

# Flooded Forest Conservation in Boribor district of Kompong Chhnang province of Tonlesap region, Cambodia

Location: Baribour diostrict- Kompong Chhnang province-Cambodia

Duration: Jul 2006- November 2007

Implemented by: Development & Appropriate Technology (DATE)

Supported by

1. **THE RUFFORD SMALL GRANTS FOUNDATION**
2. Ministry of Environment (Cambodian Government)

## ORGANIZATION BACKGROUND

Development and Appropriate Technology (DATE) is a Cambodian NGO, established in 2000, to Cultivate and promote equitable and sustainable development in Cambodia, with an emphasis on appropriate technologies and environmental friendly. DATE is registered with the Ministry of Interior. Currently DATE has 36 staffs' members, including: Ms. Ly Leakhena, Administration, Financial Manager, holding Master Degree of Business Administration in Human Resource Management, Ms. Thol Srileak, accounting assistant, holding BBA (accounting), Mr. Chhon Sophoeun, deputy director (BFA) and Mr. San You, executive director of DATE , holding Mater Degree of Business administration.

## PROBLEMS STATEMENTS

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The flooded forest destruction in Cambodia is occurring at an alarming rate. The cause is not only human beings, but also by the unwanted floating water plant called “water hyacinth”. Millions of young seedlings from the flooded forest tree species are being smothered by the dense mats of water hyacinth and the fully grown trees are being destroyed for household cooking as fuelwood. On communication with the communities in the Tonlesap region, there was a request from the communities that something should be done to protect the alarming destruction of flooded forest as their livelihoods are directly connected to its health. The flooded forest is a critical habitat for the fisheries of Tonlesap which provide a very important source of protein and livelihood to fishers. Thus, DATe felt people's participation in the conservation is essential. The aim is to conserve the flooded forest from water hyacinth plants through education, skill transformation and awareness creation among the floating household communities living on Tonlesap.

The Project was funded by **THE RUFFORD SMALL GRANTS FOUNDATION** and Department of Environment- Ministry of Environment of Cambodia.

## OBJECTIVES

The approach taken to conserve the forest is by providing fuelwood saving cooking stoves. Other approaches to be taken:

- to build awareness amongst local communities on how their livelihood as fishers is being affected by destroying the flooded forest and also by the aquatic plant called water hyacinth. Providing awareness, education and information on conservation to the community so they will feel that Tonlesap lake is their means of livelihood and needs to be protected.
- to develop tree nurseries in the community and involve school children. Involving community and school children will give them a feeling of ownership and stewardship.
- to train the community members and school children to collect healthy seeds and seedlings and then plant in a plastic bags in nurseries.
- to develop brochures and handouts on conservation methods to protect the livelihoods of the Tonlesap people.

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## REALIZATION RESULTS

Program planned	Expected results	Actual results	Problem faced
A1-Participatory approach	two workshops on the livelihoods of Tonlesap lake communities involving 200 households.	<ul style="list-style-type: none"> <li>3 event, on participatory planning were conducted , there were 130 families were participated</li> </ul>	
A2-Discussion with school children about Tonlesap lake, flora and fauna, flooded forest destruction, and means of remedial approach	focus on three schools.	<ul style="list-style-type: none"> <li>There 1 primary schools in Kampong Our and 4 primary school in Chhnok Tru commune ( about 1500 students and 20 teachers) were participant in awareness program on the importance of natural resources conservation and development.</li> </ul>	<ul style="list-style-type: none"> <li>There is a needs on promotion or awareness materials such as posters, leaflet and sign board, ect, but the project has not enough fund to produce those materials.</li> </ul>
B1-Removing Water Hyacinth	100 household members will participate in removing the water hyacinth plants.	<ul style="list-style-type: none"> <li>There are 3 team with 30 families in each were established for conservation on flooded forest</li> <li>10 Hectares of areas where there are natural flooded seedling forest were saved, by removing Water Hyacinth out.</li> <li>About 200,000 natural flooded forest seedlings were saved from Water Hyacinth impact.</li> </ul>	<ul style="list-style-type: none"> <li>Water Hyacinth regularly comes back flooded season. We have to move every year until 3 years, then the seedling become bigger.</li> </ul>
B2-Provide training	Training on natural resource conservation, nursery development and handicrafts	<ul style="list-style-type: none"> <li>3 events the importance of natural resources conservation and development were conducted to 180 families.</li> <li>3 events, on cooking demonstration by using Improved wood stove</li> <li>2 events on establishment of flooded forest-rangers to conserve 120 hectares of community flooded forest.</li> </ul>	<ul style="list-style-type: none"> <li>There is no training on water Hyacinth handicraft because there is no market potential (investigated done by project and others NGOs).</li> <li>Project duration is short and the fund is limited, then</li> </ul>

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		<ul style="list-style-type: none"> <li>• 1 event on project reviewing was conducted</li> </ul>	<p>we could not provide enough capacity, equipment and others supporting to ranger team for longer times (3-5 years).</p>
C1-Create 2 flooded forest tree nurseries	one in the community and one in the school area.	<ul style="list-style-type: none"> <li>• There is 1 nursery was established at Tonlesap community resource Center and 1 another at office of provincial environment at Tonlesap. About 6000 tree seedling was produced and shifting from natural flooded forest.</li> <li>• 1 ordian event was conducted to community flooded forest by Buddhism monk (Cambodian belief in conservation of forest).</li> </ul>	<ul style="list-style-type: none"> <li>• There is not enough space at school for setting up nursery.</li> <li>• 70 % collected from natural forest were not germinated because of not quality is bad.</li> </ul>
C2- Plant the trees involving both the community and the school children	There will be 4,000 plants of flooded forest will be planted	<ul style="list-style-type: none"> <li>• 5000 of seedling were transplanted to areas where forest is destructed</li> </ul>	<ul style="list-style-type: none"> <li>• Some of the seedling died because not enough watering and destroyed by mouse and insect.</li> <li>• Season for shifting the seedling is very short.</li> </ul>
C3- Prepare hand book on the seeds, seedling collection, and plantation.	hand book on the seeds, seedling collection, and plantation will be produced	<ul style="list-style-type: none"> <li>• 10 small sign board regarding conversation (0.60cm*120cm) were produced and installed on the trees.</li> <li>• 2 medium sign boards( 1.5 m* 2m) regarding project and conversation were produced and installed</li> </ul>	<ul style="list-style-type: none"> <li>• Hand books were not produced because community difficult to read(education is very low).</li> </ul>

## IMPACTS

- Increasing of flooded forest within 120 Hectares

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- Increasing of fisheries resources (kinds and quantity) during flooded season
- Increasing of monkeys, snakes and births
- Increasing of non-timber forest products (NTFP)
- Community gets better understanding and more participants in natural resources conservation
- There is flooded forest management by group of community

## CONCLUSION&RECOMMENDATION

- The increasing of natural resources (forest products, fisheries, animal and births) is a positive indicator. However the project still not sufficient on capacity yet in term of sustainability for the future because duration is limited.
- Water Hyacinth regularly come back during flooded season, so removing water Hyacinth have to be done every year until the forest become big and dense.
- 70% of seeds were collected from forest are not germinate because of quality is bad , so collector have learn more about the quality
- Strengthen capacity of the ranger team and community is needed at least for 3-5 years.
- Awareness should be conducted through out the community of Tonesap and others who are involving in using the Tonlesap resources.
- The nursery should be well managed such as watering, protecting mouse and insect.
- To shift Seedling from natural forest must be done in earlier or before Jun, this time the water level is still low and easy for community to shift.
- Floating Nursery costly, therefore if it is setting up at the river bank then it will be cheaper
- Location of r tree planting should agreed by Community and under their management

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- Planting tree should be done at beginning of raining season (April).
- Wtare Hyacinths handy craft is not done, but it is also alternative to make into composting ( organic fertilizer)

**BUDGEST EXPENSES IN DETAIL (attachment file)**

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## PHOTOS OF ACTIVITIES



Community removing Water Hyacinth at ToleSap



Environment officers and students – Plant trees at TonleSap



Community receiving Improved Stove from project



Natural seedling of flooded forest, saved after 1 year

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Cooking Demo at ToleSap (using traditional stove and ICS



Floating Tree nursery at TonleSap



Mss. Leakhena using improved Cookstove  
Save fuel up to 30 %

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Ordain event for flooded forest at TonleSap



Young generation planting trees at TonleSap



Sign board about natural resource conservation



The birds at TonleSap