



Human exploitation of ecosystems has resulted in the increased production of a small number of key services such as crops and livestock, but not of the others provided by nature

of the impaired delivery of ecosystem services, but the recent Millennium Ecosystem Assessment (MA) chillingly concludes that there will be substantial costs to society unless we take action to mitigate the decline in ecosystem services. Of course, the total loss of such services would mean the end of life on Earth; more realistically, any loss will have an impact on our wellbeing. Unfortunately, we do not yet adequately value those services in economic terms or understand the trade-offs that we are making when we allow unbridled economic gain without incorporating social and environmental concerns.

Increased production

The MA reports that 60% of the world's ecosystem services are degraded to the point where they no longer provide what we need in the way of food, water, clean air, fuel and many other needs. Human exploitation of ecosystems has resulted in the increased production of a small number of key services such as crops and livestock, but not of the others provided by nature.

The more than 1,300 MA experts from 95 countries warned that – that though the evidence is still incomplete – the continuing degradation of 15 of the 24 ecosystem services they examined is increasing the likelihood of serious impacts on our lives. These may include the emergence of new diseases, sudden changes in water quality, shifts in regional climate and the collapse of such important food sources as fisheries.

IUCN believes that the necessary responses are feasible, but must be backed up by political will and targeted financing. Environmental ►

Everything Connects

ACHIM STEINER describes how achieving all the Millennium Development Goals depends on ecosystem services, and says that investing in them is the only rational response.

Human well-being ultimately depends on nature to provide ecosystem services. These are the result of complex relationships and processes of the components of biodiversity – genes, species and ecosystems – working together. Their benefits come in many forms, from the provision of the basic necessities of life – such as food, water, medicine, clean air – to the aesthetic inspiration for our culture and society. They are the foundation of our daily lives, though most of us use them without being conscious of the intricate web of processes involved. Yet we are losing the biological diversity that provides the foundation on which they rely. While only one of the Millennium Development Goals – MDG7 on environmental sustain-

ability – explicitly targets the environment, achieving each of the others requires the support of functioning ecosystems. In turn, achieving the goals on poverty, education, health, food security, equality and partnerships will support the delivery of MDG 7 (see table) During the past 12 months the World Conservation Union (IUCN) has engaged in a sustained effort to convince decision makers of the need to ensure MDG 7 is not forgotten in the global development effort. It has suggested concrete actions to help maintain biodiversity and the ecosystem services which contribute directly to the achievement of the other Goals.

It is difficult to measure the long term impacts of biodiversity loss and

conservation alone cannot achieve the MDGs, but it can and does make a major contribution. A sufficient body of evidence shows that conserving and using biodiversity sustainably can help reduce poverty and increase human health, equity and security. Conversely, we also have clear evidence that environmental mismanagement undermines livelihoods, human security and sustainable development. Investments in biodiversity conservation will help maintain the flow of ecosystem

services and, in turn, yield both immediate and long-term dividends to human well-being.

We must act now. The focus of an effective response requires improving frameworks for the governance of natural resource management, increasing investment in sustaining ecosystem services for people, and adopting relevant technologies, including a shift to landscape-scale management. Each of these must be addressed in an integrated way, since they are interlinked and not mutually

exclusive. Investing in the sustainability of natural resource use should not be seen as an environmental tax on development: on the contrary, it is a rational investment strategy to ensure long-term economic growth and development. Politicians and economic leaders must embrace this vision if the MDG targets are to be more than just statistical dreams ■

Achim Steiner is Director General, IUCN – The World Conservation Union

Key Links between the Millennium Development Goals and the environment	
Millennium Development Goals	Examples of links to the environment
Goal 1. Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> ● The livelihood strategies and food security of the poor often depend directly on functioning ecosystems and the diversity of services they provide. ● Insecure rights of the poor to environmental resources limit their capacity to protect the environment and improve their livelihoods and well-being, as does inadequate access to environmental information, markets, and decision-making.
Goal 2. Achieve universal primary education	<ul style="list-style-type: none"> ● The time that children, especially girls, spend collecting water and fuelwood can reduce the time they spend on study. ● Additional income generated from sustainable management of natural resources is available to be spent on education.
Goal 3. Promote gender equality and empower women	<ul style="list-style-type: none"> ● The time that women spend collecting water and fuelwood reduces their opportunities for income-generating work. ● Poor rural women often depend heavily on natural resources, but inequality and lack of secure rights limit their access to decision-making and resources.
Goal 4. Reduce child mortality	<ul style="list-style-type: none"> ● Improved management of local watersheds can reduce child mortality related to water-borne disease.
Goal 5. Improve maternal health	<ul style="list-style-type: none"> ● Indoor air pollution from burning wood and other biomass and carrying heavy loads, such as fuelwood and water, during late stages of pregnancy, put women's health at risk before childbirth.
Goal 6. Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> ● Environmental risk factors account for up to one-fifth of the total burden of disease in developing countries. ● Preventive environmental health measures are as important, and at times more cost-effective, than health treatment.
Goal 8. Develop a global partnership for development	<ul style="list-style-type: none"> ● The complex interaction between human wellbeing, ecosystem services and biodiversity requires an integrated approach including partnerships between civil society, the private sector and government.

* Goal 7: Ensure environmental sustainability

Sources: taken from UN Millennium Project 2005, DFID et al. 2002; UNDP 2002.