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Wetlands, Fish and Food Security

Learning from USAID's Co-Management Work in Bangladesh

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International Resources Group (IRG)

Partners in Bangladesh

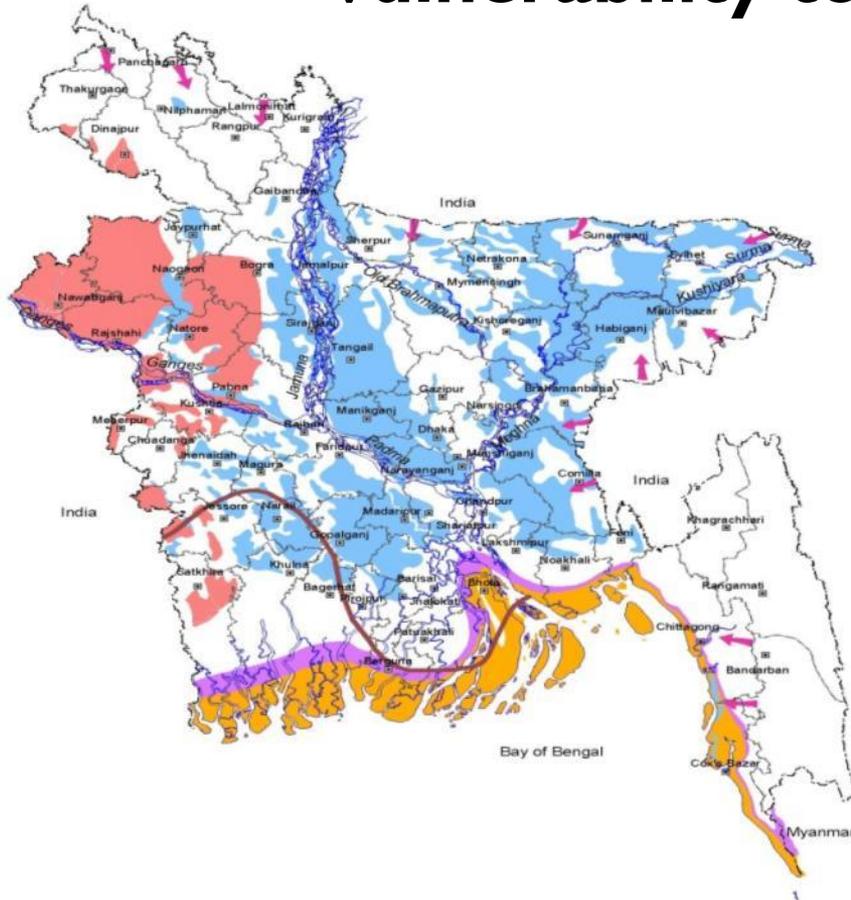


International Partners





Vulnerability to Natural Disaster



Legend

- International boundary
- District boundary
- Rivers
- Normal Flood
- Flash Flood
- Severe drought prone area
- Surge Height above 1 meter
- Surge Height less than 1 meter
- 1 ppt salinity Isoline

Bangladesh is the most vulnerable country in the World, IPCC, 2007.



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Wetland Environments





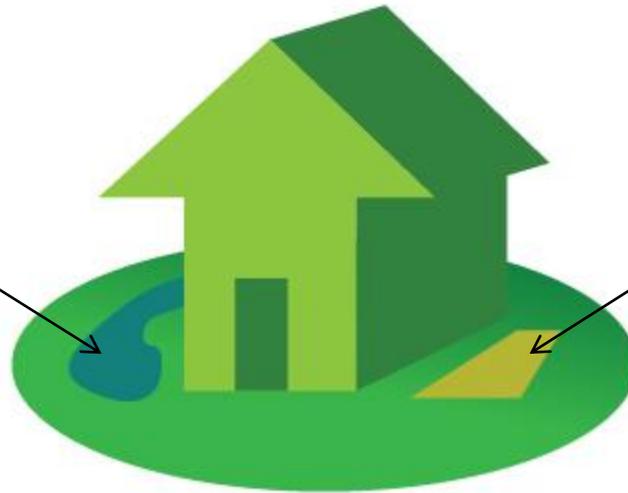
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Wetland Environments





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Households and Adjacent Resources



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Households and Surrounding Resources





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Households and Surrounding Resources





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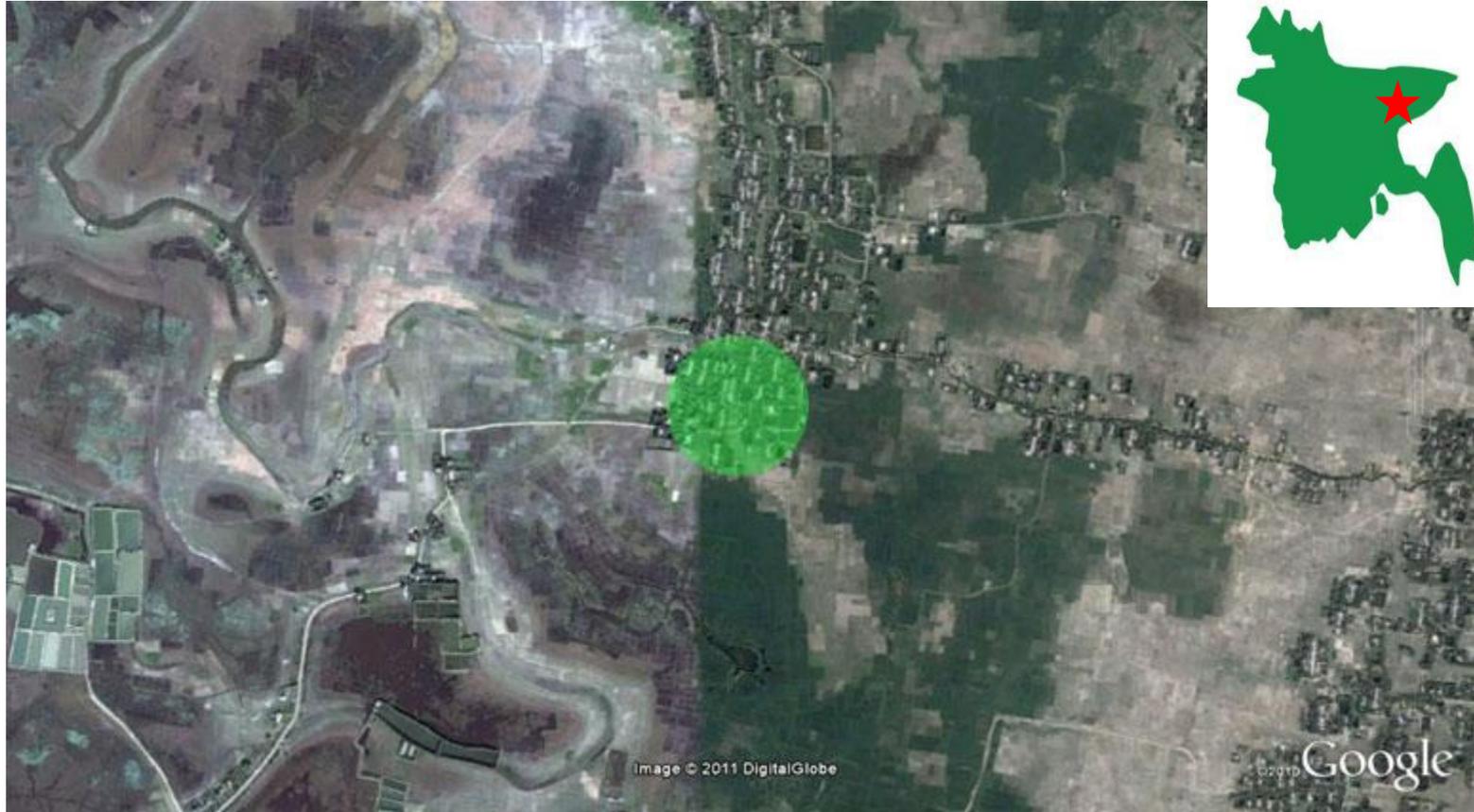
Households and Surrounding Resources





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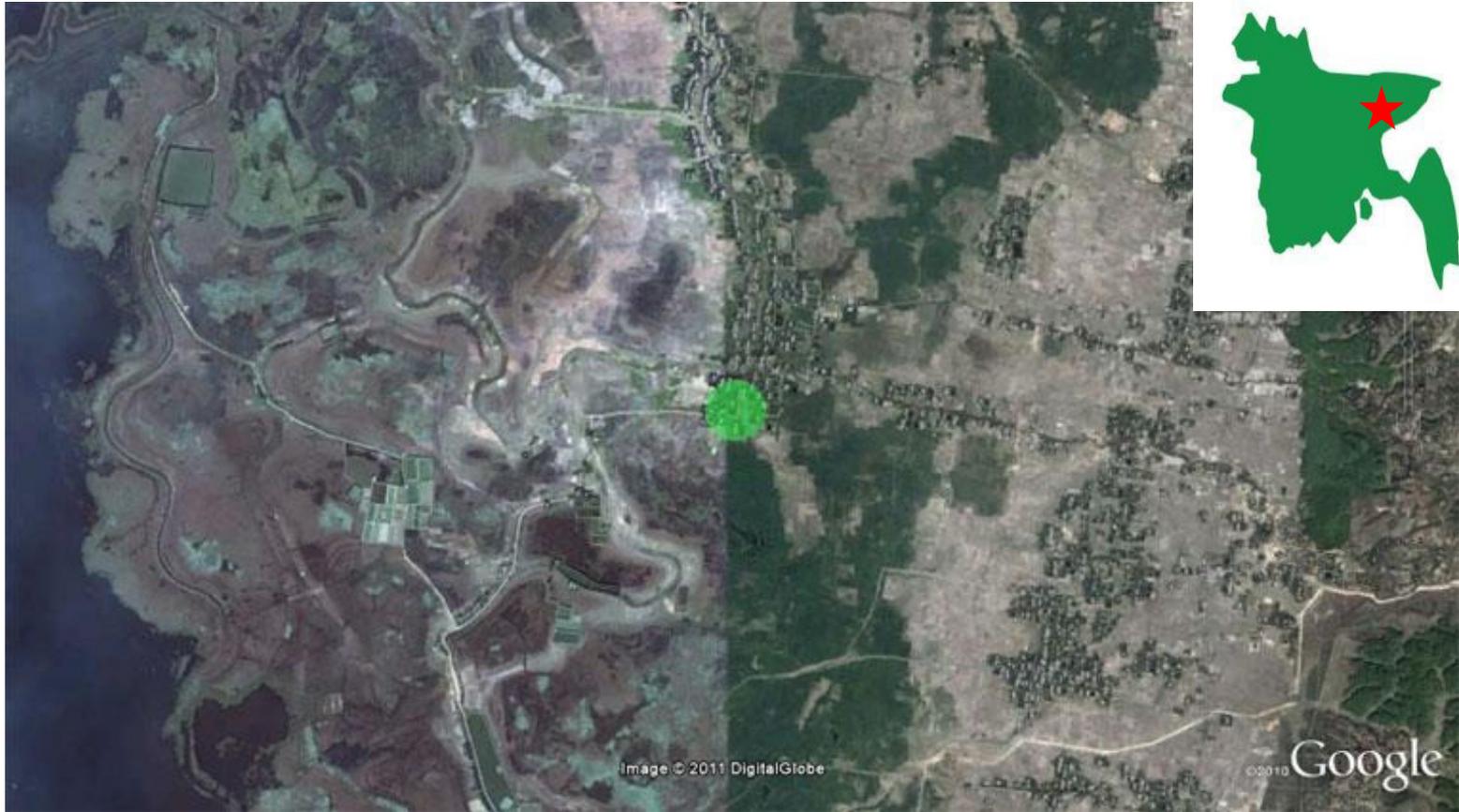
Households and Surrounding Resources





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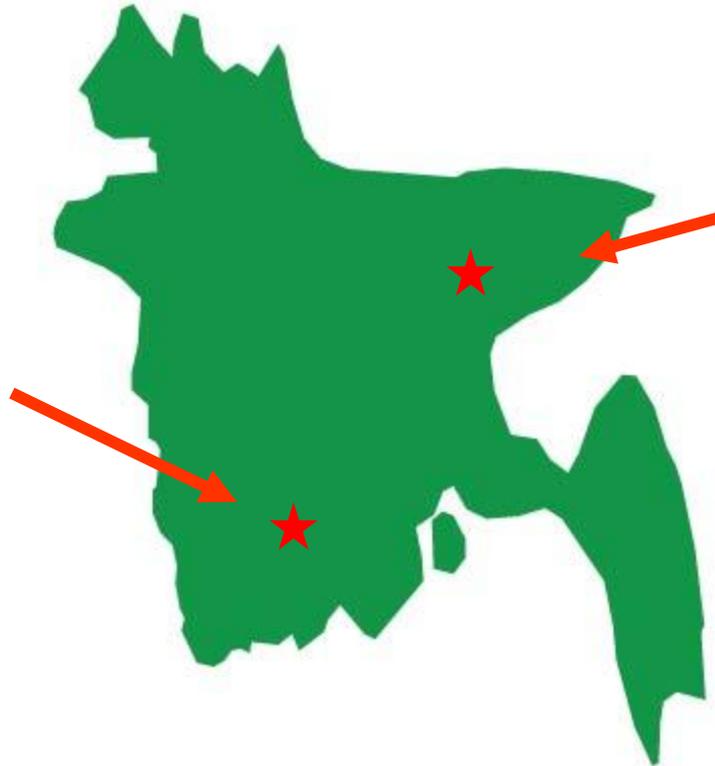
Households and Surrounding Resources





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Two Women: Northeast and Southwest

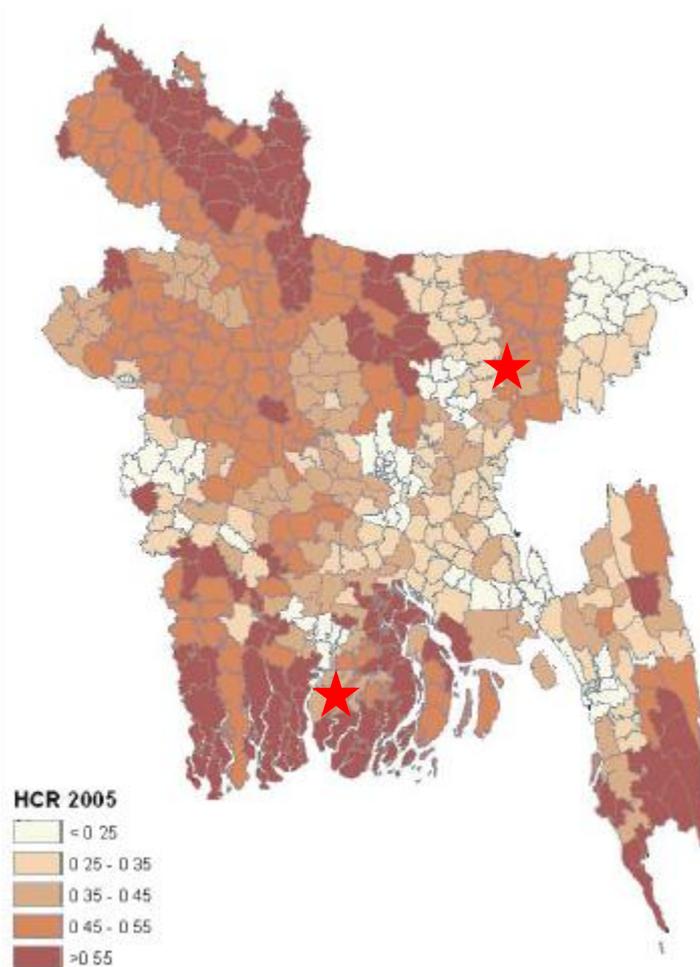




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Two Women: Household Makeup

Poverty Concentration





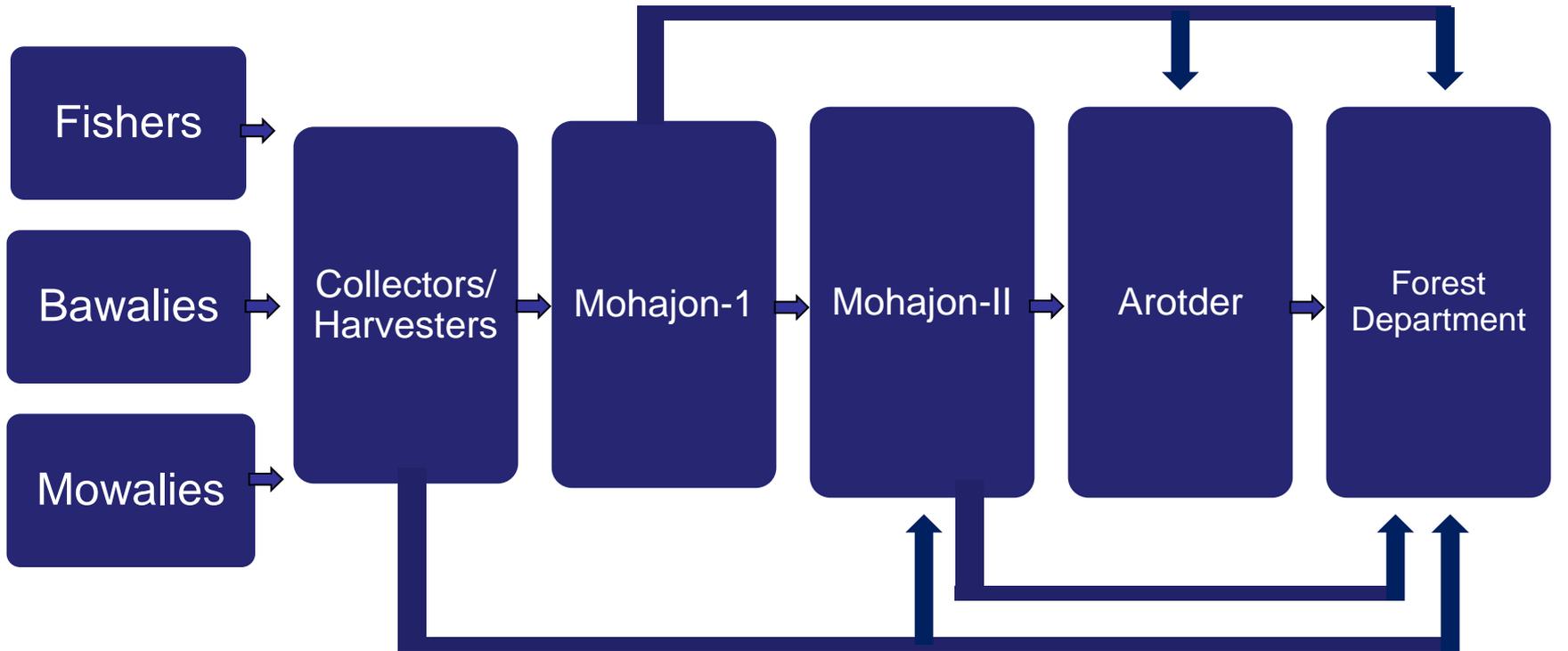
Fish Production

| All Fisheries/Subsectors | 2010 in millions of metric tons |
|--------------------------|------------------------------------|
| Capture Fisheries | 1.18 |
| Culture Fisheries | 1.13 |
| Marine Fisheries | 0.55 |
| All Fisheries | 2.87 |

Reference: Planning Commission. 2010. Background Studies for the Sixth Five Year Plan (2011-2015). Dhaka, Bangladesh: Ministry of Planning, Government of the People's Republic of Bangladesh



Sundarbans Fisheries Value Chain Actors



None/ Least

Moderate

Very High

Concentration of Power/Control

Reference: *Identification of Key Stakeholder Groups & Stakeholder Identification Methodology for Collaborative Management of the Sundarbans East Sanctuary and its Landscape*, 2009, M. Mokhlesur Rahman, Nishorgo Support Project, Dhaka.



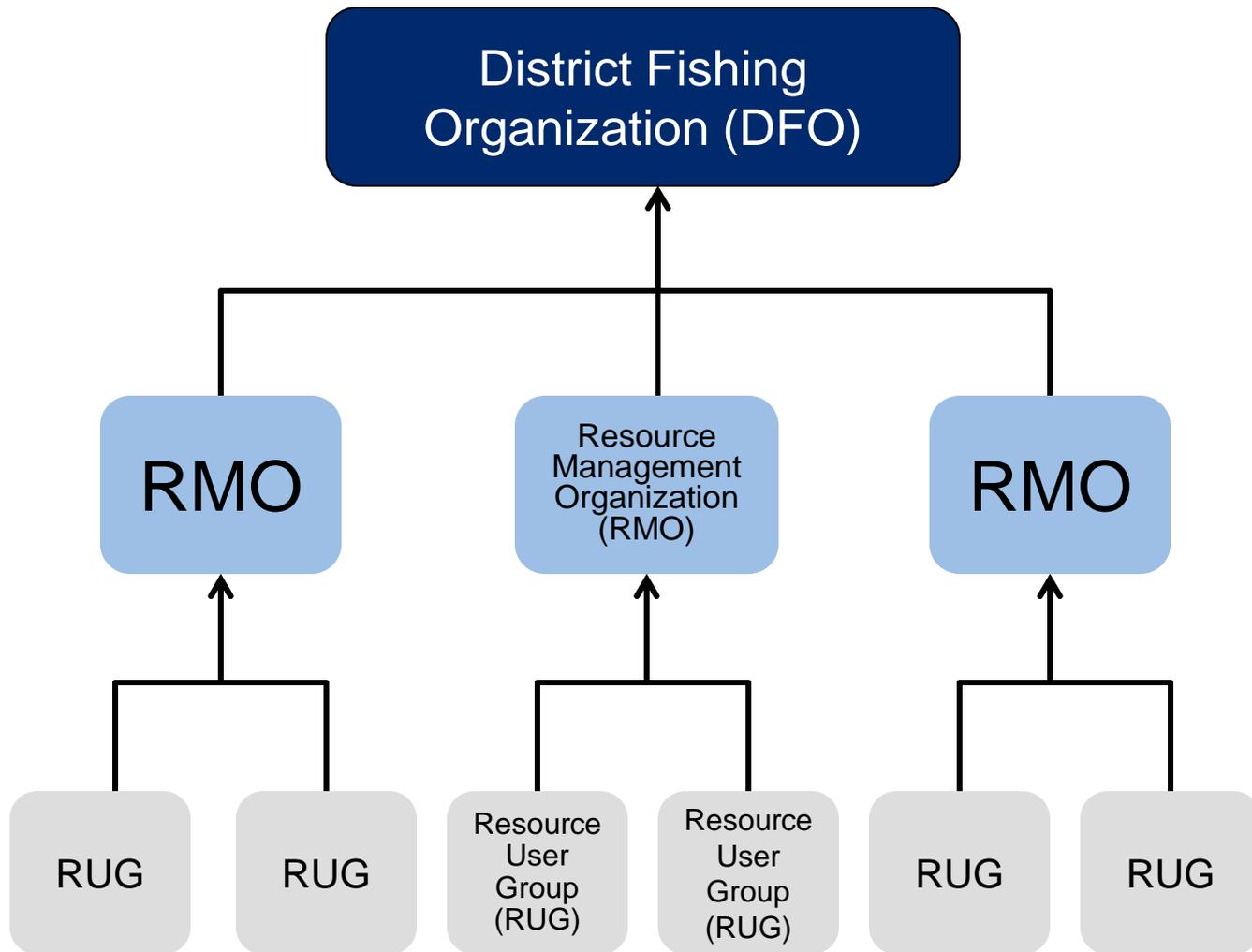
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USAID and Partner Interventions





Changes in Power and Access





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Changes in Economic Activity





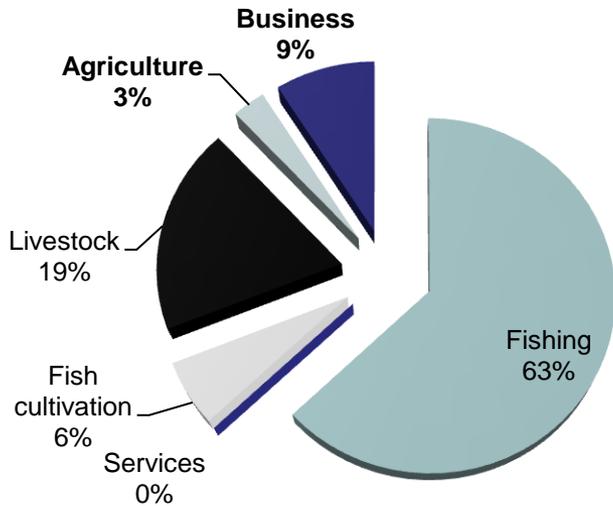
Managed wetlands
increasingly productive

| Three Initial USAID Wetland Sites | Baseline Year KG/Ha/Yr | Impact Over Entire Period (Average) Kg/Ha/Yr | Increase Over Baseline KG/Ha/Yr |
|-----------------------------------|---------------------------|---|--|
| Turog-Bangshi | 51 | 123 | 72 |
| Hail Haor | 164 | 228 | 64 |
| Kangsha Malijhee | 150 | 178 | 28 |

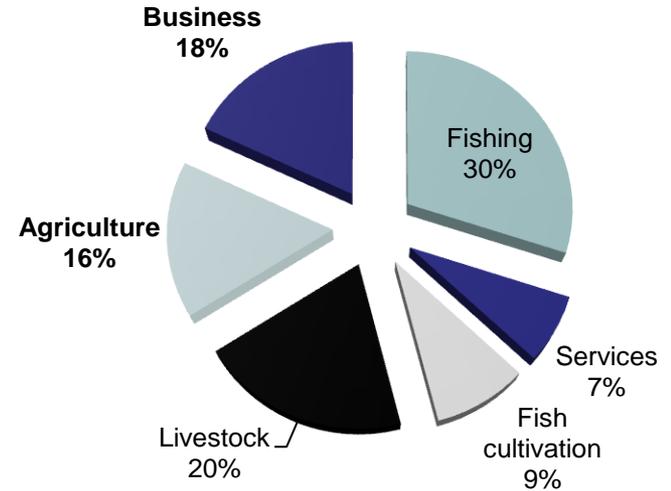


Changes in Livelihoods

Non-Participant Households



Co-Management Participant Households



Reference: Dev, Bishwajit Kumar, *Co-management, participation, livelihood, and status among fishers in Baikka Beel, Bangladesh*. 2011. Forthcoming chapter in USAID IPAC and East West Center volume on co-management of wetlands and fisheries in Bangladesh.



Economic Value – Northeast Wetland (Hail Haor)

| Type of good or service | Total Returns (TK) | Value per area (TK/ha) | Percent |
|----------------------------------|--------------------|------------------------|-----------|
| Subsistence fisheries | 83,651,100 | 6,800 | 18 |
| Commercial fisheries | 56,272,200 | 4,580 | 12 |
| Non-fish aquatic products | 127,973,300 | 10,410 | 28 |
| Boro rice value | 83,857,500 | 5,190 | 14 |
| Project/biodiversity funds | 43,650,600 | 3,550 | 10 |
| Pasture value | 40,292,800 | 3,280 | 9 |
| Flood control | 23,443,200 | 1,910 | 5 |
| Recreation | 7,025,700 | 570 | 2 |
| Transportation | 8,758,300 | 710 | 2 |
| Total (TK) | 454,924,600 | 37,00 | 100.0 |
| Total (US\$) | 7,981,100 | 650 | |

(Compares to \$321/ha for paddy rice alone.)



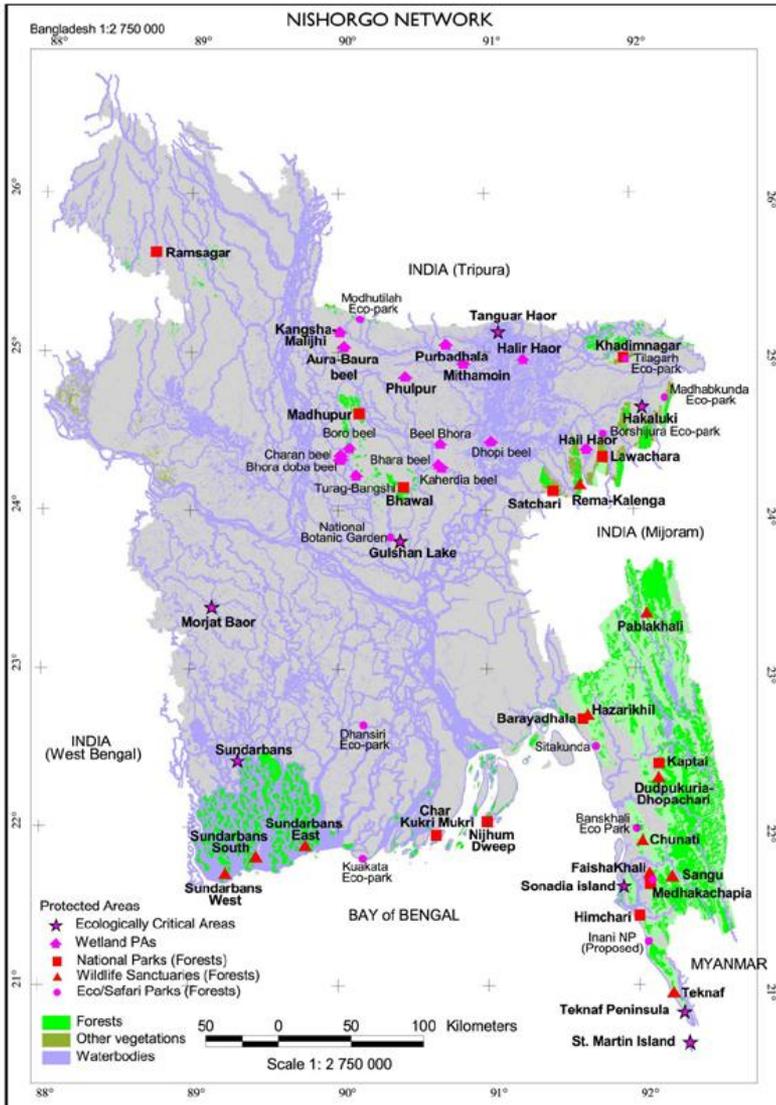
Household Fish Consumption

| USAID Wetland Site | Base year (gm/capita/day) | +3 years (gm/capita/day) |
|--------------------|------------------------------|-----------------------------|
| Hail Haor | 46.90 | 60.89 |
| Turog-Bangshi | 27.32 | 37.14 |
| KM Sherpur | 22.00 | 26.58 |

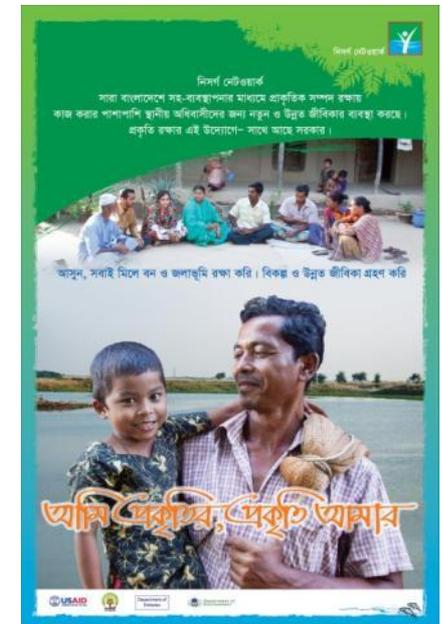


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Going to Scale



National Nishorgo Network





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Civil Society





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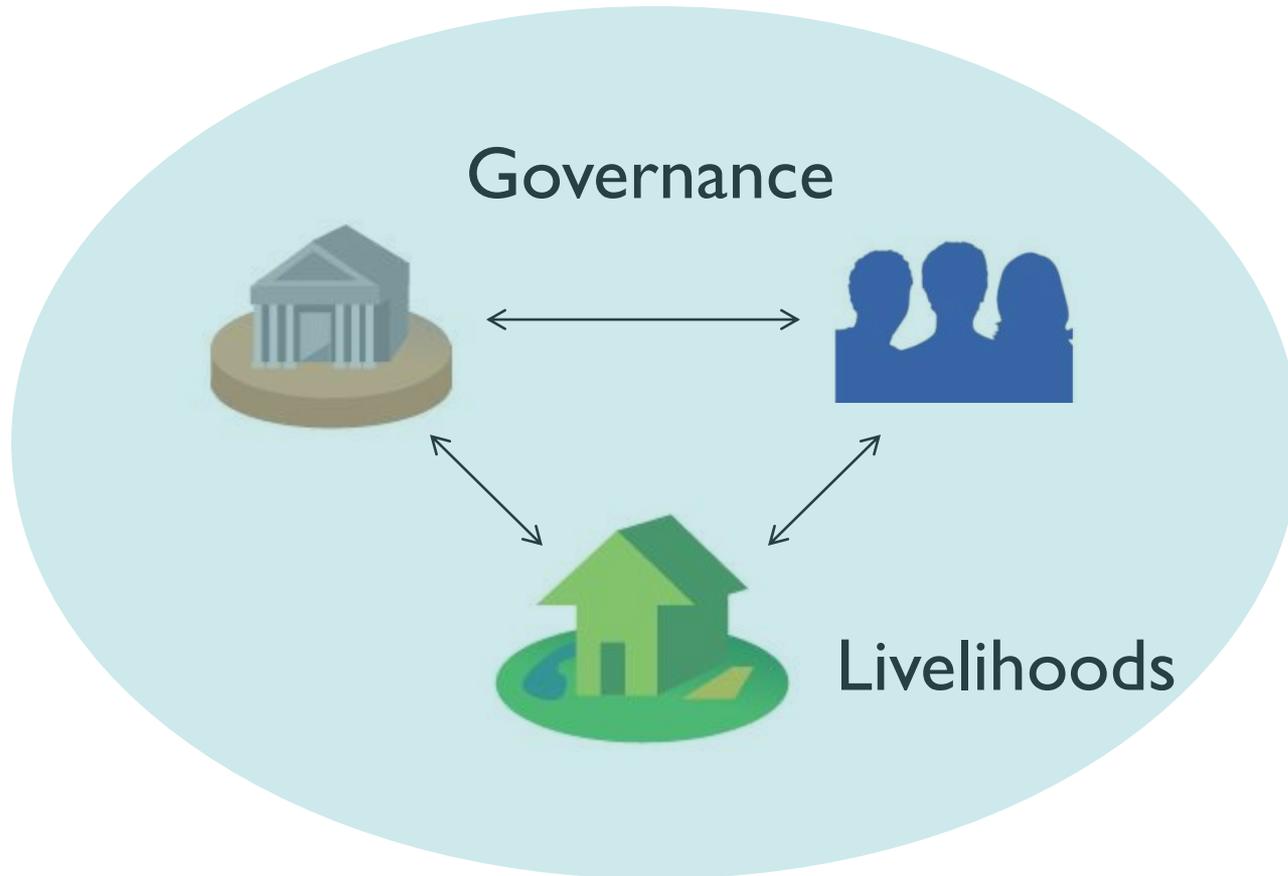
NRM Investments and Food Security Relevance In Bangladesh

- The improvement of food security cannot ignore the productive natural base of the fisheries sector
- Wetland resources are a critical source of resilience for households at the margin, principally because of diversification
- Access and governance issues along value chains are a necessary feature of food security interventions
- Managed and maintained natural resources are necessary to climate change adaptation



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Relevance to Livelihood and Food Security



Resources - Livelihoods - Governance



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O my river
Just one question I have for you
Tell me where do you belong?
Tell me where does your journey stop?
Don't you seek any boundaries?
And is that why you seek no home
And your tides change in the blink of our
eyes

Won't you take me as yours
Wont you share with me your infinity
Tell me your sorrows and joy
O my river, please be one with me like
we were always supposed to be

ও নদীরে,
একটি কথা শুধাই শুধু তোমারে
বল কোথায় তোমার দেশ
তোমার নেই কি চলার শেষ
তোমার কোনও বাধন নাই
তুমি ঘরছাড়া কি তাই
এই আছো ভাটা তে

এই তো দেখি জোয়ারে
আমায় ভাবছ শুধু পর
তোমার নাই কি অবসর
সুখ দুঃখের কথা কিছু
কইলে না হয় আমারে ।

- From the song "Oh My River" by Hemonto Mukharji