

## **The Global Agenda: International Vulnerability Assessments and the Millenium Ecosystem Assessment**

*Monika Zurek, Millenium Ecosystem Assessment Scenarios Group, FAO, Rome*  
(Monika Zurek is an agrobiologist but now works in economical issues.)

*Outline of the talk:*

(i) purpose of vulnerability assessment; (ii) some important vulnerability assessments up to date; (iii) the Millenium Ecosystem Assessment (MA); and (iv) the MA Scenarios.

### *(i) Purpose*

There are interactions between policy and the scientific community. One of the main purposes of the MA is to bridge the gap between policy and decision-makers on the one hand and the scientific community on the other. There are three important criteria for this assessment. Firstly, the assessment must be credible. This implies that it is scientifically sound and technically correct. Secondly, it must be salient. This means that the information provided is relevant. Thirdly, the assessment must be legitimate.

### *(ii) Some important vulnerability assessments up to date*

Important issues on the global agenda faced by decision-makers today are food, water and timber. Food and timber production must meet the needs of a growing world population, while water related issues become more and more important. Goals defined by the global community are, for example, the goals of the UN conventions, such as the issue of biodiversity. In this respect, the capacities of many ecosystems to provide certain services are overstressed nowadays. Assessments are performed by the IPCC, Global Environmental Outlook (UNEP), Global Biodiversity Assessment, Global Mountain Biodiversity Assessment (Diversitas GCTE, World Water Vision) and the Global Millenium Assessment.

### *(iii) the Millenium Ecosystem Assessment (MA)*

The Millenium Ecosystem Assessment (MA) is a four-year assessment. Its goal is to create a mechanism to increase the amount, quality and credibility of policy-relevant scientific research findings concerning ecosystems and human well-being. The MA addresses the convention of biological diversity, the convention to combat desertification and the Ramsar Wetlands convention. It not only addresses national governments, but also other sectors such as individual companies. The MA is an independent project financed by a large consortium. Financers are, for example, the World Bank, the Packard foundation and the NASA. The MA has four different working groups that comprise 800 scientists from 80 countries focussing on trends. An independent board reviews the outgoing reports.

The conceptual framework of the MA can be on a local, a regional or on the global level of scale, sometimes for the short term, sometimes for the long term. An example of an assessment on the local level is the assessment of the ecosystem services provided by a park in Stockholm. It is argued that drivers of change that influence ecosystems and their services can be direct as well as indirect. As a result, changes in ecosystem services might affect human well-being.

The benefits for people derived from ecosystems are divided into three categories. Firstly, the provisioning of services, such as food, fresh water, or fuel wood. Secondly, the regulating of services, such as climate regulation. Thirdly, the provisioning of cultural services, such as spiritual, recreational and aesthetic services. There are important interactions between ecosystem services and human well-being. Examples are security, basic materials for good life, health and good social relations. All these provide freedoms and choice.

There are four MA working groups trying to answer core questions. The groups are: (i) the Conditions and Trends working group, (ii) the Scientific working group, (iii) the Responses working group and (iv) the Sub-global assessment working group.

*(iv)* the MA Scenarios

The scenarios are a way to illustrate choices and describe a range of possible outcomes for ecosystem services. They organize available information, evaluate choices, confront uncertainty and aid outreach. The MA includes four forward looking scenarios: (i) Global Orchestrations, (ii) Techno Garden, (iii) Order from Strength (i.e. business as usual) and (iv) Adapting Mosaic (i.e. we really have to do something now). The scenarios use a range of models, for example the IMPACT model, assessing world food production. Outcomes of this model are assumptions for 2050 on per capita grain consumption, the number of malnourished children or domestic water use for the different scenarios.

By 2005, the most important outputs will be the Technical Assessment Reports, the Synthesis Reports and the Board Summary of Key Messages. The Synthesis Reports are meant for policy makers and address issues like ecosystems and well-being, biodiversity, desertification, wetlands, the private sector, health and ecosystems, and finally food and cultivated systems. The MA will also provide reports available over the internet and it will address the media.

Winnie Gerbens-Leenes