10 Debating Development Perspectives
Years After Rio
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Contents

Heinrich B ll Foundation

The Heinrich B ll Foundation, affiliated with the Green Party and headquartered in the Hackesche H fe in the heart of Berlin, is a legally independent political foundation working in the spirit of intellectual openness.

Heinrich B ll (1917-1985) is considered one of the most important writers and social critics of the Federal Republic of Germany. In 1972 he received the Nobel Prize for Literature (for more details see next page).

The Foundation's primary objective is to support political education both within Germany and abroad, thus promoting democratic involvement, socio-political activism, and cross-cultural understanding. The Foundation also provides support for art and culture, science and research, and developmental cooperation. Its activities are guided by the fundamental political values of ecology, democracy, solidarity, and non-violence.

Through international collaboration on a long-term basis with a large number of project partners - currently about 130 in 60 countries - the Foundation aims to strengthen ecological and civil activism on a global level, to intensify the exchange of ideas and experiences, and to keep our sensibilities alert for change. Additional important means to foster international cooperation include visitor programs to enhance the exchange of experiences and political networking, as well as basic and advanced training programs for committed activists.

In addition to its own educational work, the Foundation operates two institutions, namely the "Green Academy" and the "Feminist Institute", that provide in-depth analysis and sensitisation on these important concerns.

The Heinrich B ll Foundation has about 160 full-time employees as well as approximately 300 supporting members who provide both financial and non-material assistance.

The Foundation currently maintains foreign and project offices in the USA, Cambodia, the Czech Republic, El Salvador, Israel, Kenya, Pakistan, South Africa, Turkey, and an EU office in Brussels. New foreign offices have more recently been opened in Bosnia-Herzegovina and the Arab Middle East, with Brazil and Chiang Mai in Thailand as the latest openings.

The office in Thailand was officially opened in February 2000 with a series of workshops "Debating Green" to introduce its profile in the new host country. The foundation's major focus of cooperation with partners from Thailand and South East Asia are the promotion of sustainable development, social and gender justice, citizen's empowerment and participatory democracy.

About Heinrich B ll

Heinrich B ll was one of the Federal Republic of Germany's most important and best known authors, "Bound by the times and my contemporaries, by what my generation had lived through, experienced, seen and heard" as he himself wrote.

He was the critical chronicler of Germany's history at mid century and he was awarded the Nobel Prize for Literature in 1972. Heinrich B?ll was president of PEN International for several years.

His courageous and unerring interventions significantly enriched and shaped political culture in Germany. Throughout his life, Heinrich B ll was a committed supporter of persecuted fellow writers, artists, civil rights activists and political prisoners across ideological boundaries.

Some of his most important books are "Billiards at Half-Past Nine", "The Clown" "Group Portrait with Lady", "The Lost Honor of Katharina Blum", "Women in a River Landscape", and the "Irish Journal". A number of his books have been made into films.

"Short Stories" of Heinrich B ll, translated by Acharn Ampha Otrakul into Thai were published by Samanchon publishing house in 2543 (2000).

In agreement with the B ll family and the Green Party, the foundation was given his name in recognition of his embodiment of the rare combination of political vigilance, artistic creativity and moral integrity, which will remain a model for generations to come. The courage to stand up for his beliefs, encouragement of others to intervene in public affairs and uncompromising commitment to the dignity and rights of each human being were the characteristics of the author Heinrich B ll. The foundation that bears his name remains dedicated to this tradition.

Preface

After the announcement of the preparatory process for the 'Johannesburg 2002 World Summit on Sustainable Development' by the Commission on Sustainable Development (CSD), the debate around the contents of the next summit has picked up considerable pace. Government Organizations (GOs), Non-Government Organizations (NGOs) and practically all groups concerned with sustainable development have taken part in discussions, assessments and an overall analysis of sustainable development implementation over the last decade.

The Heinrich B ll Foundation wants to play an active role in the preparatory process for the Johannesburg Summit. One particular idea among a number of other HBF-activities related to the Johannesburg preparatory process is the establishment of a "North-South Commission for the Earth Summit 2002, which is expected to formulate a memorandum to be available as an input for NGO's and GOs in the run-up to the Earth Summit. With such a project, the foundation hopes to promote self-reflection within the civil society, to contribute to the dialogue between non-governmental activists, open-minded entrepreneurs and managers and the political institutions. It is hoped that the work of such a commission constitutes a visible contribution in the process of defining positions of the global public around the Johannesburg Earth Summit.

To extend a platform for active participation by less well informed groups and 'laymen' in this process, the Heinrich B ll Foundation's Regional Office for South East Asia planned for the preparation of this reader.

'10 YEARS AFTER RIO: Debating development perspectives' is the second publication in the Heinrich B ll Foundation's series 'World Summit Papers'. The first publication, 'Towards the World Summit on Sustainable Development, Johannesburg, South Africa, 2002', provides a detailed factual basis for an overview of the whole sustainable development process, related institutions, groups, problems and issues. This second publication is aimed at groups not directly concerned with the preparation for Johannesburg and who might be at times less familiar with the whole context.

From the very beginning, **'10 YEARS AFTER RIO: Debating development perspectives'** was perceived in its outline as a regional paper to be translated into regional languages to address students, development workers, academics, politicians not specialized in the field and 'laymen' alike. The paper offers altogether 6 chapters, different in character: Chapter 1 provides a conceptual review of the development paradigm between 1949 and the present. Chapters 2 and 3 focus on a detailed summary of the Agenda 21 agreement and the ecological and economic definition of sustainability, respectively. Chapter 4 concerns the impact of Agenda 21 implementation on Thailand in examples that might be translated to other developing countries as well. Chapter 5 focuses on the World Trade Organization and the Commission on Sustainable Development and the United Nations, and Chapter 6 on the Johannesburg preparatory process and finally suggests some topics for debate.

As it was impossible to narrate the many international activities related to the post-Rio process a second 'development implementation time-line' has been added to the 'debating development perspectives time-line' of the reader's contents, which presents an overview of the development of the "sustainable development paradigm".

Although this paper is not written to primarily satisfy sustainable development specialists, I do hope that it, nonetheless, provides interesting reading for all groups actively or passively concerned with sustainable development. Throughout the chapters a focus on economic issues in development is prominent. Not because an opponent of growth was requested to write this paper, on the contrary, but because the economy seems to increasingly develop into an opponent of sustainability.

I hope that by consciously approaching the troubled relationship between sustainable development and the current economic system, this publication might encourage positive criticism towards the accumulative economic paradigm and generate interest in active participation in the search for an alternative.

Dr. Heike Loeschmann
Director
HBF Thailand and South East Asia Regional Office

Chiang Mai, February 2001

Acronyms

Chapter 1 Of the Evolution of a Paradigm

OECD	Organization for Economic Cooperation and Development
NIC	Newly Industrialized Countries
WCED	World Commission on Environment and Development
WDB	World Development Bank
WTO	World Trade Organization
UN	United Nations
BCSD	Business Council on Sustainable Development

Chapter 2 The Results of the Earth Summit

GO	Government Organization
NGO	Non-Government Organization
GNP	Gross National Product
ADB	Asia Development Bank
UNDP	United Nation Development Program

Chapter 4 Rio's Impact

CSD	Commission on Sustainable Development
CBO	Community Based Organizations
TFP	Timber Forest Products
ISO	International Organization for Standardization
JICA	Japanese International Cooperation Agency
EIA	Environmental Impact Assessment
SIA	Social Impact Assessment
EGAT	Electricity Generating Authority of Thailand
TAO	Tambon Administrative Organization
GHG	Green House Gas
FCCC	Framework Convention on Climate Change
WRI	World Research Institute
CSE	Center for Science and Environment
TNC	Transnational Corporation
MAI	Multilateral Agreement on Investment

Chapter 5 Beyond Rio: Disparities in Sustainability

CSD	Commission on Sustainable Development
GATT	General Agreements on Tariffs and Trade

PPM	Process and Production Methods
DSP	Dispute Settlement Panel
TRIPS	Trade Related Aspects of Intellectual Property Rights
MEA	Multilateral Environmental Agreement
CTE	Commission on Trade and the Environment
ILO	International Labor Organization
ECOSOC	Economic and Social Council
IDC	International Development Council
UNGAS	UN General Assembly

Chapter 6 On the Road to Johannesburg 2002

CSD	Commission on Sustainable Development
UNGAS	UN General Assembly
NGO	Non-Government Organization
WTO	World Trade Organization
PPM	Process and Production Methods
ISO	International Organization for Standardization

List of figures

Debating development perspectives' time-line:

The following time-line gives a rough summary of central events in sustainable development as mentioned in the reader.

18th century

- 1776 'The Wealth of Nations', by Adam Smith

19th century

- Industrialized production replaces manufacturing
- Karl Marx and others try to introduce an alternative paradigm on human societal organization termed 'Kommunismus' and 'Sozialismus'
- Social critics and philosophers, especially Nietzsche, start criticizing human societies and behavior in industrial societies
- Beginning of nature conservation and preservation movement in the USA (continues into the 20th century and can influence national policies to create the country's national parks)
- George(tte) Sands, the companion of the composer Chopin, becomes known as the first woman with a live-long personal agenda of trying to break traditional gender roles in Europe
- 'Women's lip' (starting in the UK) actively pursues social equity for women and is able to introduce the right to University education and the right to vote for women

Early 20th century to the beginning of World War 2

- 'Die Wanderv gel', a German popular movement reintroduces the slogan 'back to nature (zur ck zur Natur)' with many activities to re-focus human perception on the natural environment
- Other societies are founded in Germany to pick up the trend 'back to nature', for example, 'Die Naturfreunde' or the 'Freie K rperkultur Bewegung (FKK)' as a conscious effort to include the natural environment, which is more and more excluded from human societal development, as an important component in human environmental perception
- 1929 'Black Friday', Wall Street stock market crash that triggers the first **worldwide** economic crisis for industrialized countries
- Late twenties and early thirties: A number of German governments introduce the 'Vorsorgeprinzip (precautionary principle)' and an early version of what will later be termed 'Civil Society', to national policies.
- 1932 Pigou introduces his 'Internalized Market' economic theory in his publication 'The Economics of Welfare'
- 1930s 'The New Deal' program of US president Roosevelt makes the standard of living of the nations poor and unemployed policy focus

1946

- **General Agreement on Tariffs and Trade (GATT)** established on a provisional basis to promote trade liberalization

1949

- Harry S. Truman coins the term ‘under-developed’ for poor countries, as opposed to ‘developed’ for affluent countries

Through-out the 1950s

- First signs of environmental stress in London, Los Angeles and other population centers in industrialized countries

1959

- **United Nations Development Program** evolved to maturity

Through-out the 1960s

- Increased concern among scientists and the general population in developed countries about the environment

1964

- **UNCTAD** United Nations Conference on Trade and Development established

1968

- **Club of Rome** organized
- Increase in worldwide human populations clearly perceived as a threat to humanity’s future (Ehrlich publishes his book ‘The Population Bomb’)
- Garret Hardin publishes his article ‘The Tragedy of the Commons’ and introduces the concept to theories in human environmental perception and planning

1969

- First (hu)man on the moon

1972

- **Earth Summit I** First U.N. Conference on Environment (Stockholm)
- Limits to Growth published by the Club of Rome

1973

- The World Bank concedes the failure of the development paradigm in alleviating poverty
- **UN Environment Program** launched

1979

- **First World Climate Conference** in Geneva concludes that CO2 emissions could have long term impact on climate

1980

- **Brandt Commission** (Independent Commission on International Development) chaired by Willy Brandt. Report: published ‘North-South: A program for Survival’

1983

- UNGAS establishes the ‘World Commission on Environment and Development

1984

- Industrial accident kills thousands of people in India (Bhopal)

1986

- Melt-down of the atomic reactor in Chernobyl

1987

- **Brundtland Commission** (World Commission on Environment and Development). Report: published 'Our Common Future'

1991

- **Group of 77 meet in Beijing and demand 'the right to development'**

1992

- Earth Summit in Rio de Janeiro and resolution of AGENDA 21
- Parallel Conferences publish 'Alternative Treaties'
- **UN Commission on Sustainable Development (CSD)** created to advance Agenda 21
- **Pronk-Iglesias Report on proposed CSD role and structure ignored**
- **Framework Convention on Climate Change (FCCC)** signed at the UN Conference on Environment and Development, Rio de Janeiro

1994

- **World Trade Organization** formed at the Uruguay round of GATT negotiations as an international legal institution to administer the global framework of trade rules and agreements

1995

- **World Summit for Social Development**

1997

- An international process is initiated (Group 77, USA, EU) for a conference on financing for development

1998

- **UN Climate Change Conference** in Buenos Aires
- Massive worldwide protests stop the Multilateral Agreement on Investment negotiations (MAI) of developed countries

1999

- The 54th session of UNGAS calls for a high-level, intra-governmental 'event' on financing for development to be held in 2001
- WTO ministers meet in Seattle
- World NGO conference

2000

- First organizational meeting to prepare the 'event' on the financing for development
- Earth Charter
- **NGO Millennium Forum New York, precursor to the "The People's Assembly"**
- **The Hague Conference on Climate, negotiations break down**
- UNGAS decides to call for the next Earth Summit in Johannesburg in 2002 under the title 'The world Summit on Sustainable Development
- MAI negotiations are continued in Paris

2nd Time-line: Development related milestones 1942-2000

The following timeline gives events of the last 58 years that had and/or have a direct or indirect impact on aspects of development, which are:

- Human activities
- Events that shaped human environmental, social and economic perception and conception
- Laws and regulations
- Conventions and political bodies

This list is by no means complete and represents merely a selection to aid the objective of this reader, '10 YEARS AFTER RIO: Debating development perspectives', and might be interesting to follow-up for anyone interested or working in a development context. Besides the events mentioned here, there are a large number of other events that could rightfully belong here, too:

1942 Landmark events:

- **Declaration by "United Nations"** - first official use of the name "United Nations" suggested by Roosevelt

1944 Landmark events:

- **Bretton Woods Agreements** created the World Bank and the International Monetary Fund

1945 Landmark events:

- **International Court of Justice** established in the Hague
- August 6, & 9, **atomic bombs** dropped on Japan
- **UNESCO** created in London

1946 Landmark events:

- **World Health Organization** created
- **General Agreement on Tariffs and Trade (GATT)** established on a provisional basis to promote trade liberalization
- **UN General Assembly (UNGAS) adopts its first resolution** on the peaceful use of atomic energy and elimination of atomic and other weapons for destruction
- Trygve Lie (Norway) becomes first Secretary-General

1948 Landmark events:

- **Universal Declaration of Human Rights** adopted by U.N. General Assembly
- **Environmental Education** concept introduced to the U.N.
- **GATT** entered into force
- **UN Truce Supervision Organization (UNTSO)** First UN observer mission established in Palestine
- **Universal Declaration of Human Rights**

1953 Landmark events:

- The United Nations Economic and Social Council adopted a resolution to provide maps based on common world specifications with a scale of 1:1,000,000

1957-58 Landmark events:

- **International Geophysical Year.** Measurements of atmospheric carbon dioxide begin

1959 Landmark events:

- **United Nations Development Program** evolved to maturity

1961 Landmark events:

- **World Wildlife Fund (WWF)** created
- Food and Agricultural Organization (FAO) and UNESCO start the 'Soil Map of the World' project

1964 Landmark events:

- **UNCTAD** United Nations Conference on Trade and Development established

1*968 Landmark events:*

- **Club of Rome** organized

1969 Landmark events:

- **National Oceanic and Atmospheric Administration** formed

1970 Landmark events:

- **First Earth Day**
- **Environmental Protection Agency** created

1971 Landmark events:

- **Group on Environmental Measures and International Trade** set up by GATT

1972 Landmark events:

- **Earth Summit I** First UN Conference on Environment (Stockholm)
- **First landsat satellite** launched
- 'Limits to Growth' published by the Club of Rome

1973 Landmark events:

- **CITES signed** (Convention on International Trade in Endangered Species)
- **UN Environment Program** launched

1975 Landmark events:

- **Several global environmental Conventions enter force**:

  1971 Convention on Wetlands of International Importance;

  1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter;

  1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora
- **Global Environmental Monitoring System (GEMS)** established by UNEP

1976 Landmark events:

- **HABITAT I** United Nations Conference on Human Settlements
- **UNIFEM** created to promote women's rights

1978 Landmark events:

- **Global Taxation** first proposed by James Tobin

1979 Landmark events:

- **CEDAW** (Convention on the Elimination of All Forms of Discrimination Against Women) adopted by the UN General Assembly
- **First World Climate Conference** Geneva concludes that CO2 emissions could have long term impact on climate

1980 Landmark events:

- **Brandt Commission** (Independent Commission on International Development) chaired by Willy Brandt. Report: 'North-South: A program for Survival' linked economic equity to development and is the beginning of "sustainable development" concept
- World Conservation Strategy launched by UNEP

1981 Landmark events:

- IBM launches its personal computer
- Publication of the last sheet in the FAO 'Soil Map of the World' Project

1982 Landmark events:

- **UN Convention on the Law of Sea** adopted

1984 Landmark events:

- IBM AT personal computer starts to have a significant effect on desk-top personal scientific computing

1985 Landmark events:

- **Tropical Forests Action Plan (TFAP)** established
- **International Tropical Timber Agreement** reached in Geneva to provide an effective framework for sustainable utilization of tropical forests enters into force

1987 Landmark events:

- **Brundtland Commission** (World Commission on Environment and Development). Report: 'Our Common Future' which defined "sustainable development" and introduces the sustainable development paradigm.
- **Institute for Global Communications** created to facilitate NGO communications
- **Ad hoc working group to look into a biodiversity convention** requested by UNEP governing council meeting
- **Bellagio Conference** Scientists point out that consequences of sea-level rise would outweigh any direct temperature effects of climate change in coastal regions
- **Montreal Protocol** signed

1988 Landmark events:

- **First meeting of the ad hoc working group.** It endorses the need for a convention to protect natural habitats within national frameworks
- Conference on Changing Atmosphere: Implications for Global Security **Toronto calls for establishment of a world atmosphere fund at least partly funded by a levy on fossil fuel consumption in the industrialized world**
- Intergovernmental Panel on Climate Change (IPCC) **created by UNEP and the World Meteorological Organization (WMO)**
- **The 1985 Vienna Convention for the Protection of the Ozone Layer enters into force**

1989 Landmark events:

- Berlin Wall falls **(November 9), USSR begins to disintegrate**
- Small States Conference on Sea Level Rise **in Maldives**
- The General Assembly decides to convene a UN Conference on Environment and Development in 1992
- **The Montreal Protocol on Substances that Deplete the Ozone Layer enters into force**

1990 Landmark events:

- **A Biodiversity Treaty** negotiated by the first meeting of the ad hoc working group
- **Global Agreement on Forests** proposed by Swedish prime Minister Ola Ullsten
- **Tropical Forest Convention** to be negotiated by 1992 as asserted by the Houston Summit of G7
- **Forest Convention at UNCED** opposed by Malaysia
- **Conference of Selected Developing Countries on Global Environmental Issues** puts the responsibility of climate change on industrialized countries
- **Fourth Plenary Session of IPCC** convenes in Sweden to formally adopt a report which estimated that under business as usual scenario, global temperatures would increase by about 1°C above 1990 values by 2005 and 3°C before the end of the 21st century
- **Second World Climate Conference** in Geneva. 137 countries agree to negotiate a world climate treaty
- **World Summit for Children**
- **Human Development Index** developed by UNDP

1991 Landmark events:

- **Factual paper on trade and environment requested by ASEAN from GATT**
- **Second UNCED Preparatory Meeting** NGOs and Western nations step up pressure
- **Intergovernmental Negotiating Committees**, sessions held by the ad hoc working group produce a CBD (Convention on biological diversity) text in final meeting
- First Meeting of the Intergovernmental Negotiating Committee (INC-1)
- OECD countries accept responsibility for climate change
- **Earth Pledge** signed by several dignitaries committing them to action to improve the earth's environment

1992 Landmark events:

- **UN Conference on Environment and Development (UNCED)** Rio de Janeiro. Chaired by Maurice Strong. Published Agenda 21; Convention on Biological Diversity; Framework Convention on Climate Change and the Rio Declaration
- **UN Commission on Sustainable Development (CSD)** created to advance Agenda 21
- **Convention on Biological Diversity (CBD)** opened for signing at the Rio Summit. Rejected by US
- **Forests for the Future Initiative** announced at Rio Summit by US, to double assistance to rainforest conservation. UK and Germany swing ministers into action to negotiate convention. Oil producing Gulf countries support convention idea
- Developing countries win round at Rio with relevant Agenda 21 section accepting all kinds of appropriate internationally agreed agreements
- **Digital Chart of the World published**

- **The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal** enters into force
- **Framework Convention on Climate Change (FCCC)** signed at the UN Conference on Environment and Development, Rio de Janeiro

1993 Landmark events:

- **Deadlock on forests between North and South** broken through bilateral initiative launched between India and UK
- **Negotiations begin over International Tropical Timber Agreement (ITTA)**
- Brazil, Ghana, Indonesia and Malaysia demand new agreement to cover temperate forests.
- **Intergovernmental Committee on the Convention on Biological Diversity** established by UNEP
- **World Conference on Human Rights**

1994 Landmark events:

- **World Trade Organization** formed at the Uruguay round of GATT negotiations as an international legal institution to administer the global framework of trade rules and agreements
- **International Conference on Population and Development**
- UN Global Conference on the Sustainable Development of Small Island Developing States
- **International Conference on Natural Disaster Reduction**

1995 Landmark events:

- **Fourth World Women's Congress** in Beijing
- **FAO meeting** in Rome
- **Intergovernmental Panel on Forests (IPF)** set up at the third meeting of the Commission on Sustainable Development (CSD3) in New York
- President of the Philippines issues an executive order to regulate bioprospecting
- First meeting of Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)
- **Biosafety Working Group** created in Jakarta
- **First Session of the Conference of Parties to the FCCC** Berlin.
- India breaks deadlock in negotiations on emission cuts by urging industrialized nations to cut their carbon dioxide emissions by 20 percent by 2000
- **World Summit for Social Development**
- **Ninth UN Congress on the Prevention of Crime and the Treatment of Offenders**

1996 Landmark events:

- **HABITAT II** Istanbul
- Peru and Switzerland fund working group to review existing institutions and instruments in forestry
- A law regulating genetic resources within the Andean Pact nations of Bolivia, Colombia, Ecuador, Peru and Venezuela comes into force
- **SBSTTA 2 Meeting**
- **World Food Summit**
- **UNCTAD IX** Nineth UN Conference on Trade and Development

- **Second Session of the Conference of Parties to the FCCC** Geneva

1997 Landmark events:

- **Al Gore's Report** to the U.N. at Rio+5. A broader view of Agenda 21 implementation
- No agreement at fourth and last meeting of IPF in New York in February
- At CSD-5, IPF presents options that are not necessarily mutually exclusive
- CSD establishes Intergovernmental Forum on Forests (IFF) to present a final report at CSD-8 in 2000
- **Byrd-Hagel Resolution** passed by US senate, saying US will not ratify any climate treaty unless it includes commitments for developing country parties
- US automobile manufacturers, oil companies and trade unionists launch a US $ 13 million advertising campaign that a treaty on climate would result in skyrocketing prices
- Japan proposes a mere five percent cut in emissions below 1990 levels by 2008-2012
- Latin American regional workshop in Rio de Janeiro puts heaviest burden on historically large emitters of GHGs, which are industrialized countries
- All industrialized countries agree to reduce GHG emissions to 5.2 per cent below 1990 levels by 2008-2012. Japan agrees to reduce six percent, the US seven and the EU eight percent below 1990 levels
- **Third Session of the Conference of Parties to the FCCC** Kyoto protocol on climate change
- An international process is initiated (Group 77, USA, EU) for a conference on financing for development

1998 Landmark events:

- **UN Climate Change Conference** in Buenos Aires
- Kyoto Protocol opens for signature in New York
- 8th meeting of the subsidiary bodies in Bonn concentrates on emissions trading
- Massive worldwide protests stop the Multilateral Agreement on Investment negotiations (MAI) of developed countries

1999 Landmark events:

- **World NGO Conference** held in Canada to promote planning for "The People's Assembly"
- **UN Climate Change Conference** in Bonn
- IFF-3, last substantive meeting before forum submits report to CSD in Geneva
- **SBSTTA-4 Meeting**

2000 Landmark events:

- **Earth Charter**
- **NGO Millennium Forum New York, precursor to the "The People's Assembly"**
- **UNDPI/NGO Forum New York, to strengthen civil society in UN operations**
- **Lack of consensus during IFF-2 in Geneva continues**
- **The Hague Conference on Climate, negotiations break down**
- **First organizational meeting to prepare the 'event' on the financing for development**
- UNGAS decides to call for the next Earth Summit in Johannesburg in 2002 under the title 'The World Summit on Sustainable Development'
- MAI negotiations are continued in Paris

Chapter 1
Of the Evolution of a paradigm

Development

Sometimes one hears a line that at the time simply amuses and then for some reason stays in memory for a long while to come. One such a remark was given by an elder visitor to Europe from Africa in the context of discussing development and went like this: 'You know, it's funny, but you make all the watches and we have all the time!' Everyone laughed and admired his wit, although, in effect, it ended the impromptu discussion within the next ten minutes. There was a fundamental truth expressed in it that all development theories and tools to assist 'poorer' countries could not equal or transcend. The joke was not on watches, the joke was on the 'developed people' and expressed a conflict permeating all development and environmental issues.

With the probable exception of most of the middle and upper classes, for the larger portion of the population in developing countries, time still has a different connotation. Time and its abundance are the basis of everything: it is available to make the right decision on what kind of change is best and most effective (and not on what change is fastest and most efficient); it is the heart of a collective community memory, that does not use watches, which divide time into units, but a continuous flow of time, so that it can be based on the experience of all. In those regions it is the abundance of time that shapes not only a person's knowledge, but also the intuition on what is needed and good for a community. In comparison, the paradigms that people, who consider themselves developed, have of change for the better depend on definitions, and they seem to create an ever-increasing distance to the things they actually want to do; to the things humans must do, if they want to save their planet from and for humanity.

But the more watches are made, the less time there is to solve global problems. And with more watches there also comes a new perception of time and pace in live, portending a different understanding of what change for the better means and what one's potential and capacity signify in the development context. As the gap in perception widens, the distance to possible alternatives to the current development paradigm grows. But an alternative humanity might need, as it is the understanding and implementation of development as an ever-increasing cycle of production and consumption that results in the accelerating pace of the environmental and development crisis.

The early years

…The concept of defining a 'better society' through linking it to its state of (economic) development and production output is relatively new. On January the 20th 1949, Harry S. Truman, the then old and new President of the United States of America, while addressing Congress in his inauguration speech, tried to focus the attention of his audience on the condition in poorer countries and their low per capita income, when compared to the US. He classified them as 'underdeveloped areas' (Truman 1950: 1366), in contrast to his own country with the highest standard of living worldwide.

America had just won the Second World War and an unprecedented national growth during and directly after the war years had increased the US per capita income to 1.400 US$ per year, compared to less than 100 US$ in more than half of all other countries in the world (Sachs 1999: 8).

As Truman had his political roots in the Great Depression and the subsequent 'New Deal' of his predecessor Roosevelt, he was in this tradition a man of high moral standards and demands. A sign on his desk in the oval office expressed his view, that development and economic growth must, first of all, benefit the people: 'The buck stops here!' (Meaning: the responsibility ultimately rests with me.) In this respect he was still more a community leader and much less an economic manager, like so many government leaders in our time seem to be. The development vision implemented during his administration was to give peace to the world by raising the living standard of all its populations to a level where traditional means of conflict management, like wars and aggression, would simply cease to be a viable alternative. The basic concept of this political paradigm was that high per capita income equals good and low per capita income equals bad in terms of community development*.

However, the idea to develop the world in order to bring prosperity and peace (in this order) was based on the American model and had one major drawback, e.g. it described social conditions in economic terms. It assessed, analyzed and judged a multitude of different states of development in their own right from the point of view of an American ethics, ruled by the invisible hand of the free market. Within a few years this paradigm would learn to disregard all alternative definitions of common good as inferior and replace differing traditional and ethical outlooks on life with that of 'The American Dream'. The stage for a world wide rapid loss of cultural diversity was set and a multitude of social problems that were created by the implementation of Adam Smith's free market theories - but could not be solved by them alone - was to follow in all developing countries.

In the same year Truman held his speech, a vision on how to create the new 'developed world' was already available to government agencies that were to implement it: guided economic growth. As a low per capita income (based on American standards) was seen as a deficiency, it had to be replaced by affluence. The 'New Deal' and the 'Marshall Plan' for Europe's postwar recovery had given the United States (and to some extent also Europe) experience in economic guidance through careful market intervention by government agencies. Implementing both programs had shown how this type of policy could create economic growth rates and profits on an unprecedented scale. This view was expressed in one of the first World Bank reports dated 1948-1949: 'The magnitude

* Like other terms, for example 'The Truman Doctrine', the term 'Truman's development paradigm' originates in convenience of use. Being a political concept, it would hardly suffice to declare Truman the sole creator of the paradigm. However, as it was first introduced during his time in office the concept became attached to his administration.
The need for such a convenient term arises from the fact that there were other prardigms on development much earlier in human history. Adam Smith's free market ideas concise a paradigm on economic development. Karl Marx's theories as presented in 'Das Kapital' and 'Das Kommunistische Manifest' are a paradigm on social and economic development. Social philosophers like Nietzsche in the late 19th Centuryand the movement of 'Die Wanderv gel' of the early 20th century point towards concepts in development and consumption in Europe. The preservationist and conservationist movements already beginning in the 19th century in the United States, which resulted in the creation of national parks (like Yellowstone National Park), are another example of an active debate in development related issues. Concepts like 'good governance' from socialist Germany in the early thirties and Pigou's 'internalized market' from 1932 can also be seen as attempts to introduce development paradigms.

of this [per capita income] discrepancy demonstrates not only the urgent need to raise the living standards in the underdeveloped countries, but also the enormous possibilities to do just this.'

At first mostly in the countries of the Organization for Economic Cooperation and Development (OECD), but then more and more worldwide, the agenda of alleviating poverty through intensified economic efforts became the focus of almost all governments, (in principle, but not necessarily in method) even in those countries that based their social organization on Socialism and/or Marxism/ Leninism. By the mid-fifties, economy and development had become an inseparable twin, and as poverty was decisively reduced in most of Western Europe by the end of the decade, the focus of development here shifted. The paradigm of 'development to fight poverty to ensure world peace' became one of 'economic development to further increase affluence through more production'. In essence we are still stuck with it today, in the year 2001, and although a string of events has forced humanity to scrutinize and criticize the shift in the paradigm, most governments today assess, judge and decide by it.

First obstacles

The success of the development idea in Europe could not be easily repeated in other countries. After the Second World War an extended period of releasing former colonies into independence followed. Those new governments embraced Truman's paradigm and shaped their policies to focus on the mobilization of their countries to increase output. In 1949, Nehru, the leader of the new independent India, voiced the Third World's intent to join the development age: 'It is not a question of theory; be it communism, socialism or capitalism, whatever method is more successful, brings the necessary changes and gives satisfaction to the masses, will establish itself on its own … Our problem today is to raise the standard of the masses...(Sachs 1999: 5)'

But social and ethical traditions of those countries were not comparable to Europe. There, the development idea could be implemented on a large industrial basis and on a population's attitude that was mostly in line with its economy-centered thinking. The American incentive gave the needed focus. In contrast, the third world was, as yet, structurally not ready to implement the new development concept. A World Bank mission to South America reported on Colombia in July 1949: 'Only through a generalized attack throughout the whole economy on education, health, housing, food and productivity can the vicious circle of poverty, ignorance, ill health and low productivity be decisively broken' (IBRD 1950: xv). The tenor of this report became program: development potential and capacity of regions was not linked to their cultures and societies, but to their 'economies' and indigenous ways of living and thinking became (development-) 'ignorance'. Over the next twenty years the third world societies were going to be imprinted with the American and later also a slightly altered European vision of development and prosperity.

A first diverging interpretation of development

Western European Nations had chosen a variety of alternatives towards development that can be summarized under the term 'social market economy'. It did not question the idea of development through growth as such, but put more stress on installing political instruments for interference with and guidance of the market economy. The aim was to reach a fairer distribution of development benefits throughout all strata of society. This trend in political and economic organization was partly based on historic experience during the 'Great Depression' of the late twenties and early

thirties with its economic hardship for many citizens. Extensive social security, often combined with free access to education, and elaborate health-care plans were initiated.

New political structures mirrored the experience with fascist Germany and the Second World War. The moral degradation of politics in parts of Europe that ended in the 'Holocaust' and the racially inspired killing of millions of people, motivated the generation after to initiate a variety of social and economic measures to allow more active participation of its populace in politics. Labor unions were allowed to take a leading and active role in society development and through political and administrative decentralization democratic structures provided a sound basis for local and regional people participation. In the longer-run, this would lead Western Europe to a path in development, where later on in the economic growth process, environmental concerns could be more easily translated into government policies. Founding these new structures largely on alternative social and economic ideas developed and partially implemented between the two World Wars, Western Europe was able to take a leading role in introducing environment management concepts and social concerns to the worldwide development process in times to come.

The erosion begins

Meanwhile, in Europe a new phenomenon surfaced during the mid-fifties, which became known as the 'London smog': the city's air had become un-breathable and poisonous due to massive exhaust emissions from burned fossil fuels. People fainted, died of heart attacks and developed respiratory problems. Traffic and most of the city's life was forced to a complete standstill. The problem was seen as due to industrialization and burning of the 'wrong' fuel by the private sector and the electricity generating power plants: low-grade coals from the English mines. A program was launched to substitute coal with other fuels, like gas, oil and atomic energy, accompanied by laws and regulations to channel fuel consumption better. Over the next few years similar measures were adopted by other countries, whose major cities also showed signs of environmental stress. The idea of development, introduced to better the life of people, had shown its first small cracks. Its implementation had resulted in the death and harming of people. In spite of this, at the time no one questioned the development paradigm itself, and policies remained focused on as much economic growth as possible, especially as the smog improved: out of sight, out of mind.

However, worries about the impact and cost that the pollution created for nature, and for society in form of hospital bills, production stops and needed subsidies to utilize 'better' fuels started to surface. First suggestions on how to cover those costs had already been introduced in 1932 by the economist Pigou. He had proposed a new economic paradigm (The Economics of Welfare: 1932) to distribute such costs according to market mechanisms. Under his 'materials balance model', which later evolved into the Polluter Pays Principle, he integrated costs for the environment resulting from pollution into material costs, so as to achieve a self-regulating economic mechanism that establishes efficiency in resource consumption. He called this process 'internalization', while he referred to the old market principle as 'externalization'. The theory, based on a critical interpretation of economic development, was ahead in its field and remained, for the time being, largely unnoticed by policy makers.

In the 40s and 50s alternative development approaches critical towards the western model were experimented on in communist or socialist states other than the Soviet Union. However, they became increasingly tainted by Stalinist interpretations of state-power and decision finding. These

early communist experiments with new social structures focusing on empowerment, social and gender equity, and new economic approaches, ended in an atmosphere of communist party dictatorship. This resulted in mass-migrations of people from communist countries to the 'West' through the then still permeable 'iron curtain' in Europe. The construction of the 'Berlin Wall' (1961) was the successful attempt to stop the increasing loss of human resources of the communist countries, but also disqualified communist concepts on development as an alternative. Not only for people in the West, but also, over time, for an increasing number of inhabitants of communist countries themselves. However, in regard to environment management, communist ideas focused solely on political and social issues based on the paradigm that humanity must subject nature to its needs and without regard to costs. Environmental destruction, thus, occurred in the Communist countries on a much larger scale than anywhere else.

Ideas like the internalized market and others, like the German 'Vorsorgeprinzip (Precautionary Principle)' based on 'good governance (civil society)' from the early thirties were revived in the sixties. An ever-larger group of concerned scientists, scholars and ordinary people were no longer willing to ignore the ongoing environmental degradation. One such group started to meet regularly on a private initiative in Italy and became later known as the 'Club of Rome'. Free from any government agencies and groups of interest they analyzed the environmental problems based solely on available scientific data and came to an alarming conclusion: the development paradigm has one flaw that renders the whole model obsolete. The development concept from the Truman era is based on the, until then unvoiced assumption, that all resources are infinite, when as a matter of fact they are quite limited. The club's subsequent publication 'Limits To Growth' (Meadows et al. 1972) showed the global impact of human development paradigms, and predicted that human societies were heading for the abyss of starvation and global chaos. The theoretical policy foundations of the developed world were questioned.

First failures in growth objectives

An additional blow to the development paradigm came at about the same time with alarming news from the third world: the development idea was not working! By the end of the sixties it became clear to the World Bank and the International Labor Organization that poverty increased precisely and diametrically to wealth; unemployment proved resistant to economic development; pushing industrial growth would not grow more food for the world population. While the United States and the OECD countries accumulated wealth unknown in human history, the developing countries were falling more and more behind and not only fighting with an increasing affluence gap to the North, but also within their own societies, where a new economic elite accumulated most of the benefits of the development process. This would finally lead to the creation of a 'North in the South' and the poorer social strata were left not to accumulate economic benefits, but an ever increasing, ever poorer population, which put ever more strain on the earth's limited resources ('Population Bomb', Ehrlich 1968). At the end of the decade the development paradigm had finally turned out not only to be a dead end, but also a vicious circle: in his article 'The Tragedy of The Commons' (Science, vol. 162, 1968: 1243-48) Garret Hardin destroyed the myth that the development paradigm is based on a self-regulating mechanism and drew the conclusion that the approaching crisis had no technical solution, but required a fundamental extension in political morality.

All these critical voices towards development were still mostly met with denial by governments and the industry, but found attentive followers among the population of the developed countries. For many of them the development process of the decade that brought the first human to the moon was also the decade that increasingly destroyed their habitats: rivers, lakes, coastlines and forests were rapidly turning into a brown, poisoned and dead slush or wasteland. When the Apollo Space Program sent the first pictures of our (still) blue planet from the moon, more and more people realized the infinity of space and the very finiteness and uniqueness of our world. A new coalition was beginning to form: scientists and people from all walks of life, the first stirring of the 'green movement'*.

The United Nations Conference on the Human Environment

In 1972 governments finally reacted and agreed on a United Nations conference on environmental problems. Being a Swedish initiative, grown out of worries about acid rain, levels of pesticides and heavy metals in fish and birds and the overall pollution of the Baltic, the conference was held in Stockholm. It introduced the environment as a completely new agenda of worldwide concern. Governments were forced to re-think their development approach and the ensuing attitudes. Stockholm was called 'The United Nations Conference on the Human Environment' and the name expressed the spirit of the international gathering: acknowledge the well-founded concern of the scientific evidence for environmental destruction, but claim the environment as belonging to humans and to economic development.

The introduction to the 26 articles of the final conference declaration states that '…the protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; …in the developing countries most of the environmental problems are caused by under-development; …along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each day; … to defend and improve the human environment…[is]…a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development (Stockholm Declaration 1972: Introduction).'

The approach chosen for the conference ensured that mainly pollution prevention became the issue of the subsequent action plan. The development paradigm itself was not questioned. Instead, its focus shifted again and became 'development for the human environment'. Environmental problems were seen as '…conditions of under-development…that can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance…(Principle 9)' and environmental quality should be achieved by'…appropriate national institutions [to be] entrusted with the task of planning, managing or controlling the environmental resources…(Principle 17).' Thus, the approaching crisis was not defined as the central conflict between differing needs of nature and humans, but declared the management issue of environment development.

* There were other comparable movements earlier than the sixties. However, what is termed the 'green movement' would be the first to be able to transcend national borders to a very high degree and, in form of independent movements and political parties would be the first to actively take part in regional and national policy decisions.

A first basis for change

However, some important new conceptual approaches towards the human/nature relationship were introduced by Stockholm. World legislation in general and the OECD Council in particular (1972 and 1974) introduced the 'Polluter Pays Principle' into economic development practices. Based on Pigou's market internalization, it put an end to direct subsidies for excessively polluting industries and clarified the issue of liability and responsibility for environmental damage, at least in theory. This decreased the relative (but not the total) amount of pollution occurring in the developed countries. However, it also intensified the moving of polluting industries into the economic periphery of the developing world. (Again, the principle 'out of sight is out of mind' was applied and it needed the industrial accident and subsequent mass poisoning and death of an Indian rural population in Bhopal in 1984 to remind the world that this was not a solution.)

Another positive result of the Stockholm conference for the environment was the creation and increased allocation of financial resources for environment related research. This proved to be an important step forward, indeed, as the following years generated the knowledge needed to finally establish local environmental events as a global phenomenon that was not part of development, but a direct result of it. Stockholm proved also important for yet another shift in the development paradigm itself. After years of equaling economic development with social development, in Stockholm the participating governments officially addressed them as two separate issues and thus laid the foundation to discuss and work on true equity between nations.

Development as the answer to development problems

In 1973 Robert McNamara, the president of the World Bank finally had to state that: '…despite a decade of unprecedented increase in the gross national product … the poorest segments of the population typically receive relatively little benefit … The upper 40% of the population typically receive 75% of all income… (Sachs 1999: 6).' But a solution was readily available in line with the development approach chosen in Stockholm. The problem of rural social and economic disadvantage was transformed into a program of 'rural development'.

During the rest of the decade and in the eighties this approach was repeated whenever research identified new problems in the developing world: development of local employment markets, of social equity, of basic needs, of women parity and interestingly, - after the Truman era had introduced the development paradigm to fight poverty in the first place -, of the eradication of poverty. But it had become clear that development indeed meant only two things: firstly, further increasing the affluence of the already affluent and secondly, further increasing the access of the economic system to human and natural resources for exploitation in the developing world. No single person or power was to blame, but the perpetual and ever-steeper spiral of production, output and consumption: the globe was being plundered by a system.

By the time of the Brundtland Report in 1987, less than 20% of the world population was consuming more than 70 % of the world resources. In essence, Truman's original idea to develop communities, a social entity, had, through its lack of regulating mechanisms, developed into an advocate and implementer of a worldwide free market economy, where all advantages were with the rich and all disadvantages with the poor. This trend was only softened in countries were social and political structures, like for example in many parts of Western Europe, provided for participative regulating

mechanisms that were able to introduce social and ecological concerns to government policies and their implementation. The development concept embraced all emerging problems with just more of the same and development turned into big business. The world was not solving its problems, but it was managing them at a profit for the industrialized countries and a growing upper and middle class in the developing world that was helping to implement accelerated economic growth.

The 'Brandt-Report'

Starting with the embargo of the oil-producing countries, the decade of the seventies also brought the first threat of a worldwide recession and many industrialized countries had to learn to live with much reduced growth rates. Although the average standard of living of their populations still increased, unemployment was on the rise and threatened to reintroduce poverty to some extent; the economies of the developed world struggled to keep up with their own expectations. While the sixties and early seventies had started to raise worldwide awareness on social issues and the environment, the Independent Commission on International Development Issues prepared the way for an extended perspective under its chairman and former German Chancellor Willy Brandt. The so-called 'Brandt-Report' (North-South: A program for Survival: 1980) finally brought a third constituent, the economy, into the discussion. 'It is clear that the world economy is functioning now so badly that it damages both the immediate and the longer-run interests of all nations (Brandt-Report: 267).'

The report provided an analysis of the world situation that successfully linked deficiencies in social human development with the economic structure introduced to the world under the development paradigm. It called on decisive reforms regarding the guiding principles of commodity trade, energy consumption, industrialization, investment, technology transfer, the world monetary order and the financing of development. In its 'Program of Priorities (North-South: chapter 17)' it called for a summit of world leaders to initiate a direct dialogue between North and South on these issues. It called to surrender national economic self-interest and priorities to an international program of assistance and reorientation in development strategies in order to lesson the burden that the existing economic system put especially on the developing nations. The Brandt-Report came close to Garret Hardin's call a decade earlier for a new morality, expressing the hope that the report could 'contribute to the development of worldwide moral values (North-South: 7)'.

On the road to sustainable development

The reforms undertaken in the wake of the 'Brandt-Report' brought a dramatic increase in worldwide economic growth and created the first newly industrialized countries (NIC), but the general trend towards a global crisis could not be broken. Although the direct relationship between economic structure and social development became the center of new policy planning and implementation, environmental issues were only slowly being perceived in an ecological, and thus global, context. This changed with the first signs of global warming, accelerated desertification, the depletion of the oceans and the ozone hole. Humanity was reminded that an increase in economic efficiency does result in an improved economy, but not necessarily in an improved environment. The finiteness of the world's resources and thus the finiteness of growth were brought back into focus.

In 1983 the General Assembly of the United Nations established the World Commission on Environment and Development under her chairwoman Gro Harlem Brundtland. In its terms of

reference it united the development paradigm with concepts of the ecology. The development triad of economy, human society and ecology was described under the term 'sustainable development'. When the report was published in 1987 and introduced its 'new' and 'different' development paradigm, the global environmental crisis had already seen the catastrophic atomic reactor meltdown in Chernobyl (1986).

'Our Common Future', The Brundtland Report.

The World Commission on Environment and Development opened up a variety of new agendas to be considered by humanity. All of them find their roots in the unification-process of the development triad of economy, human society and ecology. While in the early decades of development topics of world importance, like poverty reduction, equity, growth, food production, erosion, pollution etc., where mostly considered in isolation, the Stockholm Conference and the subsequent series of international meetings and reports (culminating in the "Brandt Report') introduced the concept of an interrelated world-system following common constraints. With the 'Brundtland Report', ecological thinking was introduced in policy and strategy development to answer the global challenge. Economic development was now being interpreted as a system of interdependencies similar to those existing in ecological systems.

This portended a radical change in perspective towards the development paradigm and finally led to the Earth Summit of Rio de Janeiro in 1992. However, by introducing new conceptual approaches only analogue with, and not based on, ecological principles directly, the multitude of management tools devised after the report simply streamlined economic procedures applied in development.'…We have in the past been concerned about the impacts of economic growth upon the environment. We are now forced to concern ourselves with the impacts of ecological stress – degradation of soils, water regimes, atmosphere, and forests – upon our economic prospects (WCED 1987: 5)'.

Sustainable development focused on seven agendas that were seen as the main components of the challenge for humanity: Population control, human resource development, food production, bio-diversity, energy, industry and urbanization. These agendas were circumscribed on a national level by assessing the different stages and needs of nations in accordance with their level of economic development. By linking them through 'the Commons and its management', the report tried to unify the needs of humanity with the needed action to sustain the ecology. Education, empowerment, knowledge transfer, financial aid, administrative adaptations, equity and others were identified as local development agendas. The need for an international legal framework of implementation principles was seen as a must for an international cooperation that aimed at an increased efficiency and thus an increased effectiveness of programs to solve the identified problems.

In regard to human societies 'Our Common future' called for more equity among human societies and mechanisms that could effectively correct disparities in economic and political power on a local, regional and worldwide level. In ecological and economic terms humanity was to implement a development policy that would take no more potentially renewable resources from the natural world than could be replenished naturally while not overloading the capacity of the environment to cleanse and renew itself by natural process. It thus addressed the problem of consumption and the need to lower it wherever possible. (In the years to come the world would see remarkable progress in, for example, energy efficiency, but also a remarkable overall increase in growth. In

the end any reduction in energy units consumed per unit of work achieved would be more than offset by the overall increase in energy need of the world.)

The solution to these challenges was already defined on the first page of the report: '…The human race relies on the environment and therefore must manage it wisely (Brundtland: Introduction).' Thus, more efficient management of the environment was approached on an increasing scale and all major organizations like the World Development Bank (WDB), the General Agreements on Tariffs and Trades/World Trade Organization (GATT/WTO), United Nations (UN), as well as smaller, but nonetheless influential institutions, like for example the Business Council on Sustainable Development (BCSD), instigated ever-new programs and concepts. Their united efforts firmly embedded the ecology as a new field of investment in economic thinking, but failed to establish ecological thinking into economic paradigms. 'Green' became a popular label for selling products, but production itself was in most cases not ecologically conform.

The term 'environment', once it had been introduced into international problem perception and negotiations, was crucial in discovering the plight of nature under the impact of the development paradigm in the past, but was now lost to business and treated accordingly. While the report identifies problems and conflicts of the world system correctly and in great detail, the crux of the problem is seen in the finiteness of resources and not in the development paradigm's principle aim to raise the standard of living of the world population according to definitions derived from the accumulative form of economics. The management tool was to be extended to 'the efficient management of natural resources', so that humanity could meet increased consumption needs of future generations. The Brundtland Report thus epitomizes the dawn of the modern age human being and its metamorphosis from homo industrialis to homo efficiensis.

Rio's outset

The period after the publication of 'Our Common Future' (Brundtland Report) saw an intensive search for a new conceptual basis of the development paradigm. Soon the realization set in that the rate of humanities resource consumption was the core of the conflict between nature and humanity, and reducing consumption the only viable alternative. Alarmed by the prospect of loosing their development perspectives, the North in the South insisted on their right to increase consumption further and in the Beijing declaration of 1991 the Group of 77 defined their agenda for the Summit in Rio: '…Environmental problems cannot be dealt with separately, they must be linked to the development process, bringing the environmental concerns in line with the imperatives of economic growth and development. In this context, the right to develop for the developing countries must be fully recognized (Beijing Ministerial Declaration: 19.6.1991)'.

When the then President of the United States of America, George Bush, declared at the outset of the Summit in 1992 that '…the standard of living reached by the U.S. citizens is not open for discussion…' a kind of ecological 'Mexican standoff' between the North and the South set the tone for the opening curtain of the conference. The results achieved were therefore much less than had been demanded by some scientists and hoped for by the ecologically concerned.

The world situation had been assessed in sufficient detail and in recognition of interdependencies. Now the governments of the world could hold a conference to cover all urgent issues and propose

a program of action that was seen as the first common response of humanity to the common challenge of development.

The geographical North-South division fades

Thus, the Earth Summit in Rio de Janeiro was to be the conference where environmental concerns would be addressed, assessed, analyzed and prioritized on a global scale, with the pre-defined goal of developing an action plan. By 1992, the year of the conference, a worldwide awareness on environmental issues, ecological systems and the global development crisis had been achieved. In accordance with the 'Brundtland Report' it was perceived from the outset of the summit that many environmental issues could only be approached by first bridging the fundamental gaps between the different stages of development of the participating nations. Although a number of NIC countries, especially from Asia, had moved out of the economic periphery, the world was basically still divided into those 20% of humanity that used (by then) roughly 80% of the world's resources, e.g. the North, and humanity's remaining 80% that used 20% of world resources, e.g. the South. However, the North-South conflict of the sixties and seventies was very different in character from the one in the early nineties. By now, the conflict had been transported onto the national level of developing countries, where an economic elite of upper middle and higher classes was acting as a 'North' within the 'South' and consuming most of those 20% of resources not used by the industrialized world.

The Brandt and Brundtland reports had worked for some change in the relationship between the industrialized and the developing world. Equal communication had been established and equal rights at least in principle. But especially the latter one turned out to be the double-edged sword that was to dominate the outcome of the conference, as equal rights were defined in terms of economic thinking. From the North's point of view the term 'equal rights' was interpreted stressing equal responsibility. In other words, a consumer is not liable for the costs created by production, but only for those created by consumption. And as 80% of world resources consumed by the North originated to a very large extent in the South, the North was only willing to be responsible for the impact of its consumption, if the South was willing to equally reduce consumption and adapt environmentally and ecologically conform policies for its development.

The poor are marginalized

The outlook for the South was different. The new emerging middle class, even in extremely poor countries like Bangladesh, did not want to see an abrupt end to their development success of the booming eighties. They wanted to make sure that efforts to keep the global ecology intact would not interfere with their prospects for further economic development. For them, the resource demand of the North was at the core of the problem and 'equal rights' was understood as responsibility equal to means. Although this conflict looked like two different agendas, it was based on a common denominator, e.g. the economy, which could be conveniently translated back into development and economic growth. The RIO-Declaration was thus seen as a success in almost all participating countries, as it could address the interests of the North and South equally well: '…The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations (Principle 3: Rio-Declaration).'

The RIO-Conference established the pattern for future development, which will also be the basis for the next Earth Summit: the North provides knowledge, expertise, standards and financial aid to lower environmental impact of resource allocation, production and consumption in the developed and developing countries so as not to lower the world's development prospects, while the South initiates reforms and establishes administrative structures so as to enable the North and the North in the South to implement sustainable development worldwide to the advantage the economic system's efficiency. The focus in development efforts remains but a rather more complicated version of Truman's development paradigm, linking social development in principle with the implementation of economic growth. Vital issues of the declaration thus become indirectly part of economic objectives, like for example: '…eradicating poverty as an indispensable requirement for sustainable development… (Principle 5); …to achieve sustainable development and a higher quality of life for all people… (Principle 8).' A pre-condition of this approach remains access to economic resources and by linking social development to market mechanisms, the competition for these resources becomes a central force also within all social strata. As social pressure increases to do materially better than others, focus on economic self-interest is introduced, and those loosing out in the competition are increasingly marginalized.

The hegemony of economics in sustainable development

The Rio-Declaration addresses many important social and political issues first outlined by the Brundtland Report and their inclusion in the action plan (Agenda 21) would have a tremendous impact on human social development and thinking to come. However, by choosing the established concept of sustainable development and management, which is directly linked to economic principles, those changes for the better were put at risk from the very beginning. The melding of environment and economic development into one combined agenda was about to turn the whole globe into one single resource for sustainable development. There would be the resource-person, knowledge resources, community resources, resource-saving consumption (what an oxymoron!), cow-dung as energy resource, recoverable input resources and so on. Through its program of implementation, Agenda 21, the world was preparing to send and receive experts on sustainable development all over the world to classify and divide our planet and everything on it into usable units for controlled and sustainable consumption. Concerning global ecological problems, the approach to save the environment through an increase in through-put efficiency was an illusion that would water down the most pressing issues in environmental protection, namely to lower overall consumption. And soon enough the term 'sustainable economy'* lost its focus on environmental protection and was in many developing countries interpreted as sustaining the economy at all costs and not as a form of economy that is environmentally conform.

Chapter 2
The Results of the Earth Summit

Agenda 21

Agenda 21, the 1st Earth Summit's plan of action, aimed to achieve a sustainable balance between consumption, population and the Earth's life-supporting capacity. It does so by addressing poverty, excessive consumption, health and education, cities and farmers by means of suggesting ways for technology and knowledge transfer, improved funding for sustainable development, (international) legal restructuring and equity. The detailed total of 37 agendas (excluding 2 preambles and accounting) were divided into 3 main sections, with different topics to each section as follows:

Social and Economic Dimensions: International Cooperation, Combating Poverty, Changing Consumption Patterns, Population and Sustainability, Protecting and Promoting Human Health, Sustainable Human Settlements and Making Decisions for Sustainable Development.

Conservation and Management of Resources: Protecting the Atmosphere, Managing Land Sustainability, Combating Deforestation, Combating Desertification and Drought, Sustainable Mountain Development, Sustainable Agriculture and Rural Development, Conservation of Biological Diversity, Management of Biotechnology, Protecting and Managing the Oceans, Protecting and Managing Fresh Water, Safer Use of Toxic Chemicals, Managing Hazardous Wastes, Managing Solid Wastes and Sewage and Managing Radioactive Wastes.

Strengthening the Role of Major Groups: Women in Sustainable Development, Children and Youth in Sustainable Development, Strengthening the role of Indigenous People, Partnerships with NGOs, Local Authorities, Workers and Trade Unions, Business and Industry, Scientists and Technologists, Strengthening the Role of Farmers.

Two World Summits

All the topics above where introduced to the summit and discussed by representatives and senior officials of 179 governments, hundreds of officials from United Nations organizations, municipal governments, business, scientific and other groups as well as 18.000 participating non-government officials from 166 countries. In this respect the Rio summit was a really unique event in human history and truly deserved the name 'Earth Summit'. However, the huge number of participants also portended compromises that had to be made in order to reach an agreement. The process was not always smooth.

The participating groups generally split into government (GO) and non-government (NGO) representatives. The negotiations of the first resulted in the Agenda 21 action paper. The latter groups organized 'parallel conferences' that published their own demands in form of 'alternative treaties' and otherwise tried to influence government representatives to include at least part of their agendas in the official summit papers. Major differences in opinion can be summarized in NGOs putting more stress on the environment

by insisting to acknowledge the concept of sustainability in the development process prior to that of economic growth. Measures proposed by the NGOs in the context of the social agenda were much more far-reaching in regard to structural changes of the development process and radical new approaches towards financing and capital flows. They interpreted problems in the development process as a conflict between the poor and the rich in general, rather than separating the North from the South geographically and adhering to the old North/South pattern introduced by the Brandt Report.

But even within the GO and NGO factions themselves, unity in opinion was not easily reached. Europe had, for example, a much more ecologically friendly position towards development, than the USA, Canada, Japan and Australia. NGO opinion was split between fundamental and pragmatic approaches not only regarding the level of cooperation with GOs, but also regarding the catalogue of demands in the alternative treaties*.

The Proposed implementation process

The official result of these compromises is best reflected in the last eight agendas or proposed means of implementation, e.g., how to bring the agendas to the world populace. It is here that Agenda 21 developed its strength as a document clearly intending to point to the future. But it is also here that we find the roots of a number of weaknesses that became apparent in the implementation process to follow over the next 8 years:

Financing Sustainable Development

The annual costs to implement policies for 31 of the action plan's 38 agendas were given with 561.5 billion US$. Excluded from the estimate was the implementation for Consumption Patterns, NGOs, Business/ Industry, Farmers, Organizing Sustainable Development and International Law. Funding was pledged to be provided by developed countries with a target of 0.7 % of their annual GNP by the year 2000 and funding should be organized by major international funding organizations, such as the International Development Association, regional development banks (for example the ADB), the United Nation's Global Environment Facility and UNDP.

Technology Transfer

The technology transfer was to be built on hardware and systematic training of craftspersons, technicians, middle-level managers, scientists, engineers and educators in order to provide developing countries with informed and alternative choices.

Science for Sustainable Development

Implementation was seen on three levels, e.g., advanced sciences in general (to develop better tools), ecological and social sciences (to improve our understanding of the global and human system) and indigenous and local knowledge from various cultures (to provide alternatives better adapted to locality). The tools proposed were a variety of international centers, exchange visits, in-field training and measures to stop the exodus from and increase the number of scientists in developing countries.

* The extent of those treaties is rather large and covers all topics addressed by the official conference. As presenting them here in detail would clearly go beyond the scope of this reader, in the annex an on-line source is listed for parties interested in the complete text.

Education, Training and Public Awareness

The implementation focused on giving people access to information regarding sustainable development through making environment and development education available to people of all ages. The tools proposed were to involve children and students in topic related research, set up training programs throughout all sectors of society, give access to expert services to local communities, bring indigenous knowledge into education and training and involve the media in promoting sustainable development.

Creating Capacity for Sustainable Development

Implementation was based on a worldwide assessment per country of what would be needed, which should be finished by the year 1994 and await further recommendation by the United Nations in 1997, at the latest. Tools envisioned at the time were assistance in form of skills, knowledge and technical know-how. They were to be provided by the United Nations, national governments, municipalities, NGOs, universities, research centers, business and other private organizations. UNDP was given responsibility for mobilizing international funding and coordinating programs for capacity building.

Organizing for Sustainable Development

This agenda was to be under special responsibility of the General Assembly of the United Nations, which should create a high level commission on sustainable development. The Commission was to monitor agenda 21-implementation, and draw on expertise from UN organizations, international financial institutions, business and scientific groups. Natural resource accounting, environmental economics, international environmental law and treaties where considered a special responsibility of the commission. UNDP should act as lead-agency in pooling and organizing needed resources.

International Law

Treaties, existing laws, a framework to settle development disputes and standards should be prepared to support sustainable development. A scientific and technical expertise should be built up to support participating nations in agreement negotiations.

Information for Decision-making

To increase availability, quality and accessibility of data on sustainable development was seen as the major issue together with the development of new indicators to provide information on sustainability. The health of the environment and economic development should be a base for the creation of a 'development watch'.

The Rio-Conventions*

Two important UN framework conventions became part of the Earth summits declaration. They were on climate change and bio-diversity:

* Desertification was addressed by the Rio-Conference in chapter 12 of Agenda 21, but a convention to combat desertification was only added after the conference. It is therefore not included here, but an on-line reference is given in the annex. Similarly, forest management was only addressed in form of a 'Statement of Principles on Forest Management' and not in form of a convention. An on-line reference is given in the annex.

United Nations Framework Convention on Climate Change

The convention would set up a specific group to help in the transfer of funds and technology to assist nations in controlling greenhouse gases and dealing with climate change, for example the Global Environment Facility of the UNDP, the United Nations Environment Program and the International Bank for Reconstruction and Development.

Following the UN charter, the convention states that countries have the right to exploit their own resources, but also the responsibility to ensure that activities under their control do not cause damage to the environment beyond their borders (Stockholm: 1972). It then calls on the widest possible cooperation by all countries and their participation in an effective and appropriate response to climate change, including laws and the protection of natural processes. The ultimate goal was described as stabilizing greenhouse gases in the atmosphere at levels that will not dangerously upset the global climate system. However, '...On a person basis greenhouse gas emissions from developing countries are still relatively low. For these countries, the first and overriding priorities are economic and social development, and eradication of poverty. The developing nations' share of global emissions will grow as their economies expand and they use more energy (UN Convention on Climate Change: 1992).'

Developed countries are called upon to help developing nations to deal with the requirements of the convention and the effects of climate change by:

- Providing money and technological assistance to help these nations measure flows of greenhouse gases
- Assisting countries that are particularly vulnerable to harmful effects of climate change to meet the costs of adaptation
- Providing environmentally sound technologies and know-how, as well as supporting the development of technologies within these nations

All nations were called upon to:

- Provide information on quantities of greenhouse gases they release, and how much is absorbed by their sinks
- Publish regular up-dates on programs to control emissions, and to adapt to climate change
- Promote the sound management and conservation of such greenhouse gas sinks as plants, forests and oceans
- Cooperate in planning for the impact of climate change on coastal zones, water resources and agriculture
- Cooperate in the protection of areas prone to floods or drought, particularly in Africa
- Inform the public about climate change and its effects, and promote and facilitate public participation in developing responses

The end of the convention states that: '...Although climate change needs to be dealt with, nations should also promote an international economic system that would lead to sustainable economic growth and development in all countries, particularly in all developing countries. This will make them better able to deal with the problems of climate change. Measures taken to combat climate change should not be used arbitrarily to restrict international trade (UN Convention on Climate Change: 1992).'

United Nations Convention on Biological Diversity

'The worlds biological diversity - the variability among living organisms - is valuable for ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic reasons (Rio Convention on Biological Diversity: 1992)'. With these opening remarks and the conclusion that some human activities reduce diversity the convention stresses the need to conserve it prevent its loss by providing substantial investments, which '...will pay off with a broad range of environmental, economic and social benefits.' The world should make sustainable use of its components so as not to lead to its long-term decline.

Nations that join the Convention pledge to:

- Identify the components of biological diversity important for conservation and sustainable use, and monitor activities, which may have adverse impacts on this diversity
- Develop national strategies, plans or programs for the conservation and sustainable use of biological diversity
- Make conservation and sustainable use of biological diversity part of planning and policy-making
- Use the media and educational programs to help people understand the importance of biological diversity and need for measures to conserve it
- Establish laws to protect threatened species, develop systems of protected areas to conserve biological diversity, and promote environmentally sound alternative around those areas
- Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, helping local people to develop and carry out those remedial plans
- Establish means to control the risks from organisms modified by biotechnology.
- Use environmental impact assessment, with public participation on projects that threaten biological diversity, in order to avoid or minimize damage
- Prevent the introduction of, control or eradicate alien species, which threaten ecosystems, habitats or species

The traditional knowledge of indigenous people in the conservation and sustainable use of biological diversity should be used by nations. The Convention then continued saying that:

- Countries are to facilitate access to genetic materials within their borders for environmentally sound use. Access will be allowed with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other use of genetic resources.
- Developing countries are to have access to environmentally sound technologies that they need for the conservation and sustainable use of biodiversity. This access will be under fair and most favorable terms, and will recognize patent rights.
- Developing countries are to have access to technology that makes use of resources they provided. They are also to have a role in biotechnological research.
- Developing nations are to receive technical and scientific assistance, so that they can develop their own institutions and expertise in sustainable use of biological diversity.
- Countries are to consider the need for an agreement on the safe handling and use of living organisms modified by biotechnology.

Financing of programs of the convention was to be provided by developed countries that sign the convention and shall provide new financial aid to developing countries to help them implement terms of the Convention. The initial funding will be handled by three United Nations organizations involved in environment and development.

Unsolved problems and persisting conflicts

'...They hoped for much more than actually emerged. ...They sought on a sweeping Earth Charter; conventions to assist development whilst containing binding and quantified commitments on greenhouse gas emissions and the preservation of species and forests; and an Agenda 21 backed with targets of achievement and agreement on associated funding requirements, mechanisms and contributions for achieving those targets (An analysis of Rio '92: Earthscan 1993).'

The above comment describes in one sentence the central weakness of the Earth Summit's result. Nations had met with the intent to formulate an action plan that would define the 'newness' of the 'new' sustainable development and bind it to fast and definite steps to solve the world's most pressing problems; a plan that would initiate substantial changes in the interpretation of the development paradigm. Instead, Agenda 21 turned out to be just an agreement on how to interpret the situation assessed by the Brundtland report based on economic considerations. Even the 'Proposed Means of Implementation' of the Agenda 21 document provides mostly objectives, pledges and tools to link the, in principle, unchanged development paradigm to even the remotest corners of the globe, but refrains from specifying concrete measures.

The development of affluence

Sustainable development was being turned into an instrument to increase consumption - and guarantee the right to do so - analogue to ecological principles, e.g., within the bounds of the self-healing capacity of our planet. While the idea had instant charm and logic, it denied the fact that the rich 20% of the world population already consumed beyond the limits of natures system of self-repair permissible for all of humanity combined. This fact had and has implications on the North-South conflict, which had transformed in principle into a conflict between affluent and poor populations, independent of geography. In order to stay within the limits of ecological sustainability and implement the right of the less affluent to development at the same time, it would be necessary to shift the balance of consumption gradually away from the rich. Thus equity in consumption and production could slowly be approached, and with an increased economic weight, the South* could come closer to achieving one of the Brundtland Report's demands: to correct disparities in economic and political power, that also showed increasingly on a national level within developing countries.

Lack of alternative vision on development

But the idea to shift consumption without linking it to an overall worldwide accelerated economic growth was and is a difficult topic in development discussions, and always interpreted as a call for the North and

* The term 'South' is used in a social context and generally refers to the poor strata of human societies and the term 'North' to the affluent, independent of geographical location. Thus the origin of the term 'The North in the South' that can be translated as 'the rich parts of societies in developing countries'.

the North in the South to 'stop developing'. Thus, Rio had not much to suggest in the form of concrete measures to bridge the development gulf. Instead, the very extensive catalogue of assessment tools of Agenda 21 indirectly suggests that it is, as it was before, up to the poor to catch up with the rich. Rio failed to define what might be called a 'development paradigm based on limited consumption and output' for the planet's sake. The conference did not even estimate the sustainable development implementation costs for such central issues as consumption patterns, NGO's, business and industry, farmers, organizing sustainable development and international law. Instead of at least proposing 'initial' budgets, these topics were simply excluded from chapter 33 of Agenda 21.

Economic interests versus ecological needs

It is therefore of little surprise that another central persisting conflict following the Rio conference is that between national sovereign interest on the one hand, and international responsibilities on the other. Only truly obvious transnational problems, such as water management, acid rain, climate change and biodiversity were addressed in the form of a convention directly; however, only by pledging change and defining ceilings to certain output many years in the future. Indirect impacts, such as flooding by rivers breaking their banks in one country because of intensive deforestation in watershed areas of other countries upstream, were considered under legal terms that rather favored national concern (see Rio's 'Statement of Principles on forests: 1992).

Throughout the Rio agreements the only consistent factor is that of economic growth and, in case of conflicting agendas, there was always a clause to give the economy priority. For example, the Climate convention states that '...Although climate change needs to be dealt with, nations should also promote an international economic system that would lead to sustainable economic growth and development in all countries, particularly in all developing countries. This will make them better able to deal with the problems of climate change. Measures taken to combat climate change should not be used arbitrarily to restrict international trade (UN Convention on Climate Change: 1992).'

The world was approaching a dangerous policy: increase output in order to increase affluence in order to increase capacity to deal with increased global warming (created by this very process!) through increased management efficiency and control. The development paradigm of the Truman era was flawed in regarding resources as limitless. The newly introduced and through the Rio Earth Summit defined 'sustainable development paradigm' is flawed in that it proposes limitless human capacity in guiding, directing and controlling consumption. Seen in this light, the absence of specific commitments in Agenda 21 to actually reduce consumption makes sense, as they would not be needed. Instead the focus could be placed on capacity building and increasing efficiency in all aspects of human activities that even remotely relate to consumption. This included nature, representing our resource base. Humanity was getting ready to truly embrace the world as one system and prepare it for sustainable development, e.g., sustainable consumption, e.g., sustainable economy. And once the latter phrase had been coined, the call for a more efficient, unrestricted, uninhibited and free exchange of resources was just around the corner: globalization - the new stage for the race to become a member of the cream of the crop of the affluent.

Chapter 3
A Theoretical Excursion: Development and Economics

The discovery of the ecology and its principles as the decisive limiting factor for human development prospects has led to the extensive use of the word sustainability and sustainable development in all human affairs. However, development in natural systems includes creation in periods of growth and destruction in periods of regression and both are aligned around sustainability in the zone of equilibrium. To stay within this zone, nature needs to give each life form a set of limiting factors. The human induced global crisis is about human development paradigms basically ignoring this fact and trying to achieve constant and uninterrupted growth without limits in consumption; in the process pushing ourselves and many other living creatures with us outside of the zone of equilibrium into a prolonged phase of regression or, depending on the point of view, destruction.

However, what is at stake here is not nature (which will still be around after all of humanity has ceased to exist, even if we master the current crisis), but nature as we know it, which is ultimately the nature humans have adapted to live in. Many indigenous cultures know this and, although they lack any 'scientific' knowledge of ecological principles, they live and develop 'instinctively' within the zone of equilibrium set by their natural environments. Only because humanity as a whole lives without apparent limitation to consumption, has the scientific concept of sustainability become such a key-component for all of humanity's future, including otherwise sustainable indigenous cultures. Sustainability is therefore, even if it develops its paradigm analogue to the ecological system, basically a concept needed by those who constantly out-consume nature's self-healing capacity in order to sustain their life-style. (Which gives us yet another concept of sustainability.)

But if many human cultures have been able to live sustainable without 'scientific' knowledge of the ecology, why and how does modern human society threaten its own survival? What is ecological sustainability and how does it relate to development and economic growth? To find an answer to these questions, it is crucial to look at the theoretical context in which the term ecological sustainability itself is applied. Only if we understand the inherent contradiction created by applying it to development based on traditional, accumulative economic growth of the free market is it possible to find alternatives and improved policies to create a truly ecologically sustainable human development.

Ecological sustainability and development

In ecological terms sustainability can be defined as a system of organization that uses least of available resources for the most beneficial gain for current and future system maintenance or growth, while at the same time not taking more potentially renewable resources from the natural world than can be replenished naturally and does not overload the capacity of the environment to cleanse and renew itself by natural process.

All consumed resources are utilized to introduce change in one form or another. This is true for the natural world and for human societies alike and the process of change is called development. Citing

Webster's new world dictionary, to develop means '...to make fuller, bigger, better etc....' Accordingly, development would mean the act or process of making something fuller, bigger, better etc., which is a change of form or status by means of work being performed in order to achieve a net-gain (in form or status). Whenever work is performed, potential energy is lost and available resources are consumed. Development is thus

- Dependent on a supply of resources over the period of time it takes to complete a change and
- In the process automatically alters the distribution pattern of available resources of the environment it occurs in.

Although the characteristics of any individual development process are always unique and specific, the development of one system affects the development opportunities of other systems that share the same environment, locally, regionally and globally.

Looking at the earth's ecology, we can see that change is a common and constant phenomenon of our eco-sphere. This, however, does not mean, that all systems develop. Change for any one system depends on the availability of resources. Positive change for one system results invariably in a decrease of available resources for at least one other system sharing the same environment and resources. For those systems that face a decrease of available resources, a negative development or regression will occur if they cannot shift to other pools of resources. Through evolution nature has given organisms that can sustain themselves on least resource consumption a survival advantage. For example, in an overgrazed environment those plant eaters with a more efficient digestion and energy extraction can live on less food than others and thus have a bigger chance of surviving an extended period of limited food supply. This principle keeps change to the environment as limited as possible and thus maximizes the number of individuals that can be sustained within a given area without destroying its own resource base.

In the world's eco-system millions of life forms share solar and earth capital* and interact with each other as they share the same biosphere. It is close to impossible to determine the exact characteristics and consequences of the development/regression relationship for each life form individually. Instead, scientists summarize net-losses and net-gains in a group of systems in what is called the "natural equilibrium". The characteristics and significance of a natural equilibrium* are defined by

- The number of systems selected for consideration
- The period of time for consideration, and
- The extent of a study- or ground-area in any given environment considered.

Three aspects are instrumental in describing equilibrium. They are

- Physical development (or regression)
- Physiological development (or regression) and
- Organizational development (or regression).

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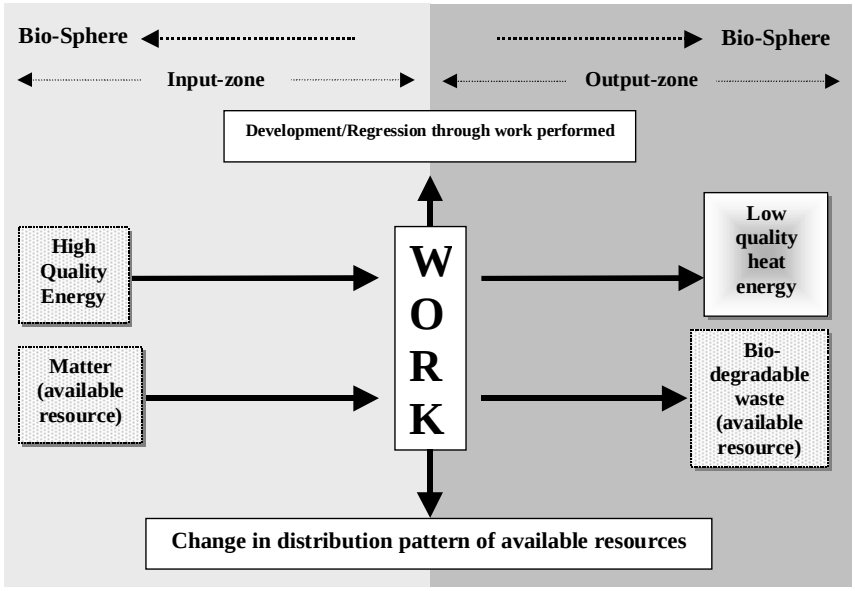
* The earth's natural resources and processes that sustain humanity and other species (Miller; Environmental Science: 168/9)
* The natural equilibrium is, however, not to be seen as an instrument enabling scientists to predict future development of a species and their populationk, but rather as one to assess a status over a limited period of time and allow for certain extrapolations. The mosaic of all species combined exhibits in regard to population development a more open-ended behavior as described by chaos theory.

A physical factor in development is, for example, the availability of resources or the size of a population. Through a series of development and regression over time, a stable population is reached in the form of a consistent average, or equilibrium, between increase and decrease of the number of individuals. A physiological factor would be the bodily response of a living organism like, for example, an insect to environmental factors like an insecticide; or the embryonic growth of an organism before it is born. As a general rule it can be said that the more complex the organism, the slower any physiological development. An organizational factor is, for example, the behavioral change or group response of carnivores towards hunting due to an increase or decrease in the number of pack-members or the number of prey. All three factors are inter-linked and represent different levels on which development can take place.

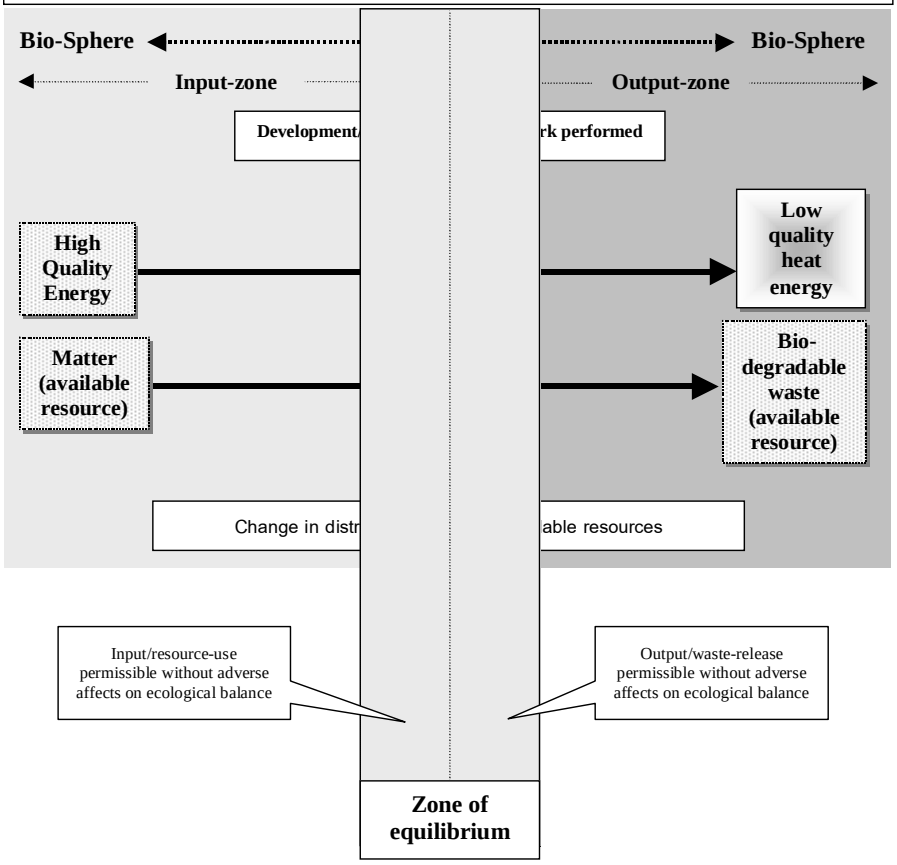
We can summarize a general ecological definition of sustainable development in a natural environment as follows: The process of physical, physiological or organizational change in or of a system or form of organization over a period of time that results in a net-gain in form or status (for that system or form of organization). This gain is achieved through work, least use of available resources and the least change in resource distribution patterns. Nature regulates and limits consumption to an absolute minimum necessary. Thus, whenever one particular environment is threatened by over-consumption through, for example, overpopulation, any environmental damage is always well within the self-healing capacity of that environment. For any human society that would want to live sustainable, it would therefore be imperative not to take more potentially renewable resources from the natural world than can be replenished naturally. At the same time human consumption should not overload the capacity of the environment to cleanse and renew itself by natural process.

Figure 1: Energy/matter conversion principle to perform work



To attempt an ecological definition for sustainable development in the human environment we have to consider two additional human factors. In having highly developed brains and hands, humans are different from other beings in that they can create their own environment with the help of tools. Another important human distinction concerns the physiological factor, which is too slow to have an immediate impact on human social development. Instead, sustainability concepts in human societies need to consider psychological or attitudinal factors. In the natural environment, the physiological make-up of a living organism is the determining (limiting) factor of how available resources can be put to work. In the human social environment it is the psychological make-up of a society and its individuals that decide on how available resources are being used. One well-known example is that the Hindus of India do not consume their cows but regard them sacred, while for a large portion of humanity the cow is an important source of protein.

Figure 2: Utilization of resources within the zone of equilibrium



Therefore, human societal development concerns physical and organizational development based on the overall psychological make-up of its individual members and centers on three main aspects:

- As living beings, humans are part of nature and develop in accordance with opportunities provided in the natural environment, following ecological principles.
- As social beings using tools, they invent and shape their own environment, following human behavioral (cultural) principles.
- Using the economy as a tool to organize the resources of the natural environment for human consumption, they introduce and create the economic environment to the eco-sphere, following economic principles.

We can therefore define ecologically sustainable development in human societies as the process of physical, psychological or organizational change in or of a human system of organization over a period of time that results in a net-gain in form or status. However, to be sustainable this gain must be achieved through a process of work that takes no more potentially renewable resources from the natural world than can be replenished naturally. Total human resource consumption must not overload the capacity of the environment to cleanse and renew itself by natural process.

The sustainable economy: a contradiction in terms?

The economy is a management system to organize resources and their consumption or production; economics is the theoretical tool to describe this process. The foremost concern for the traditional, accumulative economy of the free market is not to sustain the ecology and natural world, but to satisfy human consumption needs. The tool that Rio, and the whole development process before that, proposes to achieve sustainability for human societies is economic growth. But the economy is not a natural, but an artificially created system of resource-flow management that uses available resources and economic capital to produce capital gain. Economic principles are always implemented in an artificially created environment. The resource-flow within an economy is thus not automatically environmentally conform, but needs to be consciously adapted to function within the natural world, so as to supply humanity with resources without adversely affecting our biosphere.

Therefore, contrary to natural or human society systems, for various reasons, a sustainability definition for economic systems poses some problems. A true-market economy does not aim at achieving the highest possible gain in energy extraction, which would be minimizing throughput, but at achieving the highest possible surplus of available resources for consumption by humans. The current indicator for this type of accumulative economy is the ‘Gross National Product’ or ‘GNP’. Economic development that maximizes throughput, the accumulative economy, is set apart from development on an ecologically sustainable basis.

The accumulative economy is still the dominant form of resource management by humans and the very central idea is to take more resources out of the natural environment than can be directly consumed, in order to build an external storage pool that extends the actual consumption needs. Although this consumption takes place in the natural world, e.g. our planet, its resources are first transferred from the natural environment to the human environment. Resources have not only been redistributed into a new pattern, but also taken out of natural systems, e.g. they are no longer available for consumption by other life forms. Re-introduction into the biosphere takes place only via defecation for biologically consumed

resources and/or in form of waste for socially consumed resources (which are either bio-degradable or not).

Humans developed societies and culture only because they were able to collect more resources than were actually needed to sustain the original human population. Through the introduction of excessive throughput, external storage and trade, humans excluded more and more life forms from access to their natural resources, thus creating the human environment. Humanity, although consisting of many individuals, has the environmental impact of one single organism with an "unnatural" consumption need for available resources, with human societies consuming more than all single human individuals combined. Being a human tool, the basic function of the economy is not the consumption of resources itself, e.g. potential energy is extracted to perform work, but the collection of resources to be stored, processed and distributed. The term sustainable economy can only be applied for an economy that uses least of available resources. Thus, attempting to forward sustainability for human societies without first leaving the GNP based or accumulative economy is not possible. Economic theories that emphasize least resource consumption have been suggested by, for example, Herman E. Daly, in what he calls steady-state economy or 'The economics of sustainable Development' (see bibliography).

A different potential energy source

Besides introducing storage, the introduction of a monetary system (financial capital) was another important step in the development of the economy. Money acts as an indicator of how many available resources are available for human consumption and are required for redistribution. Money becomes a substitute for the potential energy that would otherwise have to be consumed in order to give human individuals access to resources in a natural environment. It is thus a substitute for the resource itself and the act of collecting it. Money has become the major potential energy source of the human and economic environment, contrary to natural systems who take their potential energy from solar and earth capital, only. With a monetary system in place:

- Available natural resources can be transformed into financial capital.
- Resources can be stored outside of the natural and physical environment of the human using the resource.
- Humans can very efficiently exchange an available resource that is useless to a system with a useful one (trade).
- Resources do not need to be moved to become available for human economic consumption, but in addition can now be claimed by purchase and title deeds.

The introduction of a financial system has increased economic efficiency in collecting, distributing and providing consumable goods for humanity. As money itself has become a resource, it is possible for individual humans to store more resources than they could ever, either bodily or socially, consume in their lifetime. For the natural world, the cost of economic development based on maximizing throughput is therefore a rapid loss of available physical resources. This loss occurs when resources are consumed, e.g., removed into human storage or transformed into economic capital. When the consumption rate exceeds natural need for the extraction of potential energy to actually develop and sustain the living human organism, environmental degradation occurs. Simultaneously and additionally, ordinarily available resources in the natural environment are transformed into non-available resources, e.g. the (non-biodegradable) waste created by humans. Waste creation often permanently removes potential

resources from the ecological resource cycle and at times even poisons the environment. This never happens in the natural world, where physical waste products of consumption always represent a new potential energy source for another organism.

Socially, we can observe a similar consequence with an increased replacement of the natural environment by the human environment. Development comes to a standstill for those societies that loose their access to resources directly convertible into potential energy via bodily consumption and that do not have the financial resources to acquire them otherwise. Ironically, the very source of humanity's wealth in available resources, the economy, has now become the source of poverty for most of humanity*. In the natural world, there can be hardship and misery for humans, but it always follows the rule of constant average, the zone of equilibrium, which means that there are 'bad years', but also always 'good years'. Only the economic environment knows the term 'poverty' and only the economic environment can create conditions where there are 'only bad years' for some of humanity. More and more humans are forced to live in environments that have been depleted of most of their available resources only to be stored externally in either their physical shape or in form of financial capital. These removed resources create 'never-ending good years' for the affluent 25% of the world's population (including affluent people outside of developed countries).

As long as humanity relies only on principles of the free market economy to guide human development, there can be no sustainability in the ecological and social sense. The amount of available resources is limited and with all physical areas of the eco-sphere claimed by humans directly through consumption (use) or indirectly through purchase, economic development in the longer-run must come to a standstill. The economy is but a very efficient tool of humanity to direct resource flows. Its aim is to create a constant surplus of available resources, which is the basis of human social development. The accumulative form of economy, the traditional free market economy, extracts the largest possible amount of resources from the natural world in order to create the largest surplus possible to maximize throughput. On the other hand, true ecological sustainability always aims at the least use of resources in order to avoid depletion, so as to subject an environment only to as much change as is absolutely necessary. Because of this contradiction it is not possible to define sustainable economics based on ecological terms. Thus, whenever the term 'sustainable economy' is used in connection with the GNP based economy, it ultimately only means to completely subject nature to humanity's needs. In other words, replace nature with a human environment that humanity hopes to run on ecological principles. The final goal is not to sustain the natural world, but to enable humanity to sustain its profits in disregard to ecological damage.

Chapter 4
Rio's Impact

Although contention about the Earth Summit's result was running high, especially among ecology concerned participants - who thought that economic considerations had too much influence on the negotiation process - Rio did have significance in bringing the environment agenda in its perceived importance on par with development. Agenda 21 tried to link ecological concerns with those of humanity on various levels, with one of the most important being the structure of human society itself. Main topics addressed related to empowerment and social equity and were generally approached through capacity building in a variety of measures ranging from knowledge transfer and dissemination to the support of NGOs and women/youth related activities or administrative changes of local authorities and strengthening the role of farmers. Special commissions, for example the Commission on Sustainable Development (CSD), programs of the United Nations and its institutions, and also projects from the private sector, took a leading role in the implementation process. The aim was clearly defined: initiate sustainable societies based on awareness and people participation; regionalize Agenda 21 by creating local agendas to bring the Rio decisions to the user level.

Local advances in human society development through NGOs

NGOs played a very important role worldwide in reaching objectives of sustainability and their numbers multiplied in the 90s*, including many Community Based Organizations (CBOs), networks and umbrella organizations. On a global level, the so-called 'Parallel Conferences' of NGOs during Rio in 1992 were held to prepare 'Alternative Treaties' and define a basis for sustainable development implementation independent of government positions. The new awareness and esteem of rural and urban communities towards the work with, through and of NGOs can be considered a decisive step forward in reaching social equity, or at least in creating a basis for its realization. However, local problems and agendas identified by those groups were very often different from what was originally envisioned by policy planners after Rio. Politics, local power structures and social dependencies per se proved to be of much more importance than environmental protection and/or the implementation of ecological sustainability. Democracy, social fairness and participation turned out to be the key agendas to forward change over the next few years in developing countries and not nature and the environment.

This had a downside and an upside. The latter was a vision of true independence from rigid social structures and at least a limited self-rule, which people took into their own hands to achieve. This trend was supported by an increasing influence of the sustainable development agendas on a national level, starting even before the Rio Conference. For example, in the 5th National Development Plan (1982 and 1986), Thailand introduced a social agenda separated from the one for economic growth and has continued

* This process already started in the 80s, but reached a first culmination in the 'Alternatie Treaties' of the parallel conference of NGOs in Rio de Janeiro in 1992. From then onward, the role of NGOs has constantly increased.

to do so ever since. The theoretical foundations and examples of practical implementation of a different approach towards development were very considerably expanded by his majesty the King's publications on sustainable development. This includes his proposal for a 'self-sufficiency' approach for social and economic development of the land. Its true capacity for development was demonstrated in many projects initiated and overseen by all members of the royal family.

With the rise of participation, once a community problem was identified, the increasingly popular instrument of the NGO was used to organize activities to solve those problems (see also: SLE/CATAD: Community Based Organizations: 1998). It was not long before a system of networks and umbrella-organizations, for example in Thailand the 'Assembly of the Poor', sprang up and actively pursued political change. As communities were being politicized and developed their own local agendas in their own terms, two important goals of the Rio conference were being approached: social development and strengthening the role of major groups.

The relevance of sustainability

The downside was a distortion of environment and sustainability issues proposed by Agenda 21 due to its lack of imminent significance for a large part of the rural population. Especially among poorer villages and local communities the relative scarcity of resources had already resulted in more or less self-sufficient and leveled consumption patterns. Their need for a sustainable development paradigm was relatively small and the more pressuring issues for them were poverty and social justice. Contrary to the poorer segments of society, a growing middle class in developing countries and especially in city's discovered consumerism and western life-styles and demanded more and faster growth. To satisfy their needs, economic growth at all costs on a national level was - especially but not exclusively for developing nations - more important than environmental protection on the local level.

Structural limits of the sustainable development implementation process

Structural or bureaucratic deficiencies in administration in both developing and donor-countries aggravated problems in the implementation of Agenda 21 objectives. For example in Naan Province (Thailand), after the initial success of hill-tribe programs (Thai Phayap) in internationally marketing hand-woven products through 'Fair Trade', the villagers wanted to include silver ornaments in their program. This would generate more profit and take less time than making place mats. However, as some of their silver raw materials would be pre-fabricated and 'Fair Trade' regulations do not provide such an option in production in their program, they were not allowed to market them. To the hill-tribes the message was interpreted as follows: villagers in developing countries are supposed to weave mats and clothe in a lush tropical setting to live happily ever after. For them it seemed as if a climb up the social and economic ladder was not a result of the Agenda 21 implementation process. (Once their products had been made popular, private companies, who were not restricted by investment limitations, quickly eroded their market with mass-produced items 'a la hill-tribe'.) This kind of rigidity in donor-countries led to what is termed 'donor pressure' in many areas. Some NGOs began inventing 'problems' in line with foreign donor policies so as to continue to receive still crucial aid. And many donor organizations were happy to spend their budgets, so as to avoid cuts the following year.

The inverted 'agenda pyramid'

Donor country policy goals in sustainability, set within strict time frames and parallel to each other, enhanced the problem and an inverted 'agenda-pyramid' was created. In one example from Laos (Udomxai Development Project) a forest protection, subsistence farming and Timber Forest Products (TFP) program had to classify village populations into 'rich' and 'poor' villagers, because there were also programs in poverty reduction, income generation, gender equity etc. to be approached and statistics (in donor countries) to be prepared. But in Udomxai, like in many developing countries with intact traditional structures, the more you earn, the more you have to share and the more social responsibility you have to take on (see also: Guns, Germs and Steel: Jared Diamond: 1998: Chapter 14). It is thus not how much you earn that makes you rich, but how much you can save. In the end, villagers with a high social responsibility were classified as 'rich', even though what they had left to themselves was just sufficient to feed them.

Obstacles in ecological conservation

In addition to irritating indicators, the forcing of agendas from developed countries onto communities where the agenda simply had no local significance, was a problem of development policies with a 'local' impact. First disparities between local and international perception in interpreting key objectives appeared. But the 'inverted pyramid' also initiated regional and even national change in developing and NIC countries that was counter-productive and limited goals envisioned by Rio. Programs were initiated without regard to their success potential. In accordance with agenda 21's objectives of strengthening local authorities and improving their capacity, development policy implementation was organized through government agencies. After education in policy goals and information dissemination about target groups and areas considerable budgets were provided for the purpose, mostly from local governments and partly in form of international aid. They met with two obstacles. The first one was a widespread disinterest of government officers in local affairs that did not have a direct, personal significance in their daily lives. The second obstacle had already been described in the Brandt-Report one and a half decades earlier: '...Waste and corruption, oppression and violence, are unfortunately to be found in many parts of the world... (Brandt-Report: 10).'

For many political parties in the developing world, government is business: a politician spends money and influence in a combination of vote buying, peer pressure, direct oppression and, at times, violence to acquire a seat in the national assembly. After being 'elected', he or she needs to recover his expenses. To that end he establishes a permanent position or obtains an influential post in or close to the government through 'doing favors'. Thus many of the environmental programs turned out to be channels to funnel money back into the pockets of government officials. For example, during the mid-nineties Thailand had an extensive program in reforestation. It is commonly understood* in the country that millions of overpriced trees were acquired, with profits going directly to involved officials. Eucalyptus trees were planted on so-called 'degraded forest land' to be harvested in a few years to come and sold to Japanese paper manufacturers. At times forests were deliberately 'degraded' for this purpose through encouraging illegal but tolerated logging in intact forest areas. Some villages received truckloads of a few thousand saplings to be planted by them for a hundred Baht a day and then left to whither and dry as no one was 'paid' to look after them. Trees in environmental protection programs had become a source of personal profit instead of bringing an advance in environmental conservation. Similar misuse of development funds was

and is taking place in the government's extensive program to introduce international standards (ISO Standards) to the country (see the guest essay: ISO - A Concept to Protect the Environment?).

A chance meeting: ecological conservation and social equity

Progress in the conservation of trees was achieved from a different group in Thai society and motivated by a different agenda: empowerment. The longstanding corruption practices of Thai government officials were accelerated during the rapid economic growth in the early and mid-nineties in Thailand. An increasing number of state employees put pressure on the country's protected and unprotected resources to be consumed by the booming economy. As the boundaries of Thailand's conservation forests were extended step by step during the mid-eighties to the mid-nineties, a huge area of publicly owned land used by villages as community forests came under central administration. These areas, which had been used ecologically sustainable for many generations and constituted the backbone of rural community life, were to be covered by often-corrupt sustainable development projects that were ignorant of local tradition.

Contrary to customs of urban life, up-country every new household plants and nurtures a number of new trees whenever a new house is built, so as to ensure wood supply 'for our children'. Villages marked the boundaries of integrated forests with the planting of trees to divide their natural resources equally among neighboring communities. With the forest conservation program came new rules how community forests could be utilized. When, as in some instances, the new boundaries of the conservation forest cut right through living rooms and bedrooms, local societal security became an important issue. Villages perceived the conservation programs as a threat to their livelihood and traditions and demanded participation and social equity in order to have a say on conservation policies.

To save their forests, between 1996 and 1999, rural populations initiated and implemented a countrywide movement to 'ordain' fifty million trees in order to mark the 6th cycle or 72nd birthday of His Majesty the King of Thailand. In Buddhist ceremonies they wrapped colored cloth around trees and had them blessed by monks*. Thus, they were made part of the countries religious order and traditions and no logger would touch them. The villagers chose with all their experience the older and ecologically vital trees, or trees used as boundary markers. Large community forest areas were protected successfully and logging decreased dramatically. With the support of some GOs and their officials, who saw the benefit of genuine people participation in forest management, a new law to give villagers the right to manage their own forests was prepared and the bill passed parliament (1997). Only a change in government prevented the signing a few weeks later, and the issue of local forest management in Thailand today remains unsolved.

But the success gave an important boost in self-confidence and the motivation to tackle other threats to local communities by development programs, for instance the Pak Moon Dam in Ubon Province. Sustainable development in human societies for environmental protection did prove to be less an issue of knowledge, structures and economic growth, but basically one of moral attitude, personal responsibility, power and influence. And because they were so often instrumental in satisfying personal greed, again sustainable development turned out to be ultimately a question of consumption attitude and structure. Sustainable

* No written proof was available to the author and the information in th is chapter is based on many personal interviews with concerned parties and innumerable everyday conversations and observations during fieldwork and on-site training between 1989 and 2001.

development was implemented through economic principles and considerations, in spite of the best intentions of Rio and Agenda 21.

Local economic impact of national development priorities

The Pak Moon Dam in Ubonratchathani is an often-publicized case of economic impact due to implementation of development policies. In addition to this, although the plan was conceived before the Earth-Summit in Rio, it was implemented based on the countries 5th and 6th development plans, which explicitly refer to an independent social and poverty alleviation agenda for Thailand. Thus, the demands of Agenda 21 were seen as an extension of an already existing development direction in the country and after 1992 the dam-project was defended as a contribution to sustainable development. An unprepared, undereducated and personal profit oriented administration and the North in the South have continued until now (2001) to defend its personal interests in the same old manner: look for loopholes where the sustainable development implementation process opens up opportunities for personal enrichment and subject all objectives in planning to this one goal.

Thailand has a long tradition in big dam projects, and the first in a whole series was the approval in 1957 of the Bhumipol Dam in Tak Province. There followed a series of dams built in the central region to serve electricity needs of American soldiers involved in the Vietnam War until 1975. Dam building was then continued by Japanese investors through the Japanese International Cooperation Agency (JICA) to back up investment plans in Thailand and through the World Bank as part of their development strategy to improve regional infrastructure. When the Pak Moon Dam Project surfaced at planning agencies in the late 80s, Thailand was preparing for the biggest economic boom of any nation worldwide during that period, with its Gross National Product (GNP) expanding an average 9.8% between 1985 and 1995.

The dam promised water for irrigation and electricity for development. In connection with the project the World Bank explicitly asked for Environmental Impact Assessments (EIA) and Social Impact Assessments (SIA), which were promptly conducted with results to the satisfaction of the government and the World Bank alike. To address local concerns over a likely change of economic structure in the region in regard to income generation and fishing after the completion of the dam, an extensive fish-farming project was added to the envisioned dam. This was not sufficient by far to avoid grave conflict between the local population and the regional and central administration, which stretches on into the year 2001. The latest move in the development drama was the expulsion of a 'protest-village' by locals in immediate vicinity to the dam (November 2000). Although the expulsion team was under strict order to conduct the affair 'politely', all 300 households were burned to the ground with inventory and a large number of villagers seriously wounded.

Projected potential and capacity

From the very beginning, the dam was built on inaccurate projections in regard to local needs. The promised 150 Megawatts (MGW) of electricity were never achieved and according to local residents the 40 MGW actually produced are not needed. This might simply be considered a bad investment, were it not for the fact that the dam was designed based on development needs on the national level and ignored needs of the local population to sustain themselves socially and economically from the ecology of the projected dam area. EGAT's (Electricity Generating Authority of Thailand) need in planning and executing the dam introduced development priorities in line with economic development projections of the country.

To provide adequately for the future growth of that development, the Pak Moon area offered sufficient potential to further increase the nations capacity, which at the time showed an average growth of its Gross Domestic Product (GDP) of 9.4%. Thus, up-country areas were planned to be developed locally by means and through projects that could contribute to the national capacity. However, by not listening sufficiently to local concerns and indigenous knowledge about the ecological potential and local capacity of the area, a nationally and internationally supported development policy in the end created ecological destruction. This type of development conflict is by local NGOs largely seen as the country's interests of the rich versus the country's interest of the poor and less powerful.

The Pak Moon area is traditionally very dry with poor soil quality. In spite of the surrounding arid conditions, the Pak Moon River Delta provided an extensive inland fishery with 256 (!) different species of fish. The people of the River valley lived in relative, but not necessarily 'developed', affluence and a local culture had developed that was intricately interwoven with the local ecology of the river. Changing the river would mean to change the basis of that culture to be replaced by one that was oriented along new consumption attitudes established in the more affluent city areas and their specific growth pattern. Thailand as a nation needed to promote exports following the path indicated by the development paradigm in order to become a developed country herself. For the central government, Pak Moon was only one dam in a series intended to increase the countries agricultural capacity by opening up new areas for cultivation through irrigation. Thailand was to be the biggest rice exporter in the world. This position was achieved in the nineties, and is only now being contested by Vietnam*.

The national development priorities to increase GNP through exports and boosting industrial growth were the only relevant criteria applied in the conducted EIA/SIA. Although the 60s and 70s had proven the failure of such accumulative economics, the basic logic applied was one of more growth, better infrastructure, and more jobs, less poverty. The participation of the local population and integration of the local ecology was envisioned along those lines. Through promoting fish farming in the lake created by the dam, a fishery industry was to be established that would go beyond the pre-dam carrying capacity of the area and introduce an improved economic development potential, boosted by the locally produced electricity. In spite of continued local protest a private construction company finally finished the dam.

A multitude of priorities in sustainable development

The result was the almost complete disappearance of 169 of the indigenous 256 fish species, fish farms achieving 4% (!) of the projected output, and a few hundred local villages were deprived of their livelihood and traditional culture. The construction process also destroyed a large area of pristine forest in the river valley. The project indebted the country with an additional 6,600 million Baht, although its estimated construction cost was 3,880 million Baht at the outset of the project (WFT-Dams: www.levatenet.com). An appeal for help from the World Bank by local villagers to alleviate their problems stemming from the dam, met the following response: '...the World Bank is a bank, not a charity organization...(Third World Network:

* This project is also a good case to demonstrate that corrupt practices can be found throughout *all strata* of Thai society and are not restricted to government officials. At times corruption shows extensive cooperation between bureaucrats and private interests. Although the ordaining of trees was a village affair, in many instances non-corrupt government officials were the initiators to protect the forests from corrupt elements located in villages with direct links to the local logging mafia.

TWN: Supara).' Poverty issues and sustainability could obviously not be addressed properly by policy planning and implementation on the macro-level of a society.

Conflicts like Pak Moon arise from discrepancies between international, national and local needs to achieve sustainability and reflected basic disparities in priority perception among involved groups. The potential and capacity of local ecologies, objectives in sustainable development and sustained economic growth are defined differently by each group of interest. Those stakeholders involved in the Agenda 21 implementation process with more influence and power are normally able to forward the implementation of their very own definition of sustainable development. In the end, the issue of equity, e.g., the only firm basis for concerted international action to protect the environment, was shown to extend from the international level all through to the local level. International equity still does not give each country equal weight in the implementation of sustainability policies in accordance with their ecological importance. Economic might still decides who can forward change. Social equity simply reflects those discrepancies on a local level. The process of achieving sustainable development through Agenda 21 implementation is, at least in Thailand, loosing its focus and surrenders its objectives by allowing a multitude of different priorities based on economic and not ecological demands.

Civil society and the 'green' agenda

To acknowledge these problems in sustainability and development in human societies, government and NGO efforts on a local/national level focused on the introduction of structures to civilize the state. In order to forward 'good governance' - e.g., administrative decision making to the benefit of local and national populations, contrary to the actions of an administration for the interest of specific groups or corrupt national administrative powers - people of many different classes joined hands to formulate their demands. These were political demands: '...National good governance lies in the power of the movement of local organizations, peoples, and communities to understand problems, be self-reliant, help themselves, reform themselves; and at the same time, be forceful in monitoring whatever is bad and ugly in society...(Workshop on good governance: Chulalongkorn University: July 1998).' And the destruction of a people's livelihood through changing or destroying their ecological basis, like for example in Pak Moon, is 'ugly' even when initiated with the best intentions and introduces environmental concerns to social and economic security of local societies. Thus, fostered by social and economic conflict, local movements formed a coalition with the environmental agenda merely by chance. The fact that global environmental degradation occurs in the form of environmental destruction distributed over a multitude of localities, links the issues of people participation, self-sufficiency in local economy and the indigenous need for an intact local ecology directly with international agendas of an ecologically sustainable development.

The role of the state in transition

But this link transcends the state as the steward of local economic growth interests and develops beyond and often in opposition to national economic concerns and strategies. While local regions first tried to achieve local economic sufficiency, which is a leveled consumption pattern as a base for further development, nations perceived their regions as potential resources to further overall economic growth and thus an increase in consumption and through-put. National policies to increase the use of what might be called the 'national environment' or 'national Commons' as a means to further economic development were locally perceived as a threat to homes, families and livelihood, a threat to what might be called the

'immediate environment' or 'local commons'. This conflict of interest lessened the role of the state in providing security to its population on a local level. Instead this role was taken up by many an NGO umbrella organization that united local efforts to achieve security and often included green issues.

The poorer and ecologically concerned segments of society started to speak with one voice, a worldwide trend that found its first manifestation already at the Rio Summit in its so-called 'Parallel Conferences' and has continued till today. This coalition between social and ecological issues of agenda 21constitutes an important link between groups in the North and South that are actively looking for an alternative interpretation of the sustainable development paradigm. It increasingly counterbalances sustainable development demands that focus on accumulative growth, as represented by the conservative majority of governments and international institutions like the World Trade Organization and the World Bank.

A shift in donor policies

The attempted internal restructuring in many developing nations in the wake of Agenda 21 led many countries into a no-win situation in regard to the traditional relevance of their state institutions. On a local level they increasingly lost influence and control in organizing social and economic affairs due to civil society demands, which envisions decisively diminished and reduced internal roles for state bodies. On an international level they increasingly lost credibility and credit, as they became - as a state - a less reliable instrument to locally implement internationally agreed objectives on sustainable development. Instead, attention from donor-countries focused more and more on the sustainability agendas carried by NGOs.

However, this development put great strain on the related administration in donor countries. By the year 2000, new policies surfaced, for example Germany's BMZ's (Ministry of International Cooperation) policy trend to centralize the multitude and diversity of NGOs by operating through common programs (Programmantr ge) instead of implementing their development objectives through individual NGOs. Although this process has increased the pace of unifying NGOs under common agendas, without additional measures this new approach to support 'problem-areas' rather than NGOs directly might slow down the process of civil society implementation. While it is easier for the administration in donor countries to support a smaller number of organizations representing NGOs, it might also lead to a smaller range of NGO activity locally. But, the implementation of civil society demands depends to a large degree on a high diversity of independent activities on a local level.

New national alliances

This left many developing countries with only one alternative in attempting to please all interest groups: to focus on economic growth, the most readily identified common denominator in modern human society. The larger they could make their economies, the larger became their middle classes and the smaller the chances of civil unrest from the grass-root level. At the same time, accelerated economic growth could increase their weight in international negotiations, thus potentially furthering their national interests.

* Interestingly, in October 2000, the FAO published a study stating that 21 million Thais do not have enough to eat and at times are still exposed to hunger (Bangkok Post: 17.10.2000).

This focus on 'development as economic growth only and at all costs', found attentive followers in corrupt parts of societies. Weakened national institutions with lessened self control and restraint were increasingly occupied by people working for their 'very own private and personal economic development'.

To further that goal, new alliances were struck throughout the national apparatus of power and influence. This trend was aggravated by the newly created structures on a state level to further social equity in line with international demand. For example, Thailand installed the Tambon Administrative Organization (TAO) in 1994 to decentralize provincial administration and in the process created thousands of new local government positions that had to be filled with inexperienced and poorly educated personnel. Thus, the TAO did not become a new power, but a new power-vacuum that rapidly formed corrupt structures introduced by officials from a higher level. Personal economic interests became more often than not the only measure for local policy decisions. In the year 2001, the TAO is considered the most corrupt state institution in the country. As Pasuk Phonpaichit pointed out in the Wertheim Lecture in 1999 in Amsterdam: '...[Thailand has]... corruption scandals of a [new and] different pattern: namely politicians and bureaucrats working together in schemes which are much more elaborate and much more long-term.'

In the end, sustainable development in developing countries stayed an issue of top-down policies, often using the same structures the North had used with aid programs for the South a few decades earlier. In the past, developing countries had accumulated a huge debt-burden in the name of development. Now, developing local populations are weakened by interest payments. They had taken out loans to develop themselves along lines and objectives provided, promoted and pushed through by governments on the national level and based on national needs. Restructuring of rural debts was, for example in Thailand, an important and central issue in the election campaigns (2000/2001).

National versus global interests

The Brundtland Report's demand for 'the wise management of the Commons' has found fertile grounds on a local level and is now more and more recognized as the only possible means to organize the immediate environment. But on a national and global level the 'wise management of the Commons' still seems to be based on a free for all, 'get-as-much-as-you-can-now' policy. Agreed, such a policy only pays respect to the realities of economic might and global political power in a commons. And even though it can be understood to some extend as an automatism in human society development due to a lack of alternatives, ecological and social aspects of sustainability lose out in such an approach on managing the commons, as it cannot provide true equity between ecological and social demands on the one hand and economic demands on the other. An excellent example of a commons transcending regional and international boundaries are air that we breathe, the globe's atmosphere and the climate in it.

Humanity uses the atmosphere to discharge gaseous wastes and the amounts released are already beyond nature's self-healing capacity. The resulting heating up of the planet and the impact on global climate has in effect been known since 1896, when the Swedish scientist Svante Arrhenius described the 'greenhouse effect' (London, Edinburgh and Dublin Philosophical Magazine and Journal of Science: April 1896). But only in 1972 did the scientists Roger Revell and Hans Suess bring the greenhouse effect to international attention in the run-up of the Stockholm conference. In 1979 the 'First World Climate Conference' was organized in Geneva, where the international community agreed that global warming constitutes a real threat to our climate and has struggled ever since to come up with a workable solution. This struggle has its origin in the rationality of human societies in regard to their treatment of the Commons. To understand

the inherent conflicts of, for example, the climate debate, its automatism, and the dependencies of any possible solution, it is necessary to refer to Garret Hardin's Article 'The Tragedy of the Commons'.

The modern 'Tragedy of the Commons'

His original article is based on an analogy describing a local pasture owned by all and devoid of rules limiting consumption. Mr. Hardin chose the title of his article based on a remark by the philosopher Whitehead: '...the essence of dramatic tragedy is not unhappiness. It resides in the solemnity of the remorseless working of things... (Whitehead, Science and the Modern World: 1948).' Mr. Hardin used this as a metaphor to describe the impact of the worlds very first development paradigm from 200 years earlier, Adam Smith's 'invisible hand': '...the idea that an individual who "intends only his own gain," is, as it were, "led by an invisible hand to promote...the public interest."... (Adam Smith, The Wealth of Nations: 1776).'

The boundary of the 'Commons Atmosphere' is not local but global, e.g. it exists in its maximum expansion. Analogue to and based on Mr. Hardin's article, the 'Tragedy of the global Commons Atmosphere' can be described as follows: The atmosphere is open to all for consumption. As modern human society depends on fossil fuels for energy extraction and the atmosphere can be utilized without limitations and restrictions, it is to be expected that each nation will try to keep as many units as possible, for example cars or factories, on that commons. Such an arrangement may work reasonably well for a long time as both growth and recession keep the strain on the atmosphere well within natures self-healing capacity through Green House Gasses (GHG) sinks. But finally, through a steady increase in economic volume over time, the limit is being approached and the inherent logic of the commons remorselessly generates tragedy. Human societies being rational, each nation seeks to maximize its gain. Explicitly or implicitly, more or less consciously, it asks, "What is the utility to the nation and its people of adding one more unit to the commons?" This utility has one negative and one positive component.

1. The positive component is a function of the increment of one more unit. Since the nation and its population receive (almost) all the benefit of the additional unit, the positive utility is nearly +1.
2. The negative component is a function of the additional resource demand created by one more unit. Since, however, the effects of overexploitation are shared by all nations, the negative utility for any particular decision-making nation is only a fraction of -1.

Adding together the component partial utilities, the rational nation concludes that the only sensible course for it to pursue is to add another unit to its environment and economy. And another; and another... But this is the conclusion shared by each rational nation sharing the global Commons Atmosphere. Therein is the tragedy. Each nation is locked into a system that compels it to increase its economy without limit - in a world that is limited. Current humanity, its development paradigm and its economy are absolutely dependent on energy extraction through burning of fossil fuels in the atmosphere. Any kind of restriction to utilize the atmosphere has therefore a direct negative impact on the economy and economic growth potential.

Framework Convention on Climate Change (FCCC)

But after the 'First World Climate Conference', the international community has agreed to the urgent need to restrict the use of the global 'Commons Atmosphere' and - not surprisingly - dissent developed early

in the process. The North, led by the USA and the EU, wanted to calculate restrictions according to a World Research Institute (WRI - based in the United States) report from 1990-1991. Based on emission calculations per country it argued that the GHG emissions of the South almost equaled those of the North and would soon overtake developed countries. The South would therefore have to restrict its use of the atmosphere as much as the North. A report in 1991 by the Center for Science (CSE: - based in India) contested the WRI calculations on various grounds, but mainly insisted on measuring emissions per capita and not per country. It also argued that the North had been utilizing the atmosphere for much longer than the developing countries and would therefore be called upon to lead climate negotiations and provide needed finances to introduce climate measures. The North argued it was willing to lead in both areas, but only because of its more affluent means and not because it had more responsibility than the South. Thus, for the North it was imperative that emission reductions include the developing world from the very beginning of the process. Otherwise, so one argument of the North, the developing world would have an unfair development advantage over the developed world.

To comply with this demand would mean for the South to give up parts of its 'right to economic development' as stated in the Beijing declaration of 1991. This basic difference in approach towards a worldwide climate policy could not be solved and the FCCC signed in Rio therefore states that the signing nations recognize '...the principle of common but differentiated responsibilities', meaning that each nation is allowed to view its responsibilities in regard to climate change differently - or that the North and the South agree not to agree.

National self-interest versus global common interest

Soon after the signing of FCCC, the initiated international negotiations centered on the 'Earth's ecological sinks' (its vegetation and oceans). Suggestions were forwarded to trade or buy sink capacity not used by any nation so as to allow developed countries to emit more GHGs than their ecological sinks could absorb. The so-called 'emission credits' were born. They proved to be useful in Kyoto (1997) and later in Buenos Aires (1998), when the developed countries agreed to a reduction of their GHG emissions under the conditions that developing countries would also participate. This participation consisted in trading their emission credits with developed countries, mainly the United States, which could thus avoid domestic adaptations to its economy that would otherwise be necessary to reach the committed goals of emission reduction. When nations met again in The Hague in November 2000 to continue negotiations and commitments, the process of developing a common climate policy finally broke down and no progress was achieved. The cause was a disagreement over a proposal by the United States to be allowed to count the planting of trees and thus the quantitative increase in its forest ecology as an ecological sink for its emissions. This additional sink would allow its economy to cut 5% (or 20 million tons) off its commitment in emission reduction over the next few years.

The failure of the climate negotiations illustrates not only the remorseless workings of the 'Tragedy of the Commons', e.g. self interest rules over common interest. It also mirrors the conflict between local needs and national needs on a regional level described earlier. The arguments brought forward to support this or that development or environmental policy on either level, generally follow ecological reasoning only to mask economic thinking to the advantage of the higher level. The 'tree planting for sink' proposal of the United States, for example, ignores the claim of scientists that in a warmer global climate under certain conditions a forest can give off more Carbon dioxide than it can actually absorb. (Science journal 'Nature',

quoted in the Bangkok Post: 11.11.2000). The United States, doubting the new evidence, insisted on their proposal in spite of the fact that they had signed the FCCC agreement that explicitly states that '...lack of scientific evidence certainly is not used as a reason to postpone action against climate change.' From a mere ecological perspective the proposal neglects the fact that a tree, once dead, slowly releases the Carbon dioxide absorbed during its lifetime back into the atmosphere. So planting a new tree will not create additional sink capacity, but only replace the capacity volume lost through logging by the timber industry in the first place.

The stage of globalization

International reaction to sustainable development demands is reaching a stage of haggling over economic impact scenarios in order to avoid the very single most important aspect of sustainability: a reduction in consumption and/or a decisive change in consumption patterns. Language of international agreements on the environment is sufficiently vague to introduce concepts like 'sustainable economy', the interpretation of which is , for example in Thailand, motivated to save the free market concept of accumulative economics over the needed action to save the planet. As this principle attitude stretches from the regional over the national to the international level, the economy is the only common denominator between groups of different interest. Development is equaled with economic growth, which is perceived as the basis of the sustainable development paradigm, which in turn promotes an increase in human efficiency as the alternative to immediate and far-ranging reductions in consumption. But, currently human societies are out-consuming their own efforts to reduce output-in-particular through more efficiency by increasing total overall consumption through increased economic growth.

Staying on this path, humanity is advancing the economic system faster, much faster than the advancement of what might be termed the 'ecological strategic response'. Such a response could be seen as an international, decentralized, but united and swift action to combat negative impacts of the development process in ecological problem areas. However, a globalized common response of humanity towards the environmental crisis, has, as yet, not much progressed past the 'early warning system' demanded by the first Earth Summit. While correct ecological measures to counter the current crisis depend on all of humanity - and the vast majority still lacks the needed environmental and consumption perception for an adequate worldwide response - the advancement of the economic system depends on only about 25% of the world population*, which is ready and equipped with all means to go ahead.

Globalized interests versus global interests

As late as the early 90s, the world was economically still very much organized in the geographical dimensions of 'Center' and 'Periphery' (see: Prosperity, Poverty and Pollution: Klaus N rnberger: 1999). It very much restricted the economic development potential of many NIC and developing countries due to insufficient infrastructure and lack of human resources. This situation was deemed inefficient to further sustainable societies and measures for change were an important aspect of the Rio agreements. Although Rio calls for trade-liberalization in the context of sustainable development, the ultimate benefactor is the economy, as the development envisioned should be achieved through economic growth. The vision of a world without borders, the symbol of the blue planet that signified humanity's enlightenment to take global ecological responsibility, is becoming a vision of business and capital flow without borders.

In combination with the electronic media, that allow movement of financial capital virtually without time delay, a new economic reality is being created for human societies: the economy independent of geography. Capital now has access to every corner of the globe, at the push of a button, independent of where a business interest is located. Everyone who has the necessary financial capital and communications-access can take part. Suddenly, the affluent classes of NIC and developing countries can join with the affluent nations. In this time of economic globalization there is no more developed and undeveloped world. There is only developed humanity living on developed patches of land unevenly distributed all over the world, surrounded by the rest of humanity living on undeveloped resources. Thus, not only the economy becomes globalized, but also the human concept of the Commons. This 'Global Commons' will allow Transnational Corporations (TNCs) and private investors alike to shift their investment attention quickly and deliberately to places where as yet no consumption restrictions are implemented. It will thus be more difficult to regulate consumption patterns, as consumption restrictions will only show effect when implemented globally.

A free global economy without regulating mechanisms outside of the economic paradigm itself, will only free the economy and growth from restrictions that still limit the implementation success of Agenda 21: national sovereignty. Sustainable development and all its different social and ecological agendas still have to negotiate national and cultural hurdles in order to be at least partially implemented. In a globalized free market economy, concepts like nation, culture, sustainability and development will all submit to the ulterior goal of profit. Even advantages that develop with the globalization process and allow educational access even in the remotest areas of the globe, like for example over the Internet, will then not be able to increase the pace of sustainable development sufficiently to keep up with economic development and its demands. The opportunity to establish what might be called 'a strategic ecological and social response' through globalization is in danger of loosing priority in the globalization process. This trend is aggravated -and demonstrated - by the pace of the process of the creation of international financial sttuctures, for example in the Multilateral Agreement on Investment (MAI), when compared to the pace of international agreements on the financing of development*.

* This estimate would include what is termed 'the North in the South'.

Chapter 5
Beyond Rio: Disparities in sustainability

The current process of sustainable development is intimately linked to economic objectives, with many of the social and ecological concerns of Agenda 21 going through a process of prioritizing to their disadvantage. As humanity has, as yet, not corrected disparities in economic and political power, disparities in the implementation of sustainable development are the result. This chapter introduces in relative detail two organizations that will in this context be instrumental in achieving true, e.g. ecological, sustainability for human societies: the World Trade Organization (WTO) and the Commission on Sustainable Development (CSD). The first one is an example of ecological and social issues directly and indirectly submitting to economic power. The latter one is an example for a commission that has the political mission to implement sustainability, but lacks political power within its framework, the United Nations.

The World Trade Organization (WTO)

On The first of January 1995, the World Trade Organization (WTO) succeeded the General Agreements on Tariffs and Trades (GATT). But unlike GATT, the new organization is the legal and institutional governance framework of the multilateral (or international) trading system, meaning that decisions by WTO are legally binding to all signatory nations. International disputes discussed and addressed by the organization touch and have impact on almost all aspects of Agenda 21, although WTO has no mandate in sustainable development. No other institution mirrors the danger that threatens the process started in Rio - which in spite of all its shortcomings does reflect an ongoing 'spiritual globalization' out of concern for the environment - better than the World Trade Organization. The organization is crucial for the integration of needed action to save the environment into trade. The 1999 Trade and Development Report of the UN reflects the scope and problems of the WTO's work: '...developing countries have striven hard, and often at considerable cost, to integrate more closely into the world economy, but have had few gains, because of the deep imbalances in economic power and systemic biases in the international trading and financial system.'

According to developing countries, to remove those imbalances would mean in part to remove protection policies of the North that are aimed at environmental conservation, but - due to trade structures, market structures and consumption patterns - result in trade protectionism (CSE; Green Politics: 251). When social equity and development demands forwarded by the North (US and EU) take shape in form of demanding labor rights and environmental protection in process and production methods (PPM), the South sees strategies to keep their countries from exporting to northern markets and from enjoying the economic competitive edge of lower wages. When the South demands the end of trade sanctions (forwarded by the CSE of India), which the North claims are intended to conserve the global environment, the North sees its right to uphold stricter national environmental laws and standards threatened. In cases like this, the Dispute Settlement Panel (DSP) of the WTO is, because of the overriding importance of economic affairs in human development, instrumental in defining the ecological context of economic and trading structures of the future.

Economic terminology guides sustainable development

Currently most trade rulings are based on the concept of 'like products' and on article XX of the trade regulation agreements of Marrakech (15th of April, 1994) that allows exemptions from trade regulations on environment related issues, '...as long as they are not discriminatory between countries where the same conditions prevail...''Like products' are for example the Japanese rice-wine 'Sake' and non-Japanese liquors. This interpretation was applied in a WTO/DSP ruling prohibiting Japan from introducing taxes on not locally brewed alcoholic beverages. On the other hand, this same definition allows some developing countries to produce canned tuna for export without regard to the amount of dolphins killed in the process. The term 'like products' can take on a range of possible interpretations, also depending on the involvement of other international trade agreements. For example the 'Trade Related Aspects of Intellectual Property Rights (TRIPS)' result in a ruling that the registration of a brand name will make otherwise completely identical products like pharmaceuticals or computer software 'unlike', while agricultural products with different characteristics are '[a]like'. Aspirin is not aspirin, but beef is beef and tuna fish is tuna fish.

Article XX with its many sub-clauses is a result and an agreement of GATT and referred to whenever WTO rulings cannot clarify issues directly, for example if it is a case of extra-jurisdictionality. In one instance it resulted in a ruling against the United States to lift an embargo against canned fish-products from Mexico, while in another instance the US was allowed to uphold trade sanctions against shrimp caught in a manner endangering sea turtles. Additional conflicts can arise during trade-disputes between signatories and non-signatories of WTO, especially if non-signatories have signed Multilateral Environmental Agreements (MEA). To deliberate between such potential conflicts involving trade and the environment the WTO established the Commission on Trade and the Environment (CTE). It's key issues are:

- The relationship between multilateral environmental agreements (MEA) and the multilateral trade regime (WTO)
- The restriction of access to developing country products because of environmental standards and labeling requirements
- The relationship between the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the environment, in particular the Convention on Biological Diversity
- The environmental benefits of removing subsidies and trade restrictions

Its work has so far been inconclusive. Improved structures in form of additional panels or tribunals for specific cases might be needed to provide CTE with a clearer basis to reach compromise between governments. But, given the wide divergence of opinions on key economic issues, governments might find it hard to agree over the manner in which the environment will be integrated in the interpretation of GATT articles and other agreements relevant for WTO.

The economy rules on ecological principles

As the WTO is based on rules that are agreed upon by all participating nations, its importance lies in the multilateral aspects of its work, which does not only concern differences between the North and the South, but differing public attitudes in nations. For example, European laws prohibiting the import of hormone-treated beef from the US into the EU are based on a European public concern about the safety of its consumption and are a prolonged source of trade conflict between the two continents. Through

finding compromises and establishing international rules of economic conduct, the WTO will be the negotiation-arena to determine and influence the new structure of free trade in a globalized economy. Even though WTO has no direct mandate in sustainable development, its rulings will thus decide whether global consumption structures and patterns will change in line with Agenda 21 objectives, or not.

The difficulties of this process can be shown in what is called the 'win-win agenda' of WTO: Trade negotiators planned to introduce the green agenda to trade regulations during its 'Millennium Meeting' in Seattle (Nov./Dec. 1999). Advantages were seen in two respects, which were an increase in environmental technology trade, as well as an implementation of environmental standards in developing countries in combination with trade liberalizations. Negotiators argumented that '...from an empirical perspective, many studies have demonstrated the positive correlation between liberal trade regimes, higher productivity and more efficient allocation of resources...(Anon: Environmental benefits: 1998).' The United States prepared a list of issues to be implemented in the agenda during the Seattle round of negotiations. These issues included:

- '...ensure full compliance with existing agreements [...which will...] open up markets to US providers and ensure that all members [of WTO] can win the benefits of competition..'
- '...market access concerns...'
- '...electronic commerce negotiations to ensure that artificial barriers do not delay or block the benefits of this new method of conducting trade...'

The challenge of the trade negotiations was further described as follows:

'...Our predecessors in the administration have created a fair and open world trading system. As a result of their work, American workers are more productive; American companies more competitive; and American families more prosperous than ever before. Now the challenge is to do the same for the next generation (Anon: Trade and Development Report: 1999).' This read as more growth, more consumption. Obviously ignorant of the damage that this type of economy does to the environment, the United States were promoting not only the trade talks, but also a new round in accelerated growth based on accumulative economics. This type of reasoning is in line with policies suggested by the Rio process: ensure environmental protection through an increase in efficiency: homo efficiensis at work. After nine years of attempted Agenda 21 implementation, the one remaining issue for sustainability in human development that is least ruled by ecological considerations is the economy.

Unification under consumerism

However, the United States is not alone in promoting unlimited free trade. Over the last few years, the North / South conflict has acquired a new twist in regard to ecological demands. In the year 2000, the South is even more pro free trade than it was in 1991 at the G77 Beijing conference and the outset of Rio. Increasing affluence in higher and upper middle classes in the developing world has created a 'North in the South'. As development policies of the North have taught the South for more than half a century that consumption is the ulterior motive in life, extreme examples of consumerism are on the rise in the newly affluent parts of developing world societies, copying conservative Northern positions on development. For example, on the 27th of October 2000, the ITV channel in Thailand aired a hotline TV-show at prime time (19.20 hours) on how to treat your diamonds. Three young ladies, well dressed and adorned with diamonds, were receiving and discussing phone-calls from concerned viewers over the hotline on how to

keep their diamonds and present them best in public appearances of their owner. Suggestions ranged from only keeping them together with gold ornaments, considering that the mood of the wearer should match the mood of the diamonds - which supposedly shows in their color - to suggestions for rubies, sapphires and emeralds being the only permissible companions for the glittering fortunes. The tone was matter of fact and honestly concerned.

Policies of governments in developing countries reflect this trend of a growing consumerism when they, for example, demand that labor standards in their countries must not become part of trade regime discussions in the WTO. In spite of being an integer demand of Agenda 21, social equity, as reflected in wages and labor standards, is a less important goal in development than the competitive economic edge. Some NGOs actually support this demand of the developing nations, although from an opposing position, as they demand that those issues are discussed by the International Labor Office (ILO) only and completely removed from the agenda of organizations with a clear economic mandate. Through economic growth interests sustainability is becoming separated from issues like social equity, fairness and more democracy. Especially after the 'Asian Flu' (the economic crisis hitting Asia in 1997), the inheritance of Rio is reduced to sustaining traditional, accumulative economic growth under the free market.

Counterbalancing trends

As governments worldwide act only slowly on the environment - here to be understood as just one of many agendas in sustainable development - NGOs and ecologically concerned people from the North unite with those in the South. The result is a much more powerful and politicized NGO scene that works in worldwide umbrella organizations and has issued its own 'Earth-Charta', alternative and additional demands to the Rio agreements. An increasing number of people in the North (and to some extent in the South) are actively pursuing life-stiles and projects that are based on a different interpretation of sustainability. Company policies (mostly) in the North show an increased environmentally conscious profile and, what is termed 'green accounting', is practiced by an increasing number.

Especially the Western European model of development might offer some important ideas for future alternatives. Here, consumer consciousness and behavior are much more considerate towards ecological sustainability demands, and personal political opinions and alliances can be surrendered to the advancement of truly sustainable development. Shifts away from motorized traffic towards an environment more friendly to walking and cycling, emerging alternative energy policies, recycling and industrial standards are examples. Socially, Western Europe has a very advanced distribution of resources with only a marginal percentage of truly poor people, firmly established models of people participation, empowerment and gender equity. Social security and public health-care services are an integrated part of its democracies.

Nine years after Rio

Representing part of the North, Europe might in the longer-run be able to form sustainable development alliances that could unite with movements of the South and counterbalance the more economy-centered approaches of the United States. However, for now, alternative theories on sustainability and the knowledge generated by their implementation are mostly denied access to the powerful international policy making institutions and organizations in sustainable development, resulting in a polarization of positions and demands and radicalization of action. The civil unrest and massive demonstrations in Seattle during the

'Millennium Meeting' can be considered an example. Discrepancies in sustainability are a common occurrence nine years after Rio. Local poor populations want and need economic growth, but not at the price of ecological destruction of their immediate environment. The affluent social strata in developed and developing countries increasingly see the need to protect the environment, but most of them do not want it at the price of less affluence.

The newly introduced sustainable development paradigm of the Brundtland Report and the Rio Earth Summit, has failed to steer humanity as a whole out of the 'Tragedy of the Commons'. By only defining and outlining sustainability but not the instrument to achieve it with, e.g. economic growth, humanity still lacks an alternative vision on development. Considering the reality of current international development structures, only the WTO could provide humanity with outlines of a future path in economics that does not take us outside of the zone of equilibrium. However, it remains doubtful that an organization that does not even have a mandate in sustainable development and - as often as not - issues rulings on an international economic frame with complete disregard of social and environmental development needs, could actually provide humanity with a definition and practical examples of an 'economics of sustainable development'.

The potential of the Commission on Sustainable Development (CSD)

Apprehending the need for an institution that could provide the sustainable development agenda with a vision, the Rio conference called for the establishment of a 'Commission on Sustainable Development' (CSD). The subsequent Pronk-Iglesias Report of 1992 - initiated by the then UN-Secretary-General Boutros Boutros-Gali to outline necessary reform to the UN body, so as to adapt its organizational structure to the new sustainable development paradigm - forwarded concrete ideas on how to implement the new Commission on Sustainable Development, with Agenda 21 constituting its 'new bible of development'. The report recommended that'...the UN integrate its economic, social and environmental work with a coherent structure and common strategy...' and called for '...a dynamic, intellectual leadership...' It accordingly proposed '...the creation of a high-level official, second only to the [UN] Secretary-General, to support him in the coordination and overall management of the work program and budgets of all entities in the economic, social and environmental sectors wherever they are located...(Green Politics 1: 348).' According to this proposal, the UN Economic and Social Council (ECOSOC) and International Development Council (IDC) would have become executive arms of the CSD, giving it the role of a powerful entity within the UN system on par with the UN Security Council (International Documents Review: Anon: 1993). As the Pronk-Iglesias Report was never officially considered and until today only exists as a 'non-paper' (UN term for draft), the CSD became much less in its current form and the principle conflict between sustainable development and sustained economic growth remains without a guiding vision.

The capacity of the CSD

Instead of being constituted to be the general implementer and guardian of Agenda 21, CSD was inaugurated as a sub-division of ECOSOC in 1992, to cover the following aspects of Rio:

- To coordinate the activities of other UN bodies as they relate to issues of sustainable development;
- To analyze progress at national, regional and international levels;
- To promote the implementation of Agenda 21

Although more than 1000 NGOs are accredited to participate in the Commission's work, its influence remains lost in the division of the UN into convention bodies located in different countries and with decision prerogatives based on different priorities. The Commission's work itself offers a yearly list of sustainable development success stories on the Internet* that cover all aspects considered by Agenda 21 and the General Assembly of the UN has entrusted CSD with the preparatory process of the Rio+10 conference (20th of December 2000), which will be in Johannesburg in the year 2002. But in spite of its impressive performance and attempts to include NGOs in order to contribute with practical experience of the Agenda 21 implementation process, the CSD stays a victim of missing equity within the UN organization itself. Being a sub-unit of ECOSOC, it has practically no influence on other commissions, especially those that address the most pressing environmental problems like climate, desertification, bio-diversity, forest management etc. Instead of guiding environmental policies, as envisioned in the Pronk-Iglesias Report, the CSD concerns itself with the impact of decisions independently taken by those commissions.

The United Nations and Rio+10

The UN General Assembly (UNGAS) recognizes that the implementation process of Agenda 21 is flawed. In its opening words of the resolution (A/RES/55/199) on the Rio+10 preparation process it states that it is '...deeply concerned that, despite the many successful and continuing efforts of the international community since the Stockholm Conference and the fact that some progress has been achieved, the environment and the natural resource base that support life on earth continue to deteriorate at an alarming rate...' The definition by the UN General Assembly of the CSD's role in the Rio+10 preparation thus shows the need to take stock. In article 15e the CSD is asked to '...address ways of strengthening the [UN] institutional framework for sustainable development and evaluate and define the role and program of work of the CSD...(A/RES/55/199: UNGAS: 2000). Although this constitutes an opportunity for the CSD to attempt a redefinition of its institutional status, it falls short of what would actually be needed, namely measures to unify all relevant international institutions, be it within or outside of UN organizations, under one single imperative: ecological sustainability. However, UNGAS does not provide a necessary pre-condition for such a process, as it does not request the CSD to define the role and program work of all Commissions and institutions participating in sustainable development.

The threat of 'common but differentiated responsibilities'

Furthermore, the UNGAS declaration on Rio+10 refers twice to 'the principle of common but differentiated responsibility'; at first indirectly, via acknowledging the Malm Ministerial Declaration* from May 2000. Then in article 3 directly, when it asks for a '...renewed political commitment and support for sustainable development, consistent, inter alia, with the principle of common but differentiated responsibility...(A/RES/55/199: UNGAS: 2000). This principle was first introduced in Rio in the context of FCCC as a diplomatic formula for saying 'we agree to not agree' and is the direct expression of disparities in sustainability needs between the South and the North. Including this formula in the Rio+10 preparation process will guarantee a success of the up-coming summit in Johannesburg. But it will also guarantee that demands critical towards perceived policy priorities for future development of any one nation will not result in specific

* On UN related development work and its results, see on-line reading sources in the annex.

action. Especially when that nation is on the upper scale of the world's economy. Otherwise the United States, for example, would not have been able to ignore the WTO ruling on canned tuna from Mexico for over ten years to only recently lift its ban.

The Rio development process that started nine years ago seems to be moving in circles that always return to economic interests on all levels. But, in spite of its overwhelming influence and significance in the sustainable development process, the economy is only mentioned once in the whole text of the UNGAS declaration. The assembly decides in article 4 '...that the summit, including its preparatory process, should ensure a balance between economic development, social development and environmental protection as these are interdependent and mutually reinforcing components of sustainable development...' This is a statement known from the Rio declaration and, through its lack of defining the economics of sustainable development, constitutes the biggest threat to Agenda 21, but, - unfortunately - also the biggest common denominator between the North and the South. Thus, in case of conflict in respect to global environmental policies in sustainable development, chances are very high that the ecology and social issues lose out to the economy in form of a multilateral compromise that is to everyone's economic satisfaction. That the economic preference over the environment holds true in negotiations is perfectly demonstrated by the recent failure of the FCCC talks in The Hague. It is therefore not surprising that UNGAS reconfirms Agenda 21 should not be re-negotiated, and instead chooses to adhere to the principle of 'common but differentiated responsibility.'

Chapter 6
On the Road to Johannesburg 2002

'... In its decision [to hold 'The World Summit on Sustainable Development' in South Africa], the UN General Assembly called for the 10-year review of progress achieved in the implementation of the outcome of the United Nations Conference on the Environment and Development in 2002 at the Summit level to reinvigorate, at the highest political level, the global commitment to sustainable development. In doing so, it maintained that the Summit, including its preparatory process, should ensure a balance between economic development, social development and environmental protection as these are interdependent and mutually reinforcing components of sustainable development...(http://www.un.org/rio+10/web_pages/rio+10_summit.htm).'

The official UN announcement on the location of the next World Summit introduces the central aspect, aim and concept of the event, e.g., sustainable development, to reinvigorate global commitment to sustainable development, and to ensure a balance between economic development, social development and environmental protection. The CSD is entrusted with the preparation of the Summit and responsible for preparing an assessment of the past sustainable development implementation process on 3 levels, national, regional/sub-regional and global. The analytical part of an assessment summary for all levels will pave the road to Johannesburg 2002 by becoming the basis for a 'comprehensive policy report of the Un Secretary-General for the World Summit'.

The CSD frame for the Rio+10 preparatory process

'The Commission on Sustainable Development stressed the importance of early and effective preparations for the 2002 review and assessment of the progress in the implementation of Agenda 21...While specific decisions on the preparatory process will be determined by the UN General Assembly at its 55th session, the Commission [on Sustainable Development] invited early preparations at the local, national and regional levels which should commence immediately after the conclusion of the eighth session of the CSD...(DESA 2000: 1+2)' The preamble describes the role of the CSD as to assess the sustainable development process since Rio as a means to prepare an UNGAS decision on what issues will actually be discussed at Johannesburg 2002. To achieve this, the development review and Rio+10 preparation process is approached on three levels, national, regional or sub-regional and global.

Regarding the national level, the CSD proposes four special activities that would go beyond country profiles on achieved sustainable development:

1. **101 ways to promote Sustainable Development.**
   Countries are invited to nominate outstanding sustainable development activities to be presented at JB 2002. Nominees would have to meet the following criteria.
   a. Be aimed at implementing specific objectives of Agenda 21;
   b. Be consistent with the three goals of sustainable development i.e. have economic, social and environmental objectives, targets and outcomes;

c. Achieved tangible results;
d. Be designed and/or implemented in a participatory way with involvement of multiple stakeholders;
e. May involve an element of international cooperation (bilateral, regional or multilateral).

2. Sustainable Development Visions for the 21st century.
Countries are invited to organize a national level competition involving major groups in which the participants would be invited to prepare short essays outlining their visions of sustainable development challenges, concerns and opportunities.

3. Children's Agenda 21 Posters
Countries are invited to organize national level competition involving schoolchildren ages 7-12 in which participants would be invited to draw posters capturing their sustainable development aspirations and concerns.

4. National Progression.
This initiative would be a national broad-based consultation process to identify 3-4 specific sustainable development progress targets that are achievable in the next five to ten years and will make a significant difference in the countries progress towards sustainability. The aim is to generate independent or joint actions that will further the slow but sure transition towards a sustainable global society. The national progressions of a country are its own targets based on its own priorities and capabilities rather than those that may be agreed globally through inter-governmental negotiations. The progression targets can range from launching processes for developing a legal instrument, to comprehensive data gathering programs, or experiments with new and innovative financing programs.

On a **regional and sub-regional level**, the preparatory process tries to establish uniformity in the assessment process, while simultaneously allowing for the originality of regional contributions. While underscoring the importance of high-level intergovernmental processes that exist at the regional level, the following activities are to be considered for the preparation:

1. **Undertake a regional assessment focusing on**
   - Main achievements in the region in the Agenda 21 implementation
   - Prospective outlooks and main constraints (common/specific constraints and constraints resulting from global developments and changing conditions)
   - New initiatives and commitments
2. **Formulate a 'regional platform' to outline key policy issues, priorities and follow up actions based on**
   - Key sustainable development issues requiring priority attention and action at the global level according to the view of the region
   - [Global] issues that could be more effectively addressed on a regional or sub-regional level
   - Specific regional proposals to strengthen the effectiveness of international cooperation and international institutions

On a **global level**, the preparatory process focuses on extensive documentations to be provided for the global intergovernmental preparatory meetings and which will fully benefit from the technical expertise

and analytical capacity available in the UN organizations, agencies and programs. The documentation should

- Promote an integrated rather than a chapter by chapter review assessment of Agenda 21 implementation
- The documentation should thus prepare 'thematic clusters' that consist of a factual part and an analytical part
- The factual part will be submitted to the CSD in May 2001 for information
- The analytical part will be the basis for a 'comprehensive policy report of the Secretary-General'

What needs to be addressed by the preparatory process?

The summary of the CSD preparatory process in the preceding chapter shows the approach taken by the United Nations to prepare policy discussions and decisions for the detailed agendas of the World Summit on Sustainable Development. Whether the extent of the program is sufficient to prepare a summary on sustainable development that shows all aspects of the implementation process - including the controversial ones, like the discussion on alternative economic paradigms - remains to be seen. Also because a successful preparatory process very much depends on active discussion and input from all GOs and all NGOs from all levels of human society.

Two aspects are thoroughly missing in the preparatory process, e.g. the hegemony of the economic paradigm in the development process and the impact from international organizations that have no mandate in sustainable development. The text of the preparatory process does not acknowledge that the economy is twice represented in the development process. Firstly, as an integrated but dominating part of the sustainable development triad of economy, ecology and societal development. Secondly, as an independent force in development organized in bodies and structures like WTO or the ongoing globalization. These organizations mainly represent humanity's inborn rational self-interest. As initially described by Garret Hardin (see chapter 4), a change in political moral, e.g. political will, is needed to regulate the impact of the latter groups of interest on sustainable development. Human self-interest is an important factor of its survival strategy in the natural world and is to a certain degree an absolute necessity. But this is not true for human societies, which always represent a group of humans and can very well exist without simply being an extension of individual self-interest. The success of sustainable development in the longer-run will very much depend on two key issues:

1. The degree to which human societies are able to positively alter perception and attitude of its individual members towards sustainable development and needed adaptations of human consumption patterns
2. The successful introduction and implementation of alternative economic paradigms and structures that offer opportunities and a choice for humans to live and develop based on an individual perception and attitude that is sustainability-conform

Alternative models

Growth is one of a few indispensable characteristics of populations. The current question in the development debate is therefore not whether to be a growth proponent or a growth opponent, but simply whether humanity allows positive criticism towards the currently most influential aspect in sustainability

implementation efforts or not. Calls for an alternative economic paradigm should thus always be calls for continued growth under altered premises. Those premises might include new or simply different approaches towards aims and goals in economic growth, introduce new economic welfare indicators, change the focus on investment or find new ways of resource allocation and distribution. Economists will play an important part in such a shift of the economic paradigm and might need the support and cooperation of all participating in sustainable development. Recent years have seen a variety of proposals, like for example Herman E. Daly's 'The Economics of Sustainable Development', or other suggestion under a variety of terms like 'alternative economics', 'green economics' and others. To seriously consider all possible alternatives in regard to economics in the context of sustainability and define and implement practical alternatives by including all groups of interest equally, should be one of the priorities of Johannesburg 2002.

New economic alternatives are, however, not the only choices offered humanity in its search for an implementable sustainable development process. There are also a variety of alternative approaches in regard to social development and ecological protection. The European approach offers a model slightly different from other Western and Asian concepts of development. Under what is termed the 'social market economy', Europe has been able to tackle development problems like resource distribution, marginalizing of social groups, people participation and empowerment much more successfully than other regions. The result is an economic and social structure almost throughout the continent that actively supports decision finding and private initiative to introduce environmental protection successfully in its development. Some of the structures and examples from Europe might be suitable for implementation on and with other continents and nations, which also have their fair share of experience and ideas in human sustainable development. Some indigenous approaches and attitudes towards development, for example the concept of sufficiency in Theravada Buddhism, might be worthwhile to explore in the search for true sustainability in human societies.

Some suggestions for debates in the context of Johannesburg 2002 and the preparatory process:

On the following final pages, this reader introduces a number of suggestions that are based on the preceding chapters. The aim is not so much to offer a complete presentation of problems in the sustainable development context, but to offer a variety of topics in some of the central conflicts in the implementation of sustainability to open up a debate.

Development and growth

- ***A frame on development benefit distribution under consideration of social aspects (poverty and marginalized sectors of society) and ecological aspects (growth for a better environment)***

The distribution of the achieved growth remains a problem for human societies, which show an increase of poverty and marginalizing of the poor, worldwide. Instead, the achieved growth has benefited only a smaller percentage of the population, especially in the developing world, where scarce resources are mostly consumed by an elite few and a growing upper middle class. This development has created what is commonly termed 'the North in the South' and much reduced the significance of the traditional conflict between the developed North and the developing South, through a shift towards the conflict between the poor and the affluent in general, worldwide and independent of geography.

- ***The need for new priorities in sustainable development that firmly link social justice and the environment to the economy***

The hegemony of the economic agenda in sustainable development remains unchallenged. Not only because economic growth is still considered the major implementing agent of Agenda 21 demands, but also because it constitutes the most readily identified common denominator in human development and related conflicts. The lack of an alternative economic vision increases the dominance of self-interest in development efforts on all levels by introducing increased competition*. Schemes for poverty alleviation and social development in general, as well as environmental protection, fall victim to international bodies that have no direct mandate in the sustainable development agenda, but generate an enormous impact through their activities.

- ***The need for a binding, international framework to introduce improved consumption patterns, the Polluter Pays Principle and other production management tools via financial incentives and assistance***

The impact of human development on the ecology has increased, not decreased. A more efficient throughput of resources in some countries is nullified by an overall increase of human consumption activities, worldwide. Changing consumption patterns, like for example in the wake of the ongoing globalization, provide a more efficient access to resources, but hardly any change in consumption habits per se. Practical alternative approaches, like for example the Polluter Pays Principle or changing company policies towards 'green accounting' and improved process and production methods (PPM) and regulations (ISO), are mostly restricted to affluent parts of the world as they require considerable investment and restructuring.

- ***The need for new policies on energy generation, consumption and energy input models***

The implementation of the development and later sustainable development paradigm has been very successful in one respect: growth. By 1987 the human use of the total amount of organic matter produced by the planet was 224.5 x 1015 grams, of which humans consumed directly or indirectly 39% (I.G. Simmons 1993: 47). Based on the planets population density in the year 2001, humans now consume an estimated 46% of all biomass produced within the global eco-system. Biomass production through modern agriculture techniques has also increased, but is actually counter-productive, as it requires an increase in energy input on average about 30 times higher than traditional agriculture, while at most triples the food harvest and doubles the number of people that can be sustained when compared to traditional agriculture (V. Smil 1991: 239).

Mandates in sustainable development

- ***The need to restructure the decision-finding process in sustainable development policy planning and implementation***

NGOs contribute very successfully to a positive sustainable development implementation, especially when working at a grass-root level. These organizations have the mandate and trust of the people in the

* For example, an assessment of micro-credit programs in Bangladesh (Gramen Bank) has established that a considerable number of clients use a micro-credit to start a business as moneylender with very high interest payments.

developing world. However, they are not part of, or do not represent an international body that can actually determine policies in sustainable development. They thus lack a very much-needed political body with real executive power in the decision process on an international level.

- ***Firmly include or firmly detach international bodies without a mandate but with an impact on sustainable development from the implementation process***

Important social and environmental issues are left to bodies like WTO or the World Bank, who only have an economic mandate. But through their rulings and policies, they very much shape the actual form of sustainable development implemented worldwide. These bodies work out of an independent structure of organization that does not reflect the interdependencies between societal and economic development and environmental protection.

- ***Revitalize the UN through either restructuring or reform***

The United Nations, which are, in theory, humanities central organizer, manager and implementer of sustainable development, do not have the political power to match the significance and extent of their task. The CSD, for example, is not entitled to install binding rules and regulations to guide the development process in its entirety, although it has a clear mandate. This lack of political power over international bodies with a clear impact but no mandate in sustainable development works to the detriment of sustainability.

International structures in sustainable development

- ***Unite sustainable development efforts under one international commission, as suggested by the Pronk-Iglesias Report of 1992***

Practical implementation of sustainable development is at times stalled due to the UN commission bodies' location in different countries and with independent decision prerogatives based on different priorities. The CSD is not installed as a controlling body to unite the efforts of all international organizations and provide binding guidelines for sustainable development policies and practices. International finance and capital flows do support economic growth, but are not based on regulating mechanisms that reflect their impact on social development and environmental protection. The World Bank and regional development banks are installed as profit-making organizations with monetary policies in accordance with accumulative economics, and priorities in development established accordingly.

- ***Actively engage economists to suggest practical alternative economic paradigms that can unite humanity under the concept of sustainable growth, contrary to the current accumulative model***

Development will always be dependent on economics and economic structures and bodies like the World Trade Organization therefore have an enormous impact on sustainable development. At the same time they fail to provide human societies with alternatives in economic paradigms that are urgently needed to change consumption patterns and habits without condemning more people to poverty and economic hardship.

- ***Reform the international Agenda 21 implementation structure***

Rio's demands could not be provided with a structure that supports sustainable development in either conceptual or practical implementation. While national and international development demands are represented in a multitude of bodies that formulate their agendas, the grass-root level is still depending on NGOs that have to convene in 'alternative' umbrella organizations. Their demands only find access to concept and policy development in form of consultancy and in advisory boards, but are not provided with the right to vote within international and national bodies responsible for sustainable development, like the up-coming World Summit in Johannesburg.

Sustainability on a local, national and international level

- ***Empower local populations to actively suggest and implement their own development alternatives as a corrective measure to national development policies***

Policy development based on differing priorities in regard to potential and capacity helps to create an 'inverted agenda pyramid', that at times fails to establish relevance of international and national development demands for local development needs.

- ***Better integrate local and cultural aspects in suggested priorities and time-frames for the implementation of international or national development policies, especially in regard to attitude and perception***

The increasing focus on civil society demands by NGOs is not only a result of missing social and gender equity and empowerment locally, but also reflects the absence of true political will to nationally start with sustainable development on a grass-root level. The implementation frame currently provided to manage sustainable development locally is only partially fulfilling its role. Many organizations and/or national/ international development programs approach the actual implementation through a variety of measures that are nationally rather successful, but locally are at times controversial or fail to reach their objectives.

- ***Create national, political bodies for a public appeal process in regard to sustainable development implementation or projects***

Ecological, social and economic concerns are interdependent aspects of sustainable development, because they are interdependent aspects of human societies, which organize themselves through political structures. Being at the grass-root level of development, it is therefore not surprising that NGO's transformed into politically conscious groups. Thus, NGOs and their unification in umbrella organizations have contributed decisively to the implementation of sustainable development, as they are the groups that actually deal with the impact unsuitable economic structures or national development priorities have on a local development.

- ***Sustain the diversity of NGOs by opening more regional offices of international donor organizations operating in the context of sustainable development implementation***

Donor countries and agencies increasingly work with a focus on problem areas instead of working with individual NGOs, resulting in changed priorities, as the diversity of local demands is decreased by this trend.

- ***Firmly integrate the development-triad economy, ecology and societal development into international bodies through a proportional representation on the staff level***

The dominance of national economic interest is increasingly reflected in international conventions for environmental protection that fail to progress sufficiently to reach their objectives. International language and development codices are sufficiently vague to allow a multitude of interpretations that ignore objectives of sustainable development demands. Missing coordination between different types of international agreements, for example TRIPS, MEAs, GATT/WTO, Agenda 21 etc., lead to contradictions in policy implementation.

- ***Initiate a forum to work on common denominators between Agenda 21 and the 'Alternative Treaties'***

An increasing trend to consumerism, especially of the 'North in the South', shows in approaches and political will on an international level in regard to sustainable development demands. The result is an increasing polarization and radicalization of groups in the sustainable development implementation process that deepen conflict instead of providing venues for positive criticism and a possible compromise.

- ***Clearly define priorities of the globalization process so as to favor social and ecological issues***

Globalization, a unique opportunity to further the interests of the sustainable development agenda, is pushed through at an increasing pace without binding regulations to firmly connect social development and environmental protection to the economically motivated process.

- ***Increase transparency of politics and policies in UN procedures***

The location of UN conventions in different countries and as (semi-) independent bodies creates a multitude of approaches, priorities and policies in sustainable development implementation and creates an ever-increasing number of commissions and work-related acronyms. This result in a decisive loss of transparency for outside observers and discourages active people participation in sustainable development.

- ***Increase the role of civil society in sustainable development implementation***

Civil society and its demands are not only one of many facets of sustainable development, but also represent a pool of little explored human resources. Actively increasing the role of civil society in development efforts could decisively contribute to the reinvigoration of the sustainable development implementation process, which is one of the (UN) declared objectives of the up-coming Earth Summit in Johannesburg 2002.

Guest Essay

Usdanka Poranonond

A New Development Paradigm for the City of Chiang Mai

Chiang Mai is a city with a long history. In the year 1350 King Mengrai founded the settlement to be the new center of the Lanna Kingdom and he chose the location carefully. Situated on the plain of the Chiang Mai-Lamphun basin between Doi (mountain) Suthep and the Ping River, the new city had plenty of naturally provided water sources within close proximity and soon an irrigation system. Further away from the city, the plain's abundance in natural streams supported agriculture and dense forests. Chiang Mai's development and city expansion was steady but slow and its growth pattern did not change much even in modern times, until Thailand implemented the 1st 'National Economic Development Plan' between 1961 and 1966.

The past national development frame

The approach chosen to further economic growth was to firstly invest in the improvement of the city's general infrastructure. Objectives of the development plan followed the assumption that once the economy was in good shape, e.g., the nation's and the population's average income would increase, all other problems of the country would improve, too. The same logic was applied for the following 2nd and 3rd development plans between 1967 and 1976 and efforts kept their focus on economic efficiency and stability, with the tentative addition of some aspects of social development in the 3rd plan. The 4th development plan from 1978 - 1981 added more social issues and it was called 'Plan for the Nation's Economic and Social Development'. However, it was only with the 5th plan between 1982 and 1986 that social concerns were translated into an independent agenda and a program for poverty alleviation was added.

During the implementation of the 5th plan the Thai government extended its hold on public land and introduced concerted work plans in development efforts. This approach set the frame for the fastest economic growth during the following two plans, easily surpassing all that had been achieved during the previous 25 years. Backed by an average growth rate of 11% during the 6th development plan (1987-1991), foreign debts were reduced and considerable foreign currency reserve funds were created. The industrial and service sectors of the economy increased production and acquired new orders to such an extent that the country was welcomed to the club of industrialized nations and called a 'Newly Industrialized Country (NIC)'.

The 7th development plan (1992-1996) did not add any new perspectives besides the liberation of financial and capital flows to further expand the economy. By the end of the 7th plan, the GDP per capita had increased to 68.000 Baht in 1995 and 77.000 Baht in 1996, as compared to 2.100 Baht in 1961! Thailand now

changed its approach and the human being became the central aspect in the nation's planning. The 8th development plan (1997-2001) based its objectives and goals on the assumption that if the Thai people were given an opportunity to fully develop their personal potential, it would automatically further the development of families, communities, the economy, the environment and the political system alike. But during only the first year of the plan, the 'Asian Flu' hit Thailand, resulting in a severe economic crisis.

The development since 1961 resulted in the introduction of a basic infrastructure with convenient amenities, high-rise buildings and a multitude of modern tools available to society. But one major side effect was the very rapid depletion of natural resources and an equally rapid degradation of the environment, accompanied by an increasing number of pollution problems and a decrease in public health and quality of live. Worse than that, through development policies focusing constantly on income and turnover, Thai society had become a thoroughly materialistic culture with a multitude of negative effects on social behavior. The slackening of traditional art and manners, the absence of (self-) discipline and an increasing trend to take advantage of other people had pushed old values aside and with it the larger part of the beauty of Thai society. The traditional Thai institution of the family with its many social ties, community structures, and the local, indigenous culture were the direct victims. Aggravating the problem was the fact that the achieved increase in income was not equally distributed among all provinces and social strata of the country. The riches provinces had in 1997 an average income 12 times higher than the poorer ones. The income gap between the richest 20% of all households and the remaining 80% was 54 times higher 1991 and 59 times higher in 1996. During the same time, the poorest 20% of the households reached an income of only 4.2% of the GDP per capita in 1991 and 3.8% in 1996. The number of people living in poverty increased from 11.4% in 1996 to 15.9 % in 1999.

The government as well as the private sector had to increase spending dramatically to alleviate some of the problems fostered by the rapid economic growth that came with the increase in GDP. Many of those problems are here to stay and to counterbalance some of their impact very high investments will be needed over an extended period of time in the future, reaching well into the next generation. However, some of the damage done to society is irreparable, like for example the rather extensive degradation and destruction of some of the national cultural heritage sites, which Thailand will not be able to restore to the enjoyment of future generations. Thus, the type of development that Thailand has seen in the past and that focuses on economic growth, an increase in GDP, the amenities of western styles of living and a materialist culture, only put a heavy burden on our children and is not sustainable in any way.

The impact of development on Chiang Mai

This development also left its mark on the growth of Chiang Mai. In the context of developing administrative structures, health-districts* were introduced and the city became an important municipality. Its status and responsibilities changed from being the province capital to that of being the economic center of the North of Thailand, as well as the implementation center for international development efforts to manage the Mekong river basin. Thus, the typical changes that brought basic infrastructure with convenient amenities, high-rise buildings and a multitude of modern facilities also became a dominant feature of Chiang Mai. With the development came an extension of the city's land area. It was conducted without appropriate

* A Thai administrative unit comparable to a district with specialized responsibilities

control and no land-use planning based on a conceptual vision of growth was applied, resulting in a multitude of problems.

Fertile, agricultural lands were replaced by other developments, new construction obstructed drainage areas of the plain, streams were filled in and marshes reclaimed. This created an acute risk of floods especially during the rainy season, but also a dramatic loss in ground moisture. A lot of the city's growth was achieved by utilizing former areas of 'open space', which had constituted an important aspect of the city's potential to offer recreation and to naturally sustain its environment. Ancient places of cultural heritage were plundered and destroyed, permanently changing the indigenous characteristics of local and national sites, in the process also damaging national and international tourism, one of the main income generators of the city. Consumption behavior that had no other common denominator than using the plentiful natural resources without regard to efficiency became the norm and ended in the creation of a serious waste and wastewater problem.

Land-use planning used arbitrary zoning and the new land areas of the city's expansion were without any proper connections to each other, creating a city-planning problem that might not even be solved by adding much needed improvements to the basic infrastructure. Especially the lack of an appropriate system of public transportation condemns Chiang Mai's citizens to use private vehicles and individual means of transportation, resulting in many traffic problems and, at times, severe air-pollution. These problems are aggravated by a rural exodus of farmers and hill-tribes people fleeing the hardship of rural poverty and looking for work and better public services in the city. With a limited supply of jobs and financially affordable accommodation, this group of Thai society is forced to build and live in slums, which have become a worrisome center of infectious disease, conflagration and social problems.

All these side effects of development make Chiang Mai - a city that simply wanted to be a center of growth with an improved service infrastructure - a center of social and economic problems that increase in type, number and severity every time the city expands its land area. The loss of quality of life for its inhabitants is very apparent. The basic reason for the type of unsustainable development Chiang Mai has seen in the past is a missing balance in objectives between economic, social and environmental development efforts. Especially through its social impact regarding life-style and its adverse effects on the Thai Buddhist culture, this imbalance in development has created a society with wasteful consumption habits; a society that cannot guaranty the quality and intactness of its environment; a society that basically does not know investment in its own social development; a society that has created pollution problems and severe social injustice. With other words the past development of the city has created a society that is in the process of destroying itself, as it cannot sustain itself, neither socially, nor ecologically, nor economically.

The city development in the future

The future of the city needs a re-orientation towards a development that can be sustained by Thai society itself in regard to its nature, environment, and social and economic structure. This corrected path should include The Buddha's teachings of the middle way, which is the traditional way of life in the country and in most rural areas still guides society's thinking and concepts and people's deeds.

In regard to the environment, a sustainable development paradigm rooted in Buddhism recognizes the limitation of resources available to humans, starting first of all with the land, which should be used sparingly and with a high degree of efficiency. In accordance with the land's inherent potential and by

recognizing its characteristic of scarceness, personal selfishness in the new Thai society must be addressed and replaced by an attitude that focuses on the quality of live for all and not only for a few. This would include future generations that must not be left with a legacy of resource deficiency and unsolved social and economic problems. Any future expansion of the city must therefore respect land areas needed for (natural) water-drainage, not fill in streams, not reclaim marshes and keep fertile lands and watersheds intact. Areas that are prone to naturally occurring extreme conditions, like temporary flooding, should not be introduced to human use to avoid man-made, 'natural disasters' in the future. Expansion of the city's land area should accept the restrictions and limitations set by the surrounding natural environment.

City- and land-use planning need in its zoning to lessen the dependence on mobility. Smaller city sub-units with independent centers of public service and utilities for everyday life should be created. Such centers can provide, for example, a sufficient number and density of shops, educational institutions to at least Kindergarten and primary school levels, children's playgrounds and others. All public facilities and services should be within easy reach on foot or by bicycle. To link those independent sub-units of the city, an efficient form of public transportation should be introduced to reduce the number of private vehicles on the roads and, thus, alleviate traffic problems, reduce fuel consumption and air-pollution. The city should provide a sufficiently large area of open space to be available for recreational activities, to act as green lungs of the city proper and to provide public grounds for community activities and fairs. In addition, to keep the natural environment and the many ancient artifacts in the city healthy and in good condition, the number of new construction sites should be restricted and the construction itself clearly regulated. Finally, energy saving measures and the logistic relationship between various city activities ought to be considered in planning, so as to reduce transportation needs.

Regarding the social aspects, a positive social atmosphere is as decisive for a sustainable Chiang Mai. This would translate into a society that acknowledges each other's needs and knows how to extend a helping hand, as well as providing equal access to public services. Opportunities to contribute to the city development directly through active participation should be extended to the citizens on all levels of planning, decision-finding, plan implementation and monitoring. Citizens need to be made aware of their role and responsibility within the frame of the city; they should be able to correctly assess and choose consumption patterns that will use a minimum of resources, as well as respect the environment; they should actively conserve public facilities, utilities and open space. To be able to do this, citizens need to be provided with related education, have access to news from various media and opportunities to an exchange of ideas in seminars or similar activities. City- and social development planning should actively incorporate suggestions from the public.

By dividing the city into many smaller communities with their own study centers, areas for religious worship and an independent social and public infrastructure, village-like communities within the city would open up opportunities to regularly meet each other, know each other and provide each other with assistance, as is tradition in rural Thai communities. Thus a social basis for people participation is created and city communities can elect committees to lead their local development in all its aspects. Representatives of such committees can act as coordinators and intermediaries with the municipality to commonly develop the community area.

Regarding economic development, the future Chiang Mai is in need of a truly sustainable form of economics, e.g., a paradigm that equally respects ecological and social needs. All citizens need to be provided with work and not only a few with profits. The economic structure should afford the city an income sufficient

to responsibly take care of its public services and utilities. Economic sectors must be made self-reliant and self-sufficient, using local resources to generate income in a manner that does not destroy these very resources. Revenues need to be created that enable the city to conserve and take care of its resources so that they can be passed on intact to children and grandchildren. Economic sectors must be made aware of their role and accept tax-payments that are appropriate to their income and in accordance with the extent to which they use common resources or create pollution. Regulating mechanisms must ensure fairness and appropriateness for all city residents and cover the use of public facilities, as well as the protection of the environment and local, rural business. The implementation of an alternative sustainability paradigm for Chiang Mai's future development must make sure that people only consume what is their due.

Guest Essay

Decha Tongsoongnoen

ISO - a Concept to Protect the Environment?

A new method of environment management to benefit trade

The last century had seen the expansion of economic activity all over the globe and with it a degradation of natural resources and the environment. Consequently, many countries demanded to change human consumption attitudes and patterns to put future development on a firm sustainable basis. In response to those voices, the United Nations called for an international conference on the environment in Rio de Janeiro in 1992 (UNCED: United Nations Conference on the Environment and Development) to find new concepts and international guidelines on environment management principles in the context of development.

In accordance with the Agenda 21 implementation process, the Rio Conference's plan of action, the implementation of international standards (ISO: International Standardization Organization, Switzerland) was chosen to be one of the instruments of those new management principles. Its focus was to give business and trade a frame that would incorporate social and ecological aspects (see also: Manop Mekprayurthong: Agenda 21 for Sustainable Development, 1994) into the development process. The aim was a reduction of adverse effects of production and consumption on the environment through considering the general role of services (standard ISO 9000) and of business and industry in regard to new technologies and production techniques, the inclusion of environmental costs into commodity prices, re-use, recycling and waste management (standard ISO 14000).

This new concept and attitude was to be made the basis of production and consumption for national industries and business in order to achieve a cleaner production and higher throughput efficiency. Improved and environmentally friendly technologies were to be provided to the developing world at affordable prices. Rio thought it especially important to raise awareness in developing countries on issues like the importance of an efficient environment management, pollution-cycles in the production and consumption process and efficient public services as a pre-condition to conserve and protect the environment from adverse effects of economic growth.

At first glance, thus, the introduction of international standards in the production process looked to be the correct thing to do for developing countries. However, the implementation process showed that many detailed measures of the standards required a very high investment and funding was often not available. The ISO standards were therefore soon questioned to be just another trade protection of developed countries as products not in accordance with production requirements could be kept off the world market. The 'prescription' of the product standards ISO 9000 and 14000 by industrialized countries for developing countries might have been just a new mechanism introduced to gain access to the third world resources. Meaning, as mostly only Trans National Corporations (TNCs) were affluent enough to invest in the new standards and thus produce for the world market, they had in effect beaten their domestic competitors to

the natural resources for production. Profits made by the clean technology introduced under the standards were going mostly to the developed countries (see also: Withayagol Chaingkul: For the 21st century, 1997).

However, most TNCs were actually producing in developing countries in order to gain easy access to cheaper raw materials and to be able to start production without having to give environmental concerns too much thought. For example, Thailand has seen a number of foreign companies in the industrial estate Mataphut, Rayong Province, which regularly and daily polluted not only the environment, but also housing areas with industrial stench, air- and noise- pollution. This is one of numerous examples of TNCs producing in Thailand only concerned about the highest possible profit, regularly at the expense of the environment and neighboring communities.

Another type of TNC is one that already has the capability to produce environmentally correctly, but prefers to not apply their technologies in developing countries, as there are enough loopholes in the local law-enforcement to allow environmentally destructive, but decidedly cheaper production methods(. Other weaknesses of developing countries in their capacity to control environmental destruction are the practical absence of standards to check on pollution, the lack of knowledge and experience of government officials in assessments and control, as well as the law itself. Local companies are mostly not prepared in any way to switch to production under ISO standards.

This situation is different in developed countries. Strict implementation through
laws and regulations and, on average, a higher developed basis in production, processing and services turns ISO standards into an efficient tool to protect the environment. Financial investments needed to implement ISO-based production are smaller than fines or other disadvantages companies face in case of non-compliance with the standards. ISO standards were developed under the relatively high social and economic discipline of industrialized countries, a discipline that is hard to find in developing nations or outside of the family of companies of TNCs. But the standards can only function properly within a disciplined setting. Its positive effect on the economy and environment alike remain uncertain were proper monitoring, enforcement and control are not available.

The case of Thailand

During the last forty years development has brought a variety of changes to Thailand in regard to its societal-, business-, political and administrative structure. This change was initiated by national development plans, the first one being implemented in 1961. Currently Thailand is under the 8th plan. The most significant impact on the countries development concerns its production basis, which changed from mostly agricultural in the past to being extensively industrial at the beginning of the millennium. The import and export balance sheets of the country reflect the increasing shift towards industrial production and the resulting change to Thailand's market structure has created a newly industrialized country.

The internal policy of the past Thai governments has tried to bring the national change, which is mostly confined to urban areas, into local communities by supporting trends to change its rural, indigenous culture based on agriculture into one focusing on industrial production. A mass-migration of rural populations in accordance with labor market needs followed, resulting in cramped living conditions and many slums in urban areas. This loss of workers locally and the ever-increasing population density in

cities created many social problems, for example, wide-spread drug abuse, a variety of health problems and for many children a shorter school education to replace missing adults in the fields up-country.

Changes to business, markets and investment

The development of the country and related government policies have increasingly favored, supported and subsidized industrial growth and ignored needs of the traditional Thai agricultural sector. The introduction of tax-benefits for industrial foreign investments, an intensive promotion to draw international companies and
a gradual but constant opening of local markets were a continuous factor in Thai politics. These efforts resulted in an increasing presence of TNCs from all continents in Thailand, which supported the countries economic role worldwide and an increasing focus of government policies towards the ongoing globalization process.

Internally, a decisive improvement in infrastructure and transportation capacity, combined with weak environmental laws has increased the access of TNCs to local, natural resources. These basic conditions have turned the country into a very attractive region for industrial production with a high profit margin. The changes to the internal production structures continue at an increasing pace to adapt the country to the current needs of market restructuring in the context of globalization.

One of the government projects to introduce the country to the free market of a globalized economy is the implementation of the ISO standards 14000 and 9000 in industry and service related sectors. Especially the ISO standard 14000 is considered of some importance as it reflects attempts of industrialized countries, especially Europe and the US, to incorporated environmental protection in the industrial production process and opens an opportunity for Thailand to promote its products with an environmentally conform label. This policy is in accordance with suggestions of the WTO who support the introduction of ISO standards to ease access of local products to the international market.

The impact of ISO standard implementation in Thailand

During the 'Asian flu', it was especially the medium and small sized companies that were hit hardest. Export promotion in line with ISO standards became a new government focus to lift the national industry out of the crisis. To make up for the loss of access to short and long-term financing for many companies to afford the implementation of ISO regulations, the Thai government introduced aid in form of a loan from the Miyazawa Plan of Japan. However, the budgets available were mostly allocated for the implementation of the ISO 9000 standard, while environmental concerns were receiving much less attention. The reason for this is an interest by companies to find access to the international market via the ISO 9000 standard, as it requires much less investment and the regulations are easier to comply with. The more expensive and harder to implement ISO 14000 standard was mostly ignored by the industry. The ISO 9000 certificates, which actually only cover service standards, were used by companies to promote their goods as being produced under international regulations. To recover investment costs occurred during the ISO standard introduction to the company, many were forced to decisively increase production and thus the use of raw materials, while at the same time not obliged to follow environmental regulations, as those companies were not producing under the ISO 14000 standard. As pollution increased decisively in the wake of ISO 9000 implementation, the use for the country is an expanding export market, bought at the cost of a deteriorating environment.

This trend was aggravated by company policies to actually continue producing even outside of the ISO 9000 standard, as monitoring institutions are only poorly developed in the country. Also, in some instances the ISO certificates were acquired outside of the ISO awarding procedures, which was made possible by corrupt government organizations and officials and certificate rewarding agencies. It is generally known among those who actually work in the ISO implementation organized by the government(that a variety of companies do not enforce the standards during the actual production process.

However, there are also companies that have an active interest in protecting the environment by introducing the ISO 14000 standard to their production. These companies face another problem that at times makes it difficult to comply with the standard, even with best intent: the government has only limited capabilities to assess, monitor and verify pollution occurring during production. Thus it is at times not possible to define the extent to which an introduced standard ought to be implemented.

Problems resulting from the ISO standard introduction

Undoubtedly the ISO standard 14000 improves the environmental balance sheet of production, if an apparatus of strict enforcement, assessment and monitoring is available. Thus the reason for a negative impact of the standard implementation in Thailand is the lack of such an apparatus, in addition to other aspects, like:

- The implementation of the ISO 14000 standard requires a high financial investment and long-term commitment by companies.
- The current economic crisis results in government attempts to promote and increase exports. Thus, promoting the increased use of natural resources is part of government policies that at times hinder ISO 14000 standard implementation.
- The increased competition between TNCs and local medium and small sized companies for market-shares forces the smaller companies to counterbalance the economic advantage of ISO certified products with cheaper prices. Thus, production focuses on saving costs as much as possible and basic protection of the environment is removed, for example waste water treatment cycles are shut off to reduce costs and waste disposal utilizes the cheapest option.
- The further away a production process is physically located from controlling agencies of the government, the more likely are standards being acquired only in name.
- Structural deficiencies in administration, like for example corruption or the traditional Thai social system of rabob ubatham (peer-ship), make the bypassing of environmental requirements in production rather easy.

Alternative approaches to implement ISO standards

The implementation process of ISO standards could focus on the following aspects in order to make up for weaknesses as described above:

- Educate the public on the ISO standards to avoid that certificates can be used to mislead the public and thus the consumer.
- Shift investment aid focus in the context of ISO implementation, here especially ISO 14000, to smaller and medium companies and to the restructuring and improvement of assessment and monitoring measures.

- Introduce alternative production methods to especially smaller companies that employ local knowledge in environmentally conform production.
- Initiate a shift in government policies that puts more stress on actually achieved environmental protection and less on acquiring ISO standard certificates under all circumstances to promote export production.
- Initiate an education program on environmental issues for private companies in production and service that offers a choice whether the ISO standards are really a necessity for a company, or whether other approaches result in the same positive effects.

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Forest Conservation Portal Vast Rainforest, Forest and Biodiversity Conservation News & Information:
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Multilateral Agreement on Investment (MAI): A proposed multilateral international agreement that is currently under negotiation at the Organization for Economic Cooperation and Development (OECD) in Paris.
http://www.appletonlaw.com/MAI/

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MAI: Package of commentary, analysis and links to websites about Multilateral Agreement on Investment.
http://www.oneworld.org/guides/MAI/index.html

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http://www.unece.org/press/00gen33e.htm

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Global Policy Forum - Social and Economic Policy:...
... This is the main GPF page on the subject of Financing for Development, including the UN conference process leading to a global summit in early 2002. ...
http://www.globalpolicy.org/socecon/ffd/indxmain.htm

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http://www.globalpolicy.org/socecon/ffd/

The Earth Charter Campaign
Promoting a people Earth Charter for the 21st Century and beyond:
http://www.earthcharter.org/draft/charter.htm

United Nations Sustainable Development
Decisions of the general assembly and commission on sustainable development:
http://www.un.org/esa/sustdev/majorg.htm
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http://www.un.org/esa/sustdev/csd.htm

For environment policies for each political party on the Thai “national Election Day” 6 January 2001:
http://www.thaienvironment.net/update_area/spr/env_policy/env_policy.htm

Weekly New & Articles Update:
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ธรรมาภิบาลการค้าและสิ่งแวดล้อม, การทำงานอย่างถูกต้อง, แนะผู้ประกอบการใส่ใจทิศทางผู้บริโภค, มุ่งสินค้ามาตรฐานคู่อนุรักษ์สิ่งแวดล้อม:
http://www.thaienvironment.net/tqual/tq_home.htm

Pollution in Thailand:
ไม้พลาสติก (Plastic Lumber), คพ.เข้มเผาแบตเตอรี่เก่าก่อมลพิษ จวกนโยบาย สวล.พรรคการเมือง “พริ้ว” ไม่ทำการบ้าน-ขาดความชัดเจน
http://www.thaienvironment.net/tpol/tp_home.htm

Thai water resources:
โครงการแก้ไขปัญหาน้ำเน่าเสีย , เปิดบ่อบำบัดพัทยา 13 ธค.
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Thai safety issues:

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http://www.thaienvironment.net/tsaf/ts_home.htm

เอเทนไร้น้ำ พลังงานทดแทนสำหรับอนาคต , สวทช. เร่งเครื่องเปิดอุทยานวิทย์ แห่งแรก:
http://www.thaienvironment.net/tlab/tl_home.htm

Event’s, Conferences and Exhibitions:
http://www.thaienvironment.net/prof/event/pf_event.asp

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http://www.thaienvironment.net/eca/eca_home.htm

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Main areas of work and initiatives of the UN-secretariat in preparation for the 2002 world summit on sustainable development:

http://www.un.org/rio+10 /web_pages/brief2002dec l.htm

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http://www.egroups.com/files/hbs-intern-rio10/General+Earthsummit+2002+Info/

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http://www.tufts.edu/department/fletcher/multi/texts/STOCKHOLM-DECL.tex

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http://www.biodiv.org/biosafe/protocol/index.htm

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