

## Establishing a Framework for Sustainable Management of Mangroves Based on Government Policy at the Fangchenggang Demonstration Site

### Project Summary

Activities have been grouped in three components focussed on: the participation of the private sector in addressing environmental issues; managing resources OF the reserve in conformity with the national sustainable development strategy; and maintaining sound environmental practices through strengthened scientific research and education.

### Issues and Challenges

In the past, the main threats to mangroves in Fangchenggang have included land reclamation for mariculture and industry, including port development; gleaning of benthic invertebrates, including clams and sipunculid worms; and grazing animals in mangroves. These problems arose due to the poverty of local communities; inefficient management; and low awareness of both the public and government of the economic significance of mangroves. Ultimately this resulted in the neglect of mangrove resources in both national and local sustainable development planning. Through implementation of the UNEP/GEF project, the significance of mangroves has been recognised nationally through the establishment of a national level reserve and through inclusion of mangrove values in provincial and municipal sustainable development plans.



Beilun Estuary National level Marine Nature Reserve

## How to Maintain Fangchenggang Urban Mangroves during Rapid Local Economic Expansion

Urban mangroves along the eastern coastline of Fangchenggang are not within the Beilun Estuary reserve, and some ten years ago it was planned that they would be reclaimed for industry associated with port development. This plan was changed and revised mangrove regulations enforced, and the urban mangroves were then entrusted to, and managed by, Xindi Company, which was consequently compensated with land for conserving the mangroves. Xindi Company has undertaken a number of activities within the project including: preparation of plans for rational use of the area of urban mangroves as an educational park; replanting of mangrove trees in the secondary growth area of urban mangroves; and eco-farming within the urban mangroves.

Following completion of the planning and economic feasibility analysis a year ago, Xindi Company has applied for approval to construct a mangrove ecological park within the urban mangroves. The feasibility plan has already been examined and evaluated by an official meeting of the Fangchenggang local government that has agreed to enlarge the mangrove area managed by Xindi Company from 200ha to 333ha. The planned urban mangrove park, if established, would be the first Urban Mangrove Park globally.



Sign to Beilun Estuary National Level Marine Nature Reserve

The Fangchenggang demonstration site launched its local mangrove website ([www.mangrove.org.cn](http://www.mangrove.org.cn)) in September 2004, and in 2006 a photograph from the

Fanchenggang mangrove demonstration site was used on a national postage stamp in a series of threatened and endangered species and habitats.

## Financial Approaches and Associated Proposals to Promote FCG Mangrove Conservation, Restoration and Rational Use

Financial sustainability is crucial to conserving and sustainably using mangroves. Before the UNEP/GEF project commenced in Fangchenggang, financial support for the Beilun Estuary Marine Nature Reserve was far below that required for successful management. Through the implementation of the South China Sea Project, the reserve has attracted greater attention from government at all levels by conducting public education with technical support from the Guangxi Mangrove Research Centre. Following implementation of the project, the reserve has received funds of about 3.6 million Yuan from the Fangchenggang Local Government and the Guangxi Provincial Government.



The Mangrove Education Centre

The construction of the education centre in the Beilun Estuary Marine Nature Reserve has been completed and mangrove specimens are currently on display in the main display hall.

In 2007, a fund of 28.6 million Yuan for wetland conservation and construction from both the central Government and Guangxi Provincial Government was allocated to the reserve. In total the money allocated to the reserve following the GEF project was seventeen times greater than the funds the reserve received for the fifteen years before the project.

In January 2008, the reserve was designated as a Ramsar Site, which will further enhance the prospects for sustainability of the reserve. Public awareness regarding the importance of mangroves has been enhanced through replanting campaigns, the production of newsletters, and fostering the development of a "Mangrove friendly association" at the community level.



Removing marine litter from Fangchenggang mangroves

### Planning and Initial Actions to Foster Further Regional Cooperation on Mangrove and Coastal Ecological Research and Education

Financial support from government is vital to ensure that non-profit research facilities such as the Guangxi Mangrove Research Centre (GMRC) can carry out research and regular monitoring on mangroves. The Guangxi Mangrove Research Centre was not among the key institutes supported by local government in the past, but its role was re-evaluated following implementation of the GEF project. The centre has played a key role in, and contributed to, raising awareness of governments regarding the significance and economic importance of mangroves and other coastal wetland systems.

In 2007, the Guangxi Key Lab for Mangrove conservation was approved within the GMRC to: strengthen research into mangroves for improving management of marine ecosystems; and training experts and improving expertise. In Beihai, the establishment of the Guangxi Marine Environment, Resource and Economics School was approved by the provincial government and 100 students will be enrolled

from September 2008. A Plan is being prepared for implementation after the UNEP/GEF project period.



The China Mangrove Wetland Forum 2007

The Guangxi Mangrove Research Centre successfully convened and organised the China Mangrove Wetland Forum in Beihai in 2007 and is preparing plans for exchange between young mangrove researchers including sponsoring two or three young mangrove researchers in the region to come to China and work in the centre and the Fangchenggang Site for two or three months.

### Rationale for the Approaches Taken

The rapidly expanding economy in China has caused more and more serious environmental problems, while at the same time the Chinese government has realised that natural resources and the environment are important factors that can influence economic sustainability of the nation. To address environmental issues, the Chinese government is striving to explore new approaches to establish more effective environmental management systems, to create appropriate management mechanisms, and to improve scientific research and education.

Ideally natural resources should be used as the basis for the national sustainable development strategy but the ideas and views of local officials, experts, and stakeholders in the private sector and local communities concerning how these resources are to be used and managed need to be taken into account by the government in decision-making.

Scientific issues need to be considered together with national conditions, administrative structure, and cultural characteristics in order to ensure acceptability of the proposals.



Mangrove nursery for *Heritiera*

### Potential for Replication

Regional cooperation is appreciated and supported by the Chinese government both at central and provincial government levels to improve conservation, restoration and rational use of coastal wetlands, and to boost education. We believe that our good practice in managing coastal ecosystems can be shared with other UNEP/GEF project implementing parties to address similar environmental issues, even where diverse political systems and cultures exist.

### Contact Details

Guangxi Mangrove Research Center  
92 Chang Qing Dong Lu  
Beihai 536000  
Guangxi, China  
Email: [mangrovecenter@sina.com](mailto:mangrovecenter@sina.com)  
Tel: 0086-779-2055294  
Fax: 0086-779-2065609



广西红树林研究中心  
Guangxi Mangrove Research Center

