

**MILLENNIUM ASSESSMENT
OF GLOBAL ECOSYSTEMS
STEERING COMMITTEE**

- Edward Ayensu, Ghana
- Mark Collins, World Conservation Monitoring Centre, U.K.
- Angela Cropper, Trinidad and Tobago
- Andrew Dearing, WBCSD
- Michael Zammit Cutajar (invited), Framework Convention on Climate Change
- Louise Fresco, FAO
- Madhav Gadgil, Indian Institute of Science, Bangalore, India
- Habiba Gitay, Australian National University, Australia
- Gisbert Glaser, UNESCO
- Zuzana Guziova, Ministry of the Environment, Slovak Republic
- Calestous Juma, Harvard
- John Krebs, National Environment Research Council, U.K.
- Jonathan Lash, World Resources Institute, USA
- Roberto Lenton, UNDP
- Jane Lubchenco, Oregon State University, USA
- Jeffrey McNeely, World Conservation Union (IUCN), Switzerland
- Harold Mooney, International Council of Scientific Unions
- Ndegwa Ndiangui, Convention to Combat Desertification
- Prabhu L. Pingali, CIMMYT
- Per Pinstrup-Andersen, CGIAR
- Mario Ramos, Global Environment Facility
- Peter Raven, Missouri Botanical Garden, USA
- Walter Reid, Secretariat
- Cristian Samper, Instituto Alexander Von Humboldt, Colombia
- José Sarukhán, CONABIO, Mexico
- Peter Schei, Directorate for Nature Management, Norway
- Klaus Töpfer, United Nations Environment Programme
- José Galizia Tundisi, International Institute of Ecology, Brazil
- Robert Watson, World Bank
- Xu Guanhua, Ministry of Science and Technology, People's Republic of China
- A.H. Zakri, Universiti Kebangsaan Malaysia, Malaysia

Groundswell

The Newsletter of the Millennium Assessment of Global Ecosystems

Momentum Builds for Millennium Assessment Effort

Efforts to establish periodic science-based assessments of global ecosystems in the new millennium are in full swing. Countless headlines in recent years have warned that, as the twentieth century draws to a close, alarming trends in the vitality and productivity of the ecosystems so essential to human well-being are emerging. Declining agricultural productivity, diminished freshwater supplies, reduced timber productivity, and declining fisheries harvests are exacting great tolls on local economies and human health and well-being. Desperately needed national development opportunities are being jeopardized or lost altogether in many parts of the world as a result of ecosystem degradation.

In recognition of these mounting pressures, an international steering committee (ISC) has come together to explore the need for an integrated assessment of the status, historical trends, and biological and socioeconomic pressures on the world's ecosystems – a Millennium Assessment of Global Ecosystems (MAGE). According to **ISC member A.H. Zakri**, Deputy vice Chancellor of the **Universiti Kebangsaan Malaysia** and 1997-1999 Chariman of the Convention on Biological Diversity's Subsidiary Body on Science, Technology, and Technological Advice, "Such an assessment could consider the ability of these ecosystems to meet critical human needs for environmental *goods*, such as crops, fish, fiber, and fuelwood, and *services* such as water purification, carbon storage and biodiversity conservation." Dr. Zakri says that another key component of a MAGE could be the examination of the likely

future capacity of these systems to continue to provide these vitally important goods and services.

According to **Minister of the Environment for Ecuador**, and MAGE supporter, **Yolanda Kakabadse**, "No country still possesses the seemingly boundless biological resources of centuries past" yet, she cautions that communities and nations around the globe make daily decisions about the utilization of their natural resources often without adequate understanding of the long-term economic and human impacts of various alternatives or basic information on the inherent trade-offs involved in making these choices. For example, if a forest is cleared to grow more crops, the ecosystem may be unable to meet equally pressing needs for clean water, timber, and biodiversity. Kakabadse is clear, however, that such periodic science-based assessments should be very definitely "policy-relevant, but not policy-proscriptive." In other words, the Assessment could provide valuable

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information and should examine the science underlying the various technologies, policies, or practices that could be used to address ecosystem management challenges. However, it should not suggest “best policies” for any given situation, nor monitor or evaluate how communities and nations address their resource management challenges.

The ISC is working hand-in-hand with resource managers, biological and social scientists, international institutions, political leaders, NGOs, and members of the private sector to explore the need for such an assessment. **ISC member Jeff McNeely, Chief Scientist at IUCN**, emphasizes the importance of listening to the needs and concerns of these potential end users. He says, “Though such an assessment has already been called for by countries, NGOs, and environmental conventions alike, there’s no point in launching such an enormous undertaking until we’ve consulted the people who will use this

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MAGE Seeks to Join Forces with Ongoing Assessments, Empower Community-Based Endeavors

The foundations of the MAGE are firmly established, according to **ISC member Jane Lubchenco of Oregon State University**. Lubchenco points out that the effort would clearly build upon, and not duplicate, the work of research programs like **Diversitas**, the **International Geosphere Biosphere Programme**; monitoring activities such as the **Global Terrestrial Observing System**, the **Global Ocean Observing System**, and the **Global Climate Observing System**; datasets held by national governments and international institutions such as **FAO, UNEP, UNESCO, UNDP**, the **World Bank**, and the **World Conservation Monitoring Centre**; recent assessments of issues such as food production and biodiversity; and several other ongoing assessments, including the **FAO Global Forest Resources Assessment 2000**, the **Intergovernmental Panel on Climate Change (IPCC) Working Group II Report on Climate Change Impacts, Adaptation, and Mitigation**, the **IPCC Special Report on Land-Use, Land-Use Change and Forestry**, and the **Global International Waters Assessment**. Without the information from these related activities, says Lubchenco, “an integrated assessment of world ecosystems would be impossible; but these activities alone are insufficient to meet the needs we have identified.”

On a related note, **ISC member Madhav Gadgil, from the Indian Institute of Sciences in Bangalore** adds that it will be vital for such an assessment to mesh with, and help to empower and involve the community-based, local, and national assessment processes now under way or planned. Gadgil notes that, “Because ecosystems vary a great deal depending on geographic location, and because these dynamic systems change over time, sound management requires careful local planning and action. An international ecosystems assessment must be complemented and informed by detailed local-level monitoring and assessment efforts.” Gadgil will host a workshop in Winnipeg, **Canada**, in September 1999 to explore the potential linkages between a global-level assessment and local assessment activities.

information on how it could be shaped to meet their needs—this will be a relevant, living, breathing tool, not a dust-gathering report that sits on a shelf.”

ISC Solicits Input through Local Consultations and International Workshops

Members of the MAGE ISC are circling the globe, holding a series of workshops and briefings designed to solicit input from resource managers, policy makers,

NGOs, and the scientific community. According to **ISC member and President of the World Resources Institute, Jonathan Lash**, “Members of this committee have taken on the task of opening the dialogue on this subject and listening to feedback from end-users in order to ensure that the content, design, and products of the Assessment would meet their needs.” Lash notes that workshops and small group discussions have been held at several recent intergovernmental meetings, including the April session of the **Commission on Sustainable**

Nations, Environmental Conventions Express Support

According to **Calestous Juma, ISC member and former Secretary General of the Convention on Biological Diversity**, many nations have already committed themselves to the goals of avoiding dangerous changes in ecosystems, conserving biological diversity, and maintaining the productivity of various ecosystem goods and services. Juma adds, "We must now apply our most advanced scientific knowledge, socio-economic understanding, and technical expertise to these problems." He notes that national policy statements and international agreements such as the Convention on Biological Diversity, the Convention to Combat Desertification, the Ramsar Convention on Wetlands of International Importance, and the Framework Convention on Climate Change attest to this. In fact, delegates to several of these conventions have recently signaled direct support for the MAGE.

In May, delegates to the **Ramsar Convention on Wetlands of International Importance** stressed the difficulty in supporting the wise use of wetland habitats when so little is known about the extent and condition of this ecosystem type. And in the convention's resolution on priorities for wetland inventory, the parties noted the potential for "the scope of the proposed Millennium Assessment of [Global] Ecosystems, currently under development, to deliver valuable information of relevance to the application of the Convention."

At their meeting in June of this year, delegates to the **Subsidiary Body on Science, Technology, and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD)** noted the importance of incorporating the best available scientific and technical information on biological diversity and translating it into policy advice. The chairman of SBSTTA-4 noted that several delegates have indicated an interest in exploring the feasibility of a mechanism similar to the Intergovernmental Panel on Climate Change to draw more systematically on existing scientific knowledge, assessments and organization. He concluded that the MAGE has the potential to play a similar role for the CBD SBSTTA.

Intergovernmental development agencies have also expressed their support for the Assessment effort. **Former Administrator of the United Nations Development Programme, Gustave Speth**, said last April, "UNDP supports the Millennium Assessment because it offers clear benefits for developing countries. It is designed to provide countries with better information with which to manage their natural resources and help ensure food, water, shelter and energy." Speth added that UNDP would work to ensure that the benefits of the MAGE are felt at the country level.

The Millennium Assessment concept will also be introduced at a meeting of the Conference of the Parties to the Convention to Combat Desertification in November of this year, at the January 2000 meeting of the Subsidiary Body on Science, Technology, and Technological Advice of the Convention on Biological Diversity, and at the next Conference of the Parties to the Convention on Biological Diversity in May 2000.

Development, the Ramsar Convention on Wetlands of International Importance and the **Intergovernmental Forum on Forests** in May, the June meeting of the scientific body of the **Convention on Biological Diversity**, and the **Global Biodiversity Forum** NGO meeting just prior to the Biodiversity Convention. Feedback from the workshops has been rich and, not unexpectedly, varied, depending on the affiliation and country-of-origin of the participants, according to **MAGE Science Director, Walt Reid**. For example, Reid points out that Environment Ministers from **East Africa** have expressed different concerns and hopes for the Assessment than **European** NGO leaders or members of the scientific community in **South America**. Reid summarizes that, overall, much of the discussion has centered on the question of how the Millennium Assessment could be designed to provide information and tools at the many different scales where they are needed. He says, "We're finding that the Assessment would be useful at geographic scales ranging from local site management all the way through development of national and regional policies to global priority setting. There is no reason why we can't begin building global datasets that will be helpful at a national level and at the same time support some pilot work at local and regional levels to learn how best to link assessments at different scales." Reid adds that one of the goals of the Assessment would be to build capacity to carry out such work in countries that may not currently be equipped to do such a comprehensive assessment, as well as to leverage funding for these efforts. Reid introduced the Millennium Assessment idea during the April meeting of the **Ecosystem Conservation Group** and will host a workshop on the Assessment at the Conference on the Ecosystem Approach to be held in September 1999 in Trondheim, **Norway**.

ISC member Jose Sarukhán, from Universidad Nacional Autonoma de Mexico, points out that additional consultations in several countries, including **Ghana, Canada, Brazil**,

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- Global Environment Facility
- The David and Lucile Packard Foundation
- Netherlands Ministry of Foreign Affairs
- Swedish International Dev. Agency
- United Nations Development Programme
- United Nations Environment Programme
- United Nations Foundation
- U.S. Agency for International Dev.
- The World Bank

Malaysia, Denmark, Mexico, and China will take place over the next couple of months, “in order to both focus discussions held at the UN meetings on the needs of specific regions, and to expand discussions to include people who don’t normally participate in UN functions.” Sarukhán adds, “Typically these conventions are attended mainly by policy makers, scientists, and a few NGOs—not too many on-the-ground types have the opportunity to attend and we want to make sure we’ve had an opportunity to hear from people who make daily decisions about resource-use, even at the local level.” Obviously, says Sarukhán, there is no way to reach everyone, so that is why feedback to the ISC is also possible through the new MAGE website at:

<http://www.ma-secretariat.org>

**Moving Judiciously
Toward a Full MAGE**

As momentum and expectation for the MAGE builds, and as consultations with

end users continue, the actual content, process, and outputs of the Assessment are beginning to take shape. The ISC will hold its next meeting in September 1999 to discuss the findings from their six-month consultative period and to decide how to proceed with the effort. **ISC member Peter Schei, from the Directorate for Nature Management of Norway**, reports, “There are still several big issues to be resolved, given the scope of this proposed project. Based on our discussions with potential end users over the last several months, a picture of the most useful and effective content, outputs, and governance structure of this process is beginning to emerge.” Schei insists that such an assessment could be either fully independent of governments or established through an arrangement among governments with a formal link to one or more international bodies, such as the secretariats of environmental conventions or United Nations agencies. But whatever specific institutional arrangements might be established, he stresses that experience clearly demonstrates that in order to succeed, the MAGE must be: (1) demand driven—with the choice of issues guided by the decision makers that will use its findings; (2) inclusive—involving the very best natural and social scientists from all relevant sectors and organizations and representing all geographic regions; (3) peer reviewed and independent of political and economic influence on its findings; and (4) relevant to a wide range of public- and private-sector stakeholders. Look for an update on decisions taken at the September meeting in the next edition of *Groundswell*.

Secretariat Launches Millennium Assessment Website

The secretariat of the Millennium Assessment will soon launch a new website to provide online information about the Assessment, as well as an opportunity for visitors to provide feedback directly to the Steering Committee. As of September 15, 1999, the site can be accessed at: <http://www.ma-secretariat.org>

**Calendar of MAGE
September Events**

September 2-5, 1999
Accra, Ghana
Environment Ministerial

ISC member Edward Ayensu and Dan Tunstall of the MAGE secretariat will discuss the MAGE concept with environment ministers from Africa and the European Union.

September 6-10
Trondheim, Norway
Norway/UN Conference on the Ecosystem Approach for Sustainable Use of Biological Diversity

MAGE Science Director Walter Reid will discuss the MAGE concept in a workshop. ISC member Peter Schei is Chair of the conference’s steering committee.

September 20-21, 1999
Kuala Lumpur, Malaysia
MAGE Workshop for Malaysia

ISC member A.H. Zakri will host a workshop to discuss how the MAGE could best meet the needs of individual countries, in particular Malaysia.

September 20-21, 1999
Winnipeg, Manitoba, Canada
Linking the MAGE with Local Assessments Workshop

ISC member Madhav Gadgil will host a workshop to explore the potential linkages between a global-level assessment and local assessment activities.

September 30- October 1, 1999
Washington, D.C., USA
2nd Meeting of the MAGE ISC

Members of the MAGE ISC will meet to discuss the findings from their six-month consultative period and to decide how to proceed with the effort.

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