



# GEF ROUNDTABLE ON LAND, WATER, AND FOOD SECURITY

MARCH 2002  
NEW YORK, USA



GLOBAL  
ENVIRONMENT  
FACILITY

## **GEF ROUNDTABLE ON LAND, WATER, AND FOOD SECURITY**

THE GLOBAL ENVIRONMENT FACILITY (GEF) ROUNDTABLE ON LAND, WATER, AND FOOD SECURITY WAS HELD ON MARCH 26, 2002. CO-CHAIRING HONORABLE MEMBERS WERE H.E. DR. S. W. KAZIBWE, VICE PRESIDENT OF THE REPUBLIC OF UGANDA, AND PROFESSOR M.S. SWAMINATHAN, CHAIRMAN OF THE M.S. SWAMINATHAN RESEARCH FOUNDATION. THE ROUNDTABLE FOCUSED ON THE CONTINUED DEGRADATION OF LAND AND WATER ECOSYSTEMS WORLDWIDE AND THE IMPLICATIONS FOR FOOD SECURITY, PARTICULARLY IN DEVELOPING COUNTRIES. PARTICIPANTS OFFERED SPECIFIC RECOMMENDATIONS TO PROMOTE AN INTEGRATED APPROACH TO NATURAL RESOURCE MANAGEMENT AND TO IMPROVE FOOD SECURITY THROUGH SUSTAINABLE AGRICULTURE.

THE ROUNDTABLE WAS ONE OF FOUR SPONSORED BY GEF TO ADDRESS CRITICAL ENVIRONMENTAL AND SUSTAINABLE DEVELOPMENT ISSUES AS A CONTRIBUTION TO THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD). EACH ROUNDTABLE WAS HELD IN CONJUNCTION WITH A WSSD PREPARATORY MEETING. THE ROUNDTABLE CONCLUSIONS WERE PRESENTED TO THE THIRD WSSD PREPARATORY COMMITTEE MEETING AND ARE BEING FULLY INTEGRATED INTO THE SUMMIT PROCESS.

THE GEF HAS PROVIDED MORE THAN \$842 MILLION IN GRANTS AND LEVERAGED AN ADDITIONAL \$1.7 BILLION IN CO-FINANCING FOR INTEGRATED ECOSYSTEM MANAGEMENT, THE MANAGEMENT OF NATIONAL AND INTERNATIONAL TRANSBOUNDARY WATER BODIES, AND THE CONSERVATION OF BIODIVERSITY IMPORTANT TO AGRICULTURE. OF THAT TOTAL, MORE THAN \$278 MILLION HAS FUNDED ACTIVITIES THAT ADDRESS LAND DEGRADATION. FOR MORE INFORMATION, VISIT [WWW.GEFWEB.ORG](http://WWW.GEFWEB.ORG).

**GEF WISHES TO ACKNOWLEDGE THE GOVERNMENT OF FINLAND'S GENEROUS FINANCIAL SUPPORT.**

# ENVIRONMENTAL DEGRADATION AND FOOD SECURITY

Summary of the GEF Roundtable on Land, Water,  
and Food Security

H.E. Dr. S.W. Kazibwe and Professor M.S.  
Swaminathan, *Co-Chairs*

Environmental degradation is one of the greatest risks to future world food security.<sup>1</sup> Degraded soils, parched aquifers, polluted waters, and the loss of plant and animal species threaten food production in poor, heavily populated countries. Soil degradation, including nutrient depletion, erosion, and salinization, is widespread. Conversion of forests to agriculture is resulting in extensive loss of species and habitats. Approximately 70 percent of the freshwater withdrawn annually is used for agriculture, and irrigation is draining more underground water than rainfall is replenishing, causing water tables to fall. Excessive use of fertilizers and pesticides is polluting many water sources.

Panelists in the Roundtable on Land, Water, and Food Security discussed key factors that exacerbate land and water degradation. Among those are:

- Increasing demand for food and other products due to rapidly growing human populations. Food demand in developing countries could double over the next 30–40 years.
- Subsidies and inappropriate pricing systems that provide incentives for inefficient and wasteful use of land and water resources, fertilizers, and pesticides.
- Sectoral approaches that maximize the benefits of one sector without taking into account implications for other sectors.

<sup>1</sup> Food security means access to the food required for a healthy and productive life.

- Farming systems or agronomic practices that are not suitable for local soil and water conditions.
- Construction of dams and canals that significantly modify the flow of streams and sediment movement downstream to deltas, estuaries, and floodplains.
- Lack of secured tenure or access rights that discourage investments to improve land and water management.

Panelists also noted the impacts of degradation processes on terrestrial and aquatic (both freshwater and marine) ecosystems. Soil-related impacts include erosion, depletion of nutrients, salinization and water logging, sedimentation of water bodies, chemical pollution, and loss of biodiversity because of conversion or fragmentation of habitats. The impacts on freshwater resources from habitat modifications include changes in the flow of streams, loss of floodplain agriculture because of changes in sediment movement, and river desiccation or reduced flow during the dry season because of excessive withdrawal of water. For coastal and marine resources, the impacts include the intrusion of salt water into rivers or aquifers because of over-pumping of groundwater, degradation of coral reefs, and the destruction of mangrove forests.

## **AN URGENT CALL FOR COORDINATED INTERNATIONAL ACTION**

Panelists agreed that coordinated international action is urgently needed to address issues of land and water degradation. But the productivity of land and water resources cannot be improved at the expense of ecological integrity. Improving that productivity while preserving ecological integrity will require governments, NGOs, the owners and users of land and water resources, and other stakeholders to work together to:

- Promote a paradigm shift from a single sector approach to integrated (cross-sectoral) approaches to the management of land and water resources.

- Enhance agricultural productivity in “perpetuity” by adopting ecosystem-based approaches, utilizing traditional knowledge and other sustainable land and water management practices, supporting expanded research for productivity-enhancing technologies, and promoting fair and environmentally sound trade.
- Provide strong and sustained political leadership supporting integrated land and water management in both developing and developed countries. This political commitment should be translated into policies, budgetary allocations, and development assistance.
- Ensure good governance. Priority should be given to decentralization and devolution of decision-making on the allocation and management of land and water resources.
- Eliminate subsidies, pricing systems, and other policies that provide incentives for unsustainable use of land and water resources.
- Undertake land reforms, including strengthening land use planning, ownership, and access to resources. Such reforms will not only help to improve investments in environmental management but will also help to create environmental assets, particularly for the poor.
- Strengthen the capacity of institutions responsible for land and water management, particularly local institutions such as women’s organizations and agricultural extension delivery systems.
- Provide support for the development of microenterprises as a means to reduce pressure on land and water resources and to create employment, particularly among youth.
- Ensure that countries build their capacity to cope with the potential impacts of climate change on land and water resources.
- Promote awareness of sustainable agriculture and environmental management at all levels of formal and informal education systems.

- Develop information systems incorporating scientific and local knowledge together with the experience of other projects and make them widely available, especially at the local level.
- Promote the adoption of environmentally sound integrated land and water management practices and technologies (including indigenous practices) that are affordable and appropriate in the social context.
- Ensure that international trade regimes and agreements do not compromise the ecological integrity of land and water resources.
- Strengthen partnerships among governments, nongovernmental organizations, and the private sector at international, national, and local levels. The goal is a coordinated approach to integrated land and water management for food and environmental security.

## RECOMMENDATIONS FOR THE NEXT DECADE

Panelists agreed that many efforts to improve food security have been commendable. But in many cases such efforts have had unintended and largely avoidable adverse impacts on the integrity and function of ecological systems, including critical agricultural landscapes, forests, grasslands, freshwater bodies, and coastal and marine areas. Such impacts underscore the need for emphasis on sustainable management of land and water resources to ensure long-term food and environmental security.

Panelists made the following concrete recommendations for priority actions that should be included in the WSSD program:

1. **Planning Framework:** To ensure synergies in the implementation of the Convention to Combat Desertification (CCD), the Convention on Biological Diversity (CBD), the UN Framework Convention on Climate Change (UNFCCC), and other agreements, countries need to develop integrated implementa-

tion frameworks that build on national action programs, biodiversity strategies and action plans, and national communications.

2. **Capacity Development:** Stakeholder groups, including women's organizations, need to be empowered through formal and informal education programs at all levels. Priority should be given to enabling policymakers to initiate, develop, and implement appropriate policies; to strengthening countries' ability to plan under conditions of uncertainty due to climate change; and to improving information access by developing technologies and products tailored to the specific needs of decision-makers and other stakeholder groups.
3. **Incentive Structure:** To facilitate adoption of integrated land and water management approaches, countries need to provide appropriate incentive structures. These structures should include:
  - Adoption of a range of legal instruments covering access to and ownership of land and water.
  - Decentralization and devolution of decision-making on allocation and management of land and water resources.
  - Adoption of appropriate water-pricing policies that ensure equitable and reliable access as well as conservation and efficient use of water resources.
  - Diversification of the rural economy to reduce pressure on land and water resources, including coastal resources, through microenterprise development and multiple livelihood opportunities in which the private sector participates and in which priority is given to women, youth, and the disabled.
  - Development of markets for ecological services and mechanisms to compensate communities and other upstream landowners to protect mountain watersheds, thereby ensuring the availability of high-quality water for downstream users.

- Development of pilot activities such as “food for eco-development,” modeled after the World Food Program’s Food-for-Work program.
4. **Environmentally Sound Technology Development and Adoption:** A participatory approach to technology development for improved land and water management should include full involvement of the end users, especially farmers, to facilitate ownership and adoption. Priority should be given to upgrading national technology development and assessment infrastructure and training; to strengthening linkages between national and international public and private research centers of excellence; and to strengthening technology delivery systems.
  5. **Agricultural Research:** Participatory and integrated agricultural research approaches should bring together researchers, resource managers, and users. Priority should be given to research on soil- and water-conserving crop and livestock farming systems, including the use of low-water-tolerant or moisture-stress-tolerant crop varieties and techniques for water harvesting in drylands.
  6. **Strengthening Partnerships:** Facilitating cooperation among existing local, national, and global networks will enhance the exchange of information on and lessons learned from integrated land and water management.

H.E. DR. S. W. KAZIBWE IS VICE PRESIDENT OF THE REPUBLIC OF UGANDA. PROFESSOR M.S. SWAMINATHAN HOLDS THE UNESCO CHAIR IN ECOTECHNOLOGY AND SERVES AS CHAIRMAN OF THE M.S. SWAMINATHAN RESEARCH FOUNDATION, INDIA.





# PANELISTS

GEF Roundtable on Land, Water, and Food Security,  
March 26, 2002

**Speciosa Wandira Kazibwe**, Vice President, Government of Uganda, *Co-Chair*

**M.S. Swaminathan**, Chairman, M.S. Swaminathan Research Foundation, India, *Co-Chair*

**Herbert Acquay**, Team Leader, Land and Water Resources, Global Environment Facility

**Leonard Berry**, Director, Florida Center for Environment Studies

**Hama Arba Diallo**, Executive Secretary, United Nations Convention to Combat Desertification

**A. J. Diphooorn**, Head, Water Support Unit, Ministry of Foreign Affairs, Netherlands

**Mohamed T. El-Ashry**, CEO & Chairman, Global Environment Facility

**Malin Falkenmark**, Professor, Stockholm International Water Institute

**Mohamed Hassan**, Executive Director, Third World Academy of Sciences

**Coosje Hoogendoorn**, Deputy Director General, International Planet Genetic Resources Institute

**Kasim Kasanga**, Minister of Forestry and Lands, Government of Ghana

**R. Martin Lees**, Rector, University for Peace

**Walter Lusigi**, Adviser, Global Environment Facility

**Hillary Masundire**, Chair IUCN Commission on Ecosystem Management, Botswana

**Ruth Meinzen-Dick**, Senior Research Fellow, International Food Policy Research Institute

**Khalid Mohtadullah**, Executive Secretary, Global Water Partnership

**Jane Pratt**, President and CEO, The Mountain Institute

**Zhu Qiang**, Research Professor, Gansu Research Institute for Water Conservancy, China

**Francisco Reifschneider**, Director, Consultative Group on International Agricultural Research

**Frank Rijsberman**, Director General, International Water Management Institute

**Phrang Roy**, Assistant President, International Fund for Agricultural Development

**Mostafa Tolba**, Senior Advisor, International Center for Environment and Development

# THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT AND THE GEF

THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT WILL FOCUS WORLD ATTENTION ON GLOBAL PROGRESS TOWARD SUSTAINABLE DEVELOPMENT AND PROVIDE STRATEGIC DIRECTION FOR THE 21ST CENTURY. TENS OF THOUSANDS OF HEADS OF STATE, GOVERNMENT OFFICIALS, LEADERS OF THE NGO AND BUSINESS COMMUNITIES, AND REPRESENTATIVES OF CIVIL SOCIETY GROUPS ARE EXPECTED TO ATTEND THE SUMMIT IN JOHANNESBURG, SOUTH AFRICA, AUGUST 26 TO SEPTEMBER 4, 2002.

BY FORMAL RESOLUTION, THE U.N. GENERAL ASSEMBLY HAS INVITED THE GEF TO PARTICIPATE FULLY IN THE SUMMIT, INCLUDING THE REVIEW OF AGENDA 21, THE GLOBAL ACTION PLAN FOR SUSTAINABLE DEVELOPMENT THAT WAS ADOPTED AT THE 1992 EARTH SUMMIT.

THE GENERAL ASSEMBLY'S REQUEST THAT THE GEF BE INVOLVED IN THE WSSD REFLECTS WELL ON THE GEF'S POTENTIAL TO BRING ABOUT POSITIVE CHANGE. IN THE 10 YEARS SINCE IT WAS CREATED, THE GEF HAS ALLOCATED \$4.2 BILLION IN GRANTS AND LEVERAGED AN ADDITIONAL \$11 BILLION IN COFINANCING. GEF SUPPORTS MORE THAN 1,000 PROJECTS IN 160 DEVELOPING NATIONS AND COUNTRIES WITH ECONOMIES IN TRANSITION. A RECENT ASSESSMENT BY AN INDEPENDENT PANEL OF EXPERTS FINDS THAT THE GEF HAS BEEN A "CATALYST FOR INNOVATIVE PROGRAMS" AND HAS PRODUCED "SIGNIFICANT RESULTS" TO IMPROVE THE GLOBAL ENVIRONMENT.



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