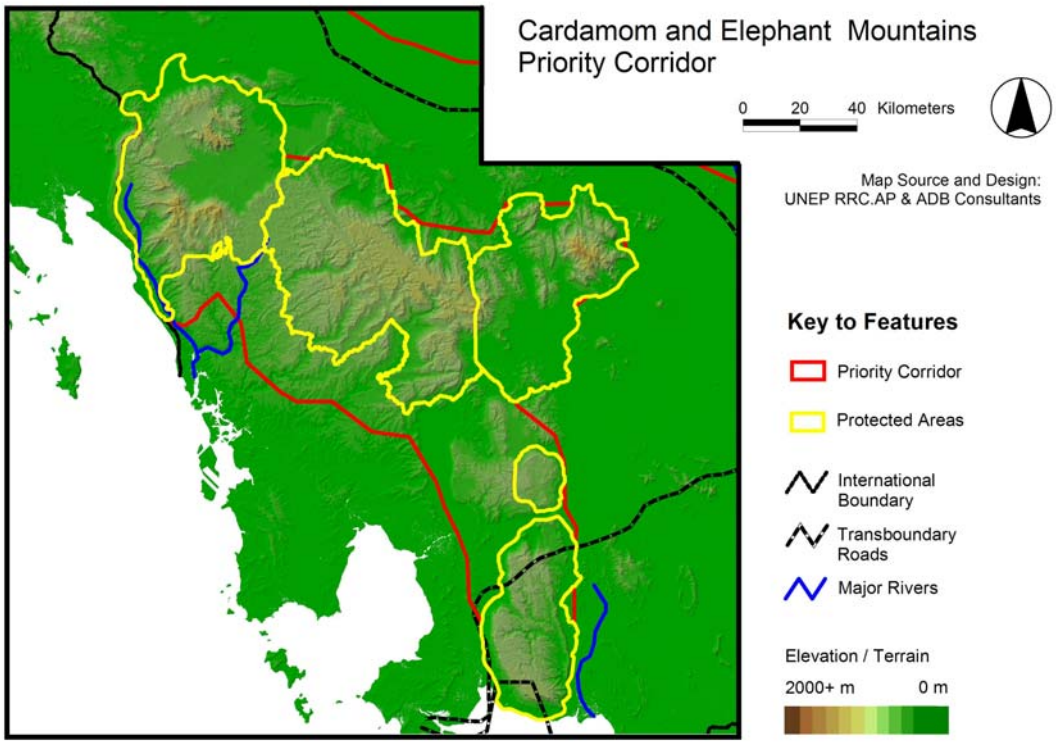
ANNEX 3.3: Description of GMS Priority Biodiversity Conservation Corridors

Figure 1: Cardamom and Elephant Mountains



Cardamom and Elephant Mountains
***Countries*:** Cambodia
Provinces/Districts: Bat Dambang, Pousat, Kampong Chhnang, Kaoh Kong, Kampong Spueu, Kampot.

Located in southwestern Cambodia, this GMSBCC represents the Cardamom Mountains Rainforest ecoregion (Figure 2). It spans the Central Cardamom Mountains to include the two peaks, Phnom Sankos and Phnom Auoral. The southward extension into the Elephant Mountain Range includes Kirirom and Phnom Bokor National Parks. The mountain range of uplifted Mesozoic substrates is an important watershed for the large Tonle Sap system in central Cambodia.

The 337,500 ha Phnom Samkos and the 253,750 ha Phnom Aural wildlife sanctuaries are relatively large for GMS protected areas, but neither have effective management in place and are not even clearly demarcated on the ground. However, the two protected areas are linked via the Central Cardamom Mountains Protected Forests to create a contiguous protected areas complex. Kirirom NP, one of Cambodia's older and more established protected areas is better managed. Because of the intact habitat in the GMSBCC, there is potential to maintain connectivity among the five major protected areas.

Figure 2: Ecoregions in the GMS

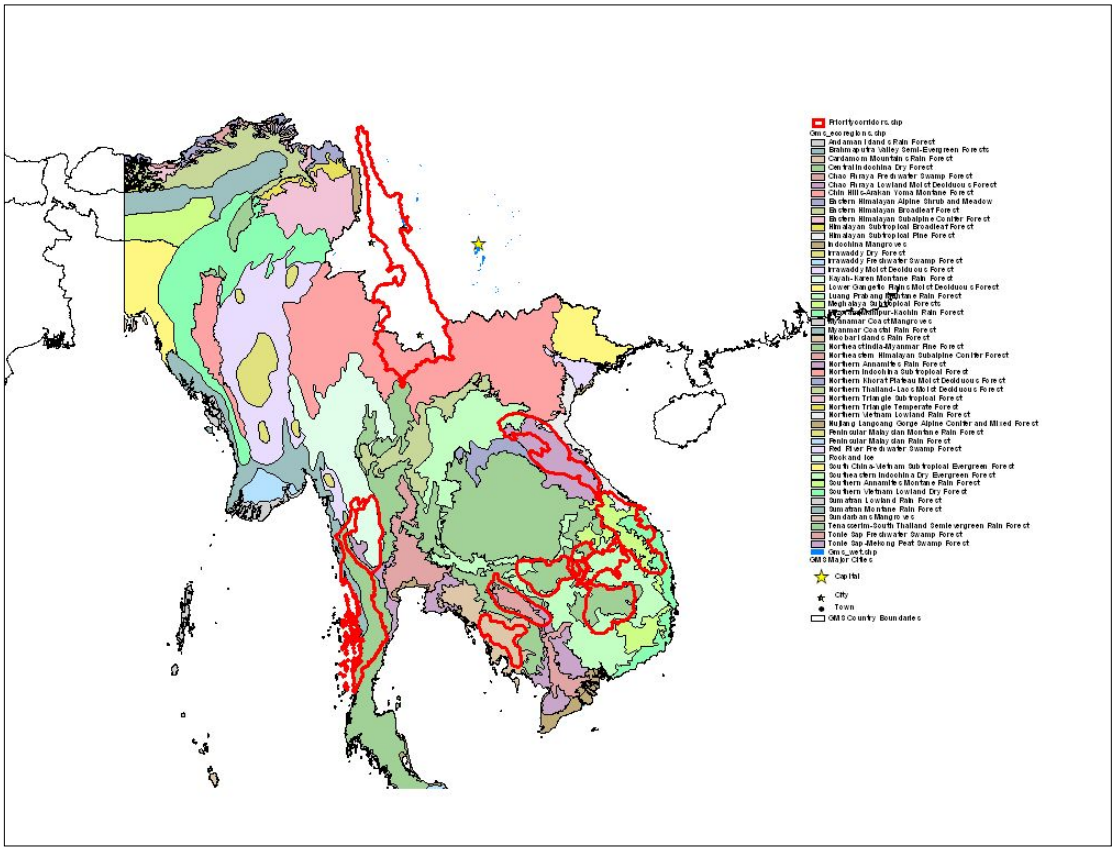
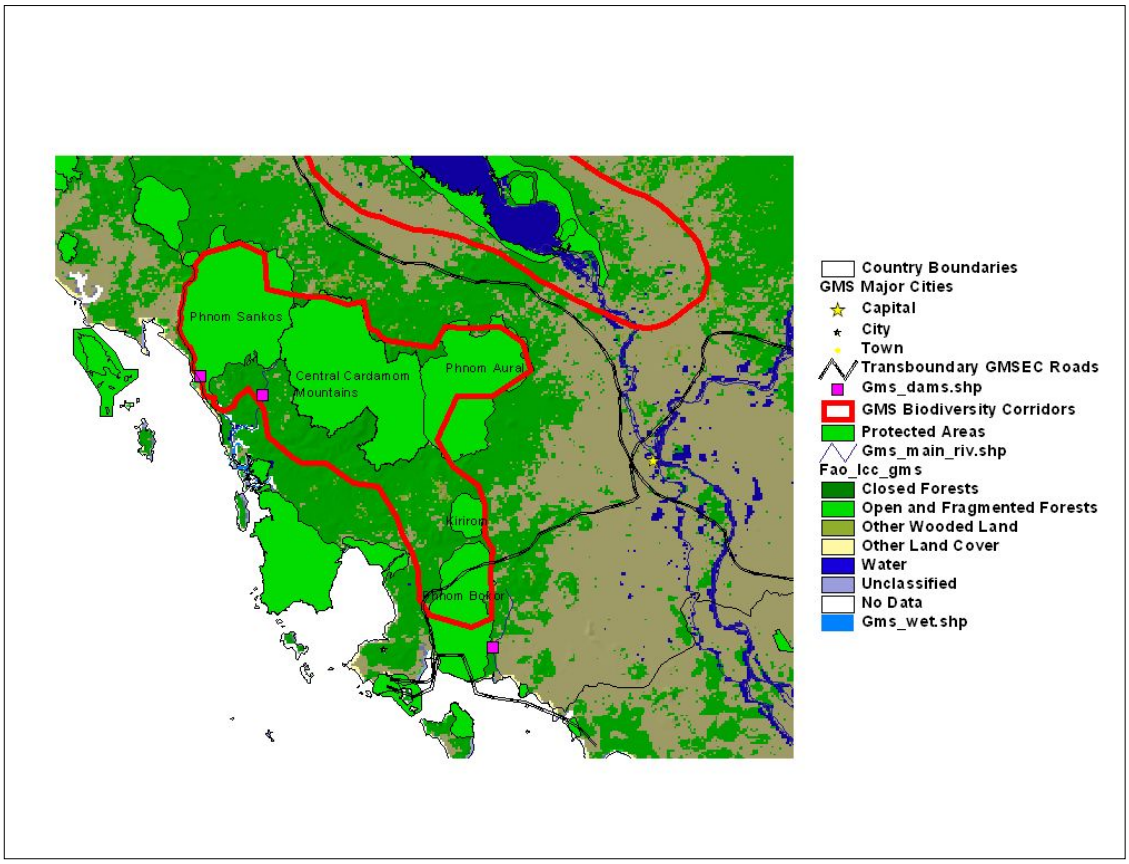


Figure 3: Protected Areas



Overall, the Cardamom Mountain rain forests are considered to represent one of the most intact and species-rich extents of rain forests in the region and is eminently suitable for landscape conservation (Wikramanayake *et al.* 2001[1]). The mountain range is still clothed in relatively intact wet evergreen forests; however, the lowlands are now threatened by logging and agriculture (Baltzer *et al* 2001, Wikramanayake *et al*. 2000). Because of the shallow, poorly drained soils, the southern slopes support an unusual dwarf rain forest community dominated by *Dacrydium elatum* and *Podocarpus neriifolius,* with a scattered distribution of *P. (Nageia) fleuryi* and *P. (Dacrycarpus)imbricatus* (Wikramanayake *et al*. 2001).

Among the wide-ranging, landscape mammals are the tiger, Asian elephant, clouded leopard, dhole, gaur, banteng, and pileated gibbon. The elephant population is thought to be one of the largest in Indochina, and the forests have been recognized as a Level I Tiger Conservation Unit (Dinerstein *et al*. 1997). The Cardamom Range probably harbors the highest density of pileated gibbons throughout the species' distributional range (Boonratana 1999[2]).

Over 450 species of birds are known from this area, including two species that are endemic to the ecoregion, Chestnut-headed partridge (*Arborophila Cambodiana*) and the Siamese partridge (*Arborophila diversa*). A population of the Endangered Siamese crocodile was also discovered in this region during relatively recent surveys (Fauna & Flora International 2000[3]), indicating the lacunae in biological knowledge of these forests.

The isolation of the Cardamom and Elephant Range from the other mountain ranges and the moist conditions that support the wet evergreen forests have supported the ecological conditions necessary to evolve a flora and fauna rich in endemism; thus, in all probability many more endemic species will be added to this list after more comprehensive surveys.

Key Conservation Issues And Threats To Biodiversity

Immigration and subsequent settlement and agriculture are beginning to fragment the forests, especially in the lowlands. A more severe threat is from logging; almost all of the Central Cardamom Mountain Range has been granted to logging concessions.

Impact Of The GMSEC.

Route R6 bisects Phnom Bokor National Park in the southern arm of the GMSBCC(Figure 3 above). Route R1 from Bangkok to Phnom Penh skirts the northern boundary of the corridor. The Zones of Influence from these roads intrude into the corridor.

Three dams are being considered in the region that will have direct impacts on the landscape.

[1] Wikramanayake, E.D., E. Dinerstein, C. Loucks, D. Olson, J. Morrison, J. Lamoreux, M. McKnight, and P. Hedao. 2001. Terrestrial ecoregions of the Indo-Pacific: a conservation assessment. Island Press: Washington, D.C.

[2] Boonratana, R. 1999. Establishment and development of Tan Phu Elephant Sanctuary. Hanoi:FFI. Cited in Wikramanayake et al. 2001.

[3] Fauna and Flora International. 2000. Asia's best kept secret. Fauna and Flora News. 13:1-2.