

# Greater Mekong Subregion Core Environment Program

## Guangxi's Biodiversity Landscape & Livelihood Project



Guangxi Environmental Protection Department  
Guangxi Environmental Protection International  
Cooperation & Exchange Center  
[www.gxepb.gov.cn](http://www.gxepb.gov.cn)



GREATER MEKONG  
SUBREGION  
CORE ENVIRONMENT  
PROGRAM

[www.gms-eoc.org](http://www.gms-eoc.org)

# Core Environment Program

The Core Environment Program (CEP) supports the Greater Mekong Subregion (GMS) in delivering environmentally friendly economic growth. Anchored on the Asian Development Bank (ADB) GMS Economic Cooperation Program, CEP promotes regional environmental cooperation to improve development planning, safeguards, biodiversity conservation, and resilience to climate change, all of which are underpinned by building capacity. CEP is overseen by the environment ministries of the six GMS countries and implemented by the ADB-administered Environment Operations Center. Cofinancing is provided by ADB, the Global Environment Facility, the Government of Sweden, and the Nordic Development Fund.

**Find out more: [www.gms-eoc.org](http://www.gms-eoc.org)**

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# Project Background

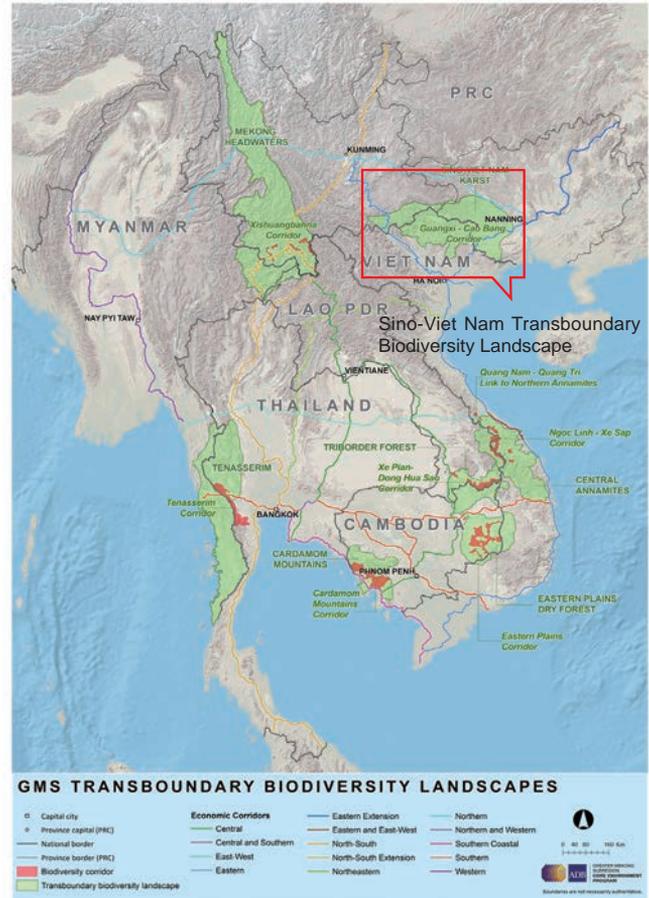
Located in South China, Guangxi is noted for its vast karst formations, spread out across more than 40% of its land surface. Guangxi has the greatest concentration of karst formations in China.

With its unique and rich biodiversity, the Sino-Viet Nam Transboundary Biodiversity Landscape (TBL) is one of seven major TBLs in the GMS. The Sino-Viet Nam TBL links mainland Asia and the South Central Peninsula, providing fertile ground for international biodiversity conservation research.

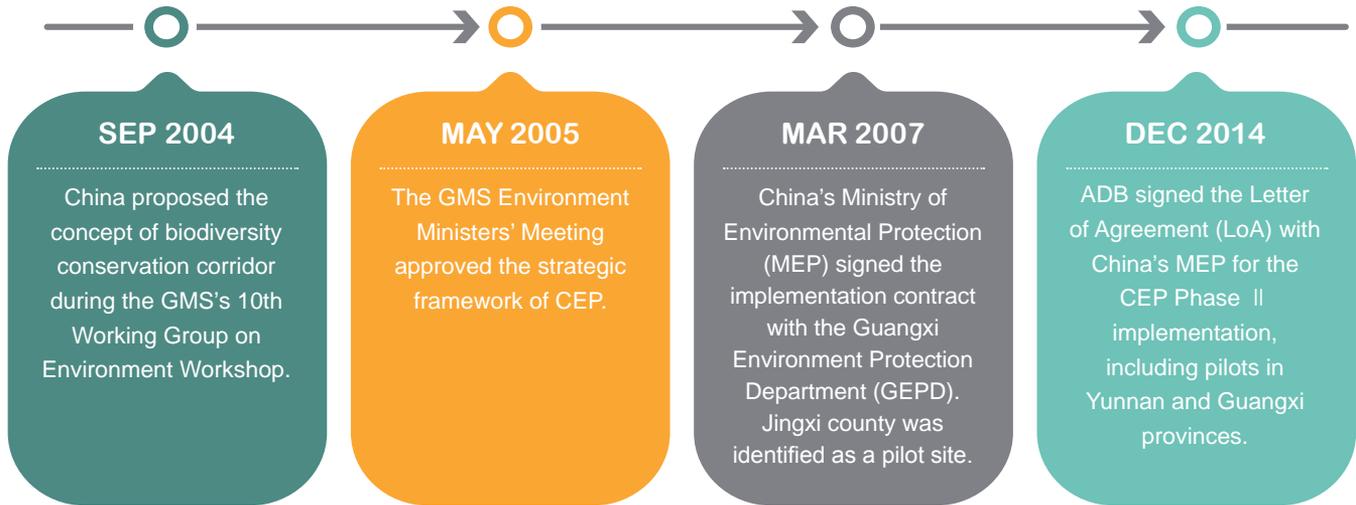
Its unique karst topography breeds rich biodiversity, providing shelter for many rare and endangered animals and plants. The strip limestone karst forest in the border areas between Cao Bang province, Viet Nam and Guangxi province, China is the home of the Cao Vit Gibbon. The Cao Vit Gibbon is a critically endangered primate species in the red list of the International Union for Conservation of Nature (IUCN). Combined with ecological vulnerability, the karst ecosystem in this area has been experiencing climate change and is extremely fragile.

In 2006, the GMS CEP launched the Biodiversity Conservation Corridor Initiative (BCI) in five GMS countries—Cambodia, China, the Lao People’s Democratic Republic, Thailand, and Viet Nam. The BCI is a response to the growing concerns about the environmental impacts of rapid economic growth. The biodiversity corridor conservation pilot sites are located within the tropical rainforest landscape in southwest Guangxi stretching down to the borders of Viet Nam. The area encompasses 12 counties from three prefectures, 7 counties of which border with Viet Nam.

Since 2009, the CEP has helped the two environment agencies of Cao Bang and Guangxi provinces develop a biodiversity conservation corridors pilot project that would reduce ecosystem fragmentation between protected areas in the landscape. The project has achieved significant restoration and conservation of the limestone forest and biodiversity in the region as well as the ecological integrity of gibbon habitats. In 2015, the CEP also facilitated the signing of a Memorandum of Understanding between the two provincial environment agencies of Cao Bang and Guangxi to strengthen biodiversity conservation collaboration in transboundary areas.



# The Origin of the Project



## Project Goal

The project aims to restore and maintain the ecological integrity of the Sino–Viet Nam Karst TBL and gibbon habitats. This will be achieved through an improved management of corridors and core zones for biodiversity conservation and development of local sustainable livelihoods.



## Major Activities of the Project



# 1

## Biodiversity Landscape and Corridor Management

2008

### Cao Bang (Viet Nam)-Guangxi (China) Transboundary Biodiversity Corridor Concept

The Cao Bang (Viet Nam)–Guangxi (China) Transboundary Biodiversity Corridor project concept was proposed in 2008 by the two provincial governments. The concept was based on a socioeconomic, biodiversity, and policy and legal framework survey conducted in the Sino–Viet Nam transboundary areas. The two provincial governments also established the nature reserves in the main habitat of the Cao Vit Gibbon. The establishment of the nature reserves aimed to restore and maintain the integrity of transboundary karst forest and gibbon habitat, contributing to biodiversity conservation and promoting the sustainable use of natural resources.



### Establishment of Guangxi Bangliang Gibbon Nature Reserve

The Guangxi's Bangliang Gibbon Nature Reserve was established in 2009 and was upgraded to a national nature reserve in 2013. It borders Viet Nam's Trung Khanh Gibbon Nature Reserve, and covers an area of 6,530 hectares (ha). The nature reserve protects the Cao Vit Gibbon and its habitat, the northern tropical karst mountain monsoon forest. There are 52 mammal species in the reserve, 5 of which are primates. There are 212 bird species, 42 reptiles, and 16 amphibians. Out of 1,059 plant species, 102 are orchids.

#### Socioeconomic Survey of the Bangliang Forest Area

In 2008, the socioeconomic survey and natural resource assessment was conducted in the communities surrounding the Bangliang forest region. The participatory rural appraisal (PRA) method was adopted in five villages for the poverty survey and it outlined possible opportunities for future development.

#### Biodiversity Survey and Feasibility Study for Bangliang Gibbon Nature Reserve

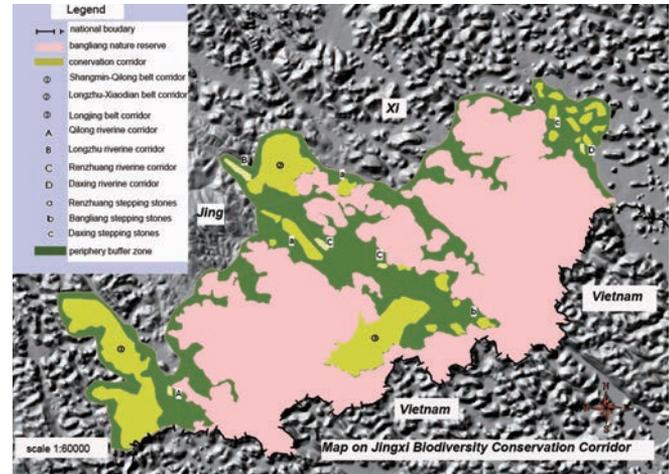
In 2008, cooperating with experts from different fields, the project team carried out the biodiversity survey in the potential corridor areas, and recorded the Cao Vit Gibbon behavior and activity status.

The survey reports resulted in the establishment of the Bangliang Nature Reserve.

2010  
~  
2012

## The Corridor Plan for Phase I

During 2010–2012, the 10 corridors plan connected two fragmented areas of the Bangliang Gibbon Nature Reserve, which was part of the Sino-Viet Nam transboundary corridor, enhancing the connectivity of gibbon habitats. The corridor covered three townships of Jingxi city and connected with southeast Viet Nam, spanning a total area of 7,500 ha.



Guangxi Biodiversity Conservation Corridor Plan for Phase I

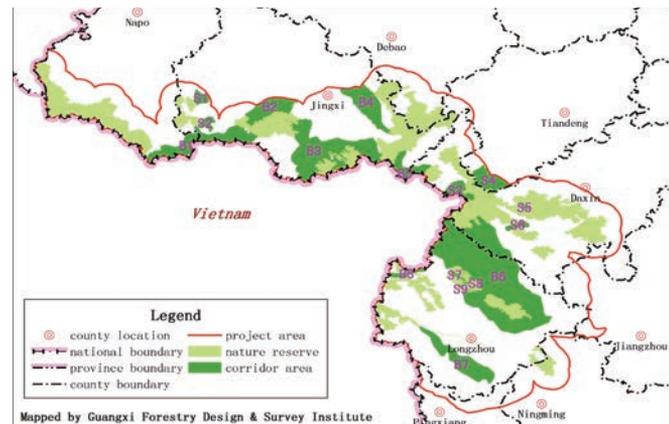
2015  
~  
2017

## Biodiversity Survey of Potential Area of Corridors

A 2015 survey assessed the variety, distribution, and habitat conditions for flora and fauna in the potential corridor areas in four counties of Guangxi. It also updated the distribution data of flagship species, such as the Cao Vit Gibbon and provided solid technical foundation for corridor design.

## The Corridor Plan for Phase II

Since 2015, the corridor plan has expanded along the Sino–Viet Nam borders. The latest plan has eight corridors and nine stepping-stone corridors to connect nine protection zones in four counties of Guangxi province, with a total area of 157,712 ha. The corridor construction action plan and safeguard measure are under government review.



Guangxi Biodiversity Conservation Corridor Plan for Phase II

# 2

## Testing of Community Based Conservation Practices

The project carried out the corridor restoration and community livelihood development in the corridor areas to expand and connect the fragmented habitat of the Cao Vit Gibbon. The pilot activities improved ecosystem integrity and the living condition of surrounding communities.

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### Restoration in the Corridor Areas

The limited area and low quality of habitat had been the main constraints for gibbon population growth. The project demonstrated natural and human-aided habitat restoration methods in critical areas outside of the gibbon nature reserve for ecosystem connectivity improvements.



#### Corridor Restoration Achievements

A total of 960 bishop woods and ficus trees were planted on 1.67 ha of land. A community-managed nursery was established where seedlings for restoration—including 1,300 Nepali hog plums and 3,700 bishop woods—were grown.



#### Karst Habitat Restoration Guideline

A 2017 research reviewed the gibbon habitat restoration activities since 2012, summarized the best technical methods and practices, and provided the technical guideline for the future restoration.

The Village Development Fund (VDF) for alternative livelihood development was carried out in key areas of the corridors. The fund supported eco-planting and farming with indigenous species, and reduced the agricultural activities' impact on the surrounding natural environment.



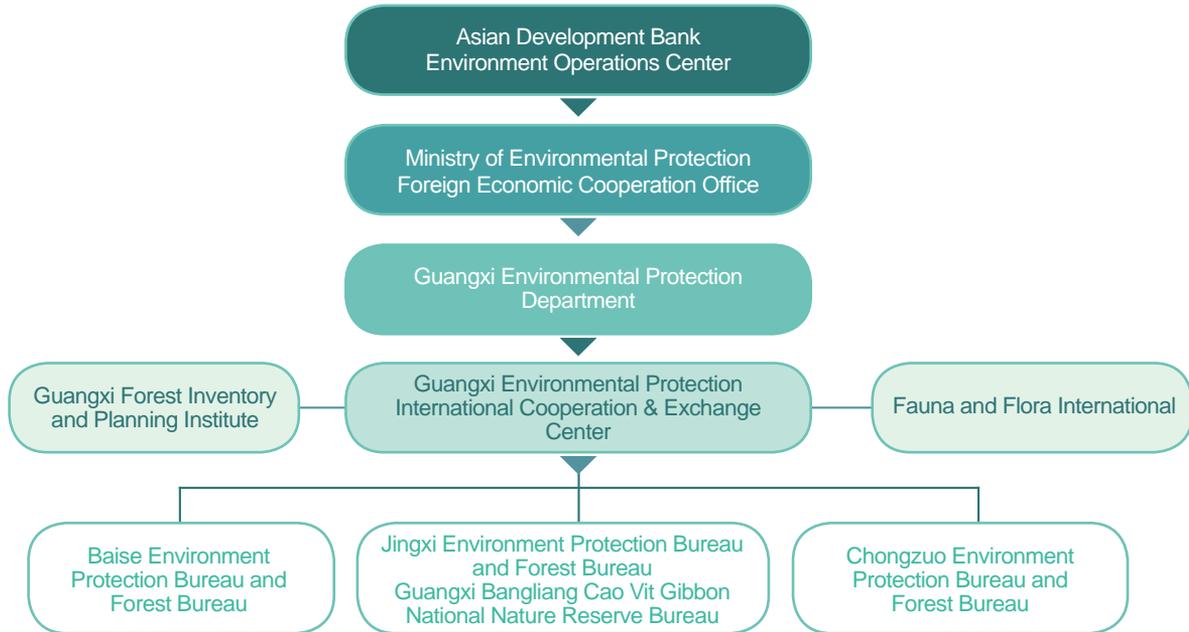
Since 2011, the VDF has invested US\$74,000 as seed capital, while villagers from 340 households in five villages has invested US\$31,000 in counterpart funding, benefiting more than 1,400 people.

# 3

## Provincial Support Unit Capacity Building

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### Project Management Structure



Participated in regional and domestic exchanges and knowledge sharing events, the implementation agencies in different levels improved their capacity and understanding of biodiversity conservation.

### Past Activities



Participated in the GMS Environment Ministers Meeting (EMM), getting the regional protection trend and cooperation direction.

Participated in Regional Knowledge Sharing Event, learned the latest research results in the field, and shared the project experiences of Guangxi pilot.

Visited Yunnan pilot project, and exchanged project management experiences.



Organized field study to Guangxi project, listening to the views of all parties.



Participated in GMS Working Group Meetings, and involved in various topic discussions, such as strategic environment assessment, land use, climate change, and natural capital for sustainable future.



# 4 Transboundary Cooperation on Biodiversity Conservation

## Sino-Viet Nam Cooperation Memorandum

Guangxi and Cao Bang provincial authorities signed an MOU in May 2015 to collaborate on biodiversity conservation in transboundary areas. Both parties agreed on common attention and commitment to protect the unique biodiversity of the karst landscape in the Sino-Viet Nam border. The MOU established regular exchanges and a long-term cooperative mechanism.



## Field study in Cao Bang Nature Reserve

The GEPD organized a field study in the Cao Vit Gibbon nature reserve in the Trung Khanh communes in Cao Bang Province in May 2015. Both parties shared experiences on nature reserve management.



## Regular Meeting at Boundary Marker

The nature reserve management officers in Jingxi and Cao Bang established a regular meeting mechanism at the Sino-Viet Nam boundary marker to exchange the latest information of protection on each side.



## Sino-Viet Nam Exchange Meeting

Sino-Viet Nam Exchange Meeting was held in Nanning, Guangxi in September 2014. Two parties shared and exchanged the experiences on biodiversity conservation approaches, corridor key areas identification and reached a consent on the joint management of transboundary corridors. The meeting promoted the collaboration of Sino-Viet Nam transboundary corridor management.



## Joint Field Survey

In coordination with Vietnamese partners, the Guangxi project team conducted three joint surveys of the Cao Vit Gibbon (2007, 2012, and 2016), and established the Strategic Action Plan for Cross-Border Protection of Cao Vit Gibbons (2016–2020).



## Project Significance and Outlook

The Guangxi pilot project has contributed to the establishment of the Guangxi Bangliang Gibbon Nature Reserve, corridor land use plan, corridor construction, and biodiversity data updating. The project has improved the ecological connectivity of isolated habitats. It also explored the community conservation and livelihood development approach, providing valuable lessons and good samples to the transboundary biodiversity corridor management in China and even to the subregion.

Guangxi and three neighboring provinces of Viet Nam (Cao Bang, Lang Son, and Quang Ninh) have a long history of environmental cooperation. The project has promoted active dialogue between two parties in transboundary biodiversity conservation, provided important information exchange and communication platform, and established an effective communication mechanism in transboundary environmental protection.

Guangxi is not only an important gateway to Greater Mekong Subregion countries, but also an important area for transboundary biodiversity habitats in southwest China. Both Guangxi province and neighboring Viet Nam provinces are facing challenges and opportunities for economic development and green transformation. Under the "One Belt and One Road" strategy, Guangxi will further take unique advantage of its geographic location to boost the national environmental cooperation. Guangxi will do so by facilitating provincial communication, building the multilevel and wide-ranging environmental cooperation frame and community in the region, and opening a new cooperation model. Guangxi will contribute to the green Silk Road with its good ecosystem and rich biodiversity.

