Gender dimensions of adopting climate-smart aquaculture

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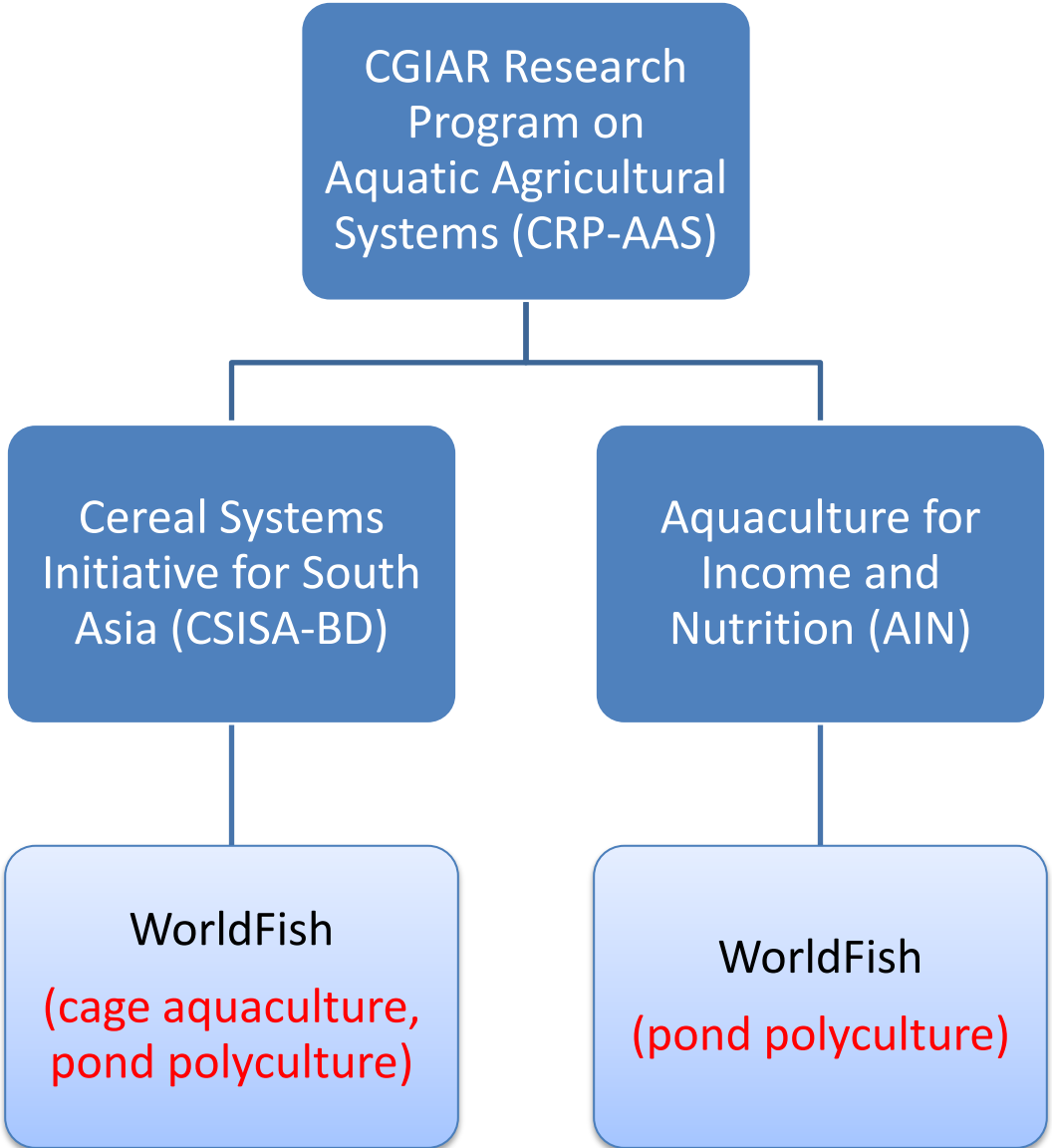
WorldFish bilateral projects in BD (sample)

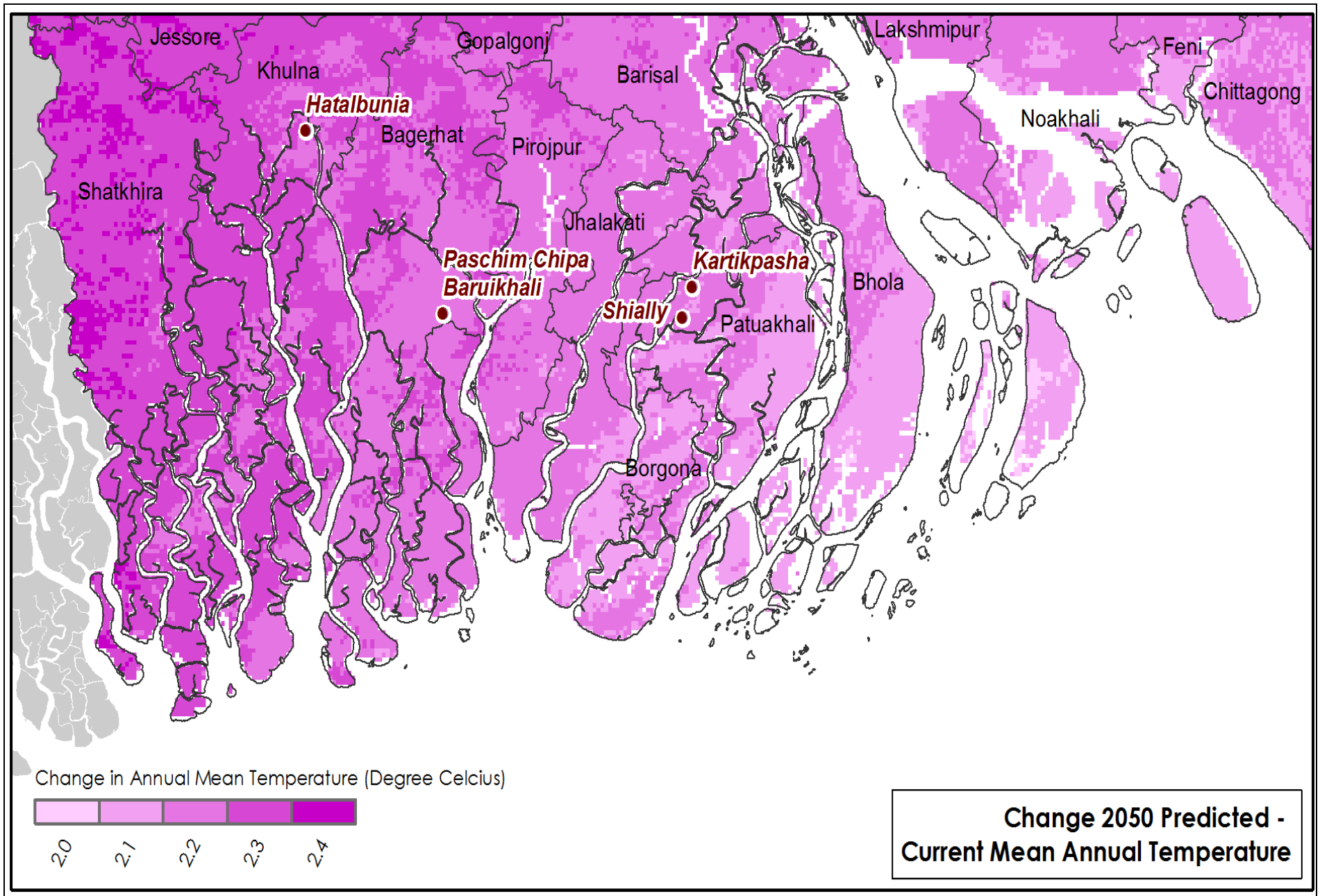


Climate change risks

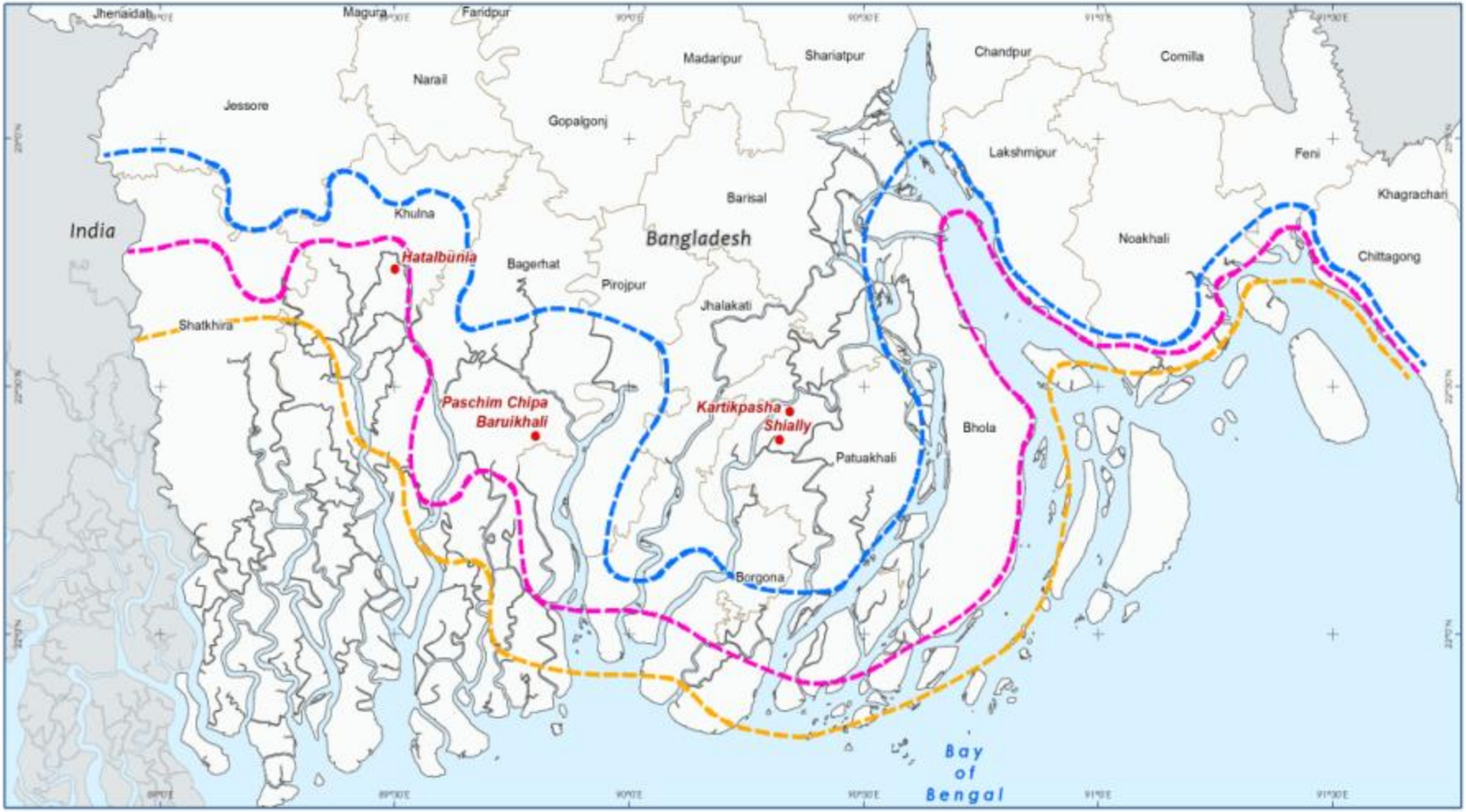
- Southern Bangladesh:
  - Temperature increase and seasonal variation
  - Floods
  - Waterlogged soils
  - Increasing salinity of both land and water

- Take geographically-specific risks into account to design appropriate climate-smart agricultural interventions

MEAN ANNUAL TEMPERATURE CHANGE (CURRENT AND PREDICTED)



MODELLED SALINITY CONDITION OF COASTAL AREA IN 2050 (IWM & CEGIS, 2007)



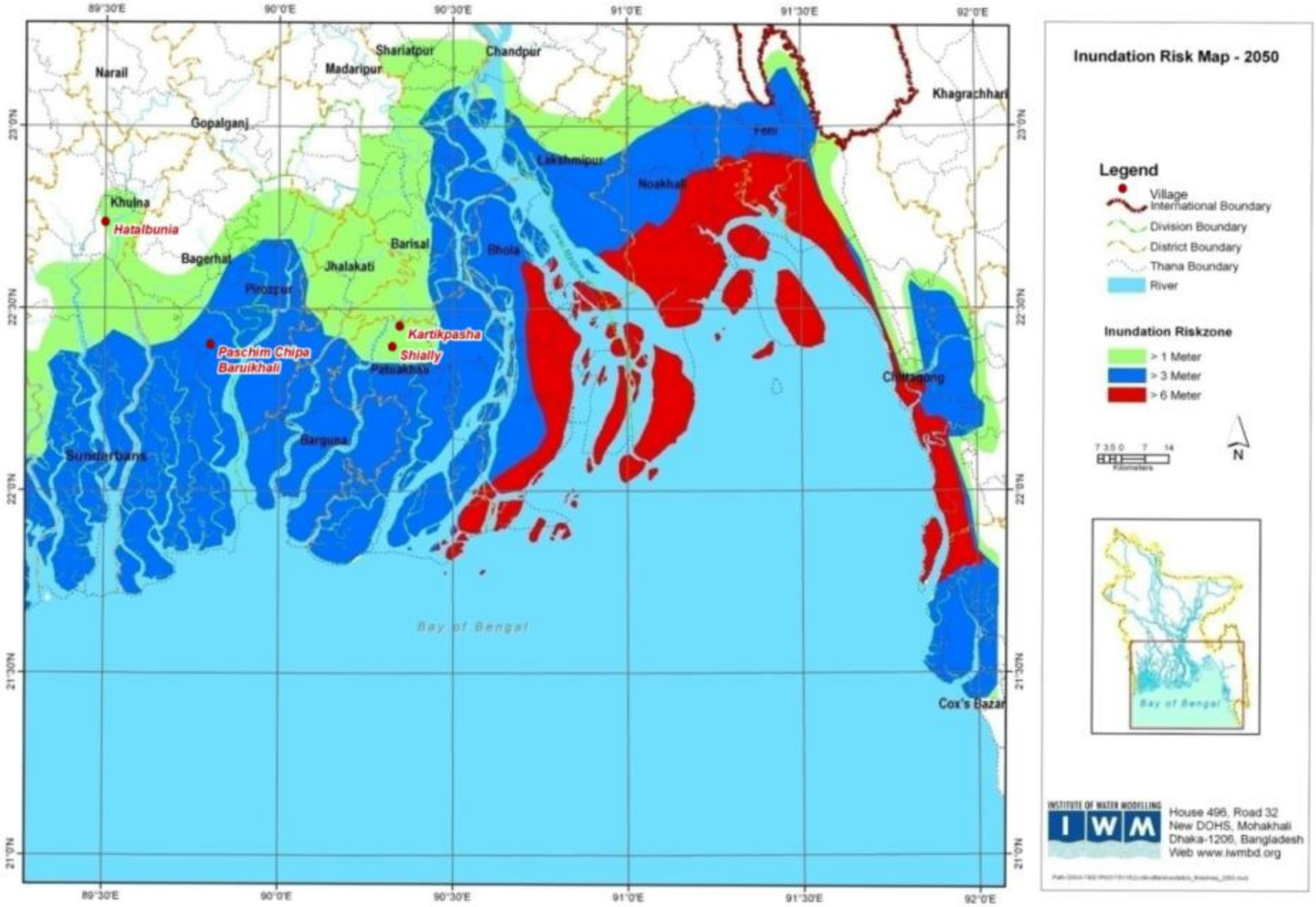
Salinity Line (parts per thousand)
based on A2 emission scenario and 27cm Sea Level Rise

- 1
- 5
- 15

0 5 10 20 30 40 50 km

Spatial Reference: Geographic Coordinate System
WGS 1984

Inundation risk map for combined effect of storm surge and sea level rise for the projected year 2050



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New DOHS, Mohakhali
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Web www.iwmbd.org

Climate-smart aquaculture innovations (CSA)

CAGE AQUACULTURE

CLIMATE CHANGE ADAPTATION	ENHANCE ADAPTIVE CAPACITY
- Cages float so can adapt to changing water resource opportunities - Can introduce saline tolerant fish species	- New income opportunity, with the potential to benefit women in particular (livelihood diversification)

Climate-smart aquaculture innovations (CSA)

POND POLYCULTURE

CLIMATE CHANGE ADAPTATION	ENHANCE ADAPTIVE CAPACITY
- Short duration, fast growing species combats seasonal variations in livelihood returns	- Productive livelihood option for women and poor households, leading to better nutrition (livelihood diversification) - Multiple harvests

Why target women?

"Vulnerability"

- More vulnerable to malnutrition than men
- More vulnerable in times of disaster and seasonal variation
- Mobility constraints (so lacking livelihood options)

"Virtue"

- Women's responsibility for family nutrient intake
- Women's role in home garden management
- These innovations accommodate women's mobility constraints (easier access to canals and homestead ponds) and work schedules

But what does this actually mean
for adapting to climate change,
for improving the lives of women, men and households, or
for gender equality?

Arora-Jonsson, Seema. "Virtue and vulnerability: Discourses on women, gender and climate change." *Global Environmental Change* 21.2 (2011): 744-751.

Study: “The gender dimensions of adopting climate-smart aquaculture innovations”

Rationale:

We need to understand the ***configurations of power*** in a local context and how *vulnerability* to climate change and *constraints to adaptation* are produced, for women and men - in order to better design appropriate climate-smart agricultural technologies and implementation strategies

Research question:

How do gender relations shape the uptake and use of climate-smart aquaculture innovations?

Study methods

Qualitative methods: Going beyond understanding rates of adoption to identify range of factors shaping use (including less tangible/measurable 'gender relations')

- FGDs (village context, perceptions on climate change)
- In-depth interviews (adopting men and women, key informants)

Research site	FGDs	In-depth interviews (adopting men and women)	In-depth interviews (key informants)	Total
Hatalbunia	6	16	9	31
P.C. Barukhali	10	6	9	25
Sheali	6	10	9	25
Kartikpasha	10	18	12	40
Total	**32**	**50**	**39**	**121**

The tools were chosen through country-level discussions and by consulting a range of sources, in particular the CCAFS/FAO Training Guide

Study findings

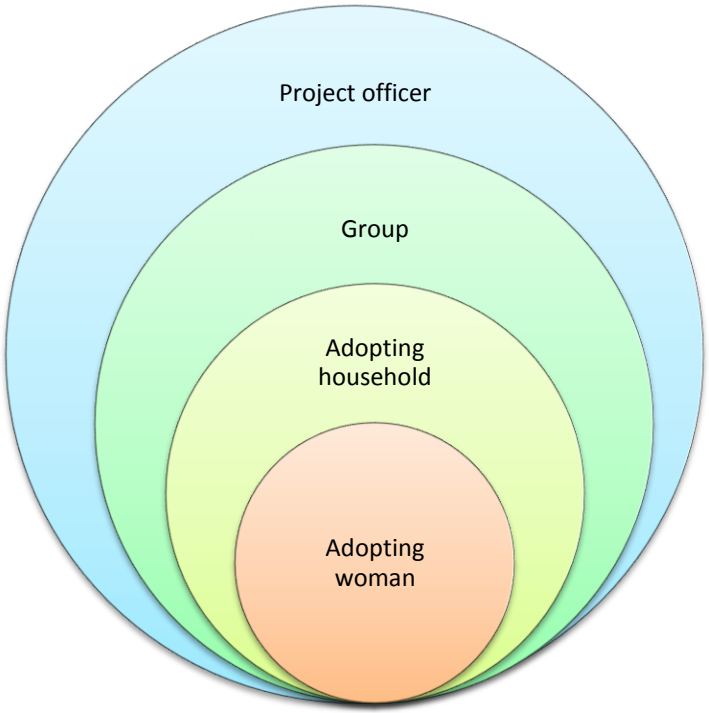
Factors affecting innovation dissemination and uptake

- Barriers to entry
- Varying feelings of ownership
- Unequal delivery of inputs affects group sharing/learning
- Gender-specific obstacles to attending training

Study findings

Factors affecting innovation use

Innovations are targeted at women, but in reality **power relations** at **every level** affect the extent to which women actually use and benefit from them



Study findings

Factors affecting innovation use

- Extra-village relations
  - Support independent use by adopters, especially women adopters

- Inter-household/group relations
  - Group mechanism can facilitate use or lead to conflict
  - May also reinforce undesirable gender roles and responsibilities

Study findings

Factors affecting innovation use (cont'd)

- Intra-household relations
  - Innovation in women's name only?
  - The **type of work** women do is shaped by *perceived* barriers
    - Physical barriers, knowledge barriers, gender norms
    - Subverting barriers
    - The design, implementation process and promotion of AQ innovation can serve to challenge or reinforce dominant gender norms/roles
  - The **amount of work** women do:
    - Increasing women's workload
    - Especially where they are perceived to have higher independent capacity *and* where men have not been included in training

Study recommendations

- Understand the **social context and power relations** that constrain how men and women actually use and make decisions about these technologies.
  - Need for multi-disciplinary research efforts

- Be realistic about the needs, interests and relations of the **target group**:
  - Consider the support required and long-term sustainability
  - Women are targeted for innovations, but they do not use it on their own

- Review targeting
  - Engage holistically, working with men and women together
  - How to do this in ways that are win-win: encourage joint use and benefits, women's voice and recognition

Figure 2: Characteristics of a gender transformative approach to agricultural RinD