoint for their dealing with reality.

No	Systems / Systemic / Holistic Thinking	Un-systemic / Traditional Thinking
1	Interdependences, Relations, Openness, Interconnectedness, Dialectical System	Independence, Dependence, Closeness, A single viewpoint/system
2	Complexity (& Complicatedness)	Simplicity, or Complicatedness alone
3	Attractors	No influential force/s, but isolation
4	Emergence	No process of making new attributes
5	Synergy, System, Synthesis	No new attributes resulting from relations
6	Whole, Holism, Big Picture, Holon	Parts and partial attributes only
7	Networking, Interaction, Interplay	No mutual influences

Figure 12.18: The Seven Interdependent Basic Sets of Terms of Systems / Systemic / Holistic vs. Un-systemic Thinking (as a dialectical system)

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⁵⁹ EPF means: University of Maribor, Faculty of Economics and Business, Maribor



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The book “Our Common Enemy – (The Climate Change System Threat) is among most popular readings at present. That is why we have put it as reprint in this book. It was reprinted four times till now, and this is fifth reprint. It makes the book The Sustainable (Development) Future of Mankind rounded with practical solutions and possibilities for future of our civilization.

Reprint:

OUR COMMON ENEMY – (The Climate Change System Threat)

By

Prof. Dr. Timi Ecimovic, Dr. T. P. Amerasinghe, Dr. Ramadan Breki, Prof. H. A. Shankaranarayana, Prof. Dr. Alexander Chumakov, Prof. Dr. Roger B. Haw, Prof. Dr. Peter A. Wilderer, and Prof. Dr. Glen T. Martin



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To Humanity on the Earth Day 2006!

**Homo hominis lupus.
(Tit Makcij Plavt, Latin saying)**

**Človek človeku volk!
Human to human wolf!**

Acknowledgment:

To our families!

To friends and coauthors: thank you for your selfless friendship and support.

To readers: thank you for your concern and interest.

To all humans: don't give up!

Medosi, Korte, Slovenia, 2006



1.1. FOREWORD – EXECUTIVE SUMMARY

It is elementary to have common threat, which may bring our civilization to have better chance for survival. “***Our Common Enemy***” is ***the climate change system***. Where we come from, and what we are, where we live. The simple mind of complicated and complex content, uniqueness without reality, requisitely holistic approach and another achievement that is what we think, maybe?

Environmental sciences are offering possibility for researching and discovering realities, which could result with understanding basics of the Nature and everything. The climate change system is a requisitely holistic part of the Nature.

The Nature – it is complicated situation with our understanding of the Nature. Great achievements, discoveries and research has been done in past and present and hopefully will be done in future, but it looks like our understanding of the Nature and the Nature itself are on two banks of the same river. Life, even survival of us, the modern civilization, depends on conditions provided by the *nature* in which we human all live, and by the climate change system as an integral part of it. The Nature, Cosmos/Universe, Milky Way, Solar System, Earth, Biosphere, climate and climate change systems, terrestrial, water and air environments are *no simple systems* (features, entities, and processes), but very complex and complicated. The time – *duration, continuance (Webster)* as it is accepted, used and understood by humans and our civilization may look completely different from the *nature* point of view. Great achievements of researchers from beginning of our civilization, antiquity, and till present, from understanding environment at hand to researching larger environments has brought up us to understanding of The Theory of Relativity, nuclear, quantum and nano mechanics technologies and techniques, genetic structure, big bang, black holes, string theory and many other discoveries including methods and means for mass killing of humans. So far humans have not been so much self supportive and sufficiently successful in their influencing the biosphere, climate and climate change system, urban and agriculture lands, water and forest environments, atmosphere and producing long lasting sustainable human eco-sphere: the dangerous consequences result from ***too much one-sidedness*** of humans, and suggest humans to use more systems/holistic thinking.

We humans live on Earth, which is a *small, but integral part of the Universe*. We are able to live here due to suitable climate and other living conditions. All over the billions of years of the existence of our planet Earth, the climate has kept changing. The impacts causing this changing, in general, result from natural processes and/or human interventions. Both kinds of impacts can cause consequences, which are both good and bad by human criteria. E.g. from a rather one-sided/narrow/shallow/oversimplifying viewpoint the changes in the human life over the last 2 – 3 centuries are bringing the so called *progress*: more comfort, a higher standard of living (for part of humanity) on the basis of many technological and non-technological innovations. But from a more holistic/broader/systemic/complexity-facing viewpoint we see that the same changes tend to cause our own *extinction*. Which is the ***correct viewpoint***? The usual answer would read: the common sense. But the modern experience demonstrates very many destructive consequences of the “common” sense, i.e. the *one-sided viewpoint* as a usual basis of thinking, decisions making and acting, which is normal with all of us individuals as specialists knowing a small fragment of reality. So, at least since the UN (humankind’s highest political body) has planned for “***sustainable*** (i.e. no short-term and nature-destroying) (***development***) ***future***”, the humankind of today knows: we should better apply the “uncommon” sense, i.e. the holistic/systemic thinking.



Each and every individual human idea, decision, and action may seem to make a small, even negligible impact, but the consequences of all of them together may be tremendous.

In the case of biosphere, our human actions tend to cause our own **self-destruction**, because we tend to **lack holism**, both in our knowledge, values, emotions, and resulting actions.

It is hard to believe what we, as humankind, know about the world and the universe. Many well-known issues and insights, however, are fragments of the whole, and we have to understand the whole on the basis of fragments without knowing the whole. And what is the whole, where are limits of fragments, and what are issues of a whole? **The whole is everything** and all other features are issues within/without inferior and superior systems/wholes/entities making partial or (fictitiously) absolute whole/s.

The **absolute/only/total whole** is what we humans call the **Universe/Cosmos**.

Now, how to understand our own role as humans within the Universe, when our understanding of the nature, space, and environment is evolving/innovated from fragments, which have never been put together to allow for a holistic insight?

The natural evolvement, which has only one direction – **the dynamic multidimensional evolvement ahead**, does not include its own payment system, profit, financial institutions, and all other innovation of great importance for our civilization of today. The nature has its own absolute knowledge, energy, matter, ability and possibility to construct systems/entities according to the existing information, environment, matter, energy, powers and forces, particles etc. of its own. The question is “Why is there a planetary system like the Solar System?” and the answer could be “We do not know, but we think that it is a result of the available natural environment, information, energy, matter, powers and forces, particles, rays, and yet not known contents, etc. at moment of transformation/formation”. What is certain, hence, is that the time has come for our civilization to make a decision about our future, including our own very near future. That decision, we believe, will take us forward to a **sustainable future or harmony with the Nature**, if a requisitely holistic thinking comes to **complement** the usual narrow specialists’ thinking. It should help us see that we are not independent, but **interdependent**, i.e. needing each other and needed by each other, because we all are specialists. And we all live on the same planet Earth, which we cannot misuse for ever.

Black/white, shallow/deep, good/bad, positive/negative, primitive/civilized, and many more coupled terms could be put together and enable us humans to see the origin of **interdependences, interactions and co-operation** of the natural systems. What was first “hen or egg”, “innovation or routine”? The answer is obvious, but rarely taken into account: they are interdependent, as soon as we consider the natural dynamics, not only a moment (which does not exist on its own anyway). So are specialized professionals, needing **creative supra/interdisciplinary co-operation** as their/our shared way out of the blind alley of a too narrow thinking and action.

People, values and knowledge have been making an epic song of our civilization, which has been going on since humans have existed. And so has other nature, including **whole** Universe, Milky Way, The Solar System, Planet Earth, Biosphere etc down to fundamental particles – quarks, protons, neutrons, electrons, relativity theory, quantum mechanics and atom structural understandings. We people are a part of nature, although this has been admitted less over the last three centuries than ever before.



1.2. FOREWORD by H.E. Baron Col. Chev. Prof. Dr. Roger Haw

Climate change system is a global concern taking centre stage. Mankind must wake up to face this issue. This timely publication aims to do just that.

Each sentence and chapter written by writers from different parts of the world particularly for this publication entitles (“***Our Common Enemy***” is the ***climate change system***) has brought the global citizen a kind of special attention on various aspects found out by experts on the issues in relation to the Climate Change aspect which required mankind not to take it lightly in regards to any actions or decisions made by any individuals or organizations at large before it is too late to regret.

Likewise I would like to pose a question to our readers: “Can ants eat an elephant?” It is indeed absolutely possible. The answer is “just a matter of time.” Similarly if human being takes no CARE of the Earth we will be destroying it gradually and human beings shall pay a heavy price for the loss of everything that we human beings work for to build it as well as anticipating the end of the World without Wars.

What did the world look like when dinosaurs were alive? The weather was warm and rainy. There were trees with spiny leaves, and lots of ferns and shrubs that grew close to the ground. There were ponds, lakes and forests, but no towns, houses, or roads, and no people! After the dinosaurs, the world slowly got colder and colder, and eventually it entered a time called the Ice Age. During the Ice Age, giant woolly mammoths, bison, and bears roamed around the earth. Dinosaurs lived on Earth for nearly 150 million years.

The world looked different then. All the land was in one great lump with the seas all around it. But little by little, over millions of years, the land broke up into pieces we call continents. This will be another proven factor due to external force that can destroy human life but does not mean that we human beings should leave it to faith or Gods. With sincere CARE attitude in action to protect the globe by the global citizen we can gain extra days for all living and non-living things to live on this beautiful Earth. The six billions world population can really create a huge impact which is beyond our thinking system on any issue if we can work together with a common goal in mind and at heart.

The discovery of fire, the moulding of metals, the use of animals, the development of farming and the invention of the wheel-all these marked the first great changes in the story of civilization. With the Industrial Revolution in the 1800s, ‘man-powered’ machines were quickly improved and perfected, leading to the development of new technology in our lifetime. It is humankind’s constant quest for discovery that has resulted in astronauts overcoming the boundaries of Earth in the conquest of space. Therefore, realization of climate change system is one of the discoveries too. In fact, it is extremely important to rectify this huge issue which we humankind should respond without further delay although the effect may not be visible immediately; but if we were have no concern on Climate Change System issues then it will kill all present the living things gradually.

There are many great things discovered by mankind such as from heat to movement, from electric light to space technology, from laser beams to measure the exact distance between earth to many planets, Biotechnology to Nanotechnology application, revealing the invisible,



see something beyond the naked eye, invented recording systems & image, long distance communication, printing press and books, Computers, medicines and etc.

Just imagine in 1920, Mr. Robert Ripley the Founder of 'Ripley's Believe It or Not!' made his first trek across Europe via Africa, Asia and then back to America. He took more times to reach one destination as compared to us today. However, he had visited 198 countries even though he had to face numerous obstacles, travelling a distance equal to 18 complete trips around the world. Indeed it is a great achievement. We can see from this simple fact and reality points shown that human has strong WILL to achieve their desired goals if she/he wants to achieve. If we never CARE for Mother Earth then who will care for her? Thirty years ago many people still used black, rotary-dial telephones. Many people who owned a television set watched black-and-white pictures. In that monochrome world, relatively few people had money to invest other than in the security of a family home. Only the rich indulged in the finer things in life or could afford to apportion their wealth into assets that would protect their future and grow in value. How time has changed! Today we live in a much more egalitarian world, a world in which education, hard work, and reward for effort have created new groups of people with significant discretionary income.

Unfortunately, nowadays the earth and human beings are facing another set of problem: the issue of Climate Change System. Based on the present global climate change conditions, that shows that the Earth and human beings as well as living things are struggling to survive under such circumstances. Let us know the simple fact about the diameter of the Earth is 12,756Kms. In its orbit around the Sun, Earth travels at a speed of 30Kms per second, 1800Kms per minutes at the same time spinning on its own axis at 1700Kms per hour.

Also we human being has to know “Beyond the Earth” there are more stars in the Universe than there are grains of sands on all the beaches in the world. The Universe is so vast that a ray of light travelling from a remote part of Outer Space takes millions of years to reach the Earth. The Earth is too precious for mankind to destroy it. Indeed I really hope that global citizen and authorities should concentrate their effort into this important agenda and not to put it in the non-priority list to avoid creating big problems for future generations.

Our Sun is only one star among an estimated 200 billion stars that orbit in a galaxy called the Milky Way. The Earth is also part of this galaxy. Venus is the nearest planet to Earth. Andromeda is the nearest galaxy. The moon is the nearest heavenly body to our planet.

The origin of the Universe is at least 15 billion years and within the tiniest length of time—something like a millionth of a billionth of a billionth of a second, there was an explosion in space. This explosion is known as the Big Bang. This was when the Universe began, instantly expanding at a temperature of billions of billions of billions of degrees and rapidly becoming billions and billions and billions times vast. It is as per present scientific thinking, but whether it is or not, we have to see in future.

“Food for thought” is a concept easily grasped. At its very beginning and as laid down in its Constitution, UNESCO has sought to mobilize intellectuals, researchers and academics to debate issues of topical or future interest where the Organisation’s values are at stake. Thought thus nurtured has a value of its own: it is an essential aspect of the intellectual life of the international community.



“Thought for action” is rather more complex. On the one hand the Sector’s action is mainly indirect. It involves a whole network of partnerships with every level of individuals as well as all kind of organizations, which precludes any assignment of thinking to one set place. On the other hand, not everyone is convinced that rigorous thought can be related to the demands of action. And yet, if we take a closer look, it is precisely these two difficulties that show how it can be done. Knowing what should be done does not make it easier.

The challenge the Sector has taken up consists in creating just such a space where action can be thought of. Such a space also needs mankind to stop destroying environmental and nature living together with us to making our lovely planet a better place to live in generation after generations. Each of us has the responsibility to play and protect the earth; hence we should think it thorough before we act. At a time when one year comes to an end and another begins what better can we wish for one another than to work together through thought and action for peace in the world and care for the only planet we are living in.

I would also like to express my heartfelt thanks to the authors and editors for doing such a splendid job in publishing (*“Our Common Enemy” is the Climate Change System*) book series with the aim of raising public awareness.

Books don't just happen by themselves. A number of smart, dedicated, competent, and compassionate people have to care about a book (and its authors) long enough to get it all done. In the case of this particular book, I would like to express my sincere thanks to all the writers who contributed their effort and time to bring it to the high level of attention. I know, no serious academic text or reference or resource book will ever see the light of day without the careful and thoughtful work of our professional and academicians colleagues. Those people reviewed, criticized, and improved the contents of this book in many important ways, and to each of them go our gratitude.

To sum up the above message, I would like to share with you the statement below;

"To learn from your mistakes makes you wise, but to learn from others' mistakes makes you wiser." However, we have only one Earth to live on hence we cannot afford to take this risk as a kind of experience-once gone forever is gone. "Knowledge means nothing if you don't apply it with relevance" "Wisdom is the practical application of knowledge."

“The art of education is to continue to grow as long as you live. Every moment brings its lesson. Every person is a teacher. Grow in all directions. Develop a desire for goodness. an eagerness for knowledge. a capacity for friendship. an appreciation for beauty. A concern for others, grow. Man is never finished. Man never arrives. Education never stops”.

If you wish to have a better understanding on how you can play your role to make this globe a better place to live in, please continue to read the entire book. I am sure you will enjoy reading it.

Happy reading and best regards!

Roger Haw



2. About the authors

Prof. Dr. Timi Ecimovic

Prof. Dr. Timi Ecimovic (1941), from Medosi, Korte, Slovenia, is an eminent international scientist, independent researcher, lecturer, first head of SEM Institute for Climate Change, retired in May 2004 and Chairman of The World Thinker's Forum. He is researcher working on The Nature, nature, space and environment protection, the climate change system, system thinking, sustainability, and sustainable future. He was among the first researchers to apply nature, space, and environment protection in a local community by activities we call today Local Agenda 21 Processes – a holistic program for survival of our civilization under new challenges of the third millennium – **from local community sustainability to global civilization sustainable future or harmony with Nature of Planet Earth**. With his research/work within the climate change system activities/problems recording/understanding/researching he has been among the leading independent researchers with many international publications and talks. Together with many researchers in co-operation worldwide within case studies and complex problem solving research and learning he is assisting a holistic and a better understanding of the present. His latest research directed towards the system theory/system thinking may provide a possible answer enabling us to better understand our world.

Dr. Timi Ecimovic is an active member of the European Academy of Sciences and Arts, the European Academy for Environmental Affairs, Doctor of Environmental Sciences (H.C.), the Chairman of World Thinker's Forum, and professor of Environmental Sciences at Ansted University.

H.E. Baron Col. Chev. Prof. Dr. Roger Haw

Prof. Dr. Roger Haw is the Founder cum Chairman of the First kind of World Book of Records with a Focus on Corporate Social Responsibility aspects '**SRW RecordPedia**' and Founded the Ansted Social Responsibility International Award (**ASRIA**) to recognize those Corporations, NGOs and individuals around the world. The publication, which has been distributed to over 80 countries, includes commendable messages from four Nobel Prize Laureates. The ASRIA Awards are known by 187 countries member nations to UNESCO commissions.

Prof. Dr. Roger Haw also serves as a Diplomat to the World Human Rights Service Council, USA to the United Nations. He has been selected as one of the International Biographical Centre, Cambridge, England TOP 100 EDUCATORS-2005. This accolade is credited to those individuals who have fulfilled a standard of merit in the eyes of their peers that is beyond the norm. It is a lasting tribute to that which can be achieved by a very select few for the benefit of many.

He has co-authored several books and research papers in the areas of Corporate Social Responsibility, Learning Organizations, Alternative Medicine, Culture & Peace and Distance/Virtual Learning Programmes which were published by various publishers in the UK, Europe, USA, India, Korea, Thailand, and Malaysia, etc.



He is one of the youngest founding members of Ansted University, established in the British Virgin Islands of UK, a private international open university with 40 affiliated campuses and training providers around the world with the support from more than 1,000 faculty members, scientists and researchers from more than 80 countries. He is also an Honorary Member of the Academic Board of Advisors and Board of Governors for 12 institutions in 12 countries.

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Dr. Amerasinghe was one of those who served on the commission that drafted the Constitution for the Federation of Earth and presented the same for adoption at the 2nd World Constituent Assembly in Innsbruck, Austria in 1977.

He has had a distinguished academic career at three universities: Colombo, Sri Lanka; London, England; Wisconsin, U.S.A. He is a M.A., a DeD and a Doctor Juris (honoris causa). He is also a Barrister-at-Law of Gray's Inn, London. A lawyer by profession, Dr. Amerasinghe has practiced in the highest courts both in Sri Lanka and abroad.

Dr. Amerasinghe has travelled widely, delivered lectures, conducted Seminars, and presided at international gatherings in various centres of higher learning, universities, institutions, and organizations in Europe, Asia, the former Soviet Union, the Americas and Australia.

In recognition of Dr. Amerasinghe's contribution in various fields of law, social sciences, education, and service to the community, he was elected Smith Mundt-Fulbright Scholar, Japan's Oomoto Foundation Gold Medal, and the World Peace Award of the Thai Peace Foundation.

Dr. Amerasinghe's contribution to the subject of climate change is unique. He was one of the earliest to understand the implications of the impending destruction to the environment and as a member of the drafting commission of the Constitution for the Federation of Earth saw to it that in its second Bill of Rights (article 13) lays down the right of the people to protect the natural environment which is the common heritage of humanity against pollution, ecological disruption or damage which could imperil life or lower the quality of life.

Dr. Ramadan Breki

Dr. Ramadan Breki is distinguished researcher from Tripoli, Libya and co-coordinator of the international meetings on direct democracy. Due to bad communications his CV data have not been received, and in next publishing of this book we expect to have data completed. He has become a part of team work for this book on accession of 9th Session of the Provisional World Parliament, April 2006 at Tripoli. Libya.



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He has been first Vice-President of the Russian Philosophical Society, and he is Ph.D., and Professor of Philosophy. Having graduated from an oil college, he worked as a foreman in oil industry and then at the nuclear test-sites in Semipalatinsk and Novaya Zemlya. He received M.A. and Ph.D. in Philosophy at the Department of Philosophy of the Moscow State University. His Ph.D. dissertation on social ecology (1984) and postdoctoral dissertation dedicated to social and philosophical aspects of global problems (1991) were among the first research projects done in the new field of global studies. For 20 years he has been studying such topics as philosophy of global problems, scientific and technological progress, transition to democracy and open society, social philosophy and ecology. He participated in and was one of the organizers of the All-Russian Philosophical Congresses; participated in the XVIIIth, XIXth, XXth and XXIst World Philosophy Congresses. A. N. Chumakov serves as professor at the Moscow State Academy of Law; Editor-in-Chief of *Vestnik RFO* journal, Leading Research Fellow at the Institute of Philosophy of the Russian Academy of Sciences; editor of many scholarly volumes and textbooks. He is the author of more than 220 research works, 7 monographs and textbooks published in Russian, English, Chinese, German, French and Czech languages.

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Prof. Dr. Peter A. Wilderer

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Professor Wilderer served as a distinguished professor in many universities in the world, which included the University of Karlsruhe, Germany; the University of California at Davis, U.S.A.; the Technical University of Hamburg-Harburg, Germany; Montana State University, U.S.A.; the University of Queensland, Australia; Massey University, New Zealand.

He holds two honorary doctoral degrees (University of Chemical Technology, Prague, Czech Republic; Technical University of Iasi, Romania), and he is honorary professor at the University of Queensland, Australia.

Since 2002, he acts as director of the Institute on Advanced Studies on Sustainability, funded by the European Academy of Sciences and Arts. In 2003 he received the prestigious Stockholm Water Prize. He authored more than 300 scientific publications, co-edited the journal *Water Research* and the journal *Sustainability Science*, and acted as editor-in-chief of the journal *Water Science & Technology*. He is a co-founder of the European Water Supply and Sanitation Technology Platform (WSSTP), member of the Board and Chairman of the Horizontal Working Group on cross cutting issues, and he is a founding member of the European Water Partnership (EWP).

Prof. H. A. Shankaranarayana

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Prof. H.A.Shankaranarayana has worked in many national and international research projects. He has produced a STATUS PAPER ON THIRD SECTOR IN KARNATAKA funded by Ford Foundation. He has conducted European Union Study on the ROLE OF SOCIAL CAPITAL IN INTERNATIONAL TRADE involving countries like France, Germany, Switzerland, Italy and Austria. This study was sponsored by TRADCO. He has also attended many national and international seminars and conferences, which have been sponsored by many international research bodies and organizations, and has presented papers.



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4.1. Our Common Enemy – The Climate Change System Threat

With “development”⁶⁰ of human society within time frame introduced by humans we think our common future is not common with the Nature. By present biosphere conditions, impact of the Climate Change System, and continuous pollution of biosphere by our civilization are not offering secure future for humans.

In the meantime partly because of the impact of human society pollution and partly because of the impact of the climate change system the living conditions on the Planet Earth biosphere are changing significantly. The natural powers of the climate change system are sufficient to change living conditions of present biosphere into not suitable for present living creatures including humans. That is why

our common enemy is the climate change system.

With continuity of practice by living as usual, we may come to the end of present “comfortable” living. Last decade number of natural disasters from tsunamis, earthquakes, floods and droughts, strong and more strong winds, volcano activities, desertification, land fertility deterioration, drinking water pollution, food production reductions, ocean and seas fish catch failures, forest depletion, ozone layer deterioration, global warming, and others are beginning of changes due to impact of the climate change system.

Our civilization is still very busy with armaments and killing devices inventions, development and production, enlargement of nuclear killing devices production (at present civilization is “proud” owner of 36,000 + nuclear war explosive devices, with trend to increase this arsenal), continuous promotion of non sustainable living practice, UN has changed human rights commission into human rights council and still did not understand need for ***biosphere rights protection against impact from human society***, US continue with international terrorist protectionism and together with other nations are protecting national interest regardless need for holistic approach for human society survival, synthetic chemicals and communication technique devices are favorable money making inventions, especially those with very sophisticated patent rights, production of combusting engines continue in millions regardless their leading position as atmosphere polluters, and etc. We think it is time to establish reality of ***our common enemy*** as not been humans and humans activities, but the climate change system impact, which, if not mitigated, will eventually change living conditions as much as been not more suitable for our living.

4.2. Environmental Sciences is Science about the Nature.

Birth of environmental sciences has been in some time as commencement of humanity, but understanding of it is coming (if) much latter. Basic reason for opening of environmental sciences is within research on fundamental roots of the Nature. There is not commencement or ending of the Nature, but continuous since unknown time and till unknown time. Commencement does not exist but environment as precondition for the Nature continuous existence, and it does exist – it is Universe or Cosmos as largest environment known to mankind, and all other environments from formal definition from largest to smallest.

⁶⁰ DEVELOPMENT is wrongly used term for human activities, which in the Nature does not exist. In the Nature there are evolution, evolution etc., under interdependences, interaction and co-operation of everything.



Universe/Cosmos is basic environment within which everything – energy, matter, information, powers and forces, rays, particles and unknown contents are **interdependent, interacting and co-operating**. Evolvement of them is the Nature at present. We may see/research/record past and present and future may look as we are thinking it may look, but in reality we can not predict future. It is result of interdependence, interaction and co-operation of energy, matter, information, powers and forces, rays, particles and other unknown contents of basic environment the Universe evolvements, and are complex much more as we, where thinking ever before. At list with researching/defining environment we may have better chances to get results on to questions which can not be answered today.

Environmental Sciences has not yet opened/written book of science, and contents of which will be elaborated by generations which are coming in future. Many parts or chapters of the Environmental Sciences has been researched/recorded/worked out by many scientists but not within the frame of environmental sciences, and putting them into frame of environment is our first task. We need scientists with ability to think as they have been and are like Artostotle, Plato, Copernicus, Newton, Einstein, Hawking to mention some from present and past who contributed much for present status of sciences.

Environmental Sciences has commencement with researching basics of the Nature, and have been taking more seriously after discovering in regards to the space, environment and Nature protection. When the climate change system has been recognized/established as major threat to present Biosphere, environmental sciences has come forward as need for scientific and applied research work for survival of humanity and present biosphere, which are hand and glove of present Planet Earth life.

Using system theory, system thinking, analysis, and synthesis could be useful tool and interacting with countless specialist sciences, and specialist and holistic approaches we could have good results in future as supradisciplinary approach. Of course holistic approach could have better results for understanding of the Nature, but when researching social and technical sciences and theirs applications it is another cattle or fish. Mathematics best assistant of mankind for understanding of social and technical sciences, if not evolving to new level, will not have so important role for natural sciences. It looks like soft approach to scientific research would be needed to achieve better knowledge of basics within the Nature sciences.

Time - most valuable dimension by mankind in reality does not exist. It is another way of understanding of environment by our civilization. The Nature does take as much time as needed for the purpose and never measure it. Actually for the Nature time as determination of dimension does not exist, but is result of interdependences, interactions and co-operation of matter, energy, information, powers and forces, particles, rays and yet unknown contents.

4.3. The Nature has Multidimensional Environment in all Directions

Environmental Sciences should have important position within sciences of mankind. All other sciences should commence with environment of which the content of multidimensional interdependence, interaction and co-operation is knowledge. Environment could have any attribute from in and out; left or right side, up and down, large environment may have countless smaller environments and so on. Physics as commencing science for understanding the Nature at present, when using soft environmental approach, system theory, system thinking, analysis and



synthesis, and using additional symbol/technique development for mathematical expressions or future development of mathematics as scientific language of our civilization, will be able to solve any target within needs or reach.

The climate change system provider, guardian and maker of climate within biosphere of the Planet Earth, which is powerful system of the Planet Earth Nature, with sufficient power for eventual change of present biosphere and consequently strong destructive impact on our civilization, is much more understandable when using soft environmental approach as specialist approach, which is used at present.

Since we (our civilization) have lost touch with our origin, it was not lost connection, but we commenced building our own image/environment. Today urban human *Homo sapiens* “*urbanus*” is anthropocentric/egocentric representative of humans, with new ethics (for third millennium), who recognize only one God – money. Rest of civilization – peoples of rural areas, mountains, small islands, jungle, arctic region, semi and other deserts, are minority without “human rights” in practice, due to pressure from bureaucracy, and only to bureaucracy understanding countless form’s and paths for ruling by power of not production, but ruling. During feudalism and before humans used to live from nature, and as part of it. It was easy to manage kings and noble people due to their small number, but today our civilization has less and less of productive population and more and more of politicians, and administrative/bureaucratic supported families.

Tribe, chief and spiritual leader was primary civilization achievement for protection of *Homo sapiens* during Neolithic time. Second to that was development of religion, as ruling practice for making self appointed minority people/individuals making living on account of majority/others people’s. Taking care of souls by stories and tales has brought Kingdoms and slavery, as practice in antiquity. What is all about, we think society is result of our origin as social creature, or it is way for survival – making living – having reproduction, food, shelter, and cloths. Someone may say it is confusion/chaos or whatsoever, but we think, if we have to understand the climate change system, we have to understand beginning and evolvments of our civilization.

Basic set up of *Homo sapiens* – looking from today level of understanding – is family. Actually we think it is male/man and female/woman of our species *Homo sapiens* as one/individual representative, with countless number of possibilities for making society. Development was interconnected with interdependences, interaction and co-operation of all matter, energy, and information in time, and within smallest/small/large/larger/biosphere environment. Result is in present status of species within biosphere (six billions + of individual representatives at end of second millennia).

Why we are making such statement – we want to show relationship between The Nature and our civilization, as basic path for understanding of the climate change system.

What is the climate change system – there is no beginning, and no end, but it is LIFE or The Nature as whole, which is within Universe/Cosmos as continuance of it with or without Planet Earth present status, or and as requisitely holistic unit – Planet Earth Biosphere evolvments. Within Earth there are all known and unknown forms of the life or the Nature as whole, and among them our civilization. Till now it is all right, but with next step, development of *Homo sapiens* civilization, environment, or human eco sphere – from 120.000 – 16.000 years onwards, and even one moment ago (because each individual unit – baby, has rights to develop into



individual representative of the species, with status and abilities, which are deciding future of society). As case study or support to our statement, could be taken “achievements by” Napoleon, the French, who had major impact to present society with great wars. Similar could be seen from history of mankind – Confucius, (G) Bautama Buddha, Christ, Alexander The Great Macedonian, Roman Gaius Julius Caesar, Polish Copernicus, English Newton, Darwin, French Napoleon, Robespierre, Austrian Adolf Hitler, to mention some of “great” humans from past, and till today greatest scientist of our time Stephen Hawking. What we are trying to say is – our civilization has taken right to interpret the Nature. On such way we have double interpretation of the Nature – first is as it is the Nature, and second is the Nature as seen by our civilization.

Motto: THE CLIMATE CHANGE SYSTEM IS AN ENVIRONMENTAL/MENTAL ISSUE, REQUIRING SYSTEMS THINKING FOR HUMANKIND TO SURVIVE

Climate is one of the many ***crucial preconditions for survival of our civilization*** living here for many millennia, now and – hopefully – in the near and long-term future. Like many other natural, technical, and societal components of life, climate is no isolated feature, but a feature with essential ***interdependencies, interactions and co-operations*** with many other systems/features with which climate, therefore, exists in mutual interaction/interplay. These interdependencies, interactions and co-operations are natural facts, which many humans tend to make an oversight of and/or forget about. Many other essential features of Planet Earth including the humankind’s life and activities share the same destiny. The ***oversight of interdependencies, interactions and co-operations*** has shown up as a very crucial mistake many times, extremely visibly in the first half of the 20th century in the form of the two World Wars and the World-wide Economic Crisis between them (1914-1945), and during second half of 20th century with destructive use of synthetic chemicals (pesticides, plastics, etc), misuse of armaments and nuclear technologies, what resulted with triggering of the climate change system and its consequent impacts – global warming, climate changes and other.

5. The Climate Change System⁶¹

Worldwide researchers and scientist, complex problem solving, case study research, education, and many other activities of Homo Sapiens Sapiens individuals and society today has to take into account the climate change system affairs, which have a main role for changes within biosphere, which are most risky issues of end of the XX and beginning of the XXI centuries.

The Climate Change System as maker, provider, holder and guardian of living conditions within the biosphere of the Earth, has a more important role as humans were thinking in the past. For the Earth’s biosphere it has the main important role of making/providing and guarding living conditions, to which the living creatures have to adjust for living. Number of extinctions of species, smaller and larger alike, are due to changed environmental qualities, because of changes within the climate change system.

The Earth’s biosphere is made of ***interdependences, interactions and co-operation*** of matter, energy, and information within the time frame (conditionally for understanding), and has three bases – Water, Land and Air environments. To be ready for changes, and mitigations due to the climate change system, all of us single representatives of human race has to learn more about basics of the biosphere.

⁶¹ As support for understanding you may look at the end of this presentation to »Atlas« drawings.



Risk assessment research was not well developed during the industrial revolution and recent times, and issues like: intensive agriculture; synthetic chemical production; money democracies: corporate social responsibility, nuclear technologies, have put for an irresponsibly long time harming substances into the Nature environments - sea ocean waters, lands and air. Today there is the question when and how harmful impact to living creatures of the Planet Earth biosphere will be. Science and people/s need to understand interdependences, interactions and co-operation within the environment, and of all matter, energy, and information to allow for sustainable future of our civilization.

Recently, individuals and society by practice are using nature, environment and biosphere as commodity free of charge. But, today this is more complex, regarding the nature quality, due to the climate change system. Major impact of the climate change system at society such as sudden floods, strong winds, earthquakes, tsunamis and changes within the local environment, may produce bad results. Our recommendation is to:

- Apply systems thinking, e.g. the Dialectical Systems Theory⁶² linking human work and its creativity with holism of thinking, decision making, and action, and with innovation;
- Make clear relationship with the Nature, which will respond to better relationship.

We think it is advisable to learn on limits and possibilities of the climate change system, to make clear vision of changes, which may affect human society, biosphere and the Planet Earth. We will concentrate on some basic features of the climate change system in order to support the two suggestions.

The water/land/air or biosphere is the bases of life on the Planet Earth. Not many researchers and public are familiar with interdependences, interactions and co-operation needed for survival of living creatures. Latest research on system thinking and the climate change system has important impact on knowledge of the nature for humans to better understand their environmental impacts.

From the natural viewpoint the climate change system alias the climate, the climate change – is a set/system/complex entity of conditions within the living space of the biosphere. Actually the living space is the biosphere itself, which is a tiny part of the Earth Planetary System. Watching the climate, and taking it into consideration when humans have been making their decisions – these have been two very separated issues, especially in the recent centuries in which the industrial life has been taking the lead and has caused a narrow professional specialization to reign and prevail.

There are two main sources of the climate change: the natural ones and the ones caused by humans. We humans should understand both of them in order to accept the natural ones and to possibly prevent their tough impact over ourselves, such as floods, droughts, air and water pollution etc. But we should better understand and cope with our own tough impacts and prevent them, too.

⁶² Prof. Emeritus Dr. Matjaz Mulej from Maribor University of Slovenia has introduced The Dialectical System Theory as assistant and tool for better understanding of complex and complicated issues, With his work he has influenced also this presentation.



The systems (as complex entities rather than mental pictures of them) could be formally set according to their size as follows:

- MACRO / MEGA / SUPERIOR / SENIOR / VERY BIG etc., systems such as the Universe, the biggest system known to humans, the Milky Way, the Solar System, the Planet Earth System etc., and
- MICRO / INFERIOR / JUNIOR / SUB etc. systems that are smaller and are either natural such as Homo sapiens / plant / animal / living creature/s, and or artificial / human-made systems such as a township / car / aircraft / rocket / satellite, etc.

Of course, the above artificial and natural systems cause a need for differentiation of sciences to natural and social sciences, of which none includes all human activities as an integral part of the nature. We think there are no artificial and natural systems, but all of them are natural as long as they are results of living creatures' activity. But we know it may take a long time for many to understand such a philosophy. Let us use communication exchange with the terms artificial and natural systems for time being.

The system theory, system thinking, analysis, and synthesis are the best assistants available today for humans to understand complex problems, which both the macro and micro systems are. There is no simple system, and there is no system we may say that humans know everything about. This could be stated more rightfully when one uses system thinking, which could make the difference between the scientific thinking of today and of tomorrow.

The challenges to us humans of today are much more complex than ever before, because we have reached a sort of a critical peak of our ability to understand the present time. The proof for this is our relationship with nature, space and environment, which is going to become unfriendly to humans, and not a good friend, as it should be. Our civilization's anthropocentric philosophy, its present social order, its religious approaches/governances, profit-based democracies, local, national, international and United Nations' bureaucracies, totalitarian rulers, lack of tolerance between different people/s on the Earth, policies (from antique times until today) of divide and rule, bread and games, ruling by information monopoly – are organizational techniques, which need restructuring/transition/new approach for a better tomorrow. Whether our civilization will have a better tomorrow or not is a question, which we better answer before its breakdown will happen. We think optimistically, that tomorrow will enable our civilization to understand nature, space and environment/climate change system, cosmos, and other systems. As a result this will open large doors to sustainable future for all of humans living on the Planet Earth.

The current understanding of the climate change is limited by anthropocentric and other views, which is less the case, when using systems theory, system thinking, analysis and synthesis, which could make us better understand the interdependences, interactions, and co-operation of mono, trans, multi, inter, and supra-disciplinary issues, all of them as an integral part of the inferior and superior systems, within the system of the Planet Earth, and further on the Solar System, the Milky Way, and the Universe/Cosmos.

The Nature does not repeat itself, but it always goes in only one direction - multidimensional dynamic evolvement ahead. Its direction is not known.

We humans, with all our beliefs, religions, natural, social and technical achievements, technologies, techniques, governances, local communities, families and relationships, sooner or



later think we are Gods, which have to rule the nature, space and environment of the biosphere. When it comes to the point of joint action, “mutual interest” and survival of our civilization, many excuses are handy such as national interest, national security, national citizens’ wellbeing, etc. But all of them are empty phrases defending/protecting individual/collective rulers, and national elites. We believe into the role of leadership, but we believe also into the moderate life style, which allows long life, peace, and stability, because Nature requires it.

How, does the today’s understanding of the climate change system result, from the anthropogenic influences, we may explain best with rule of international/national bureaucracies, who have sufficient monetary resources to pay scientists to speak and write as they wish. Redirection of scientific research, applied research, and theoretical work is hardly possible, as long as one-sided businesspersons, (their) politicians and bureaucracies are handling resources: they learned how to rule, but not how to make a holistic rather than narrow-minded progress in sciences and technologies of the Planet Earth systems. How to explain the fantastic development of armaments, chemical synthetic products, 800 million and more combustion engine motor vehicles, and many more combustion engines, such as aircrafts, ships, boats and agricultural machines motors, marketing and profit-making oriented products, transport system, promotion of “globalization” as a tool for making money, while scientists are not paid to do their basic research work, and must neglect the research needed for understanding issues of the biosphere system, which is threatening our civilization with responses of the climate change system and the whole Biosphere to human actions?

The pending big “tragedy of the commons” of all of us
is overseen, that’s how.

The climate change system is a macro system of the Planet Earth nature or Biosphere made of interdependences, interactions, co-operations of superior/inferior natural systems. The climate change system is responding not only to our civilization’s activities, but also to rules/practices – interdependences, interactions and co-operations of other systems in nature. If we do not understand the climate change system, it is so due to the improperly directed research. This has nothing to do with the common humans, but with the one-sidedness of the present social order, profit-based democracies, especially in nations of the G 7 countries leading our civilization, and international as well as national bureaucracies. They lack holism and make room for one-sidedness of human actions.

Let’s us take the case of CFC’s, the ozone depleting synthetic chemical products, which were produced because of the market-oriented research and production aimed at profit rather than benefit, and caused the climate system to react with its changes, which may respond with a total destruction of our civilization: **we have to learn** how to manage ourselves. It is true that humans did not know of the side-effects of CFC’s, but now we do: there is no reason to continue with the previous practice of using materials for which we do not know how they interact on medium and long term, such as the genetically modified organism’s techniques, war technologies, uncontrolled development and use of new synthetic chemical products, and combustion engines, which are at present the most dangerous activities of our civilization, not to mention information techniques and energy transmissions influencing magnetic fields and basics of the Earth equilibrium. And on the end to mention nuclear technologies, for which would be better to remain behind locked laboratory doors, instead of going into use, and resulting with millions years of pollution.



From energy and gases to planetary explorations, that's how the origin of the Earth from birth until present can be summarized.

The climate or the climate change system has been one of the biosphere systems, which is responsible for the maintenance of living conditions. As a natural system it is inferior to Biosphere, Planet Earth, Sun and Solar System, the Milky Way System, and the Universe. Later on we shall look into separate systems. The climate change system has many inferior systems like: atmosphere, seas/oceans, terrestrial, and other areas related to biosphere, and all the mentioned systems have inferior systems, which all together make a holistic biosphere system. All mentioned should be understood as moving, interdependent, interacting, co-operating, dialectical and dynamic systems, which always evolve. The moving direction is **only dynamic multidimensional evolvement ahead**. To an uninterested walking person the nature may look like chaos, but as the late Prof. Dr. Helmut Metzner wrote in "Chaos to Bios", that nature may look like chaos to us humans, but also our achievements may look to nature like chaos, and not like order, as we believe. It is holistic knowledge and ethics, which has to decide on right or wrong.

The climate change system is a very complex system, which is interrelated with a number of superior and inferior systems, and the main purpose of the climate change system is to maintain the energy equilibrium, mean temperature, moisture/water circle system, composition of troposphere, atmosphere and ocean's currents. Many more subsystems will be explained later on.

Definitely the climate change system cannot be explained/understood/researched with the knowledge of one or two of the presently known scientific disciplines, but the scientific research approach should be holistic, supradisciplinary, multidisciplinary, and done by a team of scientists working for a common goal on a supra/trans/interdisciplinary basis. It is obvious that scientists need techniques of the system theory, system thinking, analysis and synthesis, complex problem solving, and case research/studies to work successfully on the explorations of the nature.

Supradisciplinarity in terms of our research, from the natural sciences point of view, is a precondition for the individual to be able to understand the complex problems of the complex systems. The supradisciplinary work/research is above the classical scientific discipline's, at least from the viewpoint of understanding the needs of research/work/action aimed at system functioning in regular conditions and otherwise, interrelated with the system itself, and its inferior and superior systems.

The main purpose of the climate change system is the maintenance of the living conditions within the biosphere, and is calling for explanation of life. From our research in natural sciences and other findings we think that the life could be explained by the hypothesis in the following equation:

$$\text{Energy (E) x Matter (M) x Information (I) + Time (T) = Life (L)}$$

$$E \times M \times I + T = L$$

The life should be understood here as life appearance on the Planet Earth, which has a unique composition/place/physics/geography/biology and is permanently evolving its own nature, space, and environment quality, reflecting the present status of the system and its superior and inferior systems' qualities. An integral part of the evolvement in the biosphere is information, which is



interdependent, interacting and co-operating with energy and matter in defining the essence of a specific living creature and feature. Basic information connected with life itself is in their gene structures, which are composed by four amino acids in different combinations to systems, specific of every species for which it has been simultaneously (by evolution) composed. The first life information has evolved simultaneously by involvement of the first life structure, and the later involvements have been a reflection of the evolution. All this is evolving within environment, and by interdependences, interaction and co-operation of all matter, energy, particles, rays, powers, forces and yet unknown contents of the Nature.

The living conditions are not a set, but rather a system/entity of the biosphere environment qualities, and are preconditions for life to appear. The theory of evolution, the Gaia theory, the system theory, the known past and present, and status of the biosphere are proving the above hypothesis to be correct.

The origin of the climate system and the climate change system are dynamics of the Planet Earth – its appearance and existence, as a part of the Solar System's appearance and existence, and as a result of the Universe's dynamics.

The climate change system rules over the life status on the Planet Earth, not by command, but by interrelations, interdependences, interactions, co-operation and consequences of the system dynamics. Here we may comment on the role of humankind/present civilization in the climate change system, which may be described as triggering the system dynamics by our activities. One of triggering effects was when humans discovered and introduce CFC's and alike synthetic chemical substances, which when are given circumstances are moving in higher layers of atmosphere, and by action of chlor ion are distorting ozone trivalent oxygen molecules into oxygen. Destruction of ozone protecting layer was result of humankind introduction of commercially important synthetic chemical products based on CFC's.

6. Brief history of the Planet Earth as a one of Subsystems of the Universe

The planet Earth appeared around 4.5 billion years ago (4.500.000.000). At that time the planet was something like ball of energy and gases with temperature around 7.000 degrees Celsius. Within millions of years the planet was cooling down, and the firm matter was formed within two hundred million years. The oldest rocks on the Earth have been dated at 4.3 billions years ago (4.300.000.000).

The planet Earth is an inferior system to the Solar System, the Milky Way, and the Universe.

The Universe is the macro, largest, most complex of all the systems humankind may research and explore, and it consists of all matter and all light and other forms of radiation, energy, particles, rays, powers and forces and yet unknown contents. It consists of everything that exists anywhere in space and time (conditionally time included). The universe includes the Earth, everything on the Earth and within it, and everything in the Solar System. Our Solar System contains nine major planets along with tenth and eleventh as new comers to the family, and thousands of comets and minor planets called asteroids. It also contains the Sun, the star around which the planets revolve.



If we estimate the total existing information of the Universe as 100 units present now, our civilization's knowledge may stay between one and two units. We have to explore and research much more as we have until the present time. Of course, we should not forget the system dynamics and evolvments, which both reach beyond our present knowledge of the Universe. Understanding the holistic nature of the Universe, we have to understand that the Universe dynamics are present in countless forms, transitions, expansions, big and small bangs, appearances and disappearances, multidimensional levels, large and small dimensions, and all countless happenings/evolvments.

Second to the Universe is the Milky Way System, which is a limited part of the Universe within which we humans exist. It is our first exploration target and a system about which we have to learn as much as possible. The Milky Way consist of about 100.000 billion and more stars as systems of what ever form, and a countless number of planets, micro planets or asteroids, and all other forms of energy, light, matter, particles, rays, powers, forces and yet unknown contents of any kind.

The composition of the Earth, as a planet inside our Solar System, is "unique" because of the information, matter and energy at its birth. All forms existing at the moment of appearance are included within our Earth System, and so are many more other forms of the Universe such as light, particles, rays and matter that over the time from the appearance until present collided with the Earth. Major influences on the Earth dynamics come from the permanent energy flux from the Sun, and from collisions with asteroids, which arrive from the outer space. It is important to have this knowledge, which may assist when researching and exploring the climate change system, because the first outside effect on the climate change system is coming from the outer space as asteroids and other dangerous collisions, which have been changing and may change the equilibrium of Earth Planetary System as well as the climate change system.

From the past we may learn about a number of occasions on which the Earth climate change system has been reacting with dramatic changes of the living conditions. They were recorded as Glacial or Ice periods, which were results of the downward direction of changes of mean land and ocean temperatures. Of course, we should not forget that land mass and salt water mass react to the change of mean temperature according to their abilities, which are different. Land mass reacts faster, than the salt water mass. Consequently, the life on the terrestrial part of the Earth (totaling to app. 30 % of Earth surface) has been affected more than the marine life, during ice periods.

7. Interdependences, Interactions and Co-operations of the Life, Climate Change System, and Biosphere

Interdependences, interactions and co-operations of the life, climate change system, and biosphere are dynamic factors for the evolution of the life forms, and resulting environmental conditions. The primordial Earth, some 4.5 billions years ago, was lifeless and unrecognizable by our civilization standards. The air was oxygen free and many subsystems of the climate change system known today did not exist. The climate change system itself was evolving according to the components and relations of the system as it does even today.

The rise of the life on the Earth mirrored conditions of the primordial surface, and its physical and other contents. It took Earth something like 0.7 billion years to evolve the life. The first



evidence of the life is dated 3.8 billions years ago. From microbial life of primordial time to final evolving of the complex biosphere around 1.2 billion years ago there was the time period within which the biosphere evolved. The first biosphere energy transition from the anaerobic to the aerobic energy production by microbial life was responsible for the change of the atmosphere from the oxygen free to the oxygen rich one. The oxygen content was around 40 % and with time it has been diminishing to 21 % as it was at the end of the XIX century.

The oxygen content was the major improvement of life conditions, which made the difference from the primordial time to the time of biosphere, from 1.2 billions years ago till the present time. The concentration of the oxygen in the breathing air of life creatures should not reduce below 8 % what is somehow a minimum needed for survival. At present in some heavily human-populated areas of big cities, the concentration of the oxygen could come down as much as just above 10 %, and we are recommending monitoring of oxygen concentration as a precondition for survival of humans in the fragile and heavy polluted environments (big cities).

Our civilization's first settlements were built some 14.000 years ago, as a result of social life improvement of pre-antiquity humans. First settlements on European lands were built on swampy areas, for security reason, and population was up to 10.000 people. It was a result of the changed conditions within the biosphere that evolved after the last ice period, which was ending some 60.000 – 16.000 years ago. Since then the climate change system conditions on the Earth were almost at the quality of the present time. Of course, changes have existed but not as extreme ones, as the ones coming up now. The difference between today and 200 years ago is due to the extreme input of our civilization's output into biosphere such as: all sort of waste, and side-effects of nuclear technologies, synthetic chemicals, human population explosion and its consequences, as destruction of biosphere due to the ways of covering the needs of humans. In short, and we shall work out the above-mentioned later on, those are reasons/impacts, which cause the triggering effects of our civilization on the climate change system, as consequences.

The climate change system is a natural complex entity/system. It consists of several subsystems and is a subsystem, too, of systems such as the Planet Earth, the Solar System, the Milky Way and the Universe/Cosmos. It is very old and has been changing all the time, offering rather stable conditions to the life forms. In the current climate change system much more extreme changes have been taking place, over the centuries of industrialization and post-industrialization than ever before since the end of last ice age. We humans are not the only cause of this dangerous processes, but though an essential one, especially if our decisions and actions are based on a lack of systemic/holistic thinking.

The climate change system as an integral part of the Planet Earth biosphere is somehow between its inferior and superior systems; all of them together with the climate change system itself have a number of mutual interdependences/interactions, and co-operations.

As we have mentioned before, the Universe contains all matter and energy, particles, rays, information, powers, forces and yet unknown contents and everything. To the Planet Earth's climate change system the Universe may have a dramatic influence, in the case of catastrophic changes affecting the Solar System, and in the case of the Earth's collisions with space body/bodies influencing the Earth's existence. It happened and may/can happen again. There is e.g. the hypothesis that a collision of Earth with a cosmic meteorite some 65 millions years ago caused Dinosaurs to get extinct.



The largest and most superior system of the Nature is the Universe. The probability of a destructive interaction of the Earth with the Universe System is very small. Because there is a countless number of star systems and other forms within the Universe, the Earth has a little chance to experience major destruction caused by the Universe System activities. Of course the Earth system is just a very small part of it.

The Solar system is a very large system, from our civilization's point of view, but a very small one from the galactic point of view, and even much smaller from the Universe point of view. The Sun and its nine planets are one small sub-system of the Milky Way Galaxy. Actually the Milky Way Galaxy has hundreds thousands of star systems, and our Solar system is just one of them (please see Atlas at www.institut-climatechange.si).

The Sun is the central star of the Solar System, and has 99.8 percent of the Solar System mass. It is the center of its system, and source of all energy and matter within it. Of course it is an inferior system to the Milky Way Galaxy, which is over 100.000 billion times bigger in mass as the Solar System. The Solar System revolves around the center of the Milky Way Galaxy at a speed of around 250 kilometers per second.

For our Earth planetary system the Sun is the source of everything from birth of the planet onward, and we exist because the Sun is providing us energy, warmth, light, and all other important inputs/physical and other components and interdependent, interacting and co-operating matters. Our planet system is completely dependent on the Sun. Our present is mirroring physical, geographical and biological etc. statuses at which we are at this very moment.

Of course the influence from the Solar System is not caused only by the Sun, but also by a number of interdependent, interacting and co-operating relations with neighboring planets, planet-like bodies of different size, Moon and other forms of energy, matter, and natural powers. The most sunward planet is Venus and the outer planet is Mars. Together with Mercury they are presenting terrestrial planets of the Solar System. The other four planets Jupiter, Saturn, Uranus, and Neptune are gaseous gigantic planets of the outer part of our Solar System. The last planet is Pluto, but it is not always the last one, because of its oval shaped orbit, which places it sometimes before Neptune, but most of time it is the most distant one from the Sun. Recently 2 new planets has been discovered in line from the Sun and after Neptune.

The Solar System is stable, and changes in its system qualities are reflecting/influencing its whole system. The most important parts of the Solar System are the energy flow from the Sun to the planets, and the quality of each planetary system. Not only composition of each planet, but also its distance from the Sun is the deciding factor for the quality of the Solar System. The life stream of light and warmth from the Sun is making possible the life on the Earth. Both the quality of the Sun System and unique composition/distance from Sun of the Earth are interdependent, interacting, and co-operating parts of the life support system on the Earth.

Understanding of many powers and forces of nature, like gravitational, magnetic, energy and matter transformations, rays and particles role etc., the movements (like a top, orbital, galactic, and of the Universe), the Solar System, the Sun and planets including our planet the Earth are important, and are putting together characteristics, interdependences, interactions and co-operations of the whole system.



The Sun has a diameter that is 109 times bigger than the one of the Earth, and 400 times larger than the one of our Moon. All nine (eleven) planets and all other forms within the Solar System are orbiting around the Sun. The Sun and all planets are moving like a top and all together are orbiting within the Milky Way Galaxy. All this movement should be more researched to allow us to understand the basic powers resulting in interdependences, interactions, and co-operation among parts of the Solar System. The Solar System as well as all other systems is functioning according to their given systems⁶³/entities of parameters, and our civilization is given the chance of exploring, researching and understanding the Nature and our existence.

The birth of the planet Earth could be placed around 4.5 billions years ago. At that time the Sun provided the energy and matter for shaping its subsystems, planetary systems and other bodies. The Earth appeared as a gaseous mass which, by rotation like a top and orbiting around the Sun for a few hundred millions years, commenced shaping the planet. The composition at its birth, its distance from the Sun, and its interdependences, interactions and co-operations within the Solar System have been making the Earth for 4.5 billions years.

8. The Earth Planetary System

The Earth planetary system is very robust. At present we are having an inner core of 1.500 miles in diameter composed of iron and heavy metals, an outer core of 1.400 miles, a lower mantle of 1.400 miles, upper mantle of 400 miles and the crust of 2 – 45 miles in diameter.

On the top of the crust, there are permanent dynamic changes caused by the natural powers by which the Earth's surface was/is shaped. And the atmosphere is covering, protecting and completing the biosphere of the planet up to 650 miles or 1.000 kilometers, where the Exosphere is ending into the outer space. The main subsystems of the Earth are: its planetary body, its Moon, and its atmosphere. Its planetary body has got 8.000 miles or 13.000 kilometers in diameter. The Earth is the fifth planet by diameter, the largest one is Jupiter with an eleven times larger diameter, and the smallest one is Pluto⁶⁴ with around one fifth of the Earth's diameter.

The surface of the Earth together with its atmosphere is making its biosphere, where we live and where the life has been a part of its system for more than 3.8 billion years. At that time in history the first appearance of the microbial life could be placed.

Among the life supporting components of the Earth, oxygen is most important element. It forms:

- Two inorganic oxides - water and carbon dioxide, which are the life supporting molecules, and
- Atmosphere with oxygen molecules in the breathing air, and

⁶³ We say »system« rather than »set«, because in the systems theory a system consists of two sets, mathematically: the set of its elements, and the set of relations between them (and with its environment) resulting in synergetic attributes that the entire system has, but its elements alone do not. Hence, speaking of a set would mean the traditional oversight of relations and their crucial importance.

⁶⁴ New 2 outer planets datas are not yet known to author.



- The ozone layer as the protection against UV rays.

After setting such a support within the system of the biosphere the appearance of life on Earth was just a matter of time.

The outer supporting part of the Earth is the flow of light and warmth from the Sun, which is enabled by the Earth's adequate distance from the Sun, actually, and supports life on Earth rather than prevents it, which is the case on the Earth's neighboring planets Venus and Mars.

The unique composition of the planet Earth and its distance from the Sun are two major qualities that have evolved with evolvement of the Solar System and are making the basic possibility for the life to appear on the Earth at present.

The Earth crust surface, at present, is made of a terrestrial part, which is covering around 30 percent of the surface, and of ocean/sea waters cover taking the remaining 70 percent of the surface. The ratio between oceans and lands was changing with dynamic changes of the Earth surface evolvments. The first appearance of the water on the Earth was the deciding factor for the formation of its surface and atmosphere. After cooling down the atmosphere was thick and much lower than now. The primordial atmosphere was oxygen free. A big change was the appearance of the first life forms, which have been anaerobic microbial organisms living without oxygen. They were gaining the necessary hydrogen for their synthesis of different organic carbon compounds from dissolved inorganic compounds of carbon. It took hundreds of millions of years for them to change the primordial Earth from its anaerobic to its aerobic stage. Their significant contribution was the sink of carbon dioxide, when their dead cells sedimented to the bottom of the oceans, where they have been transformed into numerous carbon compounds, that we see today as fossil fuels. It was the time of the first energy transformation, actually those organisms transformed sugar molecules to gain two units of energy per molecule (please see "Atlas" at www.institut-climatechange.si).

In the next generation microbes were able to split water molecules with assistance of the light from the Sun, and used the released hydrogen to reduce the carbon dioxide molecules. By this photosynthesis a rich biomass was produced. The end product of this reaction was the molecular oxygen, but its appearance was poisonous for the existing life creatures. It changed the life entirely, and the new generation of microbes was able to use oxygen as its oxidation of biomass by respiration. It was the first energy transition on the Earth, because with such a transformation of the sugar molecule they gained 36 energy units or eighteen times more than the anaerobic microbes.

The carbon dioxide was a part of water due to its solubility, and oxygen that was not solvable in water, became an integral part of the atmosphere. The concentration of the oxygen in the atmosphere was increasing and changing, and settled at 21 %, with 78 % of nitrogen, and the remaining 1 % was made of carbon dioxide, methane, and some other gaseous elements. With appearance of oxygen in the atmosphere, with influence from the Sun radiation the oxygen molecule was split down to the elementary oxygen, which in the upper layers of atmosphere made the three-valence oxygen molecule ozone. With time the ozone formed an UV impermeable screen or ozone protection layer against those rays from the Sun, which have been responsible for decomposition of the dioxide molecules – the UV rays. The biosphere on the Earth responded with evolution of life, its intensification and transition from water to the Earth's terrestrial parts. The bacterial life moved on the terrestrial part of the surface, formed



on the crust top a carbon rich layer, which eventually became what we today call soil. The Earth system evolved to the stage when complex life forms were able to appear. It was some 700 hundred millions years ago, and land mammals appeared some 350 millions years ago. The human predecessors are dated some 8 millions years ago, and Homo sapiens, our predecessor, some 100.000 years ago.

9. And

So here we are – we have the Universe, the Milky Way, the Solar System, the Planet Earth System, and the life on the surface of its terrestrial and aquatic part as well as within its atmosphere. With the existing input/output effects from superior systems, especially the Solar System, with evolved parts of the Earth system, etc., the climate change system became the provider, holder, and guardian of living conditions within the biosphere.

The climate change system is an integral part of Planet Earth biosphere. It has no clear-cut borders with other systems in the nature, like we humans are used to think and see. The climate change system is rather a part and complex natural system that actively takes/uses/puts/gives inputs/influences/impacts, receives outputs/influences/impacts from all inferior and superior systems, and reflects the present ones – as living conditions at the very moment of observation. Observer can go back in the history of evolvments, but cannot go in the future, due to countless possibilities involved.

The difference between the human's traditional thinking and the system thinking could be described as follows, when concerned with the climate change system: when observers look at our civilization's achievement from the viewpoint of building and construction heritage, it looks nice, everything is in order, the arcs are arcs, lines are in a geometric order, and the whole construction follows a certain tradition/style/architect's mind work. Of course not as a total rule, because e.g. the great architect from Catalonia, Gaudi, has demonstrated his innovative approach to churches and other constructions. Also our houses, exterior and interior arrangements, agricultural activities, communications, roads/railways etc., are following a certain order, which does not look like the virgin nature. To us humans from this civilization the virgin nature looks like chaos, and we are not in position to see that it sees us vice versa. It is also difficult to comment whether the distance between nature and the human life style is now big or small, but it is obvious that we humans have made many different interventions/innovations, which are not a natural way of acting. So, for the conventional thinking chaos of nature is chaos, and our life style is all right. On other hand the system theory/thinking may allow us humans to see the natural chaos as order and the human's order as a sort of chaos. When not only scientists, but also common people in the local communities will have this ability, we shall have much more of a natural habitat as we do now.

When we apply the above findings to the climate change system, we may understand "chaos" as interdependences/interactions/co-operation of many different systems of nature resulting from parts of the very complex climate change system. Of course we should not forget that this thinking is the thinking of human beings, and it has all good and bad attributes, which we humans have.

The climate change system is a composition of a permanent evolution of the natural systems, which support the biosphere as the space for living creatures within nature. We have seen



dependences of the climate change system on its superior systems, and let us first list the influences, which may occur from them to the biosphere.

All changes/evolvments of the Sun System have an absolute impact on the biosphere. They have a strong impact on the Earth, and most probably grave consequences when changes at the Sun System evolve. More scientific research should be directed towards understanding of effects from the Sun on evolvments of our biosphere. As the major provider of warmth and light the Sun has a strong influence on our biosphere.

The Moon/Earth equilibrium has also a high ranking.

The meteorites from the Universe, the Milky Way and the Solar System as well as other forms of matter/energy/particles/rays and the forms/powers/systems not yet known to us humans have influenced and will influence our biosphere. Fortunately, their impacts are not so frequent.

The planet Earth's attributes studied by physics/geography/biology have a most important position. Due to permanent evolvment, interactions, interdependences, co-operation, etc., the powers of nature have created our biosphere, and keep creating it. We humans can see its past and present. We can understand dynamics of some of the mentioned systems/powers, but not of all of them. Our knowledge at present is lacking system thinking, as a possibility to better understand the system inter/dependencies and dynamics.

The inner core of the Earth has some 1.500 miles in diameter and is moving like a top with a different speed as other parts of the planet do. Any change in the revolutions and directions of the movements could have a strong impact on the Earth system. More research is needed, to understand this subsystem, and its interdependences, interactions and co-operations with other subsystems.

The rest of the Earth – outer core, lower mantle, upper mantle and crust totaling some 3.200 – 3.250 miles in diameter have a number of common interactions, which influence the biosphere. Earth's permanent changing under its surface is broken into numerous crust plates, which are in constant motion with respect to each other because of the powerful internal forces. Volcanic activities and earthquakes are products of large-scale crust plate collisions or separations. Both activities have complex impact on our biosphere, from the local direct disastrous impacts by lava, ashes and land movements, to the even tougher impacts in cases of strong eruptions and large inputs of ashes into our atmosphere. They result in impacts on the biosphere as a whole.

The natural powers such as gravitation, magnetic force, electricity, etc., circular movements like a top and joint movement within the space of the Solar System, the Milky Way, and the Universe are extremely important and not yet fully understood by our civilization.

The climate change system – the maker, provider, guardian and holder of living conditions within our biosphere, have been composed of a large number of systems, which interact, and are interdependent/co-operate and evolve into the present condition at the place of observation, all at same time. Thinking globally, the climate change system could be observed in some of patterns or expressions or variations, which show up in different values of the temperature, moisture, and currents.



The biosphere is composed of terrestrial, aquatic and atmospheric subsystems. Their characteristics are basically the frames, within which the climate change system has the role of the provider, holder and guardian of living conditions.

Very well known geographical facts of the Earth, such as latitude, longitude, and altitude are qualities decisive for warmth and light, which are reflected in the quality of local environment. On the other hand the distribution of this quality depends on the basic characteristic of land or aquatic environment. Of course when differences meet, at bordering environments, their quality is more complex. And it is not so simple, when taking into account complex interdependences/interaction/co-operation of all different systems together, which have something to do with the climate change system.

From the selected viewpoint, the most important inferior system of our biosphere is life on the planet Earth. As soon as the primordial Earth was ready to host life, it appeared. In ocean waters the anaerobic bacterial life was the first to influence all later evolvments. Due to the exceptional reaches of ocean waters full of inorganic compounds the first bacterial cells had an excellent living environment. The ocean waters protected them from UV rays and the temperature of waters was suitable. The light and warmth from the Sun were at a lower radiation as today. All phases of the anaerobic life lasted from its commencement on from around 3.8 billions years ago until the appearance of oxygen in the atmosphere around 2 billions years ago. The bacteria have changed the Earth's biosphere from an oxygen-free to an oxygen-rich one, from an environment unprotected against UV rays, to environment with ozone layer as UV protection zone. Sterile terrestrial lands changed to lands rich with life. After the change from the anaerobic to the aerobic life the biosphere changed, and many complex life forms evolved. The water cycle, the oxygen cycles, the carbon dioxide cycles, the sulphur cycle, and waste of organic compounds together with life itself have been an integral part of the biosphere's environment. The basic influence was transferring of the fragile environments into life-friendly environments, and resulted in protection of the Earth surface against erosion and consequences such as destruction of lands, ocean water currents, and air movements that have been established as regular or temporary. The biosphere was evolving and became the space for life and living creature. Physical, geographical, chemical, biological and systemic interdependences/interactions and co-operation provided a possibility for an environment supportive of evolvment of life. Today, we may find at the same time within the Earth biosphere primordial conditions as well as any later evolvments, which followed them in time. Our present biosphere has a countless number of biological sub-systems, which are along with their synergies, ensuring the life continuity in the present and many other possible and changed environments.

The terrestrial lands, from the frozen Arctic/Antarctic environments to the tropic conditions, are home of a large number of different living creatures, which all together make a comfortable living as long as they follow the system interdependence/interactions and co-operation. All ethological differences are a part of the maintenance of environmental matter exchange, in which numberless biosphere sub-systems evolved for the life to continue. The changes/evolvments are consequences of interdependences/interactions and co-operation of all systems involved. The same apply to the evolvment of the aquatic and atmospheric environments. The biological system is a moderator of living conditions within the biosphere.



The Sun is energy – light and warmth provider. The planet Earth protection systems are ozone protection zone in the Stratosphere (15 – 24 kilometers) and the green house effect (the natural parts of which are carbon dioxide, methane and nitrogen oxide). Both protection systems are filtering/transporting radian energy to the surface of the Earth and back to the outer space. The geography of the Earth at present as surface has around 30 % of terrestrial and 70 % of water areas (oceans/seas). The energy equilibrium is a result of inputs and outputs of energy. Changes within inputs and outputs are interfering with energy balance, and their consequences are cooling or warming. But due to the complex system characteristics of the Earth such as: changes in the atmosphere, changes at the terrestrial part, changes at the oceans/seas waters, changes within the biology of the surface, and anthropogenic inputs, the reaction of warming or cooling has different patterns. The air movements and oceans/seas currents have an additional influence adding to this complexity.

The energy balance is a most important life supporting system, and the changes within it are very destructive for the biology of our biosphere. Changes result in extinctions of animals, plants and bacteria, and appearances of new forms of the life. Drastic changes are known as glacier or ice periods; in the past the Earth experienced a number of them.

10. The Water Circle – a Crucial Component of the Climate Change System

The water circle makes the difference between Planet Earth and the other terrestrial planets Mars, Venus, and Mercury. It is a part of the biosphere and has been provided at the birth of the Earth. The water cycle is a sub-system of the biosphere, which provides the basis of quantity/quality of the biosphere environment. After birth of the Earth, as soon as it had become cool enough, water appeared in liquid, ice, and gas forms; the water cycle commenced its permanent action or evolvments. As an environment it has excellent transport and interaction abilities, which probably together with other sub-systems: cloud formation and movements, lightening and natural electricity, assisted the birth of life.

Life appeared in aquatic environment, and it took almost two billions years for life to move from the aquatic environment into terrestrial lands. 97.5 % of the Earth water is there in oceans/seas, and fresh water 2.5 % are: 68.7 % in glaciers (which are diminishing due to the climate change system impact to main surface temperature), underground waters 30.1 %, permafrost 0.8 % (also decreasing), and surface and atmosphere waters 0.4 %. Surface and atmospheric waters are: lakes 67.4 %, top soil moisture 12.2 %, atmospheric waters 9.5 %, swamps/marsh lands 8.5 %, rivers and streams 1.6 % and biota waters in living creatures 0.8 %. Yet the water is a needed quality of biosphere, which has been a precondition for life. Most living creatures have between 75 and 95 % and more of water content within their bodies. The water is the main transport system within cells, tissues and body itself. The water is the main environment for chemical processes in nature. The water is the main architect of nature, when carving mountains, lakes, rivers, and shaping the Earth surface.

Life and water,
Water and life,
Life,
Water.



From the book “Slovenia Yesterday, Today and Tomorrow, Water Management Challenge to Slovenians in the Third Millennium”, Ecimovic/Jan/Vrhovsek, Ljubljana, Slovenia, 1998 (in Slovene) and (please see “Atlas” at the end of this presentation for better understanding).

Water movements/currents of oceans and seas result from the temperature and salinity difference, trade winds and interdependences/interactions and co-operation of other Earth systems – gravitation, Earth movement, air movement, energy balance, Moon and Sun gravitation, etc. Present status of oceans currents has important role within the climate change system. The change within them may have dramatic consequences to all other parts of Biosphere. Tsunami catastrophic disaster during end of 2004 has demonstrated power of the Nature.

Air and water are permanently interdependent, interacting and co-operating when the water changes from liquid to water vapor, which is transportable by air. When temperature changes in the processes, assisted by the air particles (physical or biological), the water vapor changes into ice and liquid form and comes down to the surface as precipitation.

The mountains are water towers of the terrestrial surface, and the forest is the primary filter of water and its transporter to the underground. Rivers take water to lower altitudes and with their biological system they are secondary filters/conditioners of water. The river waters are the main transporter of mineral components from mountains and higher altitudes to lower altitudes and finally to the seas.

When waters from higher altitudes do not find their way to lower altitudes, lakes show up, and with their biological life they form the lake waters systems. Of course, lakes can have river water input and river water output, but the lake water body is placed under the level of water outtake. Lakes are the water storages at higher altitudes.

Swamps, swamp-forests and marsh land areas are best biological filters of water, and they usually are placed at lower altitudes and as estuaries. At all locations where water (fresh or salty) and land meet there are the biologically richest regions. The planet Earth matter exchange is possible due to water's active transporter role, and the activity of environment with biological richness, which helps our health by purifying the terrestrial surface waters.

The underground waters transport water under the Earth's surface and provide water in water springs. There are large underground waters at deeper levels of terrestrial and ocean/seas bottom levels, which are there because of the Earth crust movements. They are underground lakes of waters rich with minerals and usually sterile.

The terrestrial surface water movement result for both the altitude and gravitation, and water has the golden ability to move downward (gravitation), and it has always a leveled surface.

The terrestrial, biological and atmospheric waters are less than one percent of total waters on the Earth, but due to water circle they are an important sub-system of biosphere.



11. The Atmosphere as another Crucial Part of the Climate Change System

Between the Earth body and outer space reaching up to 1.000 kilometers there is a large environment of gasses, rays, particles, nature powers and forces called atmosphere. The first ten to fifteen kilometers is the troposphere, the lower part of the atmosphere. It is the weather-impacting region where the air movement is most frequent. It is here that clouds form and move and one can find living creatures, from birds to microbial life forms. Troposphere ends into stratosphere reaching 15 – 50 kilometers from the Earth's surface, including the ozone protection band (15 – 24 kilometers). Mesosphere (50 – 85 kilometers) and Thermosphere (85 – 400 kilometers) end into exosphere, which ends into outer space at the altitude of around 1.000 kilometers.

Atmosphere is a gaseous cover of the Earth surface and it is an integral part of the biosphere and of the whole Planet Earth System. It takes/transport/rebounds/transforms the band of the Earth for the Sun's rays of light and warmth, as well as for any rays/particles/outer space bodies/nature powers meeting the Earth as a whole.

Two main gases make 99 % of the atmosphere: nitrogen 78 %, and oxygen 21 %. As everything in the nature their distribution, movement, and content change within limited possibilities. The remaining one percent is made of the natural presence of carbon dioxide, methane, water vapor, nitrogen oxides, argon etc. The oxygen is present as dioxide, ozone, carbon dioxide, and water vapor. As a contribution from our civilization additional contents of gases have been put into atmosphere such as: additional carbon dioxide, additional methane, nitrous oxide, chlorofluorocarbons CFCs, hydro fluorocarbons HFCs, perfluorinated carbons PFCs as green house gases. As photo chemically important gases there are carbon monoxide, oxides of nitrogen and nonmethane volatile organic compounds NMVOCs, which indirectly contribute to the green house effect.

The atmosphere as the largest part of biosphere has an important role of making life possible due to oxygen concentration, which is the life-supporting gas amongst the atmosphere gases. Secondly it is the area of water vapor transport, cloud formation, and the main transporter of the water circle, important from the biology point of view.

The air movement in the multidimensional space has regular and irregular patterns, and at present during the climate change system movement the extreme air movements are recorded. The wind speed last 20 years has been recorded up to around 500 + kilometers per hour. For the biosphere, the air movement is of great importance as a transporter of life forms, moisture supplier, and local weather maker. On the other hand it is antagonistic to the human constructions, which are usually demolished, if they are constructed at lower standards of the wind/tornado/typhoon strength, when it occurs.

The carbon cycle was probably the most important cycle during the primordial Earth times, because it caused the crust formation and carbon circle deposition at ocean/seas bottom and land surface. It is a direct in/output of biology, and partly of the biosphere chemistry processes.



Carbon is a constructing element of the biosphere. A very fast (less than 1 year) exchange of carbon is within plant life. It is today the second carbon exchange, which takes the first place when thinking of the very fast carbon exchange. Fast (1 – 10 years) carbon exchange comes from soil and oceans/seas surface. Slow (10 – 100 years) is exchange of carbon within the forest systems. Very slow (more than 100 years) carbon exchange is important in the biosphere as deposition of carbon by microbial life and Calcium carbonate sediments/rocks. Due to the relatively slow processes within the carbon cycle in nature, and the relatively fast input of carbon from our civilization into our biosphere, we have a situation, which the existing processes in the biosphere are not able to compensate. It is one of the reasons for the global warming.

The sulphur cycle has been a less important cycle in the nature during the time when our civilization did not exist. It has its important role within nature, but our civilization causes damages in nature by increased quantities of sulphur (acid rain) that became fast a damaging factor. The sulphur is an essential element for the life to exist on Earth.

12. Our Civilization as a Hampering Precondition of Climate Change System

Be it any inferior or a superior system of biosphere, planet Earth, Solar System or Universe, ours civilization is a small system, but an integral part of the whole. Today we are discussing our problems of nature, space and environment protection (protection against whom?), but even the great Greek philosopher Plato more than 2.000 years ago stated:

“When there have been still forest growing in the mountains of Attica, the rich soil received water and stored it, so that the absorbed mass slowly became distributed from the heights, feeding fountains. But now the fatty and rich soil has been washed away and just the meager framework of the landscape is still present – comparable to the skeleton of the body attacked by illness”.

The systems have not been properly named “important and unimportant systems”; they all are systems and interacting/interdependent and co-operating to produce the results present in the Biosphere now. But we humans did not follow the nature’s instructions that we should think of interdependences, interactions, and co-operations enough, so far. The Dialectical System Theory may offer a more promising possibility/tool than the General Systems Theory; that we have discussed in our book “System Thinking and Climate Change System”.

The climate change system as an integral part of the Earth Biosphere’, has a bigger influence on our civilization as we humans of our civilization think and believe. In absolute terms the climate change as provider, holder and guardian of the living conditions is making our life possible. But we humans are mostly trying to do our best in our modern relations to nature and each other not to appreciate this fact, but to harm the climate change system as much as we can, yet fortunately not as much as we think we may.

There is a theory of the anthropocentric interference with the climate change system, which is trying to explain reasons for the climate change caused by our civilization over the last 200 years, 1800 – 2000, and we would like to discuss it and to assess feasibility of such a theory.



The philosophy about this issue was written many centuries ago when the story of David and Goliath appeared. But by our standards we humans are not viewing our David-like abilities and impacts as a general practice, and we do not know what we are, what is our natural system, which systems are we interacting/interdependent/interrelating and co-operating with, and where do we belong. What we do understand is how to make money out of our civilization and how to use the nature's richness for it. What are our impacts and what could be their consequences, most of us humans do not care. What about the living of our civilization on the Earth, we have to recognize the biosphere's capacities for our, human, species to be successful rather than harm ourselves. It is not only competition but also and mostly interdependences, interactions and co-operation, which is making our civilization possibilities for life. As long as we shall live on the present paradigm, which could be seen as "the ostrich head", rather than take the long-term responsibilities for our civilization's impact on our own biosphere, so long we shall be increasing the difference/distance between our civilization and our nature/our biosphere.

It is ***not the Planet Earth*** that is the home of our civilization, but ***the biosphere***, which is a tiny part of the planet Earth. Vulnerability of the two are two, not even comparable issues.

What is the present status of our civilization like, do we see our civilization requisitely holistically – as a system, and what are interdependences/interactions and co-operation needed for a sustainable future of our civilization, are the issues of "to be or not to be" and important only for our civilization's well being.

If we accept that the origin of our ancestor, the Homo sapiens has been dated some 100.000 years ago and her first settlements some 14.000 years ago (the first settlements in Eurasia), and great cultures (China, India, Mesopotamia, Egypt, Persia) 7.000 – 3.000 years ago, we may discuss ***from where*** we are. But ***what*** we are, from the point of view of the natural sciences – biology of the biosphere and planet Earth, this issue is not included into any old script or our predecessors' philosophy. Religions – the permanent supporters of our civilization are our predecessors' innovations, but they have never discussed the origin of the civilization. Their focus has always been on human being and how to take from people as much as possible. Existence, economics, and ideology have always been interdependent. Warriors, kings, rulers, democrats from the past (such as the ancient Greeks some 2.500 years ago) and present, religious/spiritual leaders, politicians and many others, who have been self-appointed, elected or appointed, were products of their time and ruled as they ruled. The tribe stories – on and by people, chiefs, and spiritual leaders – describe what we are, but do not discuss what are we doing for our living, and what is our civilization's impact on the biosphere.

If we accept that we humans are an integral part of the Planet Earth biosphere – nature, and the peak of the life tree on the planet Earth, from the natural sciences point of view, and take system theory as our thinking tool, we may say that we belong to the planet Earth biosphere as interdependent part/content/living creature.

Thus, our civilization is ***one of the many life systems*** inside the Planet Earth biosphere and we may say that we are one of the planet Earth civilizations. And which are other civilizations? From our research we may point to many living creatures and large civilization, which are out-numbering Homo sapiens by the number of their members many times. Among the largest populations are microbial species, etc. It is known that survival is based upon



availability of food, water, air, and space, but what has never been considered, is the impact of the species on the food/water/air/space availability. In the nature many species are known, which have a short lifetime, as individuals/individual representatives of their species, but as species they have been within the biosphere for very long time. The classical case are microbial cultures – parasites, which destroy their host and themselves, but not as species, but as a present culture invading the host. This is a life story, one among many others. And the nature has taken care of matter transition within the kingdom of life. It is a permanent system of matter transition from “ashes to ashes”, not used for ruling the humans but symbolizing the circling of matter within the biology of the biosphere.

Let us see ourselves in this context. First scattered settlements were where the food, water, air, and space were abundant, and settlements flourished. When settlements had joined, the cultures/nations were established. And as long as the food, water, air, and space were abundant the culture was in good shape, but when food, water, air or space became restricted, the culture went down. So finally our civilization became our and global ruler of the planet Earth. After a few millennia, food has still been abundant (in 1960's), and water was abundant (in 1960's), and air is abundant (at the beginning of third millennium), and space looks like being abundant. But at the end of second millennium the food was no more abundant, the water was no more abundant, the air was no more abundant and only space still looked like abundant, which in fact is neither so any more. Is the end of our civilization approaching us?

From the natural sciences point of view: yes, it is. But, any culture in the biology of the biosphere has its time of birth, childhood, adulthood, old ages, and history, anyway.

13. Human Capacity of Requisite Holism – a Crucial Precondition of a Benevolent Climate Change System Process Still to be Attained

The novelty to be attained – and to be made innovation – could be the ability of the current Homo Sapiens to think, understand, and learn, how to *requisitely holistically* manage our own civilization affairs, e.g. to all humans food, water, air, and space for living. This task can be done better, if the systems thinking could be used.

The climate change system is an integral part of the Earth's biosphere and it has a multi-complex purpose of putting together, hold, and guard basic conditions of the life: temperature, water cycle, air-sea-ocean movements, protection, management and regulation/control of the biology of the biosphere.

The climate change system is one of sub-systems of the biosphere. Which parts of the biosphere system could be affected by impact of our civilization is a question, which we shall try to indicate an answer to, now.

Biology of the biosphere has many successful systems, which are in different stages of life. The most successful and the best evolved is the rain forest. Of course the geography, i.e. longitude, latitude and altitude of the environment and space impact the conditions and possibilities for evolvement and management of life. Second to these conditions is availability of water, which in many cases is closely connected with evolvement of the biological system. In many cases the biology of bordering regions between two different environments land/see,



fresh water/land etc., include very successful systems like mangroves, corals, coastal sea and ocean waters etc. But the bigger portion of the biosphere is made of oceans and seas (around 70 % of the earth surface are oceans/seas and 97.5 % of all water on the Earth is in the oceans and seas) and they are less researched and more difficult to know in details.

A general biology knowledge may indicate that the best biological systems on the terrestrial surface are the forests, the second are grasslands, and then come the biotopes specialized according to local conditions – swamps and marshes, bush lands, makia/gariga (Mediterranean), mountains, the Sub-artic, Arctic and Antarctic regions, rivers and lakes, deserts, etc. In coastal waters of oceans and seas there are corals, mangroves, and many more as biological systems belonging to successful stories.

All natural systems are composed of physical, geographical and biological characteristics, which make a basis for their composition, while the climate change system provides the conditions (water, air, temperature) to provide/guard their evolvments. We may explore the past and see the present of these systems, but we cannot see future evolvments, due to many possibilities and influences involved.

Water and food are very interdependent, when we discuss the food production of our civilization. Water is a basic precondition for food production. Due to changes in the biosphere our civilization was replacing water available for food production naturally with water from other sources – rivers, lakes, artificial accumulations, etc. Actually, by doing so, the food producing environments have become very similar to the artificial systems, and have been moving fast out of the biosphere patterns.

Due to increased demand for food, new areas have been put into exploitation, which have not been used before. The artificial food producing systems entered a long-term use (reactions in the biosphere are taking time as long as they need, since nature always has enough time, or nature does not care for time, etc). The reaction was very much limiting the production ability, and our civilization was forced to innovate technologies for food production and protection (not to forget the profit/money gaining reasons) of the food production systems. Many pesticides were invented and then innovated. One-sidedness of the purpose of innovation has been resulting in damages within the biosphere that have gone far beyond our ability to understand them, when we commenced to use pesticides. Today the synthetic chemical compounds should better not enter the natural systems, because of their long-term damaging effect on the different parts of nature systems such as water pollution, desertification and loss of productivity of agricultural lands, etc.

At present we face a large intoxication of the biosphere with pesticides. It is a consequence of lack of consideration of both complexity and complicatedness of our (only!) biosphere.

Due to an exaggerated growth of the needs of our civilization (drinking water, industrial consumption of water, etc.), and demand for agriculture and food production, the water sources in the nature are becoming insufficient. Many innovations were used for solving this problem, of which many have had an impact on the biosphere systems. Let us mention here the exaggerated use of fresh river/lakes waters, resulting in the destruction of underground deposits and lakes of water, and combined with a lack of understanding the physics of the underground water deposits systems, etc.



At present we face large deficit of fresh water sources, and quality of present sources is questionable, due to pollution by synthetic chemical compounds and their long-term effect. Recently, also the influence of hormones and hormone-like substances are becoming more and more important. Today we do not have clean fresh water supply, but fresh water supply, of water quality within the limits of allowed level of intoxication by synthetic chemical compounds and other pollutants. From water supply viewpoint our future does not look nice.

Our civilization's settlements of near past and present (over-concentration of people and self-creation of the fragile environment – mega cities etc.) has caused the pollution of all waters in such regions, including areas as far as such polluted waters travel. Actually, the pollution has been a combined effect of pollution from city life (countless toxic substances – natural and synthetic chemical products, etc.) ending in the waters from individual kitchen outflows and sinks, toilets and sewage systems, and from the “natural” rivers flows. Secondly, the usual agriculture intoxicates lands and underground waters and further waters connected with intoxicated lands and underground waters. Finally all this is ending into coastal sea and ocean waters, which are in different stages of pollution/intoxication.

Our civilization has used rivers as sewerage transport system. To achieve the combined effects of the protection of human settlements, citizen's properties, and civilization's achievements against the natural river waters floods huge hydro constructions were introduced. Actually, by our civilization's standards, we have straightened the natural river flows, and by doing this, we destroyed the natural/biological river waters “filtering” systems. We achieved a fast take off of the river waters, and only this, because we did not protect civilization settlements and achievements against floods. In the long-term the floods are still there, but with a much more damaging effect. A majority of the rivers need eco remediation of their natural abilities for hosting life and other qualities destroyed by our civilization.

A further topic with a comparable destiny tackles estuaries and coastal waters, which in many cases were reconstructed into businesses, settlements, and tourist resorts with poor natural biosphere characteristics. They are opening new frontiers for pollution of coastal waters and as a consequence the oceans/seas waters are getting more and more pollution by synthetic chemical compounds and other sorts. Today's a larger share of human population of our civilization than ever lives on litoral coastal lands. The pollution of coastal waters is taking place, and soon we shall be able to read results of our continuous action damaging the quality of sea and ocean waters.

With our civilisation constructions and developments more and more land is changing natural characteristics. At present in Europe land use distribution is: 47 percent agriculture, 36 percent forestry and 17 percent constructions and developments or sealed⁶⁵ land, lost for ever for the Nature/Biosphere.

The data briefed here make us conclude that many individuals and organizations need to learn and apply system/holistic thinking. Both the past and present experiences of our civilization's impact on a large number of natural systems are calling for more effective nature, space, and environment protection from members of our civilization.

⁶⁵ Sealing of lands is process of putting human eco sphere in place, or constructing and building living environments for humans and livestock, constructing infrastructure, industry, churches and religious centres, education and sport facilities etc.



In reality, we need diffusion of holistic thinking for a broader impact towards better and more suitable way of thinking, decision-making and action, in order to attain our civilization's long-term responsibility and preserve our nature of our Earth/Biosphere rather than to suffer a global tragedy of the commons.

The climate change system operates under preconditions given by the dynamic evolvement of physics, geography, and biology of the Earth and its environment. The humans, with their life practice over the last 300 years of industrial and post-industrial civilization, have been proving their ability to influence constructively and destructively their natural environment, and are going beyond the border of a sustainable life and its long-term influence on the biosphere of the planet Earth. Our findings exposed in our book "System Thinking and Climate Change System" so far demonstrate that the human impacts on the planet Earth's biosphere system are both individual and organizational, and their consequences are individual, local, organizational, regional, national, international, continental, global, and perhaps even universal. Therefore the selected problem is how to attain a better and more systemic long-term responsibility of humans. The selected viewpoint considers the potential political measures toward this responsibility.

The climate change system as an integral part of the Earth biosphere is not its creator, but its provider, holder and guardian of the living conditions. Humans have to find a new path towards sustainability or sustainable future, which will make mutual relationship of this civilization and the planet Earth in the newly evolved conditions.

Knowledge, sciences, research and applied research, society, and all governing, economic, national, international institutions/subjects, etc. need to accept a broader view at the given evolvments in our biosphere, and to respond adequately to their new challenges.

The present pollution on the global scale (nuclear technologies, CFCs and a like substances, pesticides, genetic modifications, hormones-like substances from our civilization's synthetic chemical production and medication, technologies impact – combustion engines and others, transport equipment, armaments and other war equipments, PCBs with impact on gene structure, etc.) reflects samples of our civilization's short-term thinking and action. What we need for our sustainable future is our long-term responsibility for our civilization's impact within the biosphere.

Here we have to distinguish the impacts of the ruler of our civilization – money or profit motive – from the understanding of it and the actual damages done by by-products caused by the lack of knowledge and holism. In many cases of global pollution the profit motive of our civilization was the main reason for large pollution – PCBs, CFCs, pesticides, plastics, etc. – which were and are produced, promoted, and marketed as improvements, but have resulted in damages within our own living space or environment. Cases include the population's explosive reproduction, and pollution of the atmosphere.

We need research and understanding aimed at long-term responsibility of our civilization in order to stop the irresponsible behavior of the present rulers, the humans and our civilization's products such as the one-sided profit system, which causes a failure of understanding of the long-term responsibility, and hence causes irresponsibility.



The present status of the biosphere, nature, space and the environment, as well as the scientific and research knowledge at the disposal of humankind and our social system are driving our civilization in a dead alley. Individual, regional, national and international interests do not permit humankind to take a new approach to survival by their social, financial, political, and bureaucratic pressures, war philosophy, and lack of tolerance between people.

We, the people of the Earth, have to recognize the need for action towards the establishment of a world constitution, a world parliament, and a world government as a possibility for our survival, with responsibility to co-ordinate social issues, and to harmonize the needs of the entire humankind, and the nature, space, and environment capabilities, needs, and possibilities.

Co-ordination of important issues for the Earth/Biosphere from united single government could give answer to practical application of research and need for correct relationship between our civilization and the Biosphere. At list we may have proper management of important issues with more or less good possibility for success. Global democracy (but not money democracy) for sustainable future or harmony of our civilization with the Nature of mankind and global governance could be proper recommendation.

The present practice on the Earth such as:

- The destruction of nearly all waters with synthetic chemicals, bio and air (rain-induced) pollution,
- The destruction of air by the land, sea, and air traffic,
- The destruction by the results of war actions, nuclear pollution, etc.,
- The destruction of the ozone layer,
- Destruction of the soil fertility by the agriculture practice, including erosion and desertification,
- Global warming, and of course
- The explosive reproduction of humankind,

Such practice cannot be dealt with by simply taking national interests into account and meet them in mutual isolation. They should be a major responsibility of the world government.

The climate change system, which is provider, holder and guardian of the living conditions within the biosphere, needs special scientific research, and world governing action. Nature, space, and environment protection from members of our civilization, which should take care of the biosphere, need special scientific research and world governing action, too. Both groups of topics are two global systems and reacting to the human one-sidedness by causing global entropy tendencies, which require a global level of the requisite holism in humankind's dealing with them.

The necessary scientific and applied research to cope with the above issues cannot be provided on the basis of our civilization's current scientific and research capacities, due to the engagement of scientists with armaments/war efficiency development, and the demands of political leaders and national, international and global bureaucracies. Therefore, a new approach is needed for a redirection of scientific work towards the needed knowledge and values capable of saving the nature, science, and the environment including the climate change system.



14. The Requisite Holism – a Way to overcome the Blind Alley of Today

Scientific work, as a basic source of knowledge, needs special co-ordination at worldwide level and should be an integral part of the world governance. We need independent scientist, who works because of their scientific thinking/acting ability, and not because of need for daily/monthly/annual salary given to them by bureaucracy (democratic financial societal system, ...), or marketing/profit oriented economy. The money system today has become a master of its own, a monster who rules the entire civilization. It would be nice to put it back, in the frame where it belongs – the servant of humankind. Now, **profit is killing profit** by causing sideeffects having crucial impacts, including humankind's cost covered by company taxes.

To be able to understand the need for world governance, humans should understand the systems within which we exist, and systems we consist of and that we create. It is important due to the known fact that any system in nature will remain as it is, as long as all systems and relations within it are in a similar mode. Together they make a living system that is trying to be a viable system. If and when any major or minor part of the system moves, changes, whole system will commence to move, change. It is not possible to predict in which direction the system will move, change. This is what is happening with the climate change system. It is maybe answer to what is happening with human society at present.

The climate change system ultimately would change living conditions within the biosphere and geography of the Earth so much that our civilization will end. Therefore we are presenting the climate change system as common enemy of our civilization, and we are

15. RECOMMENDING

One planet, one government is our first recommendation. Of course, The Constitution of the Planet Earth Federation is first and The Planet Earth Parliament and Government follow in line, after ratification of The Constitution of the Planet Earth Federation.

Secondly we recommend a new approach to the ***social order***, which has to reflect the present experience, and the establishment of a ***new contract for humankind*** living on the Planet Earth. The goal is to prevent explosion of humankind reproduction, enforce ethics and tolerance amongst peoples of the Earth, enforces (a globally holistic!) law and order, and with skilful governing allow the coming generations to live and have sustainable future⁶⁶ on the planet Earth.

Thirdly we recommend ***redirections of scientific work*** from war armaments, too narrowly market-oriented and synthetic chemicals technologies, etc., to discovering viable global systems of nature, space, the environment and cosmos, as essential elements of knowledge needed for survival⁶⁷ and sustainable future or harmony of our civilization with the Nature.

⁶⁶ Sustainable future is harmony of humankind and the Nature/Biosphere of Planet Earth.

⁶⁷ The scientists who contributed to this thinking by their work or ideas are as follows: late Dr. Rashmi Mayur, Mumbai, India; late Prof. Dr. Helmut Metzner, Tuebingen, Germany; Prof. Dr. George Pethes, Budapest, Hungary; Prof. Dr. Slavko Kulic, Zagreb, Croatia; Prof. Dr. Marjan Vezjak, Vrhnika, Slovenia; Dr. Elmar A. Stuhler, Freising, Germany; Richard Bartak, CSM, Prague, Czech Republic; Prof. Dr. Micheal O Suilleabhain, Cork, Ireland; Dr. Marion Hersh, Glasgow, Scotland; Dr. Glen Martin, USA; Prof. Dr. Nina Dorofejeva, Ukraine; Prof. Philip Isely, Lakewood, USA; late Yogi Shanti Swaroop, India; Prof. Dr. Elohim Jimenez Lopez, Mexico, and Mautendorf,



16. To think about

Many years ago we have seen below placed poem written by Prof. E. Just (+ 1990) who was President of Vegetarian Society ones upon time, and it is good to learn his thinking presented as POEM and is as follows:

Prof. E. Just M. D. (+ 1990)

CREATION IN REVERSE BY SINFUL MAN

In the end, man destroyed heavens and Earth.
And the Earth became void and drifting smog moved upon the face of the deep.

For man said: »Let us make industries, power stations and vehicles that creep along freeways and send a great cloud of smoke and noxious gases into the sky«.

And it was so. And there was no light in the morning, and in the evening, because of smog. And the man saw what he had done, that it was no good, and he said: »It is the price of success and progress«.

And man said: »Let us add to our achievements by exploding nuclear devices in the atmosphere«. And it was so. And radio-active fall-out mingled with the smoke and noxious gases in the firmament.

And the firmament above the earth became poisoned and sterile. And man said: »It is in the interest of our national security«. This was sixth day before the end.

And the smog and radio-active material fell on the seas and the dry land and contaminated every herb yielding seed and every fruit tree yielding fruit. And man said: »It is not very good, but we cannot put the clock back«. This was fifth day before the end.

And by his work, man created great deserts and changed the climatic conditions so that winds swept the dust of the Earth skywards to mingle with the smog which blotted out the sun by day and moon and stars by night, so that night and day became the same.

And man saw the work of his hands and said: »Our conquest of Nature is near complete!«. This was fourth day before end.

The third day before the end man said: »Let us dump our industrial effluents, raw sewage and garbage into the streems and waterways and seas«. And it was so. And the waters upon Earth became foul so that all life in the waters died.

And the remainder, man fished up with great nets for processing in factory ships. The great whales he hunted with sonar devices and explosives weapons and harpoons so that tha whales were no more.



And because of the poisoning of the firmament and despoilation of the Earth and denuding of the seas, all cattle and creeping things and every beast after their own kind ceased to multiply and died upon the whole face of the Earth.

This was the third day before the end.

And the man said: »Situation is very serious indeed – we had better do something«.

The second day before the end man found it is too late to save creation and himself and he choked and starved to death so that factories and other mighty works were desolated and decayed. And no one was found to mourn him upon the face of the Earth.

On this last day before the end ravages rested from the works of man and cursed the ruin he had wrought on the creation.

And at the end the Earth became just more planet eternally and meaninglessly spinning into space.

17. The Federation of the Planet Earth Constitution⁶⁸

17.1. The World Constitution and Parliament Association

The Federation of the Planet Earth Constitution and Parliament Association (WCPA) have understood since it's founding in 1958 that global climate change system is our common enemy. The organization created a network of world citizens and international lawyers who worked together for years to produce a ***Constitution for the Federation of Earth*** dedicated to preserving and restoring planetary environmental health under a democratic world system. This network took concrete actions toward non-military, democratic world government in the understanding that the cooperative work of humanity addressing the common enemy of a global climate change system required enforceable world law premised on the holism of the global environment.

The ***Constitution of the Federation of the Planet Earth*** was written though the cooperation of hundreds of world citizens who worked untiringly to give our planetary community a way to deal with the common enemy of climate change system and other global crises beyond the scope of the nation-state system. The high points in this on-going process were the four Constituent Assemblies in Interlaken, Switzerland (1968), Innsbruck, Austria (1977), Colombo, Sri Lanka (1979) and Troia, Portugal (1991). The ***Constitution for the Federation of Earth*** is the only world constitution that has gone through this kind of rigorous process of democratic development and scrutiny over a period of 23 years.

In the very first article that describes the “broad functions” for which the Earth Federation has been created, function number 5 states “to protect the environment and the ecological fabric of life from all sources of damage, and to control technological innovations whose effects transcend national boundaries, for the purpose of keeping the Earth a safe, healthy and happy home for humanity.” In Article four, “Grant of Specific Powers to the World Government,” at least eight items grant the world government the authority and the duty to protect the

⁶⁸ By Prof. Dr. Glen T. Martin and from his book »World Revolution Through World Law«, 2006/2006



ecosystems of the Earth: to protect the planetary environment itself (number 18)⁶⁹, to solve problems of soil conservation, agricultural production, and toxic wastes (20), to control population growth to conform with the “life-support capacities of Earth” (21), to protect and conserve the water supplies of the Earth (22), to protect the oceans and sea-beds of Earth (23), to protect the atmosphere of Earth (24), and to develop safe technological alternatives for protection of “the environment, the ecological system, or human health or welfare” (32).

The *Earth Constitution* includes two bills of rights for all citizens of the Earth. The first (Article 12) guarantees universal political rights and freedoms under the Earth Federation. The second (Article 13) specifies social, economic and environmental rights for all citizens. Article 13 states that all citizens the right to protection against the perils and hazards of technological innovations (number 8). All have the right to the conservation of natural resources of the Earth for present and future generations (10). All have the right to nutritious food supplies, safe water, and oxygen in a healthy atmosphere (11). And, most comprehensively, all have the right to “protection of the natural environment which is the common heritage of humanity against pollution, ecological disruption or damage which could imperil life or lower the quality of life” (9). In the *Earth Constitution*, therefore, human beings have an absolutely compelling right to be protected against the common enemy of climate change system. Redemption from climate change system is not only a “broad function” for which the Federation is created, it is also an absolute right that citizens may demand of the Federation.

The principle of holism, understood today as fundamental to all the natural sciences, from astrophysics to quantum physics to ecology, is promoted by the WCPA and is at the foundation of the *Earth Constitution*. As philosopher of science Errol E. Harris points out, holism is fundamental to the entire human and natural order (*Apocalypse and Paradigm: Science and Everyday Thinking*, Westport, CT: Praeger Publishers, 2000). Yet our present world order, fragmented economically into thousands of competing corporations and fragmented politically into 193 competing nation-states, is based on principles that oppose holism and makes us helpless in dealing effectively with the common enemy of climate change system.

The efforts to ratify the *Earth Constitution* since 1991 are only part of the work of the WCPA. Beginning in 1982, the WCPA began organizing sessions of a Provisional World Parliament under the authority of the *Earth Constitution*. These parliament sessions are part of provisional world government that is authorized by the *Constitution* in the face of the many crises and threats posed by our common enemy. The Parliament passes provisional world legislative acts as a model and guide for both the people of Earth and the actual World Parliament once the *Constitution* has been formally ratified by the citizens of Earth. To date there have been nine sessions of the Parliament, the first in Brighton, England in 1982 and the ninth in Tripoli, Libya in April, 2006.

A number of world legislative acts passed by Parliament bear directly on the environmental crisis. World Legislative Act Number 3 declares oceans and sea beds from 20 km. offshore from all countries as common heritage of the people of Earth to be protected for the benefit of humanity. World Legislative Act Number 9 creates a Global Ministry for the Environment with the following functions: “identify major issues of environmental problems; monitor

⁶⁹ Numbers of references correspond to References of the book above mentioned.



environmental dangers; solve world environmental problems on global or transnational scale; co-ordinate all efforts promptly; identify major causes of animal and plant extinction; identify possible preventions and remedies to extinction threats; and implement remedies and prevention of extinctions.”

World Legislative Act Number 16, the World Hydrocarbon Resource Act, globalize all as yet unmined natural hydrocarbon resources on Earth, creating World Hydrocarbon Reserve Board for proper regulation of use of this common heritage of humanity. World Legislative Act Number 30 draws directly from the Water Act of the World Youth Parliament for Water, meeting at the *Assemblée Nationale*, Quebec, 22nd November 2002. It provides many specific provisions for protecting the pure water supplies for humanity and recognizes that water is a limited natural resource that is fundamental to life in all its forms and essential to the health and prosperity of all peoples and to political stability in the world.

Perhaps the act of the Provisional World Parliament that most explicitly recognizes the common enemy of climate change system is World Legislative Act Number 6 creating the Emergency Earth Rescue Administration (EERA).

The Preamble to the act lists nine systemic features of climate change system. It details the corresponding resulting catastrophes that could become irreversible within few years unless the greenhouse syndrome of accumulating CO₂ is reversed. It requires the EERA to conduct massive reforestation of the Earth, massive remineralization in selected areas of the oceans and in man-made lakes, to expedite the transition away from fossil fuels, and to educate the global public concerning the meaning and necessity of these emergency measures.

The EERA is not functioning yet, even though the act was passed at the Second Session of the Provisional World Parliament in New Delhi, India in 1985. However, the plan is ready to go should the Provisional World Parliament be able to procure the proper funding or if the *Earth Constitution* should receive ratification sufficient to activate the first operative stage of the Earth Federation. For the WCPA, the *Earth Constitution*, and the Provisional World Parliament, is one of the most fundamental reasons, why humanity must unite under non-military democratic world government, if it is to combat the common enemy of impending global climate change system crisis.

Due to scientific research and new knowledge a new additions will be incorporated into Constitution of the Federation of the Planet Earth, as to protect values of the Nature as whole.

17.2. Introduction to World Revolution through World Law: *Basic Documents of the Emerging Earth Federation* by Glen T. Martin (Sun City, AZ: Institute for Economic Democracy Press, 2005, pp. 1-37)

The future of our world at the dawn of the 21st century is obscured by a dark cloud of hopelessness and despair. Violence, militarism, and war destroy the lives and hopes of millions each day. Millions more each day, including thirty thousand children, die of starvation or starvation-related conditions. Crippling diseases and plagues tear through thousands of communities in Africa, Asia, and South America.



Global warming threatens to disrupt the entire ecosystem of our planet while oil production increases daily. Yet everyone knows that the burning of oil is one of the main causes of global warming. Agricultural lands, fresh water sources, and ocean fisheries continue collapsing worldwide. Weapons of mass destruction are built and deployed with the intent of world domination and conquest. A fleet of Trident Submarines slithers across the bottoms of the oceans of Earth. Each submarine, upon receiving the order to fire, or as the consequence of some terrible accident, is capable of wiping out 123 cities worldwide.

For giant profit-making enterprises, gigantic war industries, media conglomerates, and corporate prostitutes of consumer whims, it is business as usual. They are in the business of protecting the status quo which is the source of their exorbitant profits. And for millions of first-world consumers wallowing in their self-indulgent and unsustainable lifestyles, it is also life as usual. While the majority of humankind writhes in a living hell, they flash their credit cards, indulge their mindless entertainment, and covet their corrupt luxuries.

All human beings share the same fundamental spirit, a spirit arising from the very heart of the sacred universe. In the light of this spirit, we understand that we are all brothers and sisters capable of living together in peace, harmony, mutual respect, even love, on this precious planet Earth, which is our home. But the dominant institutions of our world alienate us from our fundamental spirit. They have taken on a life of their own that is threatening to destroy not only humankind, but the entire Earth that has been entrusted to us as our home.

It is ordinary people, and the ordinary person in each of us, who must act together now to save the Earth and our common future. This book is based on the gigantic truth that such action is not only necessary but very possible. Humanity is at the verge of a breakthrough to a new world order. We do not need to wait for some “miraculous” transformation of a corrupt human nature. We need only transform the humanly-made, flawed institutions that alienate and distort our common humanity. We can rapidly and easily build those practical and common-sense institutions that allow our common humanity to flower in peace, harmony and prosperity.

The rule of universal law, applying equally to all and enforced fairly in the service of all, is a fundamental mainstay of human civilization. And it is **democratically legislated** universal laws that are the foundation of a transformed world order of peace, justice, and prosperity. The world has never yet had full democracy, not because some good constitutions have not been written, but because an interdependent world requires universal democratically legislated laws in the service of everyone.

You cannot fracture the Earth into approximately 191 competing territories and expect peace, justice, and prosperity to be the result. Humanity has the technical ability, the intelligence, and the spiritual capacity, at the dawn of the twenty-first century, to easily create a transformed future for the Earth. Now is the time.

This book contains all the essentials for creating that new and decent world order for the Earth. It provides a blueprint for a nonviolent revolution that founds the world order on genuine political and economic justice for all nations, peoples, and persons on Earth. As such, this small book may be one of the most important you will ever read. It is truly history in the making. You hold in your hand the key to justice, freedom, sustainability, and peace upon the Earth. Treasure it; think about it, and act on it. The survival of humanity and a future for our



children are what are at stake.

17.3. The History behind the Documents in this presentation

There has been a great demand among the worldwide membership of the World Constitution and Parliament Association and related movements to produce a small volume containing the basic documents of the coming “revolution through world law.” The book “World Revolution through World Law” is our response to this demand. It has been kept intentionally short so that it might be inexpensive and easily acquired by its readers. Some have given it a nickname: “The Blue Book.” It is our contribution to this presentation.

Those who wish to study the amazing history and legal accomplishments of this fast-expanding movement in more detail (including provisional world laws enacted to date) should acquire *Emerging World Law -- Key Documents and Decisions of the World Constituent Assemblies and Provisional World Parliament* (edited by Eugenia Almand and myself, with a Preface by Dr. Terence P. Amerasinghe). This larger volume includes the four documents from the present volume as well as extensive chapters of commentary, analysis, history, Provisional World Laws passed to date development of the World District Courts, etc.

Four of the documents collected below are official documents of the World Constituent Assemblies and the Provisional World Parliament. The Constituent Assemblies and their representatives wrote, debated, and approved the *Constitution for the Federation of Earth* as described in this Introduction. The Provisional World Parliament approved both the *Manifesto of the Earth Federation* and the Pledge of Allegiance to the Constitution at its Seventh Session in Chennai, India, in December 2003 and passed the “Declaration of the Rights of the People of Earth to create and ratify a World Constitution and hold sessions of the Provisional World Parliament” at its Eighth Session in Lucknow, India, in August 2004. These four together are perhaps the most fundamental documents in our revolutionary movement to create a decent world order on Planet Earth for the first time in history of our civilization.

In 1958, an agreement to call a World Constitutional Convention was initiated by four persons and circulated worldwide for signatures, with a request that both national governments and people of each country send delegates. From this call began a movement of world citizens from many countries to create a *Constitution for the federation of the Earth* and initiate democratic world government.

From this initiative, a World Committee for a World Constitutional Convention formed. Thousands signed the initial agreement, including many prominent leaders. The organizers of this action traveled around the world to enlist support. Between 1961 and 1962, a definitive call to the World Constitutional Convention was adopted. Many persons signed, including the heads of five national governments. During the next four years, two Preparatory Congresses were held, first in Denver, Colorado, USA, and then in Milan, Italy. An outline of democratic procedures for debate and the drafting of a world constitution were formulated.

In 1967, the decision was made at the Third Preparatory Congress to hold a World Constitutional Convention in 1968, even if there were no governmental delegates who had signed up. 300 people’s delegates pledged. The first World Constitutional Convention was held accordingly at Interlaken, Switzerland, and Wolfach, Germany. It was attended by 200 people’s delegates from 27 countries and five continents. At this Convention, work was begun



on drafting the *Constitution for the Federation of Earth*.

During the next two years, a strategy for “Reclaiming Earth for Humanity” was circulated and directions were developed and given to the drafting commission to write the *Constitution* according to the guidelines developed at the first World Constitutional Convention. This commission of four persons worked for two months, nearly completing the first draft of the *Federation of Earth Constitution*. Between 1973 and 1975, the first draft was finished, printed in 1974, and circulated worldwide for comment, together with the call to the second session of the World Constitutional Convention (now defined as the “World Constituent Assembly”) in 1977. Comments on the first draft were compiled and the drafting commission met once again to write the second draft. This was completed and circulated worldwide in 1976.

In June 1977, the Second Session of World Constituent Assembly was held in Innsbruck, Austria. The proposed *Earth Constitution* was debated paragraph by paragraph, amended, and then adopted with 138 original signers from 25 countries and 6 continents. A worldwide call for ratification by the nations and peoples of Earth was issued. The *Constitution* was sent to U.N. General Assembly and to all national governments.

From 1978-1980, the *Federation of Earth Constitution* was again circulated worldwide for debate and ratification. The Third Session of World Constituent Assembly was held January 1979, in Colombo, Sri Lanka. The Assembly adopted the “Rationale for a World Constituent Assembly” and defined the right of people to convene the Assembly, draft the *Constitution*, and obtain ratification. (This “Rationale” was the predecessor of the “Declaration of Rights of People” included in this volume). A worldwide appeal was issued for national parliaments to ratify. Under the authority of Article 19 of the *Constitution*, the people of Earth begin holding sessions of the Provisional World Parliament in 1982 in Brighton, England.

The process of the development and elaboration of provisional world law had begun, continuing at the Second Session of the Provisional World Parliament in New Delhi, India, in 1985 and the Third Session in Miami Beach, Florida, in 1987. A continuing discussion at these meetings of Parliament over details within the *Constitution* revealed the need to hold a Fourth Session of the World Constituent Assembly, which was called for Troia, Portugal, in 1991. Delegates adopted 59 amendments to the *Earth Constitution* (mostly small, precise changes in wording), and the document took on the final form that is now included in this volume. During the course of its 33-year development, literally thousands of world citizens worked at developing the *Federation of Earth Constitution* in the form that we have it today. It is the only world constitution in existence that has undergone such a rigorous process of democratic, participatory development.

Since 1991, the campaign for ratification of the *Constitution* has continued, with thousands of people and organizations becoming personal ratifiers of the document. (Official, final ratification must, of course, take place in accordance with the provisions set forth in Article 17 of the *Constitution*). A network of organizations and people was formed called the Global Ratification and Elections Network, to promote ratification of the *Constitution*. This network is now being integrated into the newly emerging *Earth Federation Party*, a party which may soon have chapters in every country on Earth, devoted exclusively to getting the nations of the world to ratify the *Earth Constitution*. (In some locations, for political safety reasons, this may be known as the *Earth Federation Association*).



The process of developing a body of provisional world law has also proceeded through the Fourth Session of the Provisional World Parliament in Barcelona, Spain, in 1996, the Fifth Session on the island of Malta in 2000, the Sixth Session in Bangkok, Thailand, in March 2003, the Seventh Session in Chennai, India, in December 2003, and the Eighth Session in Lucknow, India, in August 2004. The Ninth Session is currently being developed for Libya in Africa for the end of January 2006 and took place in April 2006. When the World Parliament is finally activated (upon ratification of the *Constitution* under Article 17), the urgent work of the Earth Federation will already be partially in place, with a body of high-quality world law available for the World Parliament to accept, reject, or modify.

The *Manifesto of the Earth Federation* presents the reasons why we urgently need to build the Earth Federation and work to have the people and nations of Earth ratify the *Constitution*. The “Declaration of the Rights of the People of Earth to create and ratify a World Constitution and hold sessions of the Provisional World Parliament” presents the official justification for our work of building the Earth Federation independently of the approval of the illegitimate collection of so-called “sovereign” nation-states.

The *Constitution* is the solution to the nightmare conditions on planet Earth, conditions, as the *Manifesto* points out, that are the direct result of the system of “sovereign” nation-states in cooperation with exploitative, monopoly capitalism. It is the only viable, practically available solution that we have before us today. It may not be a perfect document (no document could be perfect and non-controversial to all thinking persons). But it is an excellent and brilliantly conceived document, the official ratification of which would almost overnight create a decent world order for humanity.

The Pledge of Allegiance, adopted at the Seventh Session of the Provisional World Parliament, is an instrument by which the people of Earth can affirm their commitment to a new and decent world order independently of the corrupt system that now dominates the Earth and holds their government’s hostage to its destructive power. Even prior to the adoption of the pledge, many thousands of people were becoming personal ratifiers of the *Constitution*, putting their names on file with the World Constitution and Parliament Association as recognizing the *Constitution for the Federation of Earth* as the supreme law of Planet Earth. By doing this, they at least partially extricated themselves from participation in the corruption of the present world-system and expressed their affirmation of a world-system that includes and respects all human beings on the planet equally.

Today, the Pledge serves this function. People are signing the Pledge and sending a copy to the World Constitution and Parliament Association to keep on file for posterity and history. They are also posting it on the walls of their offices and their homes, on street corners and in public places. By doing so, they symbolically transmit their support for a new and just world order, and their rejection of the corruption and disintegration of our present world order. The Pledge is fast becoming a key document in the development of the new world within the dying husk of the old.

In every country people are also acting to build the *Earth Federation Party*, a party unlike any political party that has ever existed. The *Earth Federation Party* is not attempting to take power in any country or to influence the ways any country is run according to a political platform. The Earth Federation Party’s goal is not to take power of any sort but to have all nations ratify the *Constitution for the Federation of Earth*. The goal is not power for some



organization or interest group. The goal is for the people of Earth to take power under a *Constitution* that enshrines their rights, protects all of them equally, and recognizes their sovereignty over all parties, organizations, and nations.

17.4. World Revolution as a Paradigm Shift from Fragmentation to Unity-in-Diversity

Today, it is becoming apparent to millions of people that nonviolent world revolution is our only option and that world law is the only practical route to that option. It does not matter whether one focuses on environmental issues, human rights issues, health care issues, worker safety or exploitation issues, poverty issues, democracy issues, civil liberties and freedom issues, or any number of other issues facing our world – the conclusion is the same. There will be no positive solution to any of these issues without world revolution.

World revolution is defined as a new order established on principles that eliminate the present system of domination, exploitation, and destruction of people and nature on Earth and establishes the just rule of democratically legislated law for our planet. We need a new order premised on justice, sustainability, equity, freedom, and universal prosperity. We will see that this is not a “utopian dream” but very possible, even necessary.

The on-going destruction of the global environment, the rapid diminishing of agricultural lands, fresh water, and ocean fisheries, the assumption of ever-greater wealth and power by the few at the expense of the many, the unspeakable poverty and misery that a large portion of humanity must endure for their entire lives, the destruction of human liberty, human rights, and human dignity everywhere on Earth, the continued development and manufacture of weapons, and the use of war as an instrument of foreign policy as well as U.N. policy – all of these facts about our world lead to the conclusion that world revolution is our only option.

A fuller account of these crises is included in the *Manifesto* that makes up Chapter Three below. The study of these issues that has appeared in book after book shows that all of them are deeply interrelated. (For a list of such books, see the bibliography to this volume). We live in a world-system that inevitably produces these horrors and has led to this gigantic world crisis that we face today.

These deeply interrelated crises are not accidents of history. They are products of the dominant institutions of our modern world that evolved five or six centuries ago and are singularly unsuited for planetary protection of human life and the environment in the 20th and 21st centuries. Thousands of books have exposed the fatal flaws in these institutions, yet the dominant powers and dominant media use every resource at their command to prevent an understanding of these institutions from developing in the people of Earth. The dominant institutions of our world are global monopoly capitalism integrated with the system of “sovereign” nation-states.

The origins of these institutions have been with the birth of the modern world during the Renaissance, and along with the rise of science and the scientific method, defines the character of “modernity.” When these institutions were born much of our planet was still unknown. People living on one continent did not know about those living on other continents. Nature seemed to be an infinite and inexhaustible resource there for the taking and exploiting. Exploitative capitalism and the early “sovereign” nation-state seemed institutions that could



produce wealth for many and glory and security for nations. It did not seem to matter that the world was divided into thousands of competitive corporate and national units, all operating out of self-interest without regard to nature or people.

The fragmentation of these early modern institutions was not questioned because the world itself was not understood as single unit. There was little conception of a single human race trying to become successfully interdependent on a tiny Earth biosphere or “spaceship Earth.” There was little or no conception of a planetary environment integrated into a single ecosystem that could be fatally disrupted by human activity (Harris, 2000).

Today, despite the best efforts of the corporate-owned dominant media to prevent understanding, and despite the immense propaganda spewed forth by imperial governments, more and more people worldwide are realizing that the world has no future under these institutions. For the global crisis that we face is precisely the product of these institutions, forms of organization five centuries old that were never intended to regulate the whole of our tiny, planetary ecosystem or to integrate and harmonize the vast multiplicity of the Earth’s people.

If we are to survive on this planet much longer, if we are to eliminate the nightmare conditions in which a large portion of the Earth’s population are forced to live out their lives if we are to preserve the collapsing planetary ecosystem, if we are to abolish militarism and war as instruments of nation-states, we need new institutions designed for the world as we face it today: a fragile, integrated, interdependent whole.

This means planetary revolution. It means founding human civilization and our relationship with the global environment on new, planetary institutions. The old systems of fragmentation have taught us much that is useful. In the political sphere, they have taught us about democracy, human rights, multi-cultural respect for one another, and the need for freedom, justice, and basic equality of all.

Modern science has taught us about the dynamic “field” nature of our universe, where parts are inseparable from wholes (from the macro to the micro levels) and particular things and events are incomprehensible apart from unifying systems within which they are integrated. Science has taught us about the balanced and delicate ecosystems that form an integrated series of ecosystems up to the planetary level. Across the board, every area of 20th-century science has shown that the parts are inseparable from the whole (Harris, 2000).

All these understandings are built into the ***Constitution for the Federation of Earth***. Planetary revolution means establishing planetary democratic government based on the goal of protecting our global environment and serving equally all the diverse people that live upon the Earth. It means replacing the fragmented and failed institutions of global exploitative capitalism and the system of “sovereign” nation-states with the unity-in-diversity of democratic world government. It does not mean abolishing diversity but truly protecting it for the first time.

Under the systems of fragmentation, those parts that are bigger, stronger, or more aggressive than other parts (whether cultures, religions, ethnic groups, corporations, or nation-states) dominate or assimilate those parts that are smaller, weaker, or less aggressive. Under systems of fragmentation there is no true diversity but only the chaos of a war of all against all,



inevitably resulting in the imperial domination of the strongest corporation, religion, or nation-state.

Even when military wars are not proceeding, economic, cultural, and ideological wars continue unabated. Minorities, indigenous peoples, small religious groups, weaker ethnic groups, or weaker nations have always suffered persecution, domination, exploitation, or assimilation. Only the collective force of democratic world government under the *Constitution for the Federation of Earth* can give the Earth that unity-in-diversity that is at the heart of the universe, of our planetary ecosystem, and of human civilization on this planet (Martin, 2002).

The fragmented systems, by which we have been operating for five centuries, have led to the global crisis that we now face. These systems are clearly the underlying cause of this crisis. They cannot be reformed, because it is not some particular feature of these systems that is the problem but the set of assumptions themselves that make up these systems (Martin, 1999).

The new paradigm, affirmed by all the sciences of the 20th and 21st centuries, is unity-in-diversity. This principle applied in the human realm means the integration of all the parts (cultures, ethnic groups, religions, corporations, nations) into a whole (democratic world government) without losing their unique character as parts. Indeed, as we have seen, it is only the collective force of the democratic whole that can protect and preserve this uniqueness and individuality. The *Constitution* is explicitly based on the principle of unity-in-diversity.

17.5. The Twisted Logic of the Nation-State System

In a world divided into nearly 200 territorial units, competing with one another politically, militarily and economically, there is a perpetual danger of total disaster. It is *the logic of the nation-state system* itself that lays the ground for disaster, not corruption of peoples or leaders. Rather, the system corrupts both peoples and leaders due to its implacable logic, inherently destructive of democracy, freedom, justice, and peace.

a. The most obvious danger inherent in the logic of nation-states is that of war. War and militarism destroy all four values identified here, even if the war, or the militarism, is promoted as a “defense of democracy.” National sovereignty is by its very nature a root cause of war, because every national sovereign government regards security and defense against possible invasion or aggression as a first and most vital interest. Most sovereign states, therefore, seek to maintain as powerful an arsenal of weaponry as they can afford and spend inordinate amounts of their wealth on armaments, which other states view as a potential threat. The result is an ever-increasing arms race in the attempt to maintain a balance of power, which generates international tensions and crises that constantly tend to explode into war (Harris, 2000).

As Errol E. Harris points out in his essay “Are We Unteachable?” below, the United Nations cannot prevent this, because Article 2 of its Charter commits it to uphold the sovereign status of its members, and Chapter VII provides, as its means of “peace-keeping,” only warlike measures “by land, sea, and air.” Accordingly, as long as states remain sovereign and independent, world peace cannot be maintained and neither can the legitimacy of nation-states. The U.N. is premised on the same flawed logic of nation-states that belie the noble ideals enshrined in its Charter.



b. In a world where corporations operate with the goal of accumulating wealth regardless of the common good and outside of independent oversight of their activities, democracy, freedom, justice, and peace will again be the victims. An economics predicated on the secret machinations of self-interest will see any of these four values that interfere with its self-interest as negative values to be defeated. The most obvious example is militarism where giant corporations have a vested interest in the continuation of the war system and in promoting the war system with the governments of their respective nation-states.

Today, some multinational corporations operate autonomously, outside of any individual nation-state and hence beyond the possibility of effective regulation by any and all governments. They use the anarchic system of a multiplicity of governments to their own advantage, regardless of the good of peoples or the Earth itself. Some corporations have assets larger than the nation-states within which they operate.

Under this system, they strive for power and influence over governments. Governments are colonized into the service of private, profit-making institutions, unaccountable to the common good or the welfare of the community they are supposed to be governing. There is anarchy of greed, exploitation, and cynical self-interest.

c. Third, the system of “sovereign” nation-states gives institutional support to the lowest aspects of our common “human nature”: blind territoriality, the tendency to submerge our individuality into a collectivism of state worship, and a tendency to blind obedience to state authorities and their military mandarins. This means the possibility of fascism is always present. Fascism requires enemies to bind the nation into a unit submerged in the power of the state. It requires the complicity of corporations who see their link with state power as the source of undreamed-of profit and wealth. And it crushes diversity and individual rights and freedoms, submerging citizens in an obsessive “patriotism” that asks no questions and hates the diversity and uncertainty of democracy.

As long as the “territorial instinct” is exacerbated by dividing the world into nearly two hundred autonomous units, as if the Earth could be the “private property” of the people who happen to be born at a particular place, there will be the danger of obsessive nationalism and fascism. Any honest history course covering the modern period will reveal the havoc this territoriality has played with the values of democracy, freedom, justice, and peace. Only a united world, premised on the principle of unity-in-diversity can overcome this ever-present consequence of the logic of nation-states.

d. Under the logic of nation-states, mass media tend to operate in the service of the nation with which they identify. Mass media dedicated to the freedom of information and the creation of an educated and informed public are essential to the values of democracy, freedom, justice, and peace. Yet the mass media of each nation-state tend to reflect the dominant values of that state and its system of power. The “news” is disseminated to the population of each nation from the point of view of the national establishment with its dominant governmental and business elites (who often own or control the mass media). The result simply reflects the destructive logic of the system of nation-states, promoting international misunderstanding, war, fascist tendencies, imperialism, and injustice.

e. The logic of the modern nation-state system creates a near inevitability that powerful



states will act to dominate and exploit weaker states. Inherent in the modern world-system are the aspirations to empire and hegemony of the strong over the weak. The entire history of modernity bears this out. Imperialism, colonialism, economic exploitation, hegemony, spheres of influence, and secret pacts and intrigues not open to the public comprise the history of “sovereign” nation-states. It is not ambitious rulers and compliant populations that are primarily at fault. Rather the logic of the system itself recruits ambitious rulers and promotes blind “patriotism” in compliant populations.

These five flaws in the logic of the nation-state system make a world of democracy, freedom, justice, and peace nearly impossible. The ideals of democracy, freedom, justice, and peace have developed at the heart of the modern project, especially in terms of the “Enlightenment” project of the eighteenth century. They form the greatest legacy of modernity as well as the highest hope for our sustainable future on this planet. But the principles of democracy have their own inner logic that is in fundamental contradiction with the logic of the nation-state system as outlined here.

Democracy can only be world democracy. The twisted logic of the “sovereign” nation-state system gives us the world described above of militarism, corporate manipulation of governments, the ever-present threat of fascism, systematic media distortion of information, and imperialism. Under these conditions, authentic democracy within nations is nearly impossible. Decisions and conditions from outside the nation impact individual nations in ways beyond the control of citizens. Governments necessarily have to keep their foreign and military policies secret from their own citizens, defeating civilian oversight of government which is the essence of democracy. Economic and other decisions within the nation necessarily impact people in other countries. Citizen control of their lives (democracy) becomes a utopia.

The only real freedom must be world freedom, guaranteed to every citizen of Earth. Freedom is impossible under this current world-system. Governments routinely restrict freedom because of the uncertainties created by the chaos of nation-states. They maintain elaborate immigration protection systems, elaborate systems of visa restrictions, and elaborate security arrangements because of the threat of terrorism, subversion, or machinations of other nation-states. None of this would be necessary in a world where gross injustices have been eliminated and every nation and person has equal rights to participate in government. Only democratic world government can secure real freedom for the peoples of Earth.

Justice can only be world justice. As long as some nations have substantially more wealth, power, and influence than others, there will never be a just world order. The logic of nation-states, we have seen, ensures that there will never be economic, environmental, juridical, or democratic justice among the diverse peoples of Earth. Only world government under the *Earth Constitution*, with the clear mandate to treat all equally and to create a just world order, can succeed at this task.

Finally, peace can only come to humanity as world peace. All of the consequences of the logic of the nation-state system work to destroy the possibility of peace in the world. Militarism, unregulated corporate power, the tendency to fascism and blind patriotism, the distortion of news and the media, and imperialism all work to destroy the possibility of peace. War is a criminal activity. The production of weapons of war is a criminal activity. Only when these activities are recognized for what they are and abolished by enforceable world law



will there be peace on the Earth. Only when substantial justice has been created for the peoples of Earth will there be peace. No force on Earth can create world peace except democratic world government.

Throughout the history of nation-states in the modern period of the past 500 years, one or more of these logical consequences of the nation-state system have coalesced to perpetually destroy democracy, freedom, justice, and peace in our world. This history is there for all to see. Today, with the technology of weapons of mass destruction brought nearly to perfection this system portends the self-destruction of the Earth and our common human project. Today, all five of these negative consequences of the nation-state system have coalesced in the global empire of the United States.

17.6. Are We Inside the Belly of a Beast or the Box of Our Own Assumptions?

As a number of scholars have pointed out, the people living within the global imperial center today are the most propagandized, manipulated, and brainwashed population in the world (Chomsky, 1989). The people within the U.S. experience job loss, outrageous health-care and insurance costs, environmental degradation, decaying infrastructure in their cities, repression of civil liberties, privatizing of social security, growth of the prison industry, draconian laws targeting minorities and the poor, and growing social disintegration.

At the same time, when U.S. troops invade or bomb other countries, yellow ribbons appear on autos and in windows saying “support our troops.” It does not matter if the troops invaded another country, if they are committing mass murder of civilians, if they are engaged in torture or repression. The mantra is “support our troops.” The propaganda system (in the service of the ruling class) is just that effective. Exploited and marginalized people in the U.S. often support the very system that diminishes their lives.

The mass media focus on the atrocities of “official enemies.” The people are told these others are “enemies” based upon secret evidence. Fictitious “evil” actions of these enemies are even published for public consumption according to misinformation created by the CIA or their own government. The public is told they must trust their government (that operates in secret) as it attempts to protect them from horrible enemies in a dangerous world. Democracy is a sham and voter apathy is notorious.

The mass media uncritically repeat the formulas, photos, selection of certain information, and ideological framework provided by government and the ruling powers within the imperial centers. Two to four million people are slaughtered in Vietnam and the American people mourn only 65,000 of these deaths. U.S. troops invade Iraq and slaughter its people, and the mass media speak of those courageous Iraqis who resist as “insurgents” or “rebels.”

Military personnel in brutal dictatorships are trained by the imperial troops to repress their own people (or their neighboring countries), as happened in Indonesia, East Timor, Columbia, El Salvador, Guatemala, and elsewhere, and the media within the U.S. are silent about the connection, the massacres, and the implications of this “foreign policy.” Perhaps 200,000 people are slaughtered in the first two years of the U.S. invasion of Iraq, and the American people only mourn 1,400 of these.



Are the American people so hopelessly corrupt that they would support such horrific acts on their part of their military and care only about their own forces? This is not the case. The problem, we have seen, is not “the American people” but the system of “sovereign nation-states” that institutionalizes a system of blind loyalty towards the country where one happens to be born. The people of Germany supported Nazi troops in the same way: *Deutschland über alles!* they chanted, and organized civic groups to “support our troops” in the field.

Imperial nation-states cultivate and promote “patriotism” in order to maintain popular, blind support for their systems of domination and exploitation. In the U.S. the slogan is “God bless America.” The fact that this translates into the destruction and domination of other peoples worldwide is of no concern, since America, in the popular mind, is the chosen one of God. The problem is not the people of the United States. The problem is the world-system of sovereign states where such blind loyalty is promoted everywhere, destroying, in turn, democracy, freedom, justice, and peace.

The military oppression of other peoples by the imperial centers functions in the service of economic exploitation. The wealthy imperial centers want control of oil, diamonds, gold, manganese, forests, and coal. They want “financial stability” for their investments. The kinds of countries in the world-system that can be counted on most to provide this “financial stability” are dictatorships and authoritarian regimes whose governments operate on behalf of the tiny wealthy elite in their countries who do business with the multinational corporations and the tiny wealthy elite of the imperial centers (Chomsky, 1993).

Democracy is considered an “unstable form of government” in the foreign policy of the U.S. and has been routinely subverted, overthrown, or suppressed in dozens of countries since the ascendancy of the U.S. to global dominance at the close of World War Two (Blum, 2000). That is because a fragmented world-system cannot support the unity-in-diversity of democracy. Only the sovereignty of all the people who live on Earth institutionalized in the *Earth Constitution* can achieve the goals inherent in democracy: peace, equity, freedom, and prosperity.

Citizens of the imperial centers of capital are not so much trapped in the belly of a corrupt beast as within the box of their own limited assumptions. From inside the “box” of these institutions, the future is indeed hopeless. But there is no reason why human beings cannot think outside that box to a new order premised on the whole of our planet, the whole of its ecosystem, the whole of the human population, and the common good of all peoples. Without this gestalt switch, without this simple paradigm shift, the murderous evils of our current world-system will continue unabated.

Real revolution is not violent revolution. Very often violent revolutions establish a new government on the same flawed assumptions as the old. Real revolution is thinking outside the box of outmoded institutions. Real revolution involves solving the crisis in civilization and governance by establishing a new, more adequate paradigm. The simple switch to the principle of unity-in-diversity for planet Earth, expressed in the *Constitution for the Federation of Earth*, will cut through our immense problems and create a decent life for all the diverse peoples of our planet. It is not violence, but leaving the constricting box of our old institutions, that constitutes real revolution.

From within the belly of the beast, the point is not to overthrow or destroy “the beast.” For



history is a series of “beasts” all preying upon their weaker neighbors, all eventually overthrown to be superseded by another “beast”? Without changing the assumptions behind economics and the nation-state system, there will always be another beast, another imperial center, or another “world war” of competing imperial centers.

No country or its people are intrinsically evil. It is the flawed world-system that impels countries to act in evil ways. A new world-system under the rule of democratically-legislated world law will transform this “beast” nature of all powerful countries. It is the assumptions behind the system of “sovereign” nation-states that creates imperialism. The world will demilitarize and solve its problems through democratic processes. The only legitimate route to world revolution is through world law.

17.7. Global Monopoly Capitalism

The second dominant institution of the modern world, global capitalism, is inextricably linked to the first. The nation-state system and global capitalism are both destructive of freedom, prosperity for the majority, peace, and justice, the environment, and a decent world order (Martin 2005, ch. 9). World revolution is necessary to achieve any and all of these goals. And the only way that world revolution can possibly succeed is for the world to ascend to the level of genuine, enforceable, democratically-legislated world law.

The consequences of not doing this, that is, the consequences of the present world-system, are horrible and intolerable to all decent, informed people. These consequences can only be changed by a simple change in the premises by which we operate. Instead of the fragmentation of “sovereign nation-states” and global exploitative capitalism, we need a united world under a democratic federal world government with an economic policy designed to promote prosperity for all those who live on Earth.

As a worker on behalf of the *Earth Constitution* since 1995, and as Secretary-General of WCPA since 2003, I have traveled to many countries and seen for myself the inhuman, nightmarish conditions in which people are forced to live. They are literally “forced” to live like this, enforced by the global economic system, backed up by imperial military might, often by the repressive forces of their own governments trained and equipped from imperial centers, and trapped by an international visa system that prevents them from going elsewhere. It does not have to be this way.

I have also read many of the excellent books that have appeared concerning the savagery of empires past and present as well as books on the global economic system, the nation-state system, the global crises that the world currently faces, and the historical foundations of the current world disorder (see the bibliography). The *Manifesto of the Earth Federation* expresses not only extensive research into our current world-system but a great deal of personal experience as well.

The global system of domination and exploitation has been maintained for five centuries through the military, economic, and political might of the imperial nation-states. The system has involved the interbreeding of the two dominant institutions of the modern world – the nation-state system and monopoly capitalism. The marriage of these two institutions has led to the horrific world we live in today – a world where one fifth of the Earth’s population live in “absolute poverty,” where wars proceed unhindered all over the globe, where the



environment is being rapidly degraded, and where the future appears more and more without hope.

Global capitalism destroys democracy. Inevitably, uncontrolled concentrations of wealth interfere in politics and the law-making process on behalf of their own amoral pursuit of wealth and power. Inevitably, “freedom” is defined not as respecting the individual rights and dignity of individuals worldwide but as the license of corporations to rob and exploit and manipulate government and press as they please (Chomsky, 1996, pp. 86-91). Inevitably global capitalism results in a few winners with stupendous wealth and power with the majority of humankind as exploited and dominated losers. Finally, war, growth of a prison industry, violent conflicts, the counter-terrorism business, global “security” measures, and the consumption of weapons and ammunition are sources of immense profit for global capitalism. World peace is impossibility under this system, which is inextricably linked, as we have seen, to the system of “sovereign” nation-states.

17.8. Economics -- Inequality Structured into Law

In the Europe of feudal times, independent city-states realized that the resources necessary for production and wealth lay in the countryside. They would organize raids into the countryside to destroy the early industrial technology of the surrounding towns and villages and make these rural areas dependent on the city for processing their raw materials into the products necessary for life (Smith, 2003a). This process of domination was institutionalized in the laws passed by the governments of the cities and forced upon the weaker towns and villages. They understood, even then, that all wealth comes from a combination of nature’s resources, human labor power, and industrial capital. They took steps to control this process in their own interest.

With the development of modern nations after the Renaissance in Europe, this same policy was implemented by the ruling powers of these nations. They understood that capital was not accumulated through “free trade,” but through establishing monopoly control over the wealth-producing process. This was done through both private property laws and by maintaining a low-tech periphery that supplied cheap raw materials to the industrial centers of capital to be manufactured into goods and sold back to the periphery or other consumers at great profit.

“Sovereign” nation-states began to compete with one another for colonies and for control of technology, resources, and markets. They understood that monopoly control of the wealth-producing process is the key to the capital accumulation of great wealth and power. The military forces of these European nations were deployed to ensure domination over the colonies, the enforcement of laws that prohibited the development of technology or machines of production in the colonies, and to defend the colonies against encroachment by rival European nations also bent on controlling the wealth-producing process in their own interests.

The British were the first to discover the great propaganda value of promoting an Adam Smith “free trade” doctrine to the world while they took careful steps to ensure control of the wealth-producing process for England and its ruling elite. Nations acted to control technology, cheap resources, and markets in their own interest while preaching to the rest of the world the need for “free trade” (Smith, 2003a). The private property laws, the laws of trade and exchange, and international trade laws were promoted as “democratic” and as giving “equal opportunity” to all. In reality, they functioned to privilege the few at the



expense of the many and to favor the imperial nation at the expense of the periphery (Korton, 2001).

However, all the European nations understood this same principle and engaged in tremendous rivalry to colonize the world and control the wealth-producing process in their own interest. This led to the two world wars. Nations made trade and military pacts with other nations in order to promote their own power and self-interest and increase their colonial spheres of hegemony in the interest of wealth accumulation for the motherland and her ruling elite. This rivalry led to gigantic world wars in which the imperial nations of the world exhausted their resources in the battle (Smith, 2003a, Introduction; Hudson, 2003).

From this carnage, the United States emerged as a leading world power after the First World War. The allies whom it had aided were now deeply financially indebted for the billions of dollars in military aid they had received from the U.S., and this debt was not about to be forgiven (Hudson, 2003, Ch.1). The United States bled its former European allies to enrich itself. It was now emerging as a leading world power with its own sphere of hegemony in all of Latin America and with emerging global interests.

The industrial development of the United States drew cheap resources from Latin America and manufactured these in its industrial centers to be sold back at tremendous profit. The government acted to control market relations and the wealth-producing process in its own interest. The U.S. military routinely interfered in Latin American countries to protect “U.S. interests” there. In the late 19th and 20th centuries, it intervened in Nicaragua alone six times, including invading and running the country for a period of thirteen years (Harris and Levy, 1975)

After the nations of Europe, along with Japan, again exhausted themselves in the carnage of World War Two, the United States emerged as the undisputed world economic, imperial, and military power. Even the developing Soviet Union could never begin to match the economic and military power of the U.S. Nevertheless, U.S. Cold War propagandists routinely inflated its power in order to serve their own imperial interests. These imperial interests were no longer Western Hemispheric. They were now truly global, from Middle East oil to the tremendous natural resources of Southeast Asia.

After the Second World War, however, former colonies of the old imperial powers were anxious for freedom. Dozens of new countries were formed and joined the United Nations during the 1950s and 1960s. The United States favored de-colonization of the periphery of the old colonial powers, but it had no intention of creating a world of “free and equal sovereign nation-states” as the Charter of the United Nations professed to do. Physical colonial occupation was replaced by economic, political, and military manipulation and domination from abroad.

Military bases were constructed all over the world from which U.S. military power could be projected at a moments notice. Leaving aside a network of secret bases not publicly acknowledged, Pentagon statistics for 2002 tell us there are 725 such bases, with a replacement value of 118 billion dollars, and with close to 300,000 U.S. military personnel stationed in 153 countries. All this, along with billions of dollars in secret operations, is directed to monitoring and controlling the economic, military, and political movements of every country on Earth (Johnson, 2004, pp. 153-161).



But the military is only an adjunct to a system of inequality of rights structured into law. Trade laws, intellectual property laws, private property laws, laws regulating financial institutions, laws regulating stocks and bonds, and laws awarding control of the airwaves to gigantic private interests all together create the global system of exploitation. The entire nexus of modern law consists in “inequality structured into law” through the legal creation of what economist J. W. Smith calls “subtle monopolies” (2003a).

Today the United States largely controls the World Bank and the International Monetary Fund (IMF). It promotes international trade agreements through the World Trade Organization and uses its immense political, economic, and military influence to coerce nations into signing agreements such as the North American Free Trade Agreement (NAFTA) or the Free Trade Agreement of the Americas (FTAA). Inequality is structured into law under the propaganda slogan of promoting “free trade.” The beneficiaries are never the poor nations who find that their wealth is transferred by billions of dollars each year to the imperial centers of capital, leaving them more underdeveloped, more impoverished, more illiterate, more diseased, and more disparate with each passing year (Rich, 1994). As of 1998, the ratio of wealth flowing north on the globe to wealth going south was 7 to 1. Seven dollars flowed to the imperial centers for every one dollar flowing to the poor majority of the world’s population in the south (Smith, 2003a, p. 19).

Global capitalism interlinked with the system of “sovereign” nation-states is part of one, integrated system of exploitation. As Stan Goff expresses this:

Think colonizer and colonized. Think parasite and host. Interdependent polarities.... The ceaselessly expanding accumulation regime that defines the global structure of society has a shorter definition. Capitalism. Like a shark, it can never stop doing what it does or it will die. What it does is accumulate and expand value. What it eats are workers, and women, and colonies, and the biosphere (2004, pp. 194-195).

It is the nation-state system (where nations inevitably act in their own perceived self-interest), in league with the global system of exploitative monopoly capitalism, that has created this economic nightmare for the majority of humanity. Both these institutions must be transformed into the unity-in-diversity of democratic world government under the *Constitution for the Federation of Earth*.

Under democratic federal government, the prosperity of all nations and peoples is a constitutional goal. The elimination of poverty, illiteracy, misery, and disease worldwide is the goal. The preservation of the global environment for future generations is the goal. Demilitarization of the world is the goal. And the institutions will be in place (for the first time in history) that can meet these goals quickly and efficiently.

Once equality could be structured into law, through conversion of absolute, exclusive private property rights to conditional property rights (first recognized as necessary by American economist Henry George), these horrific systems of subtle exploitation would come to an end. Once property laws are based on the common interest of all human beings in using nature’s resources to create decent life for everyone, economic efficiency and genuine sustainable development will take place rapidly.

This cannot be done under the system of sovereign nation-states, since the system is



predicated on the fragmentation of the absolute self-interest of these states, never on the good of all. It cannot be done by “fair” trade agreements or by the United Nations for the same reason. Real equality of opportunity structured into law requires real, enforceable world law. Again, we find ourselves confronting a revolutionary situation as we realize there is no way to a general economic prosperity for the majority of human beings without democratic world government under the *Constitution*.

Both dominant institutions of the modern world ensure that inequality (poverty for the majority of nations and peoples) is structured into law. Both dominant institutions of the modern world are transformed with the adoption of the *Earth Constitution*. Both our political and our economic systems must be based on the principle of unity-in-diversity.

The *Earth Constitution* contains many explicit provisions concerning world trade and the conservation of world resources for the good of all. In addition, implicit in the *Constitution* are the economic principles described in the *Manifesto of the Earth Federation* below. Both exploitative capitalism and “sovereign” nation-states are fragmented institutions incapable of creating a just and prosperous world order. We require nothing less that a world revolution through world law.

17.9. The “Normalization” of Evil

Some authors speak of the “normalization of evil” that has afflicted our consciousness and is promoted by the world’s corporate mass media. (Goff, 2004) The unspeakable horror of the lives of the poor is ignored, marginalized, not mentioned, and not brought to attention. This is intentional on the part of the ruling elite of imperial societies. Those who control the media and those who benefit from the world-system in all the imperial and former imperial nations want the horror of poverty and of war to be acceptable to society, when it is not entirely invisible at least to be normal, inevitable, and “natural.”

Some philosophers and economic theorists tell us that the horrific condition of the world is “normal” or “natural,” given human nature. Some religious fanatics tell that the condition of the world is the inevitable product of some “original sin.” Other such fanatics tell us that we are destined to face an “Armageddon” that is a consequence of this sin. They tell us that the destruction of the environment and building of weapons of mass destruction should be encouraged because it will hasten the second coming of God. Such philosophies and cheap theologies serve the purposes of the power-elite in “normalizing” or “naturalizing” what any decent, sane human being must surely recognize as not only mad, but evil.

Under the dominant system that produces this horrific world disorder, people must not be allowed to see what is plainly in front of their faces: that the fragmented institutions by which we organize life on Earth are the source of this horrific evil. If the evil is not normalized, if it were recognized for the obscene and shocking thing that it is, then people would inquire into the reasons for this immense suffering endured by the world’s poor or the insane institutions of militarism and war.

They would become upset and angry. Upset and angry people do not make good self-indulgent consumers of goods that destroy the environment or are manufactured in horrible third-world sweatshops. If this state of affairs were not “normalized,” people would begin to see the system of domination and exploitation for the intentionally maintained and ruthlessly



protected system that it is. They would act to transcend both the nation-state system and global monopoly capitalism.

This same process of normalization has operated throughout the modern period to justify the savagery of the imperial dominators. When I was in Ghana in June 2002, our hosts took us to a series of “castles” that have been preserved as museums up and down the entire coast of West Africa. These castles, built and fought over by the Portuguese, the French, the Germans, and the British, were used to collect the slaves who were crammed into dungeons awaiting the slave ships that would arrive to take them further into the nightmare of bondage to whomever could afford to purchase them.

We saw the horrific tortures devised by the troops who ran the castles to punish recalcitrant slaves. We saw horrible, dehumanized conditions under which the slaves were kept awaiting transport in the even more horrible holds of slave ships. We saw the systems of rape of the women and girls devised by the officers of each castle.

We learned of the perhaps 40 million human beings who were transported and of the massive death, disease, and suffering they endured in transport through this slave system. To us, this was horrible, not normal. Looking back on a former era from the distance of the early 21st century, we guests were able to see these practices for what they were. To the slavers and the imperial troops who were essential in maintaining the system of domination and exploitation, the situation was “normal.” They bestialized and dehumanized their victims and rationalized their domination to the point that it became “natural” and “normal.”

Today, the imperial center of the empire spreads its tentacles of torture, murder, suffering, and massive destruction throughout the world – from Vietnam to El Salvador, to Guatemala, to Somalia, to Columbia, to Haiti, to Yugoslavia, to Afghanistan, to Iraq, and beyond (Blum, 2000). The same psychic techniques of dehumanization and bestialization are used. Vietnamese men, women, and children were slaughtered indiscriminately in “free-fire zones” (comprising most of the country) by the invaders of their homeland. Any U.S. soldier showing the slightest compassion for a Vietnamese civilian, even a child, was belittled as “a gook-lover” (Goff, 2004, p. 16).

But they were not simply slaughtered from both the air and land forces, they were raped, tortured, and mutilated by American forces. This savagery is essential to the logic of empire and not the result of accident or a “few bad apples.” U.S. military training is training in the dehumanization of other peoples and the concomitant of that training is savage treatment – bestializing imprisoned captives in Guantanamo or Abu Ghraib prison in Iraq, driving sharpened stakes into the vaginas of women in Vietnam (Goff, 2004, p. 20), devising exotic tortures for the U.S.-sponsored, CIA-supervised death squads of Columbia, El Salvador, or Guatemala (Chomsky, 1996).

This must be “normalized” for those involved and covered up for those who do not wish to know the truth. Citizens of the empire must be taught to “support our troops.” Mass media must report in sanitized, neutral language in such a way that the “enemy” is dehumanized while imperial troops are humanized and glorified. Propaganda reports from the Pentagon must be repeated uncritically as objective “news.” The system is amazingly successful. The citizens of the imperial center of the empire are numb to any sensitivity to the suffering of “non-Americans.” They cooperate with the corporate media, intentionally blocking their own



consciousness of the rest of humanity. “Comfortable white America will kill to protect its illusions” (Goff, 2004, p. 19).

They normalize reports of massive death tolls of “enemy” people, pigeonholing them as “subversives,” “terrorists,” or “insurgents.” They care only for the death toll of Americans. The huge numbers of dead and maimed are just a number, a cipher, a neutral statistic from which no imaginative account of human suffering is derived. The reports of U.S. soldiers indiscriminately shooting women, children, and old people in Iraq are not printed in the corporate owned media. Photographs revealing the agony of non-Americans are suppressed by the mass media. Like the imperial soldiers of the age of slavery, they have normalized and sanitized the hideous treatment of other peoples in the service of the system of domination and exploitation.

The “logic of empire” can tolerate nothing less. The U.S. army training of Latin American military officers at what was called the “School of the Americas” in Fort Benning, Georgia, has produced dozens of horrible torturers and mass murders, while the Army claims it teaches them “human rights.” In 1992, a training manual was smuggled out of the school which taught people torture and assassination as political tools (Hodge and Cooper, 2004).

The policy is not simply reflected at this school, however. Explicit U.S. foreign policy is built in part on the training of foreign military personnel worldwide in techniques of “counter-insurgency warfare.” This is warfare within nations directed to preserving the horrors of the status quo on behalf of those who benefit from the current world-system. This means, in covert foreign policy terms, techniques of terrorizing and brutalizing their own populations.

It is important to realize that the use of torture is not just for just for extracting information. Its use is integral to the primary necessity of empire – to create terror in subject populations. The official line of the U.S. military is that torture does not work because the victim will say anything and the information is not “righteous.” However, the torturers are experts in discerning what is “righteous” from what is not.

But that is not the main point. When the tortured just names the names of everyone he or she knows, this is valuable as well. The U.S.-supported dominators – in El Salvador, Guatemala, Chile, Argentina, Indonesia, East Timor, South Vietnam, and elsewhere – have routinely arrested, murdered, or brutalized everyone named. Similarly, human rights organizations have estimated that 70 to 90 percent of the brutalized inmates at Abu Ghraib prison were innocent of resisting the U.S. invasion of their country. (Let us dwell for a moment on the irony of that statement: “innocent of resisting the U.S. invasion of their country.”) The target is not just “subversives.” It never has been. It is necessarily the general population – who are required to live in terror (Chomsky 1996).

Edward S. Herman in *The Real Terror Network* describes the “institutionalization” of torture as U.S. foreign policy in the 1960s and 1970s. And Noam Chomsky and Edward S. Herman chart the specific relationships between the U.S. and the use of torture worldwide in the first half century after World War Two (1979). It has been a systematic feature of covert foreign policy for decades. When tortured and maimed bodies were regularly found by relatives in garbage dumps in El Salvador or Guatemala, when tortured people were released in East Timor to tell their story, when photographs of extreme humiliations were taken in Abu Ghraib prison, this has real political effectiveness in the service of covert foreign policy.



Empires, indeed, require cruelty “to subdue restive foreign populations.” And they require their troops to treat the victims as non-humans, sub-humans, very much like the *Untermenschen* of the Nazis. The majority of the world’s population suffering from the misery of extreme poverty and subject to the “grand strategy” of U.S. world domination, must be forced into a condition of political apathy and hopelessness in which they do not attempt to make change (Chomsky, 2003, Ch. 2). Their constant awareness of the incredible brutality to which they will be subjected if there is even a hint of political activity on their part is essential to keeping them in this condition.

The purpose of empires is always economic. (For a revealing description of the economic side of the empire read David Korton’s *When Corporations Rule the World*, Michael Chossodovsky’s *The Globalization of Poverty*, J.W. Smith’s *Economic Democracy*, and John Perkins’ *Confessions of an Economic Hit Man*.) The purpose of the U.S. empire is that the poor and wretched of the world should accept U.S.-owned sweatshops paying starvation wages, and U.S. corporations extracting the resources and wealth from their pliant countries while they remain in poverty and misery.

Without terror, people would never accept the brutal conditions of death, deprivation, misery, hunger, and disease that most of the people in the “grand area” endure for their entire lives. Today, the top 18 percent of the world’s population owns 83 percent of the world’s wealth. Each year untold billions of dollars in wealth are transferred from the poorest 60 percent of humanity to the wealthy imperial centers of capital. The rules of world “free trade” are formulated to ensure this transfer. Imperial military policy is formulated to protect and promote this system.

If the rights of the poor were respected – political rights and human rights – then they would organize and defeat the empire at will. They would take steps to use the resources of their countries to benefit their own people. This is exactly what empire cannot allow. Formerly secret Washington documents give this as the explicit reason for overthrowing the governments in Iran, Guatemala, Chile, and elsewhere. Only terror keeps subjugated peoples accepting the horror of their present lives of unspeakable poverty. Terror and its corollary torture are absolutely essential to U.S. foreign policy, as it is to the imperial logic of the system of “sovereign” nation-states.

Economic domination and exploitation by imperial nation-states can only be ended through effective democratic world government granting enforceable economic and political rights to all people on Earth and making economic exploitation illegal. Empires cannot be abolished from the Earth without creating a new world order that makes their existence impossible. The underlying assumptions of the United Nations and the current world order are two: the system of so-called sovereign nation-states and globalized monopoly-capitalism.

A world order based on these premises makes empires inevitable. The systematic use of terror and torture by the imperial nation-states in their defense of empires can only be ended through enforceable democratic world law under non-military world government. Mere political or military resistance to the empire from within has been going on for as long as the empire has been going on. In nearly every case, the empire has won and millions (literally) have lost their lives resisting it. It won in Vietnam as well: destroying three to four million lives and creating an economic basket-case of a nation, stultified by an on-going economic boycott, and riddled by chemical poisons, multiple birth defects, and high cancer rates.



Resistance and criticism to these horrendous practices are not enough. The empire's propaganda machine is immense and will always be able to convince the majority in the imperial center that "these abuses do not reflect the true goodness of the American people." The multi-billion dollar budget allocated to "covert operations" has cover-up of this system from the American people as one of its primary goals. Career CIA agent Ralph McGehee, who defected and extensively studied CIA archives, describes the propaganda machine as follows:

The CIA is not now nor has it ever been a central intelligence agency. It is the covert action arm of the President's foreign policy advisors. In that capacity it overthrows or supports foreign governments while reporting "intelligence" justifying these activities. It shapes the intelligence...to support presidential policy. Disinformation is a large part of its covert action responsibility, and the American people are the primary target of its lies. (1983, p. 192)

The goal of empire is not only to establish hegemony with client governments to dominate the politics and economics of exploitable countries. If this goal does not succeed, victory for the empire can still be salvaged by destroying any viable alternative to its system of domination.

Hence, the massive destruction of the civilian infrastructure through savage bombing that took place in Vietnam in the late 1960s and early 1970s and in Iraq in 1991. Alternative victory can also be secured through economic blockades preventing recalcitrant countries from becoming economically successful. This strategy has been used against Cuba, Libya, North Korea, Vietnam and other countries with significant success. The fact that millions of innocent civilians suffer and die from these practices is irrelevant to the aims of empire.

Struggle for justice must be informed by a positive vision of a transformed world order. That is the function of this little book. It contains the seeds of a transformed world order, the core of non-violent world revolution. As a reader, you are warned that you are holding dynamite in your hands – the very real and practical possibility of a new world order that is available to the people of Earth here and now. The changes needed are not difficult, nor impractical. But they are indeed fundamental.

The "Declaration of the Rights of People," the *Manifesto*, and the *Earth Constitution* together of this volume provide all that is necessary to establish this new world order. The framework for the new order is practical, simple, and common sense. It does not require 1,000 page U.N. reports or ten-year studies from some blue-ribbon "Commission on Global Governance." All that is required is the political will to take action now. Any normally intelligent person can see the common sense of the solutions put forth in these documents.

The option of violent revolution within the oppressed regions of the world is not viable. Such action only reinforces of logic of empire. In the imperial center, the justification is made for bigger imperial military budgets, more sophisticated weapons of immense destruction, and more training of torturers and murderers for "counter-insurgency warfare." In North Vietnam, every building over one storey high had been destroyed by the time the invaders withdrew. Even if the resistance "wins," the people lose. Meanwhile, the immense evil of the empire is "normalized" in the eyes of the imperial population, who are told there are violent enemies everywhere.



Afghanistan will never recover in our lifetimes the immense damage done to it even if it throws out the imperial invader. Iraq is poisoned forever by a significant quantity of depleted uranium in its soil and water with a radioactive half-life of 4.5 billion years. The Cuban people have endured 44 years of crushing poverty enforced by a vicious economic blockade of their country. The only option for the oppressed majority of humankind is to establish the genuine rule of democratic law on Earth. The only option is to change the terms of the equation, abolish the institutions that perpetuate such horror, and found a truly civilized world order on the principle of human unity-in-diversity for the first time in history.

No nation or people are inherently evil. It is not reality that the Portuguese, the Dutch, the Spanish, the French, the British, the Germans, the Italians, the Japanese, or the Americans are inherently evil. Their behavior is the product of the institutions that shape them and encourage their complicity in the maintenance and “normalization” of these perverse practices. If we change the institutions, we will change the world order of domination and exploitation with its inherent logic of torture and dehumanization of victimized peoples.

The institutions of the modern world that have created this horrific world disorder are the nation-state system integrated with the system of exploitative monopoly capitalism. These two systems have worked hand in glove with the wealthy holders of capital controlling the policies of nation-states in their own interests and the rulers in imperial nation-states promoting and protecting the private wealth and power of the capitalist class. At one time, the soldiers of the empire maintained the “castles” where slaves were collected, raped, and tortured as part of a system promoting the private profits of corporations – independent slave trading companies. The U.S. military today destroys the poor and their aspirations worldwide on behalf of the rich and their system of trans-national corporations. Only by changing both these institutions (the nation-state and monopoly capitalism) can we truly transform our world order into one of peace, justice, equality, and prosperity.

The *Earth Constitution* lays out the framework for this new world order, based, as its Preamble says, on the principle of “unity-in-diversity.” The *Manifesto* elaborates the new economics implicit in the *Constitution* and outlines the practical steps by which the world can move to a new, truly human, truly peaceful and just era. The long nightmare of domination and exploitation is nearly at an end. It is up to you, the reader of these documents, and all others of good will and good faith, to establish the new premises for a just world order: the unity-in-diversity of all peoples and nations.

17.10. Revolution and Legitimacy

Revolutionary change is justified when institutions that govern human interactions become unable to fulfill their promise of peace, prosperity, justice, equity, and freedom for citizens. At one time national governments might have been able to make this promise with some hope of fulfillment. At one time proponents of the world’s dominant economic system may have been able to make this promise without hypocrisy. But those days are gone forever.

Today, the promises of nation-states to provide peace, prosperity, equity, and freedom, like the promises of the economists in the World Bank or the dominant universities of the imperial centers of capital, ring of propaganda and hypocrisy (see Perkins, 2004). More and more thoughtful people are realizing that neither governments as we know them nor the dominant economic system can fulfill their promises. These institutions have become illegitimate.



They are not illegitimate because of corrupt people in power. Rather, the institutions themselves tend to place corrupt people in power. The nation-state and global capitalism are illegitimate because they cannot fulfill the purposes for which they supposedly exist. The very logic of this system destroys the possibility of the realization of these ideals. And the very hypocrisy of this situation invites corruption (Goff, 2004; Perkins, 2004).

Global poverty, disease, and misery are increasing worldwide. Global violence and social chaos are increasing worldwide. Global democratic institutions and respect for human rights are declining worldwide. Global wealth and power have steadily been concentrated in fewer and fewer hands throughout the 20th century. The hope of global security and peace has steadily disappeared (Renner, 1996).

With the development of super-sonic weapons, space-based weapons, nuclear, chemical, and biological weapons, depleted uranium weapons, stealth weapons, cruise missile weapons, inter-continental ballistic delivery systems, and other forms of technological means of destruction, no nation is able any longer able to guarantee security for its population. Attempts to create security under the system of “sovereign” nation-states have led to more and more militarism, greater and greater governmental secrecy, and the development of “national security states.” This has meant the giving up of aspirations to democracy, freedom, governmental openness, and protection of civil liberties, while simultaneously decreasing real security. It has meant the destruction of democracy in nations large and small worldwide.

With the development of globalized economics, economic decisions taken in foreign centers of capital, impact the livelihood of people in entire nations or regions of the world. The promise of governments to promote the prosperity of their people becomes a chimera. The central banks of many debtor nations have been taken over by the World Bank and structural adjustment has been forced upon helpless governments in which the economy of the country is reoriented to pay off international debt while services to the poor majority are slashed or privatized to exploitative multinational corporations. The economic health and stability of nations is not in the hands of the governments of nations (Chossudovsky, 1999; Caufield, 1996; Rich, 1994).

Legitimate government is government that can promote the security, peace, freedom, and prosperity of its people. By these criteria, no government on Earth is today legitimate, for globalized weaponry, globalized economics, and global interdependence have placed control of these goods beyond the scope of any government, even the most powerful.

Today, there is no force that can protect the global environment. There is no force that can regulate the global economic system on behalf of the prosperity of all the people on Earth. There is no one who can control global militarism, weapons proliferation, or the manufacture of weapons of mass destruction. The economic and political institutions of the modern world have become obsolete and, in turn, illegitimate. As Philip Allott says, “A legal system which does its best to make sense of murder, theft, exploitation, oppression, abuse of power, and injustice, perpetrated by public authorities in the public interest, is a perversion of a legal system” (1990, p. xvii). (For a more detailed examination of this issue, see my Introduction to *Emerging World Law*, Almand and Martin, eds., 2006.)

This makes all human beings into what Richard Falk calls “pilgrim citizens” in search of a legitimate world order within which to be citizens (1992). It means that such a world order is



yet to be established. Yet citizens of the world are not without the resources to accomplish this. Our impediments are lack of will, lack of revolutionary courage, and lack of the necessary information – because our options are excluded from view by the global propaganda system in the service of the illegitimate institutions of the past.

Thousands of citizen pilgrims and visionaries have acted to address this situation by creating the *Constitution for the Federation of Earth* and the Provisional World Parliament. The *Constitution* has been translated into twenty-two languages and sent throughout the world. It is premised on the principle of unity-in-diversity and designed to address all the global problems that are beyond the ability of nation-states to handle. Adopting it as the supreme law of the Earth can easily give us a world of security, peace, freedom, and prosperity within a relatively short time, perhaps twenty years.

Adopting the *Constitution* and federating all the nations of Earth under the House of Nations will also restore legitimacy to the nation-states. They will no longer be “sovereign,” that is, in complete control over all affairs and entirely independent in “foreign policy.” All nations in the Earth Federation will have to obey world law – environmental law, human rights laws, and laws against possessing military machines and weapons of mass destruction.

The harm now done by the principle of “sovereignty,” where big states impose a system of domination and exploitation on weaker states will come to an end. The harm now done by global economics, where trade relations bring immense profits into the imperial centers of capital while world poverty and misery continues to grow will come to an end. There is no other way to transform the system as a whole except through enforceable world law.

The *Constitution* gives us legitimate government – government capable of bringing security, peace, freedom, and prosperity to all peoples on Earth. But the *Constitution* has not yet been ratified by the people and nations of Earth according to the procedures set forth in Article 17. The *Constitution* outlines a morally legitimate democratic world government, but it does not yet have the legitimacy of effective enforcement of world law that can only come with ratification.

This is another reason why our situation is a revolutionary one. It is our moral duty as pilgrim citizens to create a decent world order under the rule of enforceable world law. The current governments of the world are illegitimate without democratic world government under the *Constitution*. We are obligated to act to create a nonviolent revolution through world law.

One way to do this is to become a personal ratifier of the *Constitution* and begin work to get the people and nations of Earth formally to ratify the *Constitution*. You can begin by copying the Pledge of Allegiance to the *Constitution* at the end of this book, signing it, and mailing it to the offices of the WCPA along with your address, e-mail, etc. By personally recognizing the legitimacy of the *Constitution* as world law, each person so doing is taking a revolutionary stance, one morally required by our crisis situation at the beginning of the 21st century. I declare that I will henceforth recognize the *Earth Constitution* as the supreme law of the Earth, superseding all merely national laws.

The situation is somewhat parallel to the one I found myself in as a young man in college facing possible draft into the Vietnam War. I had taken a world history course my freshman



year. We studied one war after another in that course, one invasion after another, one empire after another, for the past 2,500 years. I realized something about the tragic history of human beings on this planet. And I realized that every empire and every nation attempted to justify its wars in the eyes of its population.

The Nazis justified their invasion of Europe just as the U.S. government declared it was “fighting Communism” in Southeast Asia. I understood that this war system that perpetuated itself throughout history was illegitimate. And I made a revolutionary decision. The buck would stop with me. They could imprison me, persecute me, even kill me, but there was nothing they could do to make me fight as part of their illegitimate system of death and destruction.

Today, we face the illegitimacy of the global economic and political systems of modernity. And we have before us a founding document that creates legitimate government for the Earth and restores the legitimacy of the national governments once they have become members of the Earth Federation. I can passively refuse to act out of self-interest (being personally comfortable within the current world order) or out of cowardice (for social stigma or other penalties will possibly come from both government and the dominant social conformity).

Or I can take the revolutionary act of signing the *Earth Constitution* and stating that the buck stops with me. Whether the rest of the world signs or not, I have had the courage to say that I will not live without legitimate government. I will be a citizen of the Earth Federation. They can imprison me, persecute me, even kill me, but they cannot take away the fact that I have publicly chosen to live under legitimate government.

The war system may continue, even though I am a conscientious objector to this horrific and diabolical system. The system of “sovereign” nation-states may continue, even though I have personally ratified the *Constitution*. However, my act contributes to the ground-swell of persons who chosen to live their lives on authentic moral principles. My act is a powerful one feared by the dominant elites who require control over the public mind to ensure their horrific system.

My act also frees me in many ways from their system of corruption, domination, and death (not entirely, of course, for no one is entirely free of the dominant systems). I refuse to go along with their system and have taken the revolutionary decision to live under the rule of legitimate law applied equally and fairly to all persons who live on Earth.

All over the world today there are courageous people recognizing the illegitimate, unjust nature of laws, policies, or systems and engaging in acts of nonviolent civil disobedience. To commit civil disobedience in the face of this illegitimacy is often a heroic and noble act that risks jail or worse forms of repression. But the act places those who perform it in a “no man’s land” of life without government (based only on their moral principles). We are citizens of the world first, and our rights derive from our humanity, our sovereignty as world citizens (Davis, 2004, pp. 22-24).

My civil disobedience declares that I have a moral right nonviolently to violate the laws of this illegitimate system and its governments. People doing civil disobedience to illegitimate systems are now living in an anarchy in which their moral principles may disagree with those of others and there is no ground for the equal treatment of everyone under the rule of



democratically enacted universal laws. They are in danger of appearing to disrespect all laws (Zinn, 1990, Ch. 6).

They have rejected the present-day hypocritical claim that they are living under “democracy” as a lie. Conceptually speaking, they are now living in a “no man’s land” beyond the framework of legitimate government. This vacuum must be filled by a complementary *act of civil obedience*. The decision to respond with civil disobedience to illegitimate governments and institutions is complemented by a voluntary decision to submit oneself to the rule of law under the sovereignty of the people of Earth.

Combining civil disobedience to illegitimate government with the supreme act of *civil obedience* to the *Earth Constitution* means that I have not rejected the principles of legitimate government in committing civil disobedience. I have only rejected what is no longer legitimate. This is the key to world revolution through world law.

As Gary Davis never tires of saying, each of us is a world citizen first and foremost, born on spaceship Earth, and the governments that claim us as a member of some pitiful territorial segment of the Earth are entirely illegitimate (1984). We need to act out of the dignity and sovereignty of our world citizenship which is what is truly real about us, and not out of cowardly subservience to these corrupt and illegitimate nation-states.

We must work to expose the illegitimate nature of all governments and their dominant economic institutions today. We must make the supreme act of *civil obedience* ourselves, whether or not we engage in civil disobedience. We must also show our present governments that *their legitimacy can only be restored* through federating under the *Constitution for the Federation of Earth*. We do not want to abolish national governments but restore their legitimacy.

As democratic guardians of their respective peoples through nation-wide territorial laws, and federated within a world government that deals with global issues and the needs of all the Earth’s citizens, nation-states are legitimate. As so-called “sovereign” nations, independent of the rest of the world, claiming some “ownership” of us prior to our world citizenship, they are illegitimate. If they want our *civil obedience*, our governments themselves must choose the moral act of civil obedience to the *Earth Constitution*.

Otherwise they are hypocritically demanding our obedience to their laws while themselves refusing to live under the rule of law. Our governments today insist on the anarchy of claiming they are autonomous individuals (“sovereign” nation-states) with no genuine, enforceable law above them. We are supposed to obey their laws, but they are unwilling to live under the rule of law themselves. Without this choice of *civil obedience*, they remain immoral and illegitimate. Without our own act of civil obedience, our own personal choice to live under the rule of world law, our personal lives also remain immoral and inauthentic.

The *Constitution for the Federation of Earth* has greater legitimacy than any other document today. Other constitutions have been proposed, and many have been written. But none has been created by four Constituent Assemblies of world citizens, none has been translated into 22 languages and distributed worldwide, and none has created organizations that are actually building the institutions of democratic world government within the shell of the old world system. There are no other real options.



No other constitution has actually created District World Courts that have taken genuine legal actions, and none has founded a Provisional World Parliament that has done extensive work in elaborating an excellent body of provisional world law (see Almand and Martin, 2005). Through these actions, we are actually building the emerging Earth Federation. We are inviting all people and nations to join the emerging Federation of Earth!

By recognizing the *Constitution* as the legitimate law for the people of Earth, I am taking a stand for a transformed world order based on the rule of universally enforceable democratic laws. In a world of international chaos, imperial domination, and global economic exploitation, this is a revolutionary act. It is also a fundamental moral act, as we have seen, to take a stand for human security, peace, freedom, justice, and prosperity.

It is not an act on the political left or the political right. It is an act that is in front, premised on a real future for human beings on this planet. It is an act that demands a similar stance from all human beings. We find ourselves in a revolutionary situation on planet Earth, and we are required to act in the face of that situation.

The Earth Federation Movement is a movement of all people of Earth. It cannot be defined by the “political spectrum” of left or right. It seeks no power for itself. It seeks only to enfranchise the disenfranchised people of Earth through the *Earth Constitution*.

The people and nations of Earth can then elect whom they want to represent them. We do not have a political platform but rather an urgent moral mandate to represent all the citizens of Earth. We are the suffrage movement for all the people of Earth.

However, many persons interested in creating a decent world order are not ready to question their own privileged position within the imperial centers of power.

They encourage mere *reform* of the world order toward democratic world “governance” (many of them speak only of “governance,” not government) and do everything they can to criticize those who affirm genuine world government under the *Earth Constitution*. (For our published response to some of these reformists, see *Toward Genuine Global Governance*, Harris and Yunker, 1999.) Our revolutionary commitment (like all such commitments) involves an implicit criticism of their timidity and inaction. E-volution is not the same as Revolution.

E-volution of the present world-system of “sovereign” nation-states and global capitalism will not and cannot give us a substantially better world. For one thing, there is simply no time for this, since the world condition is one of global crisis and daily getting worse. Secondly, the very nature of these systems, as I have shown above, will forever subvert attempts to modify them toward a better order. International law and worthwhile U.N. agencies need not be abolished. They can easily be converted to valuable tools of world law by founding them on legitimate premises.

Only a founding document, presenting for the world a set of principles for a decent world order from the very beginning, can give us hope. A founded society is not an evolved society, which can only be a hodge-podge of conflicting forces, conditions, and claims. A founded society under the *Constitution* is structured for a just world order from the very beginning (Martin, 2005, chs 12 and 13).



This founding document gives us the premises of unity-in-diversity under the sovereignty of the people of Earth.

The present system can easily be converted from its current absurd and unjust premises (“sovereign nation-states and exploitative capitalism”) to legitimate premises. With this simple conversion, a new world order would have truly begun.

We sign the Pledge of Allegiance to the *Constitution* and the “e-volutionists” claim that the *Constitution* is “only legitimate in the eyes of its ratifiers.” Others claim “the *Constitution* was not sufficiently democratically created.”

We need decades, they say, to involve all the people of Earth in writing a *Constitution*. One wonders how the more than one billion people now starving to death on the planet feel about this. Some others, comfortably embedded in wealthy first-world institutions, claim that those who affirm the *Constitution* are “the lunatic fringe of the world government movement.”

To take a truly nonviolent revolutionary stance in today’s world requires courage, integrity, and the capacity for real moral decision and action.

It also requires a clear seeing of the absolute need for world government promised on a founding document. It is not for the timid and faint-hearted who cling to their harmless “idealism.” “Oh wouldn’t it be nice if the world were a place of security, peace, freedom, and prosperity,” they say. “Let us hold another conference about it.” Let us “dialogue.” Let us have “participatory democracy” in our ineffectual NGOs.

Anything we need but real government. Anything we need but taking on ourselves the responsibility for creating genuine government for the Earth. Anything we need but making a revolutionary commitment to the principle that “the buck stops with me, and decision to live under real, legitimate government begins with me.” Anything we need but a genuine act of *civil obedience*. In this, they are like the nation-states who also refuse to live in a world of enforceable law.

Like the nation-states, they refuse to take responsibility for governing themselves.

We citizens of the Earth Federation deeply respect the often genuine motives of people in the movement to create a decent global world order.

We cooperate and network with them as much as possible, but we cannot let their largely ineffectual idealism corrupt the revolutionary purity of our commitment to world revolution through world law. However, such idealism has its place.

It may do some good through educating people to be concerned about global issues. It may make some incremental changes in the United Nations system or other global “governance” institutions.

But ultimately, only those with the courage to choose world revolution through affirming practical and concrete world law in the here and now are going to be effective. It must begin someplace, and that place must be me.



It is up to each of us in the world, poor and rich, of every race, religion, and culture, to create a decent world order for future generations.

Governments are trapped in a network of economic, political, and military corruption and are not likely to lead the way to a just and free world order.

The rich are often trapped in the corrupt system that generates their wealth and are not likely to lead the way.

We must mobilize ourselves as world citizens to pressure our governments to act to ratify the *Constitution for the Federation of Earth*. The ratification process in Article 17 of the *Constitution* requires both people and nations to participate.

The Earth Federation will be a true federation with effective government at all levels.

Local city and town governments will still operate. Regional governments and national governments will be vital.

The revolutionary difference is that under world government they will all be working together rather than in competition and hostility to one another.

All levels of the federation will have to obey world law that requires respect for the rights of not only their own citizens but all other citizens worldwide.

All that is necessary is 25 nations who become fed up with the vampire of the present world-system sucking the life and blood from their peoples and perpetuating forever immense human suffering, disease, death, and despair.

All it takes is the leadership of 25 nations who are not hopelessly corrupted by their masters in the imperial centers of capital in the global north. How this process can easily work is described below in section seven of the *Manifesto* entitled “Common Sense Economics under Democratic World Government.”

In a very short time, with only a little courage and political will on the part of oppressed nations of the global south (in cooperation with world citizens from every nation), the foundations of a decent and prosperous world order can be established.

The cornerstone (the *Earth Constitution*) is finished and ready to be placed. All that is required is a few decent, courageous, and honest national leaders and their citizen supporters.

But ordinary people must also act to educate, and to build the Earth Federation from within, regardless of the response of governments.

These governments are no longer fully legitimate and their legitimacy can only be restored through joining the Earth Federation. The future of the world and humanity is in our hands, not in the hands of governments. We represent legitimacy, not them. We must act now: boldly, intelligently, and decisively.



To sign the Pledge of Allegiance to the *Constitution for the Federation of Earth* is a truly transformative act.

To create a chapter of the *Earth Federation Party*, in which every member has signed the Pledge, is not just to create another organization working for some ideal. It is a practical decision and a commitment to take one's stand on a truly new world order in the here and now. Protest marches taking place everywhere on Earth often chant "What do we want? Justice! When do we want it? Now!" It is this "now" that is at the heart of revolutionary nonviolent morality.

This "now" is what Mahatma Gandhi took his stand on. He insisted that we should all live our "utopias" every day of our lives, in the here and now.

For they are not merely "utopias," but the common sense of the way human beings should be living on this Earth. Gandhi insisted that "we must be the change we want to see in the world" (1987, pp. 458-460; Jesudasan, 1984, p. 32). The right time to demand justice is now. And justice can only exist if it is institutionalized within a founding document.

The world will not and cannot "evolve" toward justice, at least not on the level I am addressing here.

Justice is an ethical decision, a decision that can be made by nations, corporations, groups, and individuals.

It is not a slowly evolving organic life-form.

It is not an impractical "ideal" to be postponed indefinitely into the future. It is a choice, a decision, capable of transforming our world in the here and now.

But the transformation requires an institutional framework, the *Earth Constitution* as the basis of a *founded*, just, world government.

The here and now of the decision to live one's life as a citizen of the Earth Federation is a gigantic and powerful one.

It not only confers ever-greater legitimacy on the *Constitution for the Federation of Earth*. It confers a powerful moral legitimacy upon our own lives.

To sign the Pledge is not the end of our work. It signals the beginning.

As citizens of the emerging Earth Federation, we have much work to do. Tomorrow will be too late.

The time for world revolution through world law is now.



18. Declaration of the Right of the People of Earth to create and ratify a Constitution for Federation of the Earth and hold sessions of the Provisional World Parliament (Unanimously ratified at the Eighth Session of the Provisional World Parliament, Lucknow, India, August 2004)

We, the citizens of the Earth, have the right and duty to establish a viable world government capable of maintaining the Rule of Law among all nations in place of the disastrous anarchy now prevailing among sovereign states, to abolish massively destructive armaments and end all wars, to protect the global environment for future generations, and to create economic justice and prosperity for all the citizens of our planet.

1. *These are the times the world will not soon forget.* Future historians will wonder how a few of us maintained our sanity and dignity in the face of the global breakdown of world order. Never in history have so many people been starving to death on Earth. Never have so many people lacked clean water or sanitation. Never has there been so much poverty and misery.

Never in history have so many people possessed so many weapons and engaged in continuous mutual slaughter of one another – in Columbia, Afghanistan, Sudan, Uganda, Chechnya, Iraq, and elsewhere. Never have human beings everywhere on Earth been so insecure. Never has the average person anywhere on Earth felt so afraid and the future seemed so hopeless. Fifteen years after the collapse of the USSR, the threat of a global nuclear holocaust remains in place, while the superpower continues to develop space-based and tactical nuclear weapons.

Nowhere in previous history has the world faced a possible breakdown of its planetary ecosystem. Never has the ozone layer that protects the Earth from the sun's deadly radiation been threatened. Never have the ocean fisheries been collapsing from over-fishing, never before has grazing land been turning to desert on a global scale from overgrazing, never has agricultural land disappeared at the astonishing rates that we see today. Never before has the world's fresh water supply been endangered.

2. *Some people in every age of historical crisis have been the visionaries, the civilizers, the advanced thinkers* who see the way forward beyond the narrow assumptions and petty issues of their day. Some people in every age have spoken for universal principles, for justice and human dignity, for equality and freedom among nations, peoples, and individuals of the Earth. These are the civilizers; these are the voice of legitimate creativity. These are the ones who establish new institutions and give renewed hope for the future.

The legitimacy of an action is not always whether it is approved by some majority. Very often in history the majority have represented reaction, intolerance, and injustice. The legitimacy of an action is whether it moves history forward toward greater universality. The innovators within history, like the writers of the French Declaration of the Rights of Man or the U.N. Universal Declaration of Human Rights, have always been a tiny minority.

The legitimacy of their work derives from its universality. The movement of history, the extension of rights, is from the tribe to the clan to the territory to the nation to the entire



planet. The ultimate universality is the sovereignty of the people of Earth. New eras of legitimacy in history have been initiated by those who extended human rights and freedom to ever greater numbers of people and to those who promoted the just rule of law in human affairs.

The criterion of legitimacy in human affairs is moral universality. The core of democracy is not majority rule but the protection of minorities from both majorities and tyrants. It is equal rights for all under just laws. Nor is legitimacy derived from either power or existing institutions by themselves. Gigantic systems of power have existed historically from the Roman Empire to the many European Empires, to the present American Empire. The fact of military, bureaucratic, or institutional power does not lend legitimacy.

The only criterion is whether human rights, dignity, freedom, and justice prevail because of these institutions. This is why democracy is the ultimate criterion of legitimacy, democracy defined as any system that promotes rights, dignity, freedom, and justice in human affairs. Only global democracy represents the sovereignty of the people of Earth.

3. *The present institutions of the world are failed institutions.* The global economic system has not led to prosperity for most of the Earth's citizens, but to starvation, poverty, disease, and misery for the majority. The present global political systems of the world, called territorial nation-states, have not led to a just or peaceful world order, but to endless wars, destruction of peoples and cultures, imperial domination and conquest, and global systems of exploitation of the weaker by the stronger.

The United Nations has not led to a world where the many rights listed in its Universal Declaration of Human Rights have been extended to the Earth's citizens, but to denial of those rights for the majority and continuous increase in war, poverty, social chaos, and environmental destruction. By the criterion of legitimacy set forth in this document, these institutions have made themselves illegitimate. Citizens of Earth have the right and duty to create new institutions that represent the people of Earth.

4. *The sovereignty of the people of Earth is represented in those who seek universal human political, social, and economic rights.* The sovereignty of the people of Earth is represented in those who seek universal economic justice and the common good of all who live on Earth. The sovereignty of the people of Earth is represented by those who promote the rule of law on Earth and an end to the barbaric rule of militarized force and violence. The sovereignty of the people of Earth is represented by those who seek global democracy in the form of federal world government.

It is irrelevant whether the people of Earth elected representatives to write the *Constitution for the Federation of Earth*. What matters is that the people of Earth have the opportunity to ratify the *Constitution* and begin the rule of just law in the world. It is irrelevant whether delegates to the Provisional World Parliament were elected by their countries as representatives to the Parliament. What matters is that the delegates promote universal human rights, justice, freedom, and prosperity.

Those who represent the people of Earth in this quest are not self-appointed partisans of special interests. Such self-appointed demagogues are easily identifiable by their programs that always deny rights and dignity to those they oppose. Delegates to the Provisional World



Parliament are appointed, under Article 19 of the *Constitution*, by the universal principle of morality on which the *Constitution* is based that is the criterion of legitimacy in human political and economic affairs. Their work includes all persons on Earth, and excludes none.

5. *At this juncture of world history, no nation can have a fully legitimate democracy.* For the very existence of “sovereign” nations means that the rights of those outside their borders are ignored or betrayed. At this junction of world history, no nation can protect the environment for future generations. For the destruction of the planetary ecosystem is beyond the scope and effectiveness of any nation-state.

At this juncture of world history, no nation can create economic justice. For in today’s globalized economy, prosperity for individual nations always involves exploitation and poverty for other nations. The nation-state system is dead. Only those representing global democracy through federal world government can possibly represent legitimacy in human affairs.

The present world-system not only embodies failed institutions but it is also built on morally illegitimate institutions. Every human being is morally required to live under democratically legislated universal laws. Without the rule of law, human affairs are always in a *defacto* state of war in which the stronger or cleverer will be able to take advantage of the weaker.

Genuine law legislate equality, freedom, and the principle of justice for all. Yet in the world-system today there is no genuine law, for nations are all victims to the social, military, and economic chaos that characterizes international affairs and afflicts all persons living within particular nation-states. The unenforceable pronouncement of the treaty-system that constitutes the United Nations is a travesty of genuine “international law.” We are morally required to live under universal democracy and federal world government representing all persons on Earth equally and creating the just rule of enforceable law on Earth.

6. *In the face of our world condition in the past five decades, world citizens had every right to create the Constitution for the Federation of Earth.* In the face of the global chaos resulting from monopoly capitalism and the system of sovereign nation-states, these world citizens also had a duty to write a *Constitution for the Federation of Earth*. We do not characterize these acts as the noble actions of do-gooders contributing to the human project. We describe here the universal duty of every person on Earth to live under the rule of enforceable world law.

Our work is not only more legitimate than that of politicians within nations who pass legislation excluding the majority of humanity from the laws they write. Our work is absolutely obligated by the demand for universality in human affairs and by the need to protect future generations from the lethal consequences of present institutions. It is with this understanding that we affirm our right and duty to hold future sessions of the Provisional World Parliament, to work unceasingly to activate the fledgling institutions of democratic world government, and to communicate to every citizen on Earth the absolute need to ratify the *Constitution for the Federation of Earth*.

* * * * *



19. A CONSTITUTION FOR THE FEDERATION OF EARTH

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As Amended At The World Constituent Assembly In Troia, Portugal 1991. Now being circulated worldwide for ratification by the nations and people of Earth.

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[PREAMBLE](#)

Realizing that Humanity today has come to a turning point in history



and that we are on the threshold of an new world order which promises to usher in an era of peace, prosperity, justice and harmony;

Aware of the interdependence of people, nations and all life;

Aware that man's abuse of science and technology has brought Humanity to the brink of disaster through the production of horrendous weaponry of mass destruction and to the brink of ecological and social catastrophe;

Aware that the traditional concept of security through military defense is a total illusion both for the present and for the future;

Aware of the misery and conflicts caused by ever increasing disparity between rich and poor;

Conscious of our obligation to posterity to save Humanity from imminent and total annihilation;

Conscious that Humanity is One despite the existence of diverse nations, races, creeds, ideologies and cultures and that the principle of unity in diversity is the basis for a new age when war shall be outlawed and peace prevail; when the earth's total resources shall be equitably used for human welfare; and when basic human rights and responsibilities shall be shared by all without discrimination;

Conscious of the inescapable reality that the greatest hope for the survival of life on earth is the establishment of a democratic world government;

We, citizens of the world, hereby resolve to establish a world federation to be governed in accordance with this constitution for the Federation of Earth.

A CONSTITUTION FOR THE FEDERATION OF EARTH

Article 1 - Broad Functions of the World Government

The broad functions of the Federation of Earth shall be:

1. To prevent war, secure disarmament, and resolve territorial



- and other disputes which endanger peace and human rights.
2. To protect universal human rights, including life, liberty, security, democracy, and equal opportunities in life.
 3. To obtain for all people on earth the conditions required for equitable economic and social development and for diminishing social differences.
 4. To regulate world trade, communications, transportation, currency, standards, use of world resources, and other global and international processes.
 5. To protect the environment and the ecological fabric of life from all sources of damage, and to control technological innovations whose effects transcend national boundaries, for the purpose of keeping Earth a safe, healthy and happy home for humanity .
 6. To devise and implement solutions to all problems which are beyond the capacity of national governments, or which are now or may become of global or international concern or consequence.

Article 2 - Basic Structure of World Federation and World Government

1. The Federation of Earth shall be organized as a universal federation, to include all nations and all people, and to encompass all oceans, seas and lands of Earth, inclusive of non-self governing territories, together with the surrounding atmosphere.
2. The World Government for the Federation of Earth shall be non-military and shall be democratic in its own structure, with ultimate sovereignty residing in all the people who live on Earth.
3. The authority and powers granted to the World Government shall be limited to those defined in this Constitution for the Federation of Earth, applicable to problems and affairs which transcend national boundaries, leaving to national governments jurisdiction over the internal affairs of the respective nations but consistent with the authority of the World Government to protect universal human rights as defined in this World Constitution.
4. The basic direct electoral and administrative units of the World Government shall be World Electoral and Administrative Districts. A total of not more than 1000 World Electoral and Administrative Districts shall be defined, and shall be nearly equal in population, within the limits of plus or minus ten percent.
5. Contiguous World Electoral and Administrative Districts shall



be combined as may be appropriate to compose a total of twenty World Electoral and Administrative Regions for the following purposes, but not limited thereto: for the election or appointment of certain world government officials; for administrative purposes; for composing various organs of the world government as enumerated in Article IV; for the functioning of the Judiciary, the Enforcement System, and the Ombudsmus, as well as for the functioning of any other organ or agency of the World Government.

6. The World Electoral and Administrative Regions may be composed of a variable number of World Electoral and Administrative Districts, taking into consideration geographic, cultural, ecological and other factors as well as population.
7. Contiguous World Electoral and Administrative Regions shall be grouped together in pairs to compose Magna-Regions.
8. The boundaries for World Electoral and Administrative Regions shall not cross the boundaries of the World Electoral and Administrative Districts, and shall be common insofar as feasible for the various administrative departments and for the several organs and agencies of the World Government. Boundaries for the World Electoral and Administrative Districts as well as for the Regions need not conform to existing national boundaries, but shall conform as far as practicable.
9. The World Electoral and Administrative Regions shall be grouped to compose at least five Continental Divisions of the Earth, for the election or appointment of certain world government officials, and for certain aspects of the composition and functioning of the several organs and agencies of the World Government as specified hereinafter. The boundaries of Continental Divisions shall not cross existing national boundaries as far as practicable. Continental Divisions may be composed of a variable number of World Electoral and Administrative Regions.

Article 3 - Organs of the World Government

The organs of the World Government shall be:

1. The World Parliament.
2. The World Executive.
3. The World Administration.
4. The Integrative Complex.
5. The World Judiciary.
6. The Enforcement System.



7. The World Ombudsmus.

Article 4 - Grant of Specific Powers to the World Government

The powers of the World government to be exercised through its several organs and agencies shall comprise the following:

1. Prevent wars and armed conflicts among the nations, regions, districts, parts and peoples of Earth.
2. Supervise disarmament and prevent re-armament; prohibit and eliminate the design, testing, manufacture, sale, purchase, use and possession of weapons of mass destruction, and prohibit or regulate all lethal weapons which the World Parliament may decide.
3. Prohibit incitement to war, and discrimination against or defamation of conscientious objectors.
4. Provide the means for peaceful and just solutions of disputes and conflicts among or between nations, peoples, and/or other components within the Federation of Earth.
5. Supervise boundary settlements and conduct plebiscites as needed.
6. Define the boundaries for the districts, regions and divisions which are established for electoral, administrative, judicial and other purposes of the World Government.
7. Define and regulate procedures for the nomination and election of the members of each House of the World Parliament, and for the nomination, election, appointment and employment of all World Government officials and personnel.
8. Codify world laws, including the body of international law developed prior to adoption of the world constitution, but not inconsistent therewith, and which is approved by the World Parliament.
9. Establish universal standards for weights, measurements, accounting and records.
10. Provide assistance in the event of large scale calamities, including droughts, famine, pestilence, flood, earthquake, hurricane, ecological disruptions and other disasters.
11. Guarantee and enforce the civil liberties and the basic human rights which are defined in the Bill of Rights for the Citizens of Earth which is made a part of this World Constitution under Article 12.
12. Define standards and promote the worldwide improvement in working conditions, nutrition, health, housing, human settlements, environmental conditions, education, economic security, and other conditions defined under Article 13 of this



World Constitution on.

13. Regulate and supervise international transportation, communications, postal services, and migrations of people.
14. Regulate and supervise supra-national trade, industry, corporations, businesses, cartels, professional services, labor supply, finances, investments and insurance.
15. Secure and supervise the elimination of tariffs and other trade barriers among nations, but with provisions to prevent or minimize hardship for those previously protected by tariffs.
16. Raise the revenues and funds, by direct and/or indirect means, which are necessary for the purposes and activities of the World Government.
17. Establish and operate world financial, banking, credit and insurance institutions designed to serve human needs; establish, issue and regulate world currency, credit and exchange.
18. Plan for and regulate the development, use, conservation and re-cycling of the natural resources of Earth as the common heritage of Humanity; protect the environment in every way for the benefit of both present and future generations.
19. Create and operate a World Economic Development Organization to serve equitably the needs of all nations and people included within the World Federation.
20. Develop and implement solutions to transnational problems of food supply, agricultural production, soil fertility, soil conservation, pest control, diet, nutrition, drugs and poisons, and the disposal of toxic wastes.
21. Develop and implement means to control population growth in relation to the life-support capacities of Earth, and solve problems of population distribution.
22. Develop, protect, regulate and conserve the water supplies of Earth; develop, operate and/or coordinate transnational irrigation and other water supply and control projects; assure equitable allocation of trans-national water supplies, and protect against adverse trans-national effects of water or moisture diversion or weather control projects within national boundaries.
23. Own, administer and supervise the development and conservation of the oceans and sea-beds of Earth and all resources thereof, and protect from damage.
24. Protect from damage, and control and supervise the uses of the atmosphere of Earth.
25. Conduct inter-planetary and cosmic explorations and research; have exclusive jurisdiction over the Moon and over all satellites launched from Earth.
26. Establish, operate and/or coordinate global air lines, ocean transport systems, international railways and highways, global communication systems, and means for interplanetary travel



- and communications; control and administer vital waterways.
27. Develop, operate and/or coordinate transnational power systems, or networks of small units, integrating into the systems or networks power derived from the sun, wind, water, tides, heat differentials, magnetic forces, and any other source of safe, eco logically sound and continuing energy supply.
 28. Control the mining, production, transportation and use of fossil sources of energy to the extent necessary to reduce and prevent damages to the environment and the ecology, as well as to prevent conflicts and conserve supplies for sustained use by succeeding generations.
 29. Exercise exclusive jurisdiction and control over nuclear energy research and testing and nuclear power production, including the right to prohibit any form of testing or production considered hazardous.
 30. Place under world controls essential natural resources which may be limited or unevenly distributed about the Earth. Find and implement ways to reduce wastes and find ways to minimize disparities when development or production is insufficient to supply everybody with all that may be needed.
 31. Provide for the examination and assessment of technological innovations which are or may be of supranational consequence, to determine possible hazards or perils to humanity or the environment; institute such controls and regulations of technology as may be found necessary to prevent or correct widespread hazards or perils to human health and welfare.
 32. Carry out intensive programs to develop safe alternatives to any technology or technological processes which may be hazardous to the environment, the ecological system, or human health and welfare.
 33. Resolve supra-national problems caused by gross disparities in technological development or capability, capital formation, availability of natural resources, educational opportunity, economic opportunity, and wage and price differentials. Assist the processes of technology transfer under conditions which safeguard human welfare and the environment and contribute to minimizing disparities.
 34. Intervene under procedures to be defined by the World Parliament in cases of either intra-state violence and intra-state problems which seriously affect world peace or universal human rights.
 35. Develop a world university system. Obtain the correction of prejudicial communicative materials which cause misunderstandings or conflicts due to differences of race, religion, sex, national origin or affiliation.
 36. Organize, coordinate and/or administer a voluntary, non-military World Service Corps, to carry out a wide variety of



- projects designed to serve human welfare.
37. Designate as may be found desirable an official world language or official world languages.
 38. Establish and operate a system of world parks, wild life preserves, natural places, and wilderness areas.
 39. Define and establish procedures for initiative and referendum by the Citizens of Earth on matters of supra-national legislation not prohibited by this World Constitution.
 40. Establish such departments, bureaus, commissions, institutes, corporations, administrations, or agencies as may be needed to carry out any and all of the functions and powers of the World Government.
 41. Serve the needs of humanity in any and all ways which are now, or may prove in the future to be, beyond the capacity of national and local governments.

Article 5 - The World Parliament

Sec. A - Functions and Powers of the World Parliament

The functions and powers of the World Parliament shall comprise the following:

1. To prepare and enact detailed legislation in all areas of authority and jurisdiction granted to the World Government under Article IV of this World Constitution.
2. To amend or repeal world laws as may be found necessary or desirable.
3. To approve, amend or reject the international laws developed prior to the advent of World Government, and to codify and integrate the system of world law and world legislation under the World Government.
4. To establish such regulations and directions as may be needed, consistent with this world constitution, for the proper functioning of all organs, branches, departments, bureaus, commissions, institutes, agencies or parts of the World Government.
5. To review, amend and give final approval to each budget for the World Government, as submitted by the World Executive; to devise the specific means for directly raising funds needed to fulfill the budget, including taxes, licenses, fees, globally accounted social and public costs which must be added into the prices for goods and services, loans and credit advances, and any other appropriate means; and to appropriate and allocate funds for all operations and functions of the World Government in accordance with approved budgets, but subject



to the right of the Parliament to revise any appropriation not yet spent or contractually committed.

6. To create, alter, abolish or consolidate the departments, bureaus, commissions, institutes, agencies or other parts of the World Government as may be needed for the best functioning of the several organs of the World Government, subject to the specific provisions of this World Constitution.
7. To approve the appointments of the heads of all major departments, commissions, offices, agencies and other parts of the several organs of the World Government, except those chosen by electoral or civil service procedures.
8. To remove from office for cause any member of the World Executive, and any elective or appointive head of any organ, department, office, agency or other part of the World Government, subject to the specific provisions in this World Constitution concerning specific offices.
9. To define and revise the boundaries of the World Electoral and Administrative Districts, the World Electoral and Administrative Regions and Magna Regions, and the Continental Divisions.
10. To schedule the implementation of those provisions of the World Constitution which require implementation by stages during the several stages of Provisional World Government, First Operative Stage of World Government, Second Operative Stage of World Government, and Full Operative Stage of World Government, as defined in Articles XVII and XIX of this World Constitution.
11. To plan and schedule the implementation of those provisions of the World Constitution which may require a period of years to be accomplished.

Sec. B - Composition of the World Parliament

1. The World Parliament shall be composed of three houses, designated as follows:
 - The House of Peoples, to represent the people of Earth directly and equally;
 - The House of Nations, to represent the nations which are joined together in the Federation of Earth; and a
 - House of Counselors with particular functions to represent the highest good and best interests of humanity as a whole.
2. All members of the World Parliament, regardless of House, shall be designated as Members of the World Parliament.

Sec. C - The House of Peoples

1. The House of Peoples shall be composed of the peoples



delegates directly elected in proportion to population from the World Electoral and Administrative Districts, as defined in Article 2-4.

2. Peoples delegates shall be elected by universal adult suffrage, open to all persons of age 18 and above.
3. One peoples delegate shall be elected from each World Electoral and Administrative District to serve a five year term in the House of Peoples. People's delegates may be elected to serve successive terms without limit. Each peoples delegate shall have one vote.
4. A candidate for election to serve as a peoples delegate must be at least 21 years of age, a resident for at least one year of the electoral district from which the candidate is seeking election, and shall take a pledge of service to humanity.

Sec. D - The House of Nations

1. The House of Nations shall be composed of national delegates elected or appointed by procedures to be determined by each national government on the following basis:
 1. One national delegate from each nation of at least 100,000 populations, but less than 10,000,000 populations.
 2. Two national delegates from each nation of at least 10,000,000 populations, but less than 100,000,000 populations.
 3. Three national delegates from each nation of 100,000,000 populations or more.
2. Nations of less than 100,000 populations may join in groups with other nations for purposes of representation in the House of Nations.
3. National delegates shall be elected or appointed to serve for terms of five years, and may be elected or appointed to serve successive terms without limit. Each national delegate shall have one vote.
4. Any person to serve as a national delegate shall be a citizen for at least two years of the nation to be represented, must be at least 21 years of age, and shall take a pledge of service to humanity.

Sec. E - The House of Counselors

1. The House of Counselors shall be composed of 200 counselors chosen in equal numbers from nominations submitted from the twenty World Electoral and Administrative Regions, as defined in Article II-5 and II-6, ten from each Region.
2. Nominations for members of the House of Counselors shall



be made by the teachers and students of universities and colleges and of scientific academies and institutes within each world electoral and administrative region. Nominees may be persons who are off campus in any walk of life as well as on campus.

3. Nominees to the House of Counselors from each World Electoral and Administrative Region shall, by vote taken among themselves, reduce the number of nominees to no less than two times and no more than three times the number to be elected.
4. Nominees to serve as members of the House of Counselors must be at least 25 years of age, and shall take a pledge of service to humanity. There shall be no residence requirement, and a nominee need not be a resident of the region from which nominated or elected.
5. The members of the House of Counselors from each region shall be elected by the members of the other two houses of the World Parliament from the particular region.
6. Counselors shall be elected to serve terms of ten years. One-half of the members of the House of Counselors shall be elected every five years. Counselors may serve successive terms without limit. Each Counselor shall have one vote.

Sec. F - Procedures of the World Parliament

1. Each house of the World Parliament during its first session after general elections shall elect a panel of five chairpersons from among its own members, one from each of five Continental Divisions. The chairpersons shall rotate annually so that each will serve for one year as chief presiding officer, while the other four serve as vice-chairpersons.
2. The panels of Chairpersons from each House shall meet together, as needed, for the purpose of coordinating the work of the Houses of the World Parliament, both severally and jointly.
3. Any legislative measure or action may be initiated in either House of Peoples or House of Nations or both concurrently, and shall become effective when passed by a simple majority vote of both the House of Peoples and of the House of Nations, except in those cases where an absolute majority vote or other voting majority is specified in this World Constitution.
4. In case of deadlock on a measure initiated in either the House of Peoples or House of Nations, the measure shall then automatically go to the House of Counsellors for decision by simple majority vote of the House of Counselors, except in the cases where other majority vote is required in this World Constitution. Any measure may be referred for decision to the



House of Counselors by a concurrent vote of the other two houses.

5. The House of Counselors may initiate any legislative measure, which shall then be submitted to the other two houses and must be passed by simple majority vote of both the House of Peoples and House of Nations to become effective, unless other voting majority is required by some provision of this World Constitution.
6. The House of Counselors may introduce an opinion or resolution on any measure pending before either of the other two houses; either of the other houses may request the opinion of the House of Counselors before acting upon a measure.
7. Each house of the World Parliament shall adopt its own detailed rules of procedure, which shall be consistent with the procedures set forth in this World Constitution, and which shall be designed to facilitate coordinated functioning of the three houses.
8. Approval of appointments by the World Parliament or any house thereof shall require simple majority votes, while removals for cause shall require absolute majority votes.
9. After the full operative stage of World Government is declared, general elections for members of the World Parliament to the House of Peoples shall be held every five years. The first general elections shall be held within the first two years following the declaration of the full operative stage of World Government.
10. Until the full operative stage of World Government is declared, elections for members of the World Parliament to the House of Peoples may be conducted whenever feasible in relation to the campaign for ratification of this World Constitution.
11. Regular sessions of the House of Peoples and House of Nations of the World Parliament shall convene on the second Monday of January of each and every Year.
12. Each nation, according to its own procedures, shall appoint or elect members of the World Parliament to the House of Nations at least thirty days prior to the date for convening the World Parliament in January.
13. The House of Peoples together with the House of Nations shall elect the members of the World Parliament to the House of Counselors during the month of January after the general elections. For its first session after general elections, the House of Counselors shall convene on the second Monday of March, and thereafter concurrently with the other two houses.
14. Bi-elections to fill vacancies shall be held within three months from occurrence of the vacancy or vacancies.
15. The World Parliament shall remain in session for a minimum of nine months of each year. One or two breaks may be taken



during each year, at times and for durations to be decided by simple majority vote of the House of Peoples and House of Nations sitting jointly.

16. Annual salaries for members of the World Parliament of all three houses shall be the same, except for those who serve also as members of the Presidium and of the Executive Cabinet.
17. Salary schedules for members of the World Parliament and for members of the Presidium and of the Executive Cabinet shall be determined by the World Parliament.

Article 6 - The World Executive

Sec. A Functions and Powers of the World Executive

1. To implement the basic system of world law as defined in the World Constitution and in the codified system of world law after approval by the World Parliament.
2. To implement legislation enacted by the World Parliament.
3. To propose and recommend legislation for enactment by the World Parliament.
4. To convene the World Parliament in special sessions when necessary.
5. To supervise the World Administration and the Integrative Complex and all of the departments, bureaus, offices, institutes and agencies thereof.
6. To nominate, select and remove the heads of various organs, branches, departments, bureaus, offices, commissions, institutes, agencies and other parts of the World Government, in accordance with the provisions of this World Constitution and as specified in measures enacted by the World Parliament.
7. To prepare and submit annually to the World Parliament a comprehensive budget for the operations of the World Government, and to prepare and submit periodically budget projections over periods of several years.
8. To define and propose priorities for world legislation and budgetary allocations.
9. To be held accountable to the World Parliament for the expenditures of appropriations made by the World Parliament in accordance with approved and longer term budgets, subject to revisions approved by the World Parliament.

Sec. B Composition of the World Executive

The World Executive shall consist of a Presidium of five members,



and of an Executive Cabinet of from twenty to thirty members, all of whom shall be members of the World Parliament.

Sec. C The Presidium

1. The Presidium shall be composed of five members, one to be designated as President and the other four to be designated as Vice Presidents. Each member of the Presidium shall be from a different Continental Division.
2. The Presidency of the Presidium shall rotate each year, with each member in turn to serve as President, while the other four serve as Vice Presidents. The order of rotation shall be decided by the Presidium.
3. The decisions of the Presidium shall be taken collectively, on the basis of majority decisions.
4. Each member of the Presidium shall be a member of the World Parliament, either elected to the House of Peoples or to the House of Counselors, or appointed or elected to the House of Nations.
5. Nominations for the Presidium shall be made by the House of Counselors. The number of nominees shall be from two to three times the number to be elected. No more than one-third of the nominees shall be from the House of Counselors or from the House of Nations, and nominees must be included from all Continental Divisions.
6. From among the nominees submitted by the House of Counselors, the Presidium shall be elected by vote of the combined membership of all three houses of the World Parliament in joint session. A plurality vote equal to at least 40 percent of the total membership of the World Parliament shall be required for the election of each member to the Presidium, with successive elimination votes taken as necessary until the required plurality is achieved.
7. Members of the Presidium may be removed for cause, either individually or collectively, by an absolute majority vote of the combined membership of the three houses of the World Parliament in joint session.
8. The term of office for the Presidium shall be five years and shall run concurrently with the terms of office for the members as Members of the World Parliament, except that at the end of each five year period, the Presidium members in office shall continue to serve until the new Presidium for the succeeding term is elected. Membership in the Presidium shall be limited to two consecutive terms.

Sec. D The Executive Cabinet

1. The Executive Cabinet shall be composed of from twenty to



thirty members, with at least one member from each of the ten World Electoral and Administrative Magna Regions of the world.

2. All members of the Executive Cabinet shall be Members of the World Parliament.
3. There shall be no more than two members of the Executive Cabinet from any single nation of the World Federation. There may be only one member of the Executive Cabinet from a nation from which a Member of the World Parliament is serving as a member of the Presidium.
4. Each member of the Executive Cabinet shall serve as the head of a department or agency of the World Administration or Integrative Complex, and in this capacity shall be designated as Minister of the particular department or agency.
5. Nominations for members of the Executive Cabinet shall be made by the Presidium, taking into consideration the various functions which Executive Cabinets members are to perform. The Presidium shall nominate no more than two times the number to be elected.
6. The Executive Cabinet shall be elected by simple majority vote of the combined membership of all three houses of the World Parliament in joint session.
7. Members of the Executive Cabinet either individually or collectively may be removed for cause by an absolute majority vote of the combined membership of all three houses of the World Parliament sitting in joint session.
8. The term of office in the Executive Cabinet shall be five years, and shall run concurrently with the terms of office for the members as Members of the World Parliament, except that at the end of each five year period, the Cabinet members in office shall continue to serve until the new Executive Cabinet for the succeeding term is elected. Membership in the Executive Cabinet shall be limited to three consecutive terms, regardless of change in ministerial position.

Sec. E Procedures of the World Executive

1. The Presidium shall assign the ministerial positions among the Cabinet members to head the several administrative departments and major agencies of the Administration and of the Integrative Complex. Each Vice President may also serve as a Minister to head an administrative department, but not the President. Ministerial positions may be changed at the discretion of the Presidium. A Cabinet member or Vice President may hold more than one ministerial post, but no more than three, providing that no Cabinet member is without a Ministerial post.
2. The Presidium, in consultation with the Executive Cabinet,



shall prepare and present to the World Parliament near the beginning of each year a proposed program of world legislation. The Presidium may propose other legislation during the year.

3. The Presidium, in consultation with the Executive Cabinet, and in consultation with the World Financial Administration, (see Article VIII, Sec. G-1-i) shall be responsible for preparing and submitting to the World Parliament the proposed annual budget , and budgetary projections over periods of years.
4. Each Cabinet Member and Vice President as Minister of a particular department or agency shall prepare an annual report for the particular department or agency, to be submitted both to the Presidium and to the World Parliament.
5. The members of the Presidium and of the Executive Cabinet at all times shall be responsible both individually and collectively to the World Parliament.
6. Vacancies occurring at any time in the World Executive shall be filled within sixty days by nomination and election in the same manner as specified for filling the offices originally.

Sec. F Limitations on the World Executive

1. The World Executive shall not at any time alter, suspend, abridge, infringe or otherwise violate any provision of this World Constitution or any legislation or world law enacted or approved by the World Parliament in accordance with the provisions of this World Constitution.
2. The World Executive shall not have veto power over any legislation passed by the World Parliament.
3. The World Executive may not dissolve the World Parliament or any House of the World Parliament.
4. The World Executive may not act contrary to decisions of the World Courts.
5. The World Executive shall be bound to faithfully execute all legislation passed by the World Parliament in accordance with the provisions of this World Constitution, and may not impound or refuse to spend funds appropriated by the World Parliament, nor spend more funds than are appropriated by the World Parliament.
6. The World Executive may not transcend or contradict the decisions or controls of the World Parliament, the World Judiciary or the Provisions of this World Constitution by any device of executive order or executive privilege or emergency declaration or decree.

Article 7 - The World Administration



Sec. A - Functions of the World Administration

1. The World Administration shall be organized to carry out the detailed and continuous administration and implementation of world legislation and world law.
2. The World Administration shall be under the direction of the World Executive, and shall at all times be responsible to the World Executive.
3. The World Administration shall be organized so as to give professional continuity to the work of administration and implementation.

Sec. B - Structure and Procedures of the World Administration

1. The World Administration shall be composed of professionally organized departments and other agencies in all areas of activity requiring continuity of administration and implementation by the World Government.
2. Each Department or major agency of the World Administration shall be headed by a Minister who shall be either a member of the Executive Cabinet or a Vice President of the Presidium.
3. Each Department or major agency of the World Administration shall have as chief of staff a Senior Administrator, who shall assist the Minister and supervise the detailed work of the Department or agency.
4. Each Senior Administrator shall be nominated by the Minister of the particular Department or agency from among persons in the senior lists of the World Civil Service Administration, as soon as senior lists have been established by the World Civil Service Administration, and shall be confirmed by the Presidium. Temporary qualified appointments shall be made by the Ministers, with confirmation by the Presidium, pending establishment of the senior lists.
5. [There shall be a Secretary General of the World Administration, who shall be nominated by the Presidium and confirmed by absolute majority vote of the entire Executive Cabinet.](#)
6. The functions and responsibilities of the Secretary General of the World Administration shall be to assist in coordinating the work of the Senior Administrators of the several Departments and agencies of the World Administration. The Secretary General shall at all times be subject to the direction of the Presidium, and shall be directly responsible to the Presidium.
7. The employment of any Senior Administrator and of the Secretary General may be terminated for cause by absolute majority vote of both the Executive Cabinet and Presidium combined, but not contrary to civil service rules which protect



tenure on grounds of competence.

8. Each Minister of a Department or agency of the World Administration, being also a Member of the World Parliament, shall provide continuous liaison between the particular Department or agency and the World Parliament, shall respond at any time to any questions or requests for information from the Parliament, including committees of any House of the World Parliament.
9. The Presidium, in cooperation with the particular Ministers in each case, shall be responsible for the original organization of each of the Departments and major agencies of the World Administration.
10. The assignment of legislative measures, constitutional provisions and areas of world law to particular Departments and agencies for administration and implementation shall be done by the Presidium in consultation with the Executive Cabinet and Secretary General, unless specifically provided in legislation passed by the World Parliament.
11. The Presidium, in consultation with the Executive Cabinet, may propose the creation of other departments and agencies to have ministerial status; and may propose the alteration, combination or termination of existing Departments and agencies of ministerial status as may seem necessary or desirable. Any such creation, alteration, combination or termination shall require a simple majority vote of approval of the three houses of the World Parliament in joint session.
12. The World Parliament by absolute majority vote of the three houses in joint session may specify the creation of new departments or agencies of ministerial status in the World Administration, or may direct the World Executive to alter, combine, or terminate existing departments or agencies of ministerial status.
13. The Presidium and the World Executive may not create, establish or maintain any administrative or executive department or agency for the purpose of circumventing control by the World Parliament.

Sec. C - Departments of the World Administration

Among the Departments and agencies of the World Administration of ministerial status, but not limited thereto and subject to combinations and to changes in descriptive terminology, shall be those listed under this Section. Each major area of administration shall be headed by a Cabinet Minister and a Senior Administrator, or by a Vice President and a Senior Administrator.

1. Disarmament and War Prevention.
2. Population.



3. Food and Agriculture.
4. Water Supplies and Waterways.
5. Health and Nutrition.
6. Education.
7. Cultural Diversity and the Arts.
8. Habitat and Settlements.
9. Environment and Ecology.
10. World Resources.
11. Oceans and Seabed's.
12. Atmosphere and Space.
13. Energy.
14. Science and Technology.
15. Genetic Research and Engineering.
16. Labor and Income.
17. Economic and Social Development.
18. Commerce and Industry.
19. Transportation and Travel.
20. Multi-National Corporations.
21. Communications and Information.
22. Human Rights.
23. Distributive Justice.
24. World Service Corps.
25. World Territories, Capitals and Parks.
26. Exterior Relations.
27. Democratic Procedures.
28. Revenue.

Article 8 - The Integrative Complex

Sec. A - Definition

1. Certain administrative, research, planning and facilitative agencies of the World Government which are particularly essential for the satisfactory functioning of all or most aspects of the World Government, shall be designated as the Integrative Complex. The Integrative Complex shall include the agencies listed under this Section, with the proviso that other such agencies may be added upon recommendation of the Presidium followed by decision of the World Parliament.
 1. The World Civil Service Administration.
 2. The World Boundaries and Elections Administration.
 3. The Institute on Governmental Procedures and World Problems.
 4. The Agency for Research and Planning.
 5. The Agency for Technological and Environmental Assessment.



6. The World Financial Administration.
7. Commission for Legislative Review.
2. Each agency of the Integrative Complex shall be headed by a Cabinet Minister and a Senior Administrator, or by a Vice President and a Senior Administrator, together with a Commission as provided hereunder. The rules of procedure for each agency shall be decided by majority decision of the Commission members together with the Administrator and the Minister or Vice President.
3. The World Parliament may at any time define further the responsibilities, functioning and organization of the several agencies of the Integrative Complex, consistent with the provisions of Article VIII and other provisions of the World Constitution.
4. Each agency of the Integrative Complex shall make an annual report to the World Parliament and to the Presidium.

Sec. B - The World Civil Service Administration

1. The functions of the World Civil Service Administration shall be the following, but not limited thereto:
 1. To formulate and define standards, qualifications, tests, examinations and salary scales for the personnel of all organs, departments, bureaus, offices, commissions and agencies of the World Government, in conformity with the provisions of this World Constitution and requiring approval by the Presidium and Executive Cabinet, subject to review and approval by the World Parliament.
 2. To establish rosters or lists of competent personnel for all categories of personnel to be appointed or employed in the service of the World Government.
 3. To select and employ upon request by any government organ, department, bureau, office, institute, commission, agency or authorized official, such competent personnel as may be needed and authorized, except for those positions which are made elective or appointive under provisions of the World Constitution or by specific legislation of the World Parliament.
2. The World Civil Service Administration shall be headed by a ten member commission in addition to the Cabinet Minister or Vice President and Senior Administrator. The Commission shall be composed of one commissioner from each of ten World Electoral and Administrative Magna-Regions. The persons to serve as Commissioners shall be nominated by the House of Counselors and then appointed by the Presidium for



five year terms. Commissioners may serve consecutive terms.

Sec. C - The World Boundaries and Elections Administration

1. The functions of the World Boundaries and Elections Administration shall include the following, but not limited thereto:
 1. To define the boundaries for the basic World Electoral and Administrative Districts, the World Electoral and Administrative Regions and Magna-Regions, and the Continental Divisions, for submission to the World Parliament for approval by legislative action.
 2. To make periodic adjustments every ten or five years, as needed, of the boundaries for the World Electoral and Administrative Districts, the World Electoral and Administrative Regions and Magna-Regions, and of the Continental Divisions, subject to approval by the World Parliament.
 3. To define the detailed procedures for the nomination and election of Members of the World Parliament to the House of Peoples and to the House of Counselors, subject to approval by the World Parliament.
 4. To conduct the elections for Members of the World Parliament to the House of Peoples and to the House of Counselors.
 5. Before each World Parliamentary Election, to prepare Voters' Information Booklets which shall summarize major current public issues, and shall list each candidate for elective office together with standard information about each candidate, and give space for each candidate to state his or her views on the defined major issues as well as on any other major issue of choice; to include information on any initiatives or referendums which are to be voted upon; to distribute the Voter's Information Booklets for each World Electoral District, or suitable group of Districts; and to obtain the advice of the Institute on Governmental Procedures and World Problems, the Agency for Research and Planning, and the Agency for Technological and Environmental Assessment in preparing the booklets.
 6. To define the rules for world political parties, subject to approval by the World Parliament, and subject to review and recommendations of the World Ombudsmus.
 7. To define the detailed procedures for legislative initiative and referendum by the Citizens of Earth, and to conduct voting on supra- national or global



initiatives and referendums in conjunction with world parliamentary elections.

8. To conduct plebiscites when requested by other Organs of the World Government, and to make recommendations for the settlement of boundary disputes.
9. To conduct a global census every five years, and to prepare and maintain complete demographic analyses for Earth.
2. The World Boundaries and Elections Administration shall be headed by a ten member commission in addition to the Senior Administrator and the Cabinet Minister or Vice President. The commission shall be composed of one commissioner each from ten World Electoral and Administrative Magna-Regions. The persons to serve as commissioners shall be nominated by the House of Counselors and then appointed by the World Presidium for five year terms. Commissioners may serve consecutive terms.

Sec. D - Institute on Governmental Procedures and World Problems

1. The functions of the Institute on Governmental Procedures and World Problems shall be as follows, but not limited thereto:
 1. To prepare and conduct courses of information, education and training for all personnel in the service of the World Government, including Members of the World Parliament and of all other elective, appointive and civil service personnel, so that every person in the service of the World Government may have a better understanding of the functions, structure, procedures and inter-relationships of the various organs, departments, bureaus, offices, institutes, commissions, agencies and other parts of the World Government.
 2. To prepare and conduct courses and seminars for information, education, discussion, updating and new ideas in all areas of world problems, particularly for Members of the World Parliament and of the World Executive, and for the chief personnel of all organs, departments and agencies of the World Government, but open to all in the service of the World Government.
 3. To bring in qualified persons from private and public universities, colleges and research and action organizations of many countries, as well as other qualified persons, to lecture and to be resource persons for the courses and seminars organized by the Institute



- on Governmental Procedures and World Problems.
4. To contract with private or public universities and colleges or other agencies to conduct courses and seminars for the Institute.
2. The Institute on Governmental Procedures and World Problems shall be supervised by a ten member commission in addition to the Senior Administrator and Cabinet Minister or Vice President. The commission shall be composed of one commissioner each to be named by the House of Peoples, the House of Nations, the House of Counselors, the Presidium, the Collegium of World Judges, The World Ombudsmus, The World Attorneys General Office, the Agency for Research and Planning, the Agency for Technological and Environmental Assessment, and the World Financial Administration. Commissioners shall serve five year terms, and may serve consecutive terms.

Sec. E - The Agency for Research and Planning

1. The functions of the Agency for Research and Planning shall be as follows, but not limited thereto:
 1. To serve the World Parliament, the World Executive, the World Administration, and other organs, departments and agencies of the World Government in any matter requiring research and planning within the competence of the agency.
 2. To prepare and maintain a comprehensive inventory of world resources.
 3. To prepare comprehensive long-range plans for the development, conservation, re-cycling and equitable sharing of the resources of Earth for the benefit of all people on Earth, subject to legislative action by the World Parliament.
 4. To prepare and maintain a comprehensive list and description of all world problems, including their inter-relationships, impact time projections and proposed solutions, together with bibliographies.
 5. To do research and help prepare legislative measures at the request of any Member of the World Parliament or of any committee of any House of the World Parliament.
 6. To do research and help prepare proposed legislation or proposed legislative programs and schedules at the request of the Presidium or Executive Cabinet or of any Cabinet Minister.
 7. To do research and prepare reports at the request of any other organ, department or agency of the World Government.



8. To enlist the help of public and private universities, colleges, research agencies, and other associations and organizations for various research and planning projects.
 9. To contract with public and private universities, colleges, research agencies and other organizations for the preparation of specific reports, studies and proposals.
 10. To maintain a comprehensive World Library for the use of all Members of the World Parliament, and for the use of all other officials and persons in the service of the World Government, as well as for public information.
2. The Agency for Research and Planning shall be supervised by a ten member commission in addition to the Senior Administrator and Cabinet Minister or Vice President. The commission shall be composed of one commissioner each to be named by the House of Peoples, the House of Nations, the House of Counselors, the Presidium, the Collegium of World Judges, the Office of World Attorneys General, World Ombudsmus, the Agency for Technological and Environmental Assessment, the Institute on Governmental Procedures and World Problems, and the World Financial Administration. Commissioners shall serve five year terms, and may serve consecutive terms.

Sec. F - The Agency for Technological and Environmental Assessment

1. The functions of the agency for Technological and Environmental Assessment shall include the following, but not limited thereto:
 1. To establish and maintain a registration and description of all significant technological innovations, together with impact projections.
 2. To examine, analyze and assess the impacts and consequences of technological innovations which may have either significant beneficial or significant harmful or dangerous consequences for human life or for the ecology of life on Earth, or which may require particular regulations or prohibitions to prevent or eliminate dangers or to assure benefits.
 3. To examine, analyze and assess environmental and ecological problems, in particular the environmental and ecological problems which may result from any intrusions or changes of the environment or ecological relationships which may be caused by technological innovations, processes of resource development,



patterns of human settlements, the production of energy, patterns of economic and industrial development, or other man-made intrusions and changes of the environment, or which may result from natural causes.

4. To maintain a global monitoring network to measure possible harmful effects of technological innovations and environmental disturbances so that corrective measures can be designed.
5. To prepare recommendations based on technological and environmental analyses and assessments, which can serve as guides to the World Parliament, the World Executive, the World Administration, the Agency for Research and Planning, and to the other organs, departments and agencies of the World Government, as well as to individuals in the service of the World Government and to national and local governments and legislative bodies.
6. To enlist the voluntary or contractual aid and participation of private and public universities, colleges, research institutions and other associations and organizations in the work of technological and environmental assessment.
7. To enlist the voluntary or contractual aid and participation of private and public universities and colleges, research institutions and other organizations in devising and developing alternatives to harmful or dangerous technologies and environmentally disruptive activities, and in devising controls to assure beneficial results from technological innovations or to prevent harmful results from either technological innovations or environmental changes, all subject to legislation for implementation by the World Parliament.
2. The Agency for Technological and Environmental Assessment shall be supervised by a ten member commission in addition to the Senior Administrator and Cabinet Minister or Vice President. The commission shall be composed of one commissioner from each of ten World Electoral and Administrative Magna-Regions. The persons to serve as commissioners shall be nominated by the House of Counsellors, and then appointed by the World Presidium for five year terms. Commissioners may serve consecutive terms.

Sec. G - The World Financial Administration

1. The functions of the World Financial Administration shall include the following, but not limited thereto:



1. To establish and operate the procedures for the collection of revenues for the World Government, pursuant to legislation by the World Parliament, inclusive of taxes, globally accounted social and public costs, licenses, fees, revenue sharing arrangements, income derived from supra-national public enterprises or projects or resource developments, and all other sources.
2. To operate a Planetary Accounting Office, and thereunder to make cost/benefit studies and reports of the functioning and activities of the World Government and of its several organs, departments, branches, bureaus, offices, commissions, institutes, agencies and other parts or projects. In making such studies and reports, account shall be taken not only of direct financial costs and benefits, but also of human, social, environmental, indirect, long-term and other costs and benefits, and of actual or possible hazards and damages. Such studies and reports shall also be designed to uncover any wastes, inefficiencies, misapplications, corruptions, diversions, unnecessary costs, and other possible irregularities.
3. To make cost/benefit studies and reports at the request of any House or committee of the World Parliament, and of the Presidium, the Executive Cabinet, the World Ombudsmus, the Office of World Attorneys General, the World Supreme Court, or of any administrative department or any agency of the Integrative Complex, as well as upon its own initiative.
4. To operate a Planetary Comptrollers Office and thereunder to supervise the disbursement of the funds of the World Government for all purposes, projects and activities duly authorized by this World Constitution, the World Parliament, the World Executive, and other organs, departments and agencies of the World Government.
5. To establish and operate a Planetary Banking System, making the transition to a common global currency, under the terms of specific legislation passed by the World Parliament.
6. Pursuant to specific legislation enacted by the World Parliament, and in conjunction with the Planetary Banking System, to establish and implement the procedures of a Planetary Monetary and Credit System based upon useful productive capacity and performance, both in goods and services. Such a monetary and credit system shall be designed for use



within the Planetary Banking System for the financing of the activities and projects of the World Government, and for all other financial purposes approved by the World Parliament, without requiring the payment of interest on bonds, investments or other claims of financial ownership or debt.

7. To establish criteria for the extension of financial credit based upon such considerations as people available to work, usefulness, cost/benefit accounting, human and social values, environmental health and esthetics, minimizing disparities, integrity, competent management, appropriate technology, potential production and performance.
 8. To establish and operate a Planetary Insurance System in areas of world need which transcend national boundaries and in accordance with legislation passed by the World Parliament.
 9. To assist the Presidium as may be requested in the technical preparation of budgets for the operation of the World Government.
2. The World Financial Administration shall be supervised by a commission of ten members, together with a Senior Administrator and a Cabinet Minister or Vice President. The commission shall be composed of one commissioner each to be named by the House of Peoples, the House of Nations, the House of Counselors, the Presidium, the Collegium of World Judges, the Office of Attorneys General, the World Ombudsmus, the Agency for Research and Planning, the Agency for Technological and Environmental Assessment, and the Institute on Governmental Procedures and World Problems. Commissioners shall serve terms of five years, and may serve consecutive terms.

Sec. H - Commission for Legislative Review

1. The functions of the Commission for Legislative Review shall be to examine World Legislation and World Laws which the World Parliament enacts or adopts from the previous Body of International Law for the purpose of analyzing whether any particular legislation or law has become obsolete or obstructive or defective in serving the purposes intended; and to make recommendations to the World Parliament accordingly for repeal or amendment or replacement.
2. The Commission for Legislative Review shall be composed of twelve members, including two each to be elected by the House of Peoples, the House of Nations, the House of Counselors, the Collegium of World Judges, the World Ombudsmus and the Presidium. Members of the Commission



shall serve terms of ten years, and may be re-elected to serve consecutive terms. One half of the Commission members after the Commission is first formed shall be elected every five years, with the first terms for one half of the members to be only five years.

Article 9 - The World Judiciary

Sec. A - Jurisdiction of the World Supreme Court

1. A World Supreme Court shall be established, together with such regional and district World Courts as may subsequently be found necessary. The World Supreme Court shall comprise a number of benches.
2. The World Supreme Court, together with such regional and district World Courts as may be established, shall have mandatory jurisdiction in all cases, actions, disputes, conflicts, violations of law, civil suits, guarantees of civil and human rights, constitutional interpretations, and other litigations arising under the provisions of this World Constitution, world legislation, and the body of world law approved by the World Parliament.
3. Decisions of the World Supreme Court shall be binding on all parties involved in all cases, actions and litigations brought before any bench of the World Supreme Court for settlement. Each bench of the World Supreme Court shall constitute a court of highest appeal, except when matters of extra-ordinary public importance are assigned or transferred to the Superior Tribunal of the World Supreme Court, as provided in Section E of Article IX.

Sec. B - Benches of the World Supreme Court

The benches of the World Supreme Court and their respective jurisdictions shall be as follows:

1. Bench for Human Rights: To deal with issues of human rights arising under the guarantee of civil and human rights provided by Article XIII of this World Constitution, and arising in pursuance of the provisions of Article XIII of this World Constitution, and arising otherwise under world legislation and the body of world law approved by the World Parliament.
2. Bench for Criminal Cases: To deal with issues arising from the violation of world laws and world legislation by individuals, corporations, groups and associations, but not issues primarily concerned with human rights.



3. Bench for Civil Cases: To deal with issues involving civil law suits and disputes between individuals, corporations, groups and associations arising under world legislation and world law and the administration thereof.
4. Bench for Constitutional Cases: To deal with the interpretation of the World Constitution and with issues and actions arising in connection with the interpretation of the World Constitution.
5. Bench for International Conflicts: To deal with disputes, conflicts and legal contest arising between or among the nations which have joined in the Federation of Earth.
6. Bench for Public Cases: To deal with issues not under the jurisdiction of another bench arising from conflicts, disputes, civil suits or other legal contests between the World Government and corporations, groups or individuals, or between national governments and corporations, groups or individuals in cases involving world legislation and world law.
7. Appellate Bench: To deal with issues involving world legislation and world law which may be appealed from national courts; and to decide which bench to assign a case or action or litigation when a question or disagreement arises over the proper jurisdiction.
8. Advisory Bench: To give opinions upon request on any legal question arising under world law or world legislation, exclusive of contests or actions involving interpretation of the World Constitution. Advisory opinions may be requested by any House or committee of the World Parliament, by the Presidium, any Administrative Department, the Office of World Attorneys General, the World Ombudsmus, or by any agency of the Integrative Complex.
9. Other benches may be established, combined or terminated upon recommendation of the Collegium of World Judges with approval by the World Parliament; but benches number one through eight may not be combined nor terminated except by amendment of this World Constitution.

Sec. C - Seats of the World Supreme Court

1. The primary seat of the World Supreme Court and all benches shall be the same as for the location of the Primary World Capital and for the location of the World Parliament and the World Executive.
2. Continental seats of the World Supreme Court shall be established in the four secondary capitals of the World Government located in four different Continental Divisions of Earth, as provided in Article XV.
3. The following permanent benches of the World Supreme



Court shall be established both at the primary seat and at each of the continental seats: Human Rights, Criminal Cases, Civil Cases, and Public Cases.

4. The following permanent benches of the World Supreme Court shall be located only at the primary seat of the World Supreme Court: Constitutional Cases, International Conflicts, Appellate Bench, and Advisory Bench.
5. Benches which are located permanently only at the primary seat of the World Supreme Court may hold special sessions at the other continental seats of the World Supreme Court when necessary, or may establish continental circuits if needed.
6. Benches of the World Supreme Court which have permanent continental locations may hold special sessions at other locations when needed, or may establish regional circuits if needed.

Sec. D - The Collegium of World Judges

1. A Collegium of World Judges shall be established by the World Parliament. The Collegium shall consist of a minimum of twenty member judges, and may be expanded as needed but not to exceed sixty members.
2. The World Judges to compose the Collegium of World Judges shall be nominated by the House of Counselors and shall be elected by plurality vote of the three Houses of the World Parliament in joint session. The House of Counselors shall nominate between two and three times the number of world judges to be elected at any one time. An equal number of World Judges shall be elected from each of ten World Electoral and Administrative Magna-Regions, if not immediately then by rotation.
3. The term of office for a World Judge shall be ten years. Successive terms may be served without limit.
4. The Collegium of World Judges shall elect a Presiding Council of World Judges, consisting of a Chief Justice and four Associate Chief Justices. One member of the Presiding Council of World Judges shall be elected from each of five Continental Divisions of Earth. Members of the Presiding Council of World Judges shall serve five year terms on the Presiding Council, and may serve two successive terms, but not two successive terms as Chief Justice.
5. The Presiding Council of World Judges shall assign all World Judges, including themselves, to the several benches of the World Supreme Court. Each bench for a sitting at each location shall have a minimum of three World Judges, except that the number of World Judges for benches on Continental Cases and International Conflicts, and the Appellate Bench, shall be no less than five.



6. The member judges of each bench at each location shall choose annually a Presiding Judge, who may serve two successive terms.
7. The members of the several benches may be reconstituted from time to time as may seem desirable or necessary upon the decision of the Presiding Council of World Judges. Any decision to re-constitute a bench shall be referred to a vote of the entire Collegium of World Judges by request of any World Judge.
8. Any World Judge may be removed from office for cause by an absolute two-thirds majority vote of the three Houses of the World Parliament in joint session.
9. Qualifications for Judges of the World Supreme Court shall be at least ten years of legal or juristic experience, minimum age of thirty years, and evident competence in world law and the humanities.
10. The salaries, expenses, remunerations and prerogatives of the World Judges shall be determined by the World Parliament, and shall be reviewed every five years, but shall not be changed to the disadvantage of any World Judge during a term of office. All members of the Collegium of World Judges shall receive the same salaries, except that additional compensation may be given to the Presiding Council of World Judges.
11. Upon recommendation by the Collegium of World Judges, the World Parliament shall have the authority to establish regional and district world courts below the World Supreme Court, and to establish the jurisdictions thereof, and the procedures for appeal to the World Supreme Court or to the several benches thereof.
12. The detailed rules of procedure for the functioning of the World Supreme Court, the Collegium of World Judges, and for each bench of the World Supreme Court, shall be decided and amended by absolute majority vote of the Collegium of World Judges.

Sec. E - The Superior Tribunal of the World Supreme Court

1. A Superior Tribunal of the World Supreme Court shall be established to take cases which are considered to be of extraordinary public importance. The Superior Tribunal for any calendar year shall consist of the Presiding Council of World Judges together with one World Judge named by the Presiding Judge of each bench of the World Court sitting at the primary seat of the World Supreme Court. The composition of the Superior Tribunal may be continued unchanged for a second year by decision of the Presiding Council of World Judges.



2. Any party to any dispute, issue, case or litigation coming under the jurisdiction of the World Supreme Court, may apply to any particular bench of the World Supreme Court or to the Presiding Council of World Judges for the assignment or transfer of the case to the Superior Tribunal on the grounds of extra-ordinary public importance. If the application is granted, the case shall be heard and disposed of by the Superior Tribunal. Also, any bench taking any particular case, if satisfied that the case is of extra-ordinary public importance, may of its own discretion transfer the case to the Superior Tribunal.

Article 10 - The Enforcement System

Sec. A - Basic Principles

1. The enforcement of world law and world legislation shall apply directly to individual, and individuals shall be held responsible for compliance with world law and world legislation regardless of whether the individuals are acting in their own capacity or as agents or officials of governments at any level or of the institutions of governments, or as agents or officials of corporations, organizations, associations or groups of any kind.
2. When world law or world legislation or decisions of the world courts are violated, the Enforcement System shall operate to identify and apprehend the individuals responsible for violations.
3. Any enforcement action shall not violate the civil and human rights guaranteed under this World Constitution.
4. The enforcement of world law and world legislation shall be carried out in the context of a non-military world federation wherein all member nations shall disarm as a condition for joining and benefiting from the world federation, subject to Article XVII, Sec. C-8 and D-6. The Federation of Earth and World Government under this World Constitution shall neither keep nor use weapons of mass destruction.
5. Those agents of the enforcement system whose function shall be to apprehend and bring to court violators of world law and world legislation shall be equipped only with such weapons as are appropriate for the apprehension of the individuals responsible for violations.
6. The enforcement of world law and world legislation under this World Constitution shall be conceived and developed primarily as the processes of effective design and administration of world law and world legislation to serve the



welfare of all people on Earth, with equity and justice for all, in which the resources of Earth and the funds and the credits of the World Government are used only to serve peaceful human needs, and none used for weapons of mass destruction or for war making capabilities.

Sec. B - The Structure for Enforcement: World Attorneys General

1. The Enforcement System shall be headed by an Office of World Attorneys General and a Commission of Regional World Attorneys.
2. The Office of World Attorneys General shall be comprised of five members, one of whom shall be designated as the World Attorney General and the other four shall each be designated an Associate World Attorney General.
3. The Commission of Regional World Attorneys shall consist of twenty Regional World Attorneys.
4. The members to compose the Office of World Attorneys General shall be nominated by the House of Counsellors, with three nominees from each Continental Division of Earth. One member of the Office shall be elected from each of five Continental Divisions by plurality vote of the three houses of the World Parliament in joint session.
5. The term of office for a member of the Office of World Attorneys General shall be ten years. A member may serve two consecutive terms. The position of World Attorney General shall rotate every two years among the five members of the Office. The order of rotation shall be decided among the five members of the Office.
6. The Office of World Attorneys General shall nominate members for the Commission of twenty Regional World Attorneys from the twenty World Electoral and Administrative Regions, with between two and three nominees submitted for each Region. From these nominations, the three Houses of the World Parliament in joint session shall elect one Regional World Attorney from each of the twenty Regions. Regional World Attorneys shall serve terms of five years, and may serve three consecutive terms.
7. Each Regional World Attorney shall organize and be in charge of an Office of Regional World Attorney. Each Associate World Attorney General shall supervise five Offices of Regional World Attorneys.
8. The staff to carry out the work of enforcement, in addition to the five members of the Office of World Attorneys General and the



twenty Regional World Attorneys, shall be selected from civil service lists, and shall be organized for the following functions:

Investigation.

Apprehension and arrest.

Prosecution.

Remedies and correction.

Conflict resolution.

9. Qualifications for a member of the Office of World Attorneys General and for the Regional World Attorneys shall be at least thirty years of age, at least seven years legal experience, and education in law and the humanities.

10. The World Attorney General, the Associate World Attorneys General, and the Regional World Attorneys shall at all times be responsible to the World Parliament. Any member of the Office of World Attorneys General and any Regional World Attorney can be removed from office for cause by a simple majority vote of the three Houses of the World Parliament in joint session.

Sec. C - The World Police

1. That section of the staff of the Office of World Attorneys General and of the Offices of Regional World Attorneys responsible for the apprehension and arrest of violators of world law and world legislation, shall be designated as World Police.
2. Each regional staff of the World Police shall be headed by a Regional World Police Captain, who shall be appointed by the Regional World Attorney.
3. The Office of World Attorneys General shall appoint a World Police Supervisor, to be in charge of those activities which transcend regional boundaries. The World Police Supervisor shall direct the Regional World Police Captains in any actions which require coordinated or joint action transcending regional boundaries, and shall direct any action which requires initiation or direction from the Office of World Attorneys General.
4. Searches and arrests to be made by World Police shall be made only upon warrants issued by the Office of World Attorneys General or by a Regional World Attorney.



5. World Police shall be armed only with weapons appropriate for the apprehension of the individuals responsible for violation of world law.
6. Employment in the capacity of World Police Captain and World Police Supervisor shall be limited to ten years.
7. The World Police Supervisor and any Regional World Police Captain may be removed from office for cause by decision of the Office of World Attorneys General or by absolute majority vote of the three Houses of the World Parliament in joint session.

Sec. D - The Means of Enforcement

1. Non-military means of enforcement of world law and world legislation shall be developed by the World Parliament and by the Office of World Attorneys General in consultation with the Commission of Regional World Attorneys, the Collegium of World Judges, the World Presidium, and the World Ombudsmus. The actual means of enforcement shall require legislation by the World Parliament.
2. Non-military means of enforcement which can be developed may include: Denial of financial credit; denial of material resources and personnel; revocation of licenses, charters, or corporate rights; impounding of equipment; fines and damage payments; performance of work to rectify damages; imprisonment or isolation; and other means appropriate to the specific situations.
3. To cope with situations of potential or actual riots, insurrection and resort to armed violence, particular strategies and methods shall be developed by the World Parliament and by the Office of World Attorneys General in consultation with the Commission of Regional World Attorneys, the collegium of World Judges, the Presidium and the World Ombudsmus. Such strategies and methods shall require enabling legislation by the World Parliament where required in addition to the specific provisions of this World Constitution.
4. A basic condition for preventing outbreaks of violence which the Enforcement System shall facilitate in every way possible, shall be to assure a fair hearing under non-violent circumstances for any person or group having a grievance, and likewise to assure a fair opportunity for a just settlement of any grievance with



due regard for the rights and welfare of all concerned.

Article 11 - The World Ombudsmus

Sec. A - Functions and Powers of the World Ombudsmus

The functions and powers of the World Ombudsmus, as public defender, shall include the following:

1. To protect the People of Earth and all individuals against violations or neglect of universal human and civil rights which are stipulated in Article 12 and other sections of this World Constitution.
2. To protect the People of Earth against violations of this World Constitution by any official or agency of the World Government, including both elected and appointed officials or public employees regardless of organ, department, office, agency or rank.
3. To press for the implementation of the Directive Principles for the World Government as defined in Article 13 of this World Constitution.
4. To promote the welfare of the people of Earth by seeking to assure that conditions of social justice and of minimizing disparities are achieved in the implementation and administration of world legislation and world law.
5. To keep on the alert for perils to humanity arising from technological innovations, environmental disruptions and other diverse sources, and to launch initiatives for correction or prevention of such perils.
6. To ascertain that the administration of otherwise proper laws, ordinances and procedures of the World Government do not result in unforeseen injustices or inequities, or become stultified in bureaucracy or the details of administration.
7. To receive and hear complaints, grievances or requests for aid from any person, group, organization, association, body politic or agency concerning any matter which comes within the purview of the World Ombudsmus.
8. To request the Office of World Attorneys General or any Regional World Attorney to initiate legal actions or court proceedings whenever and wherever considered necessary or desirable in the view of the World Ombudsmus.
9. To directly initiate legal actions and court proceedings



- whenever the World Ombudsmus deems necessary.
10. To review the functioning of the departments, bureaus, offices, commissions, institutes, organs and agencies of the World Government to ascertain whether the procedures of the World government are adequately fulfilling their purposes and serving the welfare of humanity in optimum fashion, and to make recommendations for improvements.
 11. To present an annual report to the World Parliament and to the Presidium on the activities of the World Ombudsmus, together with any recommendations for legislative measures to improve the functioning of the World Government for the purpose of better serving the welfare of the People of Earth.

Sec. B - Composition of the World Ombudsmus

1. The World Ombudsmus shall be headed by a Council of World Ombudsen of five members, one of whom shall be designated as Principal World Ombudsan, while the other four shall each be designated as an Associate World Ombudsan.
2. Members to compose the Council of World Ombudsen shall be nominated by the House of Counselors, with three nominees from each Continental Division of Earth. One member of the Council shall be elected from each of five Continental Divisions by plurality vote of the three Houses of the World Parliament in joint session.
3. The term of office for a World Ombudsan shall be ten years. A World Ombudsan may serve two successive terms. The position of Principal World Ombudsan shall be rotated every two years. The order of rotation shall be determined by the Council of World Ombudsen.
4. The Council of World Ombudsen shall be assisted by a Commission of World Advocates of twenty members. Members for the Commission of World Advocates shall be nominated by the Council of World Ombudsen from twenty World Electoral and Administrative Regions, with between two and three nominees submitted for each Region. One World Advocate shall be elected from each of the twenty World Electoral and Administrative Regions by the three Houses of the World Parliament in joint session. World Advocates shall serve terms of five years, and may serve a maximum of four successive terms.
5. The Council of World Ombudsen shall establish



twenty regional offices, in addition to the principal world office at the primary seat of the World Government. The twenty regional offices of the World Ombudsmus shall parallel the organization of the twenty Offices of Regional World Attorney.

6. Each regional office of the World Ombudsmus shall be headed by a World Advocate. Each five regional offices of the World Ombudmus shall be supervised by an Associate World Ombudsan.
7. Any World Ombudsan and any World Advocatet may be removed from office for cause by an absolute majority vote of the three Houses of the World Parliament in joint session.
8. Staff members for the World Ombudsmus and for each regional office of the World Ombudsmus shall be selected and employed from civil service lists.
9. Qualifications for World Ombudsan and for World Advocate shall be at least thirty years of age, at least five years legal experience, and education in law and other relevant education.

Article 12 - Bill of Rights for the Citizens of Earth

The inhabitants and citizens of Earth who are within the Federation of Earth shall have certain inalienable rights defined hereunder. It shall be mandatory for the World Parliament, the World Executive, and all organs and agencies of the World Government to honor, implement and enforce these rights, as well as for the national governments of all member nations in the Federation of Earth to do likewise. Individuals or groups suffering violation or neglect of such rightst shall have full recourse through the World Ombudsmus, the Enforcement System and the World Courts for redress of grievances. The inalienable rights shall include the following:

1. Equal rights for all citizens of the Federation of Earth, with no discrimination on grounds of race, color, caste, nationality, sex, religion, political affiliation, property, or social status.
2. Equal protection and application of world legislation and world laws for all citizens of the Federation of Earth.
3. Freedom of thought and conscience, speech, press, writing, communication, expression, publication, broadcasting, telecasting, and cinema, except as an overt part of or incitement to violence, armed riot or insurrection.



4. Freedom of assembly, association, organization, petition and peaceful demonstration.
5. Freedom to vote without duress, and freedom for political organization and campaigning without censorship or recrimination.
6. Freedom to profess, practice and promote religious or religious beliefs or no religion or religious belief.
7. Freedom to profess and promote political beliefs or no political beliefs.
8. Freedom for investigation, research and reporting.
9. Freedom to travel without passport or visas or other forms of registration used to limit travel between, among or within nations.
10. Prohibition against slavery, peonage, involuntary servitude, and conscription of labor.
11. Prohibition against military conscription.
12. Safety of person from arbitrary or unreasonable arrest, detention, exile, search or seizure; requirement of warrants for searches and arrests.
13. Prohibition against physical or psychological duress or torture during any period of investigation, arrest, detention or imprisonment, and against cruel or unusual punishment.
14. Right of habeas corpus; no ex-post-facto laws; no double jeopardy; right to refuse self-incrimination or the incrimination of another.
15. Prohibition against private armies and paramilitary organizations as being threats to the common peace and safety.
16. Safety of property from arbitrary seizure; protection against exercise of the power of eminent domain without reasonable compensation.
17. Right to family planning and free public assistance to achieve family planning objectives.
18. Right of privacy of person, family and association; prohibition against surveillance as a means of political control.

Article 13 - Directive Principles for the World Government

It shall be the aim of the World Government to secure certain other rights for all inhabitants within the Federation of Earth, but without immediate guarantee of universal achievement and enforcement. These rights are defined as Directive Principles, obligating the



World Government to pursue every reasonable means for universal realization and implementation, and shall include the following:

1. Equal opportunity for useful employment for everyone, with wages or remuneration sufficient to assure human dignity.
2. Freedom of choice in work, occupation, employment or profession.
3. Full access to information and to the accumulated knowledge of the human race.
4. Free and adequate public education available to everyone, extending to the pre-university level; Equal opportunities for elementary and higher education for all persons; equal opportunity for continued education for all persons throughout life; the right of any person or parent to choose a private educational institution at any time.
5. Free and adequate public health services and medical care available to everyone throughout life under conditions of free choice.
6. Equal opportunity for leisure time for everyone; better distribution of the work load of society so that every person may have equitable leisure time opportunities.
7. Equal opportunity for everyone to enjoy the benefits of scientific and technological discoveries and developments.
8. Protection for everyone against the hazards and perils of technological innovations and developments.
9. Protection of the natural environment which is the common heritage of humanity against pollution, ecological disruption or damage which could imperil life or lower the quality of life.
10. Conservation of those natural resources of Earth which are limited so that present and future generations may continue to enjoy life on the planet Earth.
11. Assurance for everyone of adequate housing, of adequate and nutritious food supplies, of safe and adequate water supplies, of pure air with protection of oxygen supplies and the ozone layer, and in general for the continuance of an environment which can sustain healthy living for all.
12. Assure to each child the right to the full realization of his or her potential.
13. Social Security for everyone to relieve the hazards of unemployment, sickness, old age, family circumstances, disability, catastrophes of nature, and technological change, and to allow retirement with



sufficient lifetime income for living under conditions of human dignity during older age.

14. Rapid elimination of and prohibitions against technological hazards and man-made environmental disturbances which are found to create dangers to life on Earth.
15. Implementation of intensive programs to discover, develop and institute safe alternatives and practical substitutions for technologies which must be eliminated and prohibited because of hazards and dangers to life.
16. Encouragement for cultural diversity; encouragement for decentralized administration.
17. Freedom for peaceful self-determination for minorities, refugees and dissenters.
18. Freedom for change of residence to anywhere on Earth conditioned by provisions for temporary sanctuaries in events of large numbers of refugees, stateless persons, or mass migrations.
19. Prohibition against the death penalty.

Article 14 - Safeguards and Reservations

Sec. A - Certain Safeguards

The World Government shall operate to secure for all nations and peoples within the Federation of Earth the safeguards which are defined hereunder:

1. Guarantee that full faith and credit shall be given to the public acts, records, legislation and judicial proceedings of the member nations within the Federation of Earth, consistent with the several provisions of this World Constitution.
2. Assure freedom of choice within the member nations and countries of the Federation of Earth to determine their internal political, economic and social systems, consistent with the guarantees and protections given under this World Constitution to assure civil liberties and human rights and a safe environment for life, and otherwise consistent with the several provisions of this World Constitution.
3. Grant the right of asylum within the Federation of Earth for persons who may seek refuge from countries or nations which are not yet included within the Federation of Earth.



4. Grant the right of individuals and groups, after the Federation of Earth includes 90 percent of the territory of Earth, to peacefully leave the hegemony of the Federation of Earth and to live in suitable territory set aside by the Federation neither restricted nor protected by the World Government, provided that such territory does not extend beyond five percent of Earth's habitable territory, is kept completely disarmed and not used as a base for inciting violence or insurrection within or against the Federation of Earth or any member nation, and is kept free of acts of environmental or technological damage which seriously affect Earth outside such territory.

Sec. B - Reservation of Powers

The powers not delegated to the World Government by this World Constitution shall be reserved to the nations of the Federation of Earth and to the people of Earth.

Article 15 - World Federal Zones and the World Capitals

Sec. A - World Federal Zones

1. Twenty World Federal Zones shall be established within the twenty World Electoral and Administrative Regions, for the purposes of the location of the several organs of the World Government and of the administrative departments, the world courts, the offices of the Regional World Attorneys, the offices of the World Advocates, and for the location of other branches, departments, institutes, offices, bureaus, commissions, agencies and parts of the World Government.
2. The World Federal Zones shall be established as the needs and resources of the World Government develop and expand. World Federal Zones shall be established first within each of five Continental Divisions.
3. The location and administration of the World Federal Zones, including the first five, shall be determined by the World Parliament.

Sec. B - The World Capitals

1. Five World Capitals shall be established in each of five Continental Divisions of Earth, to be located in



each of the five World Federal Zones which are established first as provided in Article 15 of this World Constitution.

2. One of the World Capitals shall be designated by the World Parliament as the Primary World Capital, and the other four shall be designated as Secondary World Capitals.
3. The primary seats of all organs of the World Government shall be located in the Primary World Capital, and other major seats of the several organs of the World Government shall be located in the Secondary World Capitals.

Sec. C - Locational Procedures

1. Choices for location of the twenty World Federal Zones and for the five World Capitals shall be proposed by the Presidium, and then shall be decided by a simple majority vote of the three Houses of the World Parliament in joint session. The Presidium shall offer choices of two or three locations in each of the twenty World Electoral and Administrative Regions to be World Federal Zones, and shall offer two alternative choices for each of the five World Capitals.
2. The Presidium in consultation with the Executive Cabinet shall then propose which of the five World Capitals shall be the Primary World Capital, to be decided by a simply majority vote of the three Houses of the World Parliament in joint session.
3. Each organ of the World Government shall decide how best to apportion and organize its functions and activities among the five World Capitals, and among the twenty World Federal Zones, subject to specific directions from the World Parliament.
4. The World Parliament may decide to rotate its sessions among the five World Capitals, and if so, to decide the procedure for rotation.
5. For the first two operative stages of World Government as defined in Article 17, and for the Provisional World Government as defined in Article 19, a provisional location may be selected for the Primary World Capital. The provisional location need not be continued as a permanent location.
6. Any World Capital or World Federal Zone may be relocated by an absolute two-thirds majority vote of the three Houses of the World Parliament in joint session.
7. Additional World Federal Zones may be designated if



found necessary by proposal of the Presidium and approval by an absolute majority vote of the three Houses of the World Parliament in joint session.

Article 16 - World Territories and Exterior Relations

Sec. A - World Territory

1. Those areas of the Earth and Earth's moon which are not under the jurisdiction of existing nations at the time of forming the Federation of Earth, or which are not reasonably within the province of national ownership and administration, or which are declared to be World Territory subsequent to establishment of the Federation of Earth, shall be designated as World Territory and shall belong to all of the people of Earth.
2. The administration of World Territory shall be determined by the World Parliament and implemented by the World Executive, and shall apply to the following areas:
 - All oceans and seas having an international or supra-national character, together with the seabeds and resources thereof, beginning at a distance of twenty kilometers offshore, excluding inland seas of traditional national ownership.
 - Vital straits, channels, and canals.
 - The atmosphere enveloping Earth, beginning at an elevation of one kilometer above the general surface of the land, excluding the depressions in areas of much variation in elevation.
 - Man-made satellites and Earth's moon.
 - Colonies which may choose the status of World Territory; non-independent territories under the trust administration of nations or of the United Nations; any islands or atolls which are unclaimed by any nation; independent lands or countries which choose the status of World Territory; and disputed lands which choose the status of World Territory.
3. The residents of any World Territory, except designated World Federal Zones, shall have the right within reason to decide by plebiscite to become a self-governing nation within the Federation of Earth, either singly or in combination with other World Territories, or to unite with an existing nation with the Federation



of Earth.

Sec. B - Exterior Relations

1. The World Government shall maintain exterior relations with those nations of Earth which have not joined the Federation of Earth. Exterior relations shall be under the administration of the Presidium, subject at all times to specific instructions and approval by the World Parliament.
2. All treaties and agreements with nations remaining outside the Federation of Earth shall be negotiated by the Presidium and must be ratified by a simple majority vote of the three Houses of the World Parliament.
3. The World Government for the Federation of Earth shall establish and maintain peaceful relations with other planets and celestial bodies where and when it may become possible to establish communications with the possible inhabitants thereof.
4. All explorations into outer space, both within and beyond the solar system in which Planet Earth is located, shall be under the exclusive direction and control of the World Government, and shall be conducted in such manner as shall be determined by the World Parliament.

Article 17 - Ratification and Implementation

Sec. A - Ratification of the Constitution for the Federation of Earth

This World Constitution shall be submitted to the nations and people of Earth for ratification by the following procedures:

1. The Constitution for the Federation of Earth shall be transmitted to the General Assembly of the United Nations Organization and to each national government on Earth, with the request that the Constitution for the Federation of Earth be submitted to the national legislature of each nation for preliminary ratification and to the people of each nation for final ratification by popular referendum.
2. Preliminary ratification by a national legislature shall be accomplished by simple majority vote of the national legislature.



3. Final ratification by the people shall be accomplished by a simple majority of votes cast in a popular referendum, provided that a minimum of twenty-five percent of eligible voters of age eighteen years and over have cast ballots within the nation or country or within World Electoral and Administrative Districts.
4. In the case of a nation without a national legislature, the head of the national government shall be requested to give preliminary ratification and to submit the World Constitution for final ratification by popular referendum.
5. In the event that a national government, after six months, fails to submit the World Constitution for ratification as requested, then the global agency assuming responsibility for the worldwide ratification campaign may proceed to conduct a direct referendum for ratification of the Constitution for Federation of Earth by the people. Direct referendums may be organized on the basis of entire nations or countries, or on the basis of existing defined communities within nations.
6. In the event of a direct ratification referendum, final ratification shall be accomplished by a majority of the votes cast whether for an entire nation or for a World Electoral and Administrative District, provided that ballots are cast by a minimum of twenty-five percent of eligible voters of the area who are over eighteen years of age.
7. For ratification by existing communities within a nation, the procedure shall be to request local communities, cities, counties, states, provinces, cantons, prefectures, tribal jurisdictions, or other defined political units within a nation to ratify the Constitution for Federation of Earth, and to submit the Constitution for a referendum vote by the citizens of the community or political unit. Ratification may be accomplished by proceeding in this way until all eligible voters of age eighteen and above within the nation or World Electoral and Administrative District have had the opportunity to vote, provided that ballots are cast by a minimum of twenty-five percent of those eligible to vote.
8. Prior to the Full Operative Stage of World Government, as defined under Section E of Article XVII, the universities, colleges and scientific academies and institutes in any country may ratify the Constitution, thus qualifying them for participation in the nomination of Members of the World Parliament



to the House of Counselors.

9. In the case of those nations currently involved in serious international disputes or where traditional enmities and chronic disputes may exist among two or more nations, a procedure for concurrent paired ratification shall be instituted whereby the nations which are parties to a current or chronic international dispute or conflict may simultaneously ratify the Constitution. In such cases, the paired nations shall be admitted into the Federation of Earth simultaneously, with the obligation for each such nation to immediately turn over all weapons of mass destruction to the World Government, and to turn over the conflict or dispute for mandatory peaceful settlement by the World Government.
10. Each nation or political unit which ratifies this Constitution, either by preliminary ratification or final ratification, shall be bound never to use any armed forces or weapons of mass destruction against another member or unit of the Federation of Earth, regardless of how long it may take to achieve full disarmament of all the nations and political units which ratify this Constitution.
11. When ratified, the Constitution for the Federation of Earth becomes the supreme law of Earth. By the act of ratifying this Earth Constitution, any provision in the Constitution or Legislation of any country so ratifying, which is contrary to this Earth Constitution, is either repealed or amended to conform to the Constitution for the Federation of Earth, effective as soon as 25 countries have so ratified. The amendment of National or State Constitutions to allow entry into World Federation is not necessary prior to ratification of the Constitution for the Federation of Earth.

Sec. B - Stages of Implementation

1. Implementation of this World Constitution and the establishment of World Government pursuant to the terms of this World Constitution, may be accomplished in three stages, as follows, in addition to the stage of a Provisional World Government as provided under Article 19:
 1. First Operative Stage of World Government.
 2. Second Operative Stage of World Government.
 3. Full Operative Stage of World Government.
2. At the beginning and during each stage, the World Parliament and the World Executive together shall



establish goals and develop means for the progressive implementation of the World Constitution, and for the implementation of legislation enacted by the World Parliament.

Sec. C - First Operative Stage of World Government

1. The first operative stage of World Government under the Constitution for the Federation of Earth shall be implemented when the Constitution is ratified by a sufficient number of nations and/or people to meet one or the other of the following conditions or equivalent :
 1. Preliminary or final ratification by a minimum of twenty-five nations, each having a population of more than 100,000.
 2. Preliminary or final ratification by a minimum of ten nations above 100,000 population, together with ratification by direct referendum within a minimum of fifty additional World Electoral and Administrative Districts.
 3. Ratification by direct referendum within a minimum of 100 World Electoral and Administrative Districts, even though no nation as such has ratified.
2. The election of Members of the World Parliament to the House of Peoples shall be conducted in all World Electoral and Administrative Districts where ratification has been accomplished by popular referendum.
3. The Election of Members of the World Parliament to the House of Peoples may proceed concurrently with direct popular referendums both prior to and after the First Operative Stage of World Government is reached.
4. The appointment or election of Members of the World Parliament to the House of Nations shall proceed in all nations where preliminary ratification has been accomplished.
5. One-fourth of the Members of the World Parliament to the House of Counselors may be elected from nominees submitted by universities and colleges which have ratified the World Constitution.
6. The World Presidium and the Executive Cabinet shall be elected according to the provisions in article VI, except that in the absence of a House of Counselors, the nominations shall be made by the members of the House of Peoples and of the House of Nations in joint session. Until this is accomplished, the Presidium and



Executive Cabinet of the Provisional World Government as provided in Article 19, shall continue to serve.

7. When composed, the Presidium for the first operative stage of World Government shall assign or re-assign Ministerial posts among Cabinet and Presidium members, and shall immediately establish or confirm a World Disarmament Agency and a World Economic and Development Organization.
8. Those nations which ratify this Earth Constitution and thereby join the Federation of Earth shall immediately transfer all weapons of mass destruction as defined and designated by the World Disarmament Agency to that Agency. (See Article 19, Sections A-2-d, B-6 and E-5). The World Disarmament Agency shall immediately immobilize all such weapons and shall proceed with dispatch to dismantle, convert to peacetime use, re-cycle the materials thereof or otherwise destroy all such weapons. During the first operative stage of World Government, the ratifying nations may retain armed forces equipped with weapons other than weapons of mass destruction as defined and designated by the World Disarmament Agency.
9. Concurrently with the reduction or elimination of such weapons of mass destruction and other military expenditures as can be accomplished during the first operative stage of World Government, the member nations of the Federation of Earth shall pay annually to the Treasury of the World Government amounts equal to one-half the amounts saved from their respective national military budgets during the last year before joining the Federation, and shall continue such payments until the full operative stage of World Government is reached. The World Government shall use fifty percent of the funds thus received to finance the work and projects of the World Economic Development Organization.
10. The World Parliament and the World Executive shall continue to develop the organs, departments, agencies and activities originated under the Provisional World Government, with such amendments as deemed necessary; and shall proceed to establish and beg in the following organs, departments and agencies of the World Government, if not already underway, together with such other departments, and agencies as are considered desirable and feasible during the first operative stage of World Government:



- The World Supreme Court;
 - The Enforcement System;
 - The World Ombudsmus;
 - The World Civil Service Administration;
 - The World Financial Administration;
 - The Agency for Research and Planning;
 - The Agency for Technological and Environmental Assessment;
 - An Emergency Earth Rescue Administration, concerned with all aspects of climate change system and related factors;
 - An Integrated Global Energy System, based on environmentally safe sources;
 - A World University System, under the Department of Education;
 - A World Corporations Office, under the Department of Commerce and Industry;
 - The World Service Corps;
 - A World Oceans and Seabeds Administration.
11. At the beginning of the first operative stage, the Presidium in consultation with the Executive Cabinet shall formulate and put forward a proposed program for solving the most urgent world problems currently confronting humanity.
12. The World Parliament shall proceed to work upon solutions to world problems. The World Parliament and the World Executive working together shall institute through the several organs, departments and agencies of the World Government whatever means shall seem appropriate and feasible to accomplish the implementation and enforcement of world legislation, world law and the World Constitution; and in particular shall take certain decisive actions for the welfare of all people on Earth, applicable throughout the world, including but not limited to the following:
- Expedite the organization and work of an Emergency Earth Rescue Administration, concerned with all aspects of climate change system and related crises;
 - Expedite the new finance, credit and monetary system, to serve human needs;
 - Expedite an integrated global energy system, utilizing solar energy, hydrogen energy, and other safe and sustainable sources of energy;
 - Push forward a global program for agricultural production to achieve maximum sustained yield under conditions which are ecologically sound;



- Establish conditions for free trade within the Federation of Earth;
- Call for and find ways to implement a moratorium on nuclear energy projects until all problems are solved concerning safety, disposal of toxic wastes and the dangers of use or diversion of materials for the production of nuclear weapons;
- Outlaw and find ways to completely terminate the production of nuclear weapons and all weapons of mass destruction;
- Push forward programs to assure adequate and non-polluted water supplies and clean air supplies for everybody on Earth;
- Push forward a global program to conserve and re-cycle the resources of Earth.
- Develop an acceptable program to bring population growth under control, especially by raising standards of living.

Sec. D - Second Operative Stage of World Government

1. The second operative stage of World Government shall be implemented when fifty percent or more of the nations of Earth have given either preliminary or final ratification to this Earth Constitution, provided that fifty percent of the total population of Earth is included either within the ratifying nations or within the ratifying nations together with additional World Electoral and Administrative Districts where people have ratified the Earth Constitution by direct referendum.
2. The election and appointment of Members of the World Parliament to the several Houses of the World Parliament shall proceed in the same manner as specified for the first operative stage in Section C-2,3,4 and 5 of Article 17.
3. The terms of office of the Members of the World Parliament elected or appointed for the first operative stage of World Government, shall be extended into the second operative stage unless they have already served five year terms, in which case new elections or appointments shall be arranged. The terms of hold over Members of the World Parliament into the second operative stage shall be adjusted to run concurrently with the terms of those who are newly elected at the beginning of the second operative stage.
4. The World Presidium and the Executive Cabinet shall



be re-constituted or reconfirmed, as needed, at the beginning of the second operative stage of World Government.

5. The World Parliament and the World Executive shall continue to develop the organs, departments, agencies and activities which are already underway from the first operative stage of World Government, with such amendments as deemed necessary; and shall proceed to establish and develop all other organs and major departments and agencies of the World Government to the extent deemed feasible during the second operative stage.
6. All nations joining the Federation of Earth to compose the second operative stage of World Government, shall immediately transfer all weapons of mass destruction and all other military weapons and equipment to the World Disarmament Agency, which shall immediately immobilize such weapons and equipment and shall proceed forthwith to dismantle, convert to peacetime uses, recycle the materials thereof, or otherwise destroy such weapons and equipment. During the second operative stage, all armed forces and para-military forces of the nations which have joined the Federation of Earth shall be completely disarmed and either disbanded or converted on a voluntary basis into elements of the non-military World Service Corps.
7. Concurrently with the reduction or elimination of such weapons, equipment and other military expenditures as can be accomplished during the second operative stage of World Government, the member nations of the Federation of Earth shall pay annually to the Treasury of the World Government amounts equal to one-half of the amounts saved from their national military budgets during the last year before joining the Federation and shall continue such payments until the full operative stage of World Government is reached. The World Government shall use fifty percent of the funds thus received to finance the work and projects of the World Economic Development Organization.
8. Upon formation of the Executive Cabinet for the second operative stage, the Presidium shall issue an invitation to the General Assembly of the United Nations Organization and to each of the specialized agencies of the United Nations, as well as to other useful international agencies, to transfer personnel, facilities, equipment, resources and allegiance to the Federation of Earth and to the World Government



thereof. The agencies and functions of the United Nations Organization and of its specialized agencies and of other international agencies which may be thus transferred, shall be reconstituted as needed and integrated into the several organs, departments, offices and agencies of the World Government.

9. Near the beginning of the second operative stage, the Presidium in consultation with the Executive cabinet, shall formulate and put forward a proposed program for solving the most urgent world problems currently confronting the people of Earth.
10. The World Parliament shall proceed with legislation necessary for implementing a complete program for solving the current urgent world problems.
11. The World Parliament and the World Executive working together shall develop through the several organs, departments and agencies of the World Government whatever means shall seem appropriate and feasible to implement legislation for solving world problems; and in particular shall take certain decisive actions for the welfare of all people on Earth, including but not limited to the following:
 - Declaring all oceans, seas and canals having supra-national character (but not including inland seas traditionally belonging to particular nations) from twenty kilometers offshore, and all the seabeds thereof, to be under the ownership of the Federation of Earth as the common heritage of humanity, and subject to the control and management of the World Government.
 - Declare the polar caps and surrounding polar areas, including the continent of Antarctica but not areas which are traditionally a part of particular nations, to be world territory owned by the Federation of Earth as the common heritage of humanity, and subject to control and management by the World Government.
 - Outlaw the possession, stockpiling, sale and use of all nuclear weapons, all weapons of mass destruction, and all other military weapons and equipment.
 - Establish an ever-normal granary and food supply system for the people of Earth.
 - Develop and carry forward insofar as feasible all actions defined under Sec. C-10 and C-12 of the First Operative Stage.



Sec. E - Full Operative Stage of World Government

1. The full operative stage of World Government shall be implemented when this World Constitution is given either preliminary or final ratification by meeting either condition (a) or (b):
 - Ratification by eighty percent or more of the nations of Earth comprising at least ninety percent of the population of Earth; or
 - Ratification which includes ninety percent of Earth's total population, either within ratifying nations or within ratifying nations together with additional World Electoral and Administrative Districts where ratification by direct referendum has been accomplished, as provided in Article 17, Section A.
2. When the full operative stage of World Government is reached, the following conditions shall be implemented:
 1. Elections for Members of the House of Peoples shall be conducted in all World Electoral and Administrative Districts where elections have not already taken place; and Members of the House of Nations shall be elected or appointed by the national legislatures or national governments in all nations where this has not already been accomplished.
 2. The terms of office for Members of the House of Peoples and of the House of Nations serving during the second operative stage, shall be continued into the full operative stage, except for those who have already served five years, in which case elections shall be held or appointments made as required.
 3. The terms of office for all holdover Members of the House of Peoples and of the House of Nations who have served less than five years, shall be adjusted to run concurrently with those Members of the World Parliament whose terms are beginning with the full operative stage.
 4. The second 100 Members of the House of Counselors shall be elected according to the procedure specified in Section E of Article 5. The terms of office for holdover Members of the House of Counselors shall run five more years after the beginning of the full operative stage, while those beginning their terms with the full operative stage shall serve ten years.



5. The Presidium and the Executive Cabinet shall be reconstituted in accordance with the provisions of Article 6.
6. All organs of the World Government shall be made fully operative, and shall be fully developed for the effective administration and implementation of world legislation, world law and the provisions of this World Constitution.
7. All nations which have not already done so shall immediately transfer all military weapons and equipment to the World Disarmament Agency, which shall immediately immobilize all such weapons and shall proceed forthwith to dismantle, convert to peaceful usage, and recycle the materials thereof or otherwise to destroy such weapons and equipment.
8. All armies and military forces of every kind shall be completely disarmed, and either disbanded or converted and integrated on a voluntary basis into the non-military World Service Corps.
9. All viable agencies of the United Nations Organization and other viable international agencies established among national governments, together with their personnel, facilities and resources, shall be transferred to the World Government and reconstituted and integrated as may be useful into the organs, departments, offices, institutes, commissions, bureaus and agencies of the World Government.
10. The World Parliament and the World Executive shall continue to develop the activities and projects which are already underway from the second operative stage of World Government, with such amendments as deemed necessary; and shall proceed with a complete and full scale program to solve world problems and serve the welfare of all people on Earth, in accordance with the provisions of this World Constitution.

Sec. F - Costs of Ratification

The work and costs of private Citizens of Earth for the achievement of a ratified Constitution for the Federation of Earth, are recognized as legitimate costs for the establishment of constitutional world government by which present and future generations will benefit, and



shall be repaid double the original amount by the World Financial Administration of the World Government when it becomes operational after 25 countries have ratified this Constitution for the Federation of Earth. Repayment specifically includes contributions to the World Government Funding Corporation and other costs and expenses recognized by standards and procedures to be established by the World Financial Administration.

Article 18 - Amendments

1. Following completion of the first operative stage of World Government, amendments to this World Constitution may be proposed for consideration in two ways:
 - By a simple majority vote of any House of the World Parliament.
 - By petitions signed by a total of 200,000 persons eligible to vote in world elections from a total of at least twenty World Electoral and Administrative Districts where the World Constitution has received final ratification.
2. Passage of any amendment proposed by a House of the World Parliament shall require an absolute two-thirds majority vote of each of the three Houses of the World Parliament voting separately.
3. An amendment proposed by popular petition shall first require a simple majority vote of the House of Peoples, which shall be obliged to take a vote upon the proposed amendment. Passage of the amendment shall then require an absolute two-thirds majority vote of each of the three Houses of the World Parliament voting separately.
4. Periodically, but no later than ten years after first convening the World Parliament for the First Operative Stage of World Government, and every 20 years thereafter, the Members of the World Parliament shall meet in special session comprising a Constitutional Convention to conduct a review of this World Constitution to consider and propose possible amendments, which shall then require action as specified in Clause 2 of Article XVIII for passage.
5. If the First Operative Stage of World Government is not reached by the year 1995, then the Provisional World Parliament, as provided under Article XIX, may convene another session of the World Constituent Assembly to review the Constitution for the



Federation of Earth and consider possible amendments according to procedure established by the Provisional World Parliament.

6. Except by following the amendment procedures specified herein, no part of this World Constitution may be set aside, suspended or subverted, neither for emergencies nor caprice nor convenience.

Article 19 - Provisional World Government

Sec. A - Actions to be Taken by the World Constituent Assembly

Upon adoption of the World Constitution by the World Constituent Assembly, the Assembly and such continuing agency or agencies as it shall designate shall do the following, without being limited thereto:

1. Issue a Call to all Nations, communities and people of Earth to ratify this World Constitution for World Government.
2. Establish the following preparatory commissions:
 - Ratification Commission.
 - World Elections Commission.
 - World Development Commission.
 - World Disarmament Commission.
 - World Problems Commission.
 - Nominating Commission.
 - Finance Commission.
 - Peace Research and Education Commission.
 - Special commissions on each of several of the most urgent world problems.
 - Such other commissions as may be deemed desirable in order to proceed with the Provisional World Government.
3. Convene Sessions of a Provisional World Parliament when feasible under the following conditions:
 - Seek the commitment of 500 or more delegates to attend, representing people in 20 countries from five continents, and having credentials defined by Article 19, Section C;
 - The minimum funds necessary to organize the sessions of the Provisional World Parliament are either on hand or firmly pledged.
 - Suitable locations are confirmed at least nine months in advance, unless emergency



conditions justify shorter advance notice.

Sec. B - Work of the Preparatory Commissions

1. The Ratification Commission shall carry out a worldwide campaign for the ratification of the World Constitution, both to obtain preliminary ratification by national governments, including national legislatures, and to obtain final ratification by people, including communities. The ratification commission shall continue its work until the full operative stage of World Government is reached.
2. The World Elections Commission shall prepare a provisional global map of World Electoral and Administrative Districts and Regions which may be revised during the first or second operative stage of World Government, and shall prepare and proceed with plans to obtain the election of Members of the World Parliament to the House of Peoples and to the House of Counselors. The World Elections Commission shall in due course be converted into the World Boundaries and Elections Administration.
3. After six months, in those countries where national governments have not responded favorable to the ratification call, the Ratification Commission and the World Elections Commission may proceed jointly to accomplish both the ratification of the Earth Constitution by direct popular referendum and concurrently the election of Members of the World Parliament.
4. The Ratification Commission may also submit the Earth Constitution for ratification by universities and colleges throughout the world.
5. The World Development Commission shall prepare plans for the creation of a World Economic Development Organization to serve all nations and people ratifying the World Constitution, and in particular less developed countries, to begin functioning when the Provisional World Government is established.
6. The World Disarmament Commission shall prepare plans for the organization of a World Disarmament Agency, to begin functioning when the Provisional World Government is established.
7. The World Problems Commission shall prepare an agenda of urgent world problems, with documentation, for possible action by the Provisional World Parliament and Provisional World Government.



8. The Nominating Commission shall prepare, in advance of convening the Provisional World Parliament, a list of nominees to compose the Presidium and the Executive Cabinet for the Provisional World Government.
9. The Finance Commission shall work on ways and means for financing the Provisional World Government.
10. The several commissions on particular world problems shall work on the preparation of proposed world legislation and action on each problem, to present to the Provisional World Parliament when it convenes.

Sec. C - Composition of the Provisional World Parliament

1. The Provisional World Parliament shall be composed of the following members:
 1. All those who were accredited as delegates to the 1977 and 1991 Sessions of the World Constituent Assembly, as well as to any previous Session of the Provisional World Parliament, and who re-confirm their support for the Constitution for the Federation of Earth, as amended.
 2. Persons who obtain the required number of signatures on election petitions, or who are designated by Non-Governmental Organizations which adopt approved resolutions for this purpose, or who are otherwise accredited according to terms specified in Calls which may be issued to convene particular sessions of the Provisional World Parliament.
 3. Members of the World Parliament to the House of Peoples who are elected from World Electoral and Administrative Districts up to the time of convening the Provisional World Parliament. Members of the World Parliament elected to the House of Peoples may continue to be added to the Provisional World Parliament until the first operative stage of World Government is reached.
 4. Members of the World Parliament to the House of Nations who are elected by national legislatures or appointed by national governments up to the time of convening the Provisional World Parliament. Members of the World Parliament to the House of Nations



may continue to be added to the Provisional World Parliament until the first operative stage of World Government is reached.

5. Those universities and colleges which have ratified the World Constitution may nominate persons to serve as Members of the World Parliament to the House of Counselors. The House of Peoples and House of Nations together may then elect from such nominees up to fifty Members of the World Parliament to serve in the House of Counselors of the Provisional World Government.
2. Members of the Provisional World Parliament in categories (a) and (b) as defined above, shall serve only until the first operative stage of World Government is declared, but may be duly elected to continue as Members of the World Parliament during the first operative stage.

Sec. D - Formation of the Provisional World Executive

1. As soon as the Provisional World Parliament next convenes, it will elect a new Presidium for the Provisional World Parliament and Provisional World Government from among the nominees submitted by the Nominating Commission.
2. Members of the Provisional World Presidium shall serve terms of three years, and may be re-elected by the Provisional World Parliament, but in any case shall serve only until the Presidium is elected under the First Operative Stage of World Government .
3. The Presidium may make additional nominations for the Executive Cabinet.
4. The Provisional World Parliament shall then elect the members of the Executive Cabinet.
5. The Presidium shall then assign ministerial posts among the members of the Executive Cabinet and of the Presidium.
6. When steps (1) through (4) of section D are completed, the Provisional World Government shall be declared in operation to serve the welfare of humanity.

Sec. E - First Actions of the Provisional World Government

1. The Presidium, in consultation with the Executive Cabinet, the commissions on particular world problems and the World Parliament, shall define a



- program for action on urgent world problems.
2. The Provisional World Parliament shall go to work on the agenda of world problems, and shall take any and all actions it considers appropriate and feasible, in accordance with the provisions of this World Constitution.
 3. Implementation of and compliance with the legislation enacted by the Provisional World Parliament shall be sought on a voluntary basis in return for the benefits to be realized, while strength of the Provisional World Government is being increased by the progressive ratification of the Earth Constitution.
 4. Insofar as considered appropriate and feasible, the Provisional World Parliament and Provisional World Executive may undertake some of the actions specified under Section C-12 of Article 17 for the first operative stage of World Government.
 5. The World Economic Development Organization and the World Disarmament Agency shall be established, for correlated actions.
 6. The World Parliament and the Executive Cabinet of the Provisional World Government shall proceed with the organization of other organs and agencies of the World Government on a provisional basis, insofar as considered desirable and feasible, in particular those specified under Section C-10 of Article 17.
 7. The several preparatory commissions on urgent world problems may be reconstituted as Administrative Departments of the Provisional World Government.
 8. In all of its work and activities, the Provisional World Government shall function in accordance with the provisions of this Constitution for the Federation of Earth.

(The Constitution for the Federation of Earth was originally ratified at the second session of the World Constituent Assembly held at Innsbruck, Austria in June, 1977; and was amended and ratified at the fourth session of the World Constituent Assembly held at Troia, Portugal in May 1991. The Amended Constitution is being personally ratified by outstanding personalities throughout the world as the campaign for ratification by the people and governments of the world get underway.)

Original world citizen [signatories](#) (320KB) to



the Earth Constitution, from 1977 and 1991.

For hard copies of this document, print this webpage. Distribution for ratification under the direction of the World Constitution and Parliament Association (wcpa.web.com).

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Quote from Benjamin Franklin at the close of the U.S.
Constitutional Convention in 1787

"I doubt, too, whether any other Convention we can obtain may be able to make a better constitution. For when you assemble a number of men to have the advantage of their joint wisdom, you inevitably assemble with those men all their prejudices, their passions, their errors of opinion, their local interests and their selfish views. From such an assembly can a perfect production be expected? It therefore astonishes our enemies, who are waiting with confidence to hear that our councils are confounded, like those of the builders of Babel... Thus I consent to this constitution, because I expect no better, and because I am not sure that it is not the best. The opinions I have had of its errors I sacrifice to the public good... I hope therefore, that for our own sakes, as a part of the people, and for the sake of posterity, we shall act heartily and unanimously in recommending this Constitution wherever our influence may extend, and turn our



future thoughts and endeavors to the means of having it well administered."

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CALL to the GLOBAL RATIFICATION and ELECTIONS CAMPAIGN

In the course of history, particularly during the past several hundred years, the technique of a Constituent Assembly has been developed and used under various circumstances as a means to devise the constitutions for democratic governments, either to create new governments where none existed before or to replace old or crumbling governments under both peaceful and revolutionary situations.

Sometimes such assemblies have been appointed by existing governments. At other times, under the most favorable circumstances, such assemblies have been elected by vote of established electorates. But at other times such assemblies have been composed and convened under circumstances where only a limited number of people of the country or areas involved actually took part in the selection of delegates. Only a small minority of any electorate might actually participate during the time when a new democratic government is emerging under conditions of revolution from tyranny or of political turmoil or urgent crises; or in the absence of any organized political system which was willing or able to supervise a vote of the total potential electorate for such an assembly or newly emerging democratic government.

It is under the later kind of circumstances that the move has gone forward during the years since World War II for the organization of a World Constituent Assembly to devise the constitution for a democratic form of federal world government. No previous world government or competent world authority has existed to organize or supervise elections to such a World Constituent Assembly. No universally approved electoral lists exist for the conduct of such elections. Existing national governments heretofore have proved unwilling or uninterested or hostile or otherwise unable to assist in either the appointment or election of working delegates to such a World Constituent Assembly, despite numerous appeals -- although these appeals are continuing.



Under the existing circumstances of global anarchy, of political turmoil in many parts of the world, of the suppression or non-functioning of democratic electoral procedures in many parts of the world, as well as of the unprecedented urgencies of many growing world-wide crises requiring extra-ordinary measures if humanity is to survive, action has been organized by the World Constitution and Parliament Association -- as well as by other organizations and groups since 1945 -- to attempt to convene World Constituent Assemblies for the purposes of preparing a constitution for democratic federal world government, and of securing the acceptance and ratification of such a world constitution.

Under these circumstances, the World Constitution and Parliament Association does not claim to have organized a World Constituent Assembly composed of delegates fully representative of and elected by the full potential electorate for such an assembly or for the subsequent world parliament which may emerge. The only claim made is that the delegates and volunteer participants in the four sessions of the World Constituent Assembly are composed of and are representative of those people and elements of society scattered around the globe who are ready, willing and able to move constructively under crises circumstances to devise a Constitution for Democratic Federal World Government, and to launch the first efforts to obtain widespread consideration and ratification and the beginnings of implementation of such a World Constitution.

Under these circumstances, we believe there have been convened four sessions of a World Constituent Assembly -- the first in August-September, 1968, at Interlaken, Switzerland, and Wolfach, Germany; the second in June, 1977, at Innsbruck, Austria; the third in 1978-79 at Colombo, Sri Lanka; and the fourth Assembly in Troia, Portugal, in May 1991.

Finally, these sessions of a World Constituent Assembly are fully consonant with the respected theory that democratic government arises from the initiative and consent of the people who will be the citizens under that government, that people at all times have the democratic right and prerogative to discharge or change any governments which do not adequately serve their welfare, and to initiate new governments when urgently required to their safety or welfare. No superior authority exists at any time to this basic right of people to initiate such action; and in particular, no



authority superior to action by people exists for the organization and functioning of a World Constituent Assembly or a democratic World Parliament.

Therefore, let us go forward with a GLOBAL RATIFICATION and ELECTIONS CAMPAIGN, appealing to people and governments to ratify the Constitution for the Federation of Earth which has been produced by these four sessions of the World Constituent Assembly.

We call upon the people of Earth to ratify the Constitution for the Federation of Earth, by direct Referendum and by Initiative Petition followed by election of delegates to the House of Peoples.

We call upon the national governments and legislatures of the world to ratify the Constitution for the Federation of Earth and elect delegates to the House of Nations.

We call upon the Universities, Colleges and Churches, Scientific Academies and Institutes to ratify the Constitution for the Federation of Earth and nominate delegates with a world view as candidates for election to the House of Counselors.

Let us move forward with courage and humility in the spirit in which these sessions of the World Constituent Assembly have been conceived, knowing that we are fully justified by the circumstances of world crises, the conditions of world-wide political turmoil and de facto global anarchy, and the recognized right and authority of people to act in the creation of democratic forms of government to serve their safety and welfare, as provided by the Constitution for the Federation of Earth. Although time may reveal the need for some amendments to this Constitution, it has been prepared by a broad global representation of qualified people and it is ready for ratification and implementation now. So let us build on this solid base which has been prepared over the last 25 years and unite our energies in achieving ratification and implementation.

(A major portion of this statement, under title of RATIONALE FOR WORLD CONSTITUENT ASSEMBLY, was adopted at the Third session of the World Constituent Assembly meeting at Colombo, Sri Lanka, from 29 December 1978, to 6 January, 1979.)



Original world citizen [signatories](#) (320KB) to the Earth Constitution, from 1977 and 1991.

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