

GLOBAL ENVIRONMENT, FORESTS HARVESTING AND SUSTAINABLE DEVELOPMENT

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It has been justly pointed out that the spate of Summits about the global concern over environmental issues has produced much more hot air and printed paper than action. An inhabitant of the Aral Sea littoral community succinctly suggested that if all the experts who have been travelling to the Aral Sea to study its ecological problems had brought a bucket of water with them, this might have been of more practical use than the innumerable reports, essays, analyses and memoranda. That could be true also of forests and forestry, which are dealt with at innumerable international institutions and fora, congresses and conferences, often regurgitating the same old stories, while illegal logging, deforestation and forest degradation proceeds unabated.

Yet, the ongoing debates and the rapidly expanding literature on environmental and development issues have provided both scientists and lay persons with the opportunity to familiarize themselves with a wide range of problems and suggested solutions. On the other hand, it has made it increasingly difficult for any individual to absorb more than a fraction of the available material, so that all of us are in danger, as in the old story, of getting hold of only one limb of the elephant and mistaking the part for the whole.

Hence the need to recapitulate how we reached Rio and then Johannesburg and Quebec, now Chiba, and what after that. This we shall attempt here with a view to providing an account of the evolution of issues that count most in the quest for environmental management, nature conservation and sustainable development, now and hereafter.

Silent Spring to Stockholm

An awareness of the need for the protection of the natural environment gained ground during the 1960s. The awakening of a new environmental consciousness, often attributed to Rachel Carson's *Silent Spring*, catalysed an unprecedented concern about the damage that humankind was inflicting on the nature, such as through the unbridled use of pesticides. The publication of the Club of Rome, *Limits to Growth*, was an in-depth scientific study proclaiming that population increase and concomitant consumption could not be sustained in view of the limits of the earth's resources. Beginning among certain scientific circles, this kind of awakening led to the formation of environmental pressure groups and to increasing coverage in the mass media. Twenty million people participated in the first Earth day on 22nd April 1970, which is now observed world-wide every year..

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Muthoo: Environment, Forests & Development

The phrase “environmental conservation” first gained wide currency during the global energy crisis of the 1970’s, and the environment conservation movement received its international sanction at the United Nations Conference on the Environment held in Stockholm in 1972, when the environment was first established as a legitimate concern in the international agenda. Apart from the creation of the UN Environment Programme (UNEP), the Stockholm Conference established two important principles. The first was that States had a responsibility “to ensure that the activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction”, which had important repercussions in terms of such issues as the effects of acid rain and emissions of hazardous gases. The second was that those who pollute should bear the costs entailed, the so-called “polluter pays” principle.

Since Stockholm, the concept of “sustainable development” has become well ingrained among policy planners, and is lately being accepted by the enlightened segments of the corporate sector. Among the often nebulous definitions of the goal of sustainable development, perhaps the pithiest is of the perspective “to meet the needs of the present without compromising the ability of future generations to meet their own needs”.

Our Common Future, TFAP, NFAP and GEF

The World Commission on Environment and Development was established in 1983. It published “Our common Future”, also known as the Brundtland Report. It recognizes a broader concept of sustainability stating that sustainable development “is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations”. The crucial principle that environmental protection and economic growth need to be treated as interrelated issues was also clearly enunciated for the first time by the Brundtland report.

The international agenda of the early 1980s was largely concerned with the debt crisis, but when the environment cropped up again in the mid-1980s, it did so with a stronger international accent, including debt-for-nature swaps. An agreement on the ozone layer was signed in Vienna in 1985 followed by the Montreal Protocol in 1987. It provided the first platform for finding ways to finance the phasing out of the chlorofluorocarbons identified as responsible for the depletion of the protective ozone layer of the earth.

Other issues attracting attention at the time included tropical deforestation, desertification and trans-boundary pollution, especially in the form of acid rain. A Tropical Forest Action Program (TFAP) was launched for addressing the issue of tropical deforestation and concomitant loss of biodiversity. It was originally co-sponsored by FAO, UNDP, the World Bank and the World Resources Institute and got upscaled as National Forestry Action Programme or National Forest Programme, which is currently underway in over 78 countries. Donors have been and are supporting -first the TFAP and now the NFAP, including Japan, the Netherlands and the UK, apart from some foundations, the UNDP and the Development banks. That signifies their recognition of the role of forests.

Increasing international concern over environmental issues during the later part of the 1980s, particularly about global warming, led to the recognition that costly corrective and preventive measures were necessary. This in turn required global mechanisms for environmental funding and led to the process for the creation of the Global Environmental Facility (GEF) launched in 1991 as a pilot programme. It completed the pilot phase and stands well established, having concentrated on five focus areas: global warming, biological diversity, international waters, persistent organic pollutants, depletion of the ozone layer, and land degradation. It has delivered 1,000 programmes and projects in 160 developing countries involving core funding of US \$4 billion and complementary co-financing of over US\$12 billion. Recently donor nations have pledged nearly US\$ 3 billion for new GEF activities through 2006.

Rio Earth Summit and Agenda 21

The United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, was convened in Rio de Janeiro in 1992 “to elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all the countries.” It was the largest gathering of its kind attended by 40,000 people, including 108 heads of State and Government. It put sustainable development on the map and was a success in raising public awareness about the need to fully integrate environmental and social considerations into economic development policy.

Agenda 21 was offered as a blueprint for socially, economically and environmentally sustainable development. It challenged prevailing policies which deepen economic divisions within and between countries, which increase poverty, hunger, disease and illiteracy worldwide, and which are causing the deterioration of the ecosystems on which we depend for life on the earth. It emphasized that sustainable development has the potential to reverse poverty as well as environmental deterioration. Its 400 pages constituted the operational platform of UNCED and an action plan through 2000 and beyond. Its 40 chapters cover 115 programme areas and contain 2,000 specific recommendations for action.

Agenda 21 provided plans for combating the degradation of land, air and water, for conserving forests and biological diversity, and for an environmentally sound management of toxic chemicals and hazardous wastes. It aimed at the strengthening of the role in sustainable development of indigenous people, of women and youth, of farmers and workers, and of NGOs and the private sector.

As a result of UNCED, three major conventions were agreed upon: the Convention on Biological Diversity (CBD), the Framework Convention on Climate Change (UNFCCC), and the Convention to Combat Desertification (UNCCD). In addition the Summit agreed upon a set of Forest Principles and the creation of the UN Commission on Sustainable Development (CSD) the latter to monitor progress, which it has been reporting annually to the UN Economic and Social Council.. UNCED estimated the average annual costs of

financing its targets at over US\$600 billion through 2000, including US\$125 billion on grant or concessional terms from the international community. Neither these figures nor the targets that developed countries should commit 0.7 percent of their GNP to official development assistance (ODA) have been attained. In fact, it has declined in the post-UNCED period from 0.34 percent in 1992 to 0.27 percent in 1996 and has not gone up through to 2000. However, foreign direct investment has more than tripled in the same period reaching US\$285 billion, but 73 percent of this went to just 12 countries.

Rio+5 in 1997 was the occasion of a special session of the UN General Assembly to assess progress made since Rio, adopting a Programme for the Further Implementation of Agenda 21. It declared that the “state of the global environment has continued to deteriorate” and that “significant environmental problems remain deeply embedded in the socio-economic fabric of countries in all regions.” It noted some progress in terms of institutional development, international consensus building, public participation and private sector actions, but stressed that much remains to be done, so that persistent poverty in the poorer regions of the world is contributing to accelerated degradation of natural resources. At the global level, it pointed out that renewable resources, in particular forests, topsoil, water and marine fish stocks, continue to be used beyond their viable rates of regeneration. Without improved situation, the Rio+5 report concluded that “this situation is clearly unsustainable”.

Other Sustainability Summits and Conferences

UNCED was followed by a string of world summits and Conferences, which have a bearing on developing priorities for the 21st century and on the Agenda 21. Taken together, the results of these conferences should offer a conceptual basis for sustainable development cooperation, giving it a people-centred dimension, a gender-sensitive dimension, and a social dimension. First of all, even before the Rio Conference, there was the adoption of the Convention on the Rights of the Child (CRC) in 1989 and the Children’s Summit held at UN, New York in 1990 where 159 Governments and 45 NGOs participated with the goals of children’s health, nutrition, education and access to safe water and sanitation. After the Rio watershed, among the notable summits and conferences were:

- The Human Rights Conference held in Vienna in 1993. The Vienna Declaration and Programme of Action adopted by 171 nations outlines a common plan for strengthening the implementation of human rights and highlights the crucial links between development, democracy and the promotion of human resources.
- The Population Conference held in Cairo in 1994. Its 20 year goals included the integration of population concerns into all policies and programmes aimed at achieving sustainable development, making family planning universally available by or before 2015, and empowering women and girls through education, health and employment opportunities.

- The Small Islands Conference held in Bridgetown in 1994 adopted the Barbados Declaration and Programme of Action, setting a strategy for development that protects the fragile environment of small island States. They build on the Rio Agenda 21 and focus on 15 key areas, including natural and environmental disasters, fresh water, land resources, energy, tourism, biodiversity, and above all, climate change and sea-level rise. The conference sought to strengthen the UNFCCC and concomitant cooperation in view of the threat of global warming and submergence of low-lying islands and coastal areas.
- The Social Summit, held in Copenhagen in 1995. The principal themes of the Summit's Declaration of ten commitments made by 186 States, including 117 heads of State or Government, are essentially threefold: eradication of poverty, expansion of gainful employment, and social integration.
- The Beijing Women's Conference, also held in 1995, had 189 Government and 2,100 NGO representatives. It focused on the cross-cutting issues of equality, development and peace analysed from a gender perspective involving the advancement and empowerment of women in relation to their human rights, poverty, voicelessness, and violence against them.
- The City Summit was held in Istanbul in 1996 to address the issue of city slums and shanty towns as was requested by the Rio Summit. It attracted an unprecedented participation of NGOs and produced the Habitat Agenda that provides an effective tool for creating sustainable settlements for the urbanizing 21st century with regard to the environment, human rights and social development. Its goals and principles include poverty eradication in the context of sustainable development and the recognition of the right to adequate housing.
- The Food Summit held at Rome in 1996 adopted the goal to halve by 2015 the number of people afflicted by hunger. About 800 million undernourished people, and the Five Year after Summit in 2002 concluded that the goal was unattainable as per the trend thus far. Concerns were already raised at Rio in 1992 emphasizing food security in the context of sustainable development as defined in Agenda 21. Later that year the FAO/WHO International Conference on Nutrition recognized that access to nutritionally adequate and safe food is right of each individual. The World Food Conference of 1974 had proclaimed the inalienable right to freedom from hunger and malnutrition and set as its goal the eradication of hunger, food insecurity and malnutrition within a decade, a goal that has yet to be met.

Monterrey and Millennium Summit

Despite all the spate of summits and conferences, of which only those most directly significant to sustainable development have been noted above, the world is suffering almost shamelessly from abject poverty, deprivation, destitution and disparities. That remains as the main cause and consequence of the planet's many creeping environmental disasters, such as deforestation of over ten million hectares annually along with blackouts

and biodiversity losses. Anger and hunger seem to be going about hand in hand and this calls for a holistic approach to the persistent problem of poverty, sustainable development and peaceful progress on the planet.

Needless to note that there are 1.2 billion people eking out their existence on less than a dollar a day and about half the world's population lives on less than two dollars a day. They lack access to basic necessities and amenities that people in the developed countries take for granted. They and many more in the developing countries and those in transition often suffer from hunger, disease, ignorance, joblessness, voicelessness and hopelessness with inadequate food, clean water and sanitation, education and health care. Modern science, technology and know-how are beyond them in most cases, be that in their homes or on their farms, forests or sweat shops. Disparities and digital divide rule the world, despite the era of globalization that is being touted about.

Keeping the above scenario in view, 147 heads of State and Government and 191 nations met at the Millennium Summit in September 2000 at the UN in New York adopting the Millennium declaration to address the issue of poverty and sustainable development. It set the following Millennium Development Goals (MDGs) for 2015:

- Reduce by half the proportion of people (i) living on less than a dollar a day (1.2 billion), (ii) who suffer from hunger (800 million), and (iii) who do not have access to safe drinking water (1.1 billion).
- Achieve gender equality in education and ensure all girls and boys complete primary schooling. (Nearly 325 million of them are not in school).
- Reduce by three quarters the maternal mortality rate.
- Reduce by two thirds the mortality rate among children under five. (11 million children under five die each year from preventable causes).
- Halt and begin to reverse the spread of malaria and major diseases and of HIV/AIDS (which afflicts around 37million people).
- Improvement in the lives of at least 100 million city slum dwellers (by 2020).

The Summit reaffirmed its support for the principles of sustainable development, including those set out in Agenda 21 at Rio. It resolved to protect “our common environment”, for which “Peoples, as well as governments, must commit to a new ethic of conservation and stewardship and demonstrate global solidarity”. As first steps, it *inter alia* resolved to:

- Make every effort to ensure the entry into force of the Kyoto Protocol and to embark upon the required reduction in emissions of greenhouse gases.

- Intensify collective efforts for the management, conservation and sustainable development of all types of forests.
- Press for the full implementation of the Convention on Biological Diversity and the Convention to Combat Desertification.
- Stop the unsustainable exploitation of water resources.
- Intensify cooperation to reduce the number and effects of natural and manmade disasters.

The MDGs and other commitments of the Rio and related Summits require significantly increased investment in strengthening national capacities and institutions, technology transfer, planning and project implementation, above all for poverty eradication and sustainable livelihoods. Leaving behind the unfulfilled estimates and targets of the Rio summit mentioned earlier, there is a consensus in the international community about the need for almost doubling donor assistance to around US\$ 100 billion an year in order to merely meet the MDGs. That would be about 0.5 per cent of the GNP for developed countries –still well below the 0.7 per cent target agreed by world leaders years ago.

In response to a fairly concerted call of the UN, the World Bank, and several donor and developing countries and institutions, an additional US\$ 12 billion a year in aid by 2006 was pledged by world leaders at the International Conference on Financing for Development held in Monterrey, Mexico, in March 2002. Monterrey was a ray of hope, like light out of darkness. Although the totals pledged did not meet the levels needed, they reversed the trend of declining aid. Donor countries may be motivated to give more if their demands are met about improved governance, accountability, transparency and outcomes. How to leverage new and additional resources for sustainable development was among the key challenges of the Johannesburg Summit, calling for innovative approaches to partnerships and cost-sharing.

Johannesburg Summit

The World Summit on Sustainable Development (WSSD) took place at Johannesburg in September, 2002, ten years down the road from Rio. It agreed to the Rio Principles that the protection of the environment and social and economic development are fundamental to sustainable development. It adopted the global programme, Agenda 21, and the Rio Declaration, to which it reaffirmed its commitment. The Johannesburg Declaration in essence recognized the challenges of:

- Poverty eradication, changing consumption and production patterns, and protecting and managing natural resource for promoting sustainable development
- The deep divide between the rich and poor and the ever-increasing gap between the developed and developing countries

- Continued deterioration of the global environment, as evidenced by deforestation, desertification, and the depletion of biodiversity and fish stocks, by climate change and more frequent natural disasters, and by air, water and marine pollution
- Globalization, whose benefits and costs are unevenly distributed, with developing countries facing special difficulties in converting this challenge into an opportunity for sustainable development.

Among commitments made by the international community at the WSSD may be listed:

- Constructive partnerships, dialogue and cooperation among all for achieving sustainable development
- Targets, timetables and partnerships to speedily increase access to basic requirements, such as clean water, sanitation, shelter, energy, health care, food security and the protection of biodiversity
- Assist one another to have access to financial resources, benefit from the opening of markets, ensure capacity building, use and transfer technology, and promote human resources development
- Fight against threats to sustainable development such as chronic hunger and malnutrition, organized crime and conflicts, terrorism, trafficking, and debilitating diseases, including HIV/AIDS, malaria and tuberculosis
- Women's empowerment and emancipation and gender equality
- Concrete efforts towards agreed levels of Official Development Assistance
- Stronger regional groupings and alliances, such as NEPAD in Africa, to promote improved international cooperation and sustainable development
- Special attention to Small Island Developing States and the LDCs
- Vital role of indigenous peoples in sustainable development
- Role of the private sector to contribute to the evolution of equitable and sustainable societies and need for enforcing corporate social responsibility
- Provide assistance to increase income generating employment opportunities
- Long-term perspective and broad-based participation in policy formulation, decision-making and implementation at all levels
- Strengthen and improve governance at all levels for the effective implementation of Agenda 21, the MDGs and the POI.

Apart from the Political Declaration of the Johannesburg participants, a Plan of Implementation (POI) was cobbled together. It testified that this summit based itself on achieving the goals and principles set at Rio and for the full implementation of Agenda 21 and its follow-up programme as enlisted at Rio+5 and other major conferences and agreements since 1992. POI thus represents a distinguishing feature of the Johannesburg Summit in that it ensured focused attention, with targets and timetables as far as feasible, on an already agreed agenda rather than re-inventing the wheel.

WSSD also distinguished itself by emphasizing the need for partnerships across the board, between governments worldwide, and between governments and major groups for attaining the shared goals of sustainable development. Some say that the corporate sector hijacked the agenda by its prominent presence at Johannesburg, but it is noteworthy that many and unprecedented alliances and partnerships were established to provide technology and resources to help the sustainable development of many a left-behind communities and societies, especially in Africa. This continent received special attention at the Summit, given its precarious position socially and economically and the spectre of hunger affecting 15 million in the very southern Africa region through the Summit.

Johannesburg Plan of Implementation

The Plan of Implementation (POI) proposed to establish a world solidarity fund to eradicate poverty, which is the first among the following list of main priority areas identified for implementation at Johannesburg:

- Poverty eradication
- Changing unsustainable patterns of consumption and production
- Protecting and managing the natural resource base of economic and social development
- Globalization challenges and opportunities for sustainable development
- Health and sustainable development
- Sustainable development of small island developing States
- Sustainable development for Africa and other regional initiatives
- Finance, trade and technology
- Institutional framework for sustainable development

Regarding poverty eradication, POI has reiterated the MDGs to halve by 2015 the world's population suffering from hunger and those living on less than a dollar a day. This priority area includes other items about access to basic necessities, local and

indigenous community development and participation, and contribution of industrial development to poverty eradication.

The POI includes the development of 10-year framework programmes at regional and national levels for changing unsustainable patterns of production and consumption. This is addressed to all countries, developed and developing, in order to promote their social and economic development within the carrying capacity of ecosystems, while improving efficiency and sustainability in resource use, sound management of chemicals and hazardous wastes, and transport strategies for sustainable development. This involves common but differentiated responsibilities of States in cleaner production and eco-efficiency, enhanced corporate environmental and social responsibility and accountability, public-private partnerships, and increased role of GEF in supporting and strengthening green production and consumption programmes.

Protecting and managing the natural resource base harmoniously calls for targets at national and regional levels to protect ecosystems and to achieve integrated management of water, land, and living resources, as also the conservation and management of oceans. This priority area calls for the conservation of biodiversity and fragile ecosystems, including forests, mountains and deserts. It seeks an inclusive approach to address vulnerability, risk and disaster management and urges action on the issue of climate change.

Sustainable development in a globalizing world is beset with challenges, particularly for the poor. These should be converted into new opportunities through an enabling environment for capital flows and advances in technology, including energy efficiency, information and communication technologies and thereby reduce the digital divide, as espoused by the World Summit on the Information Society. Removal of trade barriers and improved terms of trade favouring the developing countries on the basis of their inherent comparative advantage would institute a more harmonious background for global environmental management and sustainable development. Therefore, the POI asks to implement the outcomes of the Doha Ministerial Conference by the WTO members, further strengthen trade-related technical assistance and ensure full participation of developing countries in multilateral trade negotiations.

Health and sustainable development are interrelated, as also with poverty, pollution and environmental deterioration, which can be both a cause and consequence. The POI stresses the need to address the causes of ill health with special reference to vulnerable groups, such as women and children and indigenous people. It calls for strengthening health-care systems, implementation of UN commitments on HIV/AIDS, and the reduction of respiratory diseases caused by air pollution, among other priorities.

POI calls to attention the vulnerability of Small Island developing States (SIDS) due to adverse factors underlined in Agenda 21, requiring the accelerated implementation of the Programme of Sustainable Development of the SIDS. It involves consideration of the fragile ecosystems of SIDS, risks to their marine and coastal resources, and limitations of their land and water resources. The POI seeks to diversify their development base and to

support community-based initiatives on sustainable tourism by 2004, as also a review of the implementation of the Barbados Programme of Action for the Sustainable Development of SIDS.

Sustainable development for Africa received heightened attention, not merely because the Summit was being held in the region, but because of the marginalization of the continent in the world economy and the conflicts and emergencies that the continent has been witnessing, apart from the deterioration of its environmental and natural resource assets, such as its forests, fisheries, and watersheds. Hunger, malnutrition and poverty remain rampant in the region, as is the lack of access to clean water, education and health care, not to speak of HIV/AIDS and other preventable and communicable diseases. Bad governance has often been cited as a cause, but many countries are undergoing democratization, conflicts are waning, and the New Partnership for Africa's Development (NEPAD) is a commitment of the continent's leadership to sustainable development. The international community at Johannesburg showed solidarity with this new initiative and pledged support to its implementation.

It was not stated, but there were hints at the Summit that some African countries have yet to improve their policies and governance, but people can not be punished for the faults of those in power. Nor is attention to Africa mutually exclusive with partnerships with other needy regions and hence the Summit participants asked to incorporate in the POI other regional initiatives too. It thus includes support for their further development and implementation, such as of the Initiative of the Latin America and the Caribbean on Sustainable Development, based on the Platform for Action on the Road to Johannesburg 2002, approved in Rio in 2001. Likewise, the international community at WSSD supported the Phnom Penh Regional platform on Sustainable Development for Asia and the Pacific, recognizing that the region harbours over half of the world's population and the largest number of the poorest people. Action in this region is recognized as particularly critical to achieving the MDGs and the targets of WSSD.

POI also includes specific reference to the West Asia region, which suffers severely from water scarcity and calls for sustainable management of natural resources including water, coastal zones and for combating desertification. Likewise, regarding the EC for Europe region, the POI points to the different levels of development in the region and to its commitment to sustainable development, involving ongoing activities at regional and sub-regional levels, which would also contribute to global environment and development.

Finance, trade and technology are noted among effective means of implementation of Agenda 21. The POI calls for the delivery of these means by all the countries concerned, taking into account the Rio principles, including, in particular, the principle of common but differentiated responsibilities of the States. It urges the developed countries that have not done so to make concrete efforts towards the target of 0.7 per cent of GNP as ODA.

POI recognizes the role that trade can play in sustainable development and expresses its determination to take concrete action to address concerns of developing countries and calls for commitments to be fulfilled by WTO members, notably in terms of market

access, such as for products of export interest to developing countries. It encourages the WTO committees on Trade and Environment and on Trade and Development to act as fora to benefit sustainable development in line with the Doha Declaration.

Transfer and diffusion of environmentally sound technologies and know-how was enshrined in Agenda 21. POI seeks to promote this as also partnerships for the purpose. It asks for assistance to developing countries for building capacity in science and technology and for improved collaboration between natural and social scientists and between scientists and policy makers. POI prescribes to promote the wider application of environmental impact assessment as a national instrument and methodologies at policy, strategy and project levels for sustainable development decisions at all levels.

POI states that States should take immediate steps in the formulation of national strategies for sustainable development and begin their implementation by 2005. This should involve an enabling environment of policies and institutions, including the participation of all major groups, in order to deliver the strategies cost effectively and efficiently. POI recognizes that an effective institutional framework for sustainable development -at national and international levels, is key to the full implementation of Rio Agenda 21 and the follow-up to the outcomes of the WSSD.

Key Outcomes

POI is a concrete outcome. But, given the lesson learned since Rio that Summit declarations and good intentions are hardly ever fulfilled and that Agenda 21 is more on paper than on the ground, an action oriented proposal for Johannesburg was WEHAB:

- Water
- Energy
- Health
- Agriculture
- Biodiversity

Apart from the key outcomes of poverty eradication goals and partnerships for sustainable development, WEHAB is a watershed of the WSSD. More than a billion people are without safe drinking water. Twice that number lack adequate sanitation and more than three million people die every year from unhygienic water. Unless urgent action is taken, two thirds of the world's population may be living with severe water shortages by 2025. Agriculture consumes most of freshwater -about 70 per cent globally. Yet most irrigation systems remain inefficient, wasting water and causing salinization and loss of fertile land, and engendering health hazards and environmental risks. No wonder, water wars are not uncommon and may increase, with ever increasing scarcity.

Water related key outcomes of WSSD are to halve by 2015 the proportion of people without safe drinking water, and those without access to basic sanitation. Also to develop integrated water resource management and water efficiency plans by 2005. The United States committed US\$970 million for three years on water and sanitation projects and the European Union has launched a Water for Life programme, primarily for Central Asia and Africa. The Asian Development Bank provided US\$ 500 million fast-track credit for Water for Asian Cities besides a grant to HABITAT. Another twenty one initiatives were announced, including those involving private-public partnerships.

Energy is almost as important as water for sustainable development. Yet two billion people lack access to modern energy services, condemned to remain in poverty trap. The key outcomes of the Summit to address the problem are to (i) diversify energy supply and substantially increase the share of renewable energy, (ii) improve access to reliable, economically viable and socially beneficial and environmentally sound energy services and resources, (iii) remove market distortions including the restructuring of taxes and the phasing out of harmful subsidies, and (iv) establish domestic programmes for energy efficiency with the support of the international community, including the promotion of conservation technologies, research and development.

Even though energy is a solution to sustainable development, it is a problem too, being a major source of green house gases and cause of air pollution and damage to human health and the environment. Despite this, there was no concrete commitment for want of consensus on targets and timetables about renewable energy or the Kyoto Protocol. Nevertheless, the European Union and many other stakeholders pledged targeted increase of renewable energy usage, and countries of significance committed to the ratification of the Protocol, such as Canada and Russia. The EU committed US\$ 700 million partnership initiative on energy and the United States announced that it would invest up to US\$43 million in 2003. The UN received 32 partnership submissions for energy projects with at least US\$26 million in resources and nine major electricity companies of E7 signed a range of agreements to facilitate technical cooperation for sustainable energy projects.

Sustainable development is impossible without a healthy population. Yet, most development activities have impacts on the environment, which can cause or exacerbate health problems, such as the use of toxic chemicals and other hazardous materials which are basic elements of development. More than a billion people breath unhealthy air and three million die each year from air pollution. Two thirds of them are poor people, mostly women and children, who die from indoor pollution caused by burning wood and dung for cooking and heating. HIV/AIDS has killed millions in their prime productive years and tuberculosis takes a toll equivalent to US\$ 12 billion from the incomes of the poor. Brundtland notes that Africa's GDP would probably be about US\$ 100 billion more if malaria had been tackled 30 years ago, when effective control measures first became available. An investment of US\$ 66 billion a year by 2015 could save 8 million lives a year and generate six-fold economic benefits, more than US\$ 360 billion a year by 2020.

The key outcomes of Johannesburg are to (i) enhance health education for achieving improved health literacy on a global basis by 2010, (ii) reduce, by 2015, maternal

mortality rates by three quarters of the prevailing rates in 2000 and likewise infant mortality rates and of children under five by two thirds, and (iii) reduce HIV prevalence among youth between 15 and 24 by 25 per cent in the most affected countries by 2005 and globally by 2010, as well as combat malaria, tuberculosis and other diseases. The United States announced a major commitment to spend US\$ 2.3 billion through 2003 on health, some of which was earmarked for the Global fund. The UN received 16 partnership submissions for health projects and there were initiatives for intensified research and development of drugs to deal with chronic diseases and others afflicting the developing countries in particular, such as HIV/AIDS and malaria.

Agriculture is an issue not only to promote rural development and ensure food security, but also to deal with the problem of land degradation, which affects two thirds of the farmland worldwide. As such, desertification is intensifying and spreading and productivity is declining sharply, while the number of mouths to feed continues to grow, more so in food-deficit countries, with millions in Africa facing the spectre of starvation.

A key outcome of the WSSD was to reaffirm the MDG and the World Food Summit goal of reducing by half the number of people suffering from food insecurity by 2015, who are estimated at 800 million. Special consideration was given to the vulnerability to hunger and malnutrition of the poor people, especially in Africa. Resources for combating desertification have hitherto been miserly but it was added at the summit as a priority area in the GEF. This should give a boost to combating desertification and rehabilitating drylands for improved productivity. The UN has received 17 partnership proposals for agriculture landuse. The United States will invest US\$ 90 million in 2003 for sustainable agriculture programmes and has announced US\$ 53 million for forests in 2002 to 2005.

While improved forest management should contribute to the conservation of biological diversity, the Summit outcome included the achievement by 2010 a significant reduction in the current rate of loss of biodiversity. The POI explicitly recognized that biodiversity plays a critical role in overall sustainable development and poverty eradication. This is also linked to the conservation of fragile ecosystems, such as of the mountains and of the sustainable livelihoods of mountain communities, which were given specific attention at the Summit in the spirit of the International Year of the Mountains 2002.

Another interrelated key outcome is about oceans and fisheries, which is to (i) maintain or restore depleted fish stocks to levels that produce the maximum sustained yield on an urgent basis and where possible by 2010, (ii) put into effect the FAO international plans of action for the management of fishing capacity by 2005 and to prevent and eliminate illegal and unreported fishing by 2004, (iii) develop and facilitate the use of ecosystems and related approaches, the elimination of destructive fishing, and the establishment of marine protected areas, including representative networks by 2012, and (iv) encourage the application by 2010 of the ecosystem approach for the development of oceans.

Other cross-cutting key outcomes involving new and additional resources for implementing the Johannesburg goals and commitments include (i) the replenishment of the Global Environmental Facility with a total of US\$ 3 billion, (ii) pledges by Japan of

at least 250 billion yen for education over 5 years, food assistance of US\$ 30 million to southern Africa, and environment-related capacity building by training 5,000 people from overseas, (iii) US\$ 50 million from Norway (iv) the British announcement to double assistance to Africa to £1.0 billion a year and raising its assistance for all countries by 50 per cent, (v) the contribution of 500 million euros by Germany over the next five years to promote renewable energy, (vi) Canadian announcement that it will eliminate tariffs and quotas on almost all products from the least developed countries as of 1 January 2003, and that it will double development assistance by 2010, and (vii) 280 partnerships between governments, business and civil society, involving US\$ 250 million or more.

Constraints and Conflicts

Extreme poverty, inequality, hunger and disease, and current consumption and production patterns skewed in favour of the rich, continue to pose challenges to sustainable development. A major constraint is the lack of resources in developing countries to bear the cost of shifting to the sustainable path. Aid, in terms of Overseas Development Assistance (ODA), has declined rather than increased since Rio, though the Monterrey meeting in March 2002 holds out some prospects for reversing the trend. Debt relief has fallen short of what is needed and subsidies, such as for farming in the developed countries, are distorting trade against the comparative advantage of developing countries and those in transition. The last year's Doha round of talks on trade and their endorsement at Johannesburg are no guarantee of reducing such conflicts in the concept of synergizing global environment and development, as has recently been noted at the Cancun WTO Summit in September 2003. A special effort is needed to loosen these constraints, largely through increased aid and improved trade between the poor and the rich, particularly for poverty alleviation and related five WEHAB priority areas of action.

There are limits to national action in the areas of sustainable development, when natural resources and ecosystems are shared across boundaries. Without a broad framework for action at regional and global levels, countries, especially those that are cash-strapped, have little incentive to act on their own to pursue the sustainable path. Whether it is the question managing shared resources, or combating water borne diseases, or rehabilitating degraded drylands, coordinated action across borders is required to achieve the desired results. But how much hope can we harbour for sustainable development on the earth when we note that there was no consensus at Johannesburg for timetable and targets on several issues of the global commons, such as climate change or the related issue of renewable energy and greenhouse gases. These are areas that belong to none and all, in which the sword seems to supersede the pen, as it were.

The lack of coherence and consistency across a range of policy areas and strategies dealing with sustainable development creates conflicts of interest among various stakeholders. The existing institutions and policy processes, both at the domestic and international levels, either lack capacity or are often not conducive to integrating the goals of economic growth, social development and environmental management. Sectoral lines of authority continue to dominate decision-making. Horizontal linkages between

line ministries, departments and organizations at every level need to be strengthened to enable them to comprehend and pursue sustainable development in a holistic manner.

Training of development workers and exposure of responsible persons at policy planning levels, especially in holistic management concepts, is still rarely imparted, even in the compartmentalized UN system. At the global level, the international institutions need to ensure broad-based participation and greater transparency in the decision-making process. This remains an anathema to many in positions of power, thereby contributing to the constraints of economics versus environment, and short term versus the vision of long term sustainable development.

Global thinking and local action warrants a vision of solidarity and site specificity. Often, they are unnecessarily seen as conflicting between the concerns of the planet and of local assets and aspirations. Without consideration for local community practices evolved over centuries for the conservation, management and development of natural resources and other assets, there is the risk of losing traditional knowledge, which needs to be preserved, adapted and mainstreamed and shared globally. However, globalization is a challenge which remains yet to be converted into an opportunity for promoting sustainable development worldwide -without preying upon traditional knowledge, local cultures and practices.

The very nature of sustainable development is such that each and every segment of society should participate in daily decision-making that has direct impact on their lives. Good global governance, and at local levels, is wanting widely, for sharing authority and responsibility and for building partnerships and alliances for a common cause. Nor are there mechanism for compensation to poor local communities for the stewardship role of their natural resources and other assets, which they witness being ruthlessly extracted and logged by fly-by-night rich outside “entrepreneurs and institutions.” They thus have little incentive to care for the natural resources, such as of forests, water and biological diversity, dependent upon which is the whole humanity. With these constraints, limited democratisation of decision-making and broad-based participation in implementation, there are bound to remain conflicts in the effective implementation of sustainable policies, programmes and projects.

Efforts to shift to the path of sustainable development are often derailed by methodological debates and scientific disputes. The extreme concerns of pro-active activists, such as the Greenpeace, are in complete conflict with conservatives, such as the Spectator, who downplay the perils of unsustainability, taking refuge in pseudo-scientific and statistical works, such as the *Skeptical Environmentalist*. Its author, in fact, got recognized and elevated to an exalted position in his home country of Denmark, while many of us were busy preparing for Johannesburg, which has done little to allay the fears or to clarify the scenario.

Despite the global consensus on sustainable development at Rio, Johannesburg and elsewhere, sceptics still question the need to shift to the path of sustainability. Such debates have diverted attention from the core issue of poverty and weakened the resolve

to take action. True the Greenpeace and the World Business Council joined hands for an evening at Johannesburg, but the scientific effort to learn the truth has not received the priority it deserves. More, for instance, is required to direct forest, agricultural and industrial research and codes towards technologies that promote sustainable development and to ensure affordable access to such technologies by developing countries. So is the case for formulating and implementing projects and programmes with innovative approaches that are required for ensuring harmony between the environment and human needs. But the necessity to overcome such constraints is drowned in the conflicting voices of the activists and skeptics, who remain to be better informed.

Sustainable Forest Harvesting

Skepticism about a forest convention continues ever since it was mooted out and some of the staunch supporters are no longer behind it. Instead there are talk shops all over the place, and forests and forestry thus remain high on the global agenda, but without focus and with little concrete action. No wonder 13 million hectares or more are lost annually and equally sizeable area is degraded, mostly in developing countries. At Rio, forests and biodiversity were the two hottest subjects. An international convention was cobbled for the latter but not for the forests. That was essentially because the majority of developing countries -especially including those dependent on timber trade for foreign exchange and on forest resources for large-scale sustainable livelihoods, wished to entertain no exogenous barriers to their forest utilization. They doubted the intentions of the developed countries and the outcome was a carefully crafted non-legally binding agreement, as better than nothing.

This psychology about forests as a sovereign subject needs to be understood, though no longer can human rights be left in wilderness, if the fate of families and innocent individuals is intertwined with the nature of forest asset management as is the case for legally unrecognised proprietors running into millions of poor people living in and around the forests. If laws are not enforced, if these people are overlooked and if the forest is declared as a park or reserve area without access to forest products or without gainful employment and incomes, the greatest sufferers are the indigenous communities, forest dwellers and forest dependent women and workers which run into almost a billion world over, directly an indirectly.

Any forest harvesting code or any decision about logging or non-timber products impacts these poor people more severely than the few fly-by-night traders and concessionaires. Sustainable harvesting with due involvement of the local communities can be a saviour of the forests and the people both. This applies to tropical forests no less, despite the uninformed calls for keeping them as carbon sinks or biodiversity reserves of the world. That too is possible, if the international community so wishes, but the concerned communities and countries will need to be compensated adequately and appropriately. It is probably possible with the upcoming instruments, such as CDM and ET, though partly only, as is foreseen now. But having forests sustainably harvested and used as carbon sinks are not mutually exclusive options; instead they can be mutually reinforcing, if only

optimal models of sustainable harvesting codes and practices are designed. These will vary according to site specificities and need not be generalized.

While the millions of the poor people are not recognized, rewarded and compensated for their stewardship of forests, their traditional knowledge and the flow of environmental services to rest of the society, they are left with all the incentive to convert the forest and uproot the saplings. Their abject poverty is the biggest constraint which if not loosened will continue to have a toll on the forests and they will act as surrogate accomplices of the daylight robbers. The net outcome is deforestation and degradation of the forests.

Asia is among the worst affected, with one country alone having lost 2 million hectares of precious tropical forests an year ago. The region has the largest mass of poorest people, estimated at 40 per cent of all the world, and it has the lowest per capita forest area left to meet its burgeoning needs. The interdependence between poverty reduction and sustainable forest management can be demonstrated with no sharper clarity than in Asia which has around 500 million forest dependant disadvantaged poor people with almost no property rights. Imposing harvesting codes and law enforcement conjointly which note such situations about the poverty dimension of SFM is primordial, both for the benefit of the people and the sustainable management of the forest.

Illegal logging is worth banning, but that does not mean that the baby be thrown with the wash-water. Logging should continue, even in tropics, and that shall help biodiversity too, as low harvested and severely preserved tropical moist forest generally are less biologically diverse than those where crown density varies due to logging and felling. Regenerated forests are livelier and therefore better carbon sinks too.

Closing the forest or drastically restricting forest harvesting and utilization are obviously not the answer. Regulating, recognizing and reviewing with due considerations of EIA and in conformity with PRSP will bring rewards for all – locally, nationally and internationally. That should encourage transparent trade and private-public partnerships in timber harvesting with benefits for the environment and the economy. That is apart from catering to the needs of the local communities, whose institutional capacity calls for being strengthened to ensure the implementation of the right codes and practices, with due adjustments as required. Certification tool in the tropics remains one such area, for which phased approach is favoured in view of the current capacity constraints.

Comments and Conclusions

With little progress so far in addressing above noted conflicts and constraints, there is serious risk that the Johannesburg Summit commitments and MDGs will remain a real challenge for translation into tangible action. But we must remain stoically committed to the common cause of a sustainable planet -with harmony between humanity and the environment, and between the rich and the poor. We must make that happen. Let us test our resolve through forestry and sustainable forest harvesting and let us start in Asia. It merits priority attention, because it is in readiness to act and it needs to be so, having the

largest number of the poorest of the poor on the earth, and with the least per capita forest and continuing deterioration of its precious tropical moist and other forests.

For that we need concrete projects and programmes aimed at good governance and law enforcement. These should be designed with a global vision and local action, interalia, for eradicating poverty, which is a primary cause and consequence of environmental deterioration and deforestation in developing countries. These projects should promote pro-poor policies and help create an enabling environment for synergies among existing forestry, environmental, trade and market institutions and agreements, advancing scientific understanding and disseminating appropriate technologies for sustainable development. Their successful implementation should be based on building alliances and partnerships between various sectors of the society and for mobilizing resources for multistakeholder cooperation and national ownership.

Monitoring, evaluation and review of the development policies, programmes and projects should be undertaken transparently and periodically in order to assess their impact on the environment and poverty eradication, and to adjust and adapt strategies from lessons learnt. Workshops, brainstorming sessions and small summits to share knowledge and information on best practices may be organized at national and regional levels and on thematic issues. Chiba is no doubt a well-focused first step after Quebec in that direction.