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
of

Agriculture and Forestry

**The Millennium Ecosystem Assessment: Tradeoffs between Food Security and  
the Environment**

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 [Keywords](#)  
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**Abstract:** This paper provides an overview of selected trends and conditions of ecosystem services, in particular, food production and impacts on the environment based on the Millennium Ecosystem Assessment. It then describes outcomes for future ecosystem services under alternative development pathways, with a focus on tradeoffs between food security and the environment, such as implications for fertilizer use, and the role of biofuels. As tradeoffs among various ecosystem services are expected to increase into the future, research will need to focus increasingly on ways to achieve a balance between food security and improving non-food ecosystem services. To reduce adverse future impacts, research is urgently needed in the areas of land use change impacts on ecosystems and biodiversity, mitigation strategies for climate change, enhancing water security, and for hot spot regions where ecosystem services and human well-being are particularly vulnerable, including Sub-Saharan Africa, South Asia, and the Middle East and North Africa region.

**Key Words:** Ecosystem services, food security, tradeoffs, Millennium Ecosystem Assessment

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