



**SUMMARY REPORT FROM THE  
GLOBAL DIALOGUE ON SUSTAINABILITY  
19-21 JUNE 2000**

**REPORT OF THE MEETING**

**OPENING PLENARY: SETTING THE SCENE**

A Global Dialogue on Natural Resources: The Sustainability Challenge, was held from 19-21 June 2000 in conjunction with Expo 2000 in Hanover, Germany. This participatory process was open to the public attending Expo 2000 and over 500 people participated. Plenary sessions were also televised.

This Global Dialogue is the first of a series of ten Global Dialogues being organized by the Stockholm Environment Institute (SEI) in conjunction with Expo 2000. Over 60 leading institutions from different countries are involved in the planning and realization of the Global Dialogue series. The objective of the Dialogue series is to bring together academics, political and business decision-makers and representatives from NGOs and international organizations to develop new forms of participation and dialogue specifically in the areas of health, environment and labour. Following the Dialogue series, a programme for global partnership will be set up to reach the broader public and establish a dialogue with prominent personalities from international public life.

The Global Dialogue on Natural Resources and Sustainability endeavored to address, *inter alia*: future resource use at the global, regional and local levels; distribution; and protection of resources that are either non-renewable or gradually renewable. Linkages were made between the Global Dialogue and on-going natural resources-related initiatives, including international conventions, regional agreements and local initiatives. The goals of this Dialogue were to: discuss best practices and options to improve use, distribution and conservation of natural resources in line with sustainability, technological efficiency and innovation so as to meet increasing demands on renewable natural resources; help define the agenda for the Earth Summit 2002; and tackle sustainable production and consumption patterns of governments, business and the public. Participants addressed the topics of ecosystems, water, energy, forests, and markets in six plenary sessions and three rounds of five simultaneous workshops. The workshops met once on Monday, 19 June and twice on Tuesday, 20 June. Wednesday, 21 June, was dedicated to three plenary sessions. Chairs and panelists rotated at each workshop and plenary session.

Chair Simon Upton (Organization for Economic Cooperation and Development (OECD) Round Table on Sustainable Development) opened the meeting on Monday, 19 June, welcoming participants and calling for a multi-way dialogue. Noting that the sustainable development debate is bedeviled by statistics of doom and smooth statements, he stressed using the Global Dialogue for communicating with people and allowing them to internalize sustainability.

Speaking on environment, conflict and sustainable peace, Alexander Carius (Director, Ecologic Centre for International and European Environmental Research, Germany) highlighted a mining conflict where environment degradation triggered an unstable social system. He noted the institutional context and the relationship between violence, population pressure and environmental impacts and advocated coherent integration of poverty eradication, sustainable resource management, democratization and human security and, *inter alia*, the fostering of environmental cooperation. He underscored the success of environment policy in developing sophisticated management tools and agreements but the failure of policy integration at both national and international levels.

Tariq Banuri (SEI Senior Research Director, Boston, USA) spoke about sustainability and climate change scenarios. He reflected on the historical context of globalization and its two current trends: increasing global interdependence and the fragmentation of equality. He suggested that unsustainable development produces intergenerational inequities and stressed criteria for a transition to sustainability, including justice and fairness, equity, poverty eradication, peace, security and governance. He highlighted the use of models to understand solutions to climate change and suggested the use of efficiency, equity and sustainability.

Claude Fussler (Director of Stakeholder Relations, World Business Council for Sustainable Development (WBCSD) and SEI Board Member) gave an introduction on the challenge of creating eco-efficient markets. He explored the question of market suitability and accessibility while providing long-term environmental security. As one important step in achieving this goal, he pointed out the creation of affordable goods to be offered on markets below poverty levels.

Terri L. Willard (Internet Communications Officer, International Institute for Sustainable Development (IISD)) drew attention to the issue of knowledge management and its possible impacts on sustainability. She said that while knowledge management relies increasingly on electronic means, direct and personal communications are

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still valuable technologies. She identified explicit, implicit and tacit knowledge, encouraged diversity of and communication between knowledge systems and stressed the important role of intermediaries.

In the second part of the plenary session, panelists responded to questions by the audience. On preventing conflict, Carius stressed the key challenge of linking sustainable development and the promotion of peace. Banuri stressed the importance of long-term capacity building with a participatory approach. Fussler stressed eco-efficiency to reduce the link between consumption and negative environmental impacts. Carius emphasized ensuring that governments perceive consumption problems as political issues. On developing countries' difficulties in competing with developed countries, Fussler emphasized intelligent and collaborative solutions to avoid returning to protectionism. On the role of democracy in sustainable development, panelists emphasized the importance of equity and justice, equal access to resources and information and the avoidance of technocratic control. Chair Upton noted democracy's strength in addressing large ethical matters requiring broad direction but its uselessness in addressing highly detailed matters.

Responding to comments on the Kyoto Protocol and the pessimism that has emanated from it, Banuri reemphasized the need for a proper balance between efficiency, equity and sustainability.

### PARALLEL WORKSHOPS

Five thematic workshops were held simultaneously on Monday, 19 and Tuesday, 20 June 2000. Each workshop consisted of panelists from international organizations, NGOs, corporations, governments and universities.

**ECOSYSTEMS 21:** A workshop on ecosystems was convened by the Global Environment Facility (GEF) and World Wildlife Fund (WWF). The Monday session was chaired by Claude Martin (Director General, WWF International) and addressed global priorities and partnerships for integrated ecosystems management.

James Martin Jones (WWF-UK) gave an introduction of the Global 2000 Initiative, which aims toward a methodology for determining global conservation priorities. Drawing attention to various examples of ecosystem diversity, he said that the challenge lies in securing a broad range of ecosystems as the basis of the world's economy. He called for conservation of specific eco-regions, which carry unique biodiversity, and unusual ecological phenomena.

Colin Rees (Team Leader, Biodiversity Global Environment Facility (GEF)) discussed the GEF's role in the field of ecosystem management and biodiversity protection. He highlighted stakeholder involvement, contextual challenge and integrated ecosystem management as the three main challenges in the pursuit of an integrated approach. He said that long-term and adaptive management approaches are needed and that to optimize benefits, synergies must be created between three GEF focal areas (climate, water, biodiversity).

Speaking on behalf of Prof. Michael Succow (University of Greifswald, Germany), Thomas Trhaenhardt addressed partnerships formed with Eastern European States and the Russian Federation for the purpose of achieving an eco-regional approach for Eurasia. Describing the focal areas of the conservation activities and highlighting the special characteristics of the partnership projects, he said existing institutions should not be replaced by a framework organization.

In his presentation, Georg Schwede (CEO, WWF-Germany) highlighted the practical implications of an eco-region-based conservation approach (ERBC). He pointed out that the ERBC is a strategic approach for conducting conservation with a long-term vision, enabling a broad assessment of the best places to invest in conservation and providing a framework for identifying and addressing root causes for biodiversity loss. He said amelioration of root causes is central to effective implementation of ERBC, as is the establishment of long term commitments, and creation and reinforcement of alliances between the various stakeholders.

Anneke Trux (Observatoire du Sahara et du Sahel (OSS), Tunisia) pointed out the change in terminology from "development aid" to "development cooperation" to the current "partnership" model, and stressed the need to identify areas where partnerships are needed for sustainable development. She said partnerships would need to: balance interests and benefits; build upon reciprocal obligations, mutually agreed objectives, shared responsibilities; and establish North/South and South/South cooperation. As tools for establishing partnerships with the OSS, she highlighted legally binding instruments, especially the Convention to Combat Desertification (CCD), monitoring and evaluation, information management and circulation and technology transfer.

Christophe Crepin (Regional Coordinator, Global Environment Africa, World Bank) discussed emerging partnerships for integrated ecosystems management in Africa. He pointed out many new actors and stakeholders and the need for coordination. He highlighted the need to address and integrate constituencies at all levels, and to develop a clear understanding of the costs and benefits and the comparative advantages of partnerships.

On Tuesday, the morning session of the workshop on Ecosystems 21 was convened by the GEF, the World Bank and the German Technical Corporation Agency (GTZ) and was chaired by Mohamed T. El Ashry (Chairman and CEO, GEF) and Günther Winckler (Coordinator, CCD Support Programme, Germany). It focused on the question of drylands.

Gaoussou Traoré (Director, Department of Agriculture, Ecology and Social Development, Mali) presented a sub-regional action programme and highlighted the link between desertification and poverty. He said regional and worldwide partnerships should allow for mobility of humans and animals as an important survival strategy against climatic variations in the context of globalization. He stressed that limiting factors for the Sahel region are not technological, but rather institutional, economic, socio-cultural and financial. He also stated that the GEF must be decentralized at sub-regional level. Turning to the issue of conflicts, he suggested green cross-protection of the environment in conflict areas. One participant stressed that education on how to prevent desertification is needed.

Helmut Woehl (GTZ Senior Advisor to the Namibian Desertification Control Programme) spoke about the institutions and processes for combating desertification in Namibia. He stressed that blueprint approaches exist and that projects must be tailored to specific circumstances. He pointed out that success was limited in scope and replicability and said projects often lacked horizontal and vertical integration and adequate political, economic and legal frameworks. On the gap between research and implementation, he warned that knowledge management tends to marginalize political issues such as decentralization, land tenure and water management. A participant asked if it was worth continuing to invest in international conventions or whether it is better to concentrate on decentralization. A panelist stated that global conventions provide the legal framework for decentralized implementation and also strengthen the principle of subsidiarity.

Mary Seely (Executive Director, Namibia Desert Research Foundation) spoke on experiences at the community level. She pointed out that as a consequence of urbanization new social challenges need to be taken into account.

Christophe Crepin (Regional Coordinator, Global Environment Africa Region, World Bank) highlighted reasons for moving to an integrated approach in drylands management, including the complex interactions at different levels and the fact that drylands degradation cannot be reversed through project level intervention. He cautioned against *ad hoc* fragmented activities and sectoral approaches. He stated that implementation requires action at all levels and that it is important to identify synergies and trade-offs.

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The afternoon workshop was convened by WWF and the GEF around the theme of integrated management of international waters and achievements and challenges in the Wadden Sea and other regions and was chaired by Dr. Peter Prokosch (Director, International Arctic Programme, WWF). He called for reflection on conservation achievements in the Wadden Sea and discussion of future challenges, taking into account successful management examples from other regions, sectoral activities such as sustainable fisheries and tourism, and coastal engineering measures.

Jens Enemark (Common Wadden Sea Secretariat, Germany) gave a presentation on the trilateral sea cooperation, its achievements, challenges and perspectives. Highlighting the outstanding ecological and socioeconomic role of the Wadden Sea, he emphasized the importance of political cooperation. He underscored the need to build upon agreed guiding principles and move toward a commonly defined protection area. He outlined challenges for the future, including developing integrated and comprehensive management systems and stakeholder involvement.

Siepie de Jong (Mayor of the Municipality of Leek, the Netherlands) spoke about success and future prospects for protected areas in the Wadden Sea. She stressed the need for the Wadden Sea countries' governments to lay a foundation for cohesive implementation and underlined a resolution of the State Ministerial Conference in 1997 to establish a common understanding of the various protection regimes based on a common classification tool. She also cautioned against the lack of information sharing with stakeholders and civil society.

Siân Pullen (Head, Marine Programme, WWF-UK) drew attention to new approaches in coastal engineering measures in the UK. Outlining the major causes for loss of coastal wetlands, she argued for development of innovative partnerships between local and national environmental groups, government agencies and local industries to generate opportunities for demonstration projects. She illustrated this approach with the Abbots Hall Farm project in Southeast England, where interest groups, the private sector and government successfully jointly pursue the recreation of degraded coastal ecosystems.

Dr. Kenneth Sherman (Director, Office of Marine Ecosystem Studies, Northeast Fisheries Science Centre) gave a presentation on marine ecosystem management of the Baltic and other regions. He reflected on internationally adopted principles and their application in the nine countries bordering the Baltic Sea ecosystem with a GEF-funded project to be initiated in 2001.

Kees Lankester (Director, Scomber Consultancy, the Netherlands) underscored the compatibility of fisheries and sustainable management if fisheries' impact on the ecosystem is acceptably low. He said impact standards depend on the ecosystem and must be defined in consultation with interest groups and applied to all fisheries in the Wadden Sea.

Chua Thia Eng (GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia, the Philippines) pointed to a review of past initiatives, indicating weaknesses such as information that does not meet management requirements and approaches that are too bottom-up or top-down. He concluded that partnerships between the various stakeholders are essential and that ICM would be most effective if it is developed and implemented within the local government planning and management framework.

Dr. Mathias Feige (Institute for Economic Research in Tourism, Germany) pointed out the need to involve the tourism industry as active partners in nature conservation for shared responsibilities. He noted the absence of a joint concept of sustainable tourism that would balance the economic, environmental and cultural needs of both tourists and locals.

Dr. Karsten Reise (Island of Sylt Research Centre for the Wadden Sea, Germany) highlighted major strategic elements, including: a well-planned manner for addressing coastal retreat; construction of an

offshore port in the North Sea; prevention of species introduction; better assessment of harmful substances; and better integration of coastal tourism with nature conservation.

**WATER 21:** On Monday, conflicts and challenges in the global agenda were addressed in the workshop on Water 21, convened by SEI and chaired by Arno Rosemarin (SEI Communications Director).

On hydropolitics, Leif Ohlsson (Professor, University of Örebro, Sweden) highlighted linkages between water scarcity and social resources and presented a water management scheme. He noted the risk of "water wars" might be less than that of internal conflicts between groups, sectors, or water-privileged segments and the governments. He said research should identify hidden factors responsible for scarcity and make them available to people dependent on water for agricultural activities and food security.

Malcolm Mercer (Director, IUCN-Canada) spoke on a World Water Vision project which proposes, *inter alia*, involvement of stakeholders in integrated management, full cost pricing of water, public funding for research, and massive increase in investments. He said payment for the full value of water supply would incorporate the value of goods and services for provision of fresh water, including water cleaning, flood control, pollution attenuation, and recreational and educational values.

Alan Hall (Coordinator, Global Water Partnership (GWP)) highlighted themes from the GWP framework for action, including: mobilizing political will; making water governance effective; generating "water wisdom;" tackling urgent water priorities; and investing for a secure water future. He stressed the importance of putting international water resource management into practice with governments taking responsibility for allocation. He also stressed the need for greater involvement of the private sector to overcome obstacles linked to service delivery and investment.

On water and food, Franck Rijsberman (Director, International Water Management Institute (IWMI)) noted that 70% of water supplies go to agricultural use. He compared data on population increase, irrigated area expansion, agricultural water needs, and total growth in primary water source and noted that although some areas of the world have sufficient water supplies, a lack of infrastructure prevents channeling and efficient agricultural use, giving an illusion of dearth. He identified solutions to create sustainable food levels, among which increasing crop productivity and irrigated areas, or growing in more suitable environments and trading food products.

Juergen Resch (Board Member, Global Nature Fund (GNF), Germany), reported on a project entitled "Living Lakes," on goals for lakes conservation. He highlighted local initiatives in, *inter alia*, the St Lucia Lake in South Africa and the Mono Lake in California to underscore work accomplished through partnerships between NGOs and corporations. He said recent projects focus on developing countries and called for continued financial assistance.

On Tuesday morning, the workshop was convened by GTZ and SEI and chaired by Hinnerk Bartles (GTZ Senior Advisor).

Joachim Bendow (Executive Secretary, International Commission for the Protection of the Danube River (ICPDR), Austria) gave a presentation on water management and sustainable development in the Danube river basin. He addressed, *inter alia*: social and economic disparities among countries; pollution reduction; participation; root causes of inadequate management; the Danube water quality model; the future EU Water Framework directive; and prospects for international cooperation and financial support.

Ren Yanan (Administrative Center for China's Agenda 21) addressed sustainable utilization of water resources. She highlighted, *inter alia*, that while there is sufficient water in China, there is scarcity due to per capita occupancy and uneven distribution of precipitation. On water-related sustainable development, she noted a shortage of water resources and intensifying discrepancies between supply and demand which threaten China's agriculture, urban areas and growth

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perspectives in general. She indicated countermeasures for solving water resource problems, including saving, addressing water pricing and strengthening management. One participant highlighted inadequacy of water pricing in developing countries and advocated the "right to water."

Jerry Gatora (Chairman, Mazowe Catchment Council, Zimbabwe) detailed the management work performed by the Council for Zimbabwe rivers. He identified historical factors that have contributed to poor water management, including extensive dam building in the Mazowe Region and unmanaged access to water and land. He outlined principles contained in the 1998 Zimbabwe Water Act, including free primary use (domestic usage, small-scale agriculture), adoption of the "polluter pays" system and prioritized use of water supply.

Rita Sharma (Joint Secretary, Ministry of Agriculture, India) reported watershed management experiences in India. She pointed to: unequal geographical distribution of water; challenges ahead, including food security, improvement of agricultural production and poverty alleviation; and the dwindling effects of the Green Revolution. She identified management schemes for both rain-fed and irrigated areas which provide for, *inter alia*, people's involvement, empowerment of communities in terms of financial, human and social capital and monitoring.

Stela Goldstein (Special Assistant to the Governor, São Paulo, Brazil) highlighted institutional mechanisms for water management, including the new Brazilian Federal Water Law. She said revised water management mechanisms provide: adjustment of management to social, cultural and physical conditions; integration of environmental and resource management; integration of water into sectoral planning; and empowerment of regional and local stakeholders. She explained the system of double ownership of water resources by both the federal State and the regions.

Harro Bode (Executive Director, Ruhrverband, Germany) presented work performed by Ruhrverband, a private corporation, in treating river wastewater. He illustrated wastewater treatment with a project underway in the Ruhr River. He said German legislation passed specifically to empower them to carry out river conservation had facilitated the work of Ruhrverband, and suggested other countries adopt similar legislation.

The afternoon workshop was convened by WBCSD and addressed the theme of public and private partnerships to deliver water services.

Chair Al Fry (consultant, WBCSD) opened the discussion and referred to confrontations between the business community and NGOs. He said when the notion of sustainable development began to be addressed by NGOs, the business community saw a profitable opportunity for dialogue. He noted the WBCSD was born out of this emerging corporate interest in sustainable development and that today the priority focus of the organization is addressing fresh water supplies.

Jim Lamb (WBCSD, UK) spoke on water valuation, investment and sustainable development. He outlined: areas of consensus; infrastructure deficiencies (unmanaged population growth, lack of efficiency in water services, increasing requirements for sanitation services); sources of investments (governments, ODA funds and the private sector); incentives for private sector financing (the need for return on investments, value for money, and competent and fair regulations); and the WBCSD perspective (full cost pricing to attract investments, provision for the poor, water as a public good, and priced storage, treatment and delivery).

Al Fry noted that poor urban people pay a high price for water. He suggested rich people be charged above cost and poor people below cost and that a mechanism to implement and monitor this be put in place by the World Bank. He said dialogue was an important step in water pricing to allow for participation and create business opportunities, and hoped water pricing would make users more waste conscious.

One participant questioned how rural areas could ever attract private sector investments. Lamb said that the cost of technologies for water and sanitation needed in rural areas is much lower than in cities, which increases the value for money. He also addressed the issue of corporate corruption, especially when funds are brought into poor areas, and stressed the importance of corporate social responsibility in curbing it. He concluded that change requires dialogue and transparency, noting that people need to understand the decision-making mechanism.

**ENERGY 21:** On Monday, this workshop, convened by the GEF and the Wuppertal Institute (Germany) discussed ways of integrating cleaner solutions in energy market reform.

Referring to conclusions of the EXPO Compendium on Sustainable Energy, Chair Peter Henricke (Wuppertal Institute) noted efforts to examine energy from the perspective of the consumer and to place emphasis on energy efficiency and resource productivity. Responding to questions, he noted, *inter alia*, the importance of changing incentive structures and the promising prospects for fuel cells after 2010.

Roberto Vigotti (Chair, International Energy Agency (IEA)), highlighted world energy demand growth projections and the importance of a supportive, consistent policy framework for market integration of renewables. He emphasized market positioning and strategy in accelerating renewable energy and noted factors that will reduce prices and increase the value of renewables. He stressed cost scenarios for investments in learning in different markets, relevant markets for renewables and the impacts of investments in learning on competitiveness. Regarding a query on centralized political barriers to change, he emphasized interagency collaboration and IEA's role in convincing governments to consider renewables.

Highlighting the proposed China-GEF Renewable Energy Partnership, Jinlin Yang (GEF Focal Point, China) stressed the obstacles in China to developing renewable energy. Emphasizing political constraints, stakeholder ownership and private sector involvement, he said the Partnership's thrust is to give decision-makers the opportunity to identify the best way to develop renewable energy. He noted a stick and carrot strategy approach combining a mandatory percentage for renewables with among others, bilateral and multilateral support. Co-Chair Mohamed T. El-Ashry underscored including poverty alleviation in the strategy.

Nadiyah Moh'd Khalil Jouhari (GEF Focal Point, Jordan) highlighted energy use in Jordan and renewable energy possibilities. She noted: a renewable target of 4-5% of total energy consumption by 2010. On options for cleaner energy, she highlighted: a gradual switch to natural gas; energy efficiency programmes; methods for expanding conservation programmes; and private sector involvement.

Frank Rittner (Programme Manager, GEF) highlighted patterns of power sector reform and competitive markets' influence on the environment. He also highlighted instruments for clean energy reform, including enacting a stable and level playing field for independent power producers, eliminating hidden subsidies, reducing market barriers to energy efficiency and renewable energy and enforcing comparable environment standards on all generators.

Klaus Knecht (Programme Manager, Carl Duisberg Gesellschaft (CDG), Germany) highlighted developments in the energy market as a result of liberalization and re-regulation. He traced the developmental steps of: dissolving state monopolies in generating, transmitting and distributing power; new state regulations to control the market indirectly; activation of private sector enterprises; increased authorized independent energy producers; and accelerated technical progress in the areas of renewable energy and highly efficient technologies.

On Tuesday morning, the workshop, convened by CDG and the GEF, debated strategies to promote commercial transfers of renewable energy technologies.

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Jens-Peter Molly (Executive Director, German Wind Energy Institute) gave an overview of wind energy training courses. He highlighted creating necessary knowledge about wind energy for decision makers, transferring political and technical know-how and tackling political obstacles first. He stressed transferring technical and economic know-how to enable engineers to solve wind energy application problems.

Chen Xinjun (Vice President, Central Southern China Electric Power Design Institute, China) highlighted power industry reform and strategy in China and commented on a wind farm project near Lichuan. A Chinese participant underscored China's unstable market as a local constraint.

J. Dietrich Mayer (Director-General, Dewind, Germany), speaking on technology transfer, underscored the importance of equal benefits for both partners and long-term operations. He outlined the project phases of short-term training, transfer of hardware, long-term training in technology use and transfer of key know-how. He emphasized that Dewind retains ownership control over technology use and the need for secure economic and political conditions.

Frithjof C.M. Kublik (Vice President, Shell Solar, Germany) highlighted forecast scenarios for increased energy demand and noted Shell projects on rural electrification. He outlined a case example in South Africa and noted the high cost of solar energy installation as an obstacle to rural electrification.

Heinz-Wolfgang Böhnke (International Relations, SunTechnics, Germany) underscored that commercial technology transfer applies to the entire marketing chain and stressed the need to build up management elements of technology transfer in the local environment. He also highlighted SunTechnics' franchising approach and market access strategy and noted its requirement of a long-term, reliable mutually binding relationship.

Jörg-Dieter Anhalt (Technical Director, BRASELCO, Brazil) called for entry of German companies into the Brazilian market with BRASELCO support. He highlighted the aim of jointly selling solar modules and equipment through a distributor network in Brazil, product and service attributes needed, the different customers and how to enter the market and guarantee sustainability.

Wolfgang Jung (Manager, Solar Energy Project, Germany) highlighted results of a conference on "Renewable Energy for the South", held in Gelsenkirchen, Germany, with regard to technology needs and framework conditions, availability of appropriate/proven technologies, financing and capacity building. He noted overall findings of a lack of communication between potential partners in the North and South and lack of mutual trust as an important category in risk perception. He stressed harnessing international private investment and facilitating personal interaction between potential partners.

Frank Rittner outlined impediments influencing technology transfer. He noted availability of assistance tools to address technology transfer constraints and GEF efforts to complement these, such as provision of contingent grants and contingent or concessional loans. He stated that partial risk or credit guarantees are being explored, as well as investment insurance programmes.

The afternoon session addressed co-generation-co-benefit strategic partnerships to unleash the commercial potential of renewable energy technologies, particularly combined photo-voltaic and hydroelectric (PV-hydro) technologies.

Gunter Schramm (consultant, International Finance Corporation (IFC)) reported on a combined PV-Hydro initiative intended to reduce prices in order to make PV power a commercially viable option as a supplementary power source. He noted the collaboration of the organizations involved and indicated the need for markets to get utilities interested in making PV part of their system.

Mark Radka (Energy Programme Coordinator, UNEP-France) noted the role of GEF and UNEP implementing agencies in establishing renewable energy strategies. He indicated the precedents of the PV-Hydro concept and noted that the key interest lies in project replicability.

Rolf Seifried (PV-Hydro Project Manager, Kreditanstalt für Wiederaufbau, Germany) addressed the prospects for PV within the scope of German financial cooperation. He noted, *inter alia*, the general sectoral goal to provide reliable, cost effective and sustainable energy services to increase economic productivity and improve living conditions. On costs and financing, he noted that PV applications have been confined to *niche* solutions and wider use is limited by lack of purchasing power and of sustained financing possibilities for subsidy schemes.

Andreas Wiese (Associate Team Leader, PV-Hydro Study, Lahmeyer International GmbH, Germany) outlined a PV-Hydro Conjunctive Use Study's objectives and stages and system power scenarios and the modular set-up of the planning model. He indicated that key PV issues are investment costs and operational reliability. He highlighted benefits, screening criteria, first screening results, simulation models and project selection procedures.

Ramon Abaya (Chairman, Cagayan Electric Power & Light Company (CEPALCO), the Philippines) discussed CEPALCO's PV-Hydro Project Under a Deregulated Environment. He noted the positive impacts of deregulation and the avoidable costs. He highlighted the rationale for PV-hydro conjunctive use and its non-economic benefits, including independence from imported fuel and reduction of gas emission. He stressed reducing the cost of renewable sources, supported a deregulated power business environment and advocated private sector participation in addition to financial assistance while the PV market is developing.

Gernot Oswald (President and CEO, Siemens Solar GmbH, Germany) noted a lack of access to electricity and PV's growth potential. He highlighted rural electrification barriers within governments, banks, manufacturers, dealers/installers and customers. He said the PV-Hydro initiative was a brilliant solution to overcome most of the barriers and complement and enhance the performance of many small hydro power plants, but economic conditions are extremely challenging.

Participants discussed, *inter alia*, precedents, practicality, incentives, cost implications and timing for PV use. Panelists stressed, *inter alia*, early collaboration, technological improvement, accessibility of different PV uses and the difficulty of reducing costs without demand.

**FORESTS 21:** On Monday, this workshop was convened by the World Commission on Forests and Sustainable Development (WCFS) and SEI around the theme "Our forests, our future, forests in crisis."

Chair Ola Ullsten (Co-Chair, WCFS) stated the greatest risk of forest loss is in areas of low forest cover, which are already suffering from timber shortages. He emphasized impacts on food production, flooding and increasing poverty. He spoke of the WCFS's report on forests, which stresses services other than production, such as preventing soil erosion, water systems, and carbon cycle.

David Kaimowitz (Center for International Forestry Research, Costa Rica) stressed the underlying causes of deforestation and highlighted that global deforestation trends continue despite yearly spending of \$2 billion on technical assistance. He suggested that policy makers, *inter alia*: avoid placing roads and ports in forested areas; restrict certain large scale investments; exercise caution with agricultural and forest product trade liberalization; recognize local ethnic groups' rights and strengthen their capacity to govern; and build stronger and more democratic systems of property rights and law enforcement.

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Salleh M. Nor (President, Tropbio Research) addressed water, biodiversity and ecosystems. He maintained that: destruction of Malaysia's hill forests affects local water supplies; biodiversity is at risk from loss of the gene pool and the lack of interest in taxonomy among young people; and research into ecosystem dynamics is needed.

On climate and forests, Wolfgang Cramer, Professor (Potsdam Institute for Climate Impact Research, Germany) highlighted the influences of forest ecosystems on water, the carbon cycle and climate change. He offered solutions to global warming, including focusing on cutting fossil fuel emissions and removing existing amounts of carbon from the biosphere.

Claes Hall (Senior Advisor, Aracruz Cellulose, UK) on timber and fiber in a changing environment, opposed the idea that there is a forest crisis and stated that from a commercial perspective society is not at risk of running out of timber and fiber. He recognized the need to bring together forest stakeholders, and suggested forest issues be solved locally, regionally or nationally.

Ashok Khosla (President, Development Alternatives, India) highlighted the importance of second order consequences of deforestation, such as the burden of fuel wood collection faced by women. He suggested that the marginal costs of deforestation to livelihoods have not been adequately captured and require additional research. He highlighted technology and the appropriate institutions of governance as solutions to deforestation.

Discussion revolved around the issues of governance, devolution of power to communities for forest management and environmental services of forests such as carbon sequestration.

On Tuesday, the morning workshop addressed solutions to the forest crisis. Chair Angela Cropper (International Board of Trustees, Iwokrama International Centre for Rainforest Conservation and Development, Guyana), spoke of the WCFSD forest trust, composed of four key components: Forest Watch, a mechanism for information access and pooling; an ombudsman function covering issues of equity and transparency; a Forest Management Council, to coordinate overlapping criteria and indicator initiatives; and a forest award, including global, national and local rewards for good forestry practice.

David Pearce (Director, UK Centre for Social and Economic Research on the Global Environment) spoke of the market's failure to capture service values of forest resources and suggested innovative solutions to tackling deforestation, such as watershed management and carbon sequestration. He emphasized that all ecological functions are economic functions and suggested that alternative economic approaches can provide practical and immediate solutions. On property rights, he said paying for environmental services is not a solution as population and corruption are larger issues.

Al Fry highlighted positive developments in the forest industry, including well developed systems of plantations on previously degraded land and the forging of new partnership with different actors.

Joan Pollock (Eco2000, New Zealand) spoke of grassroots experiences in establishing successful forest farms in New Zealand.

Mark Poffenberger (Director, Asia Forest Network, USA) outlined success stories of community forestry initiatives in India, Nepal, the Philippines and Vietnam. He stressed the importance of community adaptation to environmental crisis and described community transition from state ownership of forests to new governance structures. He suggested that changes stemmed from severe land degradation, poor economies and political pressures by rural people, and stressed the re-emergence of stewardship over natural resources.

Colleen McCrory (Valhalla Wilderness Society, Canada) spoke about British Columbia's forest crisis, stating that almost a million hectares of forest per year are harvested. She stressed that true forest stewardship will bring about sustainability and the potential for implementation of a community ecosystem-based plan.

Discussion touched on: the importance of grassroots initiatives; recognition of emerging environmental service values of forests, such as carbon sequestration; and the need for investment in forestry research and the importance of global and international approaches towards forest management.

The afternoon workshop concentrated on overcoming obstacles in forestry and the themes of sustainability and governance, technical solutions and structural reforms, the politics of forests, and the challenges for political and economic systems for change.

Chair Norman Myers stressed that we are facing a forest disaster and reminded participants that tropical deforestation is increasing due to shifting cultivation.

Elizabeth Dowdeswell (former Executive Director, UNEP) identified the need to understand the nature of sustainability and pursue creative environmental governance, clarifying the role of the intergovernmental community to achieve sustainable development. She suggested an eco-systemic approach to environmental problems, highlighting interdependence and diversity. She emphasized the importance of linkages, *inter alia*, between science and policy and between people and governments. On governance, she suggested institutional and behavioral challenges are the keys to creative environmental governance.

On technical solutions and structural reforms, Maria J. Cruz (GEF Senior Social Scientist, the Philippines) called for community-based natural resource management; accountability; broadened constituencies; responsive business practices; and the sharing of technological advances. On implications for Rio+10, she highlighted: deforestation as a global problem; inclusion of forestry issues in national environmental strategies; and links between forestry programmes and poverty alleviation.

Hemo Munting, (Co-founder, GLOBE International, the Netherlands) underscored the importance of approaching politicians with substantive information. He supported WCFSD suggestions for a Forest Capital Index.

Uwe Möller (Secretary General, Club of Rome) highlighted developed countries' responsibility toward sustainable forestry and the role of business initiatives in the future of green markets.

Discussion ensued on global governance, the need for institutional change in forestry and the prospect of a forest convention. Some participants argued that forestry would be more effectively dealt with at the national level. Ola Ullsten outlined the priorities of the WCFSD report, including: developing the Forest Capital Index; pursuing the forest trust supported by IISD; and encouraging governments to take a lead in forest issues.

**MARKETS 21:** On Monday, this workshop, facilitated by Edward Frieman (Chairman, Board on Sustainable Development, National Research Council, USA) tackled markets, knowledge and sustainable development.

Kevin Dunion (Director, Friends of the Earth-Scotland) discussed fair shares in environmental space and introduced the concept of sufficiency as a means of limiting demand for goods utilizing natural resources. He called for large-scale changes toward sustainable practices in both developing and developed countries. He highlighted the importance of shared responsibility and environmental justice for progress toward sustainable development.

Ana Lorena Quirós Lara (Ecoglobal S.A., Costa Rica) discussed the role of the commons in public markets. She suggested that, as a non-market, the commons exist to overcome market failures. She stressed that property rights are key in introducing the commons into the market. She highlighted mitigation measures for non-market failures, including independent project evaluation, linking of costs and outputs, evaluation of rights, and use market mechanisms. She called for mechanisms to measure non-markets' effectiveness.

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On poverty and sustainability in the non-market, Al Binger (University of Jamaica) highlighted the need for mechanisms allowing countries' involvement in the global market. He further addressed: environmental problems facing Small Island Developing States (SIDS); methods of sustainable agriculture; development of national (specifically SIDS) participation in international organizations; and education as a vector of sustainable development.

On competitiveness and environmental quality, Franz Lehner (President, Institut für Arbeitstechnik, Germany) discussed ways to trigger growth in markets and simultaneously assist developing countries. He said de-materialized production systems would make goods available at a low price and low environmental cost. He noted that creation of better organized markets would facilitate access to new technologies.

Doug Miller (President, Enviro-nics, Canada) presented a survey of consumers' trends from 27 countries. Although views on the role of technology in solving environmental problems varied, he noted that consumers acknowledge the risk posed for future generations by current environmental problems. He identified a latent environmental activism among consumers and said corporations could trigger suggested sustainable consumerism if they catered to this new awareness.

On Tuesday, the morning workshop, convened by WBCSD and chaired by Dawn Rittenhouse (Business Sustainability and Product Stewardship Leader, DuPont Corporation, USA) addressed markets, knowledge and sustainable development.

Bas de Leeuw (Programme Director, Sustainable Consumption, UNEP Division of Technology, Industry, and Economics) stressed the importance of proper information dissemination, youth participation, training and networking, and accessible pricing in markets in order to facilitate sustainable consumption.

Georg Kell (Special Advisor to the UN Secretary General) stressed the importance of shared responsibility and enlightened self-interest. He supported the integration of developing countries in the market and noted that poverty is frequently a result of insufficient training and government failure. On creating sustainable markets, he called for attention to human rights and environment as well as trade interests.

Ezio Manzini (Director, Italian Department of Industrial Design and Architectural Technology) outlined a society in which sustainable businesses would enable people both to live better and consume less. He called for a shift from market models based on material products to one based on service and knowledge and, beyond this, a shift in consumer ideology to value social common goods.

Edward Frieman called for collaborative efforts to create a new science of sustainability. He noted the Internet economy and e-commerce were creating a fundamental shift in the relationship between energy and growth and described a trend of decreased energy consumption with increased information technology.

Anne Weir (Community and NGO Affairs Manager, Corporate Relations Department, Unilever PLC, UK) discussed ways in which responsible business could provide pathways to sustainable markets. She outlined a market programme wherein growth would not depend on natural resource consumption. Noting that products on the market need to be sustainable, she stressed mutual responsibility between businesses, government and consumers. She highlighted the importance of informed consumers and a community/government mandated framework of sustainability goals for businesses.

The afternoon workshop was chaired by Michael Hanssler (Executive Director, Bellagio Forum for Sustainable Development-Germany).

Dawn Rittenhouse discussed DuPont's new sustainable development-oriented corporate image. Methods of bringing about corporate and public awareness of this shift included the creation of environmental "to-do" lists for both the company as a whole and for individual employees.

Michael Henriques (Director, Job Creation and Enterprise Development, International Labor Organization (ILO)) discussed unemployment and poverty in the sustainable development context. He highlighted: ILO's action toward self-employment in developing countries; impediments to small business growth, specifically an inadequate legal framework; ineffective government subsidies; property rights; and lack of understanding of markets. ILO programmes address entrepreneurial training, radio and TV publicity, management training packages, and sponsorship programmes that link small businesses with larger corporations.

Frank Rittner discussed the GEF's efforts to promote customized sustainable investments for business needs. He discussed the importance of private-public sector partnerships and the need to merge divergent interests in win-win situations that have environmental and economic benefits. He noted that such partnerships were hindered by a lack of appropriate investment assessment and venture capital and the lack of incentives for market transparency. He called for innovative advisory and financial services that could resolve these problems by allowing cost circulation and benefit sharing. He also suggested strategic partnerships to aggregate supply and demand in developing countries.

Bart Jan Krouwel (Head of Sustainable Development, Rabobank, the Netherlands), discussed the role of the financial sector in sustainable development. He suggested the financial sector has the social responsibility to promote ethical investment and sustainable development. He emphasized "green management," composed of strategic sustainable development, in-company handling of environmental issues and the allocation of special or innovative funds for environmental projects.

Stig Carlson (Director General, European Advertising Agencies Association), discussed advertisement and sustainable development. He proposed that by mirroring trends advertising can create trust and relationships. As a method of social communication, he stressed that advertising must be culturally specific and pointed to a recent UNEP communication project. He discussed the need for consumers, marketers and advertisement agencies to work together for ideal communication and sustainability.

Peter Hardi (Senior Fellow and Programme Director, IISD) discussed the importance of indicators in monitoring the progress of sustainable development in projects and communities. He noted that indicators act as a link between present activities and future goals and described indicators used by IISD. The importance of making indicators both complex enough to tackle the complex issue of sustainable development and accessible to shareholders and businesses was also addressed.

The ensuing discussion focused on the importance of market technology and information dissemination in developing countries, the problems with communicating between cultures, and the need to find appropriate indicators for sustainability.

### OTHER PLENARY SESSIONS

Plenary sessions took place on Monday, Tuesday and all day on Wednesday, 21 June 2000. Sessions were televised to promote the Dialogue on sustainability to the general public. Each Plenary revolved around a theme related to sustainable development and natural resources.

**GLOBAL FOCUS:** In a Monday afternoon plenary session, His Majesty King Carl XVI Gustaf, of Sweden, thanked the SEI and collaborators for organizing the first Global Dialogue on Natural Resources. He stressed that the planet is still heading in the wrong direction despite progress made since Stockholm, 1972. He stated that at the core of sustainable development there is a need to show willingness for participation, new respect for nature and a common understanding, and emphasized it is time for developing new structures and partnerships involving industry and civil society. He emphasized dialogue as

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communication, networks and knowledge and expressed the hope that new ideas would be instilled, contributing to the realization of a sustainable future.

Peter C. Goldmark (Chairman and CEO, International Herald Tribune) introduced the session using the metaphor of planet earth being on a ship journey. Participants questioned panelists on the role and use of education, the role of NGOs, integration of long-term perspectives in decision making, the lack or slow pace of action, methods for improving systems of governance and the role of mass media.

Luciano Respini (President, Dow Europe) visualized a pyramid, with sustainable development at the top and constituencies below, drafting a manifesto focusing on dialogue and linkages. He said the key issue is to identify appropriate incentives in a market-driven society, beyond just shareholder value.

Ola Ullsten said the ship is off course due to short-term interests and called for government pressure on industry to enforce technological solutions.

Alicia Bárcena (Head of Environment and Human Settlements (UN Economic Commission for Latin America & the Caribbean (ECLAC)-Chile) said that the market could not provide sufficient solutions to environmental and development problems. She said certain values which the market does not recognize need to be taken into account and conserved by other institutions. She cautioned against simplifying the perception of the various sectors and pointed out the variety of representatives and actors within the private sector, governments and the NGO community. She stressed connecting initiatives at the local level, closing the digital divide and influencing economic decision makers.

Hanns Michael Hölz (Global Head of Environmental Coordination, Deutsche Bank AG) highlighted the need for sustainable cooperation between governments, NGOs and the business world and called for partnership-oriented organizations.

Sunita Narain (Centre for Science and Environment, India) pointed out the need for education and development and the strengthening of science for environment and development. She said the current model of economic development is inherently toxic and that it takes investment and discipline to reverse the trend of resource degradation. She also called for quicker solutions and stressed the lack of rights and entitlements at the global level.

Claude Martin stressed the need for extracurricular education activities. He emphasized transparency between governments, the private sector and NGOs.

Maritta R. von Bieberstein Koch-Weser (Director General, IUCN) indicated the role of partnerships within IUCN and its challenge in establishing long-term strategies in the dialogue for joint action.

**THE TALK AROUND THE WORLD:** On Tuesday, an afternoon plenary session was convened around the theme "A talk around the world," reuniting Global Dialogue regional planning partners from Asia, Africa and Latin America. The discussion revolved around personal and success stories as well as examples of resource scarcity, and was illustrated by mini-documentaries produced by the regional partners to exemplify local initiatives.

The panelists were: Lawrence Surendra (SEI Senior Advisor), for India; Margarita Marino de Botero (Green College, Colombia), for Colombia; Francisco Mata (Earth Council), for Costa Rica; Jerry Gatora (CAMPFIRE), for Zimbabwe; Lovemore Sola (Southern Africa Research and Documentation Centre), also for Zimbabwe; and Jürgen Bertram for Asia. Panelists were invited to present work done by their organizations.

Margarita Marino de Botero stressed dialogue and communication networks and noted a lack of involvement by the international community. She welcomed a "revolution from the bottom-up."

Jerry Gatora outlined success stories from Zimbabwe and presented a mini-documentary on CAMPFIRE. He underscored the importance of indigenous scientific knowledge.

Francisco Mata introduced a mini-documentary on the Nueva Group Macadamia Plantation, which provides free social and educational services to its workers, and addressed watershed protection and endemic and endangered species. He said the cost of protecting national parks could be met by providing incentives to private entities. He supported common but differentiated responsibilities and called for compensating for past errors.

Lawrence Surendra lamented the use of dichotomies when invoking sustainable conservation. He introduced a mini-documentary on an indigenous community-based initiative that built and manages a micro-hydroelectric plant in Orissa, India.

Jürgen Bertram said Thailand's ecological projects have been successful thanks to the support of the King. He bemoaned the corruption problems faced by most Asian countries that prevent the sustainable conservation of natural resources.

Several panelists queried the prospects for sustainability in the absence of democracy.

**YOUTH VISION PLENARY: PREPARING FUTURE DECISION-MAKERS:** The Youth Visionary Plenary was convened on Wednesday by UNEP, CDG, Volvo and SEI to explore education and training systems for delivering the interdisciplinary skills, know-how and information needed by young people to make informed decisions to manage natural resources sustainably. The Vision emphasized possible synergies between academia and business in preparing young professionals for this task.

In an opening statement, Bernd Schleich (Managing Director, CDG) said globalization provides the private sector with a unique opportunity to contribute to sustainable development, which can be promoted through education and training.

Debra Colodner (Director, Columbia University Earth Semester, USA) spoke on the role of universities in addressing sustainability. She said higher education could take a lead on environmental issues through partnerships and dialogue and highlighted Columbia's mutually beneficial business-university partnership with Volvo.

On training and education, Dawn Rittenhouse said DuPont supports interdisciplinary approaches and lifelong learning. She stressed the importance of cross-cultural activities and understanding of the social impacts of projects. On partnerships, she stressed the need for corporate interaction with universities. On future challenges, she emphasized the importance of creating business models that increase the economic power of developing countries.

Leone Samuels, representative from the Youth Plenary Retreat that met 16-18 June 2000, presented a resolution, "The Vision of Future Decision-makers," which devises an education system providing citizens with a balance of theory and practical application and an interdisciplinary approach to learning. She highlighted four main areas for change: increased accessibility to education; a shift in values to reflect the needs of a sustainable society; a restructuring of the current models of education to incorporate the values of sustainability; and the creation of closer partnerships that expand the scope of education.

Reporting on the Youth Plenary Retreat, Andrew Robinson highlighted the Retreat's vision, changes needed and the conclusion that institutions of higher education are proactive agents for change and should align their educational objectives and practices with the principles of sustainability. He also noted they will do this by interacting more closely with society and implementing flexible curricula that address the dynamic local, regional and global realities of the planet.



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**SYNTHESIS PLENARY:** On Wednesday, a Plenary chaired by Claude Fussler was organized to synthesize the three sessions of the five workshops. The synthesis was followed by presentations on the World Engineers' Convention and the Earth Summit 2002 and a panel discussion.

**Ecosystems 21:** Helmut Woehl (Senior Advisor, Namibian Desertification Control Programme, GTZ) pointed out that there are no blueprint solutions and that programmes and projects for the sustainable management of ecosystems must be tailored to specific situations. He summarized key issues identified in the workshop sessions, including: divergent political, social and economic framework conditions in the North and South; *ad hoc* and fragmented sectoral approaches and activities which are limited in scope and lack replicability; linkages with the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the CCD; the importance of knowledge management for successful natural resource management; and the increasing gap between information, knowledge and its accessibility at the resource-user level and between research and implementation. He also highlighted a specific need for, *inter alia*: long-term political commitment; comprehensive approaches by cooperation partners; partnership agreements to tackle pressing issues, based on a willingness to balance interests between concerned parties; and stakeholder involvement in natural resource management.

**Water 21:** Malcolm Mercer said the workshop had focused on conflicts and challenges, the regional agenda, including water management schemes in Germany, Brazil and Zimbabwe, and the role of the private sector. He outlined key points, including: application of an ecosystem approach incorporating integrated land and water management; the need for political will; the establishment of partnerships, especially with the private sector and NGOs; and expansion of current activities. He said no "magic bullet" was found to resolve water management problems but a suite of approaches were reviewed, including incentives, promotion of behavioral change and dissemination of knowledge.

**Energy 21:** Frank Rittner noted the key theme of holistically addressing burning problems such as reliance on fossil fuel sources, disproportionate energy consumption and resulting environmental impacts. He highlighted findings advocating integration of cleaner energy objectives in energy market reform, a level playing field for all energy sources, stable regulatory frameworks for independent decentralized power producers, incentives for investments in cleaner solutions to accelerate markets providing win-win solutions. He underscored the need to unleash the potential of the common wisdom of all cultures and genders around the world and stressed raising the level of education and promoting informed decisions.

**Forests 21:** Ola Ullsten stated that the forest crisis lies not in the production of fiber and timber but rather in lack of access, increasing forest fires, governance problems and ecological constraints. Regarding the ethics of forestry, he underscored: the concept of a Forest Trust for the stewardship of nature; responsibilities in addressing North-South inequities; the underlying moral imperative; and the need to ensure representation of public interests. On land use conflicts, he highlighted, *inter alia*, fuel wood shortages, conservation, forest production and under-valuation of forests. On priorities, he emphasized: zoning; property rights; markets for non-wood products; and removal of subsidies, which are distorting markets and contributing to corruption. He said remaining challenges for the forest crisis are increasing education, alleviating consumer demand for products, promoting civil society participation and governance, partnerships, and the need for new institutions.

**Markets 21:** Peter White (Associate Director, Procter & Gamble, UK) said the workshop had discussed at length ways for markets to deliver sustainability. He said panelists conferred on what markets should deliver, including quality of life, eco-efficiency, sustainable consumption, eco-sufficiency and choice. He noted restricted market

access for sustainable technologies and highlighted the "perverse" effects of subsidies and monopolies. He said most markets ignore the poor and some are ineffective. He reported further discussion of: the value of the commons; effective governance; the need for additional consideration of human rights, labour and the environment; corruption, especially in developing countries; and shared responsibility. He said priority issues for the Earth Summit 2002 include poverty alleviation, governance, communications, transition mechanisms for market change and mechanisms to allow sustainable technologies into the market.

The World Engineers' Convention: Detlev Moeller (Chair for Atmospheric Chemistry and Air Quality, Brandenburg Technical University, Germany) reported on the concurrent World Engineers' Convention also being held in conjunction with Expo 2000. He stressed the conclusion that engineers, not politicians, must decide whether or not, and which, technology should be applied. Traversing key points, he noted, *inter alia*, the need to determine the thresholds and limits of nature in the human-altered environment, the high cost of successfully resolving local pollution problems, the increasingly global nature of many environmental problems, world population growth as the key environmental impact factor and the need for optimization between technical and social approaches.

**Towards the Earth Summit 2002:** Johannah Bernstein (Senior Advisor, SEI-Belgium) said Rio+5 had not given any clear message to guide non-state actors and that important concerns such as governance, development and justice were insufficiently addressed. She also pointed out changes in the political landscape since the Earth Summit and said the G-77/China can no longer be perceived as a single block. She said key messages for the Earth Summit 2002 include, *inter alia*, tying together environment, development and security issues. She also called for integration of global and local problems and said the Northern "science agenda" must not dominate discussions and negotiations.

Panel discussion: One participant underscored the lack of reference in the discussions to international dialogues on economic and trade matters, especially regarding debt forgiveness. Another stressed the need to form a leadership partnership through an alliance of equals. A participant highlighted obstacles facing local forest initiatives in developing countries. In response, Ullsten underscored the importance of understanding underlying causes when framing policy.

On influencing funding mechanisms to adopt integrated approaches, Rittner stressed education for making informed decisions. He also emphasized the importance of informal networks and noted the effectiveness of NGOs in establishing communication channels. On partnerships for sustainable development, it was stressed that there is a need to pursue innovative mechanisms extending to developing countries. A participant highlighted that a theme running through the Global Dialogue was the need to act holistically in natural resource management.

In concluding, Chair Claude Fussler stressed that, with demographic and market challenges, we may need more radical technological innovations. He advocated investing in and applying innovative technologies and underscored partnerships and governance. He added that globalization is the key and can work if we can preserve the richness of diversity and culture and learn from each other.

### **CLOSING PLENARY: THE PLATFORM FOR THE FUTURE**

The closing plenary session, broadcast live, was moderated by Sabine Christiansen (Germany). She invited panelists to present their views on sustainable development and natural resource management. Julia Marton-Lefèvre (Leadership for Environment and Development (LEAD), USA) welcomed the younger generation's interest in environmental issues. Erich Stather (State Secretary, German Ministry for Technical Cooperation and Development) said it is important to define the right model for development and to create partnerships. On globalization, Mohamed T. El-Ashry addressed sustainability and highlighted

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the role of private sector investment in sustainable development initiatives, dependent on an ability to incorporate long-term perspectives. Björn Stigson acknowledged current inequalities in the global distribution of wealth and advocated support for suitable private and public sector approaches to sustainable development. He identified a need to articulate the issues of sustainable development in business terms and said it is important to set the right incentives.

Jacob von Uexhull (Right Livelihood Award Foundation, Sweden) stressed that globalization has resulted in growing human inequalities and said the private sector and governments are not fulfilling the Rio commitments. Fritz Fahrenholz (Shell, Germany) said developing countries are falling apart and root causes of poverty need to be addressed. He said the public and the media have the power to force transnational corporations concerned about their image to perform sustainably and emphasized globalization as an opportunity for communication and dialogue. Monica Greifahn (MP, Social Democratic Party, Germany) stated that current standards of globalization are based on virtual rather than real values and pointed out the interrelatedness of cultural and environmental values and policies.

The first Global Dialogue ended Wednesday, 21 June 2000 at 18:00. The next Global Dialogue, "Responsible Governance in a Global Society," will be held 1-3 July 2000. Complete information on the series of Global Dialogues to be held in conjunction with EXPO 2000 is available at: <http://www.sei.se/gd2-9.html>.

### THINGS TO LOOK FOR

**SERIES OF GLOBAL DIALOGUES ORGANIZED IN CONJUNCTION WITH EXPO 2000:** A series of Global Dialogues organized in conjunction with EXPO 2000 are scheduled to continue taking place in Hanover, Germany from July to October 2000. The Global Dialogue topics include: Responsible Governance in a Global Society; Science and Technology-Thinking the Future; Fighting Poverty, Social Innovations, New Coalitions; the Role of the Village in the 21<sup>st</sup> Century; Crops, Jobs and Livelihood; Health- the Key to Human Development; Building Learning Societies-Knowledge, Information and Human Development; Future Works- Labor, Sustainable Business and Social Responsibility; Beyond 2000- What Kind of Society do We Want? – For more information contact: The Stockholm Environment Institute (SEI), Lilla Nygatan 1, Box 2142, S-103 14, Stockholm, Sweden; Tel: +46 8 412 14 00; Fax: +468 723 0348; Internet: <http://www.sei.se/gd2-9.html>.

**URBAN 21 – GLOBAL CONFERENCE ON THE URBAN FUTURE:** This conference will be held from 4-6 July 2000, in Berlin, Germany. It is one of the key elements of the Global Initiative on Sustainable Development, sponsored by Brazil, Germany, Singapore and South Africa. For more information, contact: Federal Office for Building and Regional Planning, Am Michaelshof 8, D-53177 Bonn, Germany; fax: +49-1888-401-2315; e-mail: [information@urban21.de](mailto:information@urban21.de); Internet: <http://www.urban21.de/>

**SEMINAR ON SUSTAINABLE USE OF WATER: QUALITY AND QUANTITY:** This seminar will be held from 16-21 July 2000 in Guildford, England. For more information contact: the Information Manager, International Networking Events, The British Council, 1 Beaumont Place, Oxford, OX1 2PJ, UK; tel: +44-1865-316-636; Internet: <http://www.britishcouncil.org/networkevents> (click on Upcoming Events 2000/2001).

**SYMPOSIUM ON "WATER SECURITY FOR THE 21ST CENTURY -- INNOVATIVE APPROACHES" -- THE 10TH STOCKHOLM WATER SYMPOSIUM:** This meeting is scheduled for 4-17 August 2000. Organized by the Stockholm Water Institute, the Symposium will identify actions and appropriate innovative solutions in

transitioning from problem focus to opportunity focus in water issues. For more information, tel: +46-8-522-139-60; fax: +46-8 522-139-61; e-mail: [sympos@siwi.org](mailto:sympos@siwi.org). Internet: [www.siw.org](http://www.siw.org)

**55TH SESSION OF THE UNITED NATIONS GENERAL ASSEMBLY – THE MILLENNIUM ASSEMBLY:** The 55th Session of the UN General Assembly – designated the "Millennium Assembly" – will open on 5 September 2000, at UN Headquarters in New York. The Assembly is expected to provide an opportunity to articulate and affirm an animating vision for the United Nations in meeting the challenges of the 21st century. The role of the UN in promoting peace and sustainable development in the era of globalization has been identified as one of the key themes. For more information, contact: Office for the Millennium Assembly, Room S-3275, United Nations, New York, NY 10017 USA; tel: +1-212-963-5739; fax +1-212-963-0616; e-mail: [millennium@un.org](mailto:millennium@un.org); Department of Public Information, Room S-955, United Nations, New York, NY 10017 USA; Public queries, tel: +1-212-963-4475; Media queries, tel: +1-212-963-6870; NGO queries, tel: +1-212-963-8070; fax: +1-212-963-0536; e-mail: [inquiries@un.org](mailto:inquiries@un.org); Internet: <http://www.un.org/millennium>

**IUCN WORLD CONSERVATION CONGRESS:** This meeting will be held from 4-11 October 2000 in Amman, Jordan. The theme is "ecospace," a term indicating that environmental protection at various geographical scales is a prerequisite for the social, economic and political security of people. Participation in the Congress is mainly by invitation. Parallel Interactive Sessions will be held on 5 October 2000 and 7 October 2000 and will be open to a limited number of interested members of the public. For more information, contact: Ursula Hilt Brunner, IUCN, Gland, Switzerland; tel: +41-22-999-0232; fax: +41-22-999-0002; e-mail: [urh@hq.iucn.org](mailto:urh@hq.iucn.org); Internet: <http://www.iucn.org>

**SIXTH CONFERENCE OF THE PARTIES TO THE FRAMEWORK CONVENTION ON CLIMATE CHANGE:** COP-6 will be held from 13-24 November 2000 in The Hague, the Netherlands. For more information, contact: the UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: [secretariat@unfccc.de](mailto:secretariat@unfccc.de); Internet: <http://www.unfccc.int>

**FIRST MEETING OF THE INTERGOVERNMENTAL COMMITTEE ON THE CARTAGENA PROTOCOL:** The first meeting of the Intergovernmental Committee on the Cartagena Protocol will be held from 11-15 December 2000, in Montpellier, France. For more information, contact: Cyrie Sendashonga, CBD Secretariat, World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec H2Y 1N9, Canada; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: [cyrie.sendashonga@biodiv.org](mailto:cyrie.sendashonga@biodiv.org); Internet: <http://www.biodiv.org/>

**FOURTH SESSION OF THE CONFERENCE OF THE PARTIES TO THE CONVENTION TO COMBAT DESERTIFICATION:** COP-4 is tentatively scheduled to meet from 11-22 December 2000, in Bonn, Germany. For more information, contact: the CCD Secretariat, P.O. Box 260129, D-53153 Bonn, Germany; tel: +49-228-815-2800; fax: +49-228-815-2899; e-mail: [secretariat@unccd.de](mailto:secretariat@unccd.de); Internet: <http://www.unccd.de/hm/biodiv.org>; Internet: <http://www.biodiv.org/>

**CONFERENCE ON "GROUND WATER: A TRANS-BOUNDARY, STRATEGIC AND GEOPOLITICAL RESOURCE":** This meeting will be held 13-16 December 2000, in Las Vegas, Nevada, USA. It will explore the technical, cultural, legal, economic, military, social and political facets of ground water as a transboundary, strategic and geopolitical resource. For more information, contact: Association of Ground Water Scientists & Engineers; Michael E. Campana; e-mail: [aquadoc@unm.edu](mailto:aquadoc@unm.edu); Internet: <http://www.ngwa.org/membership/agmain.html>