

## Experts warn ecosystem changes threaten development

Paris March 30 - A landmark study launched worldwide today shows that approximately 60 percent of the ecosystem services that support life on Earth are being degraded or used unsustainably. The *Millennium Ecosystem Assessment (MA) Synthesis Report*,\* compiled by 1,300 scientists in 95 countries, warns that the harmful consequences of this degradation could grow significantly worse in the next 50 years.

“Only by understanding the environment and how it works, can we make the necessary decisions to protect it. Only by valuing all our precious natural and human resources can we hope to build a sustainable future,” said Kofi Annan, Secretary General of the United Nations, in a message\*\* launching the MA reports. “The Millennium Ecosystem Assessment is an unprecedented contribution to our global mission for development, sustainability and peace.”

The Director-General of UNESCO, Koïchiro Matsuura, for his part declared: “The challenge of ensuring the future of our environment is pressing and concerns us all, whether we work in education, science, culture or communication. We must mobilize on the international and national levels to ensure that the findings of the Millennium Ecosystem Assessment are heeded and that we limit the damage wreaked on the natural environment.”

In Paris, the study was presented at UNESCO by the Executive Director of the International Council for Science (ICSU), Thomas Rosswall and Salvatore Arico, of UNESCO’s Division of Ecological and Earth Sciences, and member of the Board in charge of the study.

Although evidence remains incomplete, there is enough for the experts to warn that the ongoing degradation of 15 of the 24 ecosystem services examined – including fresh water, capture fisheries, air and water regulation, and the regulation of regional climate, natural hazards and pests - increases the likelihood of potentially abrupt changes that will seriously affect human well-being. This includes the emergence of new diseases, sudden changes in water quality, creation of “dead zones” along the coasts, the collapse of fisheries, and shifts in regional climate.

The *MA Synthesis Report* highlights four main findings:

- Humans have changed ecosystems more rapidly and extensively in the last 50 years than in any other period. This was done largely to meet rapidly growing demands for food, fresh water, timber, fiber and fuel. More land was converted to agriculture since 1945 than in the 18th and 19th centuries combined. More than half of all the synthetic nitrogen fertilizers, first made in 1913, ever used on the planet have been used since 1985. Experts say that this resulted in a substantial and largely irreversible loss in diversity of life on Earth, with some 10 to 30 percent of the mammal, bird and amphibian species currently threatened with extinction. .../

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- Ecosystem changes that have contributed substantial net gains in human well-being and economic development have been achieved at growing costs in the

form of degradation of other services. Only four ecosystem services have been enhanced in the last 50 years: increases in crop, livestock and aquaculture production, and increased carbon sequestration for global climate regulation. Two services – capture fisheries and fresh water – are now well beyond levels that can sustain current, much less future, demands. Experts say that these problems will substantially diminish the benefits for future generations.

- The degradation of ecosystem services could become significantly worse during the first half of this century and is a barrier to achieving the UN Millennium Development Goals. In all the four plausible futures explored by the scientists, they project progress in eliminating hunger, but at far slower rates than needed to halve the number of people suffering from hunger by 2015. Experts warn that changes in ecosystems such as deforestation influence the abundance of human pathogens such as malaria and cholera, as well as the risk of emergence of new diseases. Malaria, for example, accounts for 11 percent of the disease burden in Africa and had it been eliminated 35 years ago, the continent's gross domestic product would have increased by \$100 billion.
- The challenge of reversing the degradation of ecosystems while meeting increasing demands can be met under some scenarios involving significant policy and institutional changes. However, these changes will be large and are not currently under way. The report mentions options that exist to conserve or enhance ecosystem services that reduce negative trade-offs or that will positively impact other services. Protection of natural forests, for example, not only conserves wildlife but also supplies fresh water and reduces carbon emissions.

“The over-riding conclusion of this assessment is that it lies within the power of human societies to ease the strains we are putting on the nature services of the planet, while continuing to use them to bring better living standards to all,” said the MA board of directors in a statement, “Living beyond Our Means: Natural Assets and Human Well-being.” “Achieving this, however, will require radical changes in the way nature is treated at every level of decision-making and new ways of cooperation between government, business and civil society. The warning signs are there for all of us to see. The future now lies in our hands.”

The *MA Synthesis Report* also reveals that it is the world's poorest people who suffer most from ecosystem changes. The regions facing significant problems of ecosystem degradation – sub-Saharan Africa, Central Asia, some regions in Latin America, and parts of South and Southeast Asia – are also facing the greatest challenges in achieving the United Nations' Millennium Development Goals. In Sub-Saharan Africa, for example, the number of poor people is forecast to rise from 315 million in 1999 to 404 million by 2015.

“Any progress achieved in addressing the goals of poverty and hunger eradication, improved health, and environmental protection is unlikely to be sustained if most of the ecosystem services on which humanity relies continue to be degraded,” says

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the study. It specifically states that the ongoing degradation of ecosystem services is a road block to the Millennium Development Goals agreed to by the world leaders at the United Nations in 2000.

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Journalists wishing to attend the launch must obtain accreditation from UNESCO's Press Service, +33 (0)1 45 68 17 48 [i.le-fournis@unesco.org](mailto:i.le-fournis@unesco.org)

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\*The *Millennium Ecosystem Assessment (MA) Synthesis Report* is the first in a series of seven synthesis and summary reports and four technical volumes that assess the state of global ecosystems and their impact on human well-being. This report is being released together with a statement by the MA board of directors entitled "Living beyond Our Means: Natural Assets and Human Well-being."

The four-year assessment was designed by a partnership of UN agencies, international scientific organizations, and development agencies, with guidance from the private sector and civil society groups. Major funding is provided by the Global Environment Facility, the United Nations Foundation, the David and Lucile Packard Foundation, and The World Bank. The MA Secretariat is coordinated by the United Nations Environment Programme (UNEP).

The MA is recognized by governments as a mechanism to meet part of the assessment needs of four international environmental treaties – the UN Convention on Biological Diversity, the Ramsar Convention on Wetlands, the UN Convention to Combat Desertification, and the Convention on Migratory Species. It is supported by 22 of the world's leading scientific bodies, including The Royal Society of the U.K. and the Third World Academy of Sciences.

The MA's work is overseen by a 45-member board of directors, co-chaired by Dr. Robert Watson, chief scientist of The World Bank, and Dr. A. H. Zakri, director of the United Nations University's Institute of Advanced Studies. The Assessment Panel, which oversees the technical work of the MA, includes 13 of the world's leading social and natural scientists. It is co-chaired by Angela Cropper of the Cropper Foundation, and Dr. Harold Mooney of Stanford University. Dr. Walter Reid is the director of the Millennium Ecosystem Assessment.

\*\*For the message and other material see [www.millenniumassessment.org](http://www.millenniumassessment.org)