



Tropentag, October 7-9, 2008, Hohenheim

“Competition for Resources in a Changing World:  
New Drive for Rural Development”

## Socio-Economic Conditions of Biodiversity Conservation at the Phnom Kulen National Park Region, Central Cambodia

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### Abstract

Cambodia is part of the Indo-Burma biodiversity ‘hotspot’. Although deforestation rates rank among the highest globally, extremely little is known about regional conditions for biodiversity conservation. We conducted an explorative study on rural resource use and socio-economic conditions of biodiversity protection in four settlements near Phnom Kulen National Park (PKNP) located 45 km north of Siem Reap (n=149 rural households; 08 to 12/2006). Low levels of conservation infrastructure as well as extensive fields of anti-person mines hinder collection of scientific conservation data.

After years of industrial-scale logging and intensifying shifting cultivation, continuous forest cover is restricted to PKNP. Land use changes following the Khmer Rouge regime and subsequent political turmoil are best described as an open access colonisation of a forest frontier driven by population growth, immigration, and missing land rights. Colonisation proceeded along the main access road from Siem Reap reaching and trespassing PKNP. The entire study area is characterised by smallholder shifting cultivation with short rotation periods, and permanent wet rice production at low intensity. Land availability and average farm size is bigger farther away from town, i.e. closer to PKNP. Here, forest resources (timber, NTFP) frequently contribute to household income. Closer to town, wage labour becomes more important as an income source. We do not find a clear correlation between the use of forest resources as a livelihood strategy and material well-being. This suggests that the investigated smallholders use forest resources to sustain or complement their (low) income levels, or use them as insurance against the risk of agricultural crop failures.

Hunting and consumption of wildlife as well as the use of wildlife for traditional medicine plays only a small role for total household consumption and household income. Availability ratings by local residents indicate low availability of most populations of larger wild animals (exception: wild pigs). The situation has worsened over recent years. Low availability even in PKNP suggests that past over-hunting may have preceded habitat loss. Although levels of wildlife utilisation are low, remaining hunting pressures may still be too high.

**Keywords:** Biodiversity conservation, Cambodia, hunting, income, national parks, shifting cultivation, socio-economics, traditional medicine, wildlife