



GENDER Impact
Platform

The effects of addressing gender norms and access to resources on gender equality in climate-affected agrifood systems in Bangladesh

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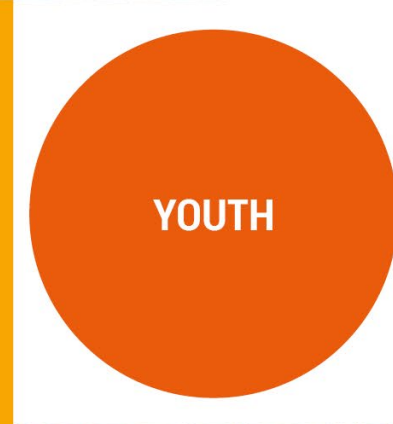
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GENDER
EQUALITY





Relevance and objective

Gender equality and resilience of agrifood systems (AFS) are interdependent

In the context of changing AFS and climate change: Critical to uncover ways to address gender equality and adaptive capacity within AFS simultaneously

This study tests the hypotheses that **reducing structural constraints to gender equality** in **climate-affected AFS** contributes to

- women's empowerment in agriculture;
- more gender-equal climate adaptive capacities; and
- more gender-equal AFS outcomes related to food and nutrition

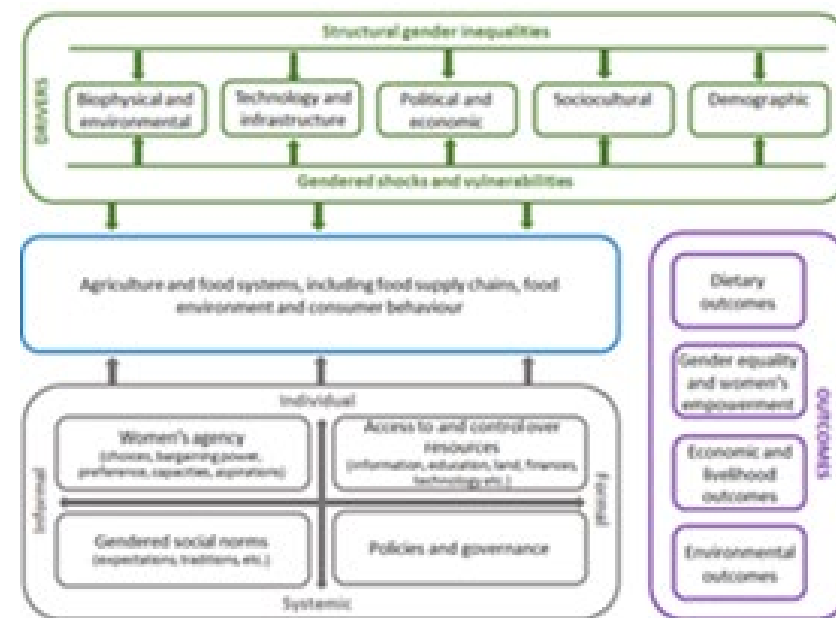


Conceptual framework and research hypotheses

Conceptual frameworks: Gendered food systems framework

(adapted from Njuki et al. 2022)

- Interdependence of food & nutrition, livelihoods, environmental and gender equality and women's empowerment in AFS
- **Formal, informal, individual, and systemic structural barriers to gender equality:**
 - i) norms, ii) agency and leadership, iii) access & control over resources, iv) structures, policies, institutions
- Biophysical and environmental drivers e.g., climate and weather, subject to gender inequalities, **gendered shocks and vulnerabilities.**



Frameworks linking climate change and gender equality in AFS (Kristjanson et al., 2017; Theis et al., 2019; Bryan et al. 2023)

- **Women and men have different adaptive and resilient capacities**
 - Tied to gender differences in i) access to information & technology; ii) decision-making; iii) abilities to negotiate climate response options; iv) themselves influenced by gender roles and norms



Research hypotheses

Research hypotheses

Addressing gender-based violence (GBV) and gender discriminatory norms positively affect

- a) women's empowerment in agriculture
- b) food and nutrition outcomes and the gender equality thereof

Tested through **intervention ECATTO** which addressed men's and women's attitudes towards GBV and norms and promoted equal rights for men and women

Improving gender equality in access to and control over resources positively affects

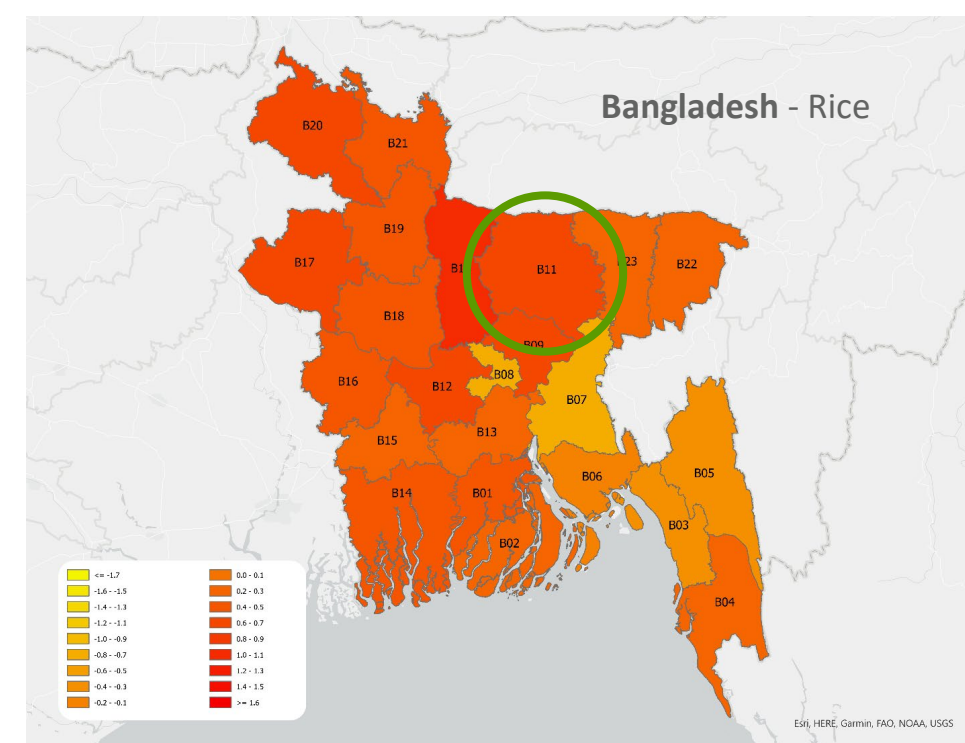
- a) gender equality of climate adaptive capacities
- b) women's empowerment in agriculture
- c) food and nutrition outcomes and the gender equality thereof

Tested through **intervention** Strengthening Household Ability to Respond to Development Opportunities **SHOUHARDO-III** which addressed women's and men's access to resources and (extension) services for climate-smart agriculture, livestock and livelihood activities



Context

- Climate-agriculture-gender inequality hotspot
- Impoverished rural populations in Kishoreganj district
- Wetland (Haor) region
- Agriculture predominant livelihood; primary crop is Boro rice
- Agriculture-based livelihoods highly susceptible to natural disasters, especially floods exacerbated by climate change
- Women not recognized as farmers, structural discrimination in controlling resources, property rights, and employment (Tanjeela and Rutherford 2018)
- Local agricultural practices, gender norms and roles, and gendered division of labor maintain gender inequality and hinder women's empowerment in AFS (Hoq, Raha, and Hossain 2021)
- Access to agriculture extension services and climate adaptation strategies is strongly gendered (Ferdushi, Ismail, and Kamil 2019)





Methods

Primary sex-disaggregated intrahousehold data collected in treatment and control groups

Quasi-experimental methods: Estimate average treatment effect using propensity score matching

Outcome indicators :

- i) awareness & attitudes on women's rights and leadership and GBV
- ii) gender equality of asset ownership and climate adaptive capacities
- iii) women's empowerment in agriculture (~pro-WEAI)
- iv) Food insecurity experience scale (FIES) and diet diversity

Two types of indicators for gender equality: Outcomes for women and intrahousehold gender difference in outcomes

	Nbr of Households		Matching variables
	Treatment	Control	
ECATTO	200 Hossainpur & Pakundia Upazilas	212 Kotiadi & Kuliarchar Upazilas	Socio-demographic characteristics Equity tool wealth category Land
SHOUHARDO III	692 Villages with SHOUHARDO III in Austagram & Nikli Upazilas	703 Villages without SHOUHARDO III	<i>Idem</i> + characteristics used for pre-project wealth ranking and targeting (very) poor households + sample restricted to (very) poor households





Results

ECATTO was effective at

- enhancing men and women's awareness of women's rights
- enhancing men and women's positive attitudes toward women's leadership
- increasing women's confidence in assuming leadership
- reducing % of men reporting incidences of violence in household

Yet, no statistically significant effect on % of women reporting incidences of violence; nor on % of women reporting experiences of violence

ECATTO

- enhanced women's empowerment in agriculture
- improved women's diet diversity

Effect of ECATTO, addressing norms		(a)	(b)	(c)
Outcome indicator		Estimated ATE	FDR q values	Mean (SD) in control group
(1)	Awareness of women's rights – By men	1.301***	0.001	2.599 (1.613)
(2)	- By women	2.034***	0.001	2.656 (1.722)
(3)	Positive attitude vs women's ability for political leadership – By men	.175***	0.006	.802 (.399)
(4)	- By women	.136***	0.008	.854 (.354)
(5)	Women's confidence in their ability for political leadership	.143***	0.008	.188 (.392)
(6)	Pct of men reporting incidences of violence in their family	-.141***	0.008	.189 (.392)
(7)	Pct of women reporting incidences of violence in their family	-.070	.133	.358 (.481)
(8)	Pct of women reporting experience of violence	-.061	.153	.274 (.447)
(9)	Women's empowerment score	.072***	0.001	0.504 (0.171)
(10)	FIES Food insecurity experience scale	.653*	.436	1.198 (2.252)
(11)	Women's diet diversity IDDS	.427***	.011	3.679 (0.742)
(12)	Intrahousehold difference in IDDS	.090	.240	0.156 (0.747)

Sample size: Treatment 200 households; Control 212



Results

SHOUHARDO III was effective at

- promoting adoption of climate-smart farming and livestock practices by women and reducing intrahousehold disparities in adoption

Yet, no statistically significant effect on women's and gender equality of livestock ownership

SHOUHARDO III

- enhanced women's empowerment in agriculture

Yet, no statistically significant effect on food security nor on gender equality of diet diversity

Couple sessions to address intrahousehold resource allocation and decision-making for SHOUHARDO III treatment households did not have additional effects on gender equality in adoption of climate-smart practices, women's empowerment, nor food security and diet diversity

Effect of SHOUHARDO III, addressing access to resources and (extension) services		(a)	(b)	(c)
Outcome indicator		Estimated ATE	FDR q values	Mean (SD) in control group
(1)	Women's total livestock holding TLH	.011	.383	0.548 (0.810)
(2)	Intrahousehold difference in TLH	-.019	.256	0.056 (0.356)
(3)	Women's adoption intensity of farm -related practices	.062**	0.028	0.282 (0.345)
(4)	Intrahousehold difference in adoption intensity of farm-related practices	-.068***	0.009	0.141 (0.398)
(5)	Women's adoption intensity of adoption of livestock practices	.041***	0.008	0.079 (0.167)
(6)	Intrahousehold difference in adoption intensity of livestock practices	-.021*	.077	0.018 (0.140)
(7)	Women's empowerment score	.062***	0.001	0.527 (0.168)
(8)	FIES Food insecurity experience scale	-.129	0.256	1.589 (2.591)
(9)	Women's diet diversity IDDS	.086	.119	3.608 (0.752)
(10)	Intrahousehold difference in IDDS	-.076	.119	0.094 (0.735)

Sample size: Treatment 660 households; Control 673

Effect of SHOUHARDO III couple sessions, addressing intrahousehold resource allocation and decision-making		(a)	(b)	(c)
Outcome indicator		Estimated ATE	FDR q values	Mean (SD) in control group
(1)	Women's total livestock holding TLH	-.029	.563	0.562 (0.804)
(2)	Intrahousehold difference in TLH	.022	.434	0.001 (0.264)
(3)	Women's adoption intensity of farm -related practices	.064**	.229	0.294 (0.384)
(4)	Intrahousehold difference in adoption intensity of farm-related practices	.011	.563	0.029 (0.281)
(5)	Women's adoption intensity of adoption of livestock practices	-.024	.370	0.114 (0.231)
(6)	Intrahousehold difference in adoption intensity of livestock practices	.009	.563	-0.001 (0.135)
(7)	Women's empowerment score	.019	.37	0.575 (0.170)
(8)	FIES Food insecurity experience scale	.566**	.229	1.751 (2.617)
(9)	Women's diet diversity IDDS	.127*	.235	3.624 (0.768)
(10)	Intrahousehold difference in IDDS	-.056	.563	0.108 (0.725)

Sample size: Treatment 304 households; Control 362



Discussion

In the context of climate-affected AFS in rural Bangladesh:

Interventions that **address GBV and gender discriminatory norms** can positively change both **men's and women's** awareness of **women's rights**, attitudes about women's **leadership** and women's leadership confidence

More research needed into what would make such interventions effective at reducing women's experience of GBV

Interventions improving **access to resources and extension services for agriculture in a gender-equal way** through multi-pronged approach can enhance the **gender equality of climate adaptive capacities** through adoption of climate-smart practices

Mixed evidence whether such interventions can change gender differences in asset and livestock holding and household food security

Interventions that **effectively remove some of the structural constraints to gender equality in AFS** related to attitudes and **norms** regarding women's rights and leadership and related to **access to** and adoption of climate-smart practices can increase **women's empowerment** in agriculture

Interventions that effectively address **norms** can also increase **women's diet diversity**