

The MA scenarios

The Millennium Ecosystem Scenarios were developed using both qualitative ("storytelling") and quantitative tools ("modeling"). While these different approaches were used to enforce each other and consistency checks were made, it was also accepted that to some degree differences between the different elaborations of the scenarios could remain emphasizing uncertainty. The scenarios are therefore the IMAGE implementation of the scenarios (and other elaborations of the same scenarios exist). The IMAGE results have formed the backbone of the quantitative chapter in the Scenario Volume of the MA (Alcamo, Van Vuuren and Cramer, 2005).

The set of MA scenarios explore changes in ecosystem services and their drivers across a set of four scenarios. These scenarios are:

- **Global Orchestration** (This scenario assumes a world with rapid economic growth based on a high level of socially conscious globalization and macro-scale policy reform. The main focus in this world is on human development and the approach towards environmental problems is reactive).
- **Order from Strength** (This scenario assumes a retreat from global institutions results in a fragmented world. In the scenario international blocks of states are formed that focus on national security and protectionism. As a result, there are large differences in wealth across the world. Technology development under this scenario is assumed to be slow).
- **Technogarden** (This scenario emphasises the development of green technologies, partly as substitutes for ecosystem services. The scenario also assumes a globalized world and a proactive approach to manage environmental problems.)
- **Adapting Mosaic** (In this scenario, local institutions are strengthened in order to protect ecosystems. Important elements in this scenario are learning processes at the local scale).

References and further reading

Alcamo J, van Vuuren D, Ringler C, Cramer W, Masui T, Alder J, Schulze K (2005). Changes in nature's balance sheet: Model-based estimates of future worldwide ecosystem services. *Ecology and society* 10.

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In addition, the data itself may be referred to as "data on the IMAGE 2.2 implementation of the MA scenarios provided by the IMAGE-team". Further information on these scenarios can be found both in the paper and in the chapter cited below.

Alcamo J, Van Vuuren DP, Cramer W (2005). Ecosystem Services across Scenarios. In Carpenter SR, Pingali P, Bennett EM, Zurek MB (eds.) Ecosystems and Human Well-being. Scenarios, Volume 2. Island Press, Washington.

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