



## Good Community Fish Refuges Management Practices for Food Security in Four Provinces

### Background

More than 30 percent of Cambodia's land area is covered by wetlands which support one of the most intensive freshwater fisheries in the world. The sector contributes 12 percent of the GDP, ahead of rice culture (10 percent), with more than 6 000 000 people benefitting directly or indirectly from the fisheries sector. Fish is highly nutritious and contains iron, calcium, Vitamin A and essential fatty acids. In Cambodia, fish account for 80 percent of the animal protein in the daily diet.

Hence, the fisheries sector plays an essential role in Cambodia's food supply and a well working fisheries sector is vital for enhanced food security and improved livelihoods, but requires and sustainable management of natural resources. In 2013, the annual catch and production of fish amounted to 682 000 tons, of which 160 000 tons from rice field fisheries, and the demand for fish is expected to increase further due to population growth and rising incomes.

This will lead to increased pressure on existing fish resources already threatened by overfishing, lost fish habitats due to losses of wetlands, hydropower dam constructions, intensification of rice farming and climate change. Against this background, the Royal Government of Cambodia has recognized the importance of Community

Fish Refuges (CFRs) as a sustainable alternative to wild catch fisheries and to aquaculture.

CFRs take advantage of flooded rice fields. During the monsoon season, flood water from the Tonle Sap Lake and the Mekong River transform up to 2 000 000 hectares of rice fields into fishing grounds. When the dry season arrives and the water levels decrease, the fish search for deeper areas to breed until the next monsoon season. Fish refuges, which become disconnected from other water bodies during the dry season, can provide sanctuaries for the fish to breed until the next rainy season. When the rains arrive, the fish migrate again from the ponds into the rice fields and become accessible for local fishermen.



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the management of eight existing CFRs in each of the provinces of Kampong Thom, Oddar Meanchey, Preah Viehar and Siem Reap. MAFF and FiA will provide support with facilities, equipment, as well as 50 000 fingerlings (fish larvae) for the CFRs.

### Project Outputs and Outcomes

The purpose of the intervention is to improve operating methods as well as monitoring and planning mechanisms by the CFRs, and thereby ensure efficient and sustainable fish catches. FiA will conduct practical training and workshops in its fisheries cantonments with the help of FAO. Training beneficiaries include the fisheries cantonments staff of the four provinces, 16 commune councillors from local authorities, and 560 fish refuge community members throughout the 32 selected CFRs.

To enhance the management of the CFRs, a practical plan will be established for the selected communities and local authorities will be capacitated to implement it.

The training materials and manuals used in the trainings are developed by FAO with support of FiA and Worldfish, and draw from the lessons learnt an assessment of well working CFRs in Cambodia, and from the difficulties observed in the other, underperforming communities.

FiA will also provide fish larvae/fingerlings to the targeted CFRs to amplify the impact of the interventions.



There is however currently no proper system in place to effectively and sustainably manage the CFRs. The Fisheries Administration (FiA) of the Ministry of Agriculture, Forestry and Fisheries has requested FAO for technical assistance to improve the management of existing CFRs and help realize their full potential by expanding their technical capabilities, resources and management capacity, and strengthening the cooperation and networking with stakeholders outside the community.

### Stakeholders and Beneficiaries

From September 2014, FAO is implementing a project in close collaboration with FiA and WorldFish, a leading agency researching rice field fisheries in Cambodia. The project, entitled “Good community fish refuges management practices for food security in four provinces” is funded by FAO’s Technical Cooperation Programme.

FAO’s contribution, valued at USD 201 000, will focus on technical assistance and capacity building to improve



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