

Chapter 4

Forest and Rice Paddy Biodiversity: Working Toward Comprehensive Management Based on Community Participation



An oil palm plantation. At left are oil palms, and at right trees have been cut to make room for replanting, exposing the soil (Malaysia, August 1996)

Photo: Iwasa Kazuyuki

1. Introduction

“Conservation and Use of Biodiversity” (I-4) in *The State of the Environment in Asia 1999/2000* discussed the problems and challenges facing biodiversity, and described eco-farming in China and combined rice/fish farming in Malaysia. While international attention is focused on the loss and degradation of Asia’s forests, peat bog development and rice paddy modernization are also involved in forest decline, and have a grave impact on wetland ecosystem biodiversity.

In view of this situation, this chapter discusses Asia’s environment from the perspective of forests and rice paddies. The loss and degradation of forests and wetlands have been addressed as major international challenges at conferences including the 2002 Biodiversity Convention COP in the Hague, the Johannesburg Summit on Sustainable Development, and the Ramsar Convention COP in Valencia.

This chapter’s first half analyzes deforestation and forest degradation in Asia, examines direct and indirect causes, and proposes remedial measures, while the second half explores the changes wrought by agricultural modernization in rice paddies, which are a traditional form of artificial wetland ecosystem. Finally, it proposes ways to reevaluate the traditional forms of rice paddies with attention to how the effects of modernization on paddies are linked to forest fires and to the decline in biodiversity.

2. The Loss of Forests in Asia and Its Causes

2-1 1990s Initiatives

Progress in Policy Dialog for Conserving Forests

Diverse initiatives on various levels have progressed over the 10-odd years since the 1992 Earth Summit. Globally, intergovernmental policy dialog on forests started with the Intergovernmental Panel on Forests and were carried over by the Intergovernmental Forum on Forests and the United Nations Forum on Forests, and major advances were achieved in negotiations on forest-related conventions such as the Biodiversity Convention and the Framework Convention on Climate Change (FCCC). On the regional and national levels the broad range of initiatives include policy dialog and activities, and the building of real cooperative relationships between international environmental NGOs and international aid agencies, such as the WWF-World Bank alliance for forest conservation. The UN Food and Agriculture Organization (FAO) has hailed these efforts as a decade of strengthened international cooperation,¹ and aside from whatever real progress has been made, such animated worldwide policy dialog on forest conservation is unprecedented.