



SCIENTIFIC MEETING

TROPICAL DEFORESTATION: PATTERNS, CAUSES AND CONSEQUENCES

Tuesday 10 October 2006

The Meeting Rooms, The Zoological Society of London, Regent's Park, London NW1 4RY

**Chair: Professor Bill Holt,
Head of Reproductive Biology, Institute of Zoology, ZSL**

Global patterns of deforestation

Dr Robert Ewers, Institute of Zoology, ZSL, and Department of Zoology, University of Cambridge

Tropical deforestation is a pressing environmental issue occurring around the globe. Tropical forests are the most biodiverse biomes on Earth and are home to more than 20,000 species of vertebrates. Historically, they have not been as heavily impacted as temperate forests, although human pressure on tropical forests is expected to build considerably over the foreseeable future.

Close to 50 million ha of tropical forests were destroyed over the period 1990–2000, and approximately one-sixth of the world's carbon emissions were generated in the process. Deforestation is occurring rapidly in all the world's tropical regions, although the large, continuous nature of forest cover in the Amazon and Congo Basins affords some level of passive protection that is lacking from the islands of South-east Asia.

At the global scale, deforestation is a response to increasing human populations, low national incomes and, importantly, the ongoing spread of agriculture into natural habitats. However, these generalisations hide considerable variation in the region-specific causes of tropical deforestation. Throughout the 1980s much deforestation was also attributed to government-sponsored colonisation projects and globalisation of agricultural markets. More recently, deforestation rates have been increased by land tenure insecurity in politically turbulent regions and the advancement of large-scale, mechanised agriculture, although small-scale agriculture has always been, and still remains, a significant driver of tropical deforestation.

Although rates of tropical deforestation are accelerating around the world at an alarming rate, the forests themselves are large enough that there is still time to ensure the continued survival of the biodiversity they contain.

Deforestation in Brazilian Amazon: rates, drivers and control

Dr Carlos Souza Jr, Instituto do Homem e Meio Ambiente da Amazonia (Amazon Institute of People and the Environment), Belém, Brazil

Brazil's Amazon rainforest accounts for about 30% of the world's remaining tropical forests. By 2005 almost 700,000 km² (270,000 miles²) had already been deforested in the region; an area that is almost threefold the size of the United Kingdom.

The Brazilian Amazon forests were being converted by deforestation at average rate of 22,500 km² per annum during 2000–2005. This alarming deforestation rate has focused international attention on Brazil because of the destruction of this high-biodiversity biome and globally significant contribution to carbon emissions.

I will present detailed information about rates and spatial distribution of deforestation in the Brazilian Amazon. Additionally, the major drivers of deforestation, and the impact of roads on this will be discussed. I will finish by highlighting the current efforts to fight illegal deforestation in the region, including the creation of new conservation units, linking satellite monitoring with command and control, and the potential of market regulation in this process.