



Photos: Alexander Kaminski

Gender transformative change along the capture fishery value chain: Panel evidence from the Barotse Floodplain, Zambia

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REPUBLIC OF ZAMBIA





Introduction


- Privileged focus on designing, testing, and implementing innovations in small-scale capture fishery settings to circumvent **technical constraints**
- Research surfacing the gender norms and power relations that constrain capture fishery value chain actors is lacking from the literature (see Okorley et al. 2001; Farnworth et al. 2015; Lentisco and Lee 2015 for some exceptions)


Making the case for the use of gender aware approaches


- Gender as a key driver of post-harvest losses in small-scale capture fishery contexts (Diei-Ouadi et al. 2015)


 **MAIN GENDER ISSUES IN PROCESSING AND SALE**


 THE SOLE BURDEN OF HOUSEHOLD CHORES AND THE LONG DISTANCE FROM THE LAKESIDE CAN DELAY WOMEN FROM REACHING THE LAKESIDE EARLY ENOUGH TO PURCHASE THE FIRST SALE/AUCTION FISH. THIS PRECLUDES THEM FROM GETTING THE BEST QUALITY FISH FROM THEIR SUPPLIERS/FISHERMEN.

 WITH A RAW MATERIAL, IN WHICH QUALITY LOSS IS ALREADY EMBEDDED (AS THEY PREVIOUSLY BOUGHT DETERIORATED FISH) WOMEN ARE LIKELY TO ACCUMULATE LOSS ESPECIALLY THAT THEY DO NOT USE ICE.

 THE SHIFTS IN SPECIES DISTRIBUTION LED BY CLIMATE CHANGES AND MAN-MADE ACTIVITIES MAY REQUIRE CHANGES IN TECHNOLOGY, IMPLYING ADDITIONAL COSTS.

 COMBINING HOUSEHOLD CHORES WITH SMOKING EXPOSES THE FISH TO PARTIAL OR COMPLETE BURNING ESPECIALLY WHEN THERE ARE NO HELPERS AND/OR CHILDCARE FACILITY.

 HOUSEHOLD CHORES AND CHILD CARE WOULD PLAY A CRITICAL ROLE IN THEIR ABILITY TO ACCESS LONGER DISTANCE MARKETS THAT MAY BE MORE REMUNERATIVE. THIS IS ACUTE DURING BUMPER HARVESTS, REQUIRING TARGETING ALTERNATIVE MARKETS THAN THE OVERSUPPLIED LOCAL CHANNELS.

 IN AREAS WHERE SOCIO-CULTURAL BARRIERS RESTRICT THEIR MOVEMENT (ESPECIALLY TO LONGER DISTANCE/BEYOND THEIR SITE OF OPERATION), ACCESS TO THE BEST/SUITABLE MARKETING OUTLET IS IMPOSSIBLE

Source: Diei-Ouadi et al. (2015)

Applying gender aware approaches in a technology-focused research project

1. Design and test **improved post-harvest fish processing technologies** with people in fishing camps to help reduce losses
2. Adopt **gender accommodative and transformative approaches** and test their contribution to improving gender relations in the capture fishery value chain

Research question:

- How does a gender accommodative approach compare to a gender transformative approach in terms of influence on women's empowerment outcomes in a post-harvest fish loss reduction intervention?

Analytical framework

(defining, framing, and assessing empowerment)

Defining empowerment as

“The expansion of choice and strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures. It is both a process and an outcome” (van Eerdewijk et al. 2017: 13)

Framing empowerment

Contingent on three interacting elements: resources, agency, and institutional structures



Source: van Eerdewijk et al. (2017)

Analytical framework

(defining, framing, and assessing empowerment)

Assessing empowerment in this study

Choice

- Involvement in fishery value chain activities

Agency

- Decision making about income from value chain activities

Resources

- Ownership status of key value chain assets

Institutional structures

- Gender attitudes as the foundations for and measurable proxy of changes in behaviors

Methods

Project background and scope

- Barotse Floodplain, Western Province
- People engage in a diverse mix of fishing, farming, and livestock rearing activities (Rajaratnam et al. 2015)
- Western Province is one of the poorest regions in Zambia (CSO 2012)
- Fish consumption and sales provide important sources of nutrients and income



Map: Shwu Jiau Teoh

Methods

Project background and scope

- Gendered participation in the fishery value chain (Rajaratnam et al. 2016)
- 65% of fish from capture fisheries in Zambia is processed using open-air sun drying or smoking methods (Department of Fisheries 2015)
- Post-harvest fish losses relatively high, both physical and quality losses
 - Especially in the processing node and for women (Kefi et al. 2017; Kaminski et al. *in review*)
- Post-harvest losses result in lost incomes for fishers, processors and traders and a loss of nutrients for consumers (FAO 2016)



Methods



Project background and scope

- 6 fishing camps in Barotse Floodplain
- 252 project participants organized into participatory action research (PAR) groups

Implement a practical gender approach (PGA) in all 6 camps

Test a gender transformative communication (GTC) tool in 3 out of 6 camps

Test improved fish processing technologies with PAR groups in all 6 camps

Using PAR to test the improved technologies



Photo: Alexander Kaminski



Photo: Alexander Kaminski



Photo: Steven Cole

Left picture: a prototype solar tent dryer that the project introduced in the fishing camps.

Through PAR, group members modified the technology (right pictures) to fit the local context and their needs.

Using PAR to test the improved technologies



Photos: Alexander Kaminski



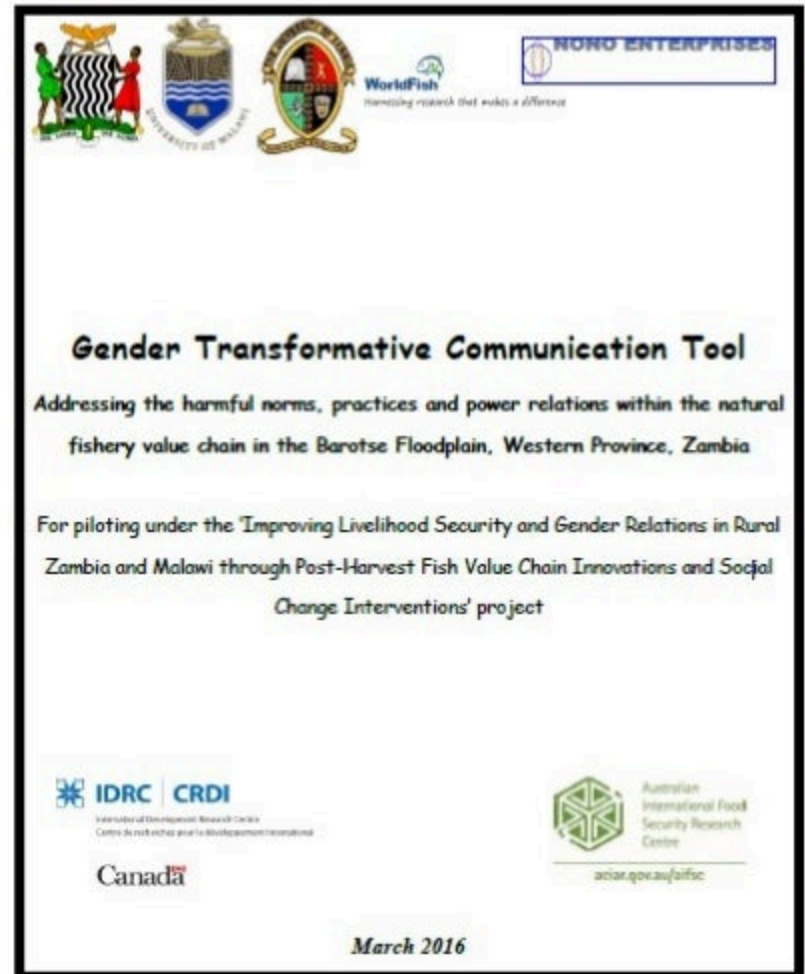
Photo: Robin Al-haddad

Left pictures: salting technology.
Right picture: improved smoking kiln.

GTC tool

Drama integrated with PAR

- Manual was developed and pretested
- Comprised dramas (3 skits) on gender roles, decision-making, power, mobility/time use issues, among others
- Also sets of questions to spark locally-led shifts in gender norms and power relations



GTC tool

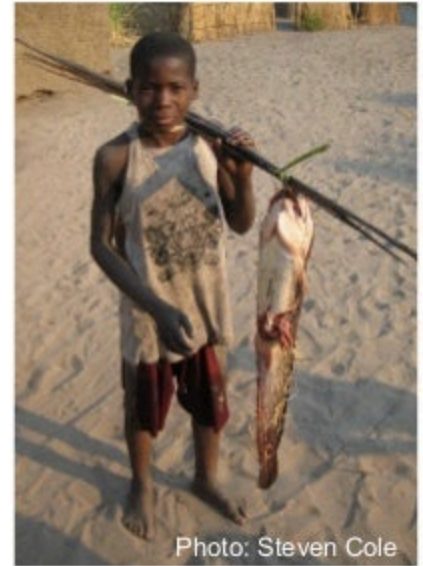
- Skits were integrated into “technical” PAR processes in 3 out of 6 fishing camps
- PAR group members critically reflected and considered ways they could implement action plans to address the issues highlighted in the drama skits



Photos: Alexander Kaminski

PGA

- PGA acknowledges that norms and power relations shape where and when certain groups can attend meetings or their access to assets (Molyneux 1985; Moser and Levy 1986)
- Project staff made explicit attempts to adjust their meeting times and venues to ensure that especially women could participate in project activities
- But did not attempt to work with project participants to challenge existing norms, attitudes, and power relations that create gender inequalities in the 3 other camps



Evaluation design of the gender approaches

Longitudinal comparative design

- Drama skits piloted (mid-2016) in 3 out of the 6 fishing camps
- Baseline (June 2015) and endline (December 2016) assessments carried out in all 6 camps
 - Used a modified Women's Empowerment in Agriculture Index (WEAI)
 - Longitudinal data on 80 of the 252 project participants

Women's Empowerment in Fisheries Index (WEFI)

Module	Content
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1	participation in value chain activities and inputs into decisions about the activities and income generated
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2	ownership of key value chain assets
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3	gender attitudes
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4	access to extension services
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5	confidence speaking in public about fisheries-related issues
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6	time use
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Variable descriptions

"Women should not get involved in fishing fulltime, that is a man's responsibility"

"Men should primarily be the ones who control the earnings obtained from the sale of fish"

Gender attitudes (institutional structures)

- Scale comprising 8 statements reflecting current gender norms and practices
- Responses summed, highest score = 24 (perfect gender equal attitude) and lowest score = 8 (perfect gender unequal attitude)

Participation in value chain activities (choice)

- Whether or not the respondent fished, processed, or traded fish over the past 12 months prior to administering the survey

Inputs into decision making about income from the activity (agency)

- With "large" input implying greater agency

Ownership of key value chain assets (resources)

- Men's ownership status (sole ownership versus joint ownership with spouse) of fishing gear

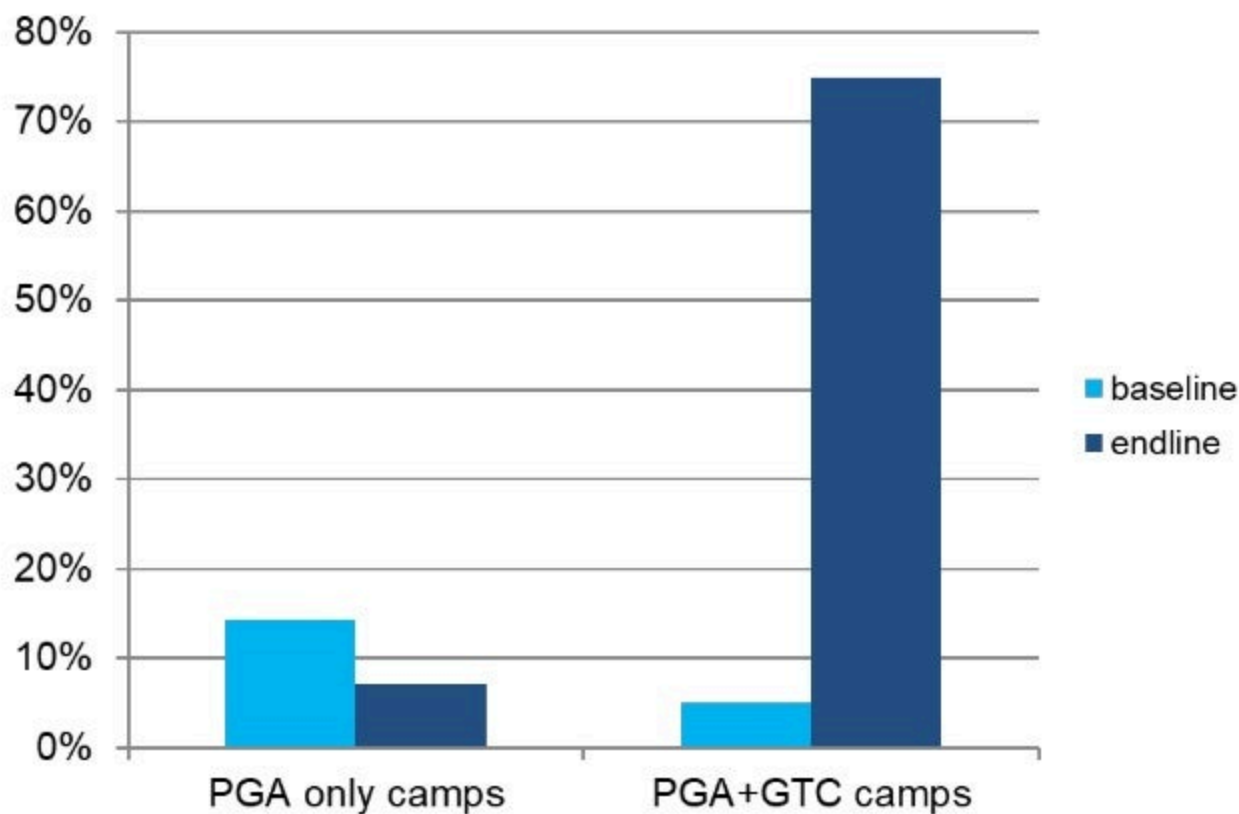
Changes in gender attitudes (institutional structures)

Gender attitude scores*	Baseline	Endline	p-value
Total	18.68	22.67	0.0000
PGA only camps	18.97	21.18	0.0286
PGA+GTC camps	18.47	23.76	0.0000
Women	19.76	23.06	0.0000
PGA only camps	20.07	22.17	0.1014
PGA+GTC camps	19.55	23.60	0.0000
Men	17.87	22.39	0.0000
PGA only camps	18.20	20.62	0.0913
PGA+GTC camps	17.60	23.88	0.0000

*Psychometric analysis of the gender attitudes scale indicated good internal consistency (measuring the same underlying concept) and determined it was unidimensional.

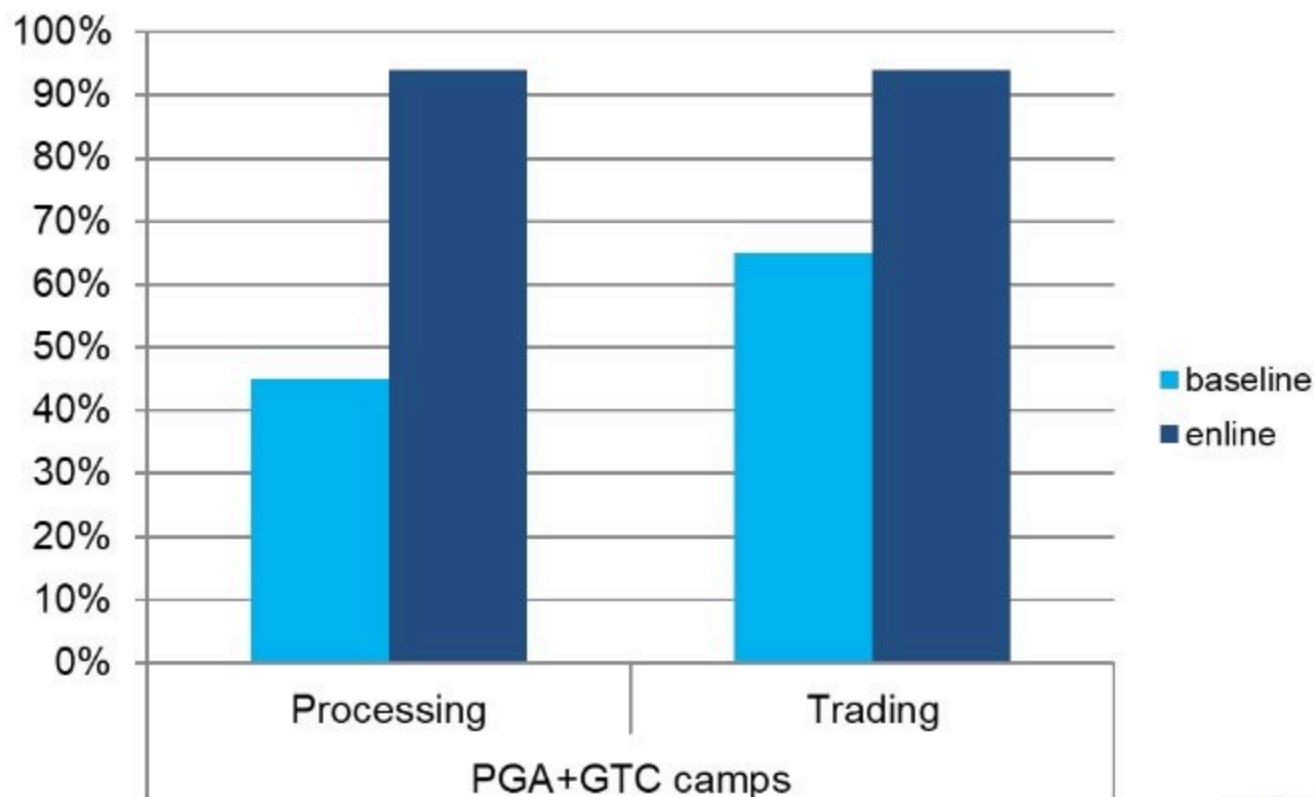
Women's empowerment (transforming choices into actions)

- Women from PGA+GTC camps significantly increased their **participation in fishing** from baseline to endline (by 70% $p < 0.0001$)



Women's empowerment (agency)

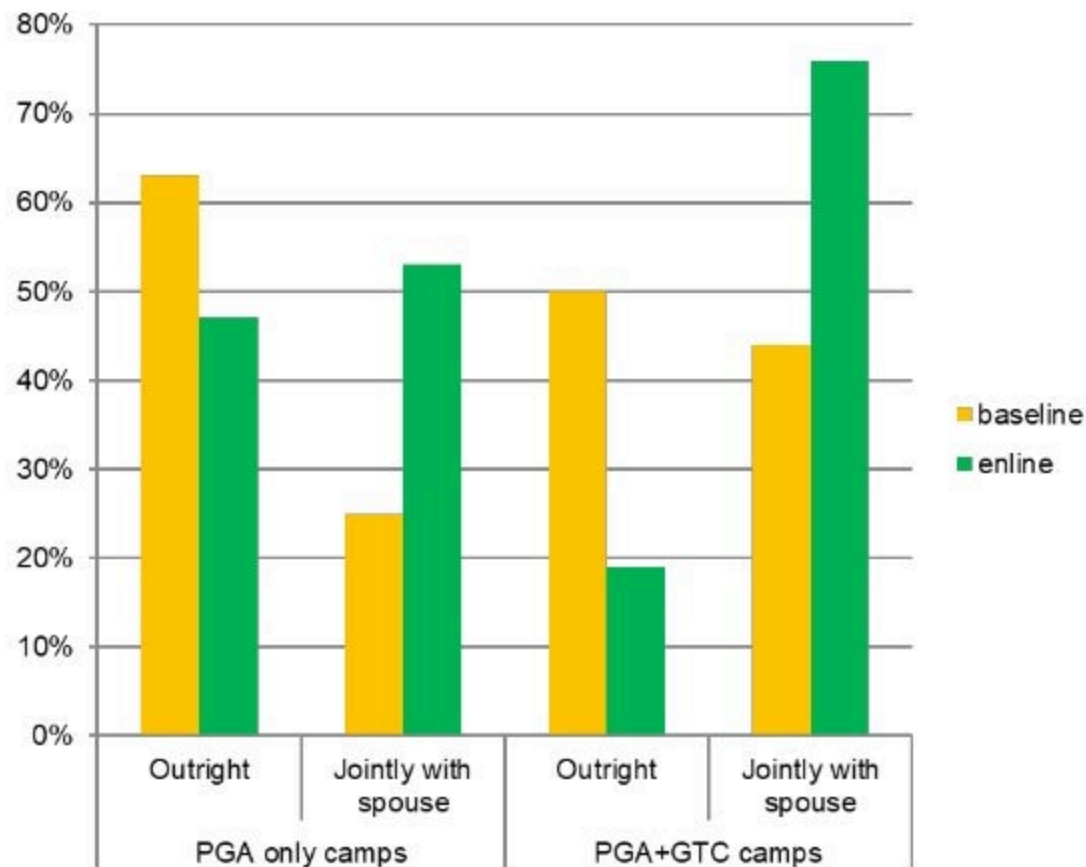
- Greater percentage of women from PGA+GTC camps* **made large inputs into decisions about income** from processing and trading from baseline to endline (by 49% $p < 0.0025$ and by 30% $p < 0.0280$, respectively)



*Too few women from PGA only camps made large inputs into decisions about income from processing and trading to make the analysis meaningful.

Changes in men's asset ownership status (resources—enabling choice)

- Amongst men from PGA+GTC camps, a significant shift was found in their fishing gear ownership status from sole to joint ownership with their spouses
- No statistically-significant changes in fishing gear ownership status of men from PGA only camps were found



Conclusion

Study provides evidence that gender transformative approaches can be an effective means of catalyzing shifts towards more gender equal attitudes among value chain actors in a small-scale fishery setting

The gender transformative approach evaluated in this study had a significant effect on improving a number of empowerment outcomes compared to only using a practical gender approach

Different stakeholders can use the learning generated by the study to integrate this or like tools at scale to address unequal gender relations that constrain fishery-dependent people from making strategic life choices and amplifying their voices to improve their food and nutrition and economic security

Acknowledgments

- District Department of Fisheries officers for organizing and implementing all the fieldwork activities
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- Research contributes to the CGIAR Research Program on Fish in Agri-food Systems (FISH)

Thank You



Contact Steven Cole for more information at s.cole@cgiar.org

Demographic characteristics of the study sample

	PGA only camps	PGA+GTC camps
% women	40.0	44.4
Mean age (years)	36.9	39.7
Mean years of education	6.4	7.2
Mean household size	5.7	6.0
% married	89	80
Primary reason for being on the camp	Fishing (59%) Trading fish (35%) Processing fish (6%)	Fishing (60%) Trading fish (24%) Processing fish (11%) Other (5%)

Summary of the findings

How did a gender transformative approach influence empowerment outcomes along the value chain?

1. Institutional structures “as the roots of individual inequalities of power” (Kabeer 1999: 10) or “constraints on the agency of women” (van Eerdewijk et al. 2017: 40)—gender attitudes shifted in this sample of value chain actors to become more equal, especially those of men from PGA+GTC camps

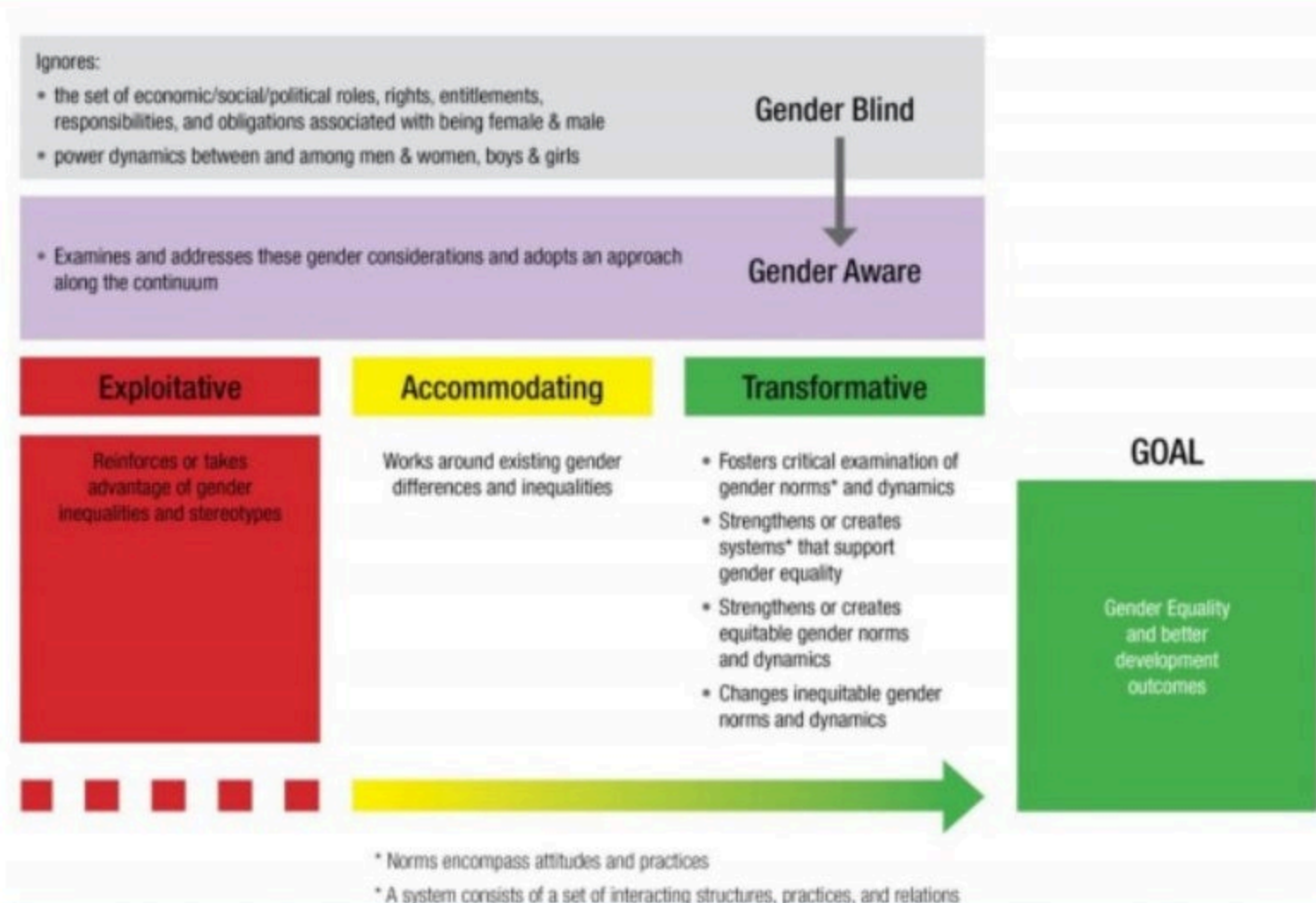
2. Expansion of choice for women in terms of fishing as an option; a choice that was transformed into an action/outcome (greater participation in fishing by women from PGA+GTC camps)

3. Women’s improved agency—greater participation by women from PGA+GTC camps making large inputs into decisions about income from processing and trading

4. Men as “change agents,” shifting their beliefs about the ownership status (sole to joint) of a “male” asset (fishing gear)

• Expansion of choice through transformation of power relations along the value chain suggests that women from this sample have greater control over their lives to achieve food, nutrition, and economic security

Gender aware approaches



Source: A Guide to Integrating Gender in Improvement (Faramand et al. 2017)