

FIG. 4.4 | Outcomes for hunger reduction and biodiversity loss under the Millennium Ecosystem Assessment scenarios

Hunger reduction is shown as reduction in the number of malnourished children (0-5 years) in developing countries, by 2050 as compared to 2000.

Biodiversity loss is shown as the eventual loss of vascular plant species on land, due to land-use change (dark part of bars) and to the combined effects of land-use change, climate change and nitrogen deposition (total bars) by 2050, as compared to 1970.

Projections are for each of the four Millennium Ecosystem Assessment scenarios, namely “Global Orchestration”, “Order from Strength”, “Adapting Mosaic” and “Techno-Garden”. The first two have a reactive approach to environmental issues, but differ in that the world represented by the “Order from strength” scenario is regionalized and fragmented, emphasizing security and protection, whereas the world under the “Global orchestration” scenario has moved towards increased global cooperation. The remaining two scenarios feature proactive approaches, and also differ from one another in taking a regional versus a global approach. The world represented by the “Techno-Garden” scenario is globally connected and the environment is highly managed, whereas under the “Adapting Mosaic” scenario, society emphasizes ecosystem management strategies and institutions on a local scale.

Note that there is no simple relationship between hunger reduction and biodiversity loss. The scenario “Order from strength” features poor outcomes for both hunger reduction and biodiversity conservation. However, the other three scenarios show an inverse relationship between the two goals. In all scenarios, biodiversity is lost.

