

## **ECOSYSTEMS AND HUMAN WELL-BEING: FINDINGS OF THE MILLENNIUM ECOSYSTEM ASSESSMENT**

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### **ABSTRACT**

The four-year (2001-2005) Millennium Ecosystem Assessment, a landmark United Nations study conducted by 1360 experts from 95 countries, is the most comprehensive assessment of the state-of-health of the world's ecosystems, and their impacts on human life. It is the first attempt by the scientific community, in consultation with governments, international institutions, business, NGOs and indigenous people, to provide a 'global check-up' and the prognosis is cause for concern. By and large, the state of the planet is declining, and the four main findings are:

- 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 18<sup>th</sup> and 19<sup>th</sup> centuries combined. Scientists said that this resulted in a substantial and largely irreversible loss in diversity of life on Earth.
- 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, including crops, livestock and aquaculture. The use of two – capture fisheries and fresh water – is now well beyond levels that can sustain current, much less future, demands. Scientists say that these problems will substantially diminish the benefits for future generations.
- The degradation of ecosystem services could grow significantly worse during the first half of this century and is a barrier to achieving the UN Millennium Development Goals. The scientists warn that changes in ecosystems influence the abundance of human pathogens such as malaria and cholera, as well as the risk of emergence of new diseases.
- 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. Options exist to conserve or enhance ecosystem services that reduce negative trade-offs or that will positively impact other services.

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