INTENSIVE MONOCULTURE OF STRIPED CATFISH, (*Pangasianodon hypophthalmus*) IN THE MEKONG DELTA, VIETNAM

This project is the outcome of a group efforts to whom credit and technical responsibility goes. The development of the project is based on an assignment which was given to course participants and supervised by Dr. Abdel Rahman El Gamal as a part of "Fish Culture Development" Training course. This annual course is organized by the Egyptian International Centre for Agriculture - (EICA). Names of the team members, countries and their pictures are shown in the following slide

2011

Mr. Ong Art Kumprasert (Thailand).
Mr.MD.Mahmudun Nabi (Bangladesh)
Mr.D.S.K.Pitigala (Srilanka)

Mr.Natseba Ahab Jacques (Uganda)
Miss.Mai Tawfig Ahmed (Sudan).
Mrs.Han Mai Huong (Vietnam)
Dr.G.Venkata Raju (India)*

* Not in the picture

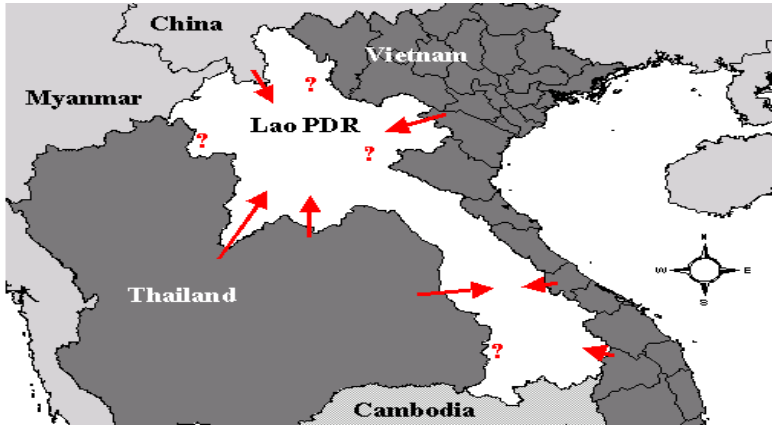
General Information

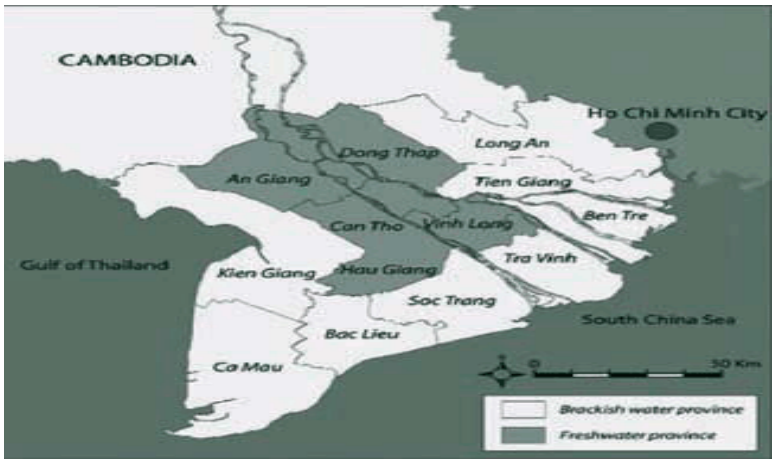
- **Title of project**: Intensive monoculture of striped catfish in in the Mekong Delta
- **Location**: Mekong Delta
- **Country**: Vietnam
- **Total cost**: 67 000 USD

CONTEXT AND JUSTIFICATION

The Mekong delta in the southern part of Vietnam is known as the region for catfish farming.

In the early phases of the culture of the catfish species, seed stocks were caught from Cambodian and Vietnamese waters, particularly in the confluence region of the Mekong, Bassac, and Tonle Sap rivers.





CONTEXT AND JUSTIFICATION

Catfish species has been traditionally farmed for few decades in small ponds with modest productivity. These species have been favored by local people and served as a daily food for many Vietnamese people who live in the southern part of Vietnam, especially in the Mekong Delta.

CONTEXT AND JUSTIFICATION

The intensification of catfish farming in earthen ponds with higher yields will help the population of Mekong Delta to enhance their annual incomes

General objectives

- Increase exports, earn foreign currency for the country.
- Help in the poverty reduction among the communities in the Mekong Delta.

Specific objectives

- Introduction of advanced farming systems
- Job creation
- Diversification of farming practices and potential higher yields would result in an expansion of the farming areas
- Securing sufficient supply of raw fish material for seafood processing plants as required for export

Biological characteristics of chosen fish

Common name: Striped Catfish or Tra Catfish

Scientific name: *(Pangasianodon hypophthalmus)*

Taxonomy

- **Class:** *Actinopterygii* (Ray-finned fishes)
- **Order:** *Siluriformes* (Catfish)
- **Family:** *Pangasiidae* (Shark catfishes)
- **Genus:** *Pangasianodon* (Mekong giant catfish)
- **Species:** *Pangasianodon hypophthalmus,* Sauvage, 1880

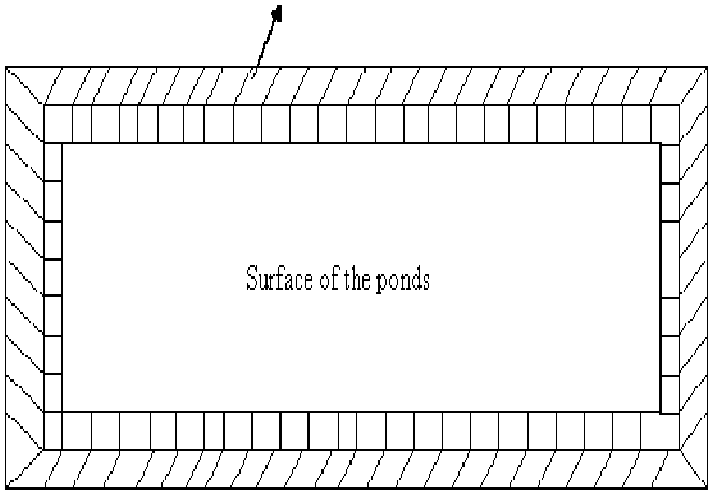
Striped bass is characterized by a laterally compressed body, a short dorsal with one or two spines, a well developed adipose, a long anal fin, strong pectoral spines, and two pairs of barbells (maxillary and mandibular).

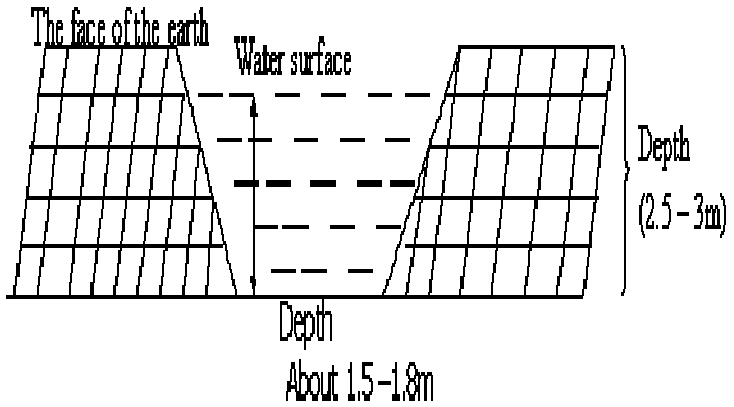
Pond preparing

A typical catfish pond normally has an area of 500 m^2 or larger, 1.5 –2-m water depth.

Pond outlets should be designed to allow easy drainage.

Prior to fish stocking, pond is completely drained and weeds are cleared from pond bottom and dikes.





Feeding regime

Practical feeding can follows any of the following scenarios:

Feeding with commercial pelleted feed will be the easiest protocol since feed is manufactured according to scientific formula.

Considering the traditional feeding practices carried out for Mekong catfish whereas feed is prepared by farmers themselves. Local materials used in traditional feed are easily obtained at low cost

The following table lists several feed formulas as adopted by local farmers.

Feed formulation

Material	Ratio (%) of ingredient of suggested formulas		
	Formula 1	Formula 2	Formula 3
Rice bran	60	50	60
Fresh trash fish	30		
Dry trash fish		15	
Imported fish meal			20
Maize meal		25	
Fresh vegetables	10	10	10
Soil bean cake			10
Vitamin C (mg/100 kg feed)	10 mg/100 kg	10 mg/100 kg	10 mg/100 kg
Estimated Protein content (%)	15 – 16	15 – 16	16 – 18

Activities and timing of project activities

Activity	Months of the year											
	1	2	3	4	5	6	7	8	9	10	11	12
Site preparation	X											
Clearing trees and grass	X											
Construction of fish pond	X											
Installation of system (aeration, inlet, outlet)	X	X										
Filling of ponds		X										
Purchasing equipment		X										
Intrants (fingerling, pilet)		X										
Stocking of fry		X					X					
Control of body weight				X		X			X		X	
Harvest							X					

Project characteristics

- Pond size: 1ha
- Stocking density: 10 fish/m^2
- Estimated survival rate: 80%
- Production per cycle: 40 ton/ha
- Production per year: 80 ton/ ha (2 cycles/year)
- Initial body weight: 10 g
- Final body weight: 500 g
- Estimated quantity of feed: 100 ton/cycle
- Feed conversion ratio (FCR): 2.5 : 1

Economic aspects of the project - Cost

	Amount/ quantity /cycle	Unit cost US$	Total cost US$		Amount US$
Investment				Amortization (yrs)	
Pond construction	10,000 m^2	2	20,000	20	1,000
Equipment			4,000	5	800
Land rental			2,000	5	400
				Total (A)	2,200
Operation cost					
Catfish (kg) – (10/m^2)	1,000 kg	5	5,000		5,000
Feed (ton)	100	300	30,000		30,000
Labor/month	6	800	4,800		4,800
Transport (round trip)	6	200	1,200		1,200
				Total (B)	41,000
			Total production cost (A+B)		**43,200**

Economic aspects of the project – Revenue& profit

Item	Quantity	Unit value US$	Amount US$
Fish sale			
Catfish (ton)	40	1,500	60,000
Total costs			43,200
Profit (US$/cycle)			16,800
Profit (US$/year)			33,600

In Summary

The farming of striped catfish -which is in its active phase of growth- plays a vital role in fishery sector in Vietnam as reflected in the expansion in farming areas and so the increase in the biomass produced in tonnage

Outlooks indicate that striped catfish will remain a key export commodity in Vietnam, contribute to improving the standards of living among the poor in rural communities of the Mekong Delta and will increasingly contribute to Vietnamese aquaculture as well as the economy

THANK YOU