



**XX International
Conference of
WACRA EUROPE
e. V. est.1984**

SUSTAINABLE

**FUTURE through Long Term Responsibility Focusing on
Uncertainty – Case – and System theory – Based Approaches**

June 26 – 28, 2008

Maribor, Republic of Slovenia

The digital “The Book of Abstracts and Proceedings” and

REPORT

**University of Maribor, Faculty
Of Economics and Business
STIQE 9th International Conference
At City of Maribor, Slovenia
WACRA EUROPE e. V., Freising, Germany
SEM Institute for Climate Change, Korte, Slovenia
ANSTED University BVI, School of Environmental Sciences, Penang,
Malaysia**

**SUSTAINABLE FUTURE THROUGH RESEARCH, HOLISM, AND
LEARNING**

Medosi, Korte, Slovenia, 25th July, 2008



**XX. Jubilee International Conference¹ of WACRA Europe e. V. Est. 1984
has been the chambers international conference in co-operation of:**

**9th International Conference on Linking System Thinking, Innovation,
Quality, Entrepreneurship, and Environment**

STIQE 2008

And

**XX. Jubilee International Conference of
WACRA – Europe e. V. Est. 1984**

WACRA EUROPE 2008

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**University of Maribor, Faculty of Economics and Business,
Razlagova 14, Maribor, Slovenia**

¹ XX. Jubilee International Conference of WACRA Europe has been organized in same time as STIQE 2008 International Conference and in co-operation, due to many years of actual co-operation of the key players of the scientific community involved.



**XX. Jubilee International Conference of
World Association of Case Studies – Europe e. V. Est. 1984**

WACRA EUROPE 2008
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**The Digital Book of Abstracts and Proceedings from XX.
Jubilee WACRA International Conference**

REPORT



Medosi, Korte, 25th June 2008

The content of the XX. Jubilee International Conference of WACRA Europe e. V. Est. 1984 has been as follows:

1. Key note presenter is Dr. Elmar A. Stuhler, The Chairman, “XX. International Conferences of WACRA Europe e. V. Est. 1984”
2. “Eco remediation and the Climate Change System Impact” by Dr. Elmar A. Stuhler, Prof. Dr. Jan W. Dobrowolski, Prof. Dr. Danijel Vrhovsek and Prof. Dr. Timi Ecimovic, presented by: Prof. Dr. Jan W. Dobrowolski
3. “Requisitely Holistic Understanding of Interest Viewpoints Concerning Sustainable Development” Vesna Cancar and Vojko Potocan
4. “Environmental Pollution and the Waste Emergency – the Health Effects, the Case Studies: Italy – Africa” Hon. Prof. Antonio Imeneo, and Dr. ssa Daniela Morrone, presented by: Dr. ssa Daniela Morrone
5. “Systems Approach to Developing Sustainable Quality Tourism in Delta State, Abraka, Nigeria” Prof. Dr. Daniel Onome Awaritefe, and Mrs. Helen Ovigue Awaritefe
6. “Scientist and Teachers of Universities should Increase the Personal Responsibility Before Mankind for protection of an Environment and of Universal Moral Values Today”, Prof. Dr. Danylo M. Kolotylo
7. “Public Opinion Formation, Leaders and the Problem of Sustainable Development”, Prof. Dr. Alexander Makarenko
8. “Health Risk of the Ukraine Population and their reduction” Prof. Dr. Zinaida Klestova
9. “Per aspera ad harmoniam astrum, Sustainable (Development) Future of Mankind – and System Thinking About its Ethical Imperative and the planet Earth – Mother Earth (including a suggestion for new logotype)”, M. Sc. Josip Tavcar, Prof. DDr. Matjaz Mulej, Prof. Dr. Vojko Potocan, Prof. Dr. Aleksander Zidansek, Prof. Dr. Stane Bozicnik, and Prof. Dr. Timi Ecimovic, presenter: M. Sc. Josip Tavcar
10. “A Dialectic Systems Theory Model of the Innovative Road Transport Sustainable Management”, Prof. Dr. Stane Bozicnik
11. “The challenges of Global Governance for Sustainable (Development) Future”, by Prof. Dr. H A Shankaranarayana, and Prof. Anita Shankaranarayana, presenter: Prof. Dr. Timi Ecimovic
12. “Sustainability”, Sally J. Goerner, Robert G. Dyck, and Dorothy Lagerroos: presented by Prof. DDr. Matjaz Mulej.
13. “The Global Enterprise Strategy – a Basis for Making the Sustainable Future”, Lecturer Tjasa Strukelj and Prof. DDr. Matjaz Mulej
14. “Affluence – Cause for Dangers for Sustainable Future to be Solved by Social Responsibility”, Anita Hrast, Manager of IRDO Institute for Social Responsibility, Maribor, and DDr. Matjaz Mulej.
15. “Road Map for Sustainable Future of Indigenous Communities: A Case of Coastal India”, by Prof. Dr. T. N. Sreedhara and Prof. Dr. Rajarama Tolpady. Presenter: Prof. Dr. Timi Ecimovic



XX. International Conference of WACRA Europe e. V. Est. 1984 has been under patronage of the:

- INTERNATIONAL PARLIAMENT FOR SAFETY AND PEACE, Roma, Italy
- CAMBRIDGE INTERNATIONAL UNIVERSITY – OPEN UNIVERSITY, Rome, Italy and Valetta, Malta,

issued by Hon. Prof. Antonio Imeneo.

During the conference The Annual Meeting of the WACRA Europe and
Third session of the World Thinker's Forum took place.

Attendant entertainments “Environmental Change - from Words to Deeds”

Has been organized during the conferences in Maribor, June 26 – 28, 2008:

- Organized by M. Sci. Josip Tavčar, the Director of the SEM Institute for Climate Change - Sustainable Future of Mankind Activities, Maribor, Slovenia

Exhibitions at: ☺ Faculty of Economics and Business, University of Maribor and
☺ University Library, University of Maribor under patronage of the:

- ESA – European Space Agency, Darmstadt, Germany
- EUMETSAT – European Organisation for the Exploitation of Meteorological Satellites, Darmstadt, Germany
- UNEP-EEA – United Nations Environment Programme, Geneva, Swiss - European Environment Agency, Copenhagen K, Denmark
- SEM – Institute for Climate Change, Sustainable Future of Mankind Activities
- ANSTED University BVI, School of Environmental Science
- Slovenian Society for System Research

Multimedia performance in Culture Centre Pekarna, Maribor, Slovenia

The wish of the conference was:



The SUSTAINABLE FUTURE OF MANKIND²

University of Maribor, Faculty of Economics and Business,
Institute of Entrepreneurship and Small Business Management
SI-2000 Maribor, Razlagova 14 and 20, Slovenia (EPF)

And

Slovenian Systems Research Society
SI-2000 Maribor, Razlagova 22, Slovenia

The 9th International Conference STIQE
Linking Systems Thinking, Innovation, Quality, Entrepreneurship, and
Environmental Care
26 – 28 June, 2008

(With honorary co-sponsorship by:
The European Academy of Sciences and Arts, Salzburg, Austria)

And

IFSR – International Federation for Systems Research, Vienna, Austria)

A N D

XX. Jubilee International Conference of
WACRA EUROPE 2008
World Association of Case Studies – Europe e. V. Est. 1984

SUSTAINABLE FUTURE
Through Long Term Responsibility Focusing on Uncertainty – Case – and
System theory – Based Approaches

Venue: EPF, Razlagova 20, Maribor

² The Sustainable Future of Mankind is the Harmony of our Civilization with the Nature/Biosphere of the Planet Earth (Ecimovic, 2006)



STIQE Schedule

26 June 08

Day, time	Topics group, authors	Titles of contributions
09.00-10.00		Welcome, introduction, registration
10.00-11.30		STIQE view at information and communication technology
	Chroust, G.	Mutually Re-Enforcing Innovations in ICT, Business, And Society
	Trček, D., Likar, B.	A Model of Innovative Provision of Quality Security and Cost Management in Information Systems
11.30-11.45		Coffee/fruits break
11.45-13.15		STIQE view at society 1
	Dyck, R. G.	Democracy and Its Imperatives for a New Social Contract
	Grigorescu, A.	System Composite of the Triplet's of Strategic Overview – Revised Fundamentals
13.15-14.30		Lunch break
14.30-16.00		STIQE view at society 2
	Ivanišin, M.	Project Management and Networks for Sustainable Regions
	Löckenhoff, H.	Innovation towards Economic and Societal Rejuvenation
16.00-16.15		Coffee/fruits break
16.15-17.45		STIQE view at society 3
	Močnik, D., Mulej, M.	Are Markets Requisitely Holistic and Hence Efficient Institution of Exchange?
	Melnikas, B.	The New Challenges for Entrepreneurship in the European Union: Knowledge – Based Economy Creation Processes
18.30-21.00		Shared evening at LENT FESTIVAL (with STIQE and WACRA dinner)

27 June 08

Day, time	Topics group, authors	Titles of contributions
08.30-10.45		STIQE view at higher education
	Jurše, M.	Requisitely Holistic View of Business School Innovation and Business Education Globalisation
	Potočan, V.	New Organizational Culture as an Factor of Holistic Business School Strategy
	Risopoulos, F.	'The Sustainable Spirit' Bridging the Gap Between Vision and Action at Universities
10.45-11.00		Coffee/fruits break
11.00-13.15		STIQE view at nature 1
	Keserü, N.	Systems Thinking, Innovation, Quality, Entrepreneurship And Environment REGIONALISM THEN AND NOW



	Ećimović et al.	Our Common Enemy: The Climate Change System Threat
	Eriyatno, Sustrisno	System Approach For Micro, Small And Medium Enterprises Development Policy
13.15-14.30		Lunch break
14.30-16.00		STIQE view at nature 2
	Hamman, J.	Sustainability In Farming - Food Production And Environment Protection
	Kusmuljono, B. S.	System Thinking For Sustainable Development Case Study On Organic Farming
16.00-16.15		Coffee/fruits break
16.15-17.45		STIQE view at systems theories
	Mlakar, T., Mulej, M.	Innovations by the New 'Control Systems Theory'
	Kujper, H.	Area Studies versus Disciplines: Towards an Interdisciplinary Country Approach
18.30-21.00		Shared evening at LENT FESTIVAL

28 June 08

Day, time	Topics group, authors	Titles of contributions
08.30-10.00		STIQE view at enterprise 1
	Antlova, K.	Importance of Knowledge to Growth in Small and Medium Enterprises
	Čančer, V., Potočan, V.	The Role of Trust in Management: Where Are We
10.00-10.15		Coffee/fruits break
10.15-11.45		STIQE view at enterprise 2
	Steiner, G.	Innovation and Creativity: A Chaos Theory Perspective
	Ženko, Z. et al.	A Model of Making Theory as Invention to Become an Innovation
11.45-13.00		Plenary discussion, end

A N D

Schedule WACRA 2008

26 June 08

Day, time	Topics group, authors	Titles of contributions
09.00-10.00		Welcome, introduction, registration
10.00-11.30	Elmar A. Stuhler	XX. International Conferences of WACRA Europe
	Jan W. Dobrowolski	Eco remediation and the Climate Change System Impact
11.30-11.45		Coffee/fruits break
11.45-13.15	Vesna Cancer and Vojko Potocan	Requisitely Holistic Understanding of Interest Viewpoints Concerning Sustainable Development
	Antonio Imeneo and Daniela Morrone	Environmental Pollution and Waste Emergency – the health Effects, the Case Studies: Italy - Africa



13.15-14.30		Lunch break
14.30-16.00	Daniel Onome Awaritefe and Helen Ovigie Awaritefe	System Approach to developing Sustainable Quality Tourism in Delta State, Abraka, Nigeria
	Danylo M. Kolotilo	Scientist and Teachers of Universities should increase Personal Responsibility Before Mankind for protection of an Environment and of Universal Moral Values Today
16.00-16.15		Coffee/fruits break
16.15-17.45	Elmar A. Stuhler	WACRA Europe annual meeting
18.30-21.00		Shared evening at LENT FESTIVAL (with STIQE and WACRA dinner)

27 June 08

Day, time	Topics group, authors	Titles of contributions
08.30-10.45	Alexander Makarenko	Public Opinion Formation, Leaders and the Problem of Sustainable Development
	Zinaida Klestova	Health Risk of the Ukraine Population and their reduction
10.45-11.00		Coffee/fruits break
11.00-13.15	Josip Tavcar	Per aspra ad harmonium astrum
	Stane Bozicnik	A Dialectical System Theory Model of the Innovative Road Transport Sustainable Management
13.15-14.30		Lunch break
14.30-16.00	A H and A Shankaranarayana, presented by Timi Ecimovic	Sustainable Future
	Sally J. Goerner Robert Dyck and Dorothy Lagerroos: presented by Matjaz Mulej	Sustainability
16.00-16.15		Coffee/fruits break
16.15-17.45	Timi Ecimovic	The World Thinker's Forum Third Session
18.30-21.00		Shared evening at LENT FESTIVAL

28 June 08

Day, time	Topics group, authors	Titles of contributions
08.30-10.00	Tjasa Strukelj and Matjaz Mulej	The Global Enterprise Strategy – a Base for making the Sustainable Future
	Anita Hrast and Matjaz Mulej	Affluence – Cause for Dangers for Sustainable Future to be Resolved by Social Responsibility
10.00-10.15		Coffee/fruits break
10.15-11.45		Joining STIQE sessions
11.45-13.00		Plenary discussion, end closing remarks



**XX International Conference of
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**SUSTAINABLE FUTURE through Long Term Responsibility
Focusing on Uncertainty – Case – and System theory – Based
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**“The Book of Abstracts and Proceedings”
(The Digital)**

WACRA EUROPE e. V., Freising, Germany

**SUSTAINABLE FUTURE THROUGH RESEARCH, HOLISM, AND
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June, 2008

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1. THE PRESENTATION HAS NOT YET BEEN RECEIVED TILL THE TIME OF PUTTING THIS DOCUMENT TOGETHER ON 25TH. July, 2008.



2. ECO REMEDIATION AND THE CLIMATE CHANGE SYSTEM IMPACT

Medosi, Korte, February 2008

“Eco remediation and the climate change system impact” has been prepared by: Prof. Dr. Timi Ecimovic, Dr. Elmar A. Stuhler, Prof. Dr. Jan W. Dobrowolski, Prof. Dr. Danijel Vrhovsek as presentation for: XX. WACRA International Conference, June 26 – 28, 2008, Maribor, Slovenia. Presented by: Prof. Dr. Jan W. Dobrowolski.

The Abstract

The sustainable future of mankind³ or harmony of our civilization with the nature of the Planet Earth is an option for mankind to survive approaching impact of the climate change system at the biosphere of the planet Earth.

Eco remediation technologies and techniques (including application of innovative eco toxicological survey followed by environmental biotechnology and eco engineering) are possible good assistant of mankind for prevention and remediation of the pollution of three basic living environments: land, water and air.

Present human environmental management of the human eco sphere and environment at biosphere of the planet Earth is actually mismanagement and overestimating of influence of the mankind to the future of the planet Earth.

It is obvious that we human have technologies, which are harming and could harm more of the living conditions on the planet, with possible serious consequences for us.

Our common enemy is the climate change system as major threat to the quality of living conditions needed for us to live on the planet Earth.

Common action of experts and society should be focused on feed-back system of forecasting of effects of warming processes, and more effective primary prevention on local community, regions, nations and larger scale including dissemination of game for surviving especially among young generation.

Key Words

Sustainable future; Our civilization; Eco-remediation; Innovative Ecoengineering; The climate change system; Our common enemy; New approach; Global society; Game for surviving, etc.

³ The sustainable future of mankind was discussed at the book »The Sustainable (Development) Future of Mankind«, Ecimovic et al., 2006, ISBN 978-961-91826-2-8, displayed at: www.institut-climatechange.si.



The Discussion

Eco remediation⁴ technologies are a part of humanity's sustainable future. Eco remediation is an integral part of the protection of nature, space and the environment, towards a sustainable future of humanity or for the harmony of our civilization with Nature (Ecimovic, 2005).

Very promising and innovative are Environmentally-friendly laser biotechnology for reclamation of deteriorated lands, biomass production at energy plantations versus overexploitation of forest and contribution to primary prevention of worming processes by stimulating assimilation of CO₂ by irradiated plants on large scale (Dobrowolski⁵).

The climate change system⁶ is a novel approach for understanding the natural sciences. The climate change system is *not*: climate change, global warming, destruction of the ozone layer, the green house effect, etc.; instead it is part of the nature of the Planet Earth. The climate change system is a natural system with many systems working within it, and yet other systems working outside it. It is located somewhere within the Planet Earth system (i.e. the whole) of which its biosphere system has three fundamental parts: the terrestrial, water and air systems of our living space. The climate change system is maker, provider, holder and guardian of the living conditions within the biosphere of the Planet Earth.

The sustainable future of humanity⁷ or the harmony of our civilization with the nature of Planet Earth is the only option for humanity if we are to survive the approaching impact of the climate change system on Earth's biosphere.

Eco-remediation is the use of technologies and techniques of natural and co-natural prevention and treatment applied to nature, space and environmental pollution/protection issues. This definition is not complete without taking into account a complex supra/multi-disciplinary approach to the specific issues of land, water and air use, re-use and pollution prevention/treatment. Contemporary, classical and applied research is taken into

⁴ Eco remediation has been the scientific and applied research and practice of Prof. Dr. Timi Ecimovic and Prof. Dr. Danijel Vrhovsek since the end of 1980. The book on this subject, »Ekoremediacije« (in Slovenian language), Vrhovsek, Vovk-Korze, ISBN 978-961-6656-054, was published in 2007.

⁵ At »Ecotoxicology; Medical Elementology; Laser Biotechnology, and Primary Prevention of Environmental Health Hazard«, proc. 3rd Intl. Symposium on Trace elements in Humans; Dobrowolski 2001, New Perspectives, Ermidou-Pollets, Pollets S., Eds, University of Athens, 2001, followed by: »Perspectives of Application of Laser Biostimulation for more Efficient Bioremediation of Soil and Ground Water«, Dobrowolski, Rozanovski, Zielinska-Loek, Skowka, Gowin, Mazur, Lewicki, Zakrzewska, and Slazak, Silesian University of Technology. Gliwice, 2005. It continues with: »40 Years Action of Committing Universities to Common Action Focused on Sustainable Development«, Dobrowolski and Narodslawski 2005, proc. Conference on the International Launch in Higher Education; Education for Sustainable Development Uns decade 2005-2014, Graz University of Technology, Graz, 2005. During 2006 was added discussion on: »The Main Purposees of the 11th International Conference on Sustainable Development. Proposals for the Future Cooperation«, Polj. Environmental Studies, 15, 5C, 2006.

⁶ The Climate Change System is an innovation reported in the book »System Thinking and Climate Change System (Against a Big »Tragedy of the Commons« of all of us)«, Ecimovic, Mayur, Mulej, 2002, ISBN 961-236-380-3

⁷ The sustainable future of humanity was discussed in the book »The Sustainable (Development) Future of Mankind«, Ecimovic *et al*, 2006, ISBN 978-961-91826-2-8.



consideration on the one hand and, on the other, so is the cooperation of the local community which is the main user and beneficiary, while also being the fundamental unit of humanity on Planet Earth.

Planet Earth's natural system has been maintaining itself for more than 4.6 billion years (4.600.000.000), with many ups and downs with respect to possible living conditions. With the evolution of humanity's environment (human eco system), the natural system has recently come under stress, and changes in the quality of living conditions are consequently taking a new turn. The natural system is using its system qualities and quantities as its permanent practice under the rules of independencies, interactions and co-operation. We cannot change living conditions but we may or may not fit into them. When we explore and gain knowledge of how the natural system and its ceaseless 24-hour processes operate, we will have a chance to properly understand the good and bad impacts of our society on its operation.

Planet Earth is not our civilization's personal playground, and it does not belong to us. In fact quite the opposite since we (our civilization as a whole) are only one group of living creatures living on the globe's surface (mainly the terrestrial part). We have been, and are trying, to accommodate ourselves very well to the quality of living conditions during our civilization's time. But recently (during the last 200 – 300 years of the industrial and subsequent era) our impact on the biosphere has been triggering a reaction from the natural system. The resulting new conditions do not benefit our civilization, but rather the contrary. And this is the main reason for contemporary, classical and applied research, and for the introduction and use of natural and co-natural technologies and techniques for eco remediation and for the prevention and cure of environmental pollution in the terrestrial, water and air systems of the biosphere.

The impact of our civilization could be summarized in the following way: Our civilization's first settlements were built some 14,000 years ago, as a result of the social life-improvements of pre-antiquity humans. The first settlements on European lands were built in swampy areas for security reasons, and the population consisted of up to 10,000. This was a result of the changed conditions within the biosphere which evolved after the last ice-age, which ended some 60,000 – 16,000 years ago. Since then the climate change system conditions on Earth have been of almost the same quality right up to the present time. Changes have, of course, occurred but not as extreme as the ones we face now. The difference between today and 200 years ago is due to the extreme input of our civilization's output into biosphere including all sorts of waste, the side-effects of nuclear technologies, synthetic chemicals, the human population explosion and its consequence which can be seen in the destruction of the biosphere due to the ways that human needs have been met.

The climate change system as an integral part of the Earth's biosphere has a bigger influence on our civilization than humans think or believe. In absolute terms the climate is provider, holder and guardian of the living conditions which make our life possible. But we humans are doing our best, through our "modern" relationship with nature and each other, not to appreciate this fact. Instead we harm the climate change system as much as we can, yet fortunately not as much as we think we may.



It is *not planet Earth* that is the home of our civilization, but *the biosphere*, which is itself only a tiny part of the planet Earth. Vulnerability of the two is separate issues, and they are not even comparable.

At present we face a large pollution of the biosphere with synthetic chemicals. This is a consequence of a lack of consideration of both the complexity and complicatedness of our (only!) biosphere.

Due to an exaggerated growth in the needs of our civilization (drinking water, industrial consumption of water, etc.) and the demand for agriculture and food production, water sources in nature are becoming insufficient. Many innovations have been used to solve this problem, of which many have had an impact on biosphere systems. Let us mention here the exaggerated use of fresh river/lake waters resulting in the destruction of underground aquifers combined with a lack of understanding of the physics of underground water deposit systems, etc.

At present we face a large deficit in fresh water sources, and the quality of present sources is questionable due to pollution from synthetic chemical compounds and their long-term effect. Recently, also the influence of hormones and hormone-like substances is becoming more and more important. Today we do not have a clean, fresh water supply, but only a supply of fresh water of a quality which falls within allowed limits of pollution by synthetic chemical compounds and other pollutants. From a water supply viewpoint, our future does not look good.

Our civilization's settlements in the near past and present (evidencing an over-concentration of people and the self-creation of a fragile environment – mega-cities, etc.) are causing the pollution of all waters in such regions, including areas to which the polluted waters travel. Actually, pollution has been a combined effect of city life (countless toxic substances – natural and synthetic chemicals, etc.) and the waste-waters from individual kitchens and sinks, toilets and sewage systems, and from “natural” river flows. Secondly, present agricultural practices intoxicate the land and ground waters and this extends to areas reached by their run-off. Finally all this discharges into coastal seas and ocean waters which are now at various stages of pollution/toxification.

Our civilization has used rivers as a sewerage transport system. To protect human settlements, property, and civilization's achievements against flood risk, huge hydro constructions were introduced. In fact, by our civilization's actions, we have straightened natural river flows and so have destroyed their natural/biological “filtering” properties. We achieved a rapid off-take of river water, and this only because we did not protect human civilization and its achievements against floods. In the long-term the floods are still there, but with a far more damaging effect. The majority of rivers now need eco remediation to restore their natural ability to host life and the other qualities destroyed by our civilization.

A further topic having a comparable destiny is our estuaries and coastal waters, which in many cases were developed to accommodate businesses, settlements, and tourist resorts with



poor natural biosphere characteristics. These are opening up new frontiers for the pollution of coastal waters and as a consequence our oceans/seas are becoming increasingly polluted by synthetic chemical compounds and other contaminants.

Today larger share of the human population than ever use littoral coastal lands for their living environments. The pollution of coastal waters is taking place and in them we shall soon see the results of our continuous and damaging actions.

With on-going human development, more and more land is being changed in its natural characteristics. At present in Europe land use distribution is: 47 percent agriculture, 36 percent forestry and 17 percent construction and development or sealed⁸ land, lost forever to Nature/Biosphere.

Present pollution on a global scale (synthetic chemicals, nuclear technologies, CFCs and like substances, pesticides, genetically modified organisms, hormone-like substances from synthetic chemical production and medication, technological impact – combustion and other engines, transport equipment, armaments and other war equipment, PCBs with impacts on gene structure, massive waste particles/parts/units of air-space/satellites and spacecrafts around the planet Earth, etc.) reflects our civilization's short-term thinking and action. What we need for our sustainable future is long-term responsibility for our civilization's impact within the biosphere.

Present practices on the Earth such as:

- The destruction of nearly all terrestrial waters by synthetic chemicals, bio and air (rain-induced) pollution,
- The destruction of air by land, sea, and air traffic, and synthetic chemicals,
- The destruction resulting from war,
- The destruction of the ozone layer,
- Destruction of soil fertility by present agricultural practices, including erosion and desertification,
- Global warming, and of course
- The explosive reproduction of humankind,

And all of them should be managed in such way as to assure humanity's long-term sustainability on the Planet Earth.

Literature

- "System Thinking and Climate Change System (Against a Big "Tragedy of Commons" of all of us)", Ecimovic, Mayur, Mulej, 2002, ISBN 961-236-380-3.
- "Our Common Enemy (The Climate Change System Threat), Ecimovic *et al*, 2006, ISBN 961-91826-0-x.
- "The Sustainable (Development) Future of Mankind", Ecimovic *et al*, 2007, ISBN 978-961-91826-2-8.
- "Ekoremediacije", Vrhovsek, Vovk-Korze, 2007, ISBN 978-961-6656-05-4.

⁸ Sealing of lands is the process of establishing a human ecosphere; i.e. constructing and building living environments for humans and livestock, constructing infrastructure, industry, churches and religious centres, education and sports facilities etc.



3. REQUISITELY HOLISTIC UNDERSTANDING OF INTEREST VIEWPOINTS CONCERNING SUSTAINABLE DEVELOPMENT

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Abstract

Over the recent decades, business conditions have changed dramatically. In the modern global economy, everybody will have to be very competitive and hence innovative. Therefore, most humans, economies, and businesses must innovate, including our understanding of economics. The new challenges require a thorough innovation of work, including a holistic consideration and implementation of sustainable development. We try to requisitely holistically research the interests that are defined and distributed in the fields of sustainable development in business systems. The paper discusses two theses. The first thesis presents the idea of the role and the importance of corporate environmental responsibility, corporate ethical responsibility and corporate social responsibility in modern business. The second thesis foresees that managers must improve the understanding and using of the above mentioned responsibilities for the creation (and implementation) of holistic enterprise ethics in their work. The paper presents the results of the surveys of work values and behaviors in which managers and professionals from different business systems all over Slovenia and Croatia expressed their views on the business activities that describe corporate environmental responsibility, corporate ethical responsibility and corporate social responsibility. We offer some new suggestions why (and how) managers need to use the above mentioned responsibilities for the creation and implementation of appropriate holistic enterprise ethics.

Keywords

Corporate environmental responsibility, corporate ethics, corporate social responsibility, sustainable development, sustainable enterprise.

1 Introduction

Sustainable development (SD) expresses the interdependence of economy, and natural environment as the two essential bases of life. The interdependence between the professional and political bases is a precondition of interests for a requisitely holistic SD as a concept for all current and future activities on all levels and in all areas in humankind's existence. In this paper, we try to requisitely holistically research the interests that are defined and distributed in the fields of SD in business systems (BSs).



The idea of synergy of sustainability and economic development into SD reveals systemic thinking in its own right. A new, more holistic / systemic understanding of needs and requirements (e.g. economic, environmental, social) of the future development has been largely encouraged by the fact that the centuries of one-sidedness have endangered economic activity and life of humankind (See: Ećimović et al., 2002; Potočan, 2002; Potočan, 2005; Potočan, 2006; Potočan, Mulej, 2007). The future existence and quality of life of humankind crucially depend on the concept of SD.

The UN has been a central political body to sponsor the professional discussion about SD since the 1970s. UN also works on the necessary political harmonization of the dealing with SD (See: BASD, 2001; BASD, 2002; Edwards, Orr, 2005; EU, 2005). SD (its basis and policies) and its economic attributes are basically defined in the following documents: the Rio Declaration, Agenda 21, and Local Agenda 21 (See: WCED, 1987; UN, 1992; ICLEI, 2000; UNESCO, 2000; Steffen, 2006; Walker, 2006). They tacitly require requisite holism of thinking, decision making and action.

BSs can attain the requisitely holistic SD if their starting points, principles etc. are requisitely long-term and broad-minded. The functioning of the world as a whole and of its parts (including BSs), is based on similar global / universal laws of living. On their basis, we can form specific goals for the specific levels of operation, which must be harmonized with SD and related general goals. In this way, BSs support their own existences well enough if they can carry out their business operations: purposefully, respectably, ethically, and innovatively (See: Ulrich, 1997; Hawken et al., 1999; Korten, 1999; Singer, 1999; Magretta, 2000; Jennings, 2005; Potočan, 2006; Shaw, 2007). BSs must, therefore, achieve “adequate” economic results within a requisitely holistic care and responsibility for their natural and social environment (See: Mulej, Kajzer, 1998; Mulej, 2000; Potočan, 2002; Potočan, Mulej, 2003; Čančer, 2002; Čančer, 2004; Čančer, Mulej, 2006; Lafollette, 2005; Lovell, Fisher, 2005; Potočan, 2006; Potočan, Mulej, 2007).

The paper presents the results of surveys of work values and behaviors, in which managers and professionals from several business fields all over Slovenia and Croatia expressed their views on the business activities that describe corporate environmental responsibility (CER), corporate ethical responsibility (CETHR) and corporate social responsibility (CSOCR), as respondents perceive them. On the basis of their expressed judgments about the acceptability of the CER's, CETHR's and CSOCR's activities we measured the perception of importance of the observed activities that were recognized to contribute to better environmental performance, to express the creation and use of appropriate ethics in enterprises, and the activities that were recognized as main contributors to corporate social responsibility in enterprises.

2 Requisitely Holistic Understanding of Interest Viewpoints of SD

When we try to requisitely holistically define interests that matter for SD activities (including in BSs), we face many issues such as: definition of the bases of interests, or their contents, and of methods for a requisitely holistic dealing with them (See: Mulej, Potočan, 2000; Potočan, 2002; Potočan, 2005; Čančer, Mulej, 2006; Potočan, 2006; Potočan, Mulej, 2007).



The definition of the bases for dealing with interest starts from the dialectical systems made of needs, possibilities, knowledge (on both contents and methods) and values of decision makers. A BS, namely, tries to satisfy all those preferential needs of both its internal and the (selected crucial) external environments, which have caused it to be established. Interests, what ever is their area or the level of their consideration, depend most crucially on:

- Individual values (which are interdependent with knowledge, needs, and possibilities);
- Culture (synergy of values in a social group and/or its social super-system);
- Ethics (culture dividing right from wrong in a social group); and
- Norms (ethics prescribing the right and the wrong in such a social group).

This fact reveals several dilemmas in dealing with SD, including relations between: the preferential needs and the interests, the interests of the entire entity and of its single parts, the shared and unshared interests, the politically conceived and professionally as well as requisitely holistically grounded interests.

The definition of contents of interests concerning SD tackles understanding of the role and weight of SD in BSs' operation as well of the ones of the single viewpoints of SD and of their synergies in BSs' operation. The level of suitability, holism, and precision of the definition of contents of SD and interest of a BS concerning SD depend on the above starting points. Hopefully, interests are defined requisitely holistically, since most interests can be defined subjectively and qualitatively, rather than objectively and quantitatively.

The next group of open issues tackles a suitable methodology of dealing with interests. Within the research of interests, one should establish: a requisitely holistic research methodology and a requisitely holistic description of characteristics of interests (e.g. requisitely holistic systems of political interests of all important actors inside and outside BSs) and requisitely holistic systems of professional interests of all important subjects of business (which directly or indirectly influence business).

We try to requisitely holistically research the interests with both a requisitely holistic methodological and a partial contents-related research. We define interests on the basis of our requisitely holistic investigation into interests, which include the institutional, functional, and factors' aspects as a dialectical system. These interests are defined and distributed in the fields of SD and used for the creation of a requisitely holistic system of research of interests concerning SD in BS.

3 Understanding of Interest Viewpoints Concerning SD in Business: Case of Slovenia and Croatia

3.1 Research Data and Data Analysis

At the University of Maribor's Faculty of Economics and Business we conducted a survey of work values and behaviors, in which 300 participants from several business fields all over Slovenia took part in three observation periods: 2004, 2005 and 2006. A similar survey was



conducted at the University of Zagreb's Faculty of Economics and Business, in which 298 participants from Croatia took part in the first observation period. We investigated the participants' views on the business activities that describe corporate environmental responsibility (CER), corporate ethical responsibility (CETHR) and corporate social responsibility (CSOCR), as respondents perceive them.

The survey questionnaire about CER, CETHR and CSOCR in Slovenian and Croatian organizations has the following bases:

- To detect general values that are typical (and important) for the participants' views on the business activities we used a questionnaire and the findings of the public opinion survey in Slovenia. These surveys have been conducted yearly since 1968 by a team from the Faculty of social sciences, University of Ljubljana, led by professor Tos (Tos, 1997; Tos, 1999; Tos, 2004; Tos, Muller, 2005);
- To detect values that are typical (and important) concerning CER, CETHR and CSOCR of employees in organizations we used the questionnaire and findings of the International investigation "A survey of work related issues". This investigation has been annually conducted for the past 12 years and has, since 2003, included 25 countries from around the world; we covered Slovenia. It is conducted by The University Fellows International Research Consortium, led by professor Ralston from the University of Oklahoma, M.F. Price College of Business, at Norman (Egri et al., 2004; Ralston et al., 2006).

Methodological and contents related attributes of our survey were presented at several recent occasions (Čančer, 2005; Mulej, 2005; Potočan, 2005; Čančer, Mulej, 2006; Mulej et al. 2006; Potočan, 2006).

On the basis of their expressed judgments about the acceptability of the CER's activities we measured the perception of importance of the observed activities that were recognized to contribute to better environmental performance. They are presented in Table 1.

Table 1: Business activities that describe corporate environmental responsibility.

Symbol	Description
CER1	To prevent environmental degradation caused by the pollution and depletion of natural resources.
CER2	To adopt formal programs to minimize the harmful impact of organizational activities on the environment.
CER3	To minimize the environmental impact of all organizational activities.
CER4	To devote resources to environmental protection even when economic profits are threatened.
CER5	To voluntarily exceed government environmental regulations.
CER6	To pay the full financial cost of using energy and natural resources.
CER7	To assume total financial responsibility for environmental pollution caused by business activities.
CER8	To ignore environmental issues when jobs are at stake.
CER9	To only proceed with activities for which environmental risks can be fully evaluated and controlled.



We used the respondents' answers that indicate the degree to which they agreed or disagreed that the business should engage in the activity described (1 – strongly agree, 3 – moderately agree, 5 – neutral, 7 – moderately disagree, 9 – strongly disagree) to define the numerical scale intensity levels of perception of the corporate environmental responsibility: 1 – strongly irresponsible, 3 – moderately irresponsible, 5 – neutral, 7 – moderately responsible, 9 – strongly responsible. For each respondent, the perception of importance of an observed activity that contributes to better environmental performance (CER1, CER2, CER3, CER4, CER5, CER6, CER7, CER9; for a description see Table 1) has been obtained by giving the belonging number of points to each scale intensity level (e.g. the scale intensity level 1 was given 9 points, and the scale intensity level 9 was given 1 point). The importance of an observed activity that contributes to environmental degradation (CER8; for description see Table 1), however, has been obtained by giving higher belonging number of points to a higher scale intensity level (e.g. the scale intensity level 9 was given 9 points, and the scale intensity level 1 was given 1 point).

Furthermore, we measured the perception of importance of the activities that were recognized to express the creation and use of appropriate ethics in enterprises. They are presented in Table 2.

Table 2: Business activities that describe corporate ethical responsibility.

Symbol	Description
CETHR1	To avoid compromising ethical standards in order to achieve corporate goals.
CETHR2	To give priority to ethical principles over economic benefits.
CETHR3	To be committed to well-defined ethical principles.
CETHR4	To agree that ethical responsibilities may negatively affect economic performance.

Understanding the role of corporate ethical responsibility as a factor of SD, we defined the numerical scale intensity levels of perception of the corporate ethical responsibility (CETHR), of the intensity levels of the importance of the observed activities that contribute to better ethical performance (CETHR2, CETHR3; see the description in Table 2) and of those that contribute to ethical degradation in business (CETHR1, CETHR4; see the description in Table 2) in the same way as for CER.

Table 3: Business activities that describe corporate social responsibility.

Symbol	Description
CSOCR1	To allocate some of their resources to philanthropic activities.
CSOCR2	To contribute actively to the welfare of our community.
CSOCR3	To bring down their labor costs to a strict minimum.
CSOCR4	To help solve social problems.
CSOCR5	To play a role in our society that goes beyond the mere generation of profits.

We also measured the importance of the activities that were recognized as main contributors to corporate social responsibility in enterprises. They are presented in Table 3.



Considering social imperative as one of the main aspects of sustainable enterprise (Potočan et al., 2004, 2005, 2006; Potočan, Mulej, 2007), we defined the numerical scale of intensity levels of perception of the corporate social responsibility, of the importance of the observed activities that contribute to better quality of life (CSOCR1, CSOCR2, CSOCR4, CSOCR5; see the description in Table 3) and of the one that contributes to social degradation in business (CSOCR3; see the description in Table 3) in the same way as for CER.

We consider that the corporate environmental, ethical and social perceived responsibilities depend upon participants' personal characteristics: age, gender, education (highest level completed), current position (non-supervisory staff, first, middle and upper level manager), size of company (less than 100 employees, 100 to 1000 employees, more than 1000 employees), and industry in which company is located (agriculture, mining, forestry and fishing; construction; manufacturing; transportation, communication and utilities are defined as high environmental impact industries; other industries are wholesale and retail trade; finance, insurance and real estate; services; public administration; health care). Our hypotheses regarding participants' personal characteristics and CER, CETHR and CSOCR are as follow:

- H1: Younger participants attribute higher importance to CER, CETHR and CSOCR than older participants.
- H2: Female participants attribute higher importance to CER, CETHR and CSOCR than male participants.
- H3: More highly educated participants attribute higher importance to CER, CETHR and CSOCR than participants with lower education level.
- H4: Participants in higher organization position levels attribute higher importance to CER, CETHR and CSOCR than participants at lower levels in their organizations.
- H5: Participants in larger organizations attribute higher importance to CER, CETHR and CSOCR than participants in smaller organizations.
- H6: Participants in high environmental impact industries attribute higher importance to CER, CETHR and CSOCR than participants in other industries.

Our hypothesis about CER, CETHR and CSOCR is as follows:

- H7: Participants, who attribute higher importance to CER, attribute higher importance to CETHR, and CSOCR, as well.

3.2 Research Findings

Mean values of the activities reflecting the perception of corporate environmental responsibility in Slovenia presents Figure 1, and the ones in Croatia presents Figure 2.

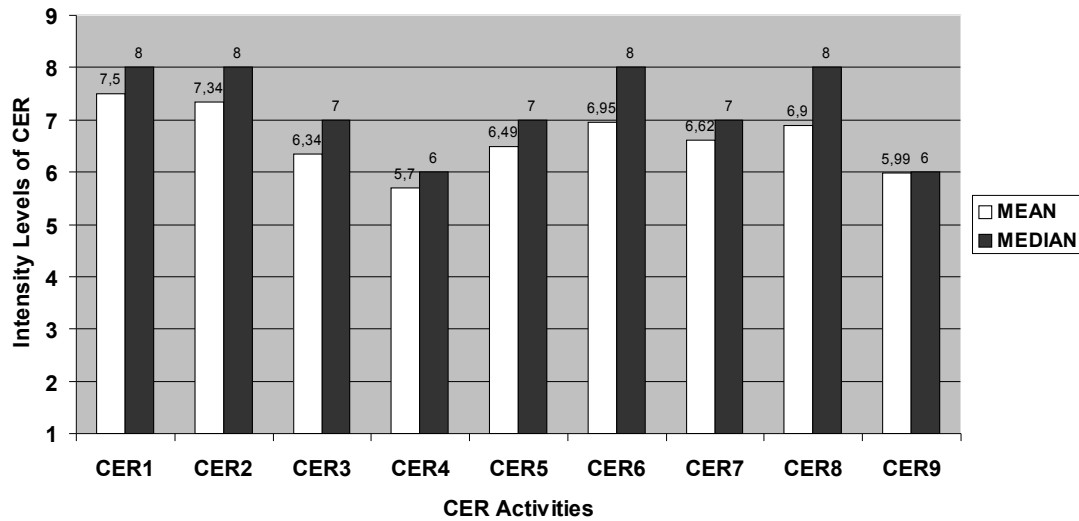


Figure 1: Mean values of the activities reflecting the perception of corporate environmental responsibility in Slovenia.

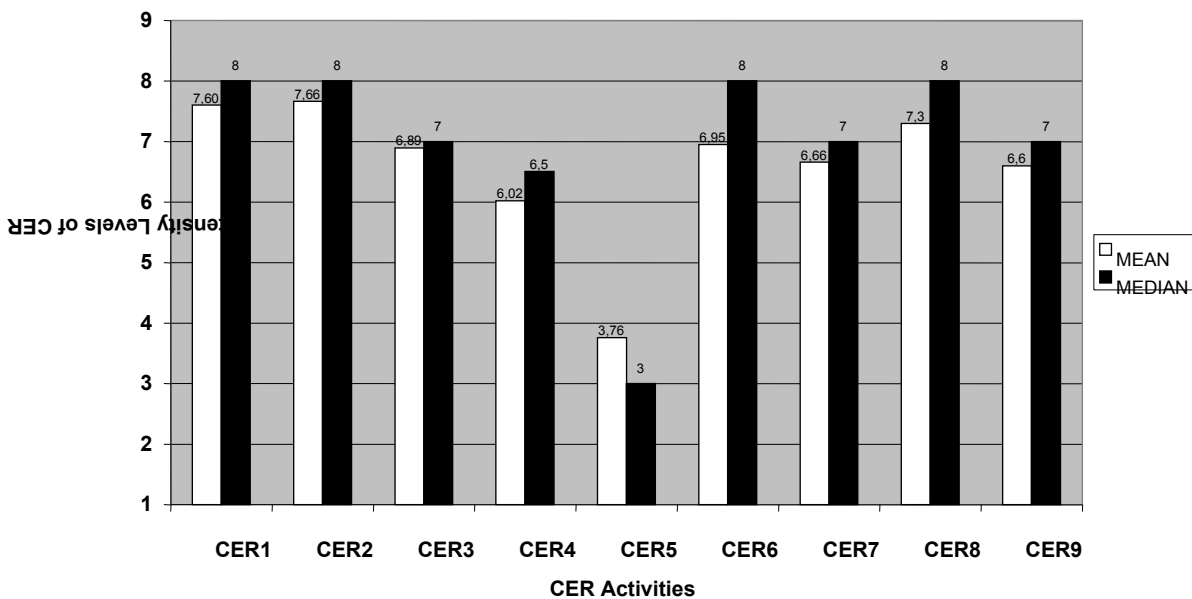


Figure 2: Mean values of the activities reflecting the perception of corporate environmental responsibility in Croatia.

The obtained mean CER's intensity levels (in Slovenia, mean = 6.65, median = 7; in Croatia, mean = 6.6, median = 7) show moderate perceived corporate environmental responsibility in both countries. Studying the mean importance of the activities for which participants believe that businesses should consider them to improve environmental performance (see Figures 1 and 2) can let us report that the mean of their judgments to:



- 1) Prevention of environmental degradation caused by the pollution and depletion of natural resources shows moderate to strong corporate environmental responsibility in both countries;
- 2) Adopting of formal programs to minimize the harmful impact of organizational activities on the environment shows moderate to strong corporate environmental responsibility in both countries;
- 3) Minimizing of the environmental impact of all organizational activities shows moderate corporate environmental responsibility in both countries;
- 4) Devoting resources to environmental protection even when economic profits are threatened shows neutral to moderate corporate environmental responsibility in both countries;
- 5) Voluntary exceeding of government environmental regulations shows moderate corporate environmental responsibility in Slovenia, but moderate corporate environmental irresponsibility in Croatia;
- 6) Paying the full financial cost of using energy and natural resources shows moderate to strong corporate environmental responsibility in both countries;
- 7) Assuming the total financial responsibility for environmental pollution caused by business activities shows moderate corporate environmental responsibility in both countries;
- 8) Ignoring the environmental issues, when jobs are at stake, shows moderate to strong corporate environmental responsibility in both countries. Since such ignorance does not lead to environmental improvement, these results mean that participants moderately to strongly disagree with this activity;
- 9) Proceeding with activities only for which environmental risks can be fully evaluated and controlled shows neutral to moderate corporate environmental responsibility in Slovenia, and moderate corporate environmental responsibility in Croatia.

Although the results of the nonparametric independent samples' Mann-Whitney U test and Wilcoxon rank-sum test (see Table 4) can let us report that there is no significant difference between the obtained mean CER's intensity levels in Slovenia and Croatia ($p > 0.05$), comparing the numeric intensity levels of the CER activities in Slovenia and Croatia by the same tests can let us report that there are significant differences between the perceived importance of the following activities:

- Adopting formal programs to minimize the harmful impact of organizational activities on the environment, minimizing the environmental impact of all organizational activities, devoting resources to environmental protection even when economic profits are threatened, ignoring environmental issues when jobs are at stake, and proceeding only with activities for which environmental risks can be fully evaluated and controlled are significantly less important ($p < 0.05$) to the respondents in Slovenia than to the respondents in Croatia, whereas
- Voluntarily exceeding government environmental regulations is significantly more important ($p < 0.05$) to the respondents in Slovenia than to their colleagues in Croatia.

Table 4: Outputs of the tests of the differences between the perceived importance of the CER activities in Slovenia and Croatia.

	Mann-Whitney U	Wilcoxon W	Z	Assymp. Sig. (2-tailed)
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CER1	43322.0	88472.0	-0.610	0.542
CER2	40362.0	85512.0	-2.128	0.033
CER3	37411.0	82561.0	-3.510	0.000
CER4	40563.0	85713.0	-1.982	0.047
CER5	17470.0	61723.5	-12.961	0.000
CER6	43946.5	89096.5	-0.292	0.770
CER7	43830.0	88980.0	-0.347	0.728
CER8	40447.5	85597.5	-2.082	0.037
CER9	36345.0	81495.0	-3.889	0.000
MEAN	42945.0	87496.0	-0.831	0.406
MEDIAN	41559.5	86709.5	-1.526	0.127

Mean values of the activities reflecting the perception of corporate ethical responsibility in Slovenia presents Figure 3, and the ones in Croatia are presented in Figure 4.

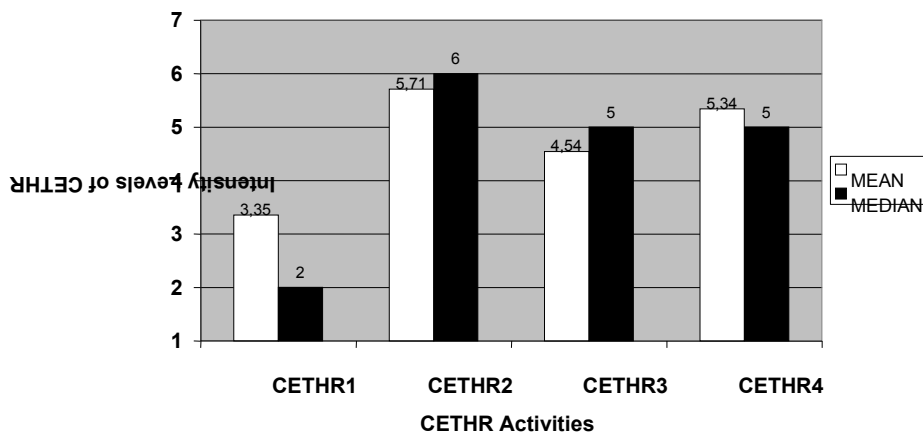


Figure 3: Mean values of the activities reflecting the perception of corporate ethical responsibility in Slovenia.

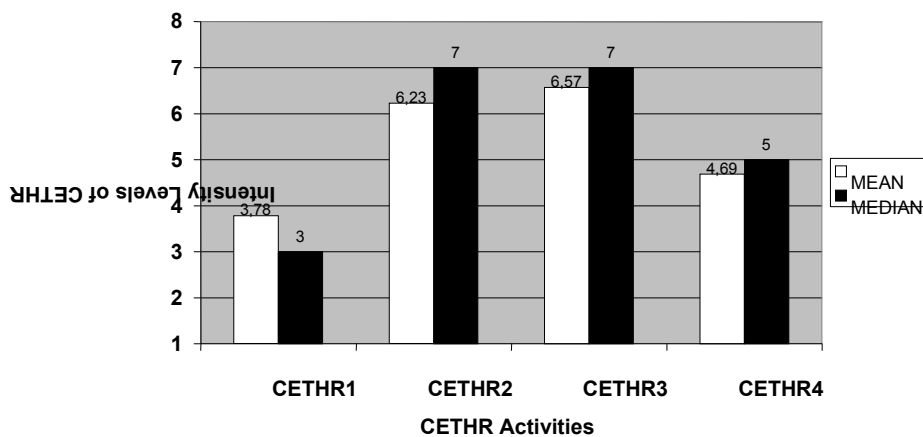


Figure 4: Mean values of the activities reflecting the perception of corporate ethical responsibility in Croatia.



Table 5: Outputs of the tests of the differences between the perceived importance of the CETHR activities in Slovenia and Croatia.

	Mann-Whitney U	Wilcoxon W	Z	Assymp. Sig. (2-tailed)
CETHR1	38201.5	83351.5	-2.799	0.005
CETHR2	38120.5	83270.5	-3.093	0.002
CETHR3	21400.5	66550.5	-11.144	0.000
CETHR4	37234.5	81785.5	-3.575	0.000
MEAN	29868.5	75018.5	-7.044	0.000
MEDIAN	30034.5	75184.5	-7.019	0.000

The obtained mean CETHR's intensity levels show *neutral* perceived corporate ethical responsibility from the point of view of sustainable development in both countries (in Slovenia, mean = 4.73, median = 5; in Croatia, mean = 5.33, median = 5). Studying the mean importance of the activities for which participants in the observed samples believe that businesses should consider them to improve ethical responsibility from the sustainable point of view (see Figures 3 and 4) can let us report that the mean of their judgments about:

- Avoiding compromising ethical standards in order to achieve corporate goals shows moderate corporate ethical irresponsibility in both countries;
- Giving priority to ethical principles over economic benefits shows neutral to moderate corporate ethical responsibility in Slovenia, and moderate corporate ethical responsibility in Croatia;
- Being committed to well-defined ethical principles shows neutral corporate ethical responsibility in Slovenia, and moderate corporate ethical responsibility in Croatia; and
- Confirming that ethical responsibilities may negatively affect economic performance shows neutral corporate ethical responsibility in both countries.

The results of the above mentioned nonparametric tests (see Table 5) can let us report that the obtained mean CETHR's intensity level is significantly lower in Slovenia than in Croatia ($p < 0.05$). Comparing the numeric intensity levels of the CETHR activities in Slovenia and Croatia by the same tests can let us report that:

- Avoiding compromising ethical standards in order to achieve corporate goals, giving priority to ethical principles over economic benefits, and being committed to well-defined ethical principles are significantly less important ($p < 0.05$) to the respondents in Slovenia than to their colleagues in Croatia, whereas
- The agreement that ethical responsibilities may negatively affect economic performance is significantly more important ($p < 0.05$) to the respondents in Slovenia than to those in Croatia.

Mean values of the activities reflecting the perception of corporate social responsibility in Slovenia presents Figure 5, and the ones in Croatia are presented in Figure 6.

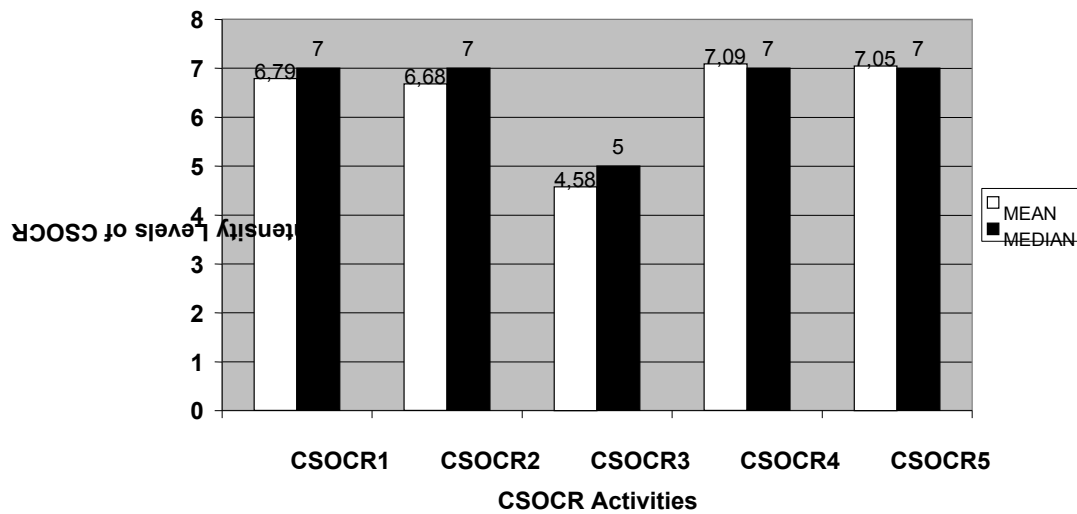


Figure 5: Mean values of the activities reflecting the perception of corporate social responsibility in Slovenia.

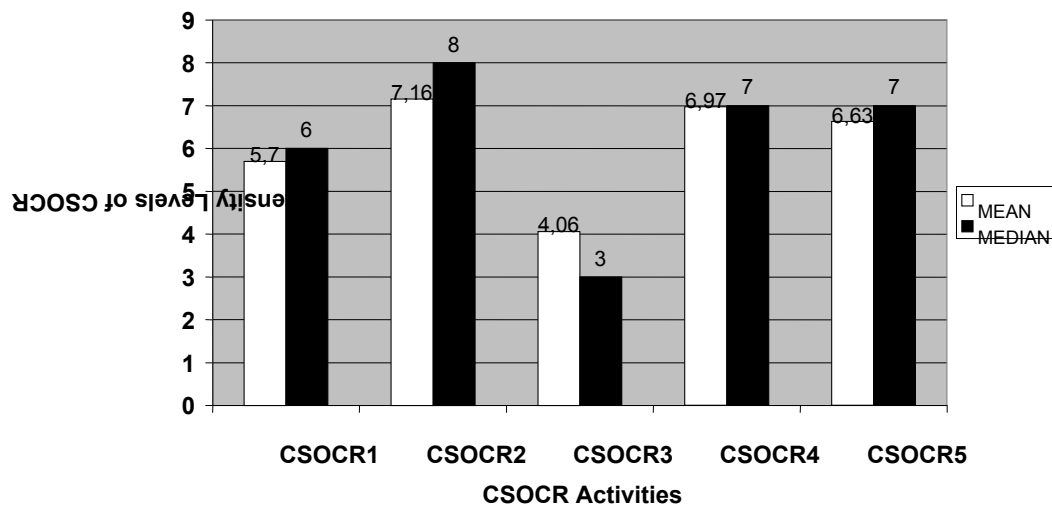


Figure 6: Mean values of the activities reflecting the perception of corporate social responsibility in Croatia.

Table 6: Outputs of the tests of the differences between the perceived importance of the CSOCR activities in Slovenia and Croatia.

	Mann-Whitney U	Wilcoxon W	Z	Assymp. Sig. (2-tailed)
CSOCR1	28470.0	71248.0	-7.488	0.000
CSOCR2	37146.5	82296.5	-3.643	0.000
CSOCR3	39181.0	83732.0	-2.637	0.008
CSOCR4	42181.5	86434.5	-1.149	0.251
CSOCR5	39293.0	83844.0	-2.606	0.009
MEAN	36333.5	80884.5	-3.967	0.000



MEDIAN	40560.0	85111.0	-2.007	0.045
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Furthermore, the obtained mean CSOCR's intensity levels show *moderate* perceived corporate social responsibility from the point of view of SD in both countries (in Slovenia, mean = 6.44, median = 7; in Croatia, mean = 6.1, median = 7). Studying the mean importance of the activities for which participants in the observed sample believe that businesses should consider them to improve corporate social responsibility from the sustainable point of view (see Figures 5 and 6) can let us report that the mean of their affection to:

- Allocating some of their resources to philanthropic activities shows moderate corporate social responsibility in Slovenia, and neutral to moderate corporate social responsibility in Croatia;
- Contributing actively to the welfare of our community shows moderate corporate social responsibility in Slovenia, and even moderate to strong social responsibility in Croatia;
- Bringing down their labor costs to a strict minimum shows neutral corporate social responsibility in Slovenia, but moderate irresponsibility to neutral responsibility in Croatia;
- Helping solve social problems shows moderate corporate social responsibility in both countries; and
- Playing a role in our society that goes beyond the mere generation of profits shows moderate corporate social responsibility in both countries, as well.

The results of the above mentioned nonparametric tests (see Table 6) can let us report that the obtained mean CSOCR's intensity level is significantly higher in Slovenia than in Croatia ($p < 0.05$). Comparing the numeric intensity levels of the CSOCR activities in Slovenia and Croatia by the same tests can let us report that:

- Contributing actively to the welfare of our community is the only CSOCR activity that is significantly less important ($p < 0.05$) to the respondents in Slovenia than to the respondents in Croatia, whereas
- Allocating some of their resources to philanthropic activities, bringing down their labor costs to a strict minimum, and playing a role in our society that goes beyond the mere generation of profits are significantly more important ($p < 0.05$) to the respondents in Slovenia than to their colleagues in Croatia.

In the chapter Research Data and Data Analysis we described our hypotheses that corporate environmental, ethical and social responsibilities depend upon participants' personal characteristics (age, gender, education, current position, size of company, industry in which company is located). Table 7 shows that the correlations between the mean CER and each of these personal characteristics were not significant (neither at the $p < 0.01$ level nor at the $p < 0.05$ level; 2-tailed p values are written in brackets) in Slovenia and in Croatia, respectively. Altogether, we can reject the hypothesis that personal characteristics significantly influence the perceived corporate environmental responsibility in both considered countries. However, Table 7 shows the weak correlation between the mean CETHR and gender in Slovenia, significant at the $p < 0.01$ level, and the weak correlation between the mean CETHR and age in Croatia, significant at the $p < 0.01$ level, as well. Similarly, there is the weak correlation between the mean CSOCR and gender in Slovenia, significant at the $p < 0.01$ level, and the weak correlation between the mean CSOCR and industry in which the company is located in Croatia, significant at the $p < 0.05$ level.

Table 7: Correlation coefficients between mean corporate environmental, ethical and social responsibility and respondents' personal characteristics.

		Age	Gender	Education	Current position	Size of company	Industry
Mean CER	Slovenia	0.044 (0.449)	0.036 (0.537)	-0.078 (0.179)	0.063 (0.277)	0.022 (0.700)	0.029 (0.617)
	Croatia	0.114 (0.052)	-0.004 (0.940)	0.080 (0.172)	0.032 (0.595)	0.023 (0.704)	-0.029 (0.632)
Mean CETHR	Slovenia	0.110 (0.058)	0.154** (0.008)	0.065 (0.260)	-0.008 (0.887)	0.067 (0.249)	-0.089 (0.125)
	Croatia	0.173** (0.003)	-0.028 (0.634)	-0.070 (0.233)	0.010 (0.863)	0.062 (0.298)	0.058 (0.342)
Mean CSOCR	Slovenia	-0.032 (0.582)	0.176** (0.002)	-0.027 (0.638)	-0.063 (0.274)	-0.015 (0.795)	0.023 (0.694)
	Croatia	0.047 (0.464)	0.059 (0.355)	0.006 (0.928)	0.070 (0.279)	0.058 (0.374)	0.152* (0.019)

**Correlation is significant at the $p < 0.01$ level (2-tailed).

*Correlation is significant at the $p < 0.05$ level (2-tailed).

Further, we consider that participants, who attribute higher importance to CER, attribute higher importance to CETHR, and CSOCR, too (see H7). In both considered countries, this hypothesis was supported in the given positive relationships between the mean CER and the mean CETHR, and the mean CER and the mean CSOCR. Table 8 shows the weak correlation between the mean CER and the mean CETHR, significant at the $p < 0.01$ level in Slovenia and at the $p < 0.05$ level in Croatia, and the relatively strong correlation between the mean CER and the mean CSOCR, significant at the $p < 0.01$ level in both considered countries.

Table 8: Correlation coefficients between the means of corporate environmental, ethical and social responsibilities.

	Mean CETHR	Mean CSOCR
Mean CER	0.209** (0.000)	0.541** (0.000)
	0.134* (0.021)	0.392** (0.000)

**Correlation is significant at the $p < 0.01$ level (2-tailed).

*Correlation is significant at the $p < 0.05$ level (2-tailed).

4 Some Conclusions

The study of the presented research results about CER, CETHR and CSOCR in Slovenian and Croatian companies enables the following cognitions.

On one side, the performed comparisons enable us to conclude that the opinions and viewpoints of the respondents in Slovene and Croatian companies are similar according to



the basic understanding (and considering) the role and importance of CER, CETHR and CSOCR in business. We can argue this with the fact that the companies in both states are working in expressive global working frames, which demand from them a higher consideration of CER, CETHR and CSOCR. At the same time we have to consider that:

- 1) The companies' target markets, together with the customers' demand for a suitable organizations' behavior are very similar in both states;
- 2) In principle, the European Union (EU) legislation that regulates the work in the fields of CER, CETHR and CSOCR is used in both states; and
- 3) The levels of knowledge about the role and importance of CER, CETHR and CSOCR in Slovenian and Croatian companies are similar.

On the other side, the research results of the surveys about CER, CETHR and CSOCR in Slovene and Croatian companies show some differences. The basic reasons for their appearance are as follows:

- 1) In the period from 1991 till 2005, Slovenia had a stricter legislation regarding CER, CETHR and CSOCR than Croatia, which consecutively contributed to the understanding of these topics in Slovene companies;
- 2) Croatia has less defined (and limited) conditions for companies' performance regarding CER, CETHR and CSOCR (from the institutional aspect) because of:
 - specific developmental circumstances in the past 15 years (e.g. harder developmental conditions, more foreign investments caused high customers' needs),
 - different economic structure (e.g. higher part of the companies are included in the primary and in the secondary sector).

Differences are mainly the results of the development in the period between 1991 and 2000. After the year 2000 (when Slovenia started to approximate – and join – the EU, and Croatia started to approximate the EU, too), the starting points and the conditions in companies regarding CER, CETHR and CSOCR started to become equal.

However, the presented results show that managers and professionals in Slovenia and Croatia should improve their perceptions of corporate environmental and social responsibilities, and especially of corporate ethical responsibility from the viewpoint of SD.

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4. ENVIRONMENTAL POLLUTION AND THE WASTE EMERGENCY – THE HEALTH EFFECTS, THE CASE STUDIES: ITALY – AFRICA

The presentation has been written by Hon. Prof. Antonio Imeneo and Dr. ssa Daniela Morrone⁹, for XX. WACRA International Conference, 28 – 29 June 2008, Maribor, Slovenia

The Abstract:

The waste emergency in Italy and Naples' case has been researched. Analysis of environmental and sanitary problems in Africa is presented. The African Continent has been as direct victim of the West - the developed/industrialized part of the World. A case study on the actual situation has been presented and possible solutions/proposals have been stated.

Key words:

Environmental pollution, Health hazards, Waste, the Climate Change System, Incineration of waste, Land, water and air pollution, Diseases prevention.

Discussion:

Pollution has been for years the main problem analysed in both International and European political – environmental community. The reason why, a range of regulation have been promoted and integrated in European action programs with the aim to increase environmental protection and human health.

The necessity to find a universal project for the Sustainable (Development) Future of Mankind pushed the Global Community to organize, in 1992, The World Summit in Rio de Janeiro. *All Countries adherent agreed that environmental issues must be solved in a universal way, and the solutions too must involve each Country.*

In that occasion, an Action Plan has been written, the “AGENDA 21”, to be realized on global, national and local level. The headlines of the plan refer to:

- Climate Changes
- Biodiversity
- Desertification.

Themes also discussed in occasion of “Kyoto Conference” in 1997, where a binding International Protocol on the decrease of “gas emission” was created. Theme debated some years later too, in 2002, at the “10 Years after Rio”, “World Summit on Sustainable Development”, Johannesburg, South Africa.

The developing process which related the western part of the world, in the latest years, increased the North - South discrepancy in term of development and industrialization. It has also exposed the African Continent to the growth of enormous problems, due to human

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irresponsibility for the irrational use of renewable sources and the gas emissions (caused by fossil fuel combustion engines emissions, synthetic chemical products use, etc).

Pollution is, therefore, the main consequence of industrialisation. Lands, water and air have become contaminated producing grave risks on human health.

The noxious substances are produced by:

- Combustion engines vehicle emissions;
- Industrial waste flew into rivers' water;
- Petroleum discharge in the sea;
- Gasses and smokes by industry and incineration of waste, etc;
- Synthetic fertilisers and pesticides used in agriculture;
- Radio-active fall-out from nuclear power station, military and other use of nuclear technologies.

Recently, among environmental pollution causes, the one who has engendered more worry than the others has been the waste issue (emergency); which has become dramatic both in Italy and Kenya in the latest years, as in the ecological-sanitary as in the social point of view.

In particular, in Italy, the waste treatment industry is considered as a short cut and a more convenient way to become reach, so that the less of political will, and the economical interest in corruptions, make impossible a define and clear solution. Corruption has become endemic to the system. For this reason, the waste emergency is, to this day, out of control causing crisis especially in the South of Italy. A special case is represented by the Campania region where a range of choices have been taken by several exceptional commissioners for the environment of Italian government, spending/speculating billions of euros in making matters worse:

- It has been chosen to build large incinerators where masses of waste can be burnt, and consequently damaging human health by incineration emissions;
- It has been put the entire cycle of garbage disposal into the hands of worst firms;
- Billion of tons of waste have been placed at illegal garbage dumps. All without the necessary security plan:

The plants working on the divisions of the waste in burning parts – cdr (combustibile da rifiuto) – and the organic parts, have produced a range of dysfunctional waste blocks (because of arsenic traces above the maximum limits allowed). Therefore, its can't be incinerated or put in garbage dumps, so the better solution would be to reinstate, recreate and reuse them; but it is too expensive.

Beyond all prohibitions, however, the waste blocks have been located as dumps at storage farms, causing the emissions of foul odours and the outflow of *discharge dangerous liquid* (toxic sludge arising from wastes) hazardous to the health and to the environment.

- Separation of waste did not have the main role for waste decrease;
- Storage farms intended for the waste compost making, haven't been built;



- People have lost the confidence in the institutions, so they oppose new farms building projects.

The roads are often plenty of waste, this due to the fault of an organised waste collection system, bad Management and Disposal of waste in total respect of the environment. Illegalities, briberies and corruptions by the organized crimes are an inevitable conclusion.

The actual situation is fall over. So, on the one hand inefficient Institutions and on the other hand the racket which use wide ground as illegal garbage disposal, where toxic waste are trucked from industrialized north Italy. ***It is not only administrative violation but it is a very environmental crime.***

Brief wastes description and risks

Hazardous to the people and environment are above all the industrial waste, because of their composition that contains chemical elements. Their toxic and carcinogenic actions cause abnormalities to the embryo and foetus.

For this reason this kind of wastes are classified as: “Dangerous”:

Within the law, waste should be removed in a particular way to prevent or minimize the risk of negative effects on environment and on human beings (*some kinds of waste should be eliminated with high temperatures, some put in specific locations as by law enacted, others reclaimed or refined...*). There is also some waste hazardous to the health: batteries, medicines out-of-date, ink cartridges, paints, solvents, etc. One battery, for example e, is made with a mercury quantity able to pollute 1.000 litres water. *This is the reason why such waste should be removed with special care.*

The “communal” waste is dangerous because of its composition (“damp” fraction: food residues, papers, synthetic chemicals, hormones, plastic, etc), and could help along microbes and a like reproduction as “vectors for disease”. Animals like cockroaches, mosquitoes, rats, etc., could carry pathogenic microbes up to human being.

The “damp fraction”, in the decomposition phases, make rise to sewages rich in toxic composts (dangerous), pollutant for lands, grounds water and rivers/lakes. For this reason the garbage dumps must be built in appropriate locations (clayey or well away from grounds water, with one or two waterproof layers, a draining purification net and a “dangerous content” purification system. Nowadays to dump the “damp fraction” at landfill is forbidden by law.

The waste “dry fraction” (plastic, metal...) is not dangerous for health, but it could be for the environment (for instance sea turtles could die eating plastic bags confused with jellyfishes). Moreover, during the decomposition phases toxic and carcinogenic substances could be liked in the environment (for instance heavy metals), which come in contact and could poison inhabitants, plants, and animals.

Instead, the waste incineration could be dangerous because the smokes could have toxic substances which cause the cancer, cardiovascular, and other disease (heart attack, ictus,



etc), abortion, and gene structure changes. ***Smokes increase also air pollution with damages on the environment (for instance greenhouse effect, acid rains, and ozone hole).***

Disposal of waste at the Campania Region is very convenient. It is onvenient because it is cheap.

Since 14 years ago, the Campania Region has been the region where waste (both communal and industrial) have been disposed off, because it is considered as an advantageous and profitable affair that bear an incalculable profit. Waste comes from all regions.

From all part of Italy, waste commences transport as toxic dangerous material. On the road, however, all labels (waste identification forms) are changed or falsified, so dangerous waste becomes ordinary waste.

Ones it arrives in Campania Region it is placed in unauthorized pits, flows, lakes, or is hidden in lands hollowed for the occasion. *Unpleasantly the illegal dumps are often hollowed in populous areas.* Thanks to this system, the criminal clans have created a net, which allows them and the industries to dispose dangerous industrial waste at a low cost.

They usually act in this way:

- 1) In the night, the garbage truck arrives to the disposal place, where waste is placed and covered immediately. When it is not possible to cover them, they are all burnt. Often, there are the Rom (gipsy) children to set the fire to the waste.

In order to hid the illegal materials and avoid controls, clans use to build infrastructure on garbage dump, so that nobody could suspect it. **Unfortunately some years later they are the cause of damages on inhabitants' health.**

- 2) The dangerous mud is directly poured in underground waters with graves consequences. Recent analysis is reporting the high presence of *dioxin, mercury, arsenic and asbestos* in lands. It is of course the pollutants, which are making the **lands and agriculture products hazardous to the health**. For years million of people have been in contact with toxic substances.

Environments are all contaminated: the pollution agents are above the agreed limits in the air, water and land. The pollution often provokes and results with irreparable damages.

The most famous case in Caserta is the Volturno flow, from years full of toxic pollutants, and now unrecoverable by the ecological point of view.

A perplexing note, pursuant to a personal summer visit characterised by the most confluence of people on the beach, in which the Volturno flow pour its waters, is the incredible presence of households not too far from the shore, where defiant mothers and their children take a bath in pong and dark waters.

Dioxin alarm and health consequences



A considerable surge of environmental pollutants, like dioxin (highly toxic and carcinogenic substances) due to the waste stakes, have led this poison to entry in the life cycle: from the grass, lands and waters, the toxics substances arrive to animal's fat (and milk fat too) through the food they eat.

The waste stake provoked by citizens laid the women and children's health on the line. The principal danger is for foetus deformity (because of dioxin) and cancer cases, above all in babies.

In May 2007, in the Campania Region it has been published a case study ordered by the Civil Safeguard Organization to the World Health Organization. The results show that Campania registers a **significant increase of cancer pathologies.**

- Mortality in the Campania Region is higher than the average: +9% for men and +12% per women. *The Lancet Oncology*, a medical magazine, since 2004 talked about a 24% of liver tumour increase in the dumps surrounding areas, which major victims are women.
- The percentage grows in the case of liver tumours: +19% for men, +29% for women.
- The nervous system diseases are 83% more than the national average, as well as the congenital deformity to the urinary and genital system: +84%.

Baby health's concern.

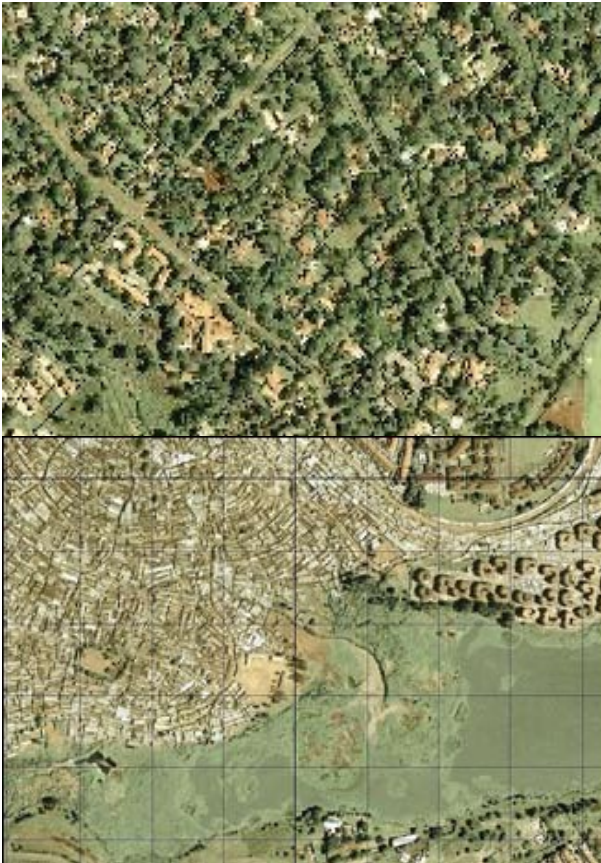
In the meantime the Campania Region has promoted one of the important international researches, unprecedented in Italy about human bio-monitoring.

The research is called Sebiorec, and is based on the drawing of 780 people, and 50 maternal milk samples, in 13 Naples and Caserta Municipalities in order to analyse presence of heavy metals and dioxin.

The list of people will be made at random between the 20th and the 64th years old, living in different Municipalities depending on the exposition to a diverse environmental risk.

Similar alarm case takes place in Nairobi, Kenya, where human health is at stake because of the presence of open-work at landfill.

NAIROBI: THE ACTUAL SITUATION



A panoramic view of the city centre compared to the panoramic view of the periphery and Korogocho landfill.

Dandora is the Nairobi poor suburb, in which one of the biggest landfills of Africa is situated. Each day it receives 2000 + garbage scores from the Nairobi, the capital city of Kenya. It is coming from the households, hotels, embassies, airports, shopping centres, etc.



Since 2001 Dandora landfill has been declared full-filled, especially for the health damages that cause to the people who live in suburb, in tinplated and wood shacks without electricity and drinking water. Unfortunately the administration does not provide a new dump.

Dandora has been created in 1977 by local authorities and by the World Bank in order to build up a low costs quarters area. But, the project was doomed because of its ideas well away from the reality, and becomes the slum of Nairobi.

Since 30 years ago Korogocho, one of the biggest Nairobi's slum, where more than 120.000 people who live piled in square kilometre with a 40 years of estimate life, try to survive. It



has been known as the worst part without expectancy. Pushed by poverty, they rummage among dishes in the hope to find something to eat: lunch residue or markets' waste. They look for something (like old bottles, glass, plastic, and etc) to sell, in the hope to earn the minimum to live. But there are also gangs which survive with dishes business, recycling materials, surrounded by violence, degradation and harmful fumes.

Garbage dump emergency in Nairobi

It has been published at The United Nation Environmental Programme – UNEP report on people's health conditions, (above all children), that live in the surrounding of Dandora waste landfill, within the Nairobi, Kenya.

It is the biggest landfill of the whole country, and represents a real environmental threat to health. The health condition of about 328 children (between 2nd and 18th years of age) have been checked as well as land samples, which also live in the Dandora surrounding. The report show that about half of the children examined have a high lead concentration in the blood, and as well as in the 42% lands samples analysed a lead concentration was out of limits. As result:

- Children are exposed to heavy metals pollution and toxic substances through lands, water, and air (because of fumes and stakes). That causes respiratory, dermatological and gastro-intestinal diseases, end plus asthma and chronic bronchitis.
- In about half of the children examined the high leaden concentration in the blood, is more than the maximum threshold of **10 µg/dl** and in some cases it goes over **30 µg/dl**.
- Low level of haemoglobin and anaemia cases have been noticed in the 50% of people and 30% of children; both with lead poisoning.
- High **Cadmium** levels run to kidney damages and cancer risks. (50% beyond limits).
- Half of the all community have a case of respiratory problems: chronic bronchitis and asthma.

Even the pulmonary growth could be modified by pollution with serious respiratory consequences during the childhood, and it could also be the principal cause of chronic diseases all life long.

Over the 30% of childish diseases in the world can be attributed to environmental factors. Contaminated water and air, synthetic chemicals, pesticides in foods, lead and other heavy metals in lands, like other environmental menaces, modify the delicate being of children during the growth. This also cause or aggravate diseases and make trouble during the growth.

On the level of the age groups, children react in a different way, due to its own growth process. Some of the effect on children health caused by the exposition to synthetic and other chemical substances could be:

- Childbirth and prenatal periods: miscarriages, premature childbirth, shortcoming from the birth;
- Child period: mortality, asthma, behaviour disturbance and immune scarcity.



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- Teenager: premature or postponed puberty.

In Africa the actual situation is worsen by fresh-water pollution and drinking water's scarcity.

Three millions and a half are the people at risk because of water scarcity. Many 5 years old children that, apart of the malnutrition (another pain in the bottle neck of Africa Continent) they are lost because of dysentery, noxious water, and the health condition that come from.

Due to:

- Unequal distribution in term of use of water at a global level
- Water pollution process (synthetic chemical products use, loss of domestic and industrial waste water treatments)
- Land Degradation – Deforestation – Desertification
- Uneconomical use of water, and
- The Climate Changes System impact (greenhouse effect, etc)

THIRSTY AFRICA - The North - South discrepancy also refers to a fundamental resource like safe water is. During the latest years it has been registered an uneconomical use of water, by the industrialized countries of the West. On the contrary in the Africa Continent, about the 65% of inhabitants have to walk for hours to reach a water source (often in bad conditions). It is also prevented that in the next years about the 80% of inhabitants will not have the necessary water quantity available. The main cause is due to the never-ending water's needs, which are making, and in future will make more conflicts at all levels, local, national, international and global. Demographic increases due to population explosion, needs for irrigations and agriculture production, food processing and marketing, industry, dry seasons and the impact of the climate change system are the main causes for decrease of water reserves. The overpopulation of the certain areas makes people to move to the coastal areas and cities generating new problems because of the services incapability and the complex problems on the water supply.

The management of water resources generate political and economical conflicts. The water treatment system is too expensive, so that the 95% of waste waters are flown directly into rivers, where the same water is often used as drinking water. It can be also added that the actual industrial processes are out-of-dates, so pollutant.

Africa is a Country in which have been registered the highest presence and diseases diffusion. The most diffused are:

- Malaria
- HIV/ AIDS
- Diarrhoea
- Anaemia
- Intestinal infection

It has also been noted an increase of water diseases, such as:



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- Typhus fever
 - Cholera
 - Parasitics diseases
 - Gastroenteritis
 - Hepatitis
 - Trachoma

Majority of diseases of human population within tropics, subtropics, and moderate climate regions of the planet Earth, caused by water transmissions of: vector by water contaminated by urine and faces; vector by water infestation by bacteria, parasites, and creatures living in water; could be summarised as:

- Intestinal disorders as: Amebiasis, Giardiasis, Isosporiasis, Cryptosporidiosis, Ascariasis, Ossiuriasis, Teniasis, Cholera, Salmonellosis, Escherihiasis, viral and ricetsial diseases,
- General disorders as: Malaria, Bilharsiosis, Toxoplasmosis, Cholera, Salmonellosis, Leptospirosis, Shistomosiasis, Distomosiasis, and
- Skin disorders as: Dracunculosis.

The gravity of disease could be from very acute and dangerous with possible fatality to moderate and les dangerous forms.

Secondly it is important to state that malaria has more important role due to coming the climate change system impact, which will make migration of the malaria to present more moderate climate regions malaria free.

The presence of stagnant water lead up to the growth of insects and parasites, which will be transferred to human beings, pathogenic for them.

If we don't take well-timed preventive measures, the people of the Africa may disappear.

Specialists and scholars notice that the declining of the quality of the ecosystem will involve a serious risk for the not renewable resources' future.

Human activity put pressure on the natural systems of the Planet Earth so that the ecosystems capacity which sustain future generation can't be taken for granted.

About the 60% of the ecosystem provided services – water, food, fishing, climate system (mentioning only a part of them) – are declined or utilized in an irrational way, also the non renewable resources.

EXPECTATION AND PROPOSAL

WHAT NEEDS TO BE DONE

Today, the problems which we have to take care as – lost of biodiversity, water scarcity, degradation of land, water and air environments – should get worse and worse in the next 50s years, if a prompt intervention on Earth behalf will not take place.



We are answerable to both ourselves and the poorest of the World, so that the global systems will be well-preserved, and they could keep on furnishing goods and services we need to survive.

In this situation it will be difficult to reach the Millennium Goals of the United Nations of reducing famine and poverty, as well as get better human health and safeguard the environment within the 2015.

A radical change of each and every one is needed. The societal, political, industrial and many more natural and man made environments systems at all levels including grass roots need rethinking for needed sustainable future of mankind. Each and one must have the moral obligation to act because natural resources protection is a responsibility commissioned to all living creature of the Planet Earth.

National governments must act.

With regards to the Italian case, the Parliament ought to go hard in approving the environmental accounting law, which allow to all the Municipalities, Districts, Regions and States to attribute an economic value to the ecosystem resources. It will be a capital step to cut down on the biodiversity loss ratio within the 2010.

Call attention to the ecosystem preservation on behalf of the future of our generations, in a World where the population growth still surging and the natural resources are at the limit, have a fundamental political and social importance.



LOSS OF NATURAL VALUE

During the latest 50 years, biosphere, nature and ecosystems have been changing faster and more than in the past.

To provide shelter, food, water, energy, etc., for the entire human population which is ever-growing, we have penalized the complex plants and animals systems, which are the main biological resources of life on Earth.

The degradation's progress increase the chances of sudden changes with a serious impact on humanity, such as: the outcrop of new illness, availability and quality water's loss, the creation of "dead zones" on the shore lines, fishing collapse and the climate change system impact mitigation.

Poorest inhabitants are the main victims who suffer the consequences of the ecosystem changes.

In the African Continent, in the South Sahara Region, it is estimated that the poor person's number would increase from 315 million in 1999 to 404 million in 2015.

A Change of Course is still possible.

Invert the degradation in order to face toward, at the same time, the ecosystem's degradation and the growing services' claim, is still possible. **But a better and less destructive use of natural resources is needed.** Let up on the Earth's natural resources, it's a societal power. The alarm signals are all before everybody's eyes. Future is all in ours hands.

Against this problem, to act is necessary

First order of the business is shoot for "a global making awake", that involve not only governmental top brass, but citizens and habitual consumers too.

Africa, with its own problems seems to be too far. In years Africa has always been an under-developing part of the human global society, differently from Italy which is now a zero-growth country, having ended its transition phase.

Now it is fundamental, above all, a direct communication to people at local communities. To consider them as a most important source, to ensure them both good living conditions, sustainable future to their children and mitigation of the climate change system impact.

POLULATION AND HEALTH

If people's **health condition** depends on all this points:

- Appropriate nutrition;
- Better sanitary conditions;
- Vaccines' use against diseases;
- Hospital structures;
- Health facilities;



-
- Medicaments availability and access;
 - Safe drinking water availability;
 - Socio-cultural degree;
 - Economical possibility;
 - Social works;
 - Work; and
 - World peace;

Humanity needs to solve the main organizational problems such as:

- **New infrastructure constructions:**
 - **To increase the number of new hospital's and health care institutions** giving free treatment to children; and increasing the number of: doctors, medical attendants, social workers;
 - **To increase the number of halfway houses:** day-care's function, rehabilitation, information and a making awake activity. Welcoming young people and children who are compelled to live road-side repudiated by their own families, giving them also the chance to take part in a group. Groups helps them to face with life's challenges, through different activities (theatre, dance, sports), which help to regain self-confidence, find out its own capabilities, to grow up, to discover talents. So, orientation and rehabilitation in the service of the whole community. Groups give also the possibility to link different cultures, ethnic and religious' groups, accustoming them in living in harmony and peace, in a "peaceful community";
 - **To increase the number of new schools and libraries:** with training and literacy's function. To cut educational costs or to give an economical help to the families for its children educational costs. In so doing a lot of children will not be compelled to leave studies and look for a work for living. Knowledge to increase the possibilities **to find a work with a better income.**

This is the reason why to invest in **children's education** of today also means to work for the wellbeing and the development of future's children.

- Residence building;
- Water supply and water sources constructions, in order to assure safe drinking water to the large part of human population;
- Water treatment plants construction;
- Better maintenance of water instalations;
- **To reclaim illegal landfills** : shutdown of illegal landfills and to construct new one's with construction according to the law and sustainable technologies.
- Conversion of producing process out-of-date and pollutants: Africa needs a well-timed conversion of its energy sources.

AFRICA HEALTH: PREVENTION

In Africa there are infective diseases that represent a serious problem for human health; although some infections can be prevented. Making evaluation of that situation, two are the main conditions needed for Africa:



- The real access to the vaccines, and
- Political action for that promotion and use of vaccines.

The climate changes system impact and consequent increase of the temperature have enlarged the mosquito proliferations so that they are able to reach high altitude spreading the malaria disease in new areas northward and southward...

MALARIA

In the whole world, malaria kills every year about one million of people, and the most part of them, about the 75%, are children. Every 30 second in Africa, in the South Sahara region, a child die because of malaria; mothers are also at risk, having them contracted malaria in endemic regions. Thanks to the recent medical and pharmaceutical developments, malaria is today a disease that can be prevented and cured.

First of all, malaria problems must be solved by local communities. A fundamental role is charged by non governmental organizations, which work to direct contact with people in villages and local communities, living and hearing their problems. They also provide to them mosquitoes netting for beds. Moreover, it is also necessary an economical and financial aid by both governments and the whole international/global community, so that a research's increase and more help to local organization will be possible to provide.

With a socio-political support to children and pregnant women, added to a broad sanitary and hygienic awareness, an improvement against malaria loses could be possible.

AIDS

Often, who suffer the consequences of AIDS are mainly the young people – between 10 and 24 years of age – and young women, because of discrimination and the loss of an education. One of the main risks to contract AIDS is the eldest men who induce young women, to have sexual intercourses, by force. Try to prevent the AIDS in Africa, means to deal with a cultural tradition and time-honoured behaviour, such as precocious sexual relations and the prophylactic use as prevention's possibilities, which are unfortunately non-existent.

Although medicines are expensive, prevention's work is in local communities, through hospitals, and rehabilitation centres constructions, increasing the number of social workers, who are constantly in contact with local people giving those supports and education.

POST-PARTUM HAEMORRAGE PREVENCTION

Africa registers the highest maternal mortality rate (the death risk that a woman have during her pregnancies), and in high fertility rate contests, like Africa-south Sahara is, women are constantly at risk during all their life long. In order to reduce the maternal mortality rate of about 75% till 2015 it is priority to give sanitary assistance to women and provide them a services' open door.

All that involves the Planned Parenthood, pregnancies' prevention and a constant specialized assistance also during the pregnancy, the childbirth and in emergency cases too.



When an obstetrician emergency is in progress a first aid with a ready clinical diagnosis is crucial.

It is also necessary the means of transport availability and well-equipped structures with professional teams nearby.

To extend throughout women education, to promote gender equality and make them aware to seek assistance is all strategies to reduce maternal mortality rate.

OTHER DESEASES

- **Infective**, due to pathogenic virus and bacteria.
The principals are: cholera, diphtheria, Ebola, hepatitis, measles, whooping cough, plague, TBC, lockjaw, pneumonia, typhus fever.
- **Parasitic**, due to lice, mosquito and pinworms.
The principals are: yellow fever, dengue, filariasis, trachoma, visceral leishmaniasis, sleeping sickness.
- **Food scarcity**, both for quantity and quality. Being needs nutritional principles, without which body do not have the energies needed for the vital functions. The principal is MPE.

To act with supports' politics to the local communities reducing pharmacological costs and increasing their number in hospitals, establishing emergency's areas, cutting pregnant women and children costs, increasing doctors' numbers, are all possible solution to cut the high mortality rate of present-day.

Fundamental is the creation of an institution able to control on medicines, as in recent enquiry result that medicines out-of-date have been distributed on street's market in all Africa. Much of them are also false or made without the active ingredients, with grave risks for patients' health of the whole Africa. We can't deny that during the past years, pharmaceutical industries have endeared of poorer nations, with the aim to distribute them medicine considered dangerous by Europe and USA, exploiting local ignorance, or negate fundamental medicines.

General recommendations

Conclusion

A real and immediate change is needed, above all, on a local, national, international and global level. Not only for what pertain to structures and industrialization, the export of advanced technology by western world into a country like from Africa been for years underdeveloped, but also a consciousness raising and a real and global action.



A lot of victims, above all children, are paying for the high price of our industrialization and development with their own life. Direct victims of modern processes: hotel and tourist villages' construction with all comfort, which interest some of Africa continent's country.

It would be needed to question why it's not a natural behaviour to live **offering yourself help**.

Some cases of enormous difficulties are also present in our countries: dryness – The Climate Changes System Impacts – waste emergency - overcome diseases that return.

If we do not take preventive, global, and immediate measures, we will get a sense of the problematic gravity only in the case that we'll be the real protagonists of the degradation.

Blindness, deafness and human indifference are a boomerang which sooner or later will lash out against us, and.....it will be too late and the crash will be inevitable.



5. SYSTEMS APPROACH TO DEVELOPING SUSTAINABLE QUALITY TOURISM IN DELTA STATE, NIGERIA

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Abstract

Though endowed with highly diverse environmental resources, tourist flow and economic gains have been low in Nigeria, causing concern to government and tourism business operators. Past tourism studies imbued with this concern are fragmented, focusing on specific components of tourism. Tourism travels were explained in past studies in terms of unidirectional models as push and pull factors which view tourism as a one way process, a start and finish relationship between tourists generating and destination regions. Despite current realization that an underlying concept in planning tourism is that tourism should be viewed as an interrelated system of supply and demand factors, tourism studies employing systems thinking, concepts and methods are yet to evolve at the national, state or local levels in Nigeria. Urged by need to apply systems thinking to tourism studies aimed at attaining sustainable quality tourism in Nigeria, this paper examined the structure and inter-relatedness of the demand and supply elements of the tourism environment in Delta State, Nigeria. The paper employed the framework of system thinking and concepts proposed by Leiper and the World Tourism Organization to adopt a comprehensive view of tourism in Delta State, Nigeria. The paper examined factors in origin environment subsystem that stimulated tourist travel decisions and factors in destination environment subsystem that influences tourist/visitor destination selection. The subsystems of routes, alternative destinations, and modes of travel between origin and destination, and control subsystems such as tour operation and travel agents were examined. Adjustment mechanisms involving tourist's activities, experiences, contacts with new environments, and possible feedback information (positive and negative) that enhances or discourages travel propensity/motivation were examined and recommendations arising from the study were made. The paper concluded with strategies/suggestions indicating ways that the systems approach to sustainable quality tourism development in Delta State specifically related to the Nigerian situation, and tourism planning, management and development generally.

Introduction

Though Nigeria is endowed with highly diverse cultural and natural environmental resources, tourist flow and economic gains have been low, causing concern to government and tourism business operators. Majority of past tourism studies (Chokor; 1993; Awaritefe,



1993; Afolabi, 1993) imbued with this concern have been fragmentary, focusing on specific components of tourism or tourism sites. Tourism travels were in more recent studies (Awaritefe, 2004; Ideh, 2005) also explained in terms of only unidirectional models as “push” and “pull” factors, which viewed tourism as a one-way process, a start and finish relationship between tourists generating and destination regions. Majority of previous tourism studies in Nigeria frequently examined issues of only supply or demand, but rarely both. Despite current realization that an underlying concept in planning tourism is that tourism should be viewed as an interrelated system of supply and demand factors, tourism studies employing systems thinking, concepts and methods are yet to evolve and gain support at the national, state or local levels in Nigeria. Urged by the need to apply a holistic, integrated system approach to tourism studies aimed at attaining sustainable quality tourism in Nigeria, this paper sought to fulfil the following objectives. First, to examine the structure and interrelatedness of both the demand and supply elements of the tourism environment in Delta State, Nigeria. And secondly, to examine tourism activities and adjustment mechanisms involving tourists’ activities, experiences, contact with new environments, and possible feedback information (Positive and Negative) that enhances or discourages travel propensity in destination areas. Finally, the paper sought to make recommendations on strategies and suggestions arising from the study that have implications on destination planning and development in Delta State, Nigeria and perhaps other African setting with similar environmental milieu.

Integrated Systems Approach to Developing Sustainable Tourism

There is presently a global shift from formal/institutionalised tourism, characterized by mass tour and guided visit in specific places, to alternative small scale tourism forms, that emphasize individual search for self fulfilment and unique experiences in diverse environments within a region. A holistic rather than reductionism framework of tourism planning is therefore desirable in order to fulfil the diverse travel needs and expectations of contemporary tourist, while simultaneously ensuring sustainability of environmental resources in destination regions.

Past tourism development approach by government and the private sector in Nigeria have concentrated on specific sites and target areas such as hotels, parks, beaches, museums and historic sites considered attractive for leisure visits, recreation or excursion. A major flaw with this approach is the failure to recognise the interrelated and holistic nature of environments, places, people and tourism (Chokor, 1993; World Tourism Organisation, WTO, 2003). Tourism involves several complicated activities that overlap many different sectors of the environment, economy and society. Thus, a more holistic and interrelated planning approach of tourism resource and destinations is desirable as a basis for tourism policy and development strategy, as it incorporates both current and historic appraisals of the entire features of the environment in a region.

A key concept underlying current tourism planning approach is that tourism should be viewed as an inter-related system of demand and supply subsystems. According to Leiper (1999) and WTO (1994; 1999; 2003), the tourism demand subsystem is made up of foreign and domestic tourists and local residents; these use local attractions, infrastructures, accommodation, services/activities, which constitute the supply subsystem or tourism product. Certain institutional structures, such as government tourism offices, hotel/catering



association, legislature and regulation are also vital tourism products or supply subsystems that are required for tourism to function optimally, much more effectively, and bring desired benefits. It is important that planning for tourism should aim for integrated and holistic development of all the supply and demand subsystems to achieve sustainable tourism development. Tourism development also requires planning for integration of tourism into overall national or regional or state development systems such as policies and plans, so as to resolve potential conflicts over locations for various developments and ensure harmony in multiple resource use by tourists and local communities. The strategy of integrated systems approach is currently widely advocated in tourism planning as it better assures that all the subsystems of the tourism system such as the natural, cultural, and other resources are conserved for continuous future use, while still beneficial to present society (Lea, 1998; Gunn, 2002). Most quality improvement or development of the tourism system impact largely on subsystems of attractions and activities that is associated with the subsystems of natural environment, cultural features, historic and heritage artefacts. Conversely, the degradation or destruction of these resource subsystems will certainly reduce tourist's patronage, hinder tourism, lower environmental quality and create local, social and cultural problems. The integrated systems approach is acutely important in planning for quality tourism as it presents the basic technique in achieving sustainable tourism development (Ashworth, 2001; WTO, 1994, 2003). The approach demands that all subsystems of tourism, especially those involving tourism supply and demand, be carefully surveyed, analysed and synthesized or considered in determining the most appropriate type and location of tourism development (WTO, 1994). It is in the context of this planning approach that the subsystems of the tourism environment in Delta State, Nigeria – tourism products, tourist's market, tourism policy and institutional frameworks, are detailed examined next.

Background of the Study Area

The study area, Delta State, is one of the thirty-six States in Nigeria. It is located South of Southern Nigeria, between latitudes $5^{\circ}01'$ and $6^{\circ}30'$ and longitudes $5^{\circ}01'$ and $6^{\circ}45'$, within the Niger Delta plains and estuaries. Delta State has a moderate tropical climate. With all year sunshine, two seasons, a dry and a rain season dominate the climate of the area. The State contains more than 8 million people of diverse ethnic groups, majority of who live in several densely settled urban areas and some rural and agricultural/fishing communities (Federal Government of Nigeria, 2006). The diversified cultures, languages, traditional occupation, customs and historic background of these ethnic groups are of high tourism interest. The two major cities are the Capital of Asaba located in the northern part of the State and Warri, a major port, with numerous oil associated industrial and commercial establishments, located south.

Various surveys of the environmental attractions in Delta State were undertaken between April 2007 and February 2008. Aspects of the preliminary report of these surveys are reported in this paper. The variables selected to measure components of environmental quality are similar to those employed in previous published studies by Hamill (1974), Chokor (1990) and Awaritefe (1992, 2000, 2005, 2007). Methods and criteria for selection of sites/areas for detailed survey and evaluation are also similar to those presented in these



previous studies. Consequently, detailed information on the methodological aspects of destination environment evaluation are omitted due to need for brevity and lack of space.



Survey and Evaluation of Tourist Product

The survey and evaluation of tourist attractions was detailed because of the importance attached to achieving the objective of developing tourism that is based on the inherent environmental and cultural attractions in the area. The survey was based on the three categories of attractions – (a) areas of scenic beauty/unique environmental features (b) areas of social/cultural attributes, and (c) areas of historic/ archaeological monuments.

a. Areas of scenic beauty/unique environmental features

A geographical survey was first undertaken of the physiologic and drainage features of Delta State. This was supplemented with information from a study on the physical structure of Delta State by Odemerho and Ejemeyovwi (2007). This resulted in identification of three broad categories of landform areas:

1) Beaches and Rivers

The beaches consist of unique beach inlands/ridges that run parallel to the coastal shoreline, and inland river beaches associated with the five major inland basin systems. Destination managers and preliminary field survey suggested sites and areas for detailed survey and evaluation, using 28 criteria. The evaluation identified ten first grade beaches and inland rivers, five-second grade and three third grade.

2) Mangrove/Freshwater Swamp

Three distinctive landform assemblages were identified and evaluated here. Mangrove swamps, fresh water swamps, and low plains. These areas provide the best examples of oxbow lakes in Nigeria. Several streams, isolated marshlands, swamps, creeks and large annual flooded plains are common features. Sites for detailed survey were evaluated using 21 criteria. These yielded scores for grading selected areas as follow:

- i. Mangrove wet land associated with fishing and unique wildlife – three primary attractions and two secondary.
- ii. Fresh water oxbow lakes – two primary attractions and one secondary
- iii. Streams/Swamps – Two primary attractions and two secondary
- iv. Isolated Marshland – Two primary attractions and one secondary
- v. Flooded plans - Three primary attractions and one secondary

3) Areas of undulating high plan and dissected Upland Areas

The high plan and upland areas identified and evaluated fall into three categories:

- i. High Plains
- ii. Isolated ridges
- iii. Disserted uplands.

This upland area is the most important hydrographic center in Delta State. The major river systems as Oroghodo, R. Oneutor and R. Anwai, and R. Ase, have their origin in the upland area. Several sites were selected for survey and evaluation using 25 criteria. Here, three high plains were identified as primary attractions and two others as Secondary; two isolated ridges as primary attractions and one as secondary; one dissected upland area as primary attraction and two as secondary. Two river sources were evaluated as primary attractions, and one as secondary.



The natural flora and fauna in Delta State was surveyed and evaluated using 21 criteria to identify major environmental attractions that constitute the basis of tourism activities and excursions, but under controlled conditions to protect flora and fauna. The survey and evaluation revealed a great diversity of species of flora, with mangrove and fresh water swamp forest, tropical lowland rainforest and discontinuous grassland as the main vegetation types. The dominant coastal areas where they are found were surveyed and categorised into three primary tourist attractions and two secondary tourist attractions. The varieties of fresh water swamp forest trees were surveyed and categorised into two primary and three secondary attractions. The variety of forest trees and the continuous patches of treeless grassland vegetation that occur in the plains of Urhobo, Isoko and Kwale were also surveyed, categorised and evaluated into five primary and three secondary attractions.

Diversity of insects, reptiles, snails, crocodiles, turtles, snakes and mammals including varieties of monkeys, chimpanzees, baboons, antelopes, rodents and bird life inhabit the area. The coastal and inland waters support varieties of fishing opportunity for tourism. For these and other areas where forest and wild life conservation is practiced, as in some forest reserves, community sacred forest and water areas, a separate survey and evaluation of species and their habitat was undertaken using 23 criteria. The criteria used for evaluation were synthesized and converted into phases of stop over time by tourist to experience attractions. This resulted to the following attraction time grouping:

- * Grade A: 4 Primary attraction areas suitable for a visit of 1 hour or more.
- * Grade B: 7 Secondary attraction areas, suitable for a visit of less than 1 hour.
- * Grade C: 3 less important attraction areas, but with potential appeal.

b. Areas of Cultural/Social Attractions

Previous studies (Awaritefe, 2006, 2005; Abotutu, 2006) suggest that the cultural roots of Deltans lie in its indigenous tribal life, tradition, social and religious life; which are amply reflected in its historic settlements, towns, and villages. Settlements considered important for experiencing the culture and life styles of Deltans were broadly classified into three groups:

- (i) Ancient or pre-colonial settlements
- (ii) Colonial settlements
- (iii) Recent or Post-colonial settlements.

An inventory of settlements was undertaken and their survey and evaluation was subsequently carried out, using 35 criteria, assigned one to five points grade. The settlements were subsequently categorized into six groupings of cultural importance as follows: first order attraction settlements (5), second order attraction settlements (7), other interesting settlements (4), settlements in ruinous condition (2), and lastly, settlement with exceptional individual or groups of building (2).

c. Areas of Historic/Archaeological Monuments

The third major attraction type examined is historic monuments and artefacts. The state has a short but interesting history which provides some of its tourists' attractions, with the following as dominant incidents: local tribal rivalry, slave trade, early European trade and missionary work and British Colonial Occupation. Sites manifesting any of



these features were listed by areas. Additionally, other historic buildings and complexes of buildings were identified and listed, including historic palaces, churches, schools, bridges, industrial and commercial places. Both areas of historic attractions were surveyed and classified into three grades:

Grade A – 5 major historic sites suitable for a visit of greater than 1 hour.

Grade B – 7 major historic sites for a visit of less than 1 hour.

Grade C – 3 less important historic sites, but with potential appeal.

The survey and evaluation of tourist attractions were incorporated as important input in the formulation of the suggested types of tourism development, policy strategies and structure plan of tourism development for Delta State, Nigeria. (See Figure I). Additionally, under the policy formulation section, recommendations were made on the significance of conserving the cultural fabric and protection of environmental quality and features.

Subsystems of travel routes/modes and other tourism infrastructures/facilities and services

Routes linking Delta State to various parts of Nigeria include air transport at Osubi, and Seaports at Warri, Sapele, Koko and Burutu. Various areas in the State are connected by network of road and waterways to other areas in Nigeria. Water boats and canoes are used on the extensive river system and creeks. The transport system is still poorly developed in several tourism parts of the state, making some areas with valuable tourism resources still inaccessible.

Foreign Tourist arrived destinations mostly in groups, travelling in buses, trucks and cars. Foreign tourists stayed longer in destinations than domestic Nigerian tourists. Domestic tourism is more of day trips, with spouse using cars. Overnight stay is small in volume, due mainly to low incomes and high cost. A few tour operators and travel agents are established in the State due to low business. Some high-grade hotels exist in major towns and few rural areas with unique tourism resources. Although tourism infrastructure is well developed in the major towns of Asaba and Warri, it is yet to be improved in many remote areas with valuable tourism resources. Medical facilities, information/education, shopping, recreation and other services for tourists are yet to be improved or provided in remote tourism areas.

Tourism Control Subsystem: Institutional Elements and Policies

The Ministry of Trade and Tourism, in conjunction with National Tourism Development Cooperation, are government organs for control or regulation of tourism development in Nigeria. Each of the 36 States of Nigeria is expected to have a State Ministry of Tourism, and a Tourism Board to regulate tourism development at the State level. Tourism development in Delta State is expected to follow laid down lines in the National Tourism Policy (Federal Government of Nigeria, 1990).

Specifically in Delta State, the Ministry of Information, Culture and Tourism, and the Delta State Tourism Board are responsible for the regulation, marketing, and other operational



activities of tourism. Private sector activities involve mostly commercial operations. The main aim of tourism policy is employment and income generation, and improvement of well being of citizens. The focus of tourism development strategy is to mobilize and encourage private sector participation in tourism development, while creating the enabling environment for private sector initiative. Each of the 21 Local Government Areas (LGAs) in Delta State is expected to set up a Tourism Committee to oversee tourism matters in their areas. However, only a few LGAs presently have functional tourism committees.

The Tourism Demand Subsystem in Delta State

The demand sub-system consists mostly of foreign and domestic tourists, and locals who demand or make use of tourism products in Delta State.

Data on volume and qualitative aspects of travel behaviour of tourists/visitors within Delta State is provided by previous research (Awaritefe, 2004, 2005) and official statistics (Delta State Ministry of Culture & Tourism, 2003). Because the data was obtained from different sources and methodologies, the data collected and many estimates differ significantly in part. Furthermore, certain tourists' activities were not adequately covered by past research and official statistics. Consequently, many figures and their interpretation should be viewed with caution.

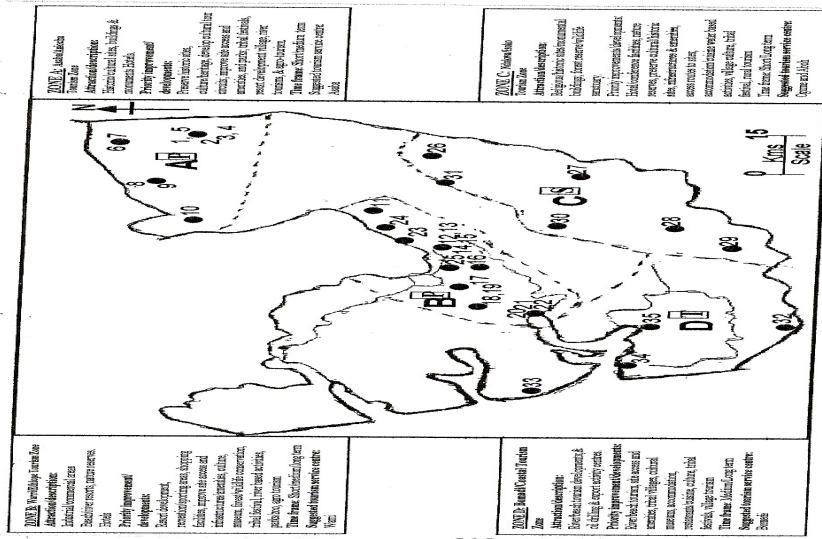


FIG. 1: RECOMMENDED TOURISM ZONES IN DELTA STATE
See key next page

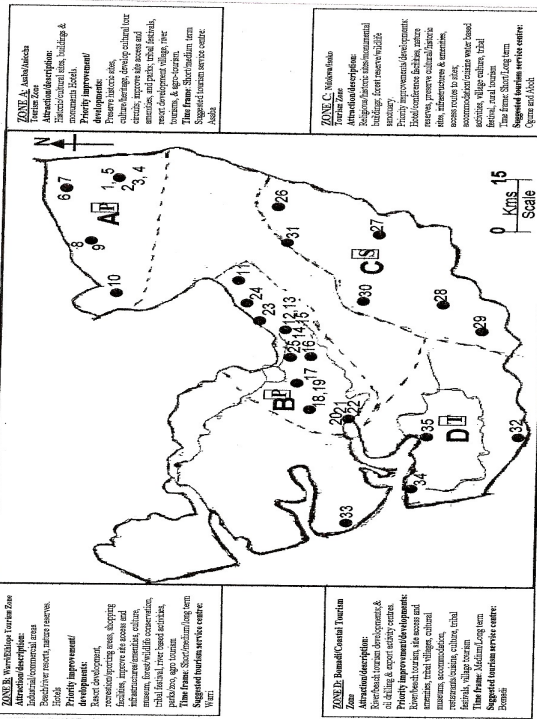


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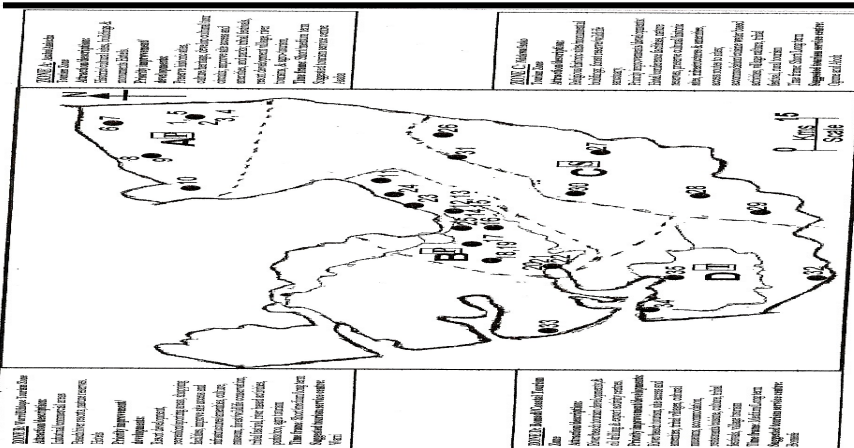


FIG. 1: RECOMMENDED TOURISM ZONES IN DELTA STATE
See key next page

ZONE C: NDOKWA/ISOKO TOURISM ZONE

FW=26	Ossissa Forest Reserve, Ossissa
HCM=27	Slave trade Relic, Aboh
HCM=28	Bible Site, Araya
RB=29	Eni Lake, Uzere
IR=30	Ibru Centre, Agbarha-Otor
HCM=31	Ogume Village square/shrines

ZONE D: BOMADI/COASTAL TOURISM ZONE

R.B=32	Bomadi Beach
R.B=33	Mangrove Swamp Forest
HCM=34	Forcados Oil Terminal
HCM=35	Akurugbene festival

KEY

A	B	:	Primary Tourism Zone
C	S	:	Secondary Tourism Zone
D	T	:	Tertiary Tourism Zone

TYPES OF TOURISM

1.	River/beach tourism	R/B
2.	Forest/Wildlife tourism	F/W
3.	Historic/cultural/monuments tourism	H/C/M
4.	Agro/Village/Rural tourism	AVR
5.	Urban Hotel tourism	UH
6.	Resort tourism	R

● = Tourism Resource Site

--- = Boundary of Tourism Zones

— = State Boundary

ZONE A: ASABA/ANIOCHA TOURISM ZONE

HCM=1	Mungo Park Building, Asaba Museum
HCM=2	Expatriate Grave yard, Asaba
RB=3	Otu-Ogwu Beach, Asaba
UH=4	Grand Hotel, Asaba
HCM=5	Niger Bridge Asaba
HCM=6	Ozomona-Manor House, Onicha-Olona
R=7	Olona Ranch, Onicha Olona
HCM=8	Nwoko Villa, Idumuje Ugboko
HCM=9	Obi Palace, Idumuje-Ugboko
HI=10	Leads Guest House, Agbor

ZONE B: WARRI/ETHIOPE TOURISM ZONE

R.B=11	Ethiope River Source, Umuaja
R=12	Abraka River Resort, Abraka
R=13	Gordon Hotels, Abraka
R=14	Turf Club, Abraka
R=15	Bembo Games Villages, Abraka
HCM=16	Adana-Okpe, Owerokpe
UH=17	Osubi Airstrip, Osubi
UH=18	De Deplomat, Effurun
UH=19	Casa de pedro, Effurun
UH=20	Pemos Place, Warri
UH=21	Hotel Peggy, Warri
UH=22	Hotel Excel, Warri
UH=23	Amena Hotel/Resort, Oghara
HCM=24	Nana Meseum, Koko
AVR=25	Songhai Farms, Amukpe



Tourists Travel Pattern

Analysis of tourists travel pattern within Delta State between 2001 and 2004 covered some 5.3 million journeys with overnight stays. This gives an annual average of 1.32 million overnight on vacation trips. In 2005, total visitors stay overnight in Delta State is estimated at 889,000. Based on an average stay of 2.5 nights, this gives about 2.2 million overnights. And with an average daily spending of ₦20,000 (i.e. about €100 with ₦200 = €1) per tourists, receipts from tourist is estimated at a low ₦4.2 billion annually.

Tourists Demographics

The majority of tourists are domestic, environmental appreciative and educational as well as recreational. Most tourists are also males, unmarried, and are between the ages of 18 – 46 years, with a mean of 32 years.

Majority of tourist earn more than ₦150,000 monthly, far above the monthly average of ₦25,000 for a typical Nigerian worker, and possess higher Certificate or Diploma, or first degree, and are of working or middle class, while a few are students. Foreign tourists are mostly Europeans from Britain, France, Italy, Germany, America, Canada, and Asia. Other Africans are few. Majority of domestic Nigerian tourists have medium and larger family sizes than foreign tourists, and travelled with spouses or friends and arrive destinations with personal vehicles. In contrast, foreign tourists were mostly single or have small families of less than two children and were travelling in large groups with family members.

Factors in tourist Origin and Destination Environment Subsystems that Stimulates Travel

Tourism research (Dann, 1996; Pearce, 1993) suggests that while the individuals' initial decision to travel is motivated by deeper socio-psychological needs, final decision to travel to specific destinations is, however, influenced by perceived images of destinations. Factors in tourist origin environment subsystem that stimulated initial tourist travel decisions and in destination environment subsystem that influenced tourist final destination selection were examined, using systems framework of human needs ("Push" to travel) and destination attractiveness ("Pull" to travel) factors.

Generally, human needs or socio-psychological needs, "push" motives, especially the need for culture/nature appreciation and educational pursuits, appeared as dominant motivations for visiting destinations by tourist. Leisure/recreational needs emerged as the next most important. Destination visit was also associated with the needs of friendship and interpersonal relationships.

Another category of factors, "pull" factors, or environmental factors, also emerged highly indicated for choice of destinations. The important environmental features operating in destination environments that tourist indicated as having influenced their final destination selection include quality service and welcoming staff, safety/ security, low cost and



affordable accommodation/food and destination comfort/satisfaction. Others are factors such as good location, accessibility and nearness of destination. Additionally, favourable information and recommendation of destination by friends and acquaintances were indicated as catalyst that motivated visit to destinations.

Tourist Adjustment in Destination Environment

Tourist's adjustment to their destination environment was viewed in the context of tourist/visitor activities, experiences, and contact with their new destination environments.

The largest number of activities/experiences that tourists participated in are leisure/recreational and action/adventure, especially swimming, walking, jogging and hiking, reading and playing ball and tennis. The next highest group of experiences, and activities considered important for destination visit were mostly educational experiences involving the appreciation and study of plants/animals, geo-landforms features and items in historic sites. The most prominent activities in these categories include viewing/study of wild life, appreciation/sight-seeing and study of physical landforms and viewing/study of vegetation or plant. Social activities follow next, with the highest activities involving camping and picnicking and meeting people and making friends. Commercial activities emerged next as most undertaken by tourist. Commercial activities considered important involve buying/collecting of artwork. By choice of such experiences these tourist have demonstrated that their foremost interest and enthusiasm for the environmental features they were presented with in the destinations are mostly associated with water/beaches, hilly terrain, grasslands and forest areas that are provided with recreation/leisure facilities.

The pattern of tourist experiences, and activities seems to reflect local environmental conditions that suggest that tourist behaviour; experiences, activities and motivation (demand element) are possibly interrelated and associated with the environmental quality in tourism destinations (supply elements). The structure of this interrelationship between the sub-systems elements of demand and supply in the determination of tourist destination selection constitutes the basis for categorizing the unique environmental attractions/areas of the state into the various tourism forms presented in Figure I in a latter section.

Feedback Information (Positive and Negative)

Information obtained from tourist on factors that enhances (positive) or discourages (negative) travel propensity/motivation was also considered. The information obtained indicated that the most serious problems that tourist encountered in tourism destinations are associated with infrastructure/ amenities (especially transportation, entertainment/ leisure facilities) accommodation, catering services, sports/games, health facilities and safety/security. Though the content of environmental features considered deficient by the tourist appeared similar in the destinations, the structure of environmental needs or deficiencies differed between the destinations. Generally, tourist revealed that they value mostly tourism infrastructure/facility rich and safe natural or cultural environments. Tourist viewed with high dissatisfaction environments devoid of provision of human features especially infrastructure/ facilities/amenities, accommodation/catering, security/ safety, entertainment and leisure facilities/space, such as sports facilities/events. The need for the provision of these human components in tourism destinations thus emerged as high premium



amongst the request by tourist for improvement or modifications in tourism destination environments in Delta State.

Recommendations for Tourism Development, Planning and Policy Strategy

The survey and evaluation of environmental attractions, tourist/travel needs, motivations, activities and tourism policies presented earlier, provide important inputs in formulating the tourism development plan (See figure I) and policy strategies for tourism development in Delta State discussed next. The suggested tourism development plan and policy strategies are aimed at providing quality opportunities for tourist to experience the cultural and natural environmental features of the State, whilst simultaneously ensuring continuous availability of such environmental resources for future use.

Accordingly, it is suggested that policy strategies for developing tourism in the area should focus on categorising the tourism attractions that are appropriate to each area, as follows:

- (i) *River and Beach Tourism:* This should focus on the numerous rivers and waterways, creeks and lagoons as well as beach areas in the state; and these can also provide good access to various points of tourist interest.
- (ii) *Forest and Wildlife Tourism:* This type of tourism development should proceed in tandem, and help facilitate a preservation strategy for the states' forest and wildlife. This strategy has several components: introducing river tours in the numerous forest area along the major rivers and their tributaries, swamps, creeks and lagoons and upgrading other wildlife sanctuary and the game reserve areas. Others are encouraging camping vacations and picnicking, excursions; opening fish and animal breeding farms to visitors and increasing interpretation at selected tourism sites.
- (iii) *Historic and Cultural Heritage Tourism:* The educational element of this tourism type is quite high. With its focus on areas of primary historic/cultural attractions, this tourism strategy can be divided into several components – historic buildings and monuments; religious centres and sites; museums; indigenous cultural contact and real experience; and fine and performing arts. A key element of this type of tourism is conservation strategy.
- (iv) *Agro, Village or Rural Tourism:* This will complement both wildlife and beach/river tourism developments in several areas. Many villages close to urban areas could be developed for day excursions. Village tourism present opportunity for encounter with indigenous agricultures, farm settlement, traditional life, especially associated with local farms, cuisine, drinks, marriage and burial ceremonies that are of interest to foreign tourists; it can also assist the local people develop their communities.
- (v) *Urban Hotel Tourism:* Some hotels of international standard are available in major urban areas as Asaba, Warri and Effurun, but are not yet available elsewhere in the vast rural areas of the state. There are limited facilities for the more adventurous tourists in areas near or within the traditional/cultural rural tourism centres and the rural river/beach areas. However, continued rehabilitation of accommodation and development of new hotels should be rapidly undertaken in various areas with tourism resources in the state.



- (vi) *Resort Tourism:* With initial focus at Asaba, and along the Ethiope River at Abraka/Obiaruku/Umuaja, resort development should be in stages, eventually extending to include Onisha-Olona, Ossissa, Araya and Bomadi beach areas. These places meet the immediate site selection criteria for resort tourism development, including good beaches, scenic surroundings, availability of land for development and climatic desirability. Having specified guidelines, next the tourism plans for specific resort are expected to be integrated and inclusive to include land use zones for hotels, residential, commercial, public facilities and conservation areas, transportation network, and utility system.

Also, to ensure that tourism develops along stipulated guidelines within designated tourism areas or zones, an integrated planning approach and additional policy strategies are suggested as follows:

1. Demarcate and legislate on all tourism zones or areas
2. Control and prohibit illegal and unplanned development in tourism areas.
3. Conserve the historic and cultural fabric of tourism areas.
4. Protect and safeguard the natural environment (landscape, flora and fauna) in tourism areas.
5. Provide basic tourism infrastructure/facilities in tourism areas.
6. Ensure safety on tourist routes and destinations by law/security agents.
7. Provide publicity/education on environmental responsible behaviour and consequences of environmental abuse to tourist/visitors in destination areas.

Encouraging community or cooperative ownership and management participation in tourism is an important strategy advocated for tourism development in Delta State. The success of this strategy in developing sustainable tourism has been widely acclaimed in African countries with similar tourism environments as the Gambia, Senegal and Tanzania, (Richards 1977; Dekadt, 1979). Community and indigenous cooperative tourism ownership and management practices encourages local or community involvement in the tourism planning and development process. It helps to develop types of tourism that will generate benefits to local communities, enhance community tourism acceptance and support conservation of local tourism resources. These goals are congruent with tourism strategy thrust of mobilizing and encouraging private sector participation in tourism, and of attaining sustainable tourism developments, which are important objectives in tourism development planning in Delta State.

The communal ownership nature of land, forest and water, mostly of beach/water areas, sacred forests, and grounds, historic artefacts/sites, and in the staging of festivals and other socio-cultural practices of tourism is still strong and prevalent in many tourism communities, especially those in the rural areas. Such communal ownership practices and customs lend support to the community or cooperative approach to tourism destination ownership, organization and management, particularly in rural areas where unique but less competitive destinations abound in close proximity. And, as suggested elsewhere (Awaritefe, 2004), there is the need to articulate planning strategies that would consolidate the numerous, poorly competitive, small scale and fragmented destination holdings that characterize tourism in Delta State into more integrated corporate management structures, as it is practiced in many developed tourism communities (Flagestad, 2002). Such integrated management structures are vital to ensuring better customer satisfaction, environmental and



heritage resource protection, and sustenance of the indigenous character of tourism, especially of accommodation/catering and souvenirs. Furthermore, cooperative and communal destination integration in organization and management may enhance negotiation power of weaker destinations to tackle common problems of infrastructure/amenities, health/safety and promote tourism, which may be impossible for individual or small destinations in the state to effectively handle.

It is further recommended that there should be close coordination and integration of objectives amongst all agencies responsible for the various aspects of tourism development in the state. Links between tourism and other sectors such as agriculture, culture, costumes, architecture, and arts/craft should be enhance to increase local community participation and gains.

Presently, there is inadequate coordination between each specific tourism policies in the State. Also, absent in the tourism development policy of Delta State is the failure to specify the special considerations that must be made in tourism development, such as the key objective of minimizing negative environmental and social impacts. Consequently, certain tourism development objectives may conflict with one another. For example, one primary objective of tourism development in Delta State is the maximization of economic benefits of tourism, thus encouraging all forms of tourists/visitors including mass tourists. This objective clearly conflicts with the policy objective of minimization of environmental and socio-cultural impacts and sustainable developments. Also, by emphasizing present use and benefits, cautious policies and efforts are not been made to develop tourism so that its natural and cultural resources are indefinitely maintained and conserved for future use.

Additionally, a more integrated view of each LGA and community with tourism attractions in the State as sub-systems of the State tourism system to which tourism policy and development programmes are targeted is sought. This suggest ensuring establishment of functional tourism committees in each LGA and community with tourism attractions and effecting greater integration between these Tourism committees and the State Ministry of Culture and Tourism, and the State Tourism Board.

There is also the strong cultural policy orientation in dealing with tourism. In Delta State and Nigeria generally, policy on tourism is regarded as cultural, and handled as such. There is still little or no integration of other dimensions, specifically environmental aspects, in tourism despite the preponderance of natural attractions over cultural in the state. A more comprehensive policy concept of tourism that embraces both culture and nature attractions, not one that undermines the nature attractions is suggested. It is anticipated that future tourism policy would address these and related issues.

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6. SCIENTISTS AND TEACHERS OF UNIVERSITIES SHOULD INCREASE THE PERSONAL RESPONSIBILITY BEFORE MANKIND FOR PROTECTION OF AN ENVIRONMENT AND OF UNIVERSAL MORAL VALUES TODAY

By

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Keeping in sight the facts of sharpening of technical and economic, ecological and moral problems of mankind during of the last fifty years, I have dared to generalize my supervision in the articles and textbooks for students.

From of preparation and the first edition of my « Ecology and economy » in 90-sh years and up to today estimation of ecological, economic both social problems and offered scripts of their decision have appreciably changed.

It was caused by essential complication of political and economic processes of formation of the global world market and as consequence(investigation), increase of danger of ecological risk, that has found reflection in the final declaration of the second World forum of the United Nations of 2002 in Johannesburg.

From the middle of the last century the growth of planetary industrial urbanization of global ecological systems of biosphere threatened to get out of hand.

Really, modern technological processes, absorbing huge natural resources for creation of industrial means of production, vehicles, building materials and the various consumer goods, generate huge planetary streams of toxic wastes and useless thermal energy of low temperature.

It critically brake balance of natural processes of global ecological systems of biosphere and, as consequence, creates threat of genetic stability of biological organisms.

And it is now more than ever apparent at the same time we are destroying our future.

This global problem has been widely discussed at the first world forum of the United Nations « the Planet the Earth » in Rio de Janeiro of 1992 where **the Program of actions** « the Agenda on XXI century » has been accepted.

As known, the purpose of the Program of actions was to coordinate global actions of the mankind directed to satisfaction of needs of the modernity, without threat for the future generations to satisfy their needs.

Since up to today some progress has been made in this direction.

The countries — members of the UNO — have set up environmental protection agencies.

The international organization Greenpeace is also doing much to preserve the environment.

Certainly, we speak to each other that we understand all this and something (even much) is undertaken for prevention of such threat, but we see results are not very consolatory.

Let's take it to consideration to analyze genesis of such environmental problems.



The situation and problems of danger of ecological crisis

At the superficial analysis of sources problems of modern ecological crisis we, first of all, name scientific and technical revolution and the extensive militarized industrial economy of the last century.

But is it so?

I am know that is not so.

Today we can convert (to transform) any harmful industrial wastes by technological process to natural inert substances and we shall not pollute henceforth an environment by poisonous substances (сущностями).

Is it expensive? Yes, but so “simply” and not so expensively, as serious waste in environment.

It is so “simply”, as though we have decided to not poison our streets and public gardens by poisonous exhaust gases of automobiles.

It is so “simply”, as though we have decided to not pour out toxic washing liquids into a wash-stand, to not throw them in the garbage container

It is so simple, as though we have decided to not pour out poisonous washing solutions in a washstand and to not throw electric batteries into the container for sweeping.

It is so “simply”, as though we have decided to not poison ourselves by surplus of alcohol and fat foodstuff with a bouquet of toxins of a tobacco smoke.

Even when we know, what is necessary (or what is not necessary) and what it is necessary to do, between the knowledge and behavior exists the big precipice.

Only to transfer knowledge is insufficiently!

In connection with the theme of my report here I have dared to interpret some of ideas which have been stated twenty years' ago on of page's of Edition of “The UNESCO Courier”

At that time Ramón Folk the president of the Spanish committee on affairs of the help to an embodiment of the program of UNESCO «the Person and biosphere» has told: “To bring up — it is more important, than to inform”. In itself the knowledge cannot bring up anyone; education should include at itself and moral values”.

This problem is an actual problem and today

Moreover today this truth should be by our key for disposal of our moral defects such as dipsomania, drugs, AIDS and, certainly, from indifference to protection of an environment.

However, I think, we should be given also more attention of the holistic integration of curriculums of natural scientific and humanitarian knowledge.

Such system in aspect of educational process with the dynamical system will have lower entropy and new emergency (unforeseen) properties of our world outlook (weltanschauung)

Positive results of development and practice of integration of curricula of such disciplines as natural sciences, ecology, economy and technique already take place at our university.

It will promote realization of the concept « from reductionism to holism » of the United Nations « global education with space vision of a life ».



The revival to holistic approaches of ancient philosophers to knowledge of the Nature today is prevented by system of narrow specialization of the staff not competent of questions of natural scientific knowledge.

The reason of it is covered in historic facts of development of a science and practice of the last centuries. 36/ During centuries the culture, educational system, in general all crafts are based on division on секторы, on a field of knowledge and skills

How to proceed from specific interests of that or that area to regular interaction between different disciplines?

Certainly, a profound knowledge of one any area are extremely necessary, however problems of an environment and development any separate discipline never can solve.

I well know that this is easy to tell, and hard to make

Why? That is why, that the majority of establishments, the organizations and **universities now work as well as the last century.**

As and between faculties of universities there is a certain disciplinary isolation and traditional competition of priorities of the importance.

Here it is possible to ask. Which decision can be offered?

Unfortunately, the simple answer is not present.

At this situation the decision of a problem can be only in conditions of democratic and moral cooperation of political, economic and academic elite of a society with universities in preparation of young generation of the scientific and educational staff.

First of all it would be necessary to analyze university system which is based on corporate distribution of faculties to find out and then and to excite in researchers of one area of disciplines of desire in a complex to work with researchers of other disciplines.

But where we can find a sample or, even, fruitful system analogue for realization of such idea as programs of action?

I think, closely we can find it in the nature surrounding us.

As analog physical (natural) model of such system for interdisciplinary synergism cooperation **the flora can serve.**

For example, the plants (trees) have deep main roots and horizontal superficial roots to connect themselves with others to be stronger and to exchange juices of ground.

In a wood of the Creator of the Earth each tree raises only its fruit, but together they represent homogeneous natural association of photosynthesis, satisfying needs of all alive organisms of biosphere

In the garden (university) also everyone the plant (tree) raises the fruit and demands from the gardener of the special program to water and fertilizer but together they serve to the purpose of the architect of a garden

Let us to name conditionally the stated sketch (prototype) to the further development of real analog physical model as Plants (disciplines) in a university garden of global knowledge.



I am a supporter of designing and use of analog physical models to predict probable changes of situations of the cooperating systems

However, work with such analog models will be fruitful if they will be quantitatively capable to reflect functional changes of physical parameters of dynamics (changes) of components of concrete situations.

For example, such analog physical models, which author already have published: « Analog physical model of forecasting of economic and ecological stability of the states in « a gravitational field » of global economic market » and « Optimization model of ecological and economic characteristics in systems of industrial technologies and university curricula's ».

We can separately discuss their essence at dialogue.

But, we cannot coordinate the professional priorities as well as the world community cannot define(determine) the general(common) priorities of economic, social and humanitarian cooperation.

Problems of my country.

Ecological tragedy "Chernobyl" and its consequences are known for all also I shall not repeat told.

The wide public knows about industrial threat of ecology of that time less.

In the beginning of becoming of independence of Ukraine (1990th years) for comparative of ecological and economic estimation of a condition of the different states (or regions) the author has suggested to use parameter (K_e) — the attitude(relation) of manufacture of the basic kinds of production per capita to the area of territory. Results of the executed calculations for Ukraine, France and Russia, have shown, that Ukraine has been enough overloaded by ecologically dangerous industrial production.

For example, on compared with Russia and France accordingly:

- **iron ore** - almost in **100** and **10** times;
- **coal** - in 60 and 11 times;
- **steel** - in 50 and 3 times;
- **chemical fertilizers** - in 45 and 1,3 times;
- **sulfuric acid** - in 21 and 1,1 times.

Concentration of these dangerous to health of the population of manufactures in territory of Ukraine was the highest in the world.

Let, now I shall stop on a concrete example concerning problems of university education in the field of economy and ecology.

Ukraine during our independence has founded tens of private economic institutes and "universities" of narrow specialization with rather weak interdisciplinary system of programs of an educational and scientific component.

It satisfied narrow professionalism and mercantile interests of the founders (of economists) of such "universities", but as we can will be convinced, it does not correspond to our analog model.

Gradually, step by step, and the state economic high schools abolished faculties and laboratories of naturally scientific and technological disciplines.

Each time when I do a step to interdisciplinary integration, I shall come across the traditional latent resistance of colleagues.



The step « not a leg to a leg » is "not patriotic» to the professional corporation of colleagues

Question. What essence of a problem?

First of all.

This **deep dissociation** of various areas of **knowledge**, scientific schools and according to their narrowly professional interests are formed the same professional education systems

Level of peripheral interdisciplinary knowledge of ecologists and economists, **it is especial in the field of natural and technological sciences**, today **it is still insufficient** for their creative mutual understanding and the decision of complex(difficult) ecological, economic and technological problems of protection of an environment

Moreover, their egoism has often the latent antagonism of their mutual relation.

Certainly, not I specify the first these problems.

It is more than half-centuries back my compatriot the outstanding researcher of environmental problems of our civilization Vladimir Vernadsky complained

«Till now historians, in general scientists of the humanities (*aem.*: so, and economists), and the certain measure and biologists, meaningly do not consider natural laws of biosphere — that terrestrial environment where only and there can be a life»

And however already our contemporary the Nobel winner, economist Vazil Leontev asks a question, « **... up to what not researchers** in such adjacent areas as a demography, sociology, a policy(politics), **on the one hand**, and the ecology, biology, medicine, technology and other applied physical sciences — **with another**, will refrain from expression of anxiety to that **brilliant isolation** of a science in which today **the academic economy** lives? »

Half-centuries has passed from Vladimir Vernadsky up to Vasily Leontjev, but also today us very little who preoccupied and follows by their appeals.

The author within several years with colleagues investigates above mentioned problems of economic universities of Ukraine.

According to the theme «Concept optimization holistically integrated natural-science, ecological and technological disciplines in educational programs economic universities of Ukrainian» we write curriculums and textbooks „Ecology and economy”, „ Systems technologies ” (in aspect economic and environmental problems), „ Modern natural sciences ” and „ Natural sciences and economy.

But it not quickly positive results of researches and practice of integration of curricula of such disciplines as natural sciences, ecology, economy and techniques are realized at our university.

All this has provoked the author of the report to develop functional model of optimization of characteristics of two objects: a parameter of an economic level of material (physical) satisfaction needs of the person and a parameter of an ecological condition of his



environment. The model in a graphic kind represents the combined system of the Cartesian and polar coordinates. Characteristic of material parameters and the conditions of an environment, which satisfy the public of the country or region at present time, are determined according to standard units in the Cartesian coordinates on an axis x and y .

In the accepted balanced ratio of the Cartesian system of coordinates x and y will connect to polar radius r (constant) and to a polar corner θ (variable). In computer version any changes of the parameter x as satisfaction of physical needs of a society (and all of them are connected with increase loading on environment) will be automatically reflected on y ordinate as a parameter of an environment's ecological level. The total changes parameter of x , y system will be reflected in change of value of a polar corner θ . Connection of parameters x and y the Cartesian system of coordinates with a polar corner θ is expressed by the equations

$$x = \rho \cdot \cos \theta, \quad y = \rho \cdot \sin \theta, \quad \theta = \arctg x / y.$$

Similarly can be determined optimum parities of disciplines time's credits of the natural-ecological and economic (or technical) in the system block of university curricula and rational correction at their change. This graphic sees on slide of "Theme of Report".

It so doing, we believe that such researches of programs will promote fruitful creative mutual understanding between ecologists, technologists and economists of Ukraine.

What is way of the decision of this global problem?

Increase of the responsibility of science and education for prevention of intensification of ecological crisis – is reliable way of service of our viability.

Fest of all it is necessary to reconsider a paradigm of our outlook, in aspect of the Nature, namely: we (people) do not live independently as well as our natural environment, but we are only one of kinds the nature of system and we are in functional dependence with all its other objects according to its laws.

Concerning to such concept the modern the term « The Person and an environment », formally dividing the person and the Nature, is not adequate to the fact. Hence, such term and its definition should be changed.

Obviously, it will change perception of the Nature by rising generation

Only universities, at support of the public and the national governments, can generate scientifically-moral system of outlook of our students.

As that: « I in the Nature », « I not the owner of the nature », « I an inseparable organism of thermodynamic system of biosphere », etc. .

Finishing the report, I shall dare to offer idea to base association from members of conference for research of problems of promotion to such purpose.

I thank for attention.



7. PUBLIC OPINION FORMATION, LEADERS AND THE PROBLEM OF SUSTAINABLE DEVELOPMENT

By

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Abstract

Different aspects exist in problem of sustainable development (SD). Environmental and ecological aspects are most evident. But socio-economical, political, cultural aspects exist. Recently it is well known that understanding, design and control of sustainable development are impossible without general systemic considerations and mathematical modeling. In the author's papers the general problems of SD had been concerned and new systemic construction had been proposed for model design, forecasting and foresees.

Recent development of proposed concepts allows outlining the ways for accounting human properties, especially mentality of social processes participants. So in proposed talk we suppose to discuss the next issues:

- General models for public opinion formation
- The optimal ways for introducing the idea of SD into social systems
- Possible phenomena in the transition to SD (in environment and in public opinion)
- Punctuated equilibrium in socio-environmental systems
- Role in new leaders in SD processes
- Illustrative examples for proposed concepts
- eGovernment problems in transition to SD and SD implementation
- Further prospects and problems for investigations are described.



8. HEALTH RISKS OF THE UKRAINIAN POPULATION AND THEIR REDUCTION

By

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Abstract

Some analytic tendency it was provide for estimate situation of health risks for Ukrainian population. We will view for three factors which influence on human health.

Keywords

Risk for population, health risks

Introduction

Today infectious diseases are not only a problem of life and health of people, but also an important social and economic problem which has deep consequences for well-being both for an individual and for the state and all mankind as a whole [1-13].

Infectious diseases always contain threat to economy and social well-being. Therefore one of the major components of national safety of any state is epidemic and epizootologic welfare.

The main reason of the growing treat of diseases in Ukraine is: unsatisfactory ecological conditions caused not only by Chernobyl catastrophe (CHNPP), but also other factors of the contamination of land and water resources, air pollution, sharp deterioration of the conditions to population life's and imbalance of nutrition; the low level of services of public health system; the retardation of the system public - home services; the insufficient level of general culture of behavior [1, 11].

Environmental conditions and attitude towards it are different in different countries and regions. Numerous scientific researches have identified various environmental factors negatively affecting human health. These factors are of physical, chemical and biological nature. Often they affect the human organism in a combined manner and produce a cumulative effect. Viral agents of infectious diseases may be one of the environmental factors which affect population's health negatively and reduce their resistibility or (besides) acts as mutagens.

A cancerogenesis process is known to be complex and not completely explored. Some oncological diseases are caused by oncoviruses from the family of Retroviridae. Unfortunately, people from various age groups are also subject to oncological diseases including children in Ukraine.

One of the acute persistent problems remains infectious epidemic diseases. However whereas the USA and other highly developed countries face with comparatively new type of the diseases (the AIDS/HIV, hemorrhagic Ebola fever, West Nile fever), over all post-soviet territory, including Ukraine, alongside with sharp increase of the number of HIV- infected



people, also high levels of tuberculosis, diphtheria, measles, hepatitis and some other infectious diseases are observed [1-6].

Regrettably, the sanitary-epidemic situation in Ukraine is estimated as complicated. Each year nearly a quarter of the Ukrainian population suffers from infectious diseases [1, 6].

54 infectious nosologic units of diseases are registered in Ukraine. Annually from 8 to 10 million persons are ill. It is one third of all causes of general diseases. The economic expenses connected with infectious diseases are annually in Ukraine approximately over 400 million dollars [1, 3, 7].

The tense ecological and sanitary-epidemic situation leads to deterioration which is connected with environmental pollution. We shall consider some risk's factors, which enlarge the health risks for Ukrainian population that impact epidemiological welfare:

1. the ecological factors,
2. the demographical situation,
3. the infection diseases.

Let us examine in more details these factors.

The ecological factors

The ecological factors in Ukraine have many aspects.

For instance, it is impossible not to take into account that the general mass of the toxic waist accumulated is exceeding 4 billion tons on the territory of Ukraine.

The number of diseases and the death-rate from oncological diseases increase in connection with dangerous ecological situation.

The condition of Ukrainian population's health was damaged in consequence of Chernobyl catastrophe. It is unsatisfactory and tends to deteriorate, including an increasing level of infectious pathology [1, 6]. 20 years after Chernobyl damage is still national ecological catastrophe. 12 districts, 73 administrative regions, 8 cities of the regional subservience and near 2000 towns and villages were ecologically damaged [8, 9].

The Ecological consequences of Chernobyl catastrophe are defined by two main factors - an irradiation of natural objects and their radioactive contamination. There are two main sources of the irradiation - external and internal. The external irradiation is all radio nuclides caused by radiation, which passed on terrain in composition of the cloud of the surge, ashes on soil, vegetable cover and water surface, skin covers of the person and animal. The internal irradiation is that radioactive nuclides conditioned by radiation that capable to adopt the organisms [8].

Not only short living, but also and middle living radioactive nuclides 20 years after the damage have completely disintegrated. Only long living radio nuclides, including cesium, strontium and super-trans-uranic-elements remained.

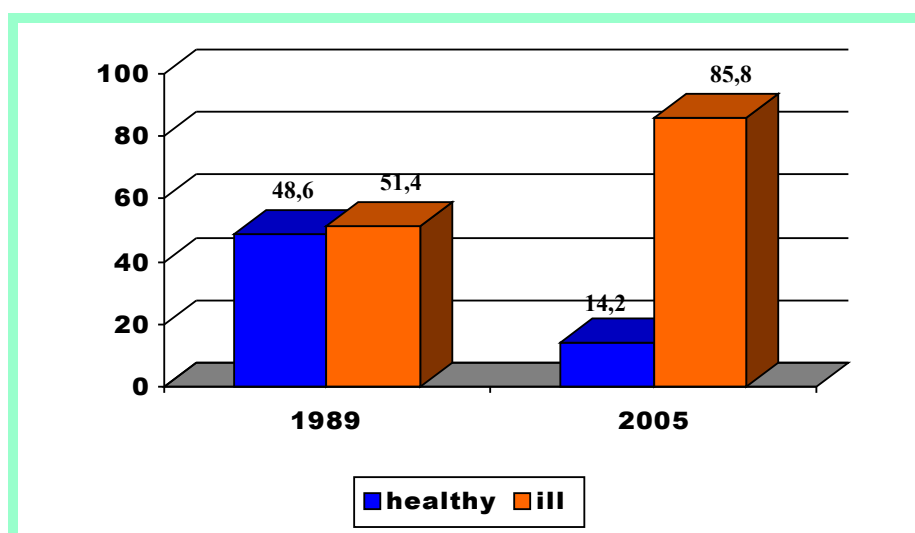
However, a dangerous radioactive situation still remains in approximately 40 towns and villages, where radioactivity in milk and meat constantly exceeds the permissible level from 5 to 15 times and there are over 400 towns and villages where radioactive pollution of milk in many private farms more than 30 % exceeds permissible rates, established in 1997.



Table 1: Ukrainian population, the victim after Chernobyl catastrophe, under supervision of Health Ministry (persons on 01.01.2006)

In total under supervision	Adult and teenagers	Among adult and teenagers, are the liquidators of catastrophe	Persons, who are living on radioactive polluted territories	Persons, evacuated from polluted territories	Victim children after catastrophe
2342207	1935067	227452 (9,7%)	1499655 (64%)	48386 (2,1%)	407140 (24,2%)

Two millions 342 thousand 207 persons, who suffered the consequences of Chernobyl catastrophe were under medical observation of the Ministry of public health by the 1st of January of 2006, including: adults and teenagers - 1 935 067 persons, amongst them 9.7% are liquidators of damages consequence on CHNPP (227 452 persons) (table 1). Approximately 1.5 million persons (64 %) live on the radioactive polluted territory: evacuated - 48 386 persons (2,1%); the children suffering after Chernobyl catastrophe – 407140 persons (24,2%)[8].



*Figure 1: Parity of healthy and patients, the victim after Chernobyl catastrophe
Person living on radioactive territories*

In 1989 the ratio of the number of healthy people to the number of ill people was practically 1:1. In 2005 it was 1:6 (figure 1). The results of annual clinical examination (dispanserization) of children's health indicate negative changes [8].

Among people living on radioactive polluted territories the number of people considered as healthy, decreased from 50.7% in 1987 to 13.4 % in the beginning of 2006. The primary diseases of the adult population and teenagers, who suffered the consequences of Chernobyl catastrophe, in comparison with 1987 increased nearly 4.4 times. An increase of the number of thyroid gland cancer cases is predicted for the following years [8].

It has been already registered among the participants of the liquidation of the consequences of the catastrophe, that the number of cases exceeds the national level of thyroid gland cancer 4 times for men in the period of 1990 - 1997 and 9 times in the period of 1998 - 2004, but amongst women – a liquidator and that above – in 10 and 13 times accordingly [8].



The amount of disabled children - 4 times exceeds the mean level of Ukrainian population. The most disadvantage shifts in thyroid gland noted among teenagers and children, got irradiated internally [8]. The growing tendency to diseases of children on cancer of the thyroid gland began in 1989. At the Institute of the endocrinology and metabolism of Ukrainian Academy of Medical Sciences, for the period of 1989 - 2004 only in Ukraine are operated 3400 persons, who were children or teenagers at the time of damages.

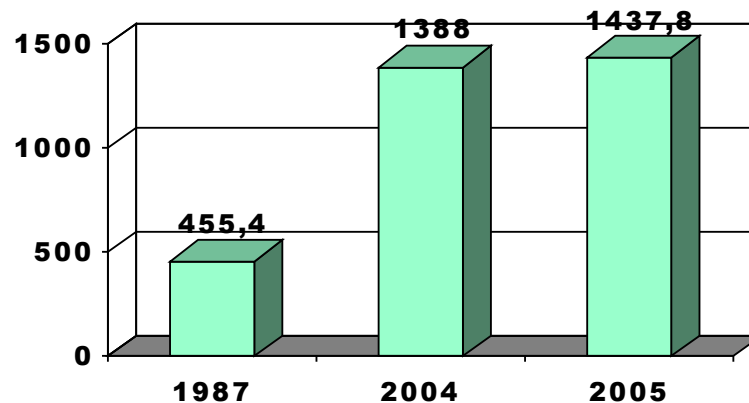


Figure 2: The general children diseases for age 0-14 years old, who Were suffered after Chernobyl catastrophe (on 1000 risk category)

Statistical data given for picture of children health regarding the ages 0 -14 years, aggravated in consequence of damage on CHNPP, is indicative of those in all post-catastrophe years: their diseases show a tendency to a gradual growing (figure 2). General children diseases increased since 1987.

From 455.4 on 1 thousand corresponding to contingent in 1987 to 1437.8 in 2005 that exceeds the factors of any year on Ukraine as a whole. The influence of consequence Chernobyl catastrophe on children immune system is significant. 82.5 % of them have immune disbalance [7, 8].

There are enough reasons to acknowledge that Chornobyl disaster and its consequences negatively influence on the health of the population. Despite of progressing reduction of radioactive contamination of environment ambiances and irradiation level, we should acknowledge consequences of the catastrophe after 20 years are liquidated not completely. [8].

The second negative factor for Ukrainian population is:

The demographic situation

Reducing of birth rate and lasting demographic crisis in Ukraine has a global nature as the result of economic, social, psychological, biological factors. The Global trend of the reduction of birth rate increased in Ukraine in 1990-th years (Table 2). In addition, significant breakup was formed between low level of populations living conditions and high European life standards. Since 1991 death-rate of the population constantly exceeds birth rate [8-10].



Table 2: Some data on Ukrainian demography situation

years	population in total, million person	including		To all population, %	
		urban	rural	urban	rural
1951	37,4	13,4	23,8	36	64
1959	41,9	19,2	22,7	46	54
1980	51,8	34,9	17,0	67	33
1991	50,8	34,5	16,3	67,8	32,3
2001	48,4	32,5	15,9	67	33

Mainly because death-rate prevailed over birth rate in Ukraine for the period of 1993-2003 Ukraine lost over 4 million persons. Due to that age structure of the population is deformed, its demographic and labor potential decreased [8,9]. The absolute amount given birth in Ukraine decreased by 31.4%. The general factor to birth rate decreased from 12.7% in 1990 to 9.3 % in 2000 [9].

Even in the most successful city Kiev - in capital of the Ukraine – the population reduction took place. Kievites lost 40 thousands persons last years. The demographic situation in Kiev you may see in the table 3.

Table 3: Demography situation in Kiev (1989, 1994-2003)

years	Was born without still-born		Dead		Natural grow	
	Abs. Number	On 1000 people	Abs. Number	On 1000 people	Abs. Number	On 1000 people
1989	35366	13,5	21479	8,2	+13887	+5,3
1994	21507	8,1	28539	10,8	-7032	-2,7
1995	21115	8,0	30378	11,5	-92630	-3,5
1996	20039	7,6	28322	10,8	-8283	-3,2
1997	19648	7,5	26278	10,0	-6630	-2,5
1998	18304	7,0	25714	9,8	-7410	-2,8
1999	18323	7,0	26042	10,0	-7719	-3,0
2000	18954	7,2	26608	10,2	-7649	-3,0
2001	19360	7,3	27168	10,3	-7808	-3,0
2002	21156	8,1	27641	10,6	-6485	-2,5
2003	23275	8,9	28134	10,8	-4859	-1,9

The children share by the age younger than 15 years old amongst the whole city population decreased, but specific gravity of person's pension age grew.

In the same time natural increase factor amongst kievites has gained negative importance to account of the excess level to death-rate on level of birth rate on 1.8 % in 2003 in contrast with 2002 natural motion population which was provided in table.

The amount deceased rural inhabitants in Ukraine for decennial cases increased by 10.5% in 2000 – in comparison with 1990, but factor to death-rate increased from 17,2 % to 19 % [9].

The infection diseases.



The appearance of new high contagious dangerous diseases becomes complicated in modern world situation. Today such new threat is birds influenza, which can provoke origin to pandemics of influenza amongst people that is rather serious danger and for Ukraine too.

The Main sanitary physician of Ukraine has brought the information that annually in state is registered beside 10 millions causes of the infectious diseases, from which 95 % accounts for influenza and sharp respiratory infections. In Ukraine over 15 thousands cases of people death in a year from infectious diseases. The epidemic situation in Ukraine is complex and tense. In Ukraine exists the other real danger - an epidemic HIV-AIDS diseases. For years this epidemic in Ukraine is registered as 86 thousands HIV-Positive persons, among them already died 7.3 thousands. The diagnosis of AIDS disease is corroborated in more than 13 thousands persons [1].

In Ukraine the amount of ill persons with diseases of the tuberculosis and HIV, so-called HIV - associated tuberculosis increased 5 times since 2000. The losses in consequence of epidemic VICH/AIDS disease in the period 2005-2015 can form approximately 100-200 thousands persons that also will have an important negative influence upon shaping the young generations [3]. On 1.09.2006 official reestrated more 98 000 HIV-positive persons.

Amongst other infectious diseases, which are registered in Ukraine, exceedingly actual are a sharp intestine infections (including rotavirus diseases), as well as viral hepatitis. Ukraine have one of the leads position on hepatit A in European region.

As has indicated the representative of a medical Committee of the practically each fourth person once a year falls ill with infectious disease [1].

The highest risk level of diseases amongst separate age groups of the population is in inherent children population. The analysis of infectious diseases comparing two years (table 4) has shown following.

Table 4: The analysis of tendency among some infectious human diseases in Ukraine

diseases	Years		Disease tendency, %
	2000	2001	
Hepatitis A			> on 50,7%
Hepatitis B		22,36	> on 2,3%
HIV-infected		~ 40 thousand	
AIDS	1055 adult	In total 2500, from them 1138 adult	> on 7,87%
Influenza	2541	1029,37	< on 59,5%
German measles	17,15	39,12	> on 2,28%
Chicken-pox	19,98	20,58	> on 2,96%
Measles	1,05	22,06	> on 20,98 times
Meningitis	0,72	0,71	< on 1,37%
Infectious mononucleosis			> on 29,54%

In spite of reduction amount sick sharp intestine infection, the level to diseases remained high [1-6].



The Viral hepatitis occupies one of the leading places in the structure of the infectious disease, as is shown in the table 4. In 2006 these diseases were: hepatitis A in 624 cases, hepatitis B – in 114 cases. In 2007 (on first 4 months – 137 and 92 consequently).

The causes of this infection increased by 50.7% in 2001 relative to 2000. This level approximately by a margin of 15-20 exceeds the factors of the developed countries [1].

The visible place also occupies influenza. The high level exists in the country to diseases on such infections as rubella - increasing twice.

Thereby, exists the high level to diseases on very dangerous for person viral infection. The incidents of influenza, rubella, cytomegalo-, herpes-, entero-, adeno-viruses and others, capable long time persistent in person organism and bring about sterility, arising the tumors, the other diseases, as well as bring about increase amount virus-bacterial association, first of all pneumonia, meningoencephalites [1, 2].

The infections have a direct negative influence upon nation genofund. (For instance, it is known that virus of the rubella in approximately 90 % cases is the reason of internal infections and genetic breaches of the embryos).

At present vaccination is considered by world community as the most economical and available facility of the fight with infection and a way of the achieving active life for all population of developed and developing countries.

For some infectious diseases the immunization is main and leading measure of the preventive maintenance on the strength of particularities of the mechanism of the issue to infections [7, 6].

In Ukraine is registered beside 257 immunobiological means, and amongst them from 54 necessary vaccines in Ukraine are produced only 11, from 95 diagnostic preparations - only 55, Ukrainian immunoensimes test-systems - only 21. In general they present no more than 50 percent from necessities. But this already not only a medical problem, but a problem of national safety [6,12].

Undertaking mass vaccination has sharply reduced some diseases [1, 6, 7].

The undoubted achievement in the field of fights with infectious diseases is of World Health organization certification of the public health of the Ukraine, as territory free from poliomyelitis. The program of World Health Organization executes to liquidation of the measles in 2006 in Ukraine [1].

However, it is noteworthy that not always antivirus preparations are efficient enough, but for a line a of new viruses that is increasing every day it is impossible to create at all. However vaccination is far from best and not the most efficient form of immunotherapy. Secondly, modern study of virus infections pathogenesis has shown that they overtake on several steps of immune answer or its block. For instance, for this reason even for quarter of the century nobody managed to create the effective vaccine against virus of the AIDS (because for this period it developed already several varieties). Viruses present today special danger since their ability to mutations is much higher then at bacteria which provides firmness to fight with them.

As is well known, the ways of the fight with viral epidemic - immunoprophylactic (vaccination) exist and use of antiviral means.

The Main sanitary physician of the Ukraine has selected the priority direction - antiepidemical, in which is included realization of the immunoprophylactic program in which 90-95% of population will be covered due to obligatory vaccination [1,6,7,12].

But, even using as preventive facilities against infectious diseases of live vaccines, one should not forget that they pose some risks to persons.



Our investigation was devoted to the problems of revealing the influence of pathogenic RNA – viruses (members of the families Reoviridae, Picornaviridae, Coronaviridae, Retroviridae, Flaviviridae) on the genome of infected cells: the determination of the features of their interaction with sensitive biological systems, the use of these features for indication and directed alterations of biological properties of causative agents in the development and creation of new means of specific prophylaxis of viral diseases. As one of the steps, in this situation for the decreasing of population health risks we must create a new protective and antimutagenic means. Also we must create a new vaccination policy against viral diseases including the using of immunostimulation means.

Conclusions: Thus, for the risk reduction of Ukrainian population complex actions should be carry out, among them [7, 12]:

- development of preventive actions on reduction of oncological diseases;
- prophylactic medical examination and monitoring of infringements of the
- bodies most sensitive to radiating influence and systems during the remote
- period;
- medical rehabilitation of the suffered contingents;
- carrying out of the system counter-measures reducing dozes of an internal and external irradiation of the population;
- carry out the immunoprophylaxy with development of new schemes of vaccination in view of the scientific approach of protection of imparted people's cell genom,
- organize the qualified medical service to citizens of old age in a countryside,
- creation of population informing system about a radiological situation in region, with recommendations of a science and medicine in the field of protection against action of an ionizing radiation,
- at national and international levels (Belarus, Russia and Ukraine) to carry out scientific and applied programs of long-term researches of studying of consequences of failure on CHNPP during the remote period.

Considering complexity and specificity of demographic problems of Ukraine it is necessary to realize the Concept of demographic development of the country on 2005-2015 [9], thus:

- to develop and accept necessary legislative and other juditional-legal certificates on all questions of demographic development,
- strengthen the state guarantees for maintenance of protection of motherhood and the childhood;
- generate the state program of carrying out of complex fundamental demographic researches;
- create the system of monitoring of a socially-demographic situation,
- generate the mechanism of coordination of actions and financial maintenance of performance of the state target programs on public health services, formation, the state support of needy families and families with children,
- to give credits to young families with children for improvement of a life;
- enter voluntary medical insurance;



- develop and realize actions on restoration of reproductive health of the population, first of all among total women population;
- provide effective preventive maintenance of distribution of infectious diseases, first of all as tuberculosis and HIV/AIDS,
- improve practice of carrying out of obligatory periodic medical surveys,
- conduction of mass sanitary-and-epidemic activities among the population;
- raise quality of water, to introduce system of an effective control behind quality of food.

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9. PER ASPERA AD HARMONIAM ASTRUM

Sustainable (Development) Future of Mankind – and
Systems Thinking About its Ethical Imperative and the planet Earth - Mother Earth
(Including a suggestion for a new logotype)

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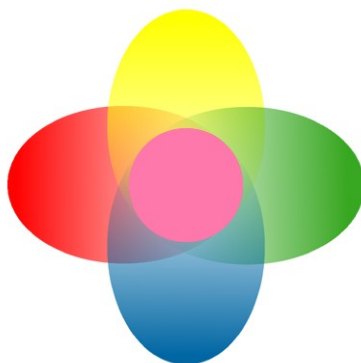
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Prepared for XX. Jubilee WACRA Europe International Conference 26 – 28. June 2008



SUSTAINABLE FUTURE CLOVER

FORTUNATELY FOUR-LEAVED CLOVER ©

Figure 1: *Logotype of SF – a System of Four Essential Aspects as a four-leave clover, fortunately*

Discussion: INTRODUCTION – THESIS



The issue of sustainable (development) future of mankind (SF from now on) is so complex (Blinč 1998) that it cannot belong to biology or any other natural or other science alone, it has very much to do with nature, society, humans and their thinking and feeling (Ecimovic, Mulej, Mayur 2002). Therefore it would be desirable to include in consideration of the nature of today and of the SF something in addition to the usual three aspects (closed pyramid, Robinson, Tinker 1998, Schnurr, Holtz 1998), even if they are found interdependent rather than considered by sectors (open pyramid with triangular sides) (see: Ib revija 2001, Radej 2002):

- The economic imperative (wealth), (for yellow colour, which has low visibility)
- The ecological imperative (eco - efficiency),
- The social imperative (quality of life).

All three of them depend on human thinking, decision making, and action, which is not based on rationality alone neither on the economists' traditional three suppositions (greed, rationality, equilibrium), but on the interdependence of the rational and emotional subsystems of the human personality and society (Mulej et al. 2000). Therefore the triangle of the above three factors might better be completed up with a fourth factor (Cheah 2002):

- The ethical imperative (contemporary human values / culture).

It belongs into the system of preconditions of the sustainable (development) future as a concept of the national, European, and generally the modern humankind's vision, principles¹⁰ of strategy and policy of diminishing of the unfavourable consequences of the impacts of the modern society and globalisation.¹¹

The arising question reads: how to include ethics/values/culture in the endeavour to make sustainable (development) future a reality, and its impact on the identity of the modern

¹⁰ The 12th CEMAT in 2000 in Hannover, Germany, "Guiding Principles for Sustainable Spatial Development of the European Continent" in which the common visions and principle of sustainable spatial development were defined (Jancic 2003).

¹¹ The modern globalisation is very much colonization to the benefit of the most innovative ones and to the detriment of the less innovative ones, under the name of a free market economy. (See: e.g. Shutt 2001; Lal 2002; Dyck, Mulej 1998, reprinted in 1999; CJE 2003, several contributions; Forrester 1996, German edition 1997; Jenner 1998; Brudenius et al. 1999; Havel 1998, Coates et al. 1997; Handy 1995; Kopper, Kiechl 1997; Martin, Schurmann 1997; Schmid 1999; Kumar 2002; Cancun 2003; etc.).



humankind, Europe, and Slovenia as well as other nations, regions, professions, other social groups, and individuals!

THE ETHICAL IMPERATIVE AND SUSTAINABLE (DEVELOPMENT) FUTURE

So far a rather mechanistic approach to consideration of the non renewable natural resources has prevailed: the economic objectives have been defined with no (clear) dependence on the natural laws or interdependence of both of them. This has not proven very helpful, but rather disastrous. The relatively new organic approach considers the human being inseparably interlinked with the Nature of the planet Earth, societal status of mankind and human eco sphere as man produced/developed/inserted/fragile environments (Ecimovic The Information Theory of Nature, and), but it considers only the »ethics of treatment« of the non renewable resources, be them natural or human (the concept of *the environmental space*, Spappens 1998; Kim 1999; Plut 2001); it includes only the *ethics of sustainable development and management* («do it yourself») of it and other processes. But it leaves the emotional (humane) aspects of personality and society aside.

This means that the cultural identity of the modern humankind is not systemic/holistic enough (See: Fig. 2) because it does not include a requisitely holistic¹² consideration of all preconditions of mankind survival. Therefore we suggest a interdependent, interacting and co-operating action (Ecimovic, Mulej, Mayur book System Thinking and Climate Change System (Against a Big “Tragedy of the Commons” of all of us), 2002) as humanistic approach, which adds to the notion of the consideration of SF from the *economic, ecological, and social* viewpoints as imperatives also the *ethical imperative* (See: Fig. 1, 4a). The latter one is supposed to add to ethics of altruism (Smith 1776), anthropocentric, professional, environmental ethics (Odin 1989, Kim 1994, Brown 1995, Lah 1996; Plut 2001), ethics of sustainability (Kuegen 1995), ethics of democracy or ethical mutuality (Kung 1997), ethics of interdependence¹³ (Mulej, Kajzer 1998; Mulej 2000; Potocan, Rebernik 2002), and humans' *humane ethics*, first of all.

To make this ethical imperative happen, we suggest the current approach of *ethics of acting (management and development)* to receive an addition called *ethics of mutual*.

¹² About the notion of the requisite holism see: Mulej, Kajzer 1998; Mulej et al. 2000; Potocan, Mulej, Kajzer 2002; etc. The point is basically as follows:

A total holism as L. v. Bertalanffy has required when establishing the General Systems Theory and asking humans to behave as *citizens of the world* and consider the *entire biosphere*, five - six decades ago, is very close to the requirement of United Nations in their Rio 1992 Declaration on Sustainable Development as a precondition for humankind to survive. This demand defeats the usual human capacity, because everybody is specialized in terms of profession, place of living and influencing.

A specialist's view is unavoidable and unavoidably a narrow one, because there is so much knowledge around today. Thus, a specialist limits him or herself to a single viewpoint. But: even in this narrow area, he or she can meet the formal definition that a system is supposed to represent a whole, and it can do so by existing as any (!) entity made of components and relations. The whole, limited to being viewed from a single viewpoint, is fictitiously holistic in terms of its real contents.

None of the two extremes is really helpful. What one can and should do, is something between them in terms of the level of holism of consideration, which Mulej and Kajzer have expressed by their “law of requisite holism”. Bausch and Christakis (2003) collected a number of laws from a number of authors that include the notion “requisite”; all of them basically support the attainment of the requisite holism.

¹³ Interdependence is a notion, which modern specialists do not see a lot of. This may be their reason for a cold reception of systems thinking (Bausch 2003). Chinese (“yin-yang”) and ancient Greeks (“dialectics”) knew interdependence millennia ago. Later on, the notion of dialectics due to the oversight of interdependence as the cause of changing by interaction was reduced to changing (Mulej 2000 and earlier), often.



understanding, interdependent tolerance (Bernik 2003), ethics of co-tolerance («be a humane human«).

Contemporary novelty within this viewpoint is “Sustainable future of mankind is harmony of our civilization with the nature of the planet Earth” (Ecimovic, 2006).

A case clarifying the need for such a consideration: UNDP's 1999 report on development of the world population includes a call for help against »the gap arising between the suppliers and owners of knowledge and the ones lacking it«. This gap is so enormous that the real chances offered by the development help in the form of new technologies cannot work. There is even a danger that the big »technological« projects undertaken by the enterprises and governments of the underdeveloped world suppress the most urging needs such as medical care, education, infrastructure, and drinkable water. (Delo 2001, Sercar 2001). – Jeremy Rifkin (president, Foundation of Economic Trends, Washington, D.C.) said correctly: »Philosophers of enlightenment created a philosophical social vision that was strong enough to match the development of ownership and market. A vision must be created for the technology and commerce revolution to work for us rather than against us«.

Step by step, humans, we foresee (Tavcar 2003a) a switch from discussions about the *impact of communication* (tone, voice, word, language, music) and *visualisation* (light, colour, picture, form), finally and also, to discussions about the impact of consciousness (motion: overall consciousness, thought in one (Schopenhauer 1818; Toth 2002)) as a human value, to the of national, personal, and cultural identity. As a vision of ethical imperative of **SF** we propose ethic of consciousness of overall humanistic approach which include **SF** in our consciousness, the rational and the emotional ones, not only in sub consciousness.

How can we make it happen?

SYSTEMIC/HOLISTIC CONSIDERATION AS A PRECONDITION FOR THE NOTION OF SUSTAINABLE (DEVELOPMENT) FUTURE TO LIVE

The shortest definition of what we mean by systemic thinking can be presented in Figure 2 (for details see: Mulej et al. 2003)

Fig. 2: The Basic Seven Groups of Terms of Systems / Systemic / Holistic

Systems / Systemic / Holistic Thinking	Unsystemic, Traditional Thinking
Interdependence/s, Relation/s, Openness, Interconnectedness, Dialectical System of (Essential) Viewpoints	Independence, One-way-Dependence, Closeness, Single Selected Viewpoint
Complexity (plus Complicatedness)	Simplicity, or Complicatedness
Attractor/s	No influential force/s, but isolation
Emergence	No process of making new attributes
Synergy, System, Synthesis	No new attributes resulting from relations between elements
Whole, Holism, Big Picture	Parts and partial attributes only
Networking, Interaction, Interplay	No mutual influences

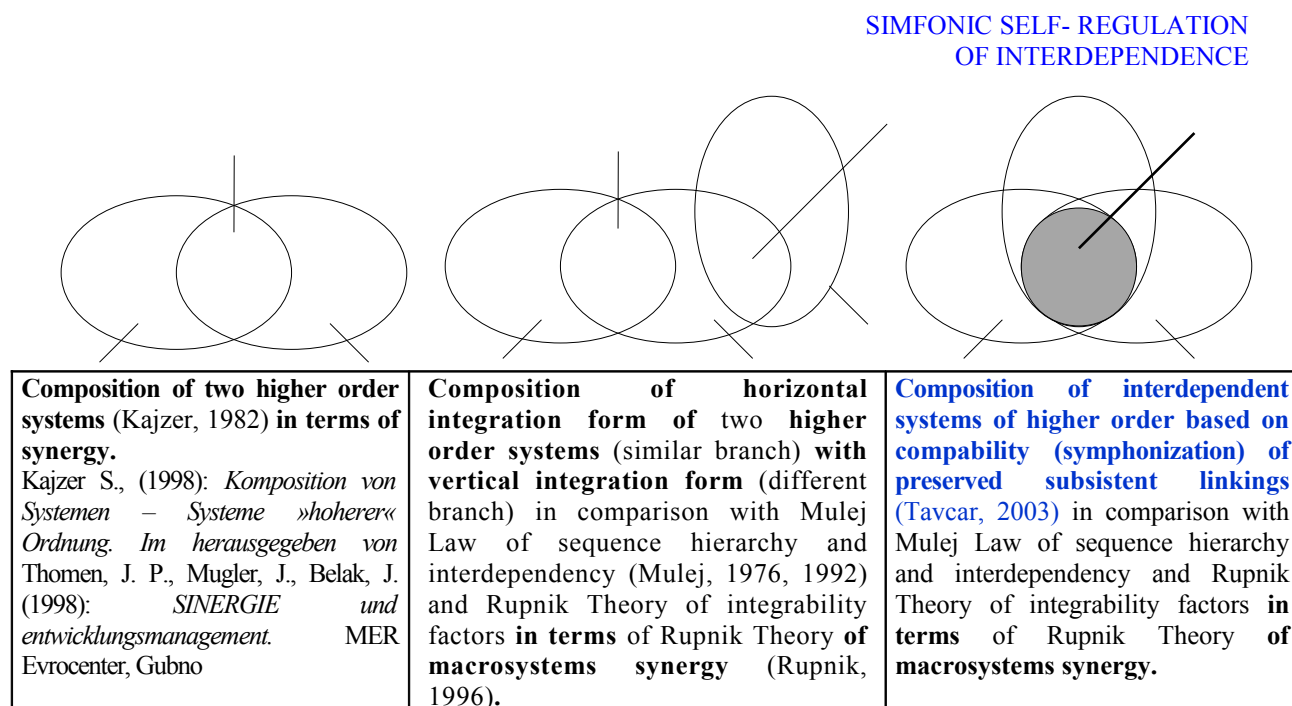
In its documents on innovation (EU 1995; EU 2000; etc.) the European Union requires systems thinking with no definition of what it means. So do European bodies dealing with quality - the European Quality Award. The United Nations Rio Declaration on SD, actually, requires systems thinking as well (for details see: Ecimovic, Mulej, Mayur, System Thinking and Climate Change System (Against a Big “Tragedy of Commons” of all of us) 2002).

Contemporary sciences novelty is also use of system thinking in research of the climate, climate change, global warming, and other issues connected with those as “the climate change system” (for details see: Ecimovic, Mulej, Mayur 2002, and “The Climate Change System Introduction”, Ecimovic 2008) and “the sustainable development system” (presented in: Tavcar, Mulej, et. al. 2003c, Tavcar, Mulej 2004)

Though, in the domain Global Changes and Eco-systems of the 6th Framework European Research Programme there are sub-domains *SD (impacts)*, *climate change (effects)*, *natural and other disasters (consequences)* and they are considered independent rather than inter-dependent systems; thus, their *emerging synergies* as a consequence of their inter-dependence and inter-action are neglected.

The same situation can be found concerning *ethics*: it is a topic under consideration in many domains, but as an independent entity rather than holistically, as an inter-dependent and inter-acting entity; again more of the *emerging synergies* as a consequence of inter-dependence and inter-action is desirable. The required systemic thinking is otherwise forgotten about. As a solution we suggest *Symphonic Self-regulation of Interdependence* (Tavcar 2003b) deriving the emerging synergies from mutual links (*F 3, 4b*).

Figure 3: *Symphonic Self-regulation of Interdependence – Emergent Synergies of Linking*



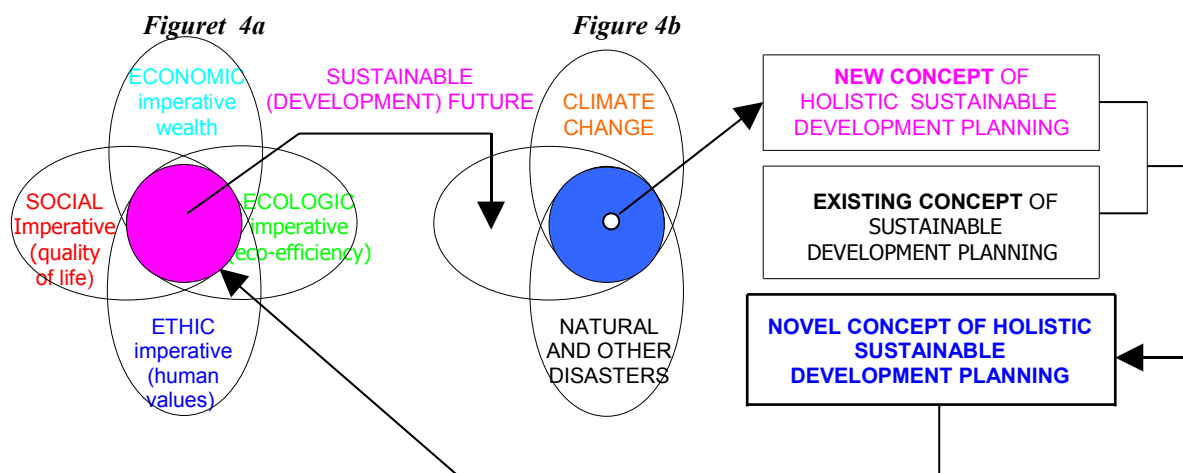
This presentation could be upgraded with interdependence, interaction and co-operation as driving powers of the Nature within the frame of the matter, energy, particles,



rays, powers, forces and yet unknown contents of the Nature. taken from contemporary sciences contents.

In a *SF* concept we propose to consider ethic as well as inter-dependent of whole (*Figure 4a*) (Tavcar 2003b, 2005) and hierarchy of interdependence of its *impact*, *effects* (*climate change*), and *consequences* (*natural and other disasters*) as framework for Novel Concept of Holistic Sustainable Development Planning (for details see: Tavcar, Mulej, Zidansek, Ecimović, Blinc, Lah, 2008) resulting from macrosystems emerging synergy.

Figure 4: *Dialectical System of Four Essential Aspects of SF as a clover –fortunately a four-leaved one, and hierarchy of interdependence of its impacts, effects, and consequences from the viewpoint of macrosystems synergy*



Contemporary science novelty is a need for transition from “*sustainable development*” to novelty strategy “*sustainable future*” (for details see: Ecimovic, Mulej at all, 2007).

A quite encouraging conclusion can be made from reading “Guiding principles for the Sustainable Spatial Development of the European Continent” of CEMAT, passed in 2000 in Hannover, Germany, and the policies of the “Ljubljana Declaration on Space Dimensions of the Sustainable Development”. SD is considered an entity of three dimensions, the economic, ecological and social ones, which are penetrated with the fourth dimension – the one of culture. In the logotype the latter covers the first three.

Though, the current kind of the Council of Europe’s systems approach to sustainable development is presented in its logotype with three **basic dimensions** – the **economic**, **ecological**, and **social** ones; together they make SD a system, which is illustrated by the circle inside their triangle. But the latter – due to this position – seems to be synergetic only rather than being self-standing as well, which would picture it closer to reality. According to the law of the requisite holism one may maintain that somebody has – with full right – decided to consider three dimensions only. But in such a case, the emotional part of the process remains out of sight, although it is very crucial in reality. Therefore we suggest the given logotype to be upgraded – **by adding the ethical imperative** as the fourth inter-dependent viewpoint/dimension/**perspective of the sustainable (development) future**. This would enable their **emerging synergies** as a consequence of their inter-dependence to be better considered. See Figure 1 (we will come back to it as a logotype later on).

The interdependence of all four crucial aspects of sustainable future of mankind - **SF** would thus be very visible. This fact is especially important in the implementation of the agreed-upon concept, vision and strategy concerning **SF**; in activities of the Council of



Europe and European Union many individuals and organisations will participate guided by their understanding of the given logotype.

The cultural dimension, which the Hannover and Ljubljana Declarations speak about, is very closely linked or interdependent with the ethical imperative, which we speak about here. They are both derived from *values* of a person launching them, which over time become more or less generally accepted in a social group thus developing to the level of *culture*, being later on imposed over the individuals as the acceptable *ethics* and become a part of their ethics and identity. But, there may be a trouble with the word culture in a logotype that might have to do with the fact that culture is a word with many meanings in the daily colloquial language. This fact could become an obstacle: people, who are supposed to use the logotype, may misunderstand it and undertake a wrong action.

SUSTAINABLE (DEVELOPMENT) FUTURE, ETHICS AND the Planet Earth - MOTHER EARTH – AND A LOGOTYPE REFLECTING THEIR INTERDEPENDENCE

Ethics (The study of standards of conduct and moral judgment; moral philosophy, Webster's 1986) means distinguishing between right and wrong (Sruk 1999; Wittmann 1996; Wilson 1998; Ulrich 1997; Thommen 1994; Thommen 1996; Knez-Riedl 2002; etc.); which ethics is the correct one, matching SD, and able to be found acceptable by most people, including the greedy and selfish ones, at the same time!¹⁴ And what should look like the ethics of sustainable future of mankind – new ethics needed for survival of mankind under the challenges of present and expected future (the climate change system impact/consequences and mitigations)!

Accepting **SF** means accepting the fact that we are integral part and mankind is living on sources provided by the planet Earth - Mother Earth as the living organism made of the living and nonliving subsystems (= real entities) and their interdependencies and resulting interactions (Lovelock 1979, Capra 1997; Vezjak, Stuhler, Mulej 1997; and interdependences, interactions and co-operation Ecimovic, Mulej, Mayur 2002; Detela 2002, Tavcar 2003b, 2005 etc.). Mother Earth is, hence our shared mother offering us her unconditional love, but only on the tiny space – biosphere, which is even non comparable with whole system of Mother Earth, except in the segments that we ruin it too badly for our loving mother to still have sources to offer us and support us with. Thus, **SF** is a concept teaching us to behave as Mother Earth's good children who are not too selfish, give her back her love, and do so for their very selfish reasons: their own longer-term survival requires shorter-term adaptation to the Mother Earth's holistic requirements (see: SIG Wisdom of the People Forum (Indigenous) in: Christakis, Bausch, eds. 2003; etc.). She is not one-sided and biased, we humans are, and need to change our level of holism of thinking to the requisitely holistic one – to survive.

Let us come back to the logotype in Fig. 1 on this basis. As Tavcar suggested in his discussion at the International Seminar "Consequences of the Enlargement of European Union" As a Side Event of the 13th European Conference of Ministers Responsible for Regional Planning (CEMAT) of the Council of Europe Member States, entitled the

¹⁴ The thesis that this is the "human/e ethics", sound fine. But it requires too much explanation because many interpretations are possible. Only a small part of the ethical rules is universal, and even only people see them as universal, who choose to consider them universal.



“Implementation of Strategies and Visions for Sustainable Spatial Development of the European Continent.” held on September 17-18, 2003, in Maribor, Slovenia¹⁵, it might be better if the logotype was:

- Not a triangle pyramid, which can hardly present a living organism or Mother Earth,
- But a clover, fortunately a four-leaved one.

Why such a suggestion?

- Each of the four leaves has the form of an ellipse to illustrate a soft-systems approach that is the natural attribute of the **Mother Earth** reflected in systems thinking (Fig. 1).
- The Globe in the form of a circle in the centre of the logotype illustrates the ideal of **happiness** / fortune, which the **Mother Earth and her unconditional love** bring (which is also a **social indicator**; see: Ib 2001, several contributions, Zidansek 2007).
- The fuzzy-system style of overlapping of the four imperatives illustrates both their over-lapping and their inter-dependence, concentrated in the **Globe** (= the entire biosphere in the language of L. v. Bertalanffy, present indirectly in the sentence “Think Global, Act Local” in the spirit of the UN Rio ’92 Declaration on Sustainable Development – as a very urgent necessity of humankind on all the Globe).
- The Sustainable Development is still a vision, more or less. Therefore we might illustrate this fact with the white colour containing all colours and hinting to the foresight that the requisitely holistically defined concept of SF will experience addition of new dimensions helping the existing ones make it happen (e.g. medical care). In the attempt to make this grand vision a reality one searches for interdependencies, i.e. mutually complementary differences of all the different impacts over the life on the Mother Earth – in order to make them a symphony, interlinking many individual instruments into one synergetic orchestra (***Symphonic Self-regulation¹⁶ of interdependencies*** (Tavcar 2003b)). This process may ease conflict and problem solving and support creative management, which is badly needed by the **concept of the Sustainable (Development) Future**.
- Is this a **utopia**? In this case we should use the rosy colour, which we suggest for the logotype under discussion here. Namely, according to the definition in the theory of colours **the rosy is the colour of the unconditional love of a Mother for her baby** (not child of a more grown-up age). If we compare the age of the Mother Earth (4.600.000.000 years) with the age of Humankind (120.000) (see: Capra 1997; Ecimovic, Mulej, Mayur 2002); etc.), humankind is not far away from the age of a baby. **Humankind also depends on Mother Earth as much as a baby does on his or her mother.**
- Along with this, we should be aware that such as **Utopia, as a Vision, is actually a part of our daily life** (Tavcar 1998). **Our Mother Earth offers and gives us her unconditional love every moment.** Like babies, we should return our love to her – by **making the concept of SF a reality – on which our own future depends a lot** (although not totally, because the Planet Earth is only a sub-system and interacting, inter-dependending and co-operating with the Solar System, Milky Way Galaxy System and

¹⁵ See also J. Tavcar (2003a,b), for an earlier version.

¹⁶ **Self-regulation** (self-organization) is typically non-linear, which makes it unstable and experience spontaneous appearance of new stable structures or patterns in the systems’ evolution process. Self-organization is typical of open systems. Non-linearity is a part of the positive feedback loops. The self-organizing structures result from a big number of interactions between parts of the system (Mandelj 2003).



the Universe as largest system humans may explore (Ecimovic, Mulej, Mayur; 2002; Ecimovic 2006, Ecimovic 2008).

- Although we humans – being sub-systemic and interdependent parts of the Mother Earth and the Universe – do not always act and react in the most suitable way, our Mother Earth acts as a self-organising organism caring all the time for us. Her capacity of self-organisation belongs to her essential attributes and covers both the living and the non-living nature and their interdependence. It is up to us to be aware of the limits of our actions putting her **self-organising capacity**¹⁷ in danger, quite often – which means putting ourselves in serious danger, which we can diminish by doing more for the concept of **SF** to live. And by doing it in a requisitely holistic manner, full of the human imperative and ethics of consciousness of interdependence.

Conclusions: CONCLUDING REMARKS

The concept of sustainable development was passed by the highest political body of the entire humankind, because there was and still is an agreement that the one-sided thinking, decision making and action of so far have become very dangerous for humankind's survival (Tegetthoff 2007, Ecimovic, Mulej, Mayur 2002, etc). A more systemic or holistic behaviour is needed.

People have shown over the decade since the UN Rio 1992 Declaration on Sustainable Development that they find it difficult to understand and realise. New actions are undertaken (such as the suggestion to the Committee of Ministers to include **SF into the agenda of the 3rd Summit of the Council of Europe**), new knowledge is developed, new logotypes show up to make the endeavour easier to accept, support and undertake. Perhaps, the existing logotypes are not holistic enough. We suggest a new one here with a brief argument and explanation that it suits the law of requisite holism and matches the **human imperative and the ethics of consciousness of interdependence. And at the conclusion to meet needs for sustainable future of mankind or harmony of mankind with the nature of the planet Earth, which is universal and under the rules of the Universe – interdependences, interactions and co-operation of all matter, energy, particles, rays, powers and forces and yet not known contents of the nature and Universe.**

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¹⁷ Capacity of **self-organization** belongs to the basic attributes of the natural evolution and is visible in very different areas of the living and non-living nature. In organization, on the other hand, there is the unavoidable moment of consciousness and ethics of consciousness. The moment of consciousness opens the issue of the many-layer nature of the phenomenon of organization. The cause/paradigm/view of the world creates and (may) essentially change the human and the world in the cosmic self-organization, including the daily life (Ovsenik 1998).



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10. A DIALECTIC SYSTEMS THEORY MODEL OF THE INNOVATIVE ROAD TRANSPORT SUSTAINABLE MANAGEMENT

Maribor, February 2008

A Dialectic Systems Theory Model of the Innovative Road Transport Sustainable Management has been prepared by Dr. Stane Bozicnik¹⁸ for the XX. WACRA International Conference, 26 – 28, June 2008, Maribor, Slovenia.

The Abstract

Present top pollutant, sector of the transport system, has got possibility for change due to better management and use. Using holistic system thinking and knowing challenges of the third millennium for better quality of the environment, harmony of present civilization with the nature of the planet Earth, what could be a short definition¹⁹ of the sustainable future of mankind, is the best of my knowledge possibility for transport system pollution decrease.

The presentation has been taken from Ph. D. thesis defended at Maribor University recently, and using larger thinking for making connections/bridges from present to future.

The key words

Transport system, Carbon dioxide, Dialectic System Theory²⁰, Sustainable (Development) Future, Environmental pollution, tradable permits

The Discussion

Present status of transport system, as main polluter of the air been third part of the basic biosphere environments, land and water to have whole of biosphere system basic living properties needed for human to live, has been researched from the point of possibility for better management.

The research analyses, partially from the aspect of classical and neoclassical economics theories, and partially from the view of economic system, the reasons hampering the development of the economy towards a sustainable economy by using the cognitions of

¹⁸ Dr. Stane Bozicnik, University of Maribor, Faculty of Civil Engineering, 23,000 Maribor, Smetanova 17, Slovenia, (Teaching : Transport economics, Logistics, Transport technologies) Head of transport economics centre. E-mail: Stane.bozicnik@uni-mb.si <http://www.fg.uni-mb.si/tec/>

¹⁹ The Sustainable (Development) Future of Mankind by Prof. Dr. Timi Ecimovic, John M. Bunzl, Prof. Dr. Mark Espozito, Prof. Dr. Warren Flint, Sir Prof. Dr. Roger B. Haw, Prof. Dr. Matjaz Mulej, Prof. Dr. H. A. Shankaranarayana, Prof. Dr. Peter A. Wilderer, Prof. Dr. Lloyd C. Williams and Ms. Roshni Udyavar, ISBN 978-961-91826-2-8, 2007 is origin of the definition.

²⁰ Prof. Emeritus DDr Matjaz Mulej many years research also presented at: System Thinking and Climate Change System (Against a big »Tragedy of Commons« of all of us), Ecimovic, Mulej, Myur, ISBN 961-236-380-3, 2002.



General Systems Theory and Dialectic Systems Theory. Based on findings of the environmental and ecologic economic theories, the Dialectic Systems Theory and the third level cybernetics system (epistemo-praxeology), the research designs theoretical foundations for necessary amendments to the existing economic paradigm. Proposed new economic system solutions would enable and continuously provide for sustainable (development) future and interaction of linear and non-linear systems mutually linked in a dialectic way.

In view of the above theoretical cognitions and starting points, the research analyses the theory and practice of the road traffic external costs valuation, establishing that the existing EU arrangement does not enable effective and successful sustainable control of the road traffic development based on internalisation of external costs of traffic, which is legitimately required by the EU traffic policy documents, but unfortunately based on a non-feasible model.

As a solution, the research develops an original, new dialectic model for innovative control of road traffic which, supported by the system of tradable permits for fuel (CO₂ emissions), provides for sustainable control of the road traffic development and operations in accordance with the theoretical requirements and reference points.

The problem solution is presented in compliance with the law on sufficient and necessary comprehensiveness required by Dialectic System Theory. Control of the volume of road traffic CO₂ emissions is solved in such manner that it enables a dynamic control of the road traffic CO₂ emissions under a single global cross-sector model of the CO₂ emissions control. Road traffic emissions of CO₂ represent only a sub-system in the global system of overall emissions. The model works based on integration of different cross-sector systems of tradable permits for CO₂ emissions at the global level and, based on target-defined and globally determined caps of acceptable CO₂ emissions, it provides for dynamic and sustainable control of the CO₂ emissions volume of all dialectically linked and inter-dependent sub-systems emitting CO₂ (greenhouse gases).

Discussing research with verification of the model on the case study for Republic of Slovenia, the model considers application of an electronic information system supporting the use (purchase and sales) of fuel, based on the fund of tradable permits (for individual motor road vehicle categories) available at fuel stations, and the use of the »fuel credit cards«. It calculates the prices of tradable permits for fuel (CO₂ emissions) for the assumed 5-, 10-, 20-, and 30-percent reduction in the fuel consumption, considering an average value of coefficients of price elasticity of demand for fuel as calculated in the world literature. It is also calculated and assessed the opportunities and threats of potential introduction of tradable permits for fuel at micro- and macro-economic levels. Negative consequences are negligible for those who are sufficiently innovative and entrepreneurial; for some others, they may be significant, while resulting in substantial positive consequences for the society as a whole.

In conclusion the effective practice could be introduced for permanent control of transport system pollution by putting together good will of all involved – human global society.

The Literature



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11. THE CHALLENGES OF GLOBAL GOVERNANCE FOR A SUSTAINABLE (DEVELOPMENT) FUTURE:

Dr. H. A. Shankaranarayana*
Anita Rao*

Introduction:

The human civilization in the beginning of the new millennium is in serious search for sustainable future development model and such a model requires a new global governance structure. The global governance is need of the hour for the New International Order is emerging in such a way that the nation states are exponentially giving ways to the policies of the borderless world. As such the global problems have become interrelated and cannot be dealt with in isolation even by the most powerful countries. These problems force us to recognize the pressing need for better governance of vital environmental resources involving all the stakeholders and innovation in managing the societal process. The need of the hour is the integration of economic, environmental, and social objectives to achieve a harmonious, human-ecological balance. This means co-operation among various sectors (government, business and voluntary/community sector organizations) both internally and internationally. In other words we need to nest various institutions at all levels within the framework of local, regional national and international regulations, standards, accountability and shared values concerning processes and policy outcomes. Action by the state alone will not resolve these problems. Partnership is required—governments working with business, the research community and the voluntary sector at all levels, which we can improve their management. All set out ideas for action which will take us towards sustainable future of these fundamental resources, and which can enhance their governance at international, national and local levels.

Defining Governance

It is important to understand what is implied by the term *governance*, and to distinguish it from *government*. The governance must be distinguished from the government. Popularly these two terms are used interchangeably: for example, the Oxford Dictionary refers to 'the manner or act of governing, of exercising control or authority over actions of subjects; a system of regulations'. In other words, the emphasis is on how people are ruled and how the affairs of state, or interstate affairs, are administered or regulated. However, because of the very nature of the problems discussed here, and the evolving nature of the world system, good governance cannot be achieved by governmental, or inter governmental activity alone. The 'world system' could be as the world economy with players which could be states, companies or multilateral or other organizations. Governance, then, can be understood as referring to national political *systems* and international political relations and their

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functioning in relation to law, public administration and democratic participation of key stakeholders and the public at large. It is about the interaction between institutions in all sectors, that must set goals and co-operate in achieving them and creating an orderly framework for action—not only at the global level, but also at regional, national and local levels. It is also about *learning* from action and reshaping policies and priorities in the light of experience and changes in the wider environment. Long-term management of resources calls for *lasting and learning* institutions.

The challenges for Global governance:

There is a very long way to go before we realize the goals of sustainable future. In terms of human development, industrialization and the health of the global commons, though there has been a significant shift in the late twentieth century from ‘frontier economy’ to a ‘full world economy’ the lingering hold of a frontier mentality still has a pervading influence on the global policy making. This mentality is anchored in the belief that a nation can draw on an inexhaustible supply of natural resources, and that man-made capital can invariably substitute for natural capital in improving human quality of life. However, of late the world is realizing the fact that there are few or no substitutes for the *critical natural capital* being depleted by the exploding rates of resource consumption associated mainly with economic growth in ‘developed’ societies.

Even where good independent scientific information exists, political and bureaucratic factors, and the existence of strong vested interests and/or long-established practices, condition decisions and often win out. One reason is that, despite the thinking is frequently detached from political decision making, being viewed as less practical and therefore carrying little weight. Greater support is needed for the role of independent internationally well regarded scientific advice, and monitoring and policing of resource issues. The science base has a role to play in governance that must be recognized and fostered by political, economic and social structures as well as by scientists. The politically sensitive nature of risk assessment and application of the precautionary principle make it essential that scientific research institutions been independent of the state and commercial interests should be fostered. Without sources of information and analysis which can be acknowledged on all sides as independent and trustworthy, debate of the risks and benefits attached to innovations affecting the commons will tend to be partisan, creating a climate in which suspicion flourishes and trust is eroded to the detriment of conflict resolution and open sharing of data and ideas.

Poor vertical integration is the result of the common failure of understanding and information flows between the policy level of government and multilateral organizations and small-scale production units or individual resource environmental standards. But the sheer number of producers and their independence of government control systems challenge traditional approaches to entirely unaware of details about whether and how current practices that are encouraged by government destroy or conserve natural resources. This ignorance results in policies which appear reasonable but often prove difficult or impossible to implement. Failures of vertical integration can be compounded by a large economic and cultural gap between a policy-making elite and the Cross-boundary initiatives, Unless there is both coordination and subsidiary (pushing decisions down to the lowest level of governance possible, subject to achieving their aim) throughout the system, confusion at the



level of global governance inevitably leads to fragmented and incoherent action at the national level, and so on down through the institutional system.

Finally, the different organizational cultures and objectives of business and government can add to the problems of achieving effective coordination between and public participation in assessing ‘joined-up’ problems and seeking solutions. On a positive note, regional organizational structures, perhaps designed to operate at the ecosystem level could be a bridge between top-down and bottom-up approaches, and between bilateral and global co-operation. Such a philosophy would also have to link ethical concerns about intergenerational equity and social justice to practical and quantitative systems for allocating opportunities for resource harvesting on the basis of scientific assessments of the ‘carrying capacity’ of ecosystems.

This implies overt linkage of economic, social and biophysical development, a long-term perspective to back up short-term action, and an inclusive, participatory framework with a high degree of political commitment behind it. The ecosystem requires that humans create opportunities for ecological self-regulation, until the global ecosystem is recognized as an integral component of the overall global political and economic system, currently dominated by economic interests, environmental issues will remain stranded on the fringes of politics and policy, and ecological institutions will be equally marginalized. Perhaps one of the most difficult of all the ethical issues is international inequality. It is also one of the most pressing since some important international agreements, notably those related to the environmental ‘commons’, hinge upon achieving a shared sense of a ‘fair’ distribution of obligations and benefits. This issue has lurked at the back of international relations throughout the post-war era. Relatively poor countries are unlikely to agree to have what they see as western definitions of ‘fairness’ imposed upon them, particularly when even NGO campaigners for fairness invariably exclude the world’s poor from negotiating processes.

Enhancing Global Governance: the Challenge

The current international governance regime has several shortcomings. First, it lacks a democratic dimension in the sense that there is acute uneven distribution of wealth and power between the north and south. Second, it lacks coordination across policy areas. The international order lacks regulatory systems that the developed world considers essential at national level: for example, bodies to regulate competition policy. While we can make vast financial transactions in milliseconds and transmit billions of dollars via IT networks across boundaries, we do not have international tax gathering and inspection systems which can perform the same task for the global community that they do for the nation state. There is a lack of common systems of resource accounting and auditing of environmental ‘stocks’ to allow comparison over time and across countries’ national sustainable (development) future strategies.

Finally, the current regime is dominated by the perspectives of Western policy makers and specialist expertise, and by the assumptions implicit in Western economic policy which give priority to individual consumption power over *community level* consumption decisions and



valuations. While no-one is arguing that these Western perspectives are incapable of analyzing complex problems of resource management and devising sustainable solutions, it is essential to acknowledge their limitations within the present systems of economic valuation. Affluent and specialized staff from Western agencies often find it hard to understand fully the needs and capacities of poor Southern communities. They may underestimate or misunderstand the local knowledge and skills that indigenous people possess (and indeed, developing country governments may also dismiss local expertise in their desire to modernize). The nature of decision making in non-democratic countries and unfamiliar cultures may be a barrier to collaborative action. Policy makers from the affluent West can find it hard to grasp the dynamics of societies where *scarcity* dominates everyday life in a way long forgotten in the rich world.

Priorities for Action

This state of affairs points us towards two key challenges for the new century. First, we need urgently to consider how we can democratize and strengthen the coherence of the existing institutions of global governance. We also have to focus on the second challenge—improving the national level of governance to ensure sustainable management of basic resources

While some TNCs have begun to report on their environmental and social impacts, and to adopt corporate policies to promote sustainable (development) future, voluntary approaches are both unevenly spread and lacking in consistent standards. There is a need to promote faster progress in this direction, through a combination of carrots and sticks. This means, in part, defining conditions on the operation of the open market economy, and ensuring that it works in support of international agreements on environmental and social protection. In part, it requires also the definition of a set of values shared by humanity, international agreements to underpin that set of values and then regulation of the market economy to ensure that it is directed towards meeting humanity's needs rather than individual's demands. Better coordination should be between UN agencies and others.

Development has been dominated for the last two decades by emulation of Western models of industrial production. But in the West there is growing recognition of the need for models of development which take full account of sustainable resource use and ecological constraints, and this needs to be reflected in the programs and priorities of international agencies. There is also a need for models of development *appropriate* to local conditions and capacities, in North and South alike. Top-down economic development, which neglects the perspectives of local communities and their expertise, is all too often unbalanced and unsustainable. Thus we need more recognition of, and support for, *alternatives* for development, models which link social and economic development with resource conservation. At the international level, there is a need to create more productive partnerships between North and South for resource management in individual sectors. We also need urban and rural models for regional and local development based on governance systems and technologies which promote sustainable (development) future and resource conservation.

There is a 'regulatory deficit' in global governance and governments should make it a priority to ratify and implement existing conventions, such as the 1997 UN Convention on



the Non-navigational Use of Water, and promote regional resource management organizations focusing on innovative solutions to conservation problems. There is also a need to develop further, via the WTO and other agencies, a global regulatory framework for the operation of TNCs. This would set global standards for environmental and social performance, and extend corporate liability to cover environmental damage. However, the ratification and implementation of global conventions cannot simply be left to governments, which may ignore them (as in the case of the US Congress's treatment of the Kyoto Protocol on global warming) or fail to act on them. Many governments are authoritarian and/or barely capable of action throughout their territory. Increasingly, power, influence and legitimacy attach themselves to other bodies: regional governments, city governments, NGOs and TNCs committed to social and environmental excellence. There is a need to establish global 'civil society conventions' to which these bodies, as well as nation states, can sign up. An example exists in the form of the Marine Stewardship Council and the Forestry Stewardship Council established by WWF with business partners to promote sustainable harvesting of fisheries and forests. By-passing the nation state where necessary, and making strong connections between communities and the private sector, must also be part of the development of new forms of governance of the global commons.

Technological Improvement, Product Substitution and Eco-efficiency are the crucial features of twenty-first century economic development. Governments need to be encouraged to subsidize technological improvements and product substitution for scarce resources, to promote cleaner production and more efficient use of energy and materials. Business can play an important role in investing in environmentally sustainable technologies both in the North and, equally important, in the South. In addition, governments should respect and support the commitment to implementation of international agreements such as the Kyoto Protocol, and ensure that subsidies, where applicable, favor the development of technologies favorable to the full implementation of such agreements. Aid and lending programs to governments should promote take-up and diffusion of appropriate sustainable technologies.

Perhaps the most important task of all is to promote a new ethical, consensual philosophy of global stewardship and citizenship, in the face of the rapid expansion of worldwide consumerist society. It is easy to call for such a thing, but far harder to define it and perhaps impossible to promote it. But the fact of globalization and the emergence of common co-operation across cultures, and new shared critiques of the existing global order—shared even between TNCs, NGOs and some governments. It is not impossible to imagine a 'highest common denominator' ethic of sustainable (development) future, based on the message of Agenda 21 and the analysis of global risks which is now shared by NGOs, some leading TNCs and many governments of all kinds. Such an ethic would need to be based on widespread public participation in decisions over sustainable resource use, possibly via Internet. But it would also need to direct attention to global political leadership and foster a marked shift to a long-term (say fifty-year) perspective in public debate, and in policy making and investment decisions—for the benefit of the world of our children's children. This new philosophy could be the common link among global civic society, based on sustainable production and consumption, ethical South–North relations and sound information of the implications of current and alternative patterns of human action. It might



be argued that a consensual ethic based on wide participation by stakeholders would simply reflect Western values and priorities, and thus deepen existing inequalities between North and South, and between the West and the rest. But this need not be so: a key element in the emerging consensus on the global risks of development is that Western shift towards a low-carbon, resource-conserving economy. While the gap between rhetoric and action in the West is huge, nonetheless the realization is spreading among decision makers and TNC leaders that radical change must come in the next decade or so. This 'self-critique' of Western production and consumption opens up the possibility of a shared agenda and a shared ethic across the planet, that challenges current assumptions and asks fundamental questions about the market, the democratic process and about social values underpinning human societies. Markets, now widely seen as the driver of innovation, prosperity and a better future for all are, after all, not separate from society. They must always rest on a social foundation of rules, and their operations reflect the goals we set for them. Currently, markets are too detached from social aspirations and collective wellbeing, and too much is expected of them. Markets need governance, for their own effective operation as well as to ensure that they deliver environmental and social benefits. As Peter Warren of WHAT has said, '...our morality does not mesh with our economic system...we cannot ask the market to define a desirable future.'

Conclusion

The common conclusion is that action is needed now, at both the global and national levels, to improve radically the systems we have for governing the use of these resources. The action needed is of two kinds. First, we need to make our laws work much better than they do. The existing framework does not promote sustainable harvesting, give accurate signals to consumers and harvesters about the limits to consumption, or implement adequately the environmental laws which have been framed to date globally and nationally. Second, we need innovations in governance—new market mechanisms, systems for regional management of resources, public information and education initiatives and better linkages between government departments and across sectors—if we are to make the transition to sustainable resource use in the twenty-first century. Governance is too important to be left to the governors; we need processes through which producers, consumers, NGOs, businesses and many other stakeholders from civil society can have a voice in the design and implementation of solutions. Because conditions vary so much, there is no top-down blueprint which can be imposed: we need open experimentation and innovation, and mechanisms for learning across sectors and cultures.

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12. SUSTAINABILITY

Summary by RGD, 06-13-08

Sally J. Goerner, Robert G. Dyck, Dorothy Lagerroos, *The New Science of Sustainability: Building a Foundation for Great Change*. Chapel Hill, NC: Triangle Center for Complex Systems, 2008. Distribution by New Society Publishers, POB 189, Gabriola Island, BC, VOR 1X0 Canada, info@newsociety.com, and by Amazon.com.

Introduction.

The sustainability movement is at the forefront of a global response to a major paradigmatic shift (great change) in the pattern of civilization, from oligarchic capitalism and power systems to a global democratic system in which long-term social, economic, and environmental vitality are linked together and extended to all parts of our world. Civilizations have transformed themselves before, and this book shows how an emerging new stage of scientific consolidation creates a unifying framework and a solid foundation for an emerging new stage of civilization. The same laws that nature uses to create vitality in living organisms and natural ecosystems can be used to foster long-term social and economic vitality.

This new scientific vision challenges current economic theory, but reaffirms that people, common-cause values, and learning lie at the heart of economic vitality as well as planetary health. The book shows that justice and humanity are critical to an integrated vision of social and economic sustainability, in education, business, media, agriculture, energy, and democracy.

The first part of the book lays out the new scientific perspective, and also includes processes of cultural reform and change, the reasons for cultural collapse, the parameters of societal fitness, and a new core view of social and economic sustainability, including its measurement. The second part of the book explores the history of how modern institutions have gone astray, how zealous oligarchs have hijacked democratic societies, and how societies have responded to today's global crises. It also provides a concluding summary for citizen and community action.

The approach of the book is not only science-based, but is also multi-disciplinary and multi-cultural in its outlook. Sally Goerner, Director of the Integral Science Institute in Research Triangle, North Carolina, contributes from her background in physics, systems engineering, mathematics, and psychology. Robert Dyck, Emeritus Professor of Public & International Affairs at Virginia Tech, Blacksburg, Virginia, contributes in the areas of economics, politics, design, and planning. Dorothy Lagerroos is an attorney, an environmental activist, and professor of government at Northland College, Ashland, Wisconsin.

The book is written in a semi-popular style to optimize understanding and dissemination of its ideas and findings to the largest possible audience. Readership is expected to include college and university students, fellow teachers and scientists, business and governmental officials, and a wide range of citizenry seeking new avenues for responsible action in a rather



confusing and conflicted socioeconomic and scientific environment, typical for a time of great paradigmatic change.

PART ONE. THE NEW PICTURE

1. Changing the Dream: How Civilizations Reinvent Themselves. The focus of the book is saving our civilization, not just the planet. The shift from the *modern* to an *integral* society mirrors prior paradigm shifts embodied in the Renaissance, the Reformation, and the scientific revolution of the Enlightenment. Today's integral (interrelated, web-like) scientific re-thinking shows that life is more about social learning, collaboration, and societal support than about competition, self-interest, oligarchy, and survival of the fittest.

2. Sustainability as a Response to Failing Times. Sustainability's origins as a subset of environmentalism has grown to include a wide range of concerns necessary for support of the environment, including government, economics, democracy, and social justice. We seek to avoid the kinds of socio-economic collapse that destroyed preceding oligarchic civilizations. When the dominant cultural paradigm fails, our map of reality has to change in accordance with a rapid, intelligent, adaptive *social learning* response. Integral science can provide the unifying theoretical foundation. Oligarchic control systems simply delay and exacerbate the adjustment problem.

3. Discovering a New Logic of Life. The new integral scientific approach shifts the focus of science from *parts* to *wholes*, and from *matter* to *energy*. It is interested in systems of complex causality and integration rather than simple causality and reductionism. Its focus on energy flows changes the emphasis from static materialism and equilibrium to dynamic processes and pattern changes. Today's dynamic view of evolution replaces the old view of life created by accident and controlled by selfish genes, to an *energy flow web* that better explains how societies, economies, and civilizations really *co-evolve*, particularly in terms of their collaborative support structures and intricate, mostly invisible, ordering processes—including fractal geometries that facilitate energy flows between differing scales of activity. These new understandings help us also to understand why collaborative learning is civilization's main survival strategy.

4. Why Civilizations Collapse. The typical causality of collapse is rigid, exclusive, self-serving oligarchical control, sharply curtailing society's natural self-managing learning adjustments to dynamically changing environmental conditions. Integral science helps us understand that a healthier, more sustainable civilization built upon partnership democracy is not only possible, but likely. Imperialism is neither desirable nor stable as an imposed form of non-adaptive order; it is structurally brittle and fragile.

5. Redefining Fitness: The Eco-Logical Explanation of What Makes Us Prosper. While new technologies are important, the key to sustainability is *social learning*, enabling societies to adapt rapidly and wisely *before* crises become critical. Similarly, *individual fitness* in an ecosystem is the ability to play a morally coherent role in the web of ecological processes, which are fractally connected to promote strength, intelligence, and resilience.



6. Economic Development as Human Development. The new view of fitness opens the door to a more productive vision of economic development. The integral perspective sees culture and economy as mind and body in interaction, with cultural systems representing our societal mind, and the economy representing societal metabolism. This approach thrives on bottom-up development, as contrasted with paternalistic top-down models that emphasize major infrastructure investments and short-term profits rather than self-reliant webs for mutual support and the progressive development of increasingly complex economic systems.

7. Measuring Economic Sustainability. The new science of sustainability makes it possible to measure quantitatively how well an economy follows nature's own web patterns of intelligent growth and vitality in human development, not just in GDP. The key elements include, as in networks of natural ecosystems, appropriate fractal structure, social capital based on mutually supportive fitness, and the high quality capital of energized, capable individuals. As pioneered by Robert Ulanowitz for natural ecosystems, sustainability in human systems must also be based on a measurably optimal balance of *resilience* and *efficiency*. Too much of one or the other and the essential balance is lost.

8. Sustainable Vitality and the Fractal Future of Money. This chapter explores how an appropriately designed, multi-scale monetary system can help create sustainable vitality at all levels by properly catalyzing socio-economic processes. Today's monetary system is not sustainable because it leads to consolidation at the top, erosion at the bottom, and conflict among all parties involved. It fails to catalyze mutual-benefit exchanges at all levels of scale, because it is not designed fractally.

9. Reweaving Democracy. Economic and social vitality are inseparable, and a self-governing collaborative infrastructure is essential to both. Democratic civil society must be built from the ashes of the Right/Left Culture War that has disenfranchised everyone. Rebuilding must be spurred by an ennobling moral vision of common cause, mutual support, and love, consistent with integral science and the fractal linkage of governance systems at all scales.

PART TWO. THE SOCIAL CHANGE

10. Rescuing the Enlightenment Baby from the Oligarchic Bathwater. Today's socio-environmental crisis has evolved from modernity's imperialist project. But, because of its counter-productive and unsustainable polarization of wealth, power, and privilege under the guises of economic freedom, economic efficiency, free trade, and the rationality of Prussian orderliness in public education, this modernist project will, sooner or later, inevitably drive global civilization to a post-oligarchical stage of development.

11. Neo-Liberal Globalization and its Discontents. Oligarchic logic embedded in today's dominant political and economic belief system, neo-liberalism, is undermining people, communities, and economies worldwide. Milton Friedman may seem to have won his battle for the "commanding heights" from John Maynard Keynes. But "Keynesian" military spending has pushed government outlays and the national debt higher than ever, while the gap between the rich and poor has increased, and our public infrastructure has crumbled. The basic stalking horse of the neo-liberals was *true belief*, but their powerful elites were



also making plenty of money. The neo-liberal approach has violated the laws of eco-logical fitness, described in chapters 4 through 7, in the name of corporate welfare.

12. Hi-Jacking Democracy: How Zealotry Turns to Tyranny. The anti-democratic impacts of neo-liberal oligarchy have been perpetuated by demagogic politicians who have zealously forced their dominant ideology on everyone, damaging democracy and effective social learning in the process. They have manipulated culture and its cherished icons. They have also co-opted our communications systems, our courts, our legislative bodies, and our executive branch for imperialist and corporatist purposes. The basic fault lies in their oligarchic culture, which has been undermining democracy for centuries.

13. The Rising Tide of Outrage: The Real Culture War. The real culture war today is between oligarchy and partnership democracy, not between Left and Right, despite the media hype. Crisis generally creates social pressures that lead to better alternatives. Outrage at neo-liberal corporatism and globalization began to find powerful expression in grassroots networks and public demonstrations, all over the world, starting in the 1990s.

14. New Rules for a New Society: A Checklist for Change. The keys to the future are partnership democracy and a social learning culture that together enable adaptive change in agriculture, local economic networks, energy and water networks, physical layout and design, finance, governance, information, social justice, public policy, taxation, and environment.

15. The New Story of Sustainability. It's about saving civilization as well as the planet, and it's the Integral View against the superceded Modernist View. Love *can* beat out selfishness!



13. “THE GLOBAL ENTERPRISE STRATEGY – A BASIS FOR MAKING THE SUSTAINABLE FUTURE – WITHOUT BUSINESS POLICY!?”

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Abstract

The global enterprise strategy (GES) is a trend of the modern world and we would like to explore globalization issues that compound a framework for thinking about GES. By the closely examination we found GES levers for multi-domestic and/or GES, description of benefits and drawbacks of GES, market globalization drivers, cost drivers, governmental drivers, competitive drivers and supplemented them with information drivers. A hypothesis we confirmed is that although planning (global) strategy is a part of very important starting points for organizational survival, existence, and development, and business activities results from leadership, vision and business policy. This is why for the strategy of any kind we have to establish vision and business policy first (mission, purpose, basic goals of an organization) without regard to rank of an organization. Reasonably this is valid also for GES. Each strategy is namely a footpath for achieving a business policy. This includes efforts for sustainable future.

Keywords

business policy, strategic management, globalization, global enterprise strategy, small and medium-sized enterprises

1 INTRODUCTION

Sustainable future (Ećimović et al, 2007) is a global problem requiring global strategy, in general and in enterprises²¹, on which we will focus here. If the global enterprise strategy (GES) fails to support the requisite holism of enterprise's observation, perception, evaluation, thinking, emotional and spiritual life, and action, the enterprise may fail to attain any future, not to speak of a sustainable future. Mulej/Kajzer law of requisite holism (1998) reminds people of their need to reach beyond a single viewpoint toward including all essential viewpoints, their interdependences, interactions and synergies, i.e. their dialectical system, although they have no real chance to attain total holism. The business policy and GES may well support the requisite holism and help humans pave their way to their sustainable future.

From the recent literature (quoted in the text below) we perceive that the GES is a trend of the modern world. Hence it follows that in this frame of organizational development there is a lack of integral (and integrative) linkage in consideration of leadership and business policy

²¹¹ Enterprise, company, firm, organization, business, business-corporation – are synonyms that we use as the original authors do from who we quote or learn.



as well as other components of integral management concepts. This is why we would like to find out an answer to some questions, related to this subject. Therefore we wish to deal with the selected problem – planning GES. We would like to point out the important themes an organization must be aware of, and globalization issues that compose a framework for thinking about GES (process). We will explore the strategic dimensions, benefits and drawbacks of a GES; industry conditions respectively industry globalization drivers (market, cost, governmental, competitive drivers) and strategic development situations in small and medium enterprises (SMEs; Small and medium-sized enterprises are often referred to as the backbone of the European economy, providing a potential source for jobs and economic growth (Key figures on Europe 2008, 110)).

Many researchers discuss GES without regard to activity, size, phase of the life cycle, culture etc. of an organization, regardless of the environment from which organizations originate (see also some quotes below). All this and more influences and changes the feasibility of successful globalization. Our selected viewpoint is GES of SMEs in a big, global world and their GES chances. So: do the principles of big ones apply to them? Are they able to compete with global multi-domestics and/or global companies, or should they be parts of these global actors? Between what kinds of strategic developmental situation can they choose and what/which dimensions can put obstacles in their way?

Our hypothesis reads: planning (global) enterprise strategy is a part of very important starting points for organizational survival, existence, and development, and business activities results from leadership, vision and business policy. Business policy results from organizational vision and presents broad starting points for organization (check Belak 2002, 74 and 38-39). Strategies (as well GES) are only means to realize organizational mission and purpose, to achieve its basic goals (compare Belak 2002, 144). About global strategic management see for example Biblio Service Rugman (2005), about managing executive attention in the global company read for example Birkinshaw and Bouquet (2007).

2 CHANGES IN THE (INTERNATIONAL OPERATING) ENVIRONMENT

In today's global competitive environment, any business, large or small, that is not thinking and acting strategically is extremely vulnerable (Zimmerer, Scarborough 2005, 68). Every business is exposed to the forces of the rapidly changing competitive environment... From sweeping political changes around the planet and rapid technological advances to more intense competition and newly emerging global markets, the business environment has become more turbulent and challenging.

Operating in an international rather than a domestic arena (Mintzberg, Lampel, Quinn, Ghoshal 2005a, 272) presents to managers many new opportunities. Having world wide operations not only gives a company access to new markets and specialized resources, but it also offers new sources of information to stimulate future product development. And it broadens the options of strategic moves and countermoves the company might make in competing with its domestic or more narrowly international rivals. However, with all these new opportunities comes the challenge of managing strategy, organization, and operations



that are innately more complex, diverse, and uncertain. Although Mintzberg, Lampel, Quinn and Ghoshal in this passage do not expose also the bigger possibility of many new threats, connected with globalization, we believe that uncertainty includes them in the most important reasons why many of (micro, small and medium size) companies do not try to operate in such an international arena.

Recent changes in the international operating environment (Bartlett and Ghoshal 2005, 273) have forced companies to optimize efficiency, responsiveness and learning simultaneously in their world wide operations. On companies that have previously concentrated on developing and managing one of these capabilities, the new challenge implies not only a crucial strategic reorientation, but a major change in organization capability as well. In tomorrow's business world (Miles, Snow, Mathews, Miles, Coleman JR. 2005, 423) some markets will still be supplied with standard products and services, while other markets will demand large amounts of customization. However, the continued pull of market forces, and the push of ever-increasing know-how honed through network partnering, is already moving some industries and companies toward a continuous process of innovation, what in many organizations changes their culture, leadership and business policy, strategies, structures and program of development respectively requisite holistic development and business (planning) in SMEs and big organizations. Fara, Kearney and Bell (2006) warn of overconfidence and poor timing. On the contrary Ghemawat (2008) argues that a manager will come to see globalization as an option to be considered rather than an imperative to be automatically accepted. The author explores two broad approaches to evaluating global strategies: in terms of principles and in terms of analyzing their implications for value (with the observation that value is the product of margins and volume).

All these considerations led us to the conclusion that the described changes in the (international operating) environment caused the fact that nowadays international business arena rise of to reality and necessity for many organizations. This is also the reason for exploring the terms globalization, globalizing, multi-domestic and global. These are namely the open questions to which we have to find answers before we can start to research the GES planning.

3 GLOBALIZATION

Organizations (Francesco, Gold 2005, 2) are becoming increasingly global. Multinational corporations formulate global strategies to expand into new markets, reduce their dependence on expensive labor, restructure into network or virtual organizations, and capitalize on innovative international financial arrangements. At the beginning of the 21st century, increasing numbers and types of organizations transcend geographic, economic, political, and cultural boundaries. The main reason to go global (Zimmerer, Scarborough 2005, 464) is not unlike the reason given by the legendary bank robber, Willie Sutton, who, when asked why he robbed banks, replied, "That's where the money is." The same is true for global business today. But: is this true also for SMEs?

According to Porter (Wheelen, Hunger 2005, 64-65), world industries vary on a continuum from multi-domestic to global. Multi-domestic industries are specific to each country or group of countries. This type of international industry is a collection of essentially domestic industries. The activities in a subsidiary of a multinational corporation (MNC) in this type of industry are essentially independent of the activities of the MNC's subsidiaries in other



countries. Within each country, it has a manufacturing facility to produce goods for sale within that country. The MNC is thus able to tailor its products or services to the very specific needs of consumers in a particular country or group of countries having similar societal environments.

Wheelen and Hunger further stated (2005, 65) that global industries, in contrast, operate world wide, with MNCs making only small adjustments for country-specific circumstances. A global industry is one in which an MNC's activities in one country are significantly affected by its activities in other countries. MNCs produce products or services in various locations throughout the world and sell them, making only minor adjustments for specific country requirements... The largest industrial corporations in the world in terms of dollar sales are, for the most part, multinational corporations operating in global industries.

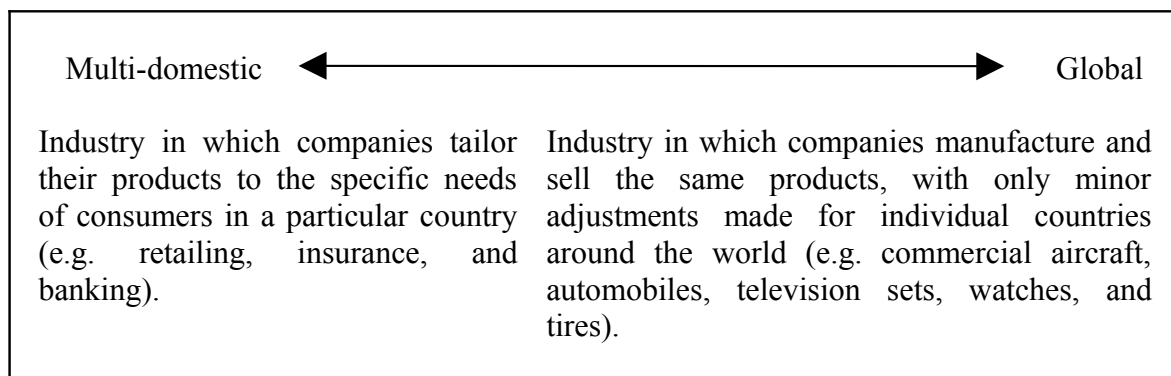


Figure 1: Continuum of International Industries (Wheelen, Hunger 2005, 65, adapted)

Whether to globalize and how to globalize (Yip 2005, 280) have become two of the most burning strategy issues for managers around the world. Many forces are driving companies around the world to globalize by expanding their participation in foreign markets. Almost every product market in the major world economies – computers, fast food, nuts and bolts – has foreign competitors. Companies are also seeking to globalize by integrating their worldwide strategies. Such global integration contrasts with the multinational approach whereby companies set up country subsidiaries that design, produce, and market products and services tailored to local needs.

Several changes seem to increase the likelihood that, in some industries, the global strategy (i.e. GES, N. B. authors) will be more successful than a multi-domestic one (Yip 2005, 280). One of these changes, as Levitt (1983) argues forcefully and controversially is the growing similarity of what citizens of different countries want to buy. Other changes include the reduction of tariff and nontariff barriers, technology investments that are becoming too expensive to amortize in one market only, and competitors that are globalizing the rules of the game. Globalization of industries (David 2005, 98) is occurring for many reasons, including a world-wide trend toward similar consumption patterns, the emergence of global buyers and sellers, e-commerce, and the instant transmission of money and information across continents.



According to Yip (2005, 281) companies want to know how to globalize – how to expand market participation – and how to develop an integrated worldwide strategy. In developing a total world wide strategy three steps are essential. Multinational companies know the first two steps well. They know the third step less well since globalization runs counter to the accepted wisdom of tailoring for national markets (Douglas, Wind 1987 in Yip 2005, 281). The three steps are (Yip 2005, 281):

1. Developing the core strategy: the basis of sustainable advantage. It is usually developed for the country first.
2. Internationalizing the core strategy through international expansion of activities and through adaptation.
3. Globalizing the international strategy by integrating the strategy across countries.

As a result of cognition what is the meaning of globalization, globalizing, multi-domestic and global industry we have basic starting point for framework of GES process. We are interested in what influences GES process and what are benefits/costs of such a GES. We will investigate what potential organizations need to achieve the benefits of GES. We are also interested in whether there is a difference between strategic dimensions along a pure multi-domestic and a pure GES. All mentioned required comprehensions and also industry globalization drivers (industry conditions) were originally developed by Porter (1986).

4 PLANNING GLOBAL ENTERPRISE STRATEGY (GES)

4.1 Framework of Global Enterprise Strategy (GES) Process

Globalization (David 2005, 98) is a process of worldwide integration of strategy formulation, implementation, and evaluation activities. Strategic decisions are made based on their impact upon global profitability of the firm, rather than on just domestic or other individual country considerations. A global strategy (i.e. GES, N. B. authors) seeks to meet the needs of customers world wide, with the highest value at the lowest cost...

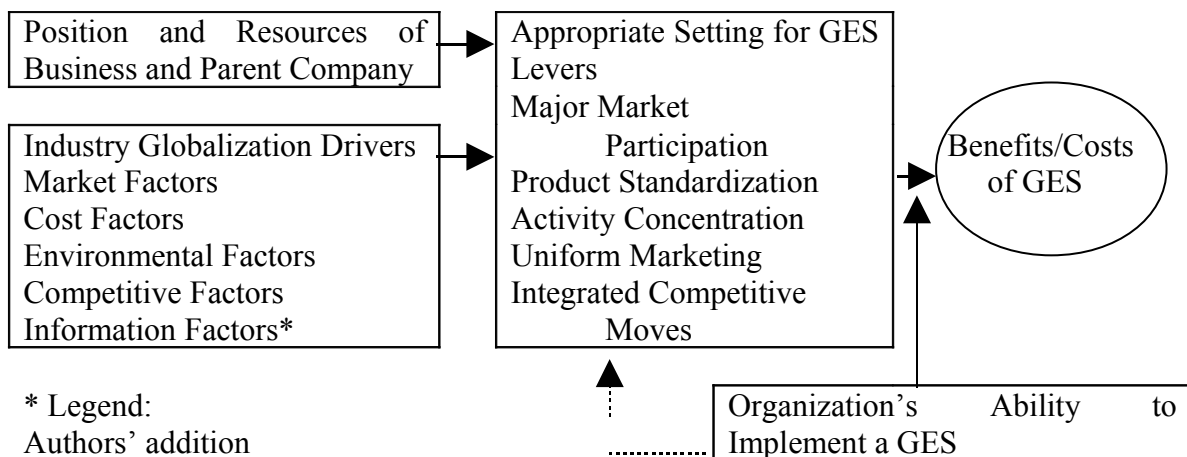


Figure 2: Framework of Global Enterprise Strategy (GES) Process (Yip²² 2005, 281, adapted)

²² Framework, developed in Yip's article we used, is based in part on M. Porter's (1986) pioneering work on global strategy. We adapted and excerpted author's cognitions and add to them our own findings.



Figure 2 lays out a framework of GES process – a framework for thinking about globalization issues. *Industry globalization drivers* (underlying market, cost, and other industry conditions) (Yip 2005, 281) are externally determined, while GES levers are choices available to the worldwide business. Drivers create the potential for a multinational business to achieve the benefits of GES. To achieve these benefits, a multinational business needs to set its *GES levers* (e.g., use of product standardization) appropriately to industry drivers, and to the position and resources of the business and its parent company. The organization’s ability to implement its GES affects how well the benefits can be achieved.

4.2 Strategic Dimensions or “Global Enterprise Strategy (GES) Levers”

Setting strategy for a worldwide business (Yip 2005, 281) requires making choices along a number of strategic dimensions or “GES levers” and their respective positions under a pure multi-domestic strategy and a pure GES (see Table 1). Intermediate positions are, of course, feasible. For each dimension, a multi-domestic strategy seeks to maximize world wide performance by maximizing local competitive advantage, revenues, or profits; a GES seeks to maximize local competitive advantage, revenues, or profits; a GES seeks to maximize world wide performance through sharing and integration. On this topic see also Hurt (2007) and compare also Rugman (2005).

Global Enterprise Strategy (GES) Levers	Setting for Pure Multi-domestic Enterprise Strategy	Setting for Pure Global Enterprise Strategy (GES)
Market Participation	No particular pattern. Countries are selected on the basis of their potential for revenues and profits.	Countries are selected on the basis of their potential contribution to globalization benefits (e.g. home market of a global competitor). Significant share in major markets.
Product Offering	They are tailored to local needs. Fully customized in each country.	Standardized core product that requires minimal local adaptation (the most important benefit: cost reduction). Fully standardized worldwide.
Location of Value-Added Activities	All or most of the value chain activities are reproduced in every country. (In international strategy “exporting” most of the value chain is kept in one country).	Concentrated – one activity in each (different) country (costs are reduced by breaking up the value chain).
Marketing Approach	Fully tailored for each country, developed locally.	Uniform approach world wide (although not all elements of the marketing mix need be uniform).
Competitive Moves	The managers in each country make competitive moves without regard for what happens in other countries. Stand-alone by country.	Integrated across countries at the same time or in a systematic sequence.



Table 1: Global Enterprise Strategy (GES) Levers/Globalization Dimensions (Yip 2005, 282; see also 281-283; adapted)

In his work Yip doesn't distinguish different types of organizations: he doesn't investigate the influence of different spheres of activities (product line/business units, functions fields) nor leadership, corporate governance and/or top management (inclusively organizational philosophy, culture and ethic). Hence it ensues that such a study is required for determination of strengths and weaknesses of an organization. Commonly we define them on the basis of traditional business analysis: comparison with competitor organization (which is placed among GES levers in different context; this view is what we will also precisely discuss in passage 4.5). See European management models (for example Concept of integrate (integral) management from University of Maribor (Kajzer, Duh, Belak 2008, 159-172), University of St. Gallen (Bleicher 2004) or Hinterhuber's Model of strategic management (2004)), and American management models (for example Wheelen's and Hunger's Strategic management model (2006) or David's Comprehensive model of strategic management process (2005)). To state a framework of planning GES stimulation and/or obstacle, we have to research benefits and drawbacks of a GES.

4.3 Benefits of a Global Enterprise Strategy (GES)

Companies that use GES can according to Yip (2005, 283) achieve one or more of these benefits: cost reductions, improved quality of products and programs, enhanced customer preference, and increased competitive leverage. The benefits of a GES are introduced in Table 2.

Benefits of a Global Enterprise Strategy GES)	Description
Cost Reductions	A company can increase the benefits from economies of scale by <i>pooling production or other activities</i> for two or more country. A second way to cut costs is by <i>exploiting lower factor costs</i> by moving manufacturing or other activities to low-cost countries. Or by <i>exploiting flexibility</i> : a company can move production from location to location to take advantage of the lowest costs at given time. Or by <i>enhancing bargaining power</i> : with suppliers, workers, and host governments etc. (because of switching production among different countries).
Improved Quality*	Concentration (focus) on a smaller number of products and programs can improve quality.
Enhanced Customer Preference	Global availability, serviceability, and recognition can enhance customer preference through reinforcement.
Increased Competitive Leverage	A GES provides more points from which to attack and counterattack competitors.

* of Products and Programs



Table 2: Description of the Benefits of a Global Enterprise Strategy (GES) (Yip 2005, 283-284, adapted)

In analysis of the benefits of a GES we have to take criticism into account: the demonstrated Yip's research is rather consistently carried through, but it doesn't incorporate consideration about important (and required) organizational differentiation (for example in different phases of their life cycle or in different size classification). The surveyed benefits are also different perceived by different organizations (consequently they have different importance for them) according to their (international) activities, legal forms, innovation preparation, business connections etc. and their capability of their exploitation. All this is very important fact for or against applying of GES and for or counter making choices along the discussion on strategic dimensions or "GES levers". And the same is valid also for drawbacks of a GES, presented in item 4.4. And this is, as we see, a widely open window for very important further research.

4.4 Drawbacks of a Global Enterprise Strategy (GES)

Each GES lever has particular drawbacks, as shown in Table 3.

Global Enterprise Strategy (GES) Levers	Drawbacks of Global Enterprise Strategy (GES)
Market Participation	A GES approach to <i>market participation</i> can incur an earlier or greater commitment to a market than is warranted on its own merits.
Product Offering	<i>Product standardization</i> can result in the product that does not entirely satisfy <i>any</i> customers. It can seldom satisfy all needs in all countries.
Location of Value-Added Activities	<i>Activity concentration</i> distances customers and can result in lower responsiveness and flexibility. It also increases currency risk by incurring costs and revenues in different countries.
Marketing Approach	<i>Uniform marketing</i> can reduce adaptation to local customer behavior.
Competitive Moves	<i>Integrated competitive moves</i> can mean sacrificing revenues, profits, or competitive position in individual countries, particularly when the subsidiary in one country is asked to attack a global competitor in order to send a signal or to divert that competitor's resources from another country.

Table 3: Drawbacks of a Global Enterprise Strategy (GES) (Yip 2005, 284, adapted)

Very important point of view, that influences planning GES, is industry in which an organization operates. Like organizations also industries have their life cycles, ascensions and declines, prosperities or recessions. All of these are very important for every organization, especially (yet more) SMEs. So there is a very important open question: problem of industry conditions, which influences globalization. This is why the passage 4.5 is dedicated to industry globalization drivers.

4.5 Industry Globalization Drivers (Industry Conditions)



To achieve the benefits of globalization (Yip 2005, 284), the managers of a world wide business need to recognize when industry globalization drivers provide them opportunity to use GES levers. These drivers can be grouped in four categories: market, cost, governmental, and competitive. Each industry globalization driver affects the potential use of GES levers. According to Yip (ibid, 287) industry globalization drivers provide opportunities to use GES levers in many ways.

Market Globalization Drivers depend on customer behavior and the structure of distribution channels. These drivers affect the use of all five GES levers.	
Homogeneous Customer Needs	Key is to understand which aspects of the product can be standardized and which should be customized.
Global Customers	Global customers buy on a centralized or coordinated basis for decentralized use. The existence of global customers both allows and requires a uniform marketing approach.
Global Channels	Channels of distribution may buy on a global or at least a regional basis. Global channels or middlemen are also important in exploiting differences in prices by buying at a lower price in one country and selling at a higher price in another country.
Transferable Marketing	Marketing elements, such as brand names and advertising, require little local adaptation. That enables firms to use uniform marketing strategies and facilitates expanded participation in markets.

Table 4: Industry Globalization Drivers: Market Globalization Drivers (Yip 2005, 285, adapted)

Cost Drivers depend on the economics of the business; they particularly affect activity concentration.	
Economies of Scale and Scope	A single-country market may not be large enough for the local business to achieve all possible economics of scale or scope.
Learning and Experience	Expanded market participation and activity concentration can accelerate the accumulation of learning and experience.
Sourcing Efficiencies	Centralized purchasing of new materials can significantly lower costs.
Favorable Logistics	A favorable ratio of sales value to transportation cost enhances the company's ability to concentrate production.
Differences in Country Costs and Skills	Concentration of activities in low-cost or high-skill countries can increase productivity and reduce costs, but manager need to anticipate the danger of training future offshore competitors.
Product Development Costs	Developing a few global or regional products rather than many national products can reduce product development costs.

Table 5: Industry Globalization Drivers: Cost Drivers (Yip 2005, 285-286, adapted)



Governmental Drivers: Government globalization drivers depend on the rules set by national governments and affect the use of all GES levers.	
Favorable Trade Policies	Host government affects globalization potential through import tariffs and quotas, non-tariff barriers, export subsidies, local content requirements, currency and capital flow restrictions, and requirements on technology transfer. Host government policies can make it difficult to use the global levers of major market participation, product standardization, activity concentration, and uniform marketing.
Compatible Technical Standards	Differences in technical standards, especially government-imposed standards, limit the extent to which products can be standardized. Often, standards are set with protectionism in mind.
Common Marketing Regulations	The marketing environment of individual countries affects the extent to which uniform global marketing approaches can be used. Certain types of media may be prohibited or restricted.

Table 6: Industry Globalization Drivers: Governmental Drivers (Yip 2005, 286-287, adapted)

Competitive Drivers are entirely in the realm of competitor choice. Competitors can raise the realization potential of their industry and spur the need for a response to the GES levers.	
Interdependence of Countries	A competitor may create competitive interdependence among countries by pursuing a GES. The basic mechanism is through sharing of activities. When activities such as production are shared among countries, a competitor's market share in one country affects its scale and overall cost position in the shared activities. Changes in that scale and cost will affect its competitive position in all countries dependent on the shared activities. Less directly, customers may view market position in a lead country as an indicator of overall quality.
Globalized Competitors	Matching or preempting individual competitor moves may be necessary. These moves include expanding into or within major markets, being the first to introduce a standardized product, or being the first to use a uniform marketing program.

Table 7: Industry Globalization Drivers: Competitive Drivers (Yip 2005, 287, adapted)

Industry evolution also plays a role (Yip 2005, 288). As each of the industry globalization drivers changes over time, so will the appropriate GES change too. Probably also because of modern information accessibility Yip didn't take them into consideration; they are (from our point of view) summarized and introduced in Table 8. About managing global information technology see also Palvia, Palvia and Harris (2007).



Information Globalization Drivers arise from recent existent communication structure and its development. They affect the use of all five GES levers.	
Global IT (information technology) capabilities	IT capabilities of the organizations can be measured in terms of the extent and importance of IT planning, the range and reach of their communications networks, and the level of IT support services they provide. Main drivers of global IT capabilities are global vision and business policy, human resources and information exchanges (compare King 2006, 78-79). Forms of IT capabilities: computers, e-mail, Internet access, and Web sites.
IT's mission related impact	Organizations must enhance their capacities in long-term IT planning, budgeting, staffing, and training; performance measurement; Internet and Web site capabilities; and the vision, support, and involvement of senior management (compare Hackler, Saxton 2007, 474).
Digital Economy (the dot com era)	The shift from industrial economy to cyber-age economy (Demirdjian 2008, I) where intellectual capital was replacing brick and mortar assets had created a new challenge for strategic planning... On-line methods (business-to-consumer or business-to-business) have challenged traditional marketing and distribution strategies.
The Internet	The Internet (Demirdjian 2008, I) abolished some of the traditional barriers to entry in a number of industries. It also resulted in creating instant global markets for little known businesses. It has created a new, far less costly, distribution channel, which drove cost of distribution to minimal levels compared to traditional distribution channels. The creation of electronic commerce has profoundly changed rules of the game for competitors. Weak entry and exit barriers, instant global and national markets, and increasingly price transparency intensified competition. This Internet era has made price-competitive variables in many industries.

Table 8: Information Globalization Drivers

4.6 Global Enterprise Strategy (GES) in small and medium sized organizations

Small firms (Lawrence 2008, 89) are important for economic progress in many countries and contribute a large portion of jobs to the job pool. In our opinion Yip (2005), who builds on Porter's thoughts (1986), in his research doesn't devote enough attention to the differences that originate in the size of organizations. In planning the GES it is necessary to take in consideration beside the industry globalization drivers (market, cost, governmental, competitive, and information) also the influence of the World Wide Web and information age we are facing today. This is the reason why we will try to introduce the theory about possible strategic developmental situations of small and medium sized organizations (SMEs), well formed by Obrecht (1998).

Obrecht explored how globalization affected SMEs, taking into consideration integration and differentiation point of view: necessity of differentiation for some organizations, opportunities and threats of globalization (1998, 157-160). Furthermore Obrecht developed different types of strategic developmental situations which results from different material and immaterial spaces, on their basis he explained the feasible developmental situations for SMEs (1998, 160-169). Market space is the sphere connected with merchandise stream;



operating space is a space where organizations work (use their technological, human and financial resources); both are material. Cognition space is immaterial and it depends on comprehension by entrepreneurs and managers; it determines adjustment of vision – it contains new, integrative (sustainable) way of thinking.

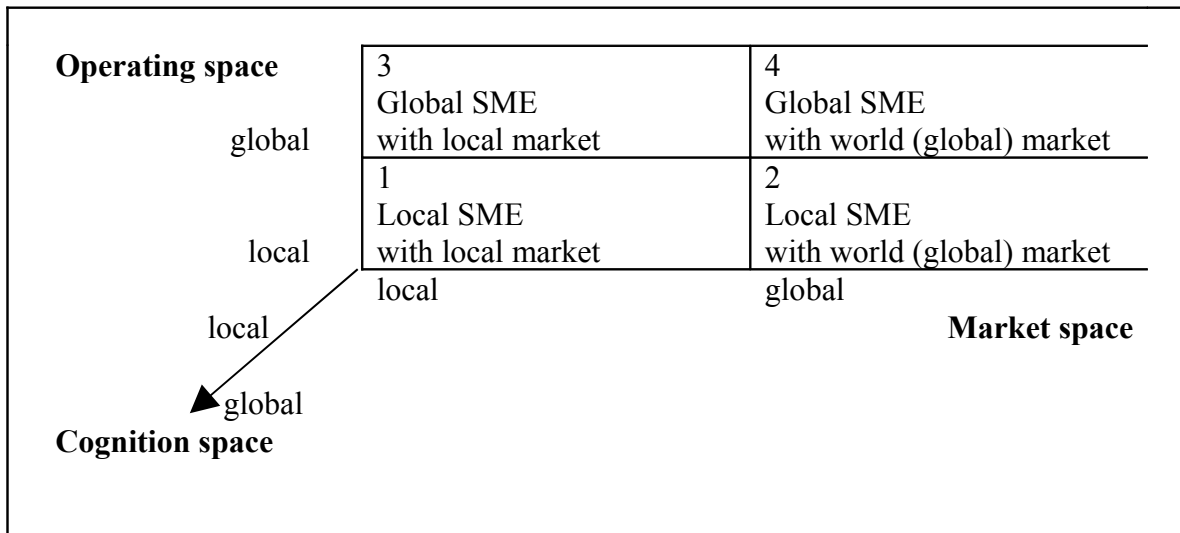


Figure 3: Strategic developmental situations of SMEs (Obrecht 1998, 162)

Obrecht foresees possible global strategies also for SMEs. He thoroughly studied possible developmental situations for this kind of organizations (1998, 163-169). These are: local SME with local market (they have two possibilities: broadening of their local space and opening new local space), local SME with world (global) market (they also have two possibilities: SME export orientation is autonomous or they help themselves with incorporation in merchant network), global SME with local market (their possibilities are SME as users of global know-how or SME as local acting suppliers of global organizations) and global SME with world (global) market (with possibilities of global SME as market niche player or global SME player following criteria of technological factors).

About strategic planning practices in profitable small firms see for example Meers, Robertson (2007).

5 SOME CONCLUSIONS

Not too long ago, a business corporation could be successful by focusing only on making and selling goods and services within its national boundaries. International considerations were minimal. Profits earned from exporting products to foreign countries were considered frosting on the cake but not really essential to corporate success... Today, essence has changed. Globalization, the internationalization of markets and corporations, has changed the way modern corporations do business. To reach economies of scale necessary to achieve the low costs, and thus the low prices, needed to be competitive, companies are now thinking of a global (worldwide) market instead of a national market... Instead of using one



international division to manage everything outside their home country, large corporations are now using matrix structures in which product units are interwoven with country or regional units. International assignments are now considered key for anyone interested in reaching top management. As more industries become global, strategic management is becoming an increasingly important way to keep track of international developments and position the company for long-term competitive advantage (Wheelen, Hunger 2005, 5).

By close examination of framework for thinking about GES (process) we found GES levers for multi-domestic and/or GES, description of benefits and drawbacks of GES, market globalization drivers, cost drivers, governmental drivers, competitive drivers, and information drivers. Our critical remark to the studied texts is that their authors did not link strategic (global) operations of organizations with very essential starting point for it: for such an activity we need vision, business policy and leadership: “Companies that are enacting a global strategic vision exchange their resources [author distinguishes four types of resources: physical, information, human and financial] among national entities on a regular, as well as an “as needed” basis... These exchanges are much more common than are exchanges of products, raw materials, machinery etc.” (King 2006, 78). It seems that (as in many life situations) the specialists of particular fields sometimes don’t take into consideration systemic connectedness of selected fields of business process and the necessary close link-up of an organizational business with its development. Developmental starting points, however, are (from the integral management model way of looking) determined on the level of business policy and suchlike owners starting point used by top managers in strategic management.

Among many world-wide acknowledged models of integral management we have already exposed authors Kajzer, Duh, Belak (2008), Bleicher (2004), Hinterhuber (2004), Wheelen and Hunger (2006) and David (2005). They nevertheless take abovementioned systems connection into account or at least point out. But we have to be aware that also each of these models presented only a partial (more integrative) view of organizational development and business, each from subjective viewpoints of cooperating authors and schools. And so they are only a framework for precise investigation of an organization. All presented models verified hypothesis we set at the beginning: for the strategy of any kind we have to establish vision and business policy first (mission, purpose, basic goals of the given organization) without regard to its size – also for SMEs. Reasonably this is valid also for GES. Each strategy (compare Kajzer, Duh, Belak 2008, 167) is namely a footpath for achieving a business policy, which stockholders determined in accordance with their philosophy, culture, ethics and interests.

Today (Zimmerer, Scarborough 2005, 464), the global market place is as much the territory of small, upstart companies, as it is that of giant multinational corporations. Powerful, affordable technology, increased access to information on conducting goal business, and the growing interdependence of the world’s economies have made it easier for companies of all sizes to engage in international trade... The new economic world order results from interaction of many dynamic forces. Culture, politics, and the basic social fabric of nations are evolving an unprecedented pace at change is facilitated by technology and challenged by global economic and competitive forces... The world market for goods and services continues to expand, fueled by a global economy that welcomes customers with new wealth. Technology, which continues to become increasingly affordable and powerful, links trading



partners together: whether they are giant corporations or individual owners of SMEs. The impact of globalization (Likierman 2006, 22) will only increase because understanding how others measure their performance gives us more opportunities to meet competition and work better with partners... It helps us turn what could be threat into a series of opportunities.

Although they are powerful, industry globalization drivers do not dictate one single formula for success. More than one type of international strategy can be viable in a given industry (compare with Yip 2005, 288):

- No industry is high on every one of the many globalization drivers.
- The appropriate use of strategy levers adds competitive advantage to existing sources. These other sources may allow individual competitors to thrive with international strategies that are mismatched with industry globalization drivers.
- A worldwide business may face industry drivers that strongly favor a global strategy (i.e. GES, N. B. authors). But global strategies are typically expensive to implement initially, even though great cost savings and revenues gains should follow. High initial investments may be needed to expand within or into major markets, to develop standardized products, to relocate value activities, to create global brands, to create new globalization units or coordination processes, and to implement other aspects of a global strategy (i.e. GES, N. B. authors). The strategic position of the business is also relevant. Even though a global strategy (i.e. GES, N. B. authors) may improve the business's long-term strategic position, its immediate position may be so weak that the resources should be devoted to short-term, country-by-country improvements.
- Finally, factors such as organization structure, management process, people, and culture affect how well a desired global strategy (i.e. GES, N. B. authors) can be implemented. Organizational differences among companies in the same industry can, or should, constrain the companies' pursuit of the same global strategy (i.e. GES, N. B. authors).

The most successful worldwide strategies (Yip 2005, 284) find a balance between over-globalizing and under-globalizing. The ideal strategy matches the level of strategy globalization to the globalization potential of the industry...

Certainly, despite all extensiveness of these preliminary proceedings there are many questions still open, and it would make sense to find answers to them. The fields that would be reasonable to investigate more are, for example, deep research and application to SMEs: when and under which circumstances are "GES levers" and industry globalization drivers true also for SMEs; why are some SMEs too much tied to their local environment; can they use the same framework of GES process; what are their benefits/drawbacks; are for them industry globalization drivers (industry conditions) also equally important; which ones are so, more and/or less; why etc. It would be important to investigate also the key external and internal factors that influence decisions of (SMEs) organizations for or against GES in different national economies: "The emergence of world-class companies from developing nations is a shift that portends a new global game" (Charan 2006, 47). Peng, for example,



with his strong scholarly focus in his textbook *Global strategy* (2006) introduces in part I foundations of global strategy and presents also cultural and ethical issues. Synergy, entrepreneurship and ecology are also identified as key success factors of an enterprise (Kajzer, Duh, Belak 2008, 167). So it would be important to investigate them in the meaning of GES too.

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14. “AFFLUENCE – CAUSE FOR DANGERS FOR SUSTAINABLE FUTURE – TO BE SOLVED BY SOCIAL RESPONSIBILITY”

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Abstract:

Affluence is the final objective of humans, and their blind alley, too, because it causes the end of ambition to work in order to have, and because it causes artificial needs to be invented and imposed. This supports profitability and employment in a short term, but ruins the natural environment of humankind beyond needs and nature's carrying capacity in the longer term, which is no longer as far away as it used to seem to be. Creativity in synergy with social responsibility seems to offer a new chance, if humans attain requisite holism of their observation, perception, thinking, emotional, and spiritual life, and action instead of one-sidedness prevailing so far. This includes innovation of criteria what is innovation rather than failure toward more/requisite holism. Official action to promote social responsibility aimed at requisite holism of humans is suggested. Otherwise, sustainable future is highly improbable, while sustainable future is the only future left for humankind to survive.

Key words:

creativity, Dialectical Systems Thinking, holism, innovation, social responsibility

0. THE SELECTED PROBLEM AND VIEWPOINT OF CONSIDERATION OF IT HERE

According to official data, 20% of humankind – the so called West and Japan and Pacific Rim Tigers – enjoy results of the end of monopolies of 1870s much more than the other 80%. They are much richer because they innovate much more, but they are not holistic enough to avoid the danger of their own blind alley, which they are causing by their abuse of Adam Smith liberal economics paradigm with ‘invisible hand’, the law of external economics, and preference given to short-term and narrow-minded rather than long-term and broad-minded criteria of optimum. The current crisis of the most advanced parts of the world seems to require innovation of the concept of innovation of so far. The abuses in the name of economic laws require corrections toward more holism. Social responsibility (SR) is a new name of this corrective effort aimed at making a contribution to the sustainable future as the only available future of the current humankind/civilization. Why is this thesis here, what can briefly explain it, and what can be suggested as a solution?

1. HUGE SOCIAL DIFFERENCES – SOURCE OF THE NEED FOR GLOBAL/PLANETARY ETHIC



Poverty is the biggest challenge to the global harmony – a conclusion of sociologists in an international conference reads (Marcuello Servos, 2006, 10). Complementary to it is data that the distribution of global richness has changed very much since times of Adam Smith, when the modern economic theory has begun its creation: then the span of richness between the big areas of civilization on the planet Earth was less than 2:1, now it is 74:1 at least (Bourg, interviewed by Sciamia, 2007, 16). The Swiss philosopher Bourg estimates that our civilization is ruining itself, because it decided to consider no limitations in no areas; this is why Bourg speaks for planetary ethic. Namely, inequalities ran out of any proportions, and cause hyper-terrorism against the privileged ones. In addition, there is a great challenge to modernize the relation of humans to their natural environment in the direction to the global ethic. This might be called a way of application of the requisite holism (RH – see Figure 1 later) by systemic thinking, decision making and action.

2. ADVANCEMENT LEADING TO POVERTY

The too one-sided human decisions in the recent centuries caused the oversight that the technological advancement has along with beneficial also detrimental consequences. One-sided assessments call the latter side-effects, but they are often essential, in the long term, at least, such as unexpected illnesses etc. due to chemicals etc. considered beneficial (Ećimović et al, 2002, 2007; Goerner, 2008, etc.).

Data says that the growth of the richness of the Western world has been much bigger in book-keeping than in long-term real economic terms – the West only postpones rather than covers cost of preservation of its and our natural environment (Božičnik, 2007). The former so-called socialistic/communistic countries of the Soviet Bloc and Yugoslavia are no better: they were using the western approach to technology and care for nature. The economic consequences of such short-sighted abuse of the law of external economics are estimated to be enormous (Stern, interviewed by Stein, 2007, 14-15): if humankind does not tackle climate changes very quickly and radically, they may cause humankind's cost as high as 5,500 (five thousand five hundred) billion Euros, which reaches beyond the cost of both World Wars combined; with no measures diminishing hot-bed gasses the world-wide GDP will fall for 5%, perhaps even for 20%.

The latter may be close to the entire sum of personal incomes of all in the current world. RH is unavoidable.

The huge differences and poverty that are expressed in the book-keeping data hence result from one-sidedness causing a too narrow and short-term view and resulting assessment what is essential in the current conditions.

All specialized knowledge is both beneficial and narrow, unavoidably, but none is either self-sufficient or sufficient (Metcalf, 2008; Mulej, 1974, 1975, 1976, 1979). Democracy supports holism, but it is not RH, if it is only political without inclusion of all other human relations, too. It is not real, if its practice means only an untouchable out-voting to the benefit/victory of the one-sided opinions of the power-holders instead of an equal-footed consideration of proofs and arguments from different viewpoints that are rather complementary than harmonious with their differences (Bučar, 2007, 2008).

3. EUROPEAN UNION: SOCIAL RESPONSIBILITY IS A CRUCIAL OBJECTIVE



In preparation, passing, and realizing of decisions one succeeds, it one has attained RH. This does not depend on knowledge alone, even less so on a single profession, but an equal importance belongs to values/culture/ethics/norms (Potočan, Mulej, 2007), because they direct/control the application of knowledge. The RH of values of specialists who need each other is expressed in their ethic of interdependence (Mulej, Kajzer, 1998a, b). It expresses the feeling that specialists complete each other up with their differences in order to make the RH and therefore success attainable. Due to these differences, clear boundaries and isomorphisms are not enough: viewing the world 'through the eyes of the others extends vision' is needed (Churchman, 1993, quoted by Lopez Garza, 2008) toward the dialectical systems approach (Mulej, 1974, 1975, 1976, 1979, etc.) and resulting RH (Mulej, Kajzer, 1998a, b).

Discussion on problems of the current humankind's blind alley such as exaggerated social differences, affluence, poverty, and self-sufficient economic growth in terms of RH, makes us think of ways toward solutions. This brings us to the concept of social responsibility (SR) and to the European Union's (EU's) concepts about it.

EU is trying to become a sustainable and knowledge-based society; the concept includes for sure the SR (e.g. under the label of social cohesion). In its document (EU, 2001), EU defines corporate SR as the integration of the care for society and environment in the daily business of enterprises and their relations with stake-holders, on a voluntary basis. This is in line with EU's strategy of sustainable development that EU has passed in 2001 as well. Its messages include the crucial statement that in a longer run the economic growth, social cohesion, and environmental protection complete each other up and support each other. It stresses too, that SR-behavior reaches beyond matching the legal obligations, hence it reflects organizations' additional efforts to meet expectations of numerous/all stake-holders. EU passed also several other documents that support development of SR (EU, 2000b; EU, 2006). They only partially cover the real contemporary needs – the creativity-based society is replacing the knowledge-based one that has replaced the routine based one (Chesbrough, 2003), and the concept of sustainable future needs to replace the concept of sustainable development (Ećimović et al, 2007, 2008), for humankind to survive.

EU defined for the period until 2010 'A European Roadmap', stressing the sustainable and competitive enterprise, which considers both the short-term and long-term creation of values (Knez-Riedl, 2007b). The corporate SR can fortify the competitive position of single enterprises as well as local and regional communities, countries and EU (Knez Riedl, 2007a). We prefer no limitation of SR to companies: they are tools of influential humans who decide.

In Slovenia, too, many activities concerning SR took place in recent years, mostly in civil society. Various professional organizations and institutions include in their work programs SR contents (www.irdo.si), professionals take additional training (project CSR – Code To Smart Reality was co-financed by EU in 2006-2007), increasingly B.A., M.A., and doctoral theses about SR are created (www.nfrcsr.org). A strategy might result or be needed for all these documents with good statements to become reality.

4. SUGGESTION: STRATEGY OF PROMOTION OF SOCIAL RESPONSIBILITY (SR)

SR is a demanding concept of promotion of a specific case of RH having to do with the beneficial rather than detrimental, long-term rather than short-term, broad-minded rather



than narrow-minded human approach to other people and nature. For success many influential people should practice RH via SR. Work of a few individuals – professionals is not enough, a general social support based on a clear strategy is needed, e.g. on the (inter-)national level.

SR mission should be to promote global ethics in order to help humankind, including oneself, survive by doing good to all stakeholders (based on RH) rather than evil (based on one-sidedness), beyond the official legal obligation.

A working group with an interdisciplinary composition should prepare a draft strategy, and later on a special Agency for Promotion of SR might have to be established, e.g. in Slovenia, and in EU, etc. Its tasks should include co-ordination of country-wide or EU-wide SR-related activities in co-operation with several professionals and institutions. Thus, the following goals should/could be met (Mulej, Hrast, 2008):

1. To create a basic interdisciplinary core of researchers working on monitoring the situation concerning SR in the area under investigation, to compare the collected findings and suggest changes in the given area.
2. To prepare legal bases for draft legislation changes, where they are needed to cover SR everywhere per areas.
3. To prepare professional, requisitely holistic bases for making up the SR program in all ministries.
4. To establish dialogue with professional associations, government bodies, public institutions, non-governmental organizations, businesses and other parts of society in order to attain a shared activity for promotion of SR.
5. To include topics on SR in primary, secondary and higher education, and to promote values of SR in daily mutual contacts of youngsters, as well as adults.
6. To create and implement a nation or EU wide program of public relations communication about SR in order to promote general awareness on how crucial a SR-based behavior of all humans and their organizations is for getting the society out of the current crisis and to prevent long-term crises/blind alley.
7. To establish a portal for both-way communication in public relations concerning the SR-based behavior with both good and bad examples.
8. To collect good and bad examples of SR and related practices of RH and innovation based on SR rather than on one-sidedness, for the society to become, be and remain an RH/innovative society with SR as a basic criterion of its excellence.
9. To collect information on development of SR anywhere and in the area under investigation in order to report about them.
10. To support initiatives of various stake-holders promoting SR and practicing it.

Tactics and operation should be defined later on per areas, but in the style of a coordinated decentralization.

This strategy is urgently needed because it can pave the way toward survival of humankind with a sustainable future. It does not fight economic efficiency, but currently prevailing and too one-sided criteria of economic efficiency.

Economic efficiency by the logic of the neo-liberal Chicago school of economics is one-sided and short-term oriented. It has an un-realistic supposition that the market is perfect with no biased human impact. It therefore tends to leave every problem to market forces,



including the abuse of the law of external economics and abuse of the less innovative by the more innovative ones and other power-holders, even when they apply very narrow-minded and short-term criteria of economic efficiency. Thus, it leads to a fictitious quality of life, business and general economic and social situation, which is actually a blind alley caused by transformation of the A. Smith's model of market economy into a plutocratic fictitious one that is closer to the feudal times against which the founding fathers of USA have fought (Goerner et al, 2008), as well as the establishers of democracy-and-entrepreneurship society in Europe. Unfortunately, Baumol et al (2007) are too one-sided to perceive the blind alley of their suggestions about capitalism. Keynes, the most influential economic theorist of the 20th century supported short-term criteria, too, with his famous sentence that in the long term we will all be dead. Fujimoto (2006) correctly classifies Keynes-based economic measures such as prices, taxes, tariffs, import quota, etc. in the superficial rather than deep bases of competitiveness: the deep ones include technology, management, and organization. They can be much more related to creativity, innovation, RH and SR. The latter actually fights problems that result from one-sided management/behavior, and are very costly to restore/repair, such as:

- Lack of non-stop invention-innovation-diffusion activities attaining RH; this lack diminishes competitiveness and hence benefits for all stake-holders and society at large.
- Lack of reaching beyond R&D, buying equipment for production and other work processes, buying intangible goods such as patents, licenses, brands, models, and know-how, industrial engineering, design and trial production toward transition from such passive to creative approaches to the invention-innovation-diffusion activities, including all types of innovation rather than the technological ones only; this lack diminishes competitiveness etc., as well as creativity and enjoyable work of co-workers and hence their commitment to their organization and resulting high engagement at work.
- Lack of RH-conceived selection of ideas that are suggested for R&D and innovation processes; this lack destroys the available human, technological, and financial resources into small pieces that allow for incremental rather than radical innovations only.
- Lack of RH-consideration of all types of innovation (business program, technology and products, organization, management, methods, be them incremental or radical, attained inside or outside job duty); this lack also destroys the invention-innovation-diffusion-friendly values/culture/ethics/norms in the organization and in society at large.
- Lack of respect for co-workers' creativity and RH in all phases of the invention-innovation-diffusion process; this lack creates passiveness and the feeling that co-workers and subordinated employees, their only remaining right being their right of irresponsibility.
- Lack of RH-consideration of potential future needs of potential future customers in the moment of decision to start an invention-innovation-diffusion process; for this consideration now the anthropologists, ethnologists and similar 'soft' scientists are found very useful because their observation methods discover more hidden attributes than the marketing and R&D methods do; this lack causes waste of resources.
- Lack of RH-consideration of the theory of innovative business with all its very many attributes and their individual and synergetic impacts on success; this lack causes waste of resources.
- Lack of RH-consideration of all possible sources of inventions, innovations, and diffusion in the 'open-innovation' style of business; this lack causes waste of resources.
- Lack of RH-consideration of demographic changes in society to be served; this lack causes waste of resources.



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- Lack of RH-creation and control of invention-innovation-diffusion vision, mission, politics, strategy, policies, tasks, operations, monitoring, training, education, and rewarding, and related information acquisition and distribution; this lack causes waste of resources.
 - Lack of RH-consideration of given and potential risks related to both the routine-based and invention-innovation-diffusion parts of processes and their synergies, be these risks personal, internal/organizational, in supply- or sales-markets of human, financial, technological, informational, motivational, and other resources; this lack causes waste of resources.
 - Lack of RH-consideration of the entrepreneurial spirit, entrepreneurship, and entrepreneurship-supporting climate based on values/culture/ethics/norms and visible in invention-innovation-diffusion projects and their realization; this lack causes waste of resources.
 - Lack of RH-based transition from the closed-innovation to the open-innovation model of the invention-innovation-diffusion process; this lack causes waste of resources.
 - Lack of RH-consideration of the role of patents and other intellectual property rights to be bought or to be sold in time rather than too late or too early; this lack causes waste of resources.
 - Lack of RH-consideration of organization's emissions into the natural environment; this lack causes waste of resources in the form of eco-remediation, health care, disabled people care, natural disasters to be cured, etc.
 - Lack of RH-consideration of productivity, efficiency, and effectiveness factors and resulting benefits reaching beyond narrow-minded and short-term criteria of success; this lack causes waste of resources.
 - Lack of RH-work on creation and maintenance of the values/culture/ethic/norms and knowledge as well as possibilities supporting invention-innovation-diffusion as a permanent daily practice of all opinion-makers in organizations and society at large; this lack causes waste of resources.
 - Lack of RH-work on creation and maintenance of the values/culture/ethics/norms and knowledge as well as possibilities of interdisciplinary creative co-operation of mutually different specialists, to fight one-sidedness of specialists; this lack causes waste of resources.
 - Lack of RH-work on creation and maintenance of the values/culture/ethics/norms and knowledge as well as possibilities of friendship as a precondition of creative co-operation of mutually different specialists, to fight one-sidedness of specialists and to enable them to not feel criticized, but rather completed up by disagreements resulting from differences in selected viewpoints; this lack causes waste of resources.
 - Lack of RH-knowledge of personal and professional attributes of all crucial co-workers; this lack causes waste of resources.
 - Lack of RH-understanding that the so called National Innovation System does not cover innovation and diffusion phases, but the invention phase only, or mostly, in a best-case scenario; this lack causes waste of resources.
 - Lack of RH-assessment of and respect for imagination capacity of managers and co-workers; this lack causes waste of resources.
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- Lack of RH-consideration of and respect for innovation of the managerial style, organization and methods supporting democracy at work rather than one-way commanding management; this lack causes waste of resources.
- Lack of RH-consideration of the fact that external focus, decisiveness, imagination and courage, and RH/ inclusiveness and domain expertise belong to the dialectical system of crucial attributes of managers and their co-workers for the organization's business to be innovative; this lack causes waste of resources.
- Lack of RH-consideration of the fact that success is not normal, but failure, if the approach to the contemporary, i.e. innovative business is not requisitely holistic, and therefore a small percentage of idea pass from the pre-development to the development of new options, and from there the operation phase, and finally to the replacement phase; this lack causes waste of resources.
- Lack of RH-consideration of the future market trends in order to prevent the going-down phase of the product or service life cycle, and hence organizational life cycle, rather than falling into the trap of 'recovering from success' due to oversights; this lack causes waste of resources.
- Lack of RH-consideration that measurement of business/innovation results matters, but the most crucial factor is the values/culture/ethics/norms and related knowledge and resulting detection and use of possibilities; this lack causes waste of resources.
- Lack of RH-consideration that it is nice/great experience which is sold to customers rather than products or services; this lack this lack causes waste of resources by sending customers to competitors.
- Lack of RH-consideration of the fact that organization can learn very much from good universities and institutes, once it has the absorption capacity and clear insight in its own needs for knowledge and values/culture/ethic/norms to be absorbed from other organizations, of course, with an active adaptation rather than passive imitation of 'best practices' from other circumstances; this lack causes waste of resources.
- Lack of RH-consideration that there is no one single best model or practice of the invention-innovation-diffusion process that fits all organizations and all social and natural environments; this lack causes waste of resources.
- Corruption and other abuses of business relations, resulting in image that prevents people from dealing with corrupt people; it excludes them from business life and friendship, etc.
- Poor quality rather than excellence of supplies of goods, services and work, which lead to equal consequences as corruption and waste of resources.
- Poor reliability as business and personal partners, which leads to equal consequences as above.
- Bluffing or lying that both lead to equal consequences as above.
- Persuasion of potential customers into fictitious needs for products, including medicines, and fictitiously necessary packaging, etc.; it leads to equal consequences as above.
- Fictitious democracy, in which on one hand most people feel excluded rather than invited to help and create, and on the other hand one-sided decisions are passed by 'majority in sessions' rather than majority in reality; it leads to equal consequences as above.
- Poor pay/wages/salaries along with enormous managers and owners incomes; it causes a poor market due to a poor buying capacity of a very big percentage of people as well as hate on their part, like in slave-owning and feudal economy/society, hence to a waste of resources.



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- Poor working moral resulting from feeling that owners and bosses misuse their employees, whom they view as cost rather than as their creative basis and co-workers, which means that the bosses and owners still manage routine work rather than knowledge and creativity; the latter two cannot be ordered, but enabled by management including SR in e.g. the form of requisitely holistically managed work relations; this causes waste of resources.
 - Fluctuation of co-workers, mostly the better ones who are able to find other jobs, and resulting loss of their expertise along with the resulting need to spend much time and money for training of new co-workers.; this causes waste of resources.
 - Lack of fidelity, feeling of belonging due to impression that ‘we co-workers are tools rather than humans, and our only remaining right is the right of irresponsibility toward our bosses and owners’; this causes waste of resources.
 - Strikes resulting from the same feelings and their causes, including the mismanaged revenues distribution; this causes waste of resources.
 - Terrorism resulting from the same feelings in combination with nationalism and religious cover of economic and social reality; this causes waste of resources, lack of peace, hence lack of trust of population toward government...
 - Resistance against novelties that should become innovations, because of the prior experience that innovation used to cause un-employment rather than benefit except for the owners and bosses; this causes waste of resources.
 - Medical problems due to poor modernization of technology and work place safety; this causes waste of resources.
 - Medical problems due to abuse of the economic law of external economics by polluting air, water, and soil; this causes waste of resources.
 - Rapid growth of population, because women are not enabled to study, while the more educated women have many less children, and according to Nobel-Prize-for-Peace-2007 co-winner Prof. dr. Lučka Kajfež Bogataj the growth of population and growth of energy consumption per person have together burdened the Planet Earth about forty times more over the recent two centuries (orally, 2008, at Otočec '08 conference on excellence, in round table); this causes waste of resources.
 - Etc. (Based on conclusions from papers presented at Hrast, et al, editors: IRDO 2006, 2007, and 2008 conferences, and authors' earlier research).

The way out of these sources of blind alley is management with SR having its common denominator in bosses' provision of clear and well-founded respect for co-workers as experienced, knowledgeable, creative, inventive, and innovative human capital rather than cost added to the unavoidable cost of equipment. The same SR applies to treatment of other partners and nature, in a short term, at least.

In order to realize this way out of the blind alley of the current humankind, one can use two essential recent findings in economic literature:

- Florida (2002, 2005) found in a comparative analysis of US regions that the best development had been attained in regions with the highest 3T: tolerance for differences between habits of the (honest, of course) people attracts talents, and hence it makes sense to invest in technology there. Malačič et al. (2006) found equal situation in Slovenia.



- Porter (1990, 2006) pointed out that the basis of competitiveness evolves in four phases: from natural resources via investment to innovation and hence to affluence, which people have always wished to have. But affluence has a crucial side-effect: affluent people have no motive any longer to work in order to have, which results in a growing need of many citizens for solidarity etc. In affluence sources are not scarce, but real needs, while marketing and advertisement try to persuade people to have wants and try to buy like wants would be needs. (See also: James, 2007). Baumol et al. (2007) do not even mention or quote Porter, but they remind of this danger with a single quote (p. 288).

Hence, theorists and practitioners with the major impact over the current society and economy need a more holistic approach, which can be covered with the SR concept. This would be a radical innovation of values/culture/ ethics/norms leading toward RH.

5. THE LAW OF REQUISITE HOLISM AND THE CONTEMPORARY INVENTION-INNOVATION PROCESSES

Systemic thinking as the practice of RH rather than one-sided thinking had been many millennia old practice of the successful humans, before systems theory as its theoretical generalization was created. Boundaries of which Metcalf (2008) reminds may be too one-sided or match RH. Like most other human capabilities, the practice of systemic thinking was informal, first, and then received the form of theory to make easier the transfer of good practice through teaching (Mulej et al, 1998; Mulej et al, 2003; Mulej, Ženko, 2004; Potočan, Mulej, Kajzer, 2002).

For our definition of RH thinking see (Mulej, in Mulej et al, 1992, reworked in Mulej, 2007a). It is based on Bertalanffy's (1986, VII ff) notion that he had created the General Systems Theory against overspecialization, and not as one of many narrow disciplines. EU confirmed this notion well, as we see above. Holistic thinking requires more holism than the human natural capacity can cover. A specialized author (usually tacitly!) selects a viewpoint, to consider the object dealt with inside boundaries on the basis of limitation to one part of the really existing attributes only. When specialists of any profession use the word system to call something a system inside their own single selected viewpoint – it makes a system fictitiously holistic. It does not include all existing attributes that could be seen from all viewpoints and all their synergies. We therefore suggest RH (Mulej/Kajzer, 1998a,b), see Fig. 1.

←-----→			
Fictitious holism/realism (inside a single viewpoint/ system. i.e. mental picture of the object)	Requisite holism/realism (a dialectical = inter-dependence-based system of essential viewpoints)		Total = real holism/realism (a system, i.e. totality of all viewpoints; equal to the object)

Figure 1: The selected level of holism of consideration of the selected topic between the fictitious, requisite, and total holism/realism

For the RH to be achieved three preconditions, at least, matter:

- 1) Mutually different specialists in teams that feel ethics of interdependence and co-operate to attain the RH.
- 2) They include professionals from all and only essential professions/disciplines.



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- 3) Their values are expressed in their ethics of interdependence and practiced in a creative teamwork, task force, session(s) based on an equal-footed cooperation rather than top-down one-way commanding.

RH thinking cannot include the global attributes only, because they make a part of the really existing attributes only, although they matter very much and tend to be subject to over-sight by specialists. Neither can RH thinking include the parts' attributes only, although they matter very much and specialists of single disciplines and professions tend to focus on them. Relations, especially interdependences causing influences of parts over each other, must not be forgotten about in RH thinking. Especially specialists, who have not developed the habit to consider specialists, who differ from themselves, tend to make crucial oversights in this respect: they are not realistic enough.

RH thinking matters for scientific reasons, for individual success in whatever activity, and for economic reasons, too. See Fig. 2 and 3 for a quick look at changes requiring holistic thinking more and more today for success in innovative society reigning over the global market/life.

Why many people today find facts in Fig. 1-3 alien?

People of today are overwhelmed by market demands for change and they must match these changes with innovation and hence RH and hence ethics of interdependence, like never before. Five major changes happened in one-generation time, rather than as slowly as people were used to earlier, and are keeping this speed.

For almost all of the 100.000 or millions of years of its history (Bryson, 2005), humankind has lived in self-sustained economy with a random market, e.g. in the form of fairs. Innovation did not matter; requisite holism was reduced to local and family relations, mostly, so was ethics of interdependence. In producers' market this ethic and/or sustainable development did not matter either, because competition was negligible; cases may include medieval guilds, strong trade unions, or market monopolists of other types, including break-through innovations. Once monopolies had been broken, after 1870s (Rosenberg, Birdzell, 1986), innovation and hence RH and ethics of interdependence gradually became crucial – in the emerging buyers' and state supported buyers' market. Hence, in a very short period of time people have become supposed to change millennia old habits – add innovation to routine, and RH to growing narrow specialization, as well as interdisciplinary co-operation to self-sufficiency of specialists. Narrow specialization that is unavoidable today may support either ethics of interdependence or ethics of self-sufficiency, depending on human values and their resulting definition what is the RH in their cases.



Viewpoints Type of Market	Basic Relation/s Between Production and Consumption	Need for innovation and SR	Quality – excellence requiring requisite holism for innovation to back it
RANDOM MARKET	Producers' own consumption and occasional exchange of random surpluses	Minimal	Defined randomly and by tradition rather than innovation
PRODUCERS' MARKET	Growing production for poorly considered, known/ unknown, customers, who lack impact over suppliers	Little	Defined by producers rather than by consumers, who are happy to buy what they can find (even with need for immediate repair etc.); no innovation
BUYERS' MARKET	Growing impact of customers requiring satisfaction / total quality of products and services, and conditions of life	Big	Defined by buyers and consumers and pressing producers and suppliers to compete to meet requirements by innovation
GOVERNMENT SUPPORTED BUYERS' MARKET	Increasingly organized / legalized impact of customers demanding total quality / excellence of products, services and conditions of life	Unavoidable	Defined by buyers and consumers and pressing producers and suppliers to compete to meet requirements by innovation; official quality standards are added; EU, e.g., requires holism

Figure 2: Development of market relations and innovation – a case of growing awareness of the requisite holism as a precondition of humankind's survival and quality of life

Prescribed standards, such as ISO 9000 (quality), ISO 14000 (environment), are cases of the related change of the buyers'-market situation. In addition, in recent decades market changes became much quicker (Fig. 3).



De-Cade	Market & Social Requirements	Enterprise's Ways To Meet Requirements of Market with SR/RH Actions/Behavior	Type of Enterprise
1945-	Covering of post-war conditions of scarcity, rebuilding, etc.	Supply anything; supply does not yet exceed demand	Supplying Enterprise
1960-	Suitable price (as judged by customers)	Internal efficiency, i.e. cost management	Efficient Enterprise
1970-	Suitable price X quality (as judged by customers)	Efficiency X technical & commercial quality management	Quality Enterprise
1980-	Suitable price X quality X range (as judged by customers)	Efficiency X technical & commercial quality X flexibility management	Flexible Enterprise
1990-	Suitable price X quality X range X uniqueness (as judged by customers)	Efficiency X technical & commercial quality X flexibility X innovativeness management	Innovative Enterprise
2000-	Suitable price X quality X range X unique-ness X contribution to sustainable development/future (as judged by customers/people)	Efficiency X technical & commercial quality X flexibility X innovativeness X sustainable development (SD), making in synergy one kind of SR	Sustainable Enterprise (SE)

Figure 3: From a supplying to a sustainable enterprise and increasing requisite holism

Conclusion: official efforts for SR and RH are much more needed today than in times of the local economy, and very complex to attain under plutocratic reign over the global economy and its hiding behind the free market story.

Over the decades after the 2nd World War, market requirements have been changing more quickly than the human capacity to unlearn the old and accept the new culture. In every next decade, rather than a two-generation cycle of about 70 years (Mulej, 1994), new attributes preconditioned success in addition to the previous ones. Every phase after 1960, in the West (and Japan, Taiwan, South Korea, Hong Kong, Singapore, Australia and New Zealand) with their 20% of population of the world, expresses the buyers' and state supported buyers' market (in Fig. 2). Competition keeps causing lower cost, including a lack of care for natural environment, if short-term and one-sided views prevail. Monopolies are no better, be them private or state-owned. A need results for costly eco-remediation, health care, organizational, managerial, business and technological innovation causing the development toward the sustainable enterprise (SE). We have no room here to enter details about them; see (Potočan, 2002; Potočan, Mulej, 2003, 2005, 2006, 2007; Potočan, Mulej, Kajzer, 2005). Is this the final phase of humankind's development/evolution? Can SR show the way toward RH and hence out of the blind alley?

6. AFTER INNOVATION AND AFFLUENCE – WELL-BEING BY CREATIVITY AND SR?



There is an interesting view of economic development phases that stresses the notions that are summarized in Figures 1-3. See Figure 4. (Porter, 1990, quoted in Brglez, 1999, 23-24). Porter speaks of competitiveness; we extend the idea to development and add our ideas about the related culture and phase 5. Obviously, the affluence phase in Figure 4 is not the highest development phase so far, only; it is also the phase of growing problems of employment, supporting everybody, growing lack of ambition and related drug etc. abuse, etc. Conclusion: one must attain and keep capacity of RH in order to enter the innovation phase quickly and remain in it as long as possible, and/or renew its culture. The latter may make room for a 5th phase, which is needed: the 4th phase can hardly be avoided. (Mulej, Prosenak, 2007). Porter and Kramer (2006) do not mention phase 5 or related culture.

SE concept means, among the other points, that the traditional economic criteria can no longer express reality, because they oversimplify (like e.g. Forbes does, in Mulej, N., 2006, or Baumol et al, 2007, but not so Goerner et al, 2008, James, 2007, Ećimović et al, 2002, 2007, 2008). Criteria of sustainability diminish the impression of success of the socio-economic development to hardly any betterment of life over the several recent decades (Božičnik, 2007; Stern, 2007).

PHASE	ECONOMIC BASIS FOR DEVELOPMENT	RELATED CULTURE
1. Natural factors	Natural resources and cheap labor, providing for a rather poor life for millennia	Scarcity and solidarity, collectivism, tradition rather than innovation
2. Investment in modern technology	Foreign investment into the area's economic development; hardly/poor competitiveness in international markets	Growing differences, local competition, individualism, ambition to have more, be rich
3. Innovation based on local knowledge	Nation or region lives on its own progress and attain a better and better standard of living by international competitiveness	Growing differences and standard of living, global competition, ethic of interdependence, social responsibility, ambition to create
4. Affluence	People have finally become rich, which makes them happy in material well-being as a blind alley	Complacency, no more ambition, consumerism; what is quality, then?
5. Holistic creation and social responsibility (SR)	Material wealth suffices; effort aimed at spiritual wealth, healthy natural and social environment as requisitely holistic well-being	Ethic of interdependence and SR, ambition to create, diminish social differences to those caused by creation, including innovation

Figure 4: From scarcity via complacency to the danger of a new scarcity or a new, 5th phase

Cost of humans' natural environment, as we quoted earlier, is only postponed to the next generations due to the lack of RH in business criteria of so far and today (Stern, 2007): it can diminish world's GDP by as much as 20% very soon, because SE criteria have not been respected. This might break the global market in the biggest economic crisis so far.

SE criteria are more realistic, but not enough, perhaps; criteria concerning well-being may serve, too.



Diener and Seligman (2004) offer a promising model. It includes important non-economic predictors of the level of well-being, such as social capital, democratic governance, and human rights; all of them influence work satisfaction and productivity well. Supportive social relations are necessary for well-being; well-being in its turn also leads to good social relationships with crucial economic policy implications. Desirable outcomes, even economic ones, often result from well-being rather than the other way around. People high in well-being later earn higher incomes and perform better at work than others. They also have better relationships, are healthier, and attain longer lives. Therefore these authors suggest measuring well-being with variables such as positive and negative emotions, engagement, purpose and meaning, optimism and trust, and life satisfaction. SR pays (Hrast, Mulej, editors, 2008).

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

What else should be added as criteria of the contemporary excellent quality based on innovation?

One can watch companies (Collins, 2001; Collins, Porras, 1997; Gerber, 2004; etc), individuals, countries, or regions. Florida (2005) found in field research, which we have mentioned above, about the reasons of differences in economic prosperity between regions of United States two basic causes of them:

- 1) In USA, the creative class is rising from 5 (five) percent a century ago to +30 % in 1999, with 12% in its super creative core, while the working class is dropping from 40% at its peak several decades ago to 25% now. The largest social group is the service class, but it does not earn much, because it only provides preconditions for the creative class to create most of all and for all (Florida, 2005, 90-99).
- 2) In USA, the most prosperous regions have the highest 3T indicator: tolerance for difference between neighbors all way from traditional families to gays etc; talents that are attracted by tolerance and chances to be creative; technology invested (Florida, 2005, 257-273). Malačič et al. (2006) found equal data and conclusions in Slovenia.

Tolerance is a relation making room for differences between humans to complement each other; it helps them to avoid oversights and to attain RH. Talents make the basis for creativity, including innovation, which in turn can best result from co-operation of specialists. Investment in technology supports their teams, and receives support from them: if various and different talents work hand in hand, results of their creativity have more chance to attain RH and succeed.

In other words: (informal) systems thinking is the back-ground of the creative class and innovative society. But it causes difference, obviously, because not all people are equally capable of RH thinking and creation, including innovation as a type of it.

But the affluence phase might be a dead alley, if people lose ambition for creation. People therefore need either a prolonged innovation phase based on RH invention-innovation rather than one-sided processes, or

a new phase, a 5th one, of creative happiness based on ethics of interdependence and interdisciplinary creative co-operation with SR replacing the phase of affluence; for selfish



reasons, people are less selfish, short-term thinking, and narrow-minded, and they apply more RH.

To make this innovation of culture and economy happen, a part of population must become the core of the creative class, not all at once: Lester (2005) found authors detecting that about 15-20% of people are willing to take risk and cooperate, about the same many want to be (abusing) free-riders, and the majority just waits to see, what will the opinion makers undertake. But this majority includes many humans with creative potential. Leaders providing role model of interdisciplinary creative co-operation can activate this potential rather than the commanding managers who do not. This would make humans happy and society prosperous. But it requires RH thinking.

This might lead to society and economy of (RH perceived) SR.

7. SOCIETY AND ECONOMY OF SOCIAL RESPONSIBILITY AND CREATION BEYOND AMBITION TO HAVE

SR is a new response to the issue of the need for RH as a difference making a serious difference. See Fig. 1 again, if necessary. Affluence is no problem as long as humans are RH in their observing, perception, thinking, emotional and spiritual life, decision making, and action; they include broader viewpoints, including indirect and long-term consequences and conditions of their actions. The RH rather than a fictitious one could hardly cause the culture of affluence. It would rather extend the ambition to create, including benefit of the entire society. RH and related ethics of interdependence can help humans join creative cooperation and perceive them-selves as a part of the entire society/community (Mulej, Prosenak, 2007; Potočan, Mulej, 2006, 2007).

Namely: SR is in the EU's definition a concept for enterprises to integrate, on the basis of their free will, social and economic concerns into their business (including sustainability) and relations with stakeholders (IRDO, 2006). IRDO reaches beyond enterprises (ibid.): SR of individuals, organizations of all kinds, professional groups, nations, peoples, unions. Following several authors IRDO defines SR as the humankind's obligation to realize shared objectives of the society and to good beyond legal obligation. (GV Planet, 2007; Hrast et al, 2006, 2007; Hrast, 2007; Knez-Riedl, Mulej, Ženko, 2001; Knez-Riedl, 2001, 2002, 2003a, b, c, d, 2006; Knez-Riedl et al, 2006, Knez-Riedl, Hrast, 2006; Potočan, Mulej, 2006; Prosenak, Mulej, 2006; Rozman, Kovač, editors, 2006). Such attributes of behavior create new ambition, reaching beyond complacency of the affluent ones. No short-term efficiency, including e.g. abuse of external economics, is enough, but happiness of many stakeholders that we have mentioned above. With the current management style, the use of capacity of US employees is 23% only (Ackoff, 2003) due to a lack of systemic thinking (Ackoff, 2001). It is not much better in EU (2006, 2006a, 1995), but there are good intentions and help is offered (Hrast, Zavašnik, 2007). Though, habits must change (Mulej, 2007b) toward RH thinking and acting (Mulej et al, 2008).

Conclusions

There is no sustainable future without SR as the prevailing values/culture/ethics/norms included in basic criteria of decision making. Without SR the innovative society is based on too one-sided criteria to help humankind survive. Besides, the innovative society is still limited to about 20% of humankind living in the oldest market economies. It is not



successful, if criteria of sustainability are added to the one-sided economic criteria of calculation of success. The Nobel Prize for peace 2007 confirms this. Even if the 'West' considers itself successful, research and public press report about increasing numbers of humans feeling unhappy and hence abusing drugs from alcohol to marihuana etc, and doing so at an increasingly young age. This is a sign that there is a lack of incentive for creation, for the Fromm's transition from 'owner to creator', as the most human attribute (James, 2007). Such processes of decline rather than development have been around before. The Roman and other empires have faced ruining, once their people entered affluence and became complacent; they forgot about SR and RH. Hopefully, SR reaching beyond CSR to SR of all, and incentives, such as happiness based on creativity, can be a way out of the blind alley toward RH and hence to sustainable future.

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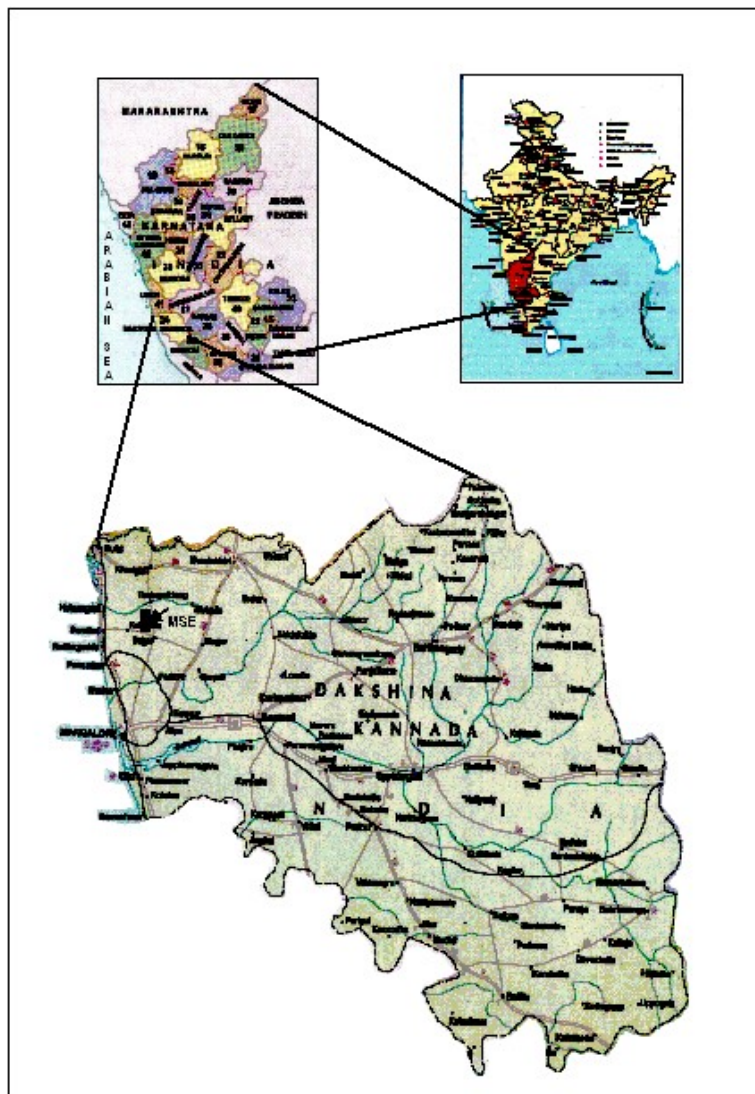
X denotes interdependence. No attribute is avoidable any longer for a longer-term success. The original table (Bolwijn, Kumpe, 1990) did not contain X, but +. The sign + denotes that interdependencies and resulting synergies are not considered; elements are only summed up. This is an oversimplification.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

Tolerance to failures in business risk-taking is much bigger in USA than e.g. in Europe. This makes USA much more innovative. USA is a product of the most entrepreneurial Europeans, who left Europe to take their risk more freely. The routine-lovers remained in Europe and their culture keeps prevailing in it. Government can become more innovative in its processes and act as a big buyer in the buyers' market to require all suppliers to all in public sector (of everything from toilet paper to top scientific findings) as well as all supplying these suppliers to excel in innovation, quality and SR; research organizations must establish marketing offices, other organizations must include search for knowledge in regular practices, and co-operate with research



organization on the basis of ethics of interdependence (Mulej, 2007b). On the other hand, USA seems to be (even) closer to one-sidedness of its entrepreneurs and politicians (Goerner et al, 2008): EU is, at least, aware of its peoples' one-sided reality and publishes official documents to push progress toward SR, including an explicit link between innovation and systemic thinking of the RH-type as the basis for EU's future quality of life and work life. Goerner et al (2008) suggest a new way of systemic thinking called 'the integral view and the new science of sustainability'; EU should pay attention to it.

15. “ROAD MAP FOR SUSTAINABLE FUTURE OF INDIGENOUS COMMUNITIES: A CASE OF COASTAL INDIA”



Location of Proposed Study Area

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Introduction

Today humanity at the global level is experiencing an unprecedented impasse. This impasse is the result of a dreadful model of development that modern societies have experimented and subsequently replicated over and over again. This model of development carried with it a specific historical experience that it mindlessly universalized and a static set of goals that it recklessly pursued. The end result could not have been anything but catastrophe. This cataclysm is characterized by lustful destruction of nature; thoughtless harm on environment; utter disregard for communities, history and culture; and disgraceful onslaught on everything that the nature and humanity have struggled to create. As victims of this upheaval, humanity has lost a sense of its history and a vision of future. It is restlessly contemplating its emancipation on a slippery and uncertain present.

What are we witnessing everyday? - Onset of climate change; ever-increasing number of natural calamities like earthquakes, floods, and draught; disheartening poverty and hunger; huge divide between the rich and the poor; ruthless and brazen appropriation of nature and its resources by a few; displacement of communities of people in the guise of development; unheard diseases, syndromes and maladies threatening health and life of people; pollutions of all kinds making life miserable. This is the life that we have created for ourselves and this is the life that we are going to leave behind for the future generations. And more importantly, this is a world where the greater humanity is in total disarray and nakedness.

Social Darwinism has been the cry of the day. People having lost their sense of history and roots, culture and community could not indulge in any kind of collective imagination. Common humanity has only remained a lip service. What actually reigns supreme is the idea of a self-centered instrumentalist individual who is all the time engaged in the pursuit of fragmented desires. Ours is an era of violence typified by ruthless and oppressive state, amorphous civil society, an unabashed march of corporate interests and futile grope of unachievable humane objectives, and endless disintegration of all possible imaginations of collectivity. Very surprisingly it took a very long time to realize what happened, what is happening and what is in store for us.

Ray of hope

Although the scenario looks gloomy, there have been attempts in the direction of problematising the contemporary discourse on development, climate change system, and other crucial issues concerning the creation of sustainable future. These attempts have tried to raise issues with the dominant formulations and paradigms that have all these days dictated us as to what should constitute a good world. These attempts have enabled us to look at the whole question in a very different and radical perspective through which we could meaningfully pursue the objective of creating the conditions for sustainable future. This involves rediscovering, reconstituting, and reconstructing the domains of meaningful social, cultural, economic, and political action such as the State, Civil Society, NGOs, Indigenous Community initiatives, vibrant social constituencies, and Local Political Institutions.



Against this background this paper tries to portray the contemporary predicament of a derived agenda of development at the local level in order to engage with the problem of sustainable future. The location we have chosen to highlight issues of development and options for sustainability is Mangalore, a coastal region of southwest India. Our engagement with the issues of development and sustainability is to chart the road map to implement and operationalise local agenda 21.

Imperative of Local Agenda 21

Local Agenda 21 is perceived to be a blueprint that provides a framework of actions that can be taken to contribute to global sustainability in the new millennium. The Agenda emphasizes that most environmental challenges have their origin in local activities influenced by predominant concepts and programmes of development. As such Local Authorities play a vital role in improving environmental, economic and social sustainability at the local level and this could be achieved by putting into action the principles of sustainable development into strategies that are relevant to local communities. Local Authorities are one of the nine 'major groups' named in Agenda 21 as being fundamental in working towards sustainable development. The others include women, youth and children, ethnic groups and their communities, non-government organizations, trade unions, business and industry, scientists and technologists, and farmers. The Local Agenda 21 processes recognize that there are difficulties in implementing the principles of sustainable development and it is vital to overcome these difficulties in securing humanity's sustainable future. The crux of the matter in this regard is the leadership. Local authorities - corporations or municipalities - more often than not, provide the needed leadership. Increasingly this leadership is being demonstrated through the adoption of Local Agenda 21 processes. In this sense Local Agenda 21 is unique as it emphasizes partnership, participation and involvement of the local community, government and industry in sustainable planning and management.

Mangalore – A Regional profile

Mangalore is located in the coastal region of Karnataka State and lies between latitudes 12.39 and 12.51° and longitudes 74.08 and 78.50°. The region is predominantly a hilly-terrain surrounded by the Arabian Sea on the west and the mountains on the east. Heavy rainfall, small rivers, and swamps like any other part of the coastal region of southwest India characterize Mangalore. The region is essentially a part of the biodiversity hotspot, the Western Ghats and inherits a variety of biomes with high life profiles. The biomes of importance for life include streams, rivers, marshlands, traditional forest reserves, mangroves, estuaries, and tidal zones. Each biome, embodied with its own characteristic, has invaluable versatile flora, fauna and microbes. The terrain of Mangalore is of aesthetic value and the greenery adds to its beauty. The native people live amidst nature with inherited values to protect the native flora and fetch part of their livelihood through plantation and traditional agricultural crops. Each traditional house invariably possesses tree species of ecological and economic value. The following table gives a summarized account of the physical and demographic details of the region.



Physical and Demographic details of Mangalore Region

Area in sq. kms.	843
Total Number of Households	173,804
Rural	53,191
Urban	120,613
Number of inhabited villages	88
Total Population	882,856
Rural	281,777
Urban	601,079
Projected population (2011)	1,115,100
Population density (per sq. km.)	1,048
Sex Ratio	1,031
Literacy Rate (7+)	87.3 %
Work Participation Rate	
Male	55.8%
Female	34.1%
Workers	395,311
Cultivators and agricultural laborers	32,710
Workers in household industry	98,801
Other workers	263,800
Normal Rainfall	3,707 mm (120 rainy days)
Land Utilization (hectares)	
Utilized Geographical area	85,153
Forest	2,902
Land not available for cultivation	34,025
Other uncultivated land	20,888
Major agricultural and plantation crops	Paddy, pulses, areca, banana cashew, coconut, sugarcane, vegetables, coco, rubber
Industries	
Small Scale units	8,235
Medium scale units	18
Large scale Units	04

Source: 2001 Census Report, Government of India.



Mangalore Region – Community Profile

Looked at historically, the region is a multi-cultural zone with differences and variations in language, religion, castes, communities, and cultural traditions. Being predominantly agrarian in character the region represented hierarchy and difference of a feudal order causing problems of disadvantage and marginalisation to a significant section of the people living here. At this juncture the early phase of modernization with the advent of Christian missionaries brought about remarkable changes in the otherwise stratified state of the community. The Christian missionaries, particularly the Basel Mission, through their efforts of community development in the areas of education, health, and employment addressed the problems of the poor and marginalized. Consequently the region became relatively more harmonious than ever before.

However, the subsequent phase of top-down modernization project in independent India had its inevitable repercussions in the region as well. This modernization and development programmes shaped by it further displaced, divided and pushed people to positions of disadvantage and exclusion. As these people found themselves in the wrong end of development programmes, they could never become the organic part of the development processes. The situation was further aggravated with the advent of globalisation and its neo-liberal package.

The task before us

Given the dynamics of on-going process of globalization and its neo-liberal development model, it is expected that there will be a major shifting of population from rural area to urban areas and consequently the urban population is expected to rise enormously. Therefore, the impact of developmental activities on the natural environment and on the overall quality of life and well being due to increasing urban activities is a major concern to local governments. It is imperative that the entire urban planning and development must be people centric and must take into consideration the climatic, economic and social issues. Special care is necessary in the areas of sustainable use of natural resources, pollution prevention and control and environmentally sustainable infrastructure development that meets the requirements of the majority.

The Mangalore region has become one of the major centers of globalization in India. The proposed Mangalore Special Economic Zone (MSEZ), particularly with its plan for petrochemical complex, in this region is going to fundamentally alter the development tapestry in this region. It is threatening to fundamentally alter the sustainable land use pattern of this region leading to irreversible damage to the sustainable livelihood of millions of local and indigenous communities. The modernization of agriculture for commercial purposes, chemical and petrochemical complexes are not only destroying the sensitive coastal eco system but also causing permanent damage to environment and climate change system. The rural population that is getting displaced due to the dynamics of neo-liberal development paradigm is migrating to the urban Mangalore region resulting in further problems of urbanization like slums, shortage of drinking water, transport problems, and problems of waste disposal. The paradox of globalization is evident in this region in that the high growth rate is creating an island of prosperity, leaving the majority of both urban and rural displaced population in poverty and despair.



The focus of our efforts must, therefore, should be to study the developmental activity of local authority of Mangalore region from the perspective of poverty alleviation, land use pattern and environment and climate change system. This would help us to assess within Agenda 21 parameters as to how the developmental activity is impacting the sustainable livelihood of local communities and indigenous population and suggest and popularize the development paradigm enshrined in Agenda 21 not only with the Mangalore region local government but also with other major groups.

It is heartening that the Mangalore Local Authority, as other local authorities in India, is compelled to recognize the significance of sustainable development. The Local Authorities in India are under democratic compulsion in developing and implementing systematic strategies to provide health and well being of the communities on a sustainable basis by sustaining the environment and Mangalore region is no exception. In this regard it is necessary to provide guidance to:

- Groups and individuals who are keen in knowing as to how to gain commitment from key decision makers in Mangalore region to establish a Local Agenda 21;
- Local authority in Mangalore region to commence and implement the Local Agenda 21 in earnestness;
- The exiting initiatives and endeavors that are working towards sustainable development but need further clarity and direction on a particular aspect of their work
- Those initiatives that are progressing well and are in need of further ideas.

Plan of action

Effective Initiation of Agenda 21 demands a group of people who basically act as a core group and a think tank. This group could comprise of people of goodwill from different walks of life such as academic and non-academic intelligentsia, researchers, students and youth, social activists, journalists, bureaucrats, women, local communities and ethnic groups, and local authority. This core group should undergo a brain storming to get familiarized with the utility of Agenda 21. This would help the group to engage with the ground preparation of sensitizing the people towards the agenda; gather relevant information; and suggest the pragmatic ways of effective implementation of Agenda 21.

Ground preparation for Local Agenda 21 in Mangalore Region

Though community groups, government agencies or NGOs act as catalyst in initiating the Local Agenda process, the effective implementation of the program is dependent on the local authority's active involvement. The principles of sustainable development must be owned, accepted and implemented not only by the broader community but also by the local authority. Therefore, to begin with, the core group must prepare a ground for starting Local Agenda 21 process. Ideally, there should be a Mangalore local authority resolution to initiate the local agenda process. There is a necessity to enter into a dialogue with various stakeholders of the region to gain support from across the local community. The



stakeholders may be, apart from Local Authorities, nine ‘major groups’ named in Agenda 21 as being fundamental in working towards sustainable development.

Inventory Development of Mangalore Local Authority

This will help in reviewing the existing and relevant strategies and activities of the local authority. The knowledge about the existing strategic work and to what extent the community has been involved will mean that the Local Agenda 21 can build on what already exists without duplication. The knowledge also provides needed background information for the remaining Local Agenda process. The inventory is to be built by using the sources like - annual report of the local authorities; economic planning document; report on Local infrastructure planning strategies; waste management strategies; regional development plans; coastal management plans; cultural plans; local conservation strategies and heritage management; and reports prepared by independent civil society groups. The inventory built on the basis of the above and other sources would give sufficient information regarding discrepancies between existing visions, objectives and goals and same could be attempted to be removed to make the Agenda 21 process more dynamic and meaningful.

Exiting Management practices

Taking stock of the existing management practices of the local authority is essential to evaluate whether the existing management practices of the local authority is in tune with the realization of sustainable development or not. The following criteria should be used in taking stock of the management practices:

- Whether the local authority is preoccupied only with short term plans at the cost of long-term plans that are needed to achieve the principles of sustainable development?
- Do the authorities take cognizance of the long-term sustainable development implications of the new proposals?
- Is decision-making process holistic to take account of socio-economic and environmental factors?
- Does the existing system accommodate the development of innovative solutions that would help in achieving sustainable development?
- Whether there is community participation in decision-making and in the execution of the development projects?

Conclusion

The successful implementation of Agenda 21, we hope, would enable us to overcome the current impasse and ensure us a more humane and sustainable future by performing three crucial roles. First, it monitors the on-going process of development with a critical perspective. Secondly, by performing that role it avoids impending hazards involved in the existing processes of development. And finally, it directs the efforts development towards the creation of a sustainable future for the majority of humanity.

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16. REPORT AND CONCLUDING REMARKS

The chamber conference has proved better environment and information exchanges for information, knowledge and improvement in communications of international conferences. Also larger group of scholars, researchers and people have been communicating nicely and successfully.

The program was well executed, participation fees free, and missing presenters presented the organizer Prof. Dr. Timi Ecimovic, and it is what allowed the programme in full to be done.

The WACRA annual conference was well attended and the following results are worth mentioning:

- The Founder and Chairman of the WACRA Dr. Elmar A. Stuhler were appointed “The Honourable Chairman for life” and the special document was signed and sent to his Excellency.
- The up to the meeting action of WACRA was reconfirmed, and full support for work of Hon. the Chairman for life Dr. Elmar A. Stuhler has been approved. The documentation is at Medosi.

The World Thinker’s Forum third session was well done and participants approved appointment of the Hon. Ricardo Di Done from Montreal, Canada as new Executive Chairman of the World Thinkers Forum. He was appointed by Prof. Dr. Timi Ecimovic, first Chairman and founding member. Also the World Headquarters have been moved to new location at Montréal, Canada, as better place for new Executive Chairman’s work. The up to session work of the World Thinker’s Forum under the chairmanship of Prof. Dr. Timi Ecimovic was approved.

The Abstract and Proceedings Book has been prepared at SEM Institute fore Climate Change and ANSTED University BVI, School of Environmental Sciences by the Chair Prof. Dr. Timi Ecimovic, Korte 124, SI – 6310 Izola – Isola, Slovenia as voluntary contribution to the XX. Jubilee International Conference of WACRA Europe e. V. Est. 1984 as appreciation for the Chairman of WACRA Dr. Elmar A. Stuhler excellent many years teaching and researching work towards better tomorrow of mankind.

To this work Prof. Emeritus DDr Matjaz Mulej from University Maribor, Faculty of Economics and Business contributed significant part, and Boris Maraz, B. Org. Sc. did editorial work.

If you find it well please let us know, whether you think it is not all right let us as well know, and thank you!

Prof. Dr. Timi Ecimovic

Mag. Josip Tavcar