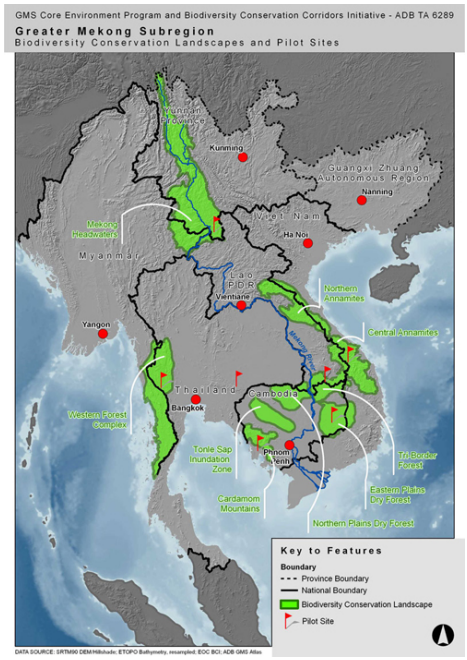
Cambodia, Laos, Vietnam

Biodiversity Conservation Corridors Initiative, Phase 2

Project Description

The Biodiversity Conservation Corridors Initiative (BCI) is part of an ADB regional assistance program intended to address the probable impacts on the environment resulting from economic development in the Greater Mekong Subregion (GMS). Biodiversity Conservation Corridors overlap with the proposed economic corridors in Cambodia, Laos, and Vietnam. The BCI was initially funded at 400,000 USD, approved by the ADB Board in December 2004, and officially launched in April 2006. The long-term goal of the BCI is that by 2015, GMS countries will have established priority biodiversity conservation landscapes and corridors for maintaining the quality of ecosystems and sustainable use of natural resources while improving people's livelihoods.



A proposal for Phase 2 was approved by the ADB Board in December 2010 via a loan to Vietnam and grants to Cambodia and Laos. The project is proposed to further enhance transboundary cooperation for preventing and mitigating fragmentation of biodiversity rich forest landscapes of the Cardamom Mountains and Eastern Plains Dry Forest in Cambodia, Triborder Forest areas in southern Laos and the Central Annamites in Vietnam.

Financing

The total cost of Phase 2 is approximately 76 million USD. The ADB will provide grants to Cambodia and Laos of 19 million USD and 20 million USD, respectively. Vietnam will receive a loan of 30 million USD.

USAID Review

USAID continues to be concerned that there is a gap between what is being proposed in Phase 2 and what is happening on the ground, resulting in the financial investment being undermined by other GMS economic corridor activities. Conflicts with hydropower development and mining concessions are raised as key issues by stakeholders as undercutting the success of the BCI. For example, in Cambodia's Southern Cardamom Mountains, there are 13 hydropower sites proposed. Reportedly, four hydropower projects within the Cardamom Mountains have been approved by the Government of Cambodia and are currently in various stages of development. The number of illegal land takes in Phnom Samkos Wildlife Sanctuary is reported to be increasing, mainly due to the expectations of hydropower development in the southern area. Another example in Cambodia is in the Mondulkiri Biodiversity Corridor where a number of mining concessions and hydropower projects are being planned. Examples of hydropower projects include the Sre Pok 4 Project, which will submerge areas in the Mondulkiri Protected Forest (an eco-lodge site) and the Lower Sre Pok 3 Project, will submerge a large area in the

Lomphat Wildlife Sanctuary (home to a number of globally threatened species, including Saurus crane and the Irrawaddy dolphin).

These types of concerns are not restricted to Cambodia. In Vietnam, the ADB is financing the Song Bung 4 Hydropower Project which will partially inundate the Song Thanh Nature Reserve, located in the corridor which was included and endorsed in the biological conservation corridor initiative by the GMS Governments Summit in 2005. Key impediments to ensuring a balance of environmental and economic interests and maintaining the integrity of these biodiversity corridors are the absence of transparency, public release, and consultation on environmental impact assessments, and cumulative impact assessments.

USAID undertook a site visit in March/April 2011 to: 1) Lao PDR's southern BCI corridor between Dong Hua Sao and Xe Pian National Protected Areas and 2) two BCI corridor projects in Cambodia's Cardamom Mountains and Eastern Plains Dry Forests landscape. All three projects are located in the Greater Mekong Subregion Southern Economic Corridor.

Lao PDR–The southern BCI is a strip of linear forest with a total area of 32,000 hectare (ha) between Dong Hua Sao and Xe Pian National Biodiversity Conservation Areas (NBCAs). These NBCAs are considered globally outstanding for species richness. In fact, the biodiversity values in Xe Pian NBCA place it among the top three protected areas in Lao PDR and among the top 10 in SE Asia. For example, there are 62 species of mammals, including at least 13 globally and 12 regionally threatened species, e.g., tiger, Asian elephant, banteng and 334 species of birds, including seven not found in any other protected area in Lao PDR. The primary focus of the BCI is to manage the corridor to support wildlife populations, maintain population connectivity of wildlife, allow for movement between Dong Hua Sao NBCA and Xe Pian NBCA, and maintain ecological function in the corridor. Corridor project activities were divided into two phases–Pilot area 1 and Pilot area 2. Although Pilot area 2 contains important wetlands, good forest and wildlife populations, BCI activities only occurred in the Pilot area 1. Pilot area 1 covers 11,000 ha with a total of 36 villages of which 11 villages were in the BCI program. Reportedly, new funds for the BCI will not provide any resources to activities in Pilot area 2. This corridor has one of the highest development pressures and is bisected by Road 18A that is in the process of being upgraded and connects Da Nang, Vietnam and Mawlamyine-Myawaddy, Myanmar.

Cambodia–
Eastern Plains Dry Forests landscape–This landscape represents the Central Indochina Dry Forests ecoregion, and includes smaller extents of the Southeastern Indochina Dry Evergreen Forests ecoregion in the southern part of the landscape. The terrain is largely flat with a few scattered hills and small, seasonal wetlands. Wetlands include headwater streams, a major river (the Srepok) and many lakes and pools. The landscape forms the last major stronghold in Indochina for highly threatened mammal species, including both deciduous and evergreen forest mammal species. The Eastern Plains also supports an

Figure 1. Snoul Wildlife Sanctuary

exceptional assemblage of threatened bird species, especially those associated with rivers and pools in lowland forest. The evergreen forests near the border support several highly localized endemic species typical of the Southern Annamite Mountains.

The BCI project is designed to conserve biodiversity and connect the ecosystem corridor linking seven protected areas in the Eastern Plains Dry Forests landscape, five of which are in Cambodia: Lomphat Wildlife Sanctuary (WS); Mondulkiri Protected Forest (MPF); Phnom Prich WS; Phnom Nam Lyr WS; and Snoul WS, and two in Viet Nam: Yok Don National Park (NP) and Bu Gia Map NP. The corridor in the Seima Biodiversity Conservation Area, which is currently under production forest status, forms a key connector between four of the other sites.

Figure 2. Srepok River, Mereuch Ranger Outpost, Mondulkiri Protected Forest

Cardamom Mountains–The Cardamom Mountains, located in Southwest Cambodia, link mountainous and lowland evergreen rainforest with lowland swamp forests and mangroves. The landscape supports almost all of the nation's known species of mammals and amphibians, and well over half of the known resident birds and reptiles. The Cardamoms host over half of Cambodia's known 2,300 species of plants of which 230 species are endemic to Cambodia. The Cardamom Mountains and adjoining areas contain significant populations of at least 14 globally threatened species and are critical to the conservation of these species at an international level. The elephant population appears to be the highest in the regions and is thought to be one of the largest in Indochina. The forests have been recognized as a Level I tiger conservation unit. Other important species in the region include the Asiatic wild dog, gaur, pileated gibbon, Eld's deer, Siamese crocodile, elongated tortoise, spiny mountain frog, chestnut-headed partridge, Cambodian laughing thrush, silver oriole, great hornbill, lesser adjutant stork, Asian arowana, green peafowl, eaglewood and Siamese cycad.

The BCI project aims to restore and maintain ecological integrity of the Cardamom Mountains landscape through improved management of core areas for biodiversity conservation, watershed protection, and development of sustainable use corridors that connect existing protected areas.

Recommendations: USAID's recommendations on ADB's BCI Phase 2 project are based on information obtained from meetings with Lao PDR and Cambodian government officials in capital cities and in the field, NGOs, MDB management, and visiting with villagers in corridor areas.

1: Refine and expand the current focus of BCI sites to include high biodiversity areas within the GMS economic corridors, both national and transboundary. This approach would include establishing Prey Long Forest as part of BCI. If BCI is focused on areas outside of the economic corridors, the areas for investment should be ecologically linked to the GMS corridor areas and interventions should be at a scale which is relevant to mitigating biodiversity threats and drivers throughout.

Site visit examples:

- Laos – Based on the density of villages, information on wildlife, and important wetland areas, the current area of activity within the Southern BCI site should be refocused to areas further east within the corridor (toward Attapeu province).
- Cambodia – Based on reports, the southern East-West GMS corridor road is cutting across the north side of Prey Lang Forest. This is the largest primary lowland dry evergreen forest remaining in both Cambodia and Indochinese Peninsula. It provides a broad range of ecosystem services and habitat to a number of endangered species dependent on critical and fragile habitats, including flooded forests.
- Transboundary – Because of the intent of BCI is to provide ecological continuity between protected areas, BCI should be expanded to include key areas (both in and outside of protected areas) that will be bisected by the southern East-West GMS corridor. This includes linking the Eastern Plains of Cambodia to the Tri-border area, which is the transition area between the dry forest and Annamitic evergreen forest.

2: Establish an Advisory Board or Panel of Experts composed of both international and national experts that are placed in a position to influence infrastructure planning and development at the national/provincial levels. Initial mandate should be to oversee the following activities and ensure their completion within a reasonable timeframe:

- Conduct a thorough biodiversity threats analysis for each of the GMS economic corridors and start the conservation planning from that perspective. Design, implement, and monitor each BCI intervention to adequately address the most pressing threats to target biodiversity in that landscape.
- Provide an overview of economic activities occurring within areas of high biodiversity (including but not limited to: ecological corridors, migration areas, protected areas, etc.) and their potential direct, indirect, and cumulative impacts.
- Determine whether the corridors are maintaining ecological connectivity, including wildlife use.
- Coordinate transboundary economic and conservation activities (e.g., corridors, illegal trade).

Site visit examples:

- It appears that infrastructure development within corridors is being approached as "business as usual." Land concessions, mining, hydropower development and new roads are being developed within the corridors and their respective protected areas without full appreciation or understanding of the direct, indirect, and cumulative impacts of these activities on the overall intent of the BCI (providing ecological connectivity). Infrastructure examples include hydropower projects within the Cardamoms potentially impacting mangrove forests; hydropower projects in Eastern Plains impacting protected areas and ecotourism initiatives and roads through all areas visited.

3: Provide leadership in integrating green infrastructure into livelihood development activities within BCI corridors.

Site visit examples:

- In all sites visited, roads running through corridors are being upgraded to accommodate increased traffic flow–via paving or widening of existing roads. Increased traffic intensifies the risks to wildlife use of the corridor via vehicle strikes, increased illegal or unsustainable wildlife trade, poaching from the road, and greater access into protected areas.
- In Cambodia, hydropower projects in both the Cardamom Mountains and Eastern Plains Dry Forests landscape will impact the ecological integrity of the protected areas. For example, hydropower projects under construction in the Cardamoms will impact river water flow regimes which empty into downstream mangrove forests.

4: Any local development activities undertaken within BCI should be designed and implemented by taking a threats-based approach to be able to strategically address the most pressing drivers in the landscape. The livelihood and local development activities should be directly and substantively linked to improved natural resource management and the conservation of local biodiversity in a sustainable way.

This can be accomplished by integrating biodiversity components into local development planning and livelihood development activities. For example, in Laos, ensure that biodiversity components are included in the overall design and use of the village development funds. In Cambodia, include a biodiversity component in the Provincial Investment Plans that are developed by the provincial government to ensure that activities under these plans have considered the environment (biodiversity, climate change issues, etc.) before investment and development proceed.

Site visit examples:

- Laos – Based on discussions with villagers, BCI benefits are seen as improving livelihoods (e.g., clinics, increased number of livestock, wells) but the conservation message is absent. For example, although villagers support the forestry rehabilitation component of BCI, they consciously chose not to use funds to continue seedling reforestation and maintenance of the forestry program in the absence of BCI funds.
- Laos/Cambodia – There is concern about the environmental impacts of small-scale infrastructure development being conducted under BCI that should be addressed through improved assessment, design and management if any infrastructure is undertaken in future phases.

Stakeholders in Cambodia understand that BCI Phase 2 will support livelihood development activities decided on at the provincial level. However, these development activities will take place in the absence of complementary activities supporting biodiversity. Reportedly, biodiversity activities will be supported through proposed Global Environment Facility (GEF)

loans. However, GEF activities, if approved, will be out of sequence and will lag behind GMS and livelihood development activities.

5: Develop a sustainability plan for respective governments to provide their own resources in a timely manner for government patrolling units within and outside of protected areas, including building the capacity of ASEAN-Wildlife Enforcement Network (WEN). As capacity is being developed, BCI could interface with the ASEAN-WEN efforts in target program areas and scale-up wildlife enforcement actions in these key 'source' geographies for the illegal wildlife trade.

Site visit examples:

- Discussions with stakeholders in both Cambodia and Lao PDR, revealed that community patrols do not effectively address the issues that are being confronted. This is due to a range of factors, including the authority/ability to arrest violators, professional elements involved in illegal activities–logging/poaching. At this point, NGOs are providing logistic and/or financial support for government patrols. In both countries, national ASEAN-WEN entities are not effectively functional.

6: Provide financial and technical support for the effective management of Protected Areas that are connected via corridors. Ensure the ability of officials to enforce the laws, maintain chain of custody of evidence, and the ability to effectively pursue court cases.

Site visit examples:

- Neither Lao PDR or Cambodia protected areas have adequate resources for effective management. In Lao–Xe Pian NBCA has 8–9 staff and receives not more than 10,000 USD/year and Dong Hua Sao NBCA has four staff and receives not more than 8,000 USD/year. Xe Pian NBCA should have at least 50 staff and a budget of at least 100,000 USD/year and if a livelihood program is included in their work then the budget needs to be increased. Dong Hua Sao NBCA should have at least 20 staff with a corresponding increase in budget. The consequence of limited staff is the fact that there are no dedicated personnel for patrolling or monitoring, which also means that staff is not properly trained.
- Cambodia – Patrolling posts need additional resources and staff in order to effectively monitor illegal activities within both corridors and protected areas.

7: Initiate a comprehensive monitoring program for BCI that includes: biophysical impact monitoring and threat proxies for interventions that test foundational assumptions of a program and that are based on causal models with indicators at key leverage points; this should include monitoring of the use of the corridor by wildlife.

Site visit examples:

- Laos – Elephants in the Dong Hua Sao NBCA and Xe Pian NBCA reportedly are moving to new habitat for food and to undisturbed areas. There is no evidence of elephants this year (2011).

- Cambodia - Mondulkiri forest staff reported that there is decreased use of the corridor between Mondulkiri PF and Phnom Prich WS by wildlife, especially elephants. Additionally, animals are being poached by the roadside.

Figure 3. Wildlife corridor between Phnom Prich Wildlife Sanctuary and Mondulkiri Protected Forest

8: Need long-term sustainability planning for both biodiversity and livelihood activities integrated into land use planning.

Site visit examples:

- Laos – There is currently no follow-up to determine how Village Development Funds are being used, and whether they are being used in a manner that undermines the biodiversity components and intent of BCI.
- Cambodia – Provincial Investment Plans that are being developed by the provincial governments do not contain a biodiversity component to ensure that the activities under the plans have considered this element before investment and development proceed.

  Seima Protected Forest is a key component to the success of the BCI project in the Eastern Plains Dry Forests landscape. It was recently gazetted and currently threatened by land concessions that the Council of Ministers approved.

- Laos/Cambodia – There is no monitoring being conducted to determine whether the corridors are maintaining ecological connectivity, including wildlife use.