

Presentation

Presentation from the 2009 World Water Week in Stockholm
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WORLD
in Stockholm,
August 16–22, 2009 **WATER**
WEEK

**Welcome
to**

**A brief presentation
On**

**Sustainable Solution for Safe Drinking Water in Saline
Affected Coastal Zone through Community
Based Integrated Water Resource Management**

**Md. Rafiqul Haque
Assistant Director Shushilan
BANGLADESH**

Uniqueness in context


- South-West coastal area
- Very adjacent to Sundarbans & Bay of Bengal
- Highly saline prone area
- Disaster prone area
- Extreme poverty

Location:


**Pathrakhola village, Shyamnagor
Upazila, Satkhira, Bangladesh**



Introduction/Problem Identification:

- Safe drinking water scarcity
 - High salinity in both surface and ground water
 - Existing fresh water sources are also saline contaminated due to gradual expansion of shrimp farming
 - Lack of low cost, affordable and sustainable water options
 - The main water facilities are Pond Sand Filter (PSF) or Tube wells (TW), but most of TWs are becoming saline
 - There are some reverse osmosis system / solar distillation have been explored but due to highly expensive, low flow rates etc have been believed unacceptable for use
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Introduction/Problem Identification:

- As experienced, in many cases, main option PSFs become out of order due to pond water contamination for intensive fish culture and lack of proper operation & maintenance
 - Around 40% people have access to safe drinking water
 - People are being forced to drink which are unpalatable & unsafe or they have to travel several kilometers to collect
 - Diarrheal diseases are common, & a main cause of infant mortality
 - Increased women & adolescent girls harassment and torture
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The Concept

Two part of the concept:

Part-1: Water selling for long term sustainability of PSF

- Strengthen PFS & Pond management Committee
- Develop local entrepreneur (Caretaker)
- Water Tariff
- Proper operation & maintenance
- Generate fund for major repair in future

Part-2: Community based Integrated pond & its vicinity management

- Natural fish cultivation
- No additional food supplement
- Plant trees which are less shady & drop fewer leaves
- Organic vegetable cultivation
- Higher economic value



Implementation Process:

- **Community mobilization**
 - Clustering
 - Rapport building
 - Situation analysis
 - problems identify & prioritization
 - Presentation & ignition
 - Swa-Unnayan committee formation
 - Develop action plan & implementation
- **Sharing with the community:**
 - The concept
 - Modality
 - Operation & maintenance of pond & PSF
 - The water tariff per user HH
 - Fund management

- **PSF management committee formation:**

- 5 members committee
- Minimum 2 female members
- Organize monthly meeting

- **Agreements:**

- Pond owner and PSF management Committee
- Caretaker and PSF management committee

- **Pond Re-excavation and PSF installation:**

- Cost sharing from the community
- Pond Re-excavation and PSF
- Constructed by community (purchase & monitoring)
- Total cost Tk 136477.00



- **Caretaker Selection:**

Selected by the management committee considering the following criteria:

- Caretaker must be from hardcore poor
- Must have a basic literacy to maintain records
- Willingness to do the job
- Physical fitness
- Acceptance of the respective community



- **Training:**

- Training for committee members on role & responsibilities, record keeping, leadership & management
- Training for caretaker on PSF operation & maintenance, book keeping skill and overall management of the PSF
- Training on integrated fish & vegetable cultivation at PSF pond and its vicinity for pond owner, caretaker, committee members and some users.

Water Tariff

Based on wealth ranking, community fixed water tariff are as below:

Sl#	Category of HH	#House Hold/Van	Monthly rate(Tk)	Total (Tk)
1	A- Category	0	10	00
2	B- Category	17	10	170
3	C- Category	81	05	405
4	D- Category	102	05	510
5	Outsiders	40 Van per month	10	400
Total		200 HHs		1485

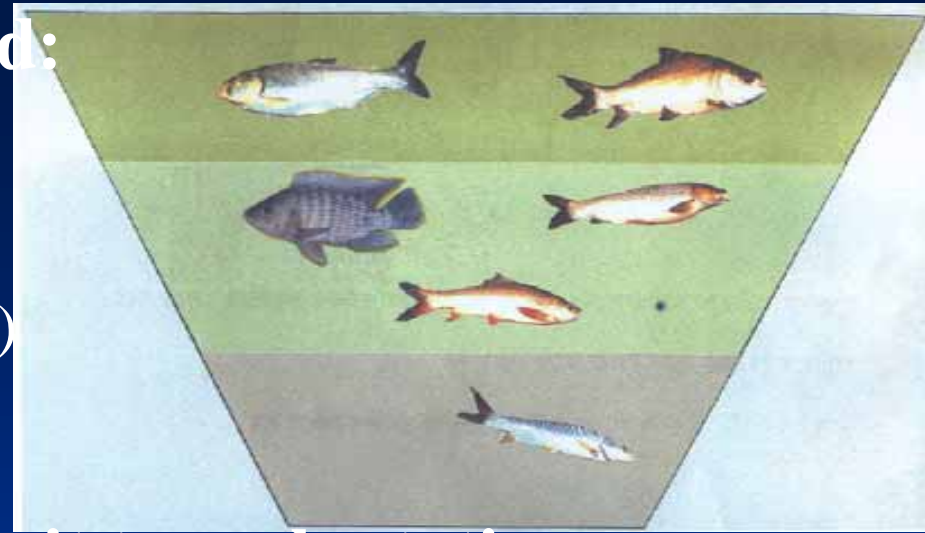
•Tariff collection and management:

- The caretaker collects water tariffs every month
- Maintained records in register
- Collected amount is handed over to management committee
- Committee pay Tk. 1000.00 to Caretaker as monthly salary
- The remaining amount has saved in a bank account for major repair in future



- **Fish cultivation in PSF Pond:**

- Per decimal 15 fish fry
- Naturally growing food
(Phytoplankton & Zooplankton)
- Production cost minimal



- **Vegetable cultivation and fruit tree plantation on the edge of PSF Pond:**

- Fruit trees which are less shady & drop fewer leaves
- Chemical fertilizer & pesticide have been totally avoided
- Organic vegetable cultivation
- Higher economic value



Major Achievements

- A sustainable mechanism has developed to ensure safe drinking water in the community
- Well maintained pond & PSF
- **Reduced medical expenditure for water borne diseases in the user community**

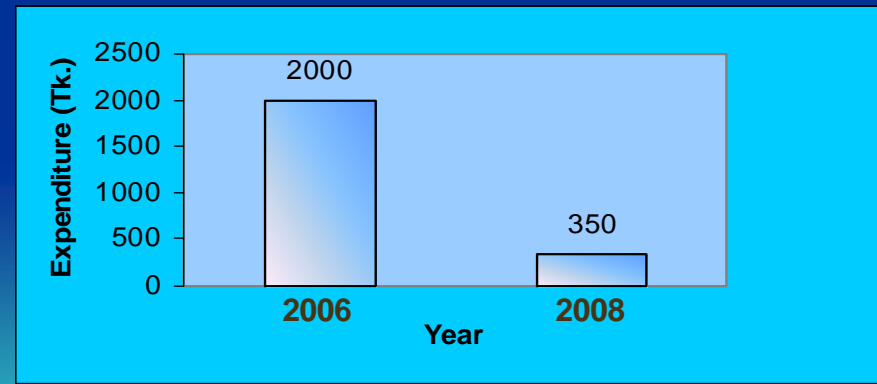


Fig: Yearly average HHs water borne diseases expenditure

- **Significantly increased students' attendance**

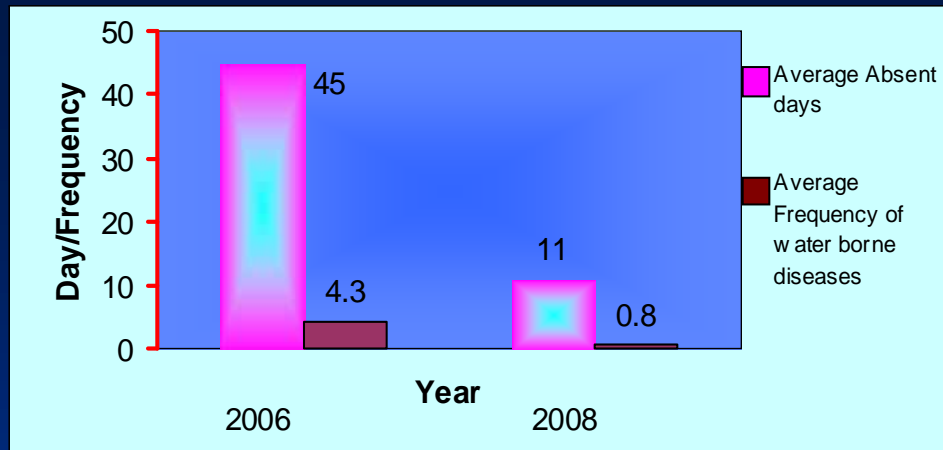


FIG: Year wise comparison of water borne diseases frequency and absent days

- **Remarkable changes has made in lives & livelihood of community peoples specially entrepreneur's livelihood**

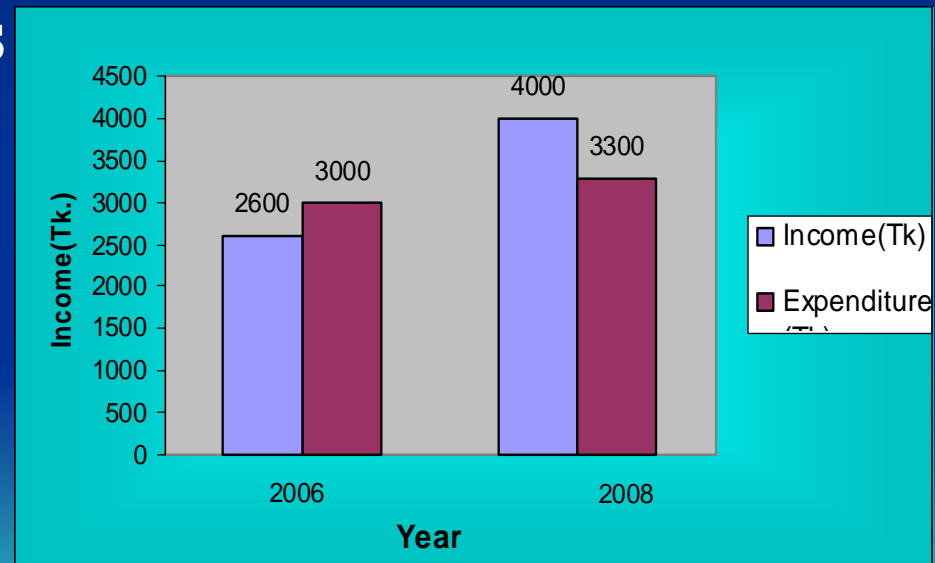


Fig: Monthly average Income-& Expenditure of caretaker

- **Fund generated for future operation and maintenance**
- **Income from pond & its vicinity**
 - Net income from vegetable –BDT 2800.00 (last year)
 - Net income from fish - BDT 16500.00
- **Around 90% user households are in practice of water safety plan:**
 - Source
 - Collection
 - Transportation
 - Preservation
 - Consumption
- **Drinking water collection time saved**
- **Reduced harassment of women & adolescent girl**





Thanks

