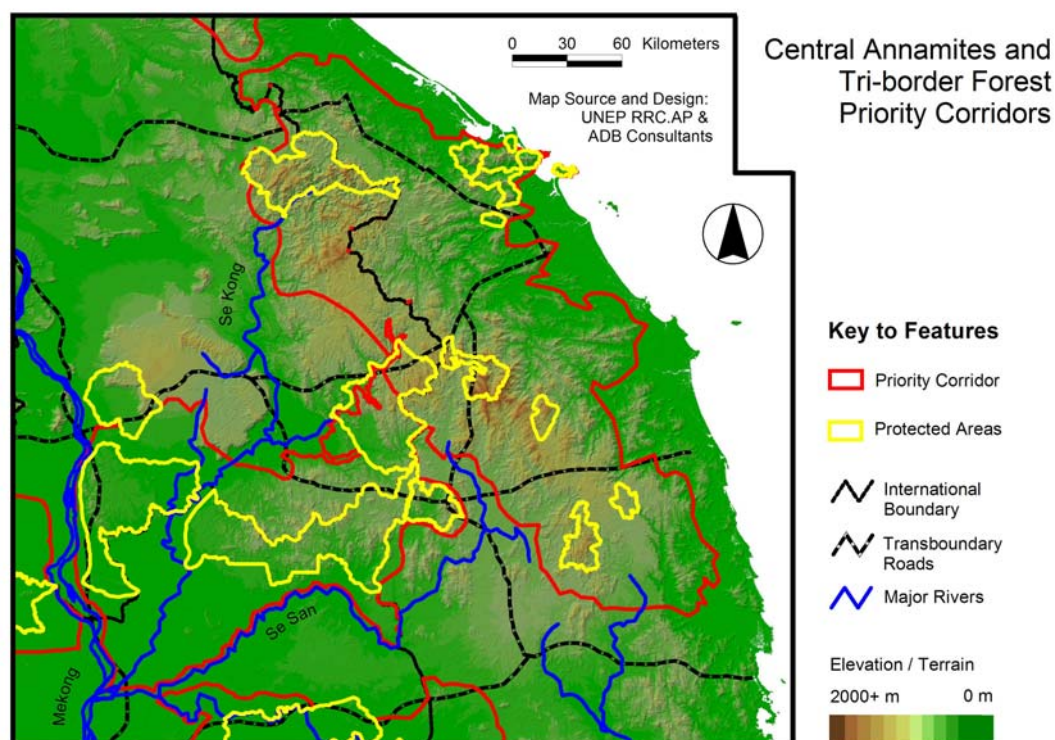


ANNEX 3.6 Tri-border Forests (Cambodia, Lao, Vietnam) GMS Priority Biodiversity Conservation Corridor

Figure 1: Tri-border Forests (Cambodia, Lao, Vietnam)



Tri-border Forests

Countries: Cambodia, Lao PDR, Vietnam

Provinces/Districts: Rotana Kiri and Stung Traeng (Cambodia); Champasack and Attapeu (Laos); Kon Tum (Vietnam).

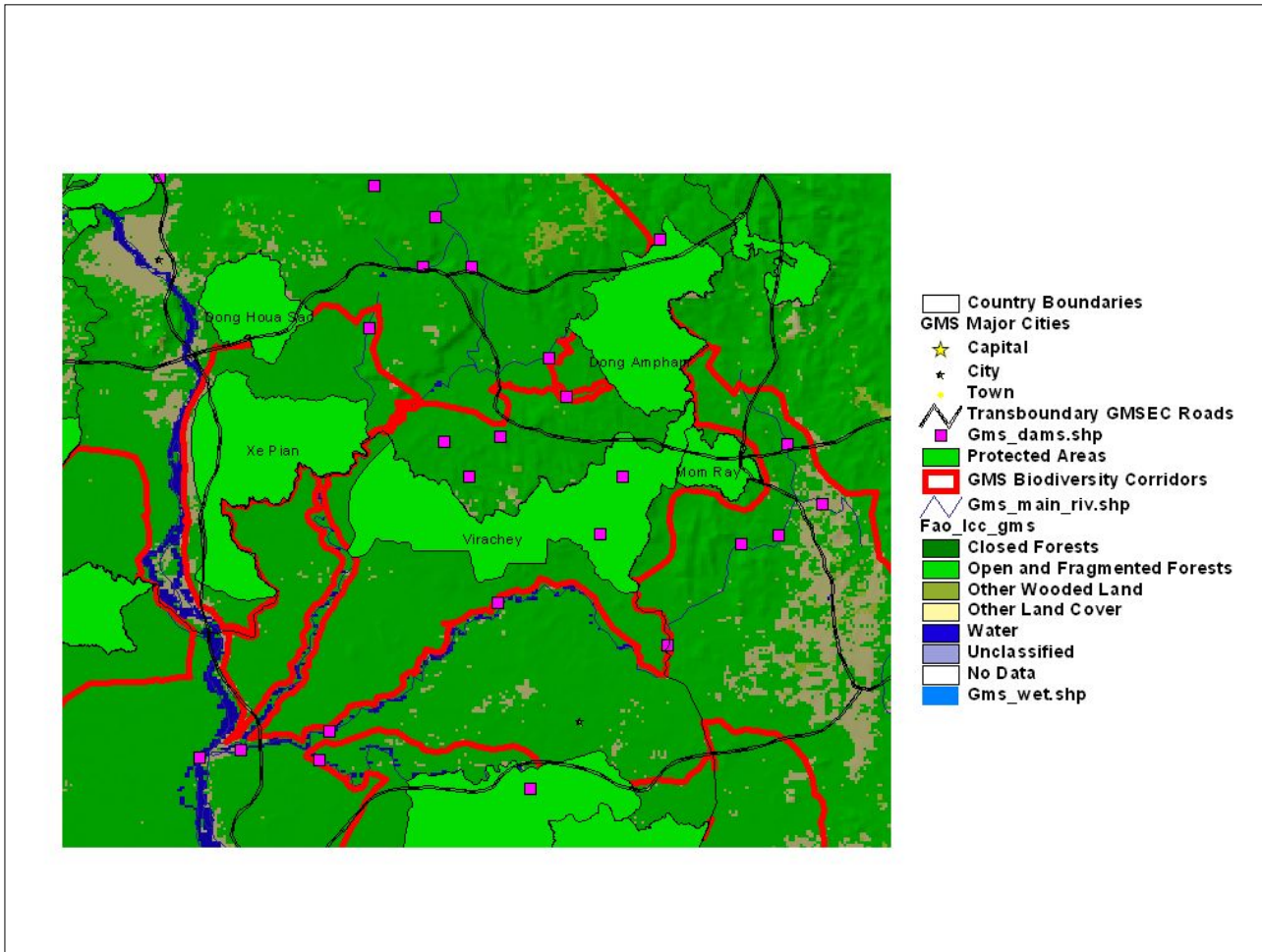
Straddling the borders of Cambodia, Laos, and Vietnam, this GMSBCC represents the Southeastern Indochina Dry Evergreen Forest and a smaller extent of the Central Indochina Dry Forest ecoregions.

This biodiversity corridor is also a major catchment area for the Xe Kong and Xe San, two major tributaries to the Mekong River and the second largest watershed in the Mekong drainage. The corridor comprises of a mosaic of Dry Dipterocarp Forests and Semi-evergreen Forests (with transitional forest types such as mixed deciduous forest), especially in the northern extent of the landscape. The terrain is volcanic in origin.

Some of the prominent protected areas in this landscape include the large Virachey National Park in Cambodia, along the northeastern border with Lao PDR and Vietnam. Virachey is contiguous with Mom Ray Nature Reserve in Vietnam, and Dong Ampham NBCA in Lao PDR. It is also less than 5km from the Xe Pian NBCA, spanning Pakse and Attepeu districts in Laos (Fig 2). In addition to these national protected areas, there are several provincial protected areas (Nam Ghong PPA, in Laos and two proposed areas in Stung Treng Province of Cambodia). Together, these comprise a large transboundary protected areas complex that is potentially important for several threatened wide-ranging 'landscape' species in the GMS, if the widespread hunting can be effectively curbed. Currently population densities of the

large mammals and birds are low because of hunting, but with effective conservation actions the populations will likely recover.

Figure 2: Tri-Border Forests showing PAs, major transnational roads, dams and remaining forest cover



Among the important species in this biodiversity corridor are the tiger, Asian elephant, Banteng, and Wild Water Buffalo. Several Globally Threatened birds are known from this corridor, especially from the wetlands. These species include Sarus Crane, Giant Ibis, Lesser Adjutant, Green Peafowl, Long-billed Vulture, White-rumped Vulture, White-shouldered Ibis, and White-winged Duck. There could be populations of the Siamese Crocodile, another Globally Threatened species, although reports have not been confirmed. Endemic or near-endemic species include Berdmore's Squirrel and Black-headed Woodpecker (Baltzer *et al.* 2001) The Se San also supports important populations of sand bank nesting birds.

Key conservation issues and threats to biodiversity

Agriculture, including clearing of old growth forests for shifting cultivation (rather than rotating in fallow lands), is encroaching into the natural forests. If the encroachment continues, the existing habitat linkages between protected areas can be degraded or entirely severed. In addition to the corridors, the protected areas are also threatened by encroachment. Logging is also widespread, and poses a graver threat because large concessions extend up to, and even into the important protected areas (Baltzer

et al. 2001). Moreover, illegal logging and cross border transport of these logs is known to occur (Baltzer et al. 2001, other refs – Global Witness).

As with most areas in the GMS, hunting is widespread. Reports of tigers being killed with baited explosives are common (Wikramanayake 1998¹). Trade is particularly heavy along Highway 78 (formerly Highway 19) between Stung Treng, Cambodia, and Pleiku, Vietnam (Baltzer *et al.* 2001)

Commercial peat extraction to the north of the Xe Pian NBCA may increase pressure on local wildlife populations due to habitat degradation from disturbance from mining operations, and even hunting by the people involved in mining (Baltzer *et al.* 2001). Gold mining and exploration in the rivers, especially in Cambodia can also pose potential threats.

The construction of the Yali Falls dam in Gia Lai Province, Vietnam, has caused severe changes in the downstream flow and water quality of the San River in Vietnam and Cambodia (Baltzer *et al.* 2001). These artificial flow regimes will likely change the aquatic and riparian flora and faunas. But they have also affected the local communities that live along the river, forcing them to move further inland, including into the Virachay area. In 2000, excessive water released from the Yali Falls dam caused floods in Cambodia.

Impact of the GMSEC.

All four major protected areas in the landscape are directly impacted by transnational roads, especially route R2(S) (Figure 2 above).

There are 13 dams that are either built, being built, or proposed within the corridor, and another five within 10 km of the corridor. Although not all will be approved and built, several will. Prior to building these, information about flows, sedimentation and the ecology of the river basins is needed to mitigate environmental threats and inform infrastructure development planning.

¹ Wikramanayake, E.D. 1998. Tigers In Virachey National Park, Ratanakiri Province, Cambodia: Poaching And Trade. WWF Indochina Program. Unpubl Report.