

It has long been clear that the needs of the poor are not being met as a natural outcome of the 'development process'. Their situation is getting relatively worse, the gap between their levels of well-being and those of others is widening - and consequently a conscious, concerted and determined effort is needed to alleviate their condition. So the global governmental community's resolution at the 2000 Millennium Summit to make a special commitment to address the multiple pressing needs of poor societies - reflected in the eight Millennium Development Goals (MDGs), and their fifteen targets - was a moment of renewed hope for poor societies and peoples across the world.

Most of the poorest of the poor, targeted by the Goals, depend directly and heavily for subsistence on ecosystem services - the benefits to humans from the use and existence of ecosystems. So it was fortuitous that a related, but separate process had already begun to explore the feasibility and usefulness of undertaking an assessment of them.

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What came to be known as the Millennium Ecosystem Assessment (MA) was carried out from 2001 to 2005. Its findings form a significant body of information, analysis, and synthesis about the ways in which ecosystems are relevant to human well-being and thus to the MDGs.

During those years these two agendas intersected at various points, complementing each other in substance and with overlap among their participants. A series of task forces comprising the Millennium Project - carried out under the aegis of the Office of the United Nations Secretary General - explored what is required to move towards achieving the MDG targets. The MA meanwhile was not just assessing the condition of the Earth's ecosystems and trends in their performance, but seeking to illuminate and deepen understanding of the relationship between the services they

provide, the ways in which human actions affect them, and the consequences for the well-being of societies. In doing so, it sought to combine learning from natural and social science, and to integrate understanding of local communities, including indigenous ones. Through a scenario-building process, it posited various plausible future worlds indicating the kind of outcomes that could occur for ecosystems and human well-being, given different policy approaches and international orientations. Under one such outcome, degradation of ecosystem services could grow significantly worse during the first half of this century, becoming a barrier to achieving the MDGs. But three of the four scenarios show that significant policy changes could partially mitigate the negative effect of growing pressures on ecosystems - though the needed changes are large, and not currently underway.

Twin Tracks

Angela Cropper

explains the close interrelationship between tackling poverty and safeguarding ecosystems and the services they provide to humanity.

Urgent interventions

The results and implications of the Millennium Project are being considered by the High Level Plenary of Heads of State and Government at the UN General Assembly. This also provides an opportunity for governments to consider the findings of the MA and the ways in which the Earth's ecosystems might either constrain meeting the MDGs under existing conditions and trends and scenarios, or contribute to their

achievement through appropriate and urgent interventions.

The MA finds that there has been considerable progress over the last 50 years in responding to the human needs encompassed in the MDGs. The global economy increased six-fold between 1960 and 2000, while the world's population doubled from 3 to 6 billion. Food production increased 2 - times; water use doubled; wood harvests for pulp and paper production tripled; timber production ▶

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increased by more than half; and installed hydropower capacity doubled.

But these gains have not been equitably distributed: hence the need for the special effort represented by the MDGs. They have also come at the cost of debilitating the capacity of ecosystems to continue to contribute the same level of services: hence the need for special attention to natural resources if the Goals are to be achieved.



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The MA assessed 24 ecosystem services, and found that 15 of them have been degraded or are being used unsustainably. Its findings reveal that, in the past 50 years, human actions have changed ecosystems more rapidly and extensively than in any comparable period in human history. For example, in the last decades:

- 20% of the world's coral reefs have been lost, and another 20% degraded;
- 35% of the area of mangroves have been lost;
- there is now 3-6 times as much water in reservoirs as in natural rivers, while withdrawals from rivers and lakes has doubled;
- the biological diversity of the planet has been altered: the distribution of species is becoming more homogeneous; the population size, range (or both) of most species across a number of taxonomic groups is declining; and 10-30% of mammal, bird, and amphibian species are currently threatened with extinction.

Social conflict.

The MA's Synthesis Report shows that "the harmful effects of the degradation of ecosystem services ... are being borne disproportionately by the poor, are contributing to growing inequities and disparities across groups of people, and are sometimes the principal factor causing poverty and social conflict." This is particularly evident in sub-Saharan Africa, Central Asia, parts of South and Southeast Asia, and some regions in Latin America, where ecological change is expected severely to constrain countries' ability to meet the MDGs in time.

The MA makes evident that Earth's ecosystems are vital to realising many of the MDGs. It outlines how the condition and trends of many of those ecosystems would constrain socio-economic achievements. And it also indicates the possibilities – given appropriate policies, institutions and management – that ecosystems present for livelihoods, income-generation, human health and security, and environmental and socio-economic sustainability. It reveals that the MDGs and their targets are a set of highly interdependent objectives that need to be approached through integrated strategies rather than through isolated interventions, with particular attention to improved management of ecosystems and their services – and that this is a prerequisite for achieving the targets on poverty, hunger, gender equality, water and sanitation, and health.

Ecological challenges

Achieving the MDGs, therefore, calls for as much urgent attention to the natural resource side of this equation as to the human one, since it is clear that the latter relies upon the capacity of the former. Continuing deterioration will damage the prospects for achieving the MDGs for poor societies and groups who directly and heavily depend on the services of the natural world.

The MA can serve governments as a basis for identifying, and responding to, ecological challenges and opportunities, as it indicates a range of interventions that may help arrest the decline in ecosystems and realise their potential contribution to achieving the MDGs ■

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