



Threats to the Tonle Sap

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Cambodia's main feature, the Tonle Sap basin, extends over 44% of the country's total area. And the main feature of the basin is the Great Lake, which happens to be the largest freshwater lake in Southeast Asia. The Great Lake has defined Cambodian life. It conditions its prospects. Why? Because its incredible biodiversity, allied to that of the watershed, underpins the livelihoods of one third of the population. There is more: the lake's importance extends far beyond Cambodia's borders. Fish migrations from the lake help to restock the Mekong River and its tributaries. The lake also helps to control salinity intrusion and to conserve mangroves in the Mekong delta, by acting as a reservoir from which water drains during the dry season. The lake and its watershed are a regionally vital resource. Their biodiversity is of global significance.

Threats to the Tonle Sap

Climate Change	Cumulative Impact of Built Structures on the Hydrology of the Mekong Basin	Deforestation in the Watersheds	Agricultural Expansion
Industrial and Urban Pollution	Conversion of the Flooded Forest to Agriculture	Overexploitation of Fisheries and Wildlife Resources	Agriculture Runoff
Mining	Habitat Fragmentation	Collection of Fuel Wood from the Flooded Forest	Introduction of Non-Native Species

Source: ADB. December 2004. *Future Solutions Now: The Tonle Sap Initiative*. Manila.

However, in Cambodia, high population growth is increasing the number of people to feed and consumptive use of the Tonle Sap basin's resources is intense. Major threats to the Tonle Sap, to name a few, include overexploitation of fisheries and wildlife resources, conversion of the flooded forest to agriculture, and collection of fuel wood from the flooded forest. In the watersheds, deforestation is destroying habitats and also results in a deterioration of water and soil quality and increased siltation rates. And so, despite the inherent richness of the lake, most indicators of poverty in the basin are even more negative than those that characterize the national population as a whole.

Outside Cambodia, major threats to the Tonle Sap include the cumulative impact of built structures on the hydrology of the Mekong basin. This is controversial and I can here only scratch the surface of a very complex environmental nexus. But, the threats are reported to relate to the importance of dynamic flows and the impact that changes may have on flood pulses, flood triggers, and flood timing. Relatively unregulated tropical rivers such as the Mekong River support a high biodiversity and the dynamic component of such rivers is essential to their productivity. Since dams, the largest of built structures, are usually constructed to enhance socioeconomic development, they tend to attract people and industry: therefore, river ecosystems containing dams must also contend with secondary environmental pressures that are independent from and in addition to the direct influences of dams on the physical and biological dimensions of the system.¹

¹ The influence of other built structures, e.g., roads, weirs, and flood control works, in flood plains is even less understood.

What is being done? In 1993, a Royal Decree designated the lake as a multiple-use protected area. In 1997, the lake was also nominated as a biosphere reserve. Most notably, in 2000, a Prime Ministerial decree released 56% of the former fishing lot area to communities. In conjunction with local authorities, they are to manage fisheries sustainably. More recently still, in late 2002, ADB approved the Tonle Sap Environmental Management Project. That project aims to enhance systems and develop the capacity for (i) natural resource management coordination and planning, (ii) community-based natural resource management, and (iii) biodiversity conservation in the Tonle Sap biosphere reserve.

The Tonle Sap Environmental Management Project focused ADB's attention on the Tonle Sap and led, in July 2003, to the formulation of the Tonle Sap Basin Strategy. The strategy is expected to concentrate 30–40% of ADB's operations in Cambodia, a concentration that has catalyzed other bilateral and multilateral assistance in support of the Tonle Sap Initiative, which is a partnership of organizations and people working to meet the poverty and environment challenges of the Tonle Sap.

At the international level, there is now greater understanding that natural resources do not recognize administrative boundaries and that decisions in one part of a basin can have significant impacts on natural resources elsewhere. In recent years, a deteriorating environment in the Mekong basin has led to a greater awareness of the need for cooperation. One of the most significant cooperative efforts to date has been the Mekong River Commission. And, for the reasons to which I alluded earlier, policymakers have also begun to pay more attention to factors that affect the timing, quantity, and quality of water, and not just water flows. But much more is needed to meet transboundary environmental challenges. Cambodia, Lao PRD, Myanmar, Thailand, Viet Nam, and Yunnan Province, in the People's Republic of China, must share the costs of, and responsibility for, altering the hydrological regime. Opportunities for enhancing environmental governance are plentiful.

It is everyone's expectation that this workshop towards the definition of a Mekong Water Resources Assistance Strategy, not just for the World Bank but for whoever wishes to act on it, will spell out what these are from a Cambodian perspective. On its part, this afternoon, ADB will outline its approach to natural resource management in the Tonle Sap basin.