
Prof. Dr. Timi Ecimovic

**The Information Theory of Nature,
and**



Medosi, Korte, Slovenia, 2006



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The Information Theory of Nature, and

Prof. Dr. Timi Ecimovic

Foreword by: Prof. Dr. Roger B. Haw

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Dear Readers,

We want to offer you a good book. If you have any reason to be unhappy, let us know, please!

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The Information Theory of Nature, And

By

Prof. Dr. Timi Ecimovic

Acknowledgment:

To my wife!

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

I am offering a complementary book on present complex issues of our civilization, science, the climate change system threat, political, economical and governing crisis and possible step forward into evolvement of the Nature knowledge, which is the only box of knowledge we need and may explore.

The Information Theory of Nature is possible answer to Unified Field Theory and other present high profile theories on Universe and Nature. Actually more on Universe as on Nature, because majority of humans have forgotten that the Nature exists, and they are exploring human eco system with great enthusiasm. The answer for future research on complex issues of exploring energy, matter, information, dimensions, particles, rays, powers, forces and yet not known contents of the Nature could be within our reach.

Moving forward the frontiers of physics to a new level and opening access for large exploration within any dimension of our world is my offer to all of you, who will find this book useful.

On 12th June 2006 with group of scientist and friends we have published the complementary book “Our Common Enemy – The Climate Change System Threat”, which has a very good response from public. The book is offering possibility for sustainable future of mankind and complex problem solving of present insolvable issues of our civilization relations with the Nature and environment or consequent destruction options from them to humanity.

So I am offering this complementary book to any individual, group, business, company, institution, governing body or international institution willing to sponsor distribution republishing it. I would support any action towards large distribution of this book.

It is my contribution, and I feel happy to have this chance to finalize my life work and to be in position to answer questions arising from my work. System Theory and practice, system thinking, analysis, synthesis and possibilities offered by them are tools not to be put aside, before trying to use them for benefit of mankind. Nobody is able to research this complex issue without help. In Nature as in society we are interdependent, interacting and co-operating for common goal.

Let me conclude this executive summary by expressing my gratitude to many colleagues, friends, associates and people of good will who contributed to my work at Climate Change Institute, The World Thinker’s Forum, and Ansted University where I was elected as Chair of Environmental Sciences and professor of Environmental Sciences which is my current occupation. Environmental Sciences could be one of the first chapters in the BOOK of Physics. Many more researchers would have to accompany a long list of past and present researchers who contributed to the BOOK of Physics, and I hope to be accepted as one of them.

Please do not hesitate to contact me for anything you think I may do for you.

Prof. Dr. Timi Ecimovic





1.2. Foreword by H. E. Baron Col. Chev. Prof. Dr. Roger Haw Boon Hong

In the human realm, we do not experience pure thought or pure feeling like the Original Creator does. Our thoughts and feelings are always intertwined. Like the electric and magnetic energies in electromagnetism, one always invokes the other. In humans, a thought causes feelings to arise. A feeling causes thoughts to arise.

In the realm of Original Creation, however, pure thought and pure feeling do exist as complementary principles, just like pure electric and pure magnetic components exist within electromagnetic energy.

On the base of The Information Theory of Nature can be expressed by the following equation:

$$M \text{ (Matter)} \times E \text{ (Energy)} \times I \text{ (Information)} + T \text{ (Time)} = \text{Nature/Life}$$

$$M \times E \times I + T = \text{Nature/Life}$$

The equation and applications of the Information Theory of Nature processes founded and developed by Prof. Dr. Timi Ecimovic, Ansted University Programme Director of Environmental Sciences shows the earth-nature factor are interdependences, interactions and co-operations.

The time factor in the equation is introduced for an understanding of the life as a process.

Prof. Dr. Ecimovic made great contributions with excellent results to mankind in the Physics and Environmental Sciences, Production technologies, Research methodologies and, especially in the area of Climate change system.

The main-line of argument in his research works are to demonstrate the scientific activity field in the area of Climate Change System aspect to enlighten mankind to take serious steps to protect the earth through the information theory of nature, industry of both constructivism and cognitive in the Environmental Sciences both technology and theory.

The significance of the argumentation consists in the fact that theories of personality are notoriously ungrounded in Theory of Knowledge.

The signal contribution however, is only a part of the research work. In the process of developing his argument, Prof. Dr. Ecimovics' drawing upon his specialized knowledge of the scientific activity field in the environmental sciences through the information theory of nature.

Processes both technical and theory, devised a simulacrum of the mind which serves the shed light both on effective and productive stages. Although, the project works main line of argument could stand alone independently of the simulacrum discussion, from a logical point of view modeling, and is several degrees of abstraction above existing models.



As an Ambassador for his profession he has given his time and expertise to several profession both private and public sectors. Prof. Dr. Ecimovic has demonstrated a visionary commitment to Environmental Sciences development activities.

He recognized the vital importance of his knowledge in the Environmental field and by investing his considerable energies and resources into his research works. He wants to build many partnerships with other institutions around the world. These connections not only provide better services for mankind and clients with learning experiences in exchange partner companies and opportunities to experience other countries and cultures.

He has driven these international collaborations because he is acutely aware that in the new millennium, as never before, everyone, whether we are talking about young business executives, artists, universities, everyone operates in a global environment where knowledge is strength.

His book written together with many authors from various countries involved in this publication project will tell us many interesting and useful information about life and nature in relation to Environmental Sciences.

Indeed all the authors of this book have made a significant positive contribution to mankind, culture and leadership, one which has been highly acknowledged by many international institutions, associations and organizations globally.

The result of this study tells mankind two important factors such as integrity and guilt.

Integrity means wholeness, completeness. A person with wholeness can focus their energies in one direction. A whole person achieves their life's purpose without the dissipation of energies caused by internal conflicts. They get things done with ease, and then move on to the next activity which further pursues their sense of inner joy.

Guilt and fear are, of course, part of the tradition that we have inherited from our forebears.

That tradition is one of separateness, separation of people into sexes, races, colors, religions. Then there's the separation of cities via competing sports teams, the separation of nations through competition, battles and wars. Even consciousness has been separated into subconscious, superconscious and regular waking states. Separation is the opposite of wholeness. Separation divides, while integrity unifies.

Dr. Owen Waters and I would like to give an illustration on the information theory of nature to help readers know more about our human life and earth as an object to make the theory even clearer.

The universe is a giant doughnut!

In physics, they call it a torus. Physicists speculate that the universe is toroidal-shaped. However, being a great fan of simplicity, I prefer the more 'sugar-coated' term, doughnut.

Moving beyond physics and into metaphysics, which is where all the fun stuff happens, the doughnut-shaped universe is really nothing more than a projection within the consciousness



of its Creator. Beyond the outer walls of that doughnut-shaped universe there is no space. Beyond the universe, there is only the consciousness that created space and everything else that makes up our universe.

Space is no more than a concept in consciousness. It isn't really "out there." Everything made from consciousness is "in here," within you.

Space is a projection within consciousness, manufactured for a specific effect. It is one of the dimensions in which we operate in the adventure called life. While everything is, in reality, just plain "here and now," not really "out there and back then," the manufacture of a map of projected consciousness created the different locations within this map of consciousness that we see as space.

Space is not infinite

The universe is made entirely of consciousness. The physical universe - the big doughnut - is held within infinite consciousness and is therefore, by definition, less than infinite.

When we were young, we were taught at school that space must be infinite because, if you were able to reach the outer limits of space, what could possibly lie beyond? If more space lies beyond what you thought was the limit of space, then space must be infinite... or so they said.

The problem was, no-one could imagine infinite space. It just seemed so counter-intuitive. The idea that infinite space would really exist just didn't sit right with anyone, but we all nodded our heads, thinking that grown-ups knew best.

In reality, physical space is finite, not infinite. It is a projection in consciousness contained within the Infinite Being which created it.

Time is not what it seems

Likewise, linear time is also finite. The term 'linear time' means clock-like time, and refers to the single timeline of past, present, future to which our brains are entrained.

The "time" before the universe was created was not time. It was pure consciousness - Infinite Being - from which time was created as yet another concept.

Both space and time are held in manifestation within the consciousness of Infinite Being. Nothing can exist outside of that awareness, for it is All-That-Is.

Everything, including the concepts of space and time, are created within its consciousness. Therefore physical space ends somewhere. It ends at the limit of the created universe. Beyond that perimeter at the edge of space lies Creator-consciousness.



Different points in time are merely different viewpoints in consciousness. Time appears to pass by in a linear fashion, but only because our brains are wired for, and entrained to, the illusion of the linear passage of time.

Most people on Earth have not considered that they can switch their focus to other locations in time and space at will. The energy required to instantly relocate a physical human body to another location in space-time might be prohibitive, but your mind can do it very easily. Remote viewing practitioners routinely visit other space-time locations under controlled conditions in order to gain information.

With brains that are entrained by the concept of linear time, we think of ourselves as being stuck in one location in space and in one position on our timeline. In reality, Infinite Being exists in the all-encompassing Here and Now and we are facets of Infinite Being. Therefore, all locations and all times can be reached just by transferring one's focus to a different place in time and space.

This is the critical cause that mankind has the power to destroy the world if we were take it lightly without care, concern of others and love our lovely environments. If the present situation is still carrying on, no one can survive and gradually the earth will be disappeared too.

As people develop their consciousness and their creativity in the dawning New Reality, these concepts will be explored more and more deeply.

Your purpose in life

Everyone comes into life with a purpose, a plan to explore certain attributes of themselves and the society of that era. However, beneath this immediate purpose lies an even deeper, long-term purpose.

You are the "eyes and ears" of Infinite Being, experiencing life from your own unique viewpoint. Your deepest reason for existence is actually the same as everyone else's. It is to develop your own unique character and potential to the fullest extent so that you can gain experience in life from your unique viewpoint.

The conclusion that can be reached from the thought is:

“Express your full potential. No-one else can do it for you, and no-one can tell you that you should do it differently. It's your life. You're in charge of it. Think before you act and do more good things to make this world a better place to live in. Inside of you there is full of potential but avoid doing things that are just for short term benefits.”

For me I see the universe as something which was created within the consciousness of Infinite Being, as something held within that immense, all-encompassing oneness. Now, as consciousness is the only tool available to the Original Creator, then the universe must be made of 100% consciousness. So, solid matter, including your computer and your desk, are really made of consciousness which is held in tension in order to appear solid.



We know that matter is energy, held in such an energetic tension that it appears solid. But what is energy? Energy is compressed consciousness. Energy appears in three forms in the universe. The higher, pre-physical form of energy is simply referred to as etheric energy. This form of energy can also be referred to as life energy, prana or chi.

The second form of energy is pure, inactive magnetic energy. This is the energy that forms the fabric of the universe. It is very dense, yet, because of its inert nature, it only reveals itself through interaction with other energies, for example, as the magnetic part of electromagnetic energy.

The third form of energy is electric energy. When set into motion, it invokes an automatic reaction from the magnetic fabric of space and travels as electromagnetic energy - as light waves, for example.

Happy reading!

Best regards,

Roger Haw

Brief profile:

Prof. Dr. Roger Haw (Email: bnhaw@tm.net.my) 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 member nations to UNESCO commissions. He has been elected by the UNESCO, Division of Ethics of Science and Technology, Social and Human Sciences Sector as one of the ETHICS EXPERTS. Prof. 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, 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.





1.3. Introduction to “The Information Theory of Nature”

By Prof. Dr. Mark Esposito

In our last two decades, we have been busy with the redefinition of what is the role of the natural resources and our responsibilities towards the planetary changes which have resulted into the largest acceptance of a constant climate change and a deterioration of the natural prime materials and resources, due to an unprecedented scruple free human driven activity.

This has raised a new level of awareness and most NGOs and Volunteering Organizations have seen their efforts drastically diverted towards the definition of a new way of acting like humans, inhabitants of this planet.

These efforts have been renamed accordingly and the different degrees of awareness processes have originated new established discussions, charged with the ethical responsibility to address this urgent nature-derogatory abuse, we are all partially liable for.

Many academicians, researchers and intellectuals have coined the existence of a word, which represents, almost in its deepest semantic significance, the natural way Nature has to protect, renew and prolong its existence for the future. This is nowadays called: **Sustainability**.

Sustainability, in fact, it is generally defined as a systemic concept, relating to the continuity of economic, social, institutional and environmental aspects of human society, as well as the non-human environment. The coral and most significant drive of this concepts, models itself from the originally natural equilibrium that our planet has always beheld, Vis a Vis of its capacity of “evolve” towards a continuous cycle of existence.

What most researchers have been doing though, it has been to take this original model and make it applicative and applicable to the human spheres of actions. At present, it is intended to be a means of configuring civilization and human activity so that society, its members and its economies are able to meet their needs and express their greatest potential in the present, while preserving biodiversity and natural ecosystems, and planning and acting for the ability to maintain these ideals in a very long term.

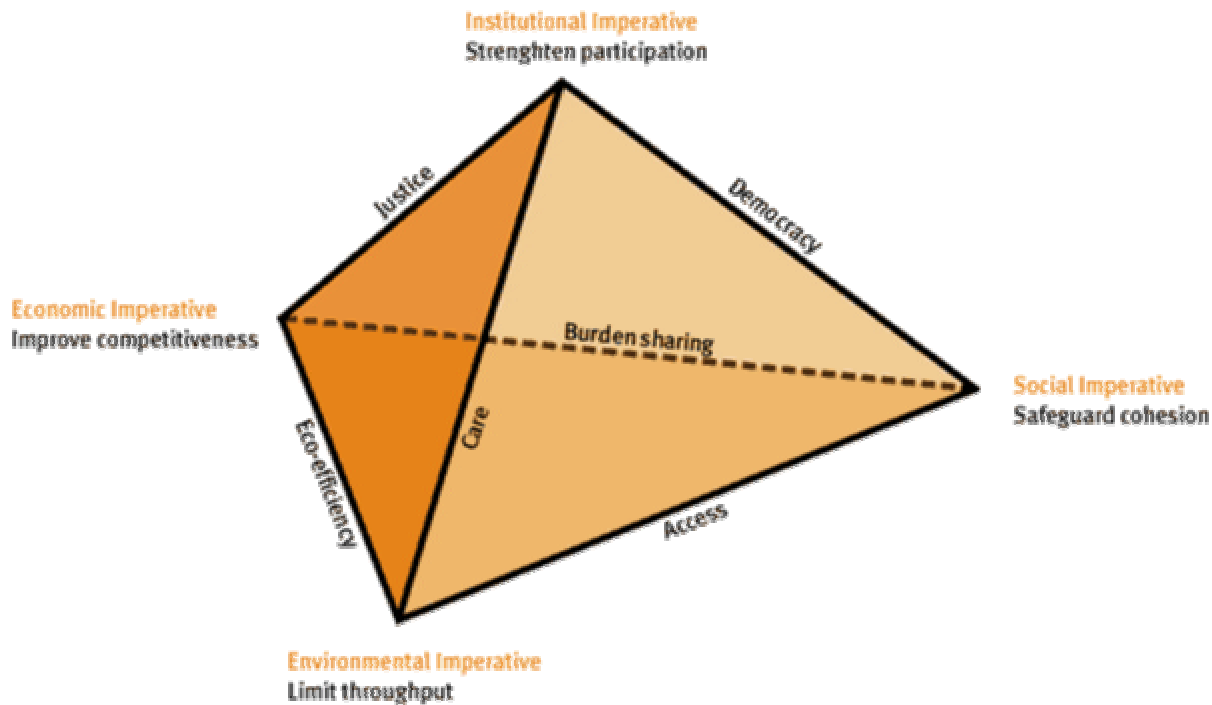
Sad enough to say, that we find ourselves into this recovery mode, where we have to act promptly, in order for us to be able to foster sustainability for our generations to come, otherwise we may not be able to offer future scenarios to the forthcoming generations of humans.

More specifically, the attempt for sustainability stretches itself in every possible direction and affects every level of organization, from the local neighborhood to the entire planet.

As we will see below from the “The prism of sustainability” elaborated by Joachim Spangenberg, we find ourselves compelled to determine our impacts and activities into the main conceptual and practical spheres of our “being aliveness”, from our role as citizens of societies which impose systems of living, rules and norms, to our economic deployment as



incorporating elements of current economies, to the cohesion and interaction among social diversities and strata, all the way to the utmost importance factor of nature, environmentalism and climatic changes.



Our biggest challenge

The central problem of sustainability is whether the human life support system on earth can continue indefinitely, or whether it is changing the world in radical ways that will fail. In nature, there are no examples of indefinite physical growth—whether humankind can transform its economic growth system into a sustainable approach is presently unknown and a matter of considerable debate.

To be added to this conversation, we need to consider how the idea of constant development, is not justified in nature. To be more explicit, nature does not prove or manifest “development”, but it evolves.

Our concept of evolution is very different from the concept that Nature applies to itself. What interrupts this process is the misconception of human life, always to be measured within numbers of productivity and enhancement, but this can be seen and asserted to be one of the main factors for such a great disparity between societies, in the world.

Sustainability can be defined both qualitatively in words, and quantitatively as a ratio. Put in qualitative terms, sustainability seeks to provide the best outcomes for the human and natural environments both now and into the indefinite future. The 1987 Brundtland Report, defined



sustainable development as development that „meets the needs of the present generation without compromising the ability of future generations to meet their needs “.

The term "sustainable development" was adopted by the Agenda 21 program of the United Nations.. The 1995 World Summit on Social Development further defined this term as *"the framework for our efforts to achieve a higher quality of life for all people,"* in which *"economic development, social development and environmental protection are interdependent and mutually reinforcing components“*.

The 2002 World Summit on Sustainable Development expanded this definition identifying the *"three overarching objectives of sustainable development"* to be (1) eradicating poverty, (2) protecting natural resources, and (3) changing unsustainable production and consumption patterns.

Some people now consider the term "sustainable development" as too closely linked with continued material development, and prefer to use terms like "sustainability", "sustainable prosperity" and "sustainable genuine progress" as the umbrella terms.

Despite differences, a number of common principles are embedded in most charters or action programs to achieve sustainable development, sustainability or sustainable prosperity. These include (Hargroves & Smith 2005, see bibliography):

- Dealing cautiously with risk, uncertainty and irreversibility.
- Ensuring appropriate valuation, appreciation and restoration of nature.
- Integration of environmental, social and economic goals in policies and activities.
- Equal opportunity
- Conservation of biodiversity and ecological diversity.
- Ensuring inter-generational equity.
- Recognizing the global dimension.
- The principle of continuous improvement.
- The need for good governance.

In this inspiring and highly researched book, **Prof. Dr. Timi Ecimovic** takes the reader to a fascinating journey through the understanding and the observation of Nature and its laws. This book is not only about Science, even if it speaks beautifully about Dr. Ecimovic's explorative approach; this book is also not only about Physics, even if the balanced laws of Physics “wallscreen” themselves as the magic dynamics which rule life on Earth.

But above all, this book is not only about Information Theory of Nature, but it gives hope, strength, willingness to pursue more targeted researches, power to think that we can create a change, we can manage it, we can implement it, we can instill it and we can become part of it.

Human activities are only about change from one state of our lives to another, but we have always failed to see this from happening. We have always posited the equation that life does not change, but develops. It doesn't.

This book is about creating harmony between Nature and our role on earth, but not only in our environmental policies and organizations: it talks about that harmony we can create in our



spirits, as soon as we will realize that Nature and ourselves share the same DNA, evolution and destiny.

Happy Reading,

Prof. Dr. Mark Esposito

About the author of this Introduction

Prof. D. Mark Esposito

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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 work as Program Director & Adjunct Professor for the University of Massachusetts Amherst in Switzerland, as Associate Professor of Management for Swiss Management Center 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



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1. 5. The Information Theory of Nature

Present understanding of the Nature has been building up as long as present civilization has been evolving. Just to demonstrate: in Europe 17 % of total land has been sealed or sixth part of total land area has been taken from the Nature system, and put into human practice use. For same time all processes of Nature have been put aside. No water to communicate, no nature to mitigate living conditions, no plants to mitigate the climate change system impacts and etc. Actually what I am trying to say is that I wonder whether our civilization has been acting for its own benefit or for some other purpose.

Thinking theory, system thinking, system analysis and synthesis are offering new thinking techniques to assist scientific, common, and whatsoever thinking patterns of our civilization, to restore natural thinking and acting towards a noble and a prestigious target of *sustainable future*¹ of mankind.

Seeking sustainable (development) future or harmony with the Nature is a path for survival of mankind. Present achievements have to be re-examined with aim of possible evolvments of present society towards sustainable future society. The target is very complex and far from being achieved by present practice of our society, with narrow thinking and acting for benefits of national elites, top sportsmen, artists and show-men.

Our mega cities have reached the peak of non human environment in which humans live in human (good citizens and elite) style and non human style for unlucky ones that live in slums. Our civilization has reached the status where the lands are no more abundant, water is restricted, and the air is more and more polluted. Our living environment is rapidly changing, and the climate change system is threatening to change it from manageable one to unmanageable one.

Our top international governing body The United Nations have been transformed from human society assistant to assistant of “money” democracies of “big” nations the USA², etc. At present UN in New York is mega millions dollars business for the USA. Present leadership has put UN in the role of obedient servant of “developed world”, multinational corporations and globalization, with no rights for other nations and peoples of under-developed world. The UN Council for Human Rights is missing basic understanding of what is what. UN should establish the Council for The Nature Rights Protection against attacks of human society (what 17 % of sealed land area in Europe is absolute proof of that).

To provide solutions, one has to re-examine the relevant system. Research is being conducted on a massive scale to understand systems operating within our biosphere. The “climate change system” has been introduced. This leads to studies of the system operating in the environment. Consequently the Information Theory of Nature has been invented. To explain the systemic background of nature three operative but “non-scientific” words are needed – interdependencies, interactions and cooperation³. It is while talking about impact that we arrive at the “Information Theory of Nature.”

¹ Sustainable Future is harmony of our civilization with the Nature (Ecimovic numerous statements).

² Please see complementary book Our Common Enemy – The Climate Change System Threat, Ecimovic et al., 2006 displayed at coming chapters or at www.institut-climatechange.si

³ Interdependences, interaction and cooperation as part of the Nature have been introduced by Ecimovic/Mayur/Mulej at The System Thinking and The Climate Change System, 2002, displayed at www.institut-climatechange.si



The question then arises as to what is this Information Theory of Nature? It is a system that is subsumed under a holistic unit of the natural system, including the Planet Earth. Nature exists as a system, whether we choose to interact with its mechanism or not. Our civilisation has assumed the prerogative to interpret it. There is thus, a dual interpretation to nature. Science understands it as it is, more or less, as a mechanism. Civilization sees nature in a different way. Both these interpretations do influence each other but not in the required holistic manner. Information theory of Nature can be expressed by the following equation:

$$M \text{ (Matter)} \times E \text{ (Energy)} \times I \text{ (Information)} + T \text{ (Time)} = \text{Nature/Life}$$

$$M \times E \times I + T = \text{Nature/Life}$$

If this equation is applied to our environment then the Universe, and the Earth are holistic units and the biosphere is the living environment/sphere of the Planet Earth. The basic relations amongst the earth-nature factors are interdependences, interactions and co-operations. The time factor in the equation is introduced for an understanding of the life as a process.

The Information theory of Nature has been devised as the basic quality of nature as a matter, energy and information where the information is an integral part of the nature as is matter and energy. Evolution of matter and energy is interconnected with evolution of information. All this should be within an *environment* and under the practice of interdependence, interaction and cooperation.

The information theory of nature is a case study of system theory/thinking implementation, as contribution towards a better understanding of the nature by a civilization. Information should not be misconstrued. It does not mean the process of communication or transmission of messages or a collection of data, its storage/retrieval or any other use of the word. "Information" as used in the Information Theory deals with:

- Information as an integral part of basic environment;
- Information as an integral part of matter and energy;
- Information not only as a part of the existing energy and matter but also of the evolving ones;
- Information on matter and energy do not exist if they are not integral part of the system/environment/basic environment/universe/cosmos in any dimension;
- Information, energy and matter are evolving within the interdependences/interaction and co-operation rules of all levels of systems within basic environment, and are making evolution of the Nature in case (requisitely holistic unit);
- Information as a part of Information theory of nature is the ability/quality of environment, energy, particles, rays or any form of matter, energy or natural powers and forces, and yet non known contents within the Universe, to make impact. This theory is a theoretical approach addressing basic problems in understanding nature. It fills in the need for a holistic presentation of nature.



The Information Theory can explain any whole, part, unit, mezzo, micro or macro dimensions in an infinite cosmos. One can understand evolved environment, evolution within environment, energy, matter, rays, particles, natural powers, forces and not yet known contents of the Nature regulated by interdependencies, interaction and co-operation principles. The rules do not exist but are the result of a particular case content. We may mention environmental characteristics of the case deciding on the rules – like liquid methane rivers and lakes on the Jupiter moon – Titan. Using this theory one can understand any processes like transformation of matter energy and information within environment under interdependencies, interaction and co-operation principles up to the present. The solution for a sustainable (development) future lies in maintaining harmony between nature/biosphere of the planet earth and all users of it. This is the answer to the future of our civilization. Systems theory, especially dialectical systems theory as a science of interdependence methodology through interdisciplinary co-operation is the core of the future.

The Information Theory of Nature is commencing point of Environmental Sciences to become a chapter at the beginning of the Book of Physics. It is seen and known when heard and understood, but not yet used at scientific and research work as well as practice or applied research due to need for evolvement of new part of the Mathematics as scientific language of our civilization. The characteristics of the environment are making evolvement within the nature possible.

Let me give two case stories. When Plasmodium the causing agent of malaria enters human blood by mosquito, it is introduced into best possible environment. It reproduces and causes malaria. If not cured it may cause death of plasmodium host the human.

Big bang theory provides answers to almost 99 % of the theoretical approach to the beginning of Universe. Figuratively expressed the environment is changing our Universe into many other requisitely holistic Universes or one Universe of which our Universe is just a part.

Many more explanations could be elaborated from, the simple systems as combustion engine, human society, rocket etc to finally largest to us known system The Universe, which could be explained by using system theory, system thinking, analysis and synthesis. The Planet Earth as a part of Universe, Milky Way Galaxy, and Solar System is representing requisitely holistic unit to hold living nature as it is in our case and the Universe we are a part of. Understanding reality of it is a treasure of Nature given to humanity as path for survival and existence.

The information Theory of Nature is a missing part needed for the new frontiers of science movement towards sustainable future of mankind. By evolvement of other contents human society may have option of sustainable future and large explorations within the Nature. It incorporates present knowledge and opens an option for confirmation and reintegration of it. All big achievements as: Big Bang Theory, Unified Field Theory, Strings Theory, Particles research, dimensions research, use of geometry and algebraic operations, reconfirmations of present knowledge, and many more possibilities will be achievements in the future of mankind.

Instead of conclusions let us conclude as Gandhi stated: “Be the change you want to see in the world”.





2. And

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 N. Chumakov, Prof. Dr. Roger B. Haw, Prof. Dr. Peter A. Wilderer, and Prof. Dr. Glen T. Martin

To Humanity on the Earth Day 2006!

**Homo hominis lupus .
(Tit Makcij Plavt, Latin saying)**

**Clovek cloveku 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



2. 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 complexes 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.



2. 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 show 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 academician 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!

Best regards,

Roger Haw



3. 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.

Dr. Terence P. Amerasinghe

Dr. T. P. Amerasinghe is a distinguished scholar of international repute. He is presently the President of the World Constitution and Parliament Association and the head of the Provisional World Parliament. He is also the President of the Graduate School of World Problems, besides serving in a number of institutions promoting peace and international understanding.

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.



Prof. Dr. Alexander N. Chumakov

Prof. Dr. Alexander Nikolaevich Chumakov (1950) has address: 113152, Russia, Moscow, Zagorodnoe shosse, 9/2 – 32. phone.: (095) 958-62-07. He is Vice-president of the Russian Philosophical Society (from 1991); Professor of the Moscow Academy of Law (from 1993); Chairman, Philosophy Department, Russian Academy of State Services to the President of the Russian Federation (from 2000). He is Member of the Russian Ecological Academy (1994). Doctor of Philosophy (Ph.D.) – (1991). Bachelor of science – (1984). Graduate from the Moscow State University, Department of Philosophy (1981). 1981-1984 – Postgraduate course (Department of Philosophy Moscow State University). 1984-1987 - assistant, lecturer (Moscow Academy of Law). 1987-1991 - First Secretary of the Philosophical Society of the USSR.

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.

Prof. Dr. Glen T. Martin

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Glen T. Martin is Professor of Philosophy and Religious Studies at Radford University in Virginia. He is Secretary-General of the World Constitution and Parliament Association (WCPA) (www.wcpa.biz), President of International Philosophers for Peace...(IPPNO) (www.radford.edu/~peace/IPPNO/), and Vice-President of the Institute On World Problems (IOWP) (www.worldproblems.net). Dr. Martin has lectured, published, and travelled in many countries of the world in the service of world peace and a transformed future for humankind. He is author of three books – *From Nietzsche to Wittgenstein: The Problem of Truth and Nihilism in the Modern World*, *Millennium Dawn: The Philosophy of Planetary Crisis and Human Liberation*, and *World Revolution Through World Law: Basic Documents of the Emerging Earth Federation*. Martin has published dozens of articles on a variety of topics in political commentary, comparative philosophy, the spirituality of human liberation, economic democracy, democratic world government, and global social issues. His personal home page is found at www.radford.edu/~gmartin.



Prof. Dr. Peter A. Wilderer

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. H. A. Shankaranarayana

Prof. H. A. Shankaranarayana, is the Program Director 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. 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.



4. 1. Our Common Enemy – The Climate Change System Threat

With “development”⁴ 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 tsunami, 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.

⁴ DEVELOPMENT is wrongly used term for human activities, which in the Nature does not exist. In the Nature there are evolvement, 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 HUMANKID 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 System⁵

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.

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 Plent 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 Theory⁶ 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 Plent Earth. We will concentrate on some basic features of the climate change system in order to support the two suggestions.

⁵ As support for understanding you may look at the end of this presentation to »Atlas« drawings.

⁶ 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 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.

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 evolvement of the first life structure, and the later evolvements 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 Plent 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 Plent 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 the end of this presentation for better understanding).

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 systems⁷/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.

⁷ 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.





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 Pluto⁸ 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
- 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

⁸ New 2 outer planets datas are not yet known to author.



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 the end of this presentation for better understanding).

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 evolvement, 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 dioxygen, 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 than come the biotopes specialized according to local conditions – swamps and marshes, bush lands, makia/gariga (Mediterranean), mountains, the Sub-artic, Artic 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 evolvements. We may explore the past and see the present of these systems, but we cannot see future evolvements, 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 sealed⁹ 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.

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.

⁹ 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, aducation and sport facilities etc.



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 future¹⁰ 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 survival¹¹ and sustainable future or harmony of our civilization with the Nature.

¹⁰ Sustainable future is harmony of humankind and the Nature/Biosphere of Planet Earth.

¹¹ The scientists who contributed to this thinking by their work or ideas are as follows: late Dr. Rashmi Mayur, Mumbai, India; late Prof. Dr. 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 Hersch, 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, Austria; and many others past and present members of the SEM Institute for Climate Change.





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 Constitution¹²

17. 1. The World Constitution and Parliament Association

The Federation of the Planet Earth Constitution and Parliament Association (WCPA) have understood since its 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 through 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 ecosystems of the Earth: to protect the planetary environment itself (number 18)¹³, 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

¹² By Prof. Dr. Glen T. Martin and from his book »World Revolution Through World Law«, 2006/2006

¹³ Numbers of references correspond to References of the book above mentioned.



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 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 a 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 than 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 Re-volution.

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 more clever 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:
 - o The House of Peoples, to represent the people of Earth directly and equally;
 - o The House of Nations, to represent the nations which are joined together in the Federation of Earth; and a
 - o 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 Ombudsman, 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 compse 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 rightst 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 with 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.

Distribution for ratification under the direction of the World Constitution and Parliament Association (wcpa.web.com).

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20. Atlas

When we have been writing our book System Thinking and Climate Change System in 2001/2002 Ecimovic/Mulej/Mayur (please see at www.institut-climatechange.si) we had assistance from lady who drew 23 tables as Atlas for better understanding of book presentation.

We are presenting same Atlas into this book with same purpose of better understanding. The »Atlas is as follows:

A T L A S

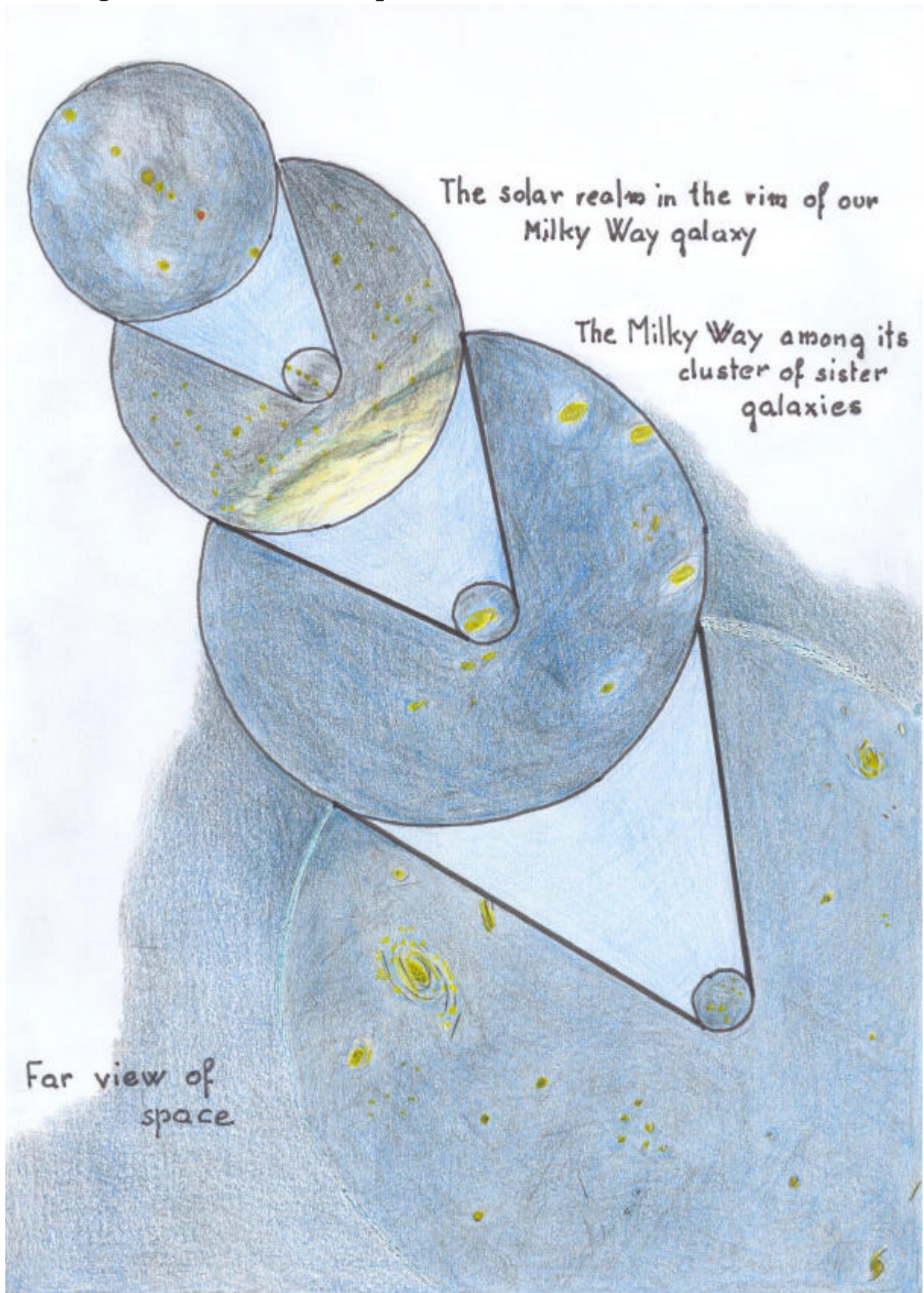


CONTENT:

- Drawing No 1. – Far View of Space
- Drawing No 2. – Planet Earth
- Drawing No 3. – Geology of the Earth
- Drawing No 4. – Oxygen Appearance on the Earth
- Drawing No 5. – Earth and Radiation
- Drawing No 6. – Radian Energy
- Drawing No 7. – The Transfer and Transformation of Radian Energy
- Drawing No 8. – The Atmosphere – Temperatures
- Drawing No 9. – Creation of Ozone in the Atmosphere
- Drawing No 10. – Catalytic Ozone Destruction Cycle in Stratosphere Involving Nitrous Oxide
- Drawing No 11. – Catalytic Ozone Destruction Cycle in Stratosphere Involving Water Vapor
- Drawing No 12. – Catalytic Ozone Destruction Cycle Involving Chlorofluorocarbons
- Drawing No 13. – Creation of the Ozone in the Troposphere
- Drawing No 14. – Atmospheric Ozone Destruction
- Drawing No 15. – The Decline of the Atmospheric Ozone over South Pole
- Drawing No 16. – Atmospheric Carbon Dioxide and Earth Temperature
- Drawing No 17. – Variations of Carbon Dioxide in the Earth Atmosphere
– Variations of the Earth Temperature During last Millennium
- Drawing No 18. – Human Population over Past Centuries
– The World use of Coal, Petroleum and Natural Gas
- Drawing No 19. – The Atmospheric Concentration of Methane – Last Millennium
- Drawing No 20. – The Water Cycle
- Drawing No 21. – The Large Scale Salt Transport System in Today's Oceans
- Drawing No 22. – Processes in the Carbon Cycle
- Drawing No 23. – Processes in the Sulphur Cycle

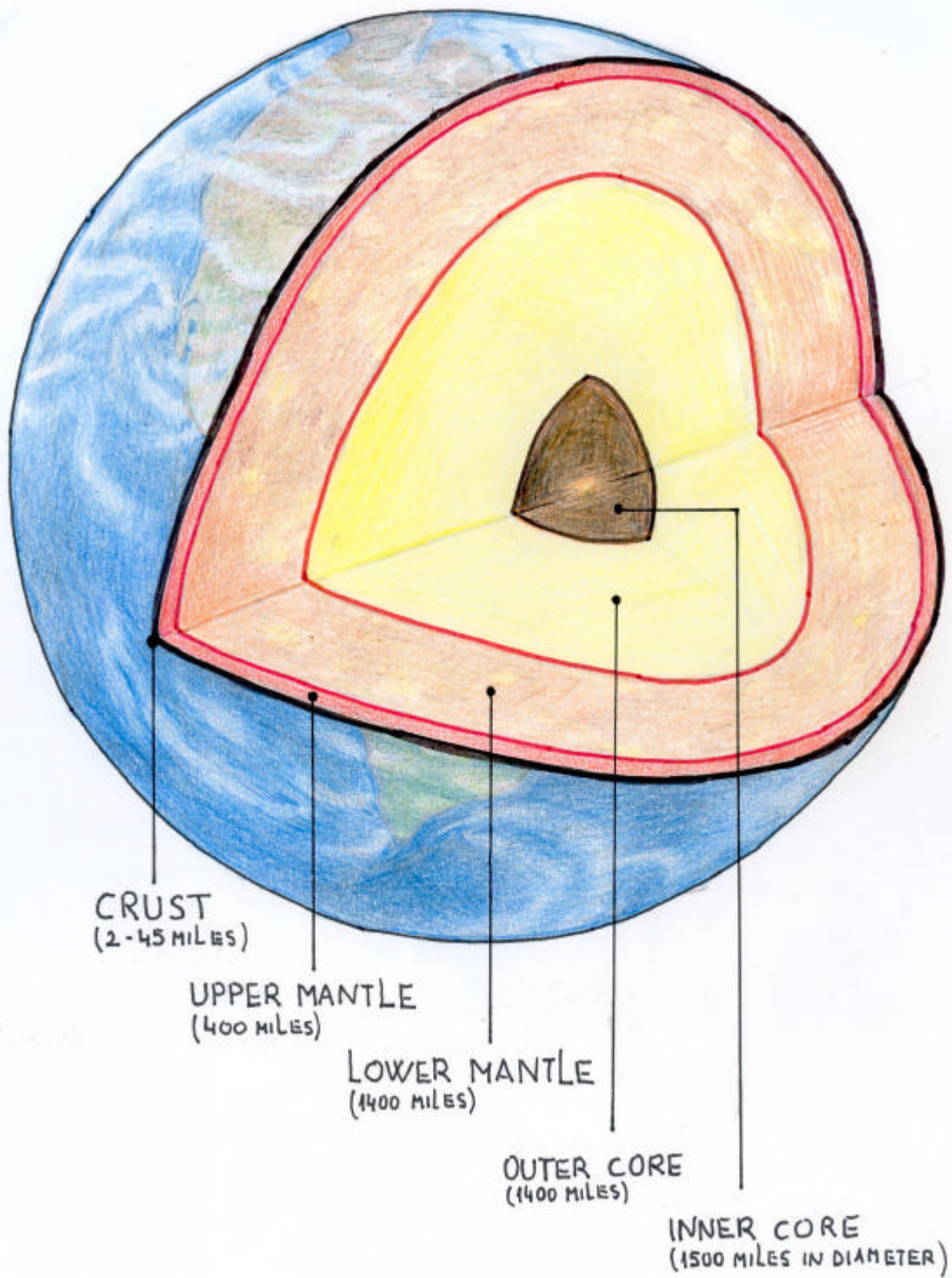


Drawing No. 1 Far View of Space



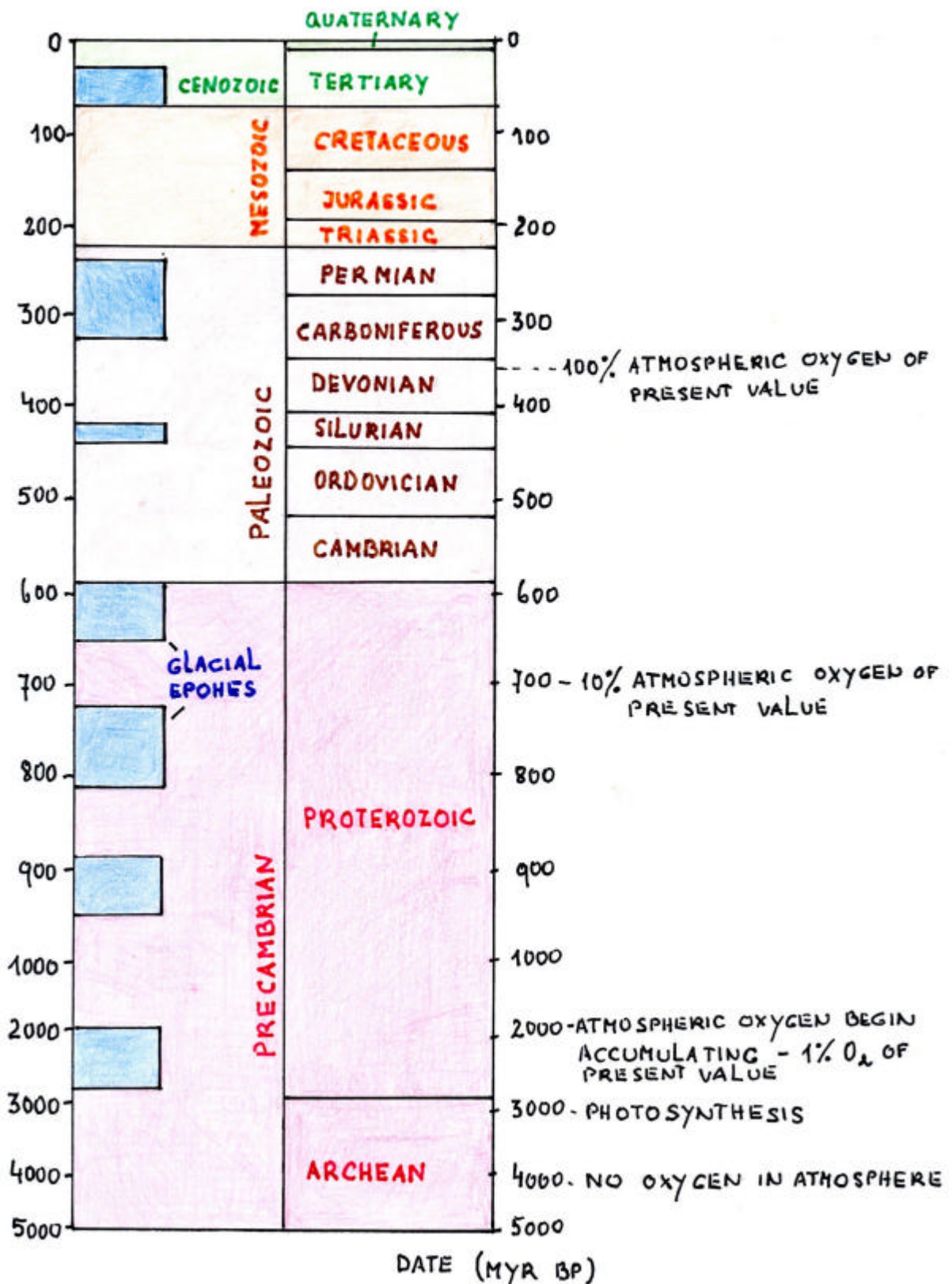


Drawing No. 2 Planet Earth



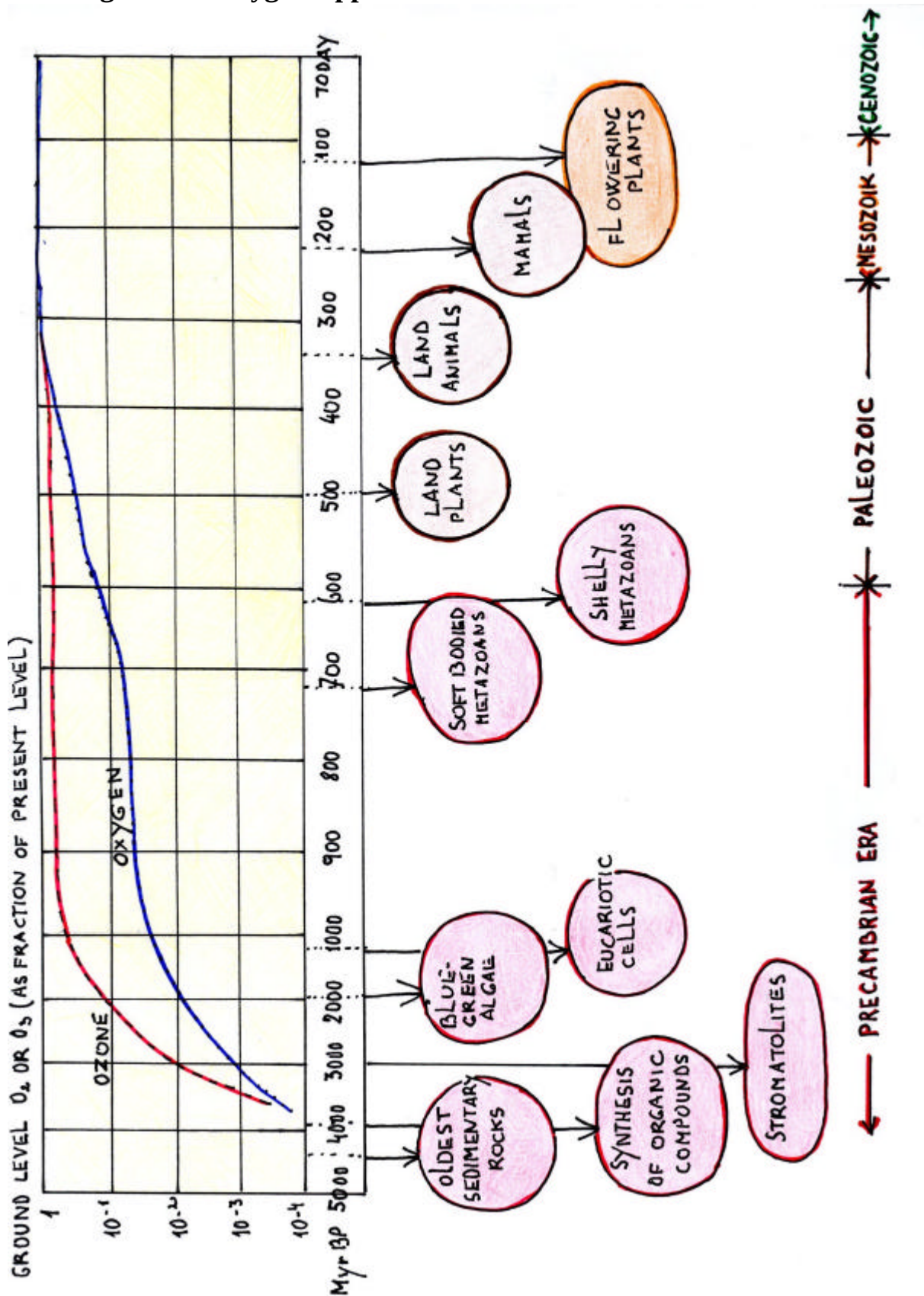


Drawing No. 3 Geology of the Earth



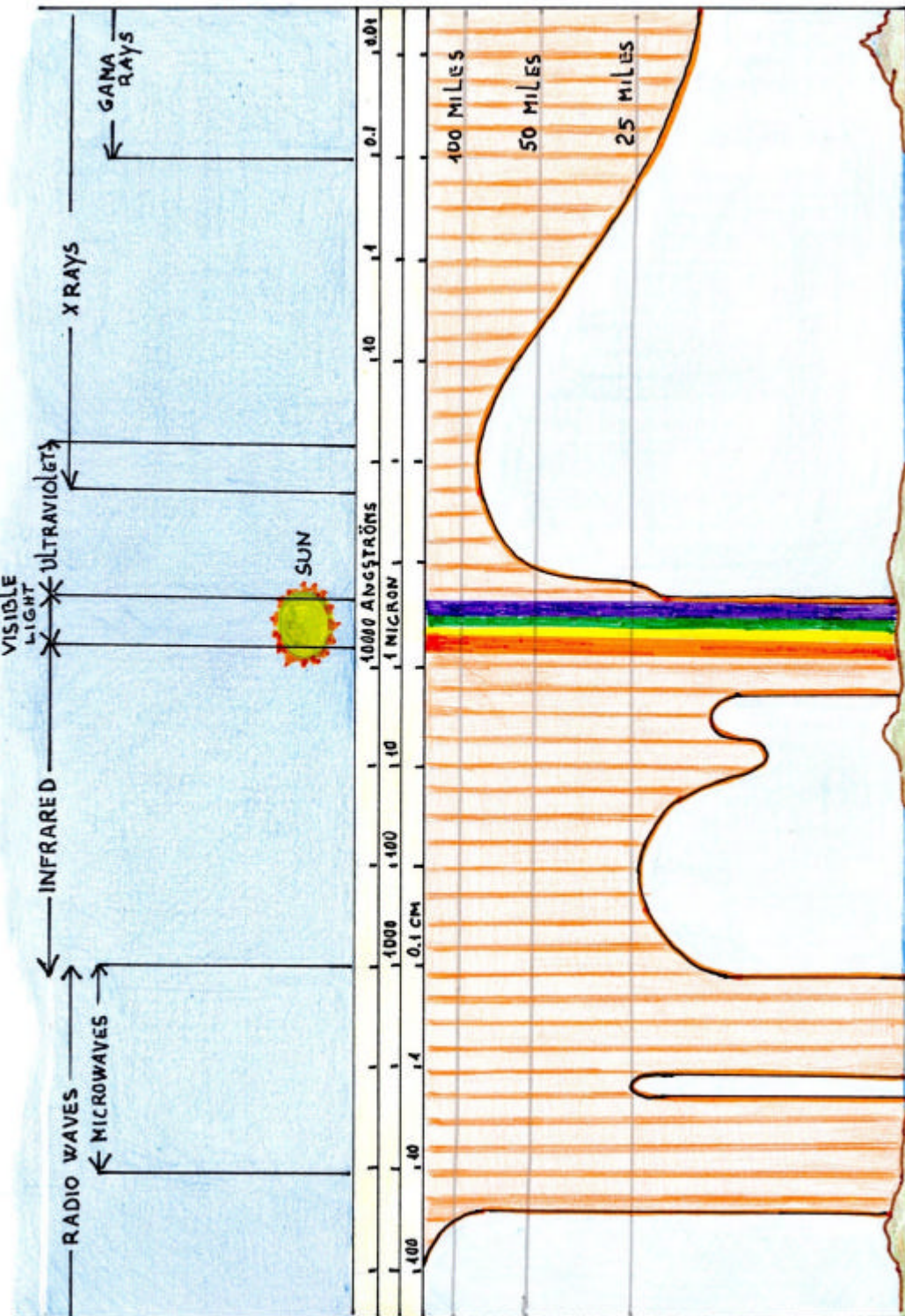


Drawing No. 4 Oxygen Appearance on the Earth



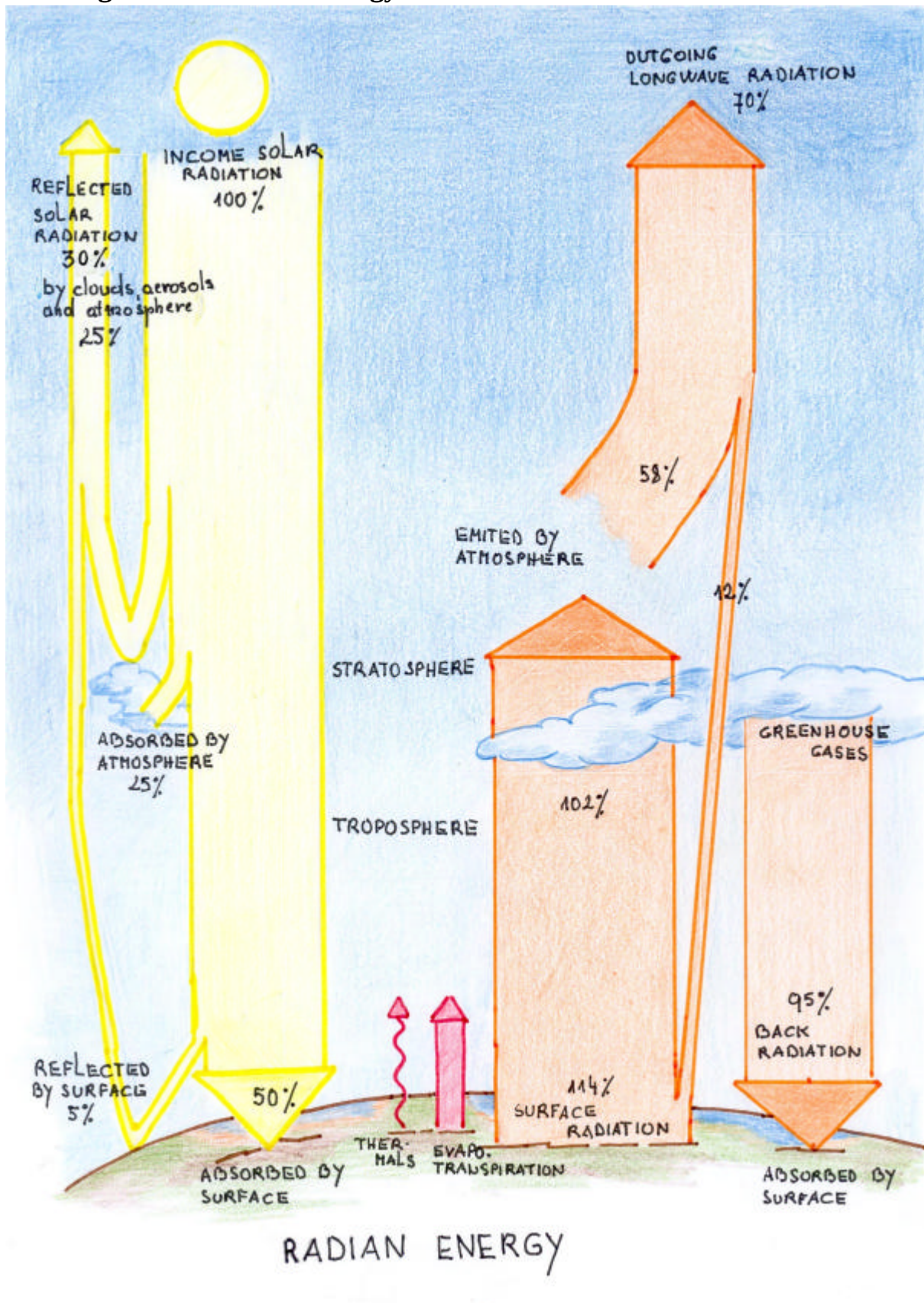


Drawing No. 5 Earth and Radiation



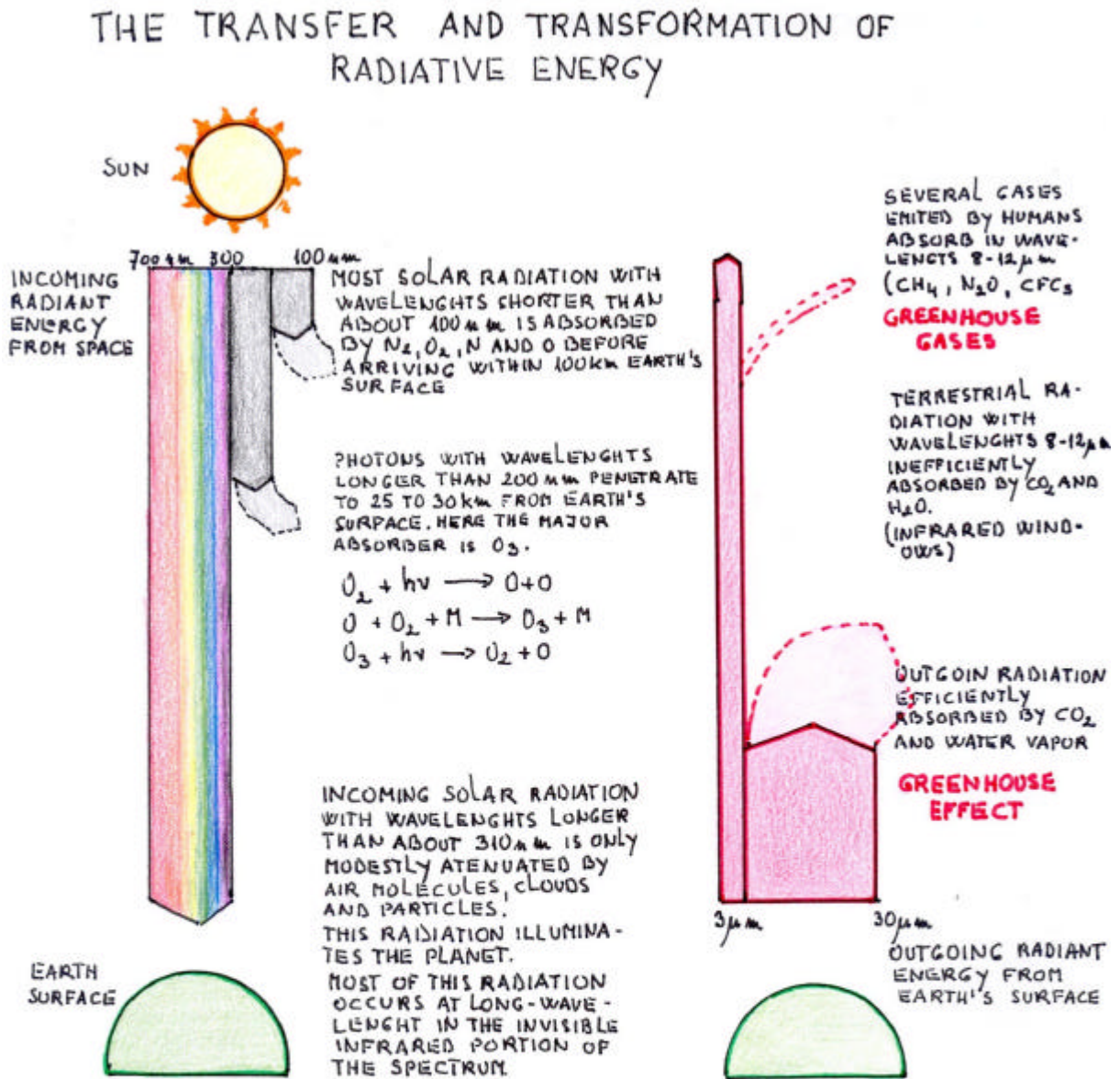


Drawing No. 6 Radian Energy





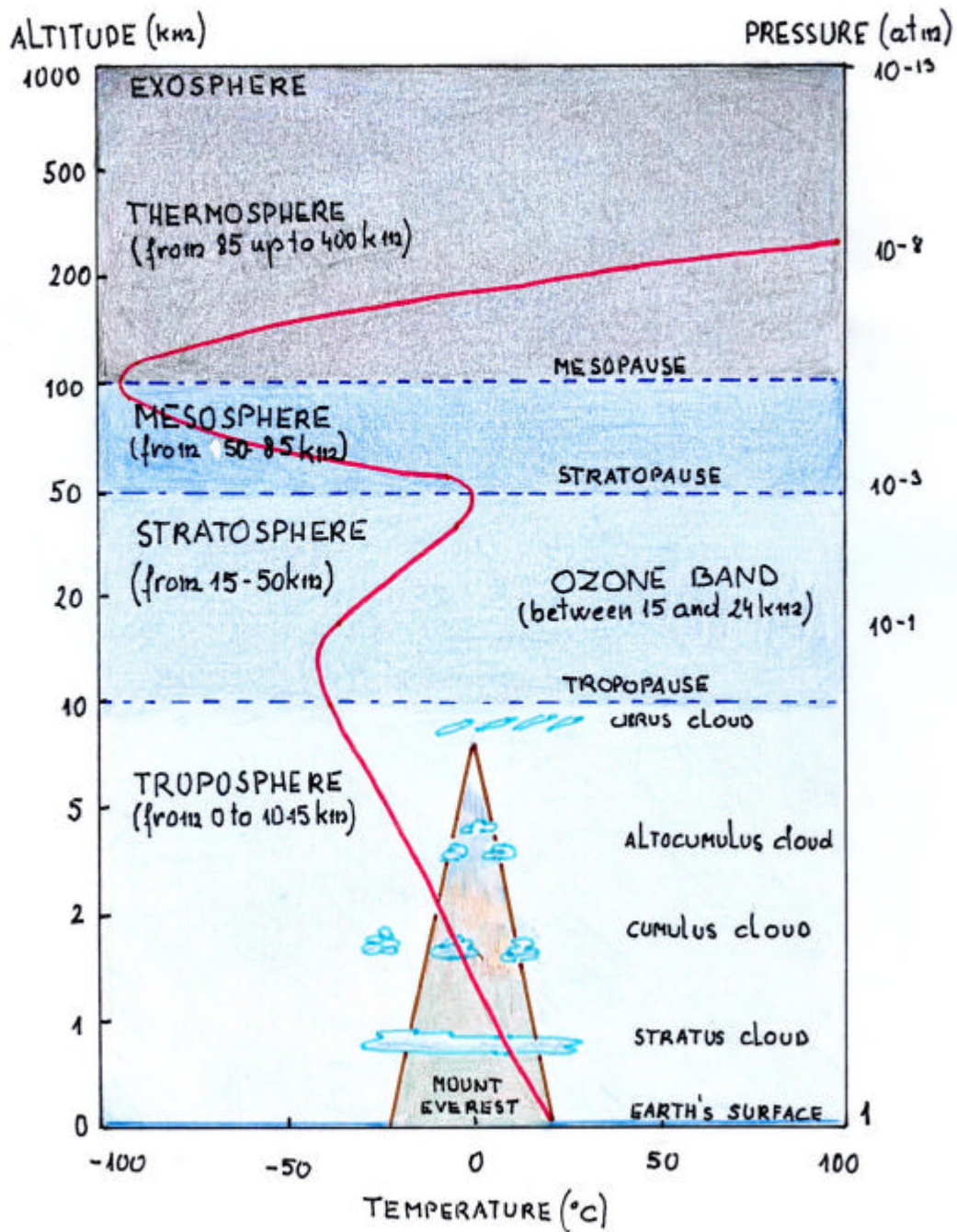
Drawing No. 7 Transfer and Transformation of Radian Energy



- $1 \mu m = 10^{-6} m$; $1 nm = 10^{-9} m$
- $h\nu$ IS STANDARD SYMBOL FOR A SINGLE PHOTON OF APPROPRIATE FREQUENCY TO BE ABSORBED BY, AND FURNISH ENERGY TO, THE MOLECULE DESTINED FOR DISSOCIATION
- M IS ANY AIR MOLECULE (USUALLY N_2) OR OXYGEN THAT ACQUIRES THE EXCESS ENERGY LIBERATED BY REACTION : $O + O_2 + M \rightarrow O_3 + M$



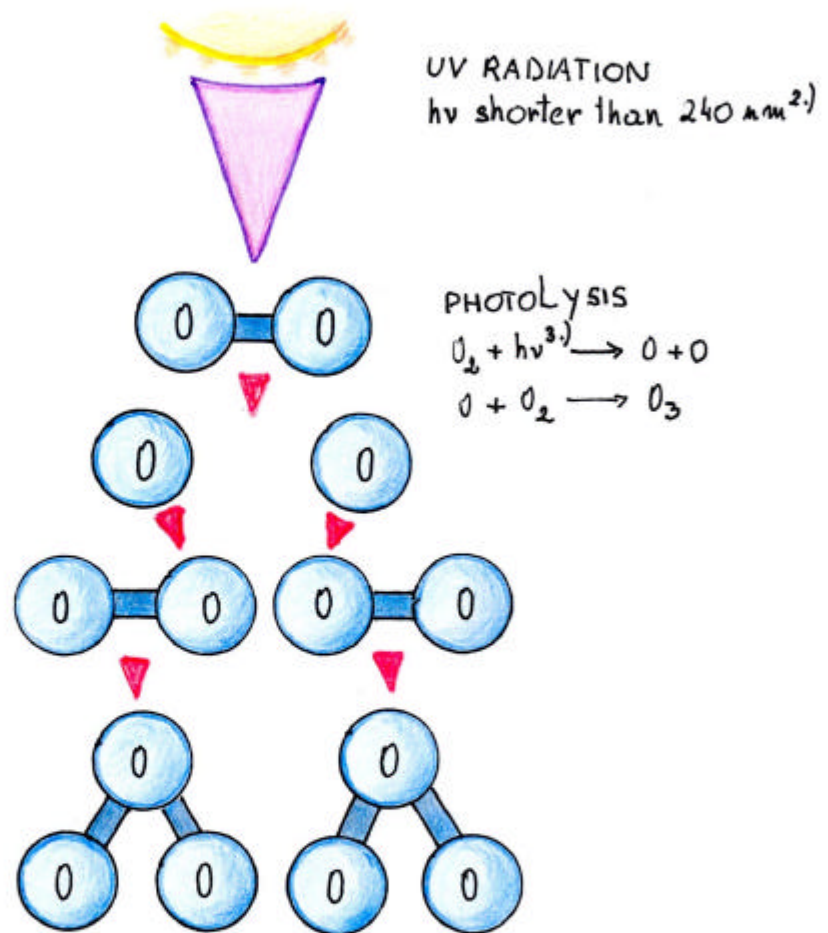
Drawing No. 8 The Atmosphere - Temperatures





Drawing No. 9 Creation of Ozone in the Atmosphere

CREATION OF OZONE IN THE ATMOSPHERE ^{1.)}

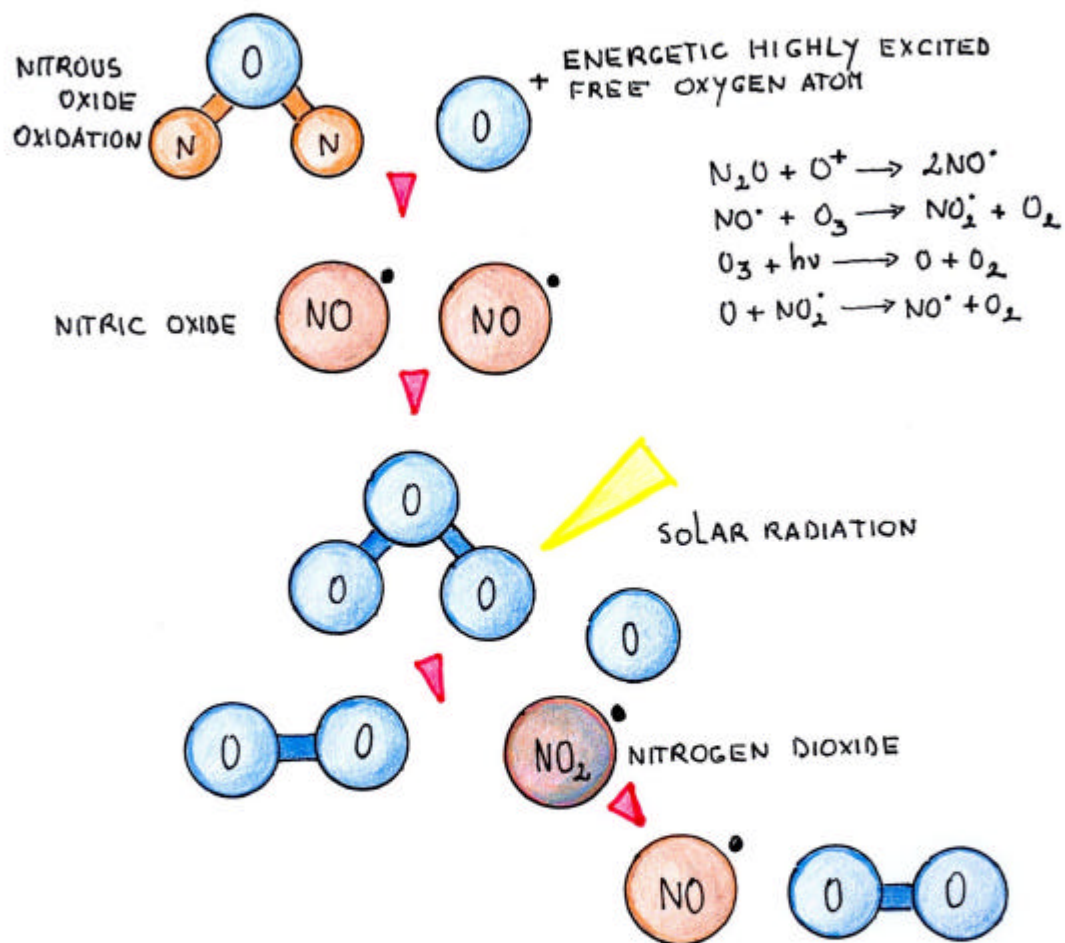


- 1.) 90% of ozone occurs in the stratosphere, where it is produced by the action of solar radiation on oxygen
- 2.) $1\text{ nm} = 10^{-9}\text{ m}$
- 3.) symbol for a single photon of appropriate wavelength



Drawing No. 10

CATALYTIC OZONE DESTRUCTION CYCLE IN STRATOSPHERE INVOLVING NITROUS OXIDE (N_2O)

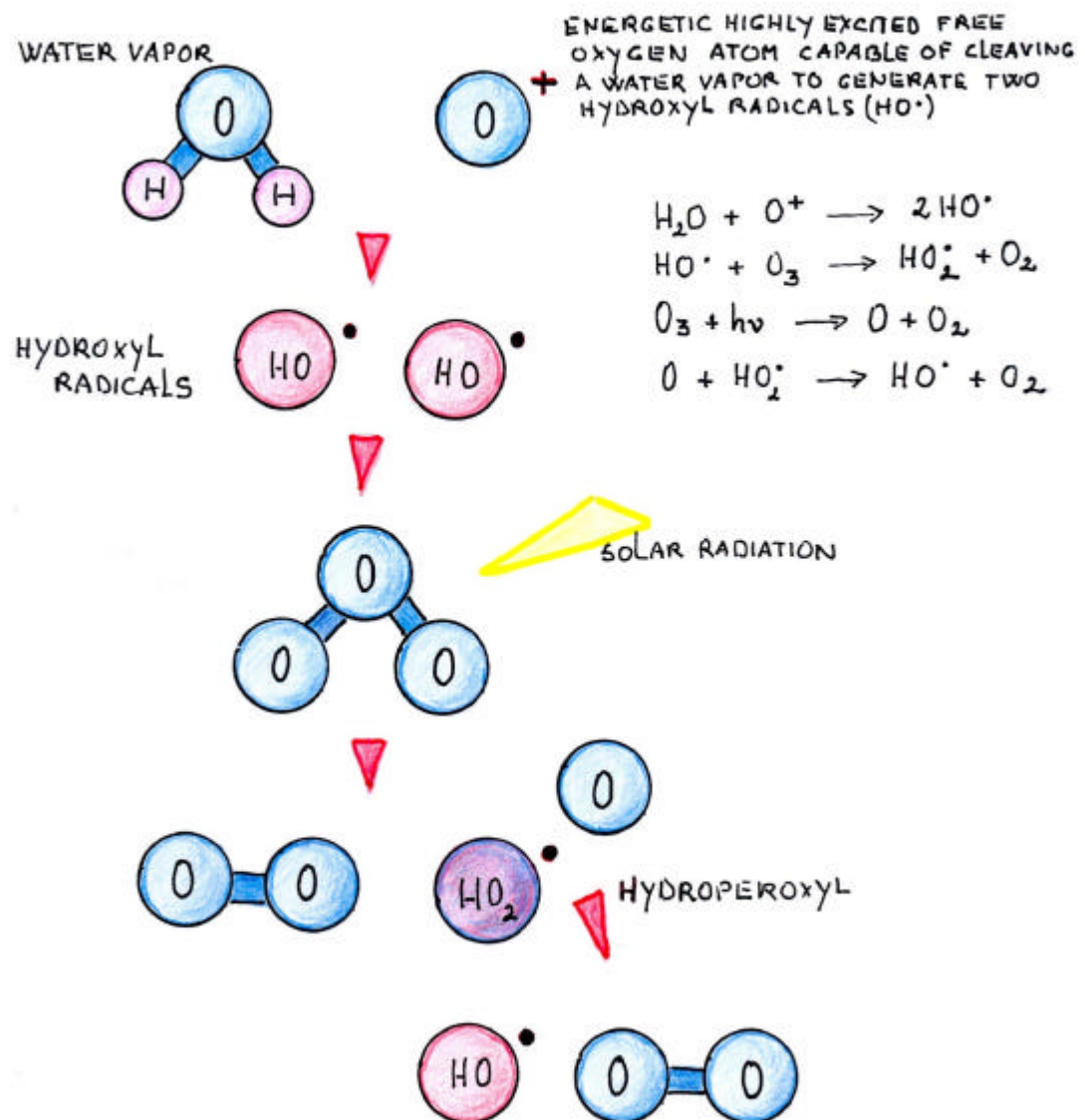


- MOST OF NO_x IN STRATOSPHERE IS A CONSEQUENCE OF GROUND-LEVEL EMISSIONS OF N_2O , LARGELY FROM MICROBIOLOGICAL PROCESSES IN SOIL AND OCEANS.
- NITRIC OXIDE CAN ALSO BE INJECTED DIRECTLY INTO STRATOSPHERE, FOR EXAMPLE BY HIGH-FLYING AIRCRAFT. NO_x EMITTED BY AUTOMOBILES AND POWER PLANTS ARE EFFICIENTLY CONVERTED TO THE NITRIC ACID (HNO_3) AND REMOVED FROM THE AIR BY RAINFALL.



Drawing No. 11

CATALYTIC OZONE DESTRUCTION CYCLE IN STRATOSPHERE INVOLVING WATER VAPOR (H_2O)

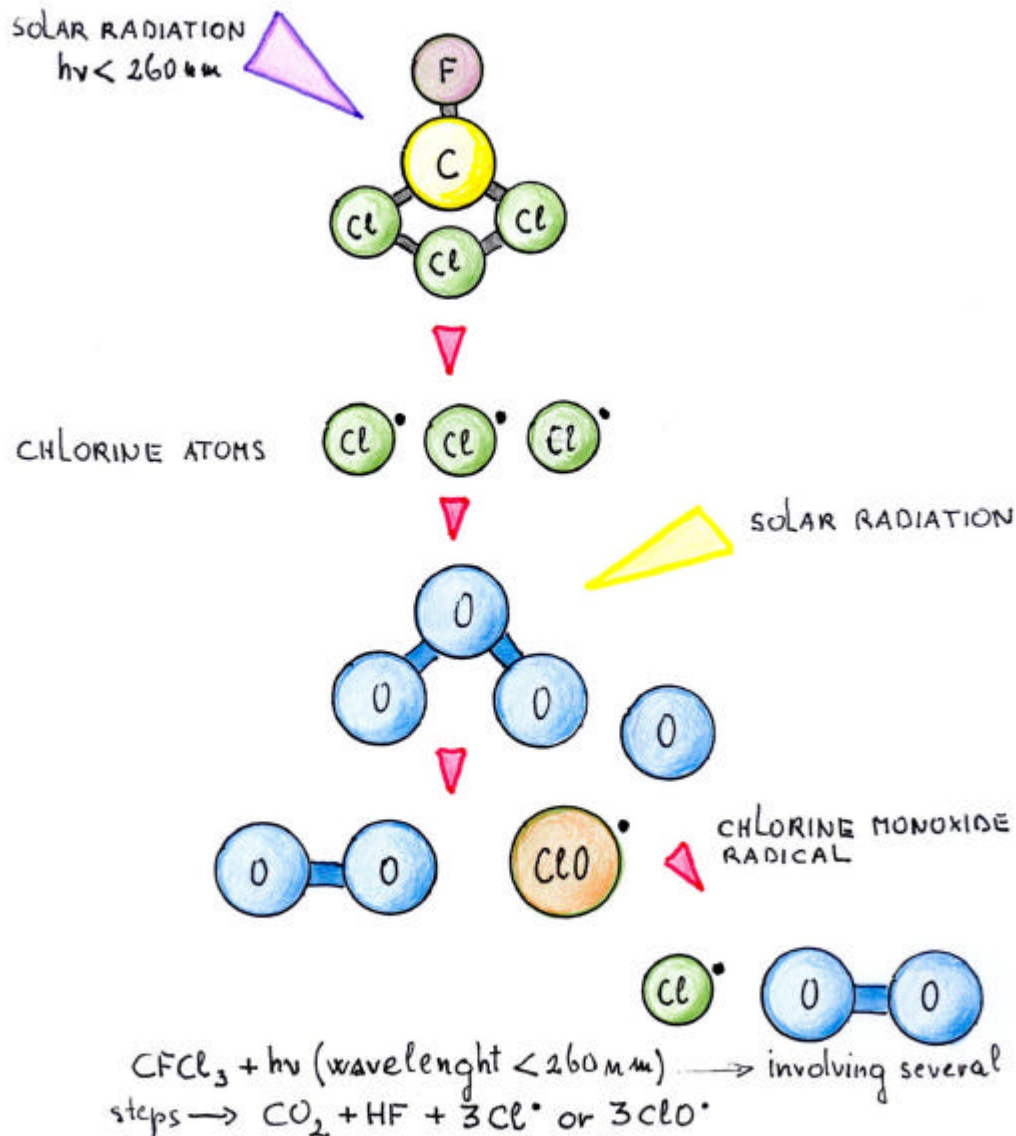


- + ABSORBING SOLAR RADIATION OZONE READILY DISSOCIATES. A SMALL FRACTION OF THAT RADIATION HAS ENOUGH ENERGY TO PRODUCE NOT JUST FREE OXYGEN ATOM, BUT A HIGHLY EXCITED ONE.
- FREE RADICALS WITH ODD NUMBER OF ELECTRONS AND THUS HIGHLY REACTIVE



Drawing No. 12

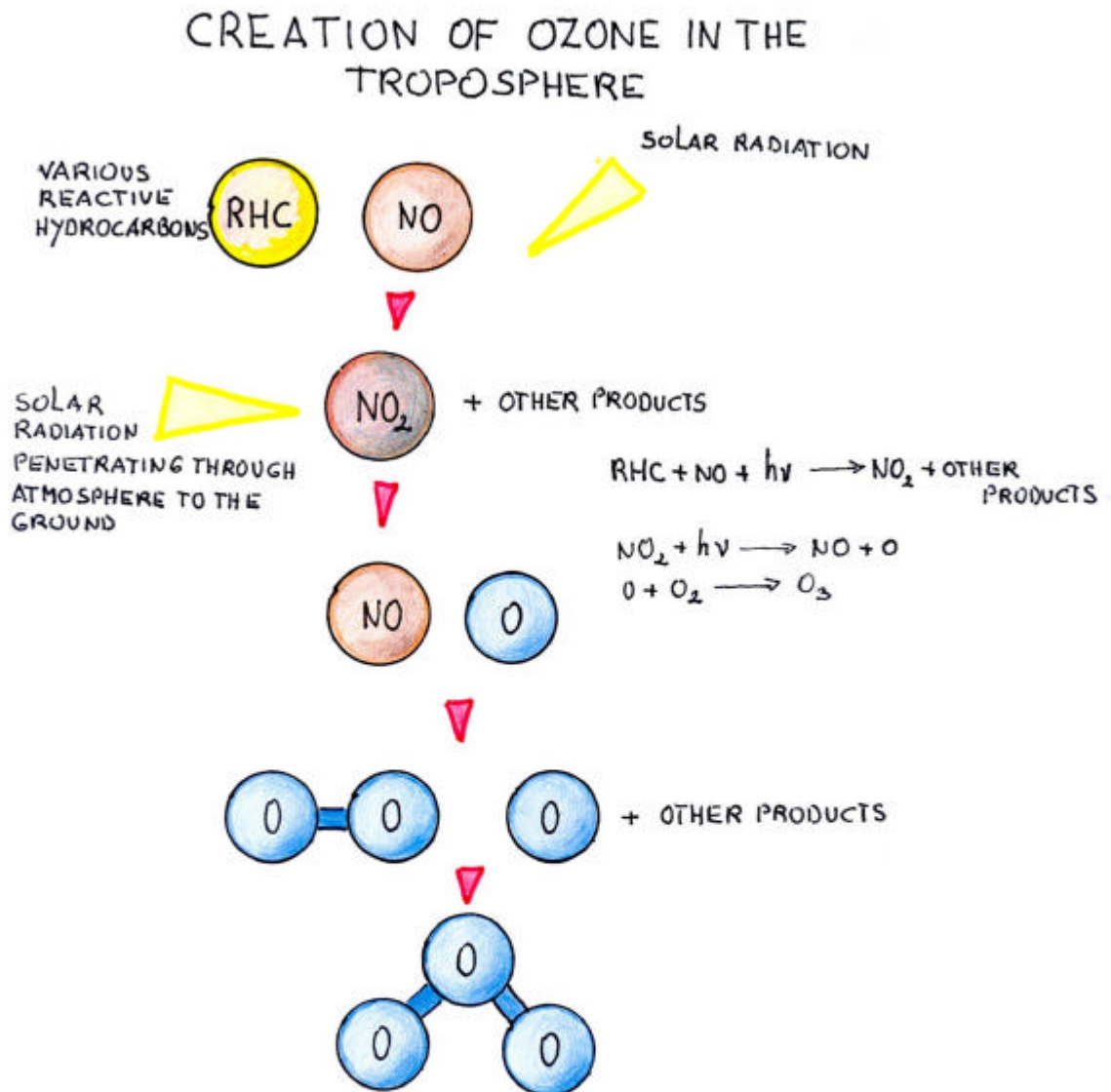
CATALYTIC OZONE DESTRUCTION CYCLE IN STRATOSPHERE INVOLVING CHLOROFLUORO- CARBONS (CFCs)



- MINOR AMOUNTS OF CHLORINE ARE ALSO SUPPLIED TO THE STRATOSPHERE BY OCCASIONAL VOLCANIC ERUPTIONS AND BY THE UPWARD TRANSPORT OF METHYL CHLORIDE (CH_3Cl), A PRODUCT OF SEAWEED AND BIOMASS BURNING
- THE NATURAL CHLORINE CONTENT OF THE STRATOSPHERE IS ABOUT 0.6 ppbv, THE QUANTITY SUPPLIED BY CFCs IS CURRENTLY ABOUT 3 ppbv.



Drawing No. 13

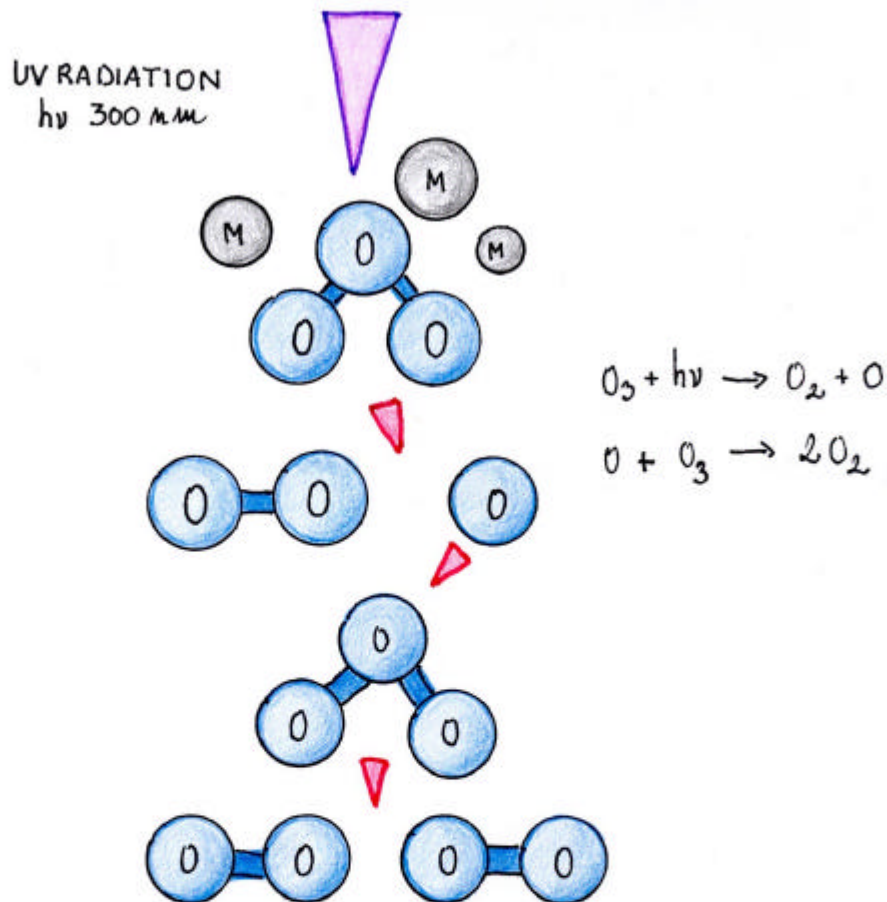


- BEFORE HUMAN TECHNOLOGY PROGRESS, NO_x WERE PRESENT ONLY ON OCCASION, DURING FOREST FIRES OR LIGHTENING FLASHES.
- RHC IN NATURE ARE ALSO EMITED BY VEGETATION (FOR EXAMPLE TERPENES ARE RHC MOLECULES. URBAN OZONE GENERATION IS MOST EFFICIENT WHEN THE RELATIVE PROPORTION OF RHC TO NO_x IS ABOUT 7:1.



Drawing No. 14

ATMOSPHERIC OZONE DESTRUCTION

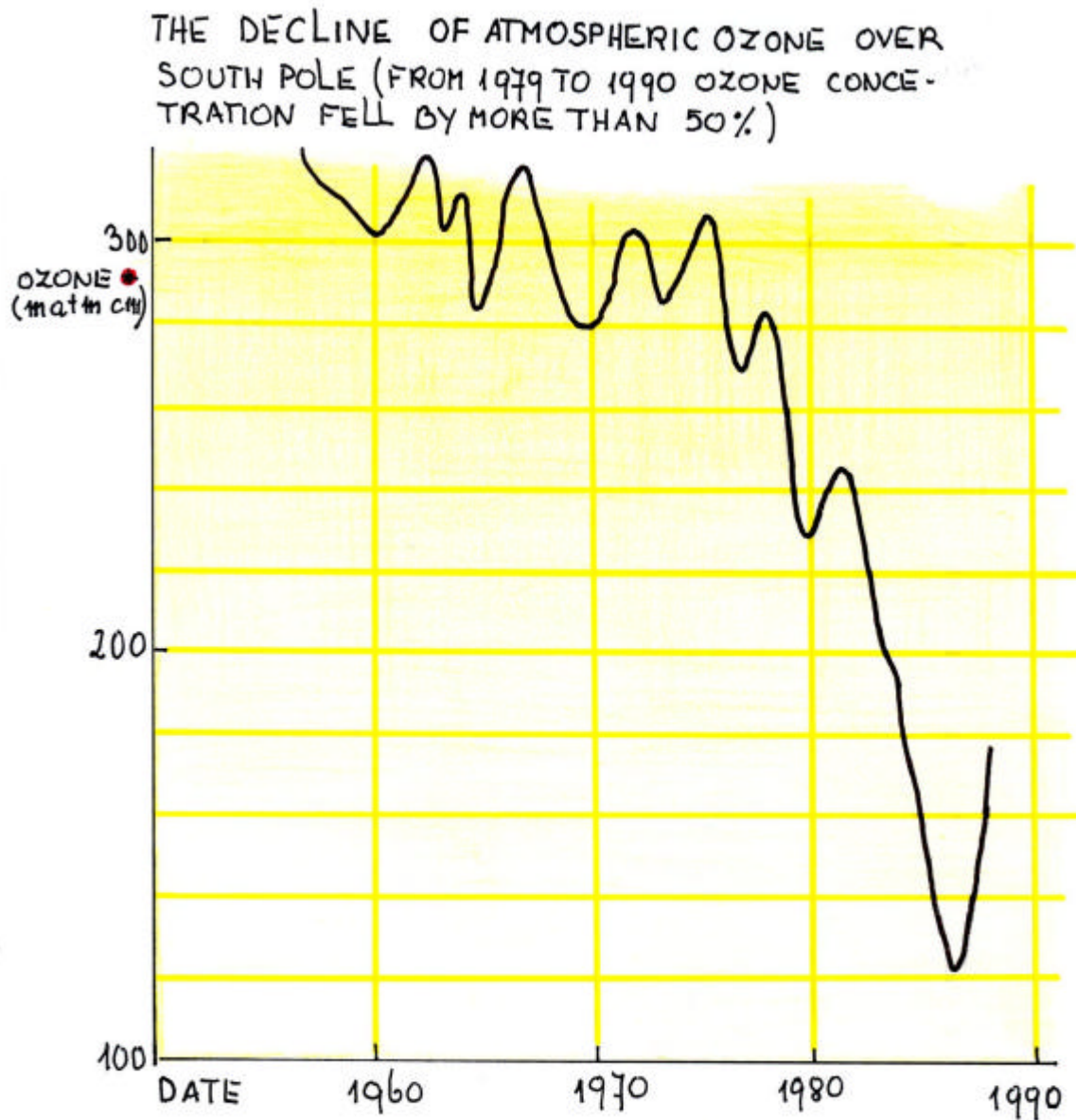


X TROPOSPHERIC OZONE ORIGINATES FROM THE STRATOSPHERE, FROM WHICH IT OCCASIONALLY DESCENDS THROUGH ATMOSPHERIC MOTIONS, SINCE PHOTODISSOCIATION OF MOLECULAR OXYGEN TO PRODUCE OZONE CAN OCCUR ONLY AT WAVELENGTHS SHORTER THAN 240 nm.

(M) ANY AIR MOLECULE THAT ACQUIRES THE EXCESS ENERGY LIBERATED IN REACTION $O + O_2 \rightarrow O_3$ (FOR EXAMPLE H_2O , N_2 , CFCs, $CHCl_3$..)



Drawing No. 15

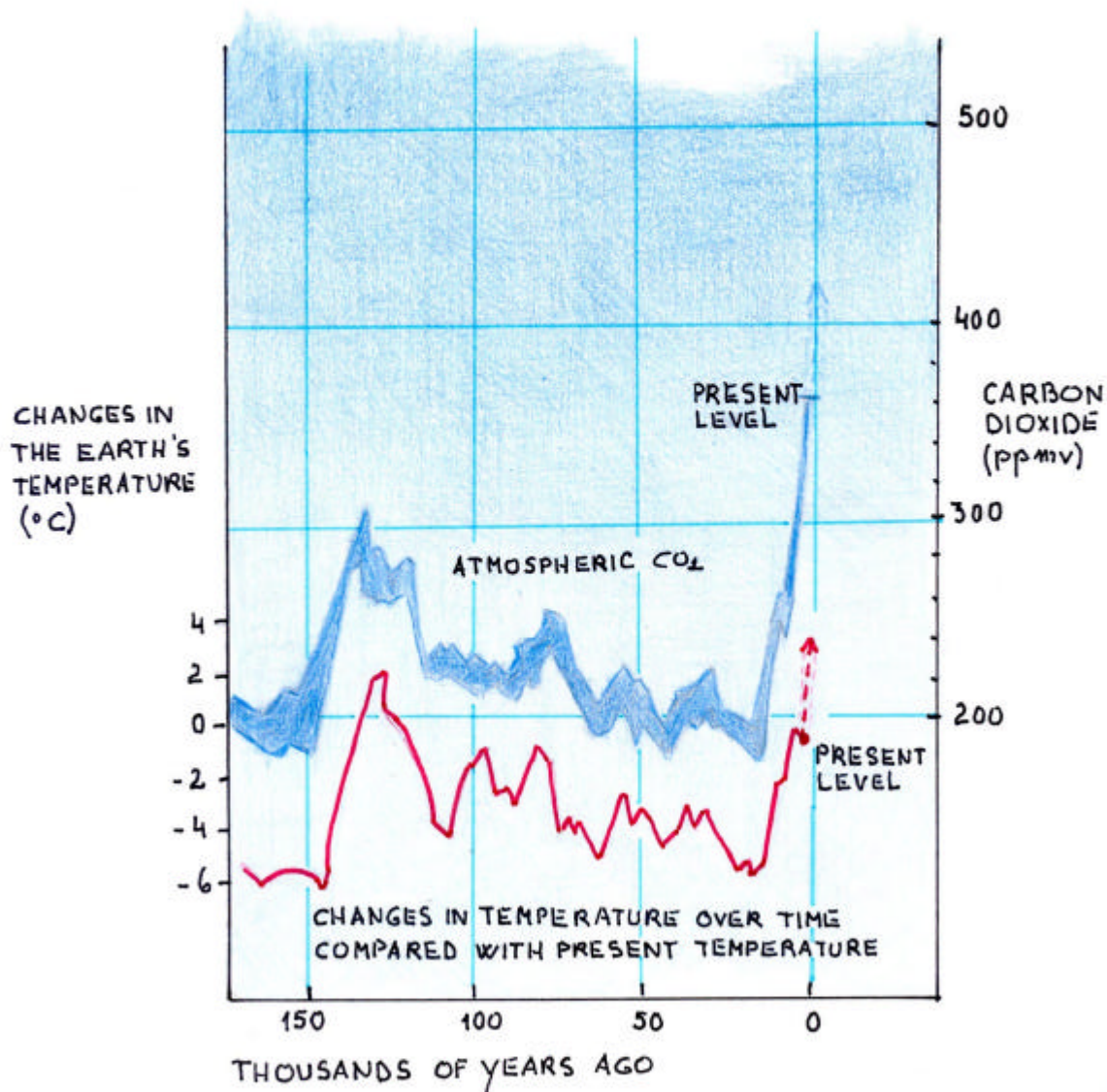


- A LAYER OF GASEOUS OZONE 1mm THIC A 1 ATMOSPHERIC PRESSURE AND 0°C CORRESPONDS TO 100 matm cm



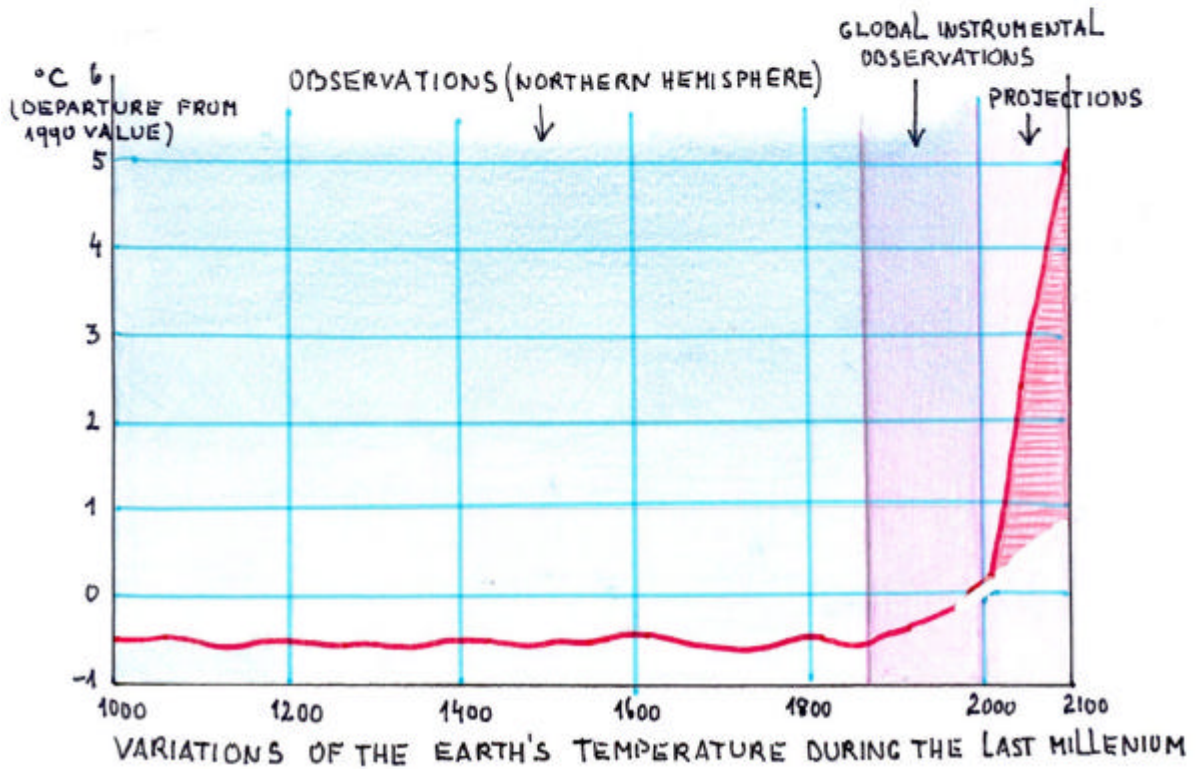
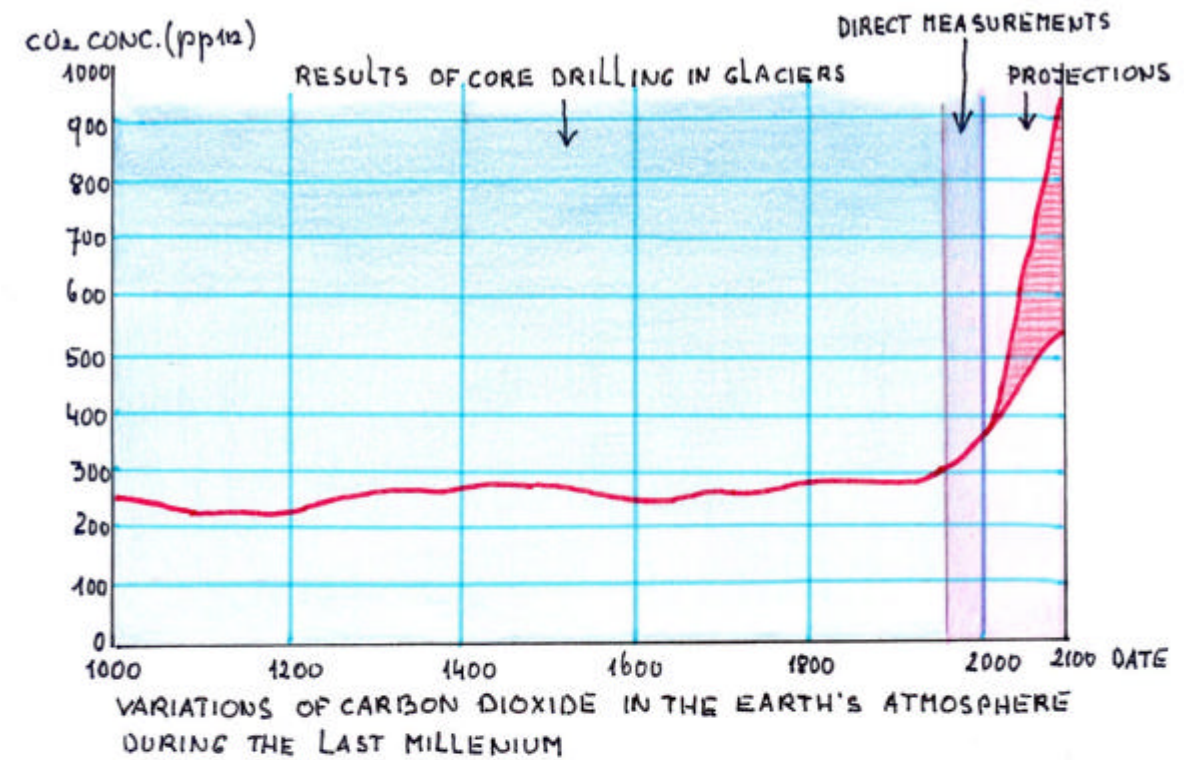
Drawing No. 16

ATMOSPHERIC CONCENTRATION OF CARBON
DIOXIDE AND CHANGES IN THE
EARTH'S TEMPERATURE



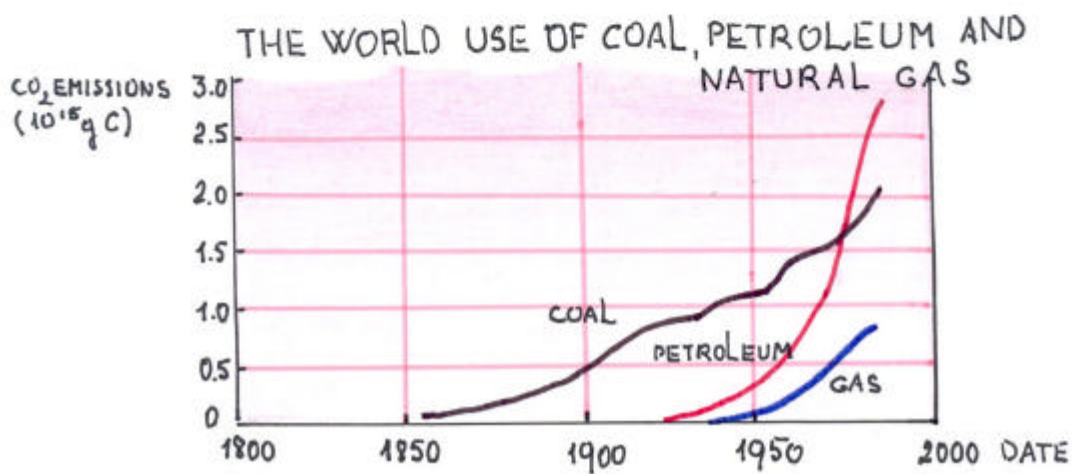
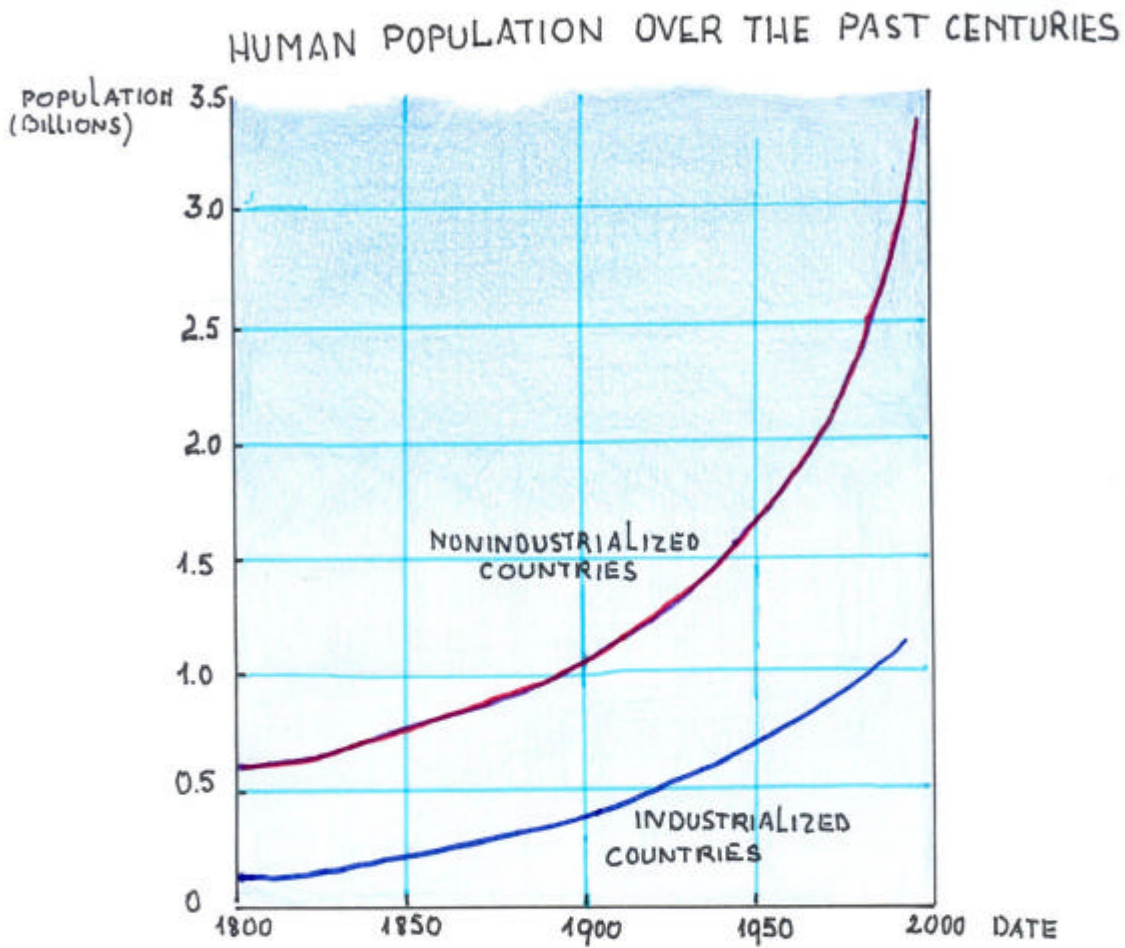


Drawing No. 17 Variations of Carbon Dioxide and Temperatures





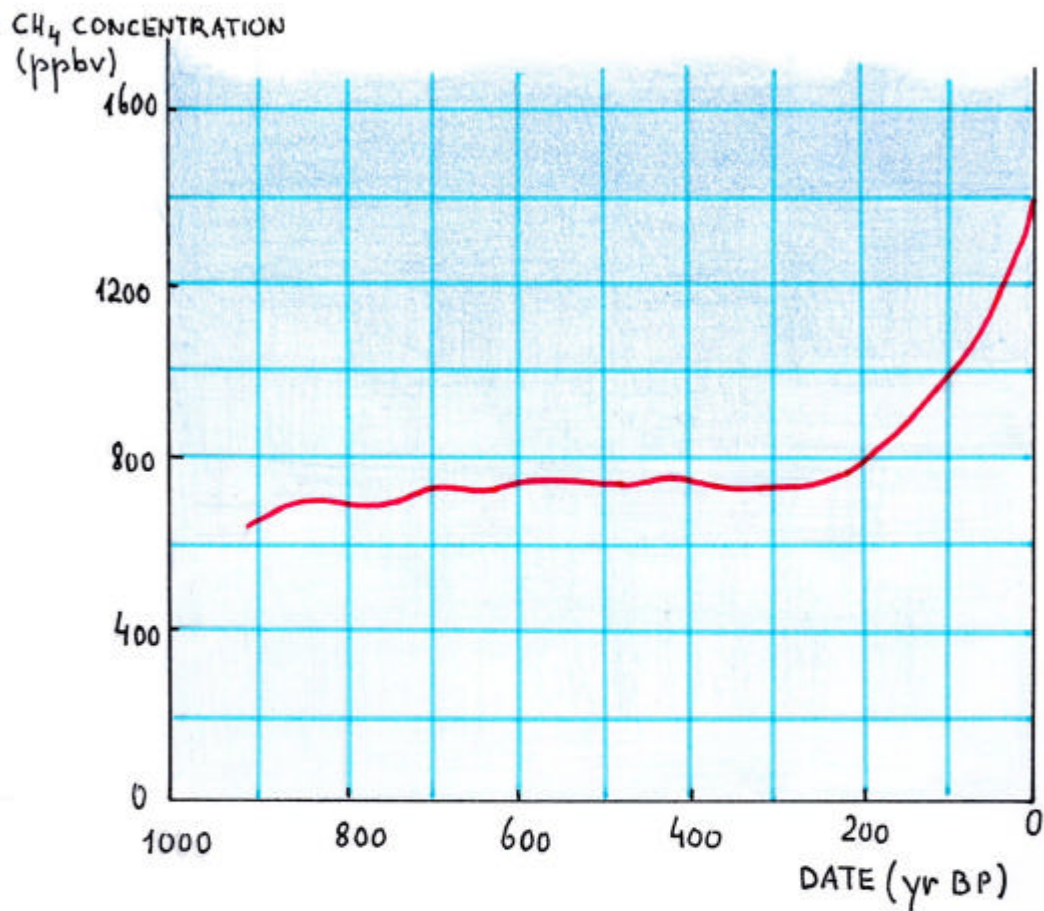
Drawing No. 18





Drawing No. 19

THE ATMOSPHERIC CONCENTRATIONS OF METHANE (CH_4) OVER THE LAST MILLENIUM

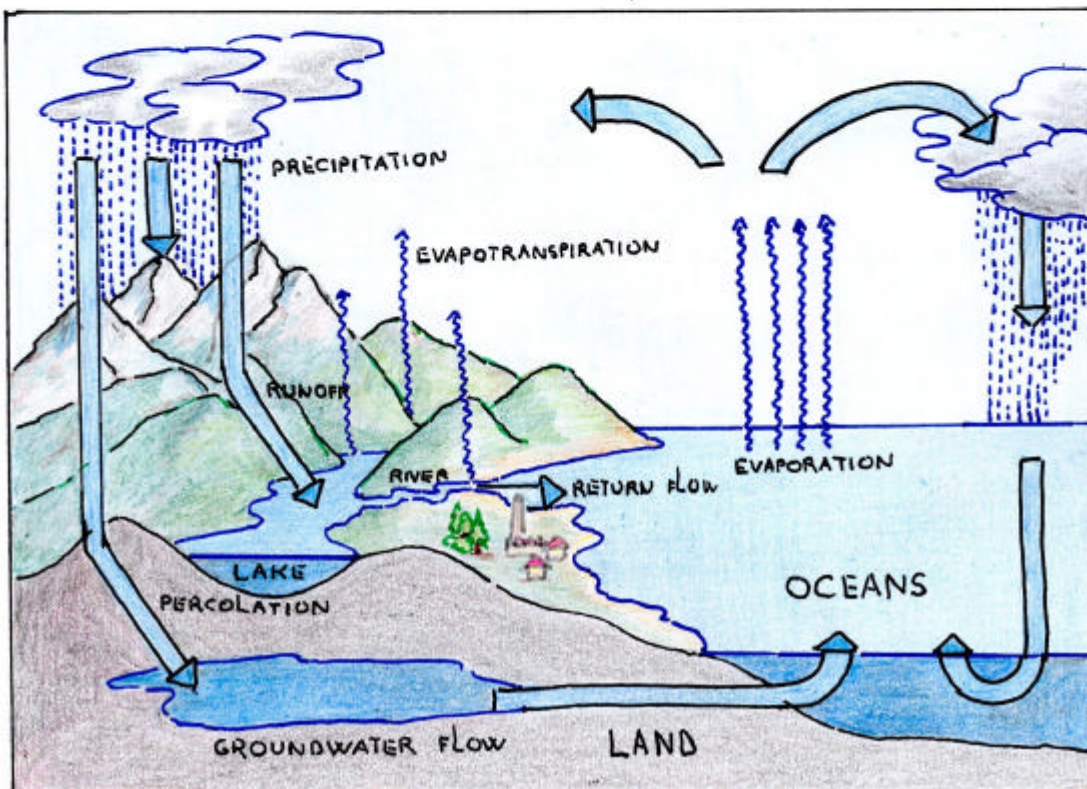




Drawing No. 20

THE WATER CYCLE

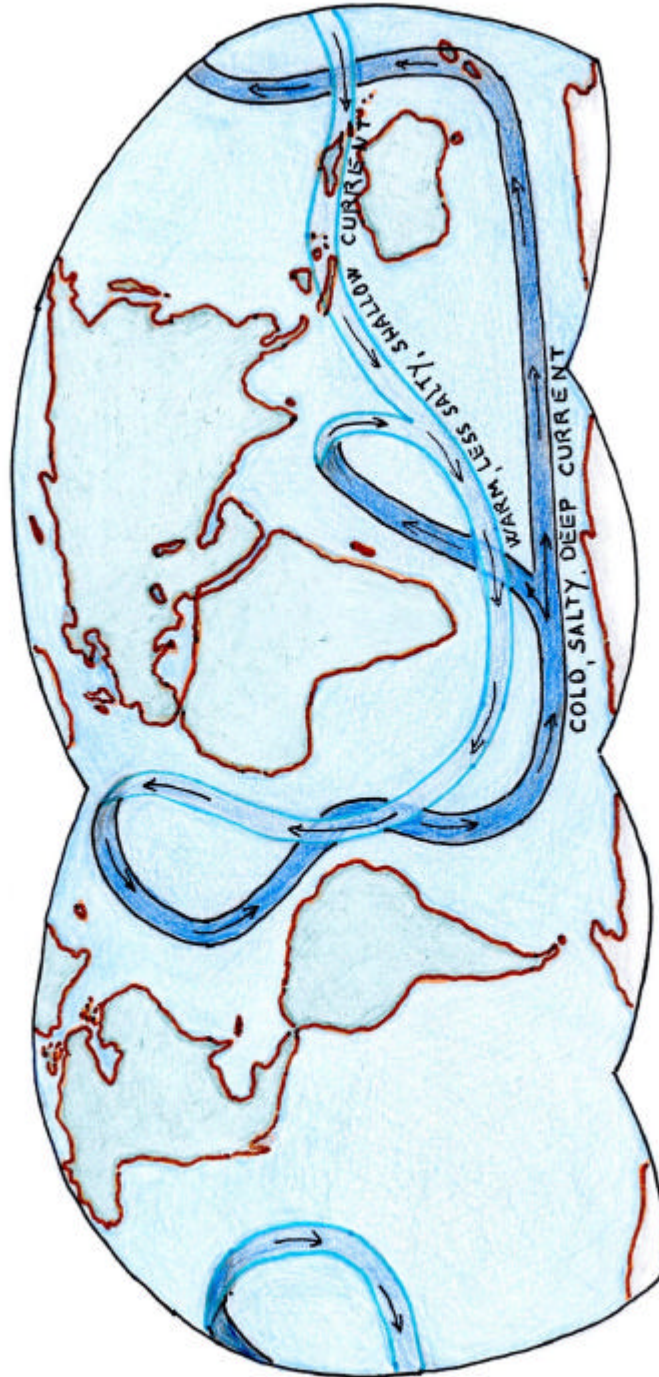
RESERVOIRS OF AVAILABLE WATER ON EARTH		
Reservoirs	Volume(10^6 km^3)	% of total
Oceans	1350	97.3
Glaciers	29	2.1
Aquifers	8	0.6
Lakes and rivers	0.1	-
Soil moisture	0.1	-
Atmosphere	0.013	-
Living biosphere	0.001	-





Drawing No. 21

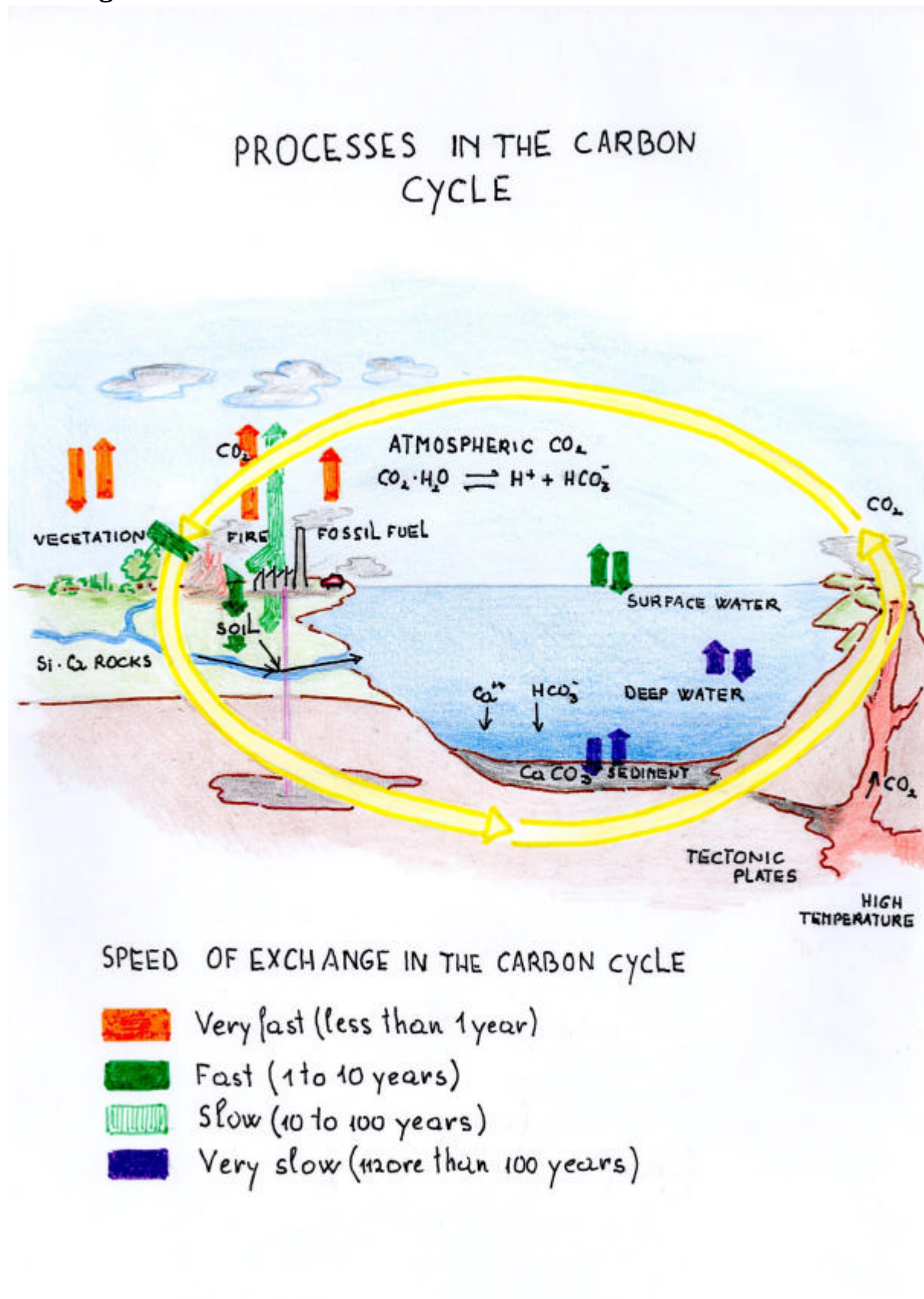
THE LARGE-SCALE SALT TRANSPORT SYSTEM IN TODAY'S OCEANS



- DEEPER FLOW- THERMOHALINE CIRCULATION - ARISES FROM DENSITY VARIATIONS. WATER IS DENSER WHEN COLD AND/OR MORE SALINE.
- MIGRATION OF COLD, SALTY WATER A FEW THOUSAND METERS BENEATH THE OCEAN SURFACE IS BALANCED BY COMPENSATING CURRENTS CLOSER TO THE SURFACE MOVING TOWARD THE SITES WHERE THE WATER IS SINKING.

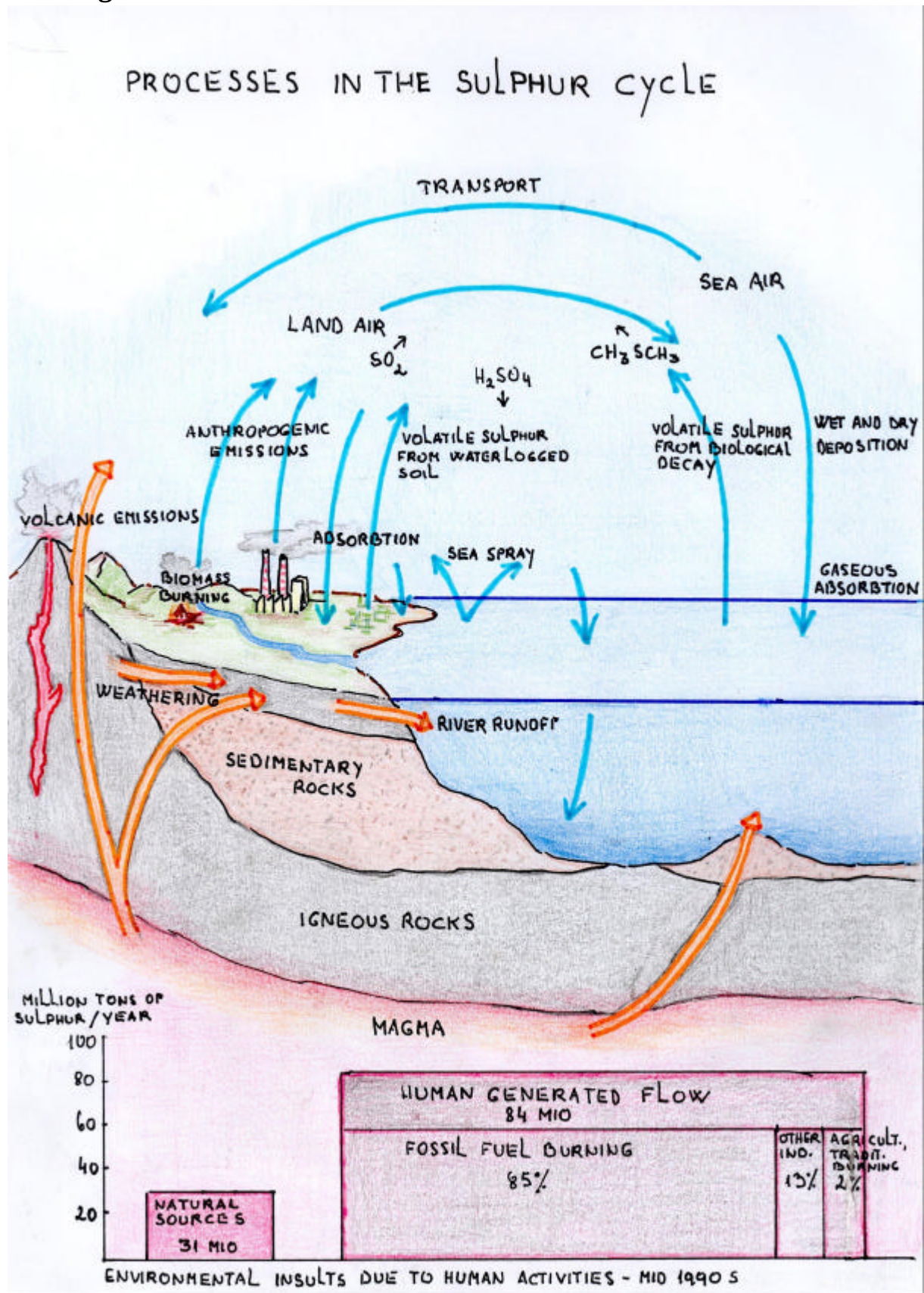


Drawing No. 22





Drawing No. 23







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