

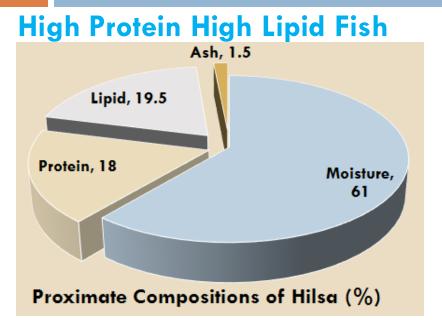
# HILSA FISHERIES MANAGEMENT IN BANGLADESH

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Hilsa (Ilish) as nutrient rich sea fish





Rich in PUFA & Omega-3 Fatty Acid

**Rich in Vitamin**: A & E

Rich in Minerals: P, Ca & Zn

- Highly palatable- taste, flavor and mouth feel awesome
- Problem-138 Pin-bones



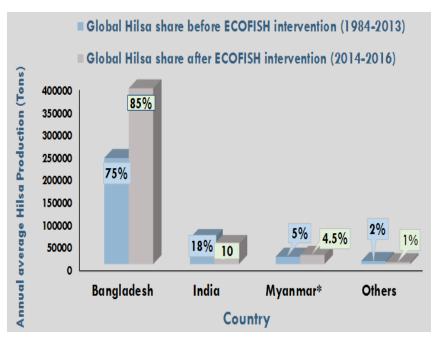




• ECOFISH Solution: Hilsa Soup & noodles Technology handed over to private entrepreneur

## Hilsa - A Flagship species

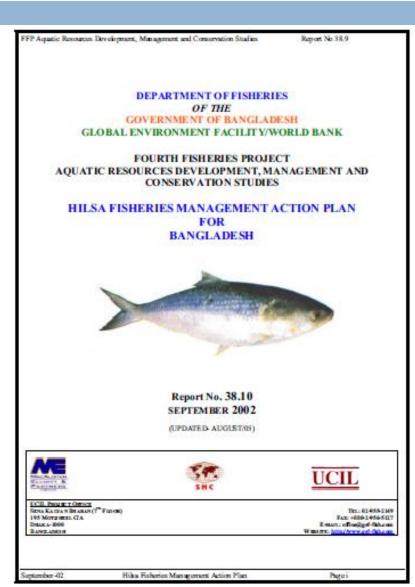




- National fish & GI product of BD
- Favorite fish to 260 million Bengalis
- 12% of Bangladesh's total fish catch
- 44% in marine catch (excluding inland)
- Annual production 517k tons (\$ 4 b)
- Non-consumptive value \$ 1.5 b
- **0.5 m** fishers directly & another **2.5 m** actors in the value chain
- Contribute to tropic cycle as it feeds at the lower trophic level

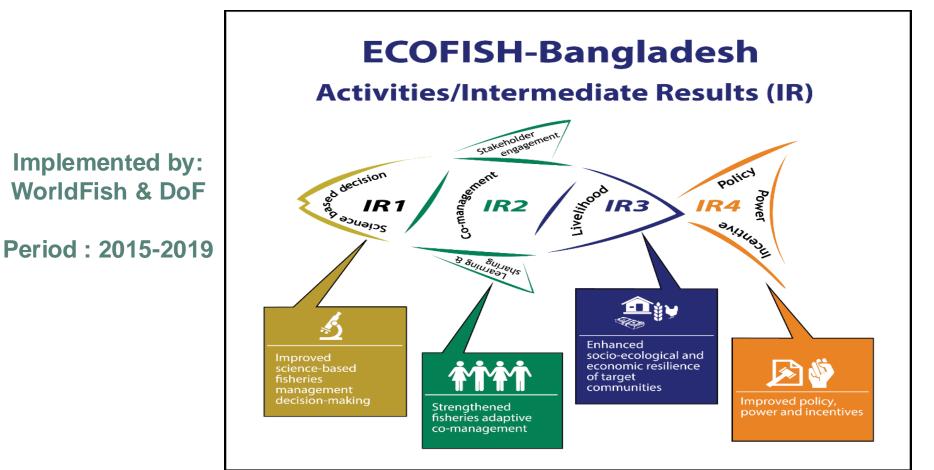
# **HFMAP** Developed to Revive Hilsa Fishery

- Fishery declined to <0.2 mt in 2003
- Govt. formulated HFMAP and started implementation in 2005
  - Five Hilsa Sanctuaries created (Mar-Apr complete fishing ban)
  - Juveniles conservation measures taken
  - Brood Hilsa protected in peak season
  - Illegal gears reduced
  - Livelihood supports provided during ban periods
  - Present incentives, @ 40 kg rice/FID for 4 months and AIGA



## **USAID's ECOFISH** – A commitment to increase Hilsa production

**Objective:** Improved resilience of the Meghna River ecosystem and communities reliant on coastal fisheries

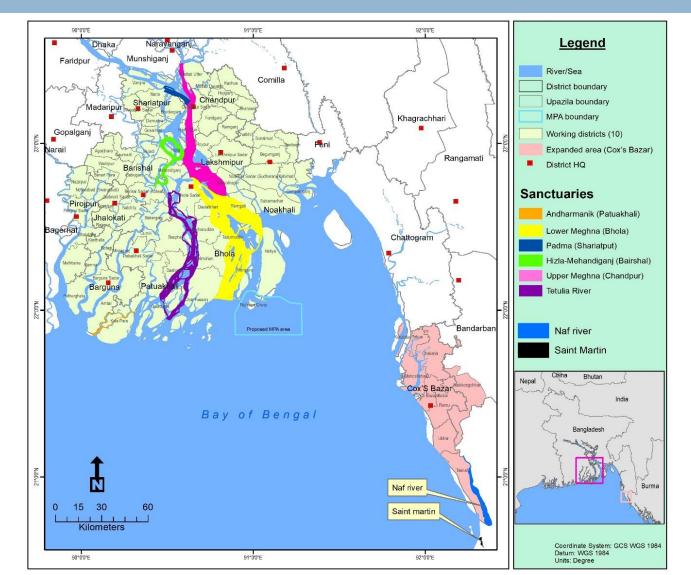


# **ECOFISH-Bangladesh: Working Areas**

#### Theater of Operations (ToO)

ECOFISH- working in:

- 136 villages
- 33 Upazila
- 13 Districts
- 3 Divisions



## **Science Outputs in decision making**

#### Hilsa catch and stock assessed & peak spawning season identified

- Hilsa stock assessed in 2016 as baseline
- 5 riverine & 2 marine area covered
  - 16,000 L-F data covering all size

**Results:** 

• Slightly overexploited:

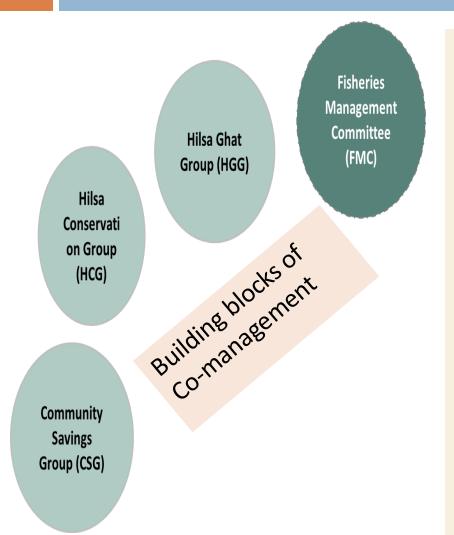
Acceptable E = 0.5 - 0.6

Current Level E= 0.67

- Estimated MSY = 5,26,000 t
- Endline re-assessment in Oct 2019
- Annual catch in 2018= 5,17,000 t

Length-Converted Catch Curve (for Z=4.19; M (at 27.2°C)=1.36; F=2.83; E=0.67) 11.0 h(Ndt) 8.0 5.0 2.0 1.0-1.00.0 2.0 3.0 Relative age (years-t0)

## Hilsa Co-management Committees: village to district levels



- 575 HCGs formed involving 19,500 members (30% women)
- 63 HGGs formed involving actor from fish landing stations
- 133 FMC formed involving all stakeholders
- 30 Union & 63 Ghat Committees
- 13 Upazila & 3 districts out of 5 formed
- 148 CSGs formed who saved US\$ 135k
- 400 trained community Fish Guards (CFGs) engaged
- Adaptive co-management implemented
- Ecosystem Approach to Fisheries Management (EAFM) initiated

#### Awareness & Enforcement: The Carrot & Stick Approach!





## Fish Guards (CFGs)- Participatory Surveillance

# 400 Community Fish Guards (CFGs) helping DoF in 6 hilsa sanctuaries

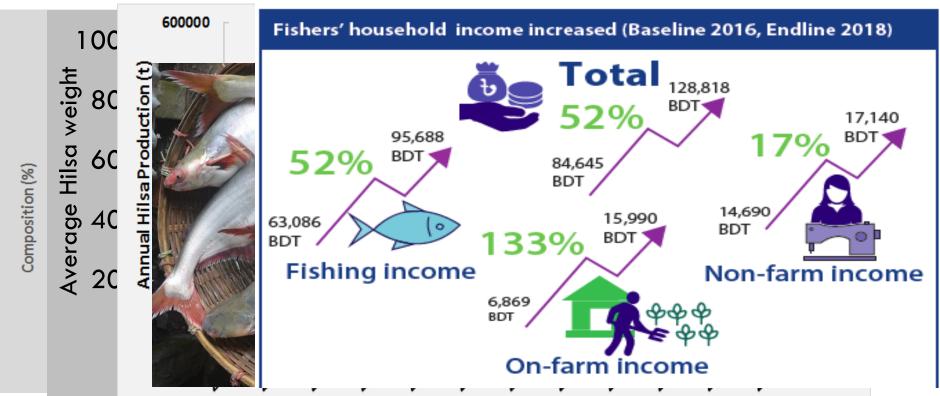






**Outcomes of ECOFISH Interventions** 

- Combined efforts of MoFL, DoF, WorldFish & other stakeholders
- Size group shifted from smaller to larger
  - Individual weight remarkably gained
    - Total Hilsa production increased at higher rate
      - Catfish abundance increased
        - Fishers' household income increased



# **ECOFISH Outcomes Supporting SDG 14a & 14b**



SDG 14 for BD : Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14a: Increase scientific knowledge, develop research capacity and transfer marine technology

- ECOFISH generated scientific information necessary for management, trained about 20k stakeholders to support management and through adaptive co-management, Hilsa production increased at sustainable level and biodiversity improved to achieve SDG 14 focusing on SDG 14a



14b: Provide access for small-scale artisanal fishers to marine resources and markets

- ECOFISH contributed to improve Hilsa production that contribute 51% of small-scale artisanal fishery, so, increase access to this sea fish supporting SDG 14b

# ECOFISH Outcomes Supporting SDG 1, 2, 3 & 5

SDG 1 : End poverty in all its forms everywhere

- as fishers' hhs income increased by 52%, so, this will reduce poverty significantly



**N-44:** 

SDG 2 : End hunger, achieve food security and improved nutrition and promote sustainable agriculture

- as annual Hilsa production increased by 11%, instead of previous 5%, this improving nutrition & food security



SDG 3 : Ensure healthy lives and promote well-being for all at all ages - improved production of high protein- high lipid and Omega-3 rich as well as PUFA rich fish ensuring healthy life



SDG 5 : Achieve gender equality and empower all women and girls

 as significantly improved access to finance for women through savings & ensured 30% women participation in project activities, certainly these empowered women

# **Regional Management Initiatives**



Participants in the Regional knowledge sharing workshop held in Dhaka

- Regional knowledge sharing workshop organized by WorldFish & IIED in Dhaka
- Synchronizing with BD, India implementing juvenile conservation activities
- Myanmar going to practice incentivebased management like BD



## USAID/ECOFISH-BD: Working together to feed a nation









