

2 COMBINING BIODIVERSITY CONSERVATION WITH AGRICULTURAL INTENSIFICATION

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Lesson #1: Pesticides are a largely underestimated determinant of biodiversity loss.

Lesson #2: Farmland biodiversity reduces household vulnerability and provides natural insurance to risk-averse farmers.

Lesson #3: Biodiversity conservation needs a landscape perspective.

Lesson #4: Farmland biodiversity is good for ecosystem services but rarely includes endangered species.

Lesson #5: High yield and high farmland biodiversity can be combined.

Lesson #6: The concept of land sparing, instead of wildlife-friendly farming, does not contribute to connecting hunger reduction with biodiversity conservation.

Introduction

Conversion of natural habitat and agricultural intensification are the most important drivers of global losses in biodiversity and associated processes. Paradoxically, agricultural intensification at local and landscape scales tends to make land use systems less resilient and more vulnerable to disturbances while environmental change and climate extremes call for a higher adaptation capacity than ever. Biodiversity loss means that ecosystem services are also endangered, affecting functioning of managed and natural ecosystems. Conservation of the biodiversity inside protected areas receives increasing attention, but management of human-dominated landscapes, including forest remnants and forested land use systems, is still a major challenge. In this chapter, we focus primarily on the relationship between biodiversity and agricultural land use.

Lessons

1. Pesticides are a largely underestimated determinant of biodiversity loss

Agricultural intensification has many components, such as loss of landscape elements, enlarged farm and field sizes and larger local inputs of fertiliser and pesticides (Tscharntke