

Co-development of biodiversity, community and livelihood in Xiaohai, Hainan



Mangroves and wetlands in Xiaohai

Covering an area of fifty square kilometers, Xiaohai is considered to be one of the biggest lagoons in southeast of China. With diverse ecosystems such as forests, rivers, wetlands and mangroves, it results in a rich biodiversity and an optimum natural fishery area. It's also called by the local people as “treasure bowl”, which has fed over 150,000 people, half population of the Xiaohai inhabitants, for the past thirty years. As a major fish resource of Xiaohai lagoon, a precious crab called Hele-crab is produced here.



Aerial photograph of Xiaohai



Mangroves besides pond in Xiaohai

However, the ecosystem has not received enough protection from the local government and communities. The region has not established any reserve or protection system. Meanwhile, for the past twenty years, about 800 hectares of high-densities prawn aquaculture have been seriously contaminating the water resources of

Xiaohai area. As a result, the water quality in some area has even been deteriorated to IV level, which caused lots of aquatic wildlife resource endangered. Consequently, it made fishery and aquaculture hardly profitable in some area.



Over fishing in Xiaohai



Wastewater and sludge discharged by shrimp farming pond

In order to build a more sustainable relationship between the ecosystem and livelihoods of Xiaohai area, Hainan Hele-crab Conservation Center(HHCC), a local environmental group, has been implementing a project called “Co-development of biodiversity, community and livelihoods in Xiaohai, Hainan”.

Aim to identify its value and threats, to explore its protection plan, and to raise the government and public awareness to the significance and urgency of protecting Xiaohai's natural environment, a project has carried out a survey of recent (through fieldwork) and historical (through a literature review) change to Xiaohai's ecology and livelihoods. The project has collaborated with local government, local communities, experts from environmental organizations and colleges such as Hainan Birding Watching Society, Ocean and Fishery Department of Hainan University, and Hainan Academy of Ocean and Fishery Science,



Field survey of Xiaohai ecology



Thousands of egrets rest in a small island, northeast of Xiaohai

Also, the project had carried out a survey of livelihoods in Xiaohai, to evaluate their income level and environmental sustainability. HHCC even produced a manual on eco-friendly hele-crab farming, to explore and promote sustainable livelihoods.



Help cooperative farmer build crab escape-proof facilities in promotion of Hele-crab eco-farming

As a result, the local government has documented a formal declare to establish a Xiaohai wetland park or nature reserve before the year of 2019. A proposal of a series of projects, including ecological protection plan of Xiaohai, the promotion of eco-farming hele-crab and eco-tourism has been written into the latest released government development plan of Xiaohai area. During the project, four communities abandon polluting prawn farming, and try to use eco-friendly hele-crab farming as a more sustainable livelihood.



Harvest of Hele-crab eco-farming



Harvest of Hele-crab eco-farming

“After all, we don’t want to pass a broken and polluted Xiaohai which has fed us for thirty years to our next generation.” Said by Chuan Chen, a farmer in Wuchang who has adopted the eco-friendly hele-crab farming during the project.

“Next step, we are planning to explore and promote a co-developing and sustainable aquaculture system for mangroves restoration and eco-friendly hele-crab farming instead of the destructive and polluting shrimp farming, meanwhile, the local government and communities are looking forward to cooperate with us in sustainable livelihood promotion,” said by Xunxiang Gu, the head of the HHCC, “only if we take care of the delicate relationship between the environment and communities/livelihoods, can we deserve the generosity we call “treasure bowl” given by the miraculous nature Xiaohai lagoon.”

