

Rupture, Gendered Adaptation and the Social Economy of Small-scale Fisheries in the Indian Ocean

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Introduction

- **Small-scale fisheries** in IO region diverse and vitally important resource economies
 - **Environmental stress** - climate change (rising ocean temperatures, changing weather patterns, sea level rise); pollution, coastal erosion and accretion; overfishing
 - **Political Economic pressure** - intersectoral competition (tourism, aquaculture, large port development), changing institutions for resource appropriation, development and control of space (e.g., Blue Economy)
- ⇒ **RUPTURES** impacting small-scale fishing communities

Objective:

To investigate emerging environmental and political economic changes in the IO region; their impacts on fishing/coastal communities; and how adaptive capacity to these changes are mediated by intersectional social relations: gender, ethnicity/race, caste, class, and place.

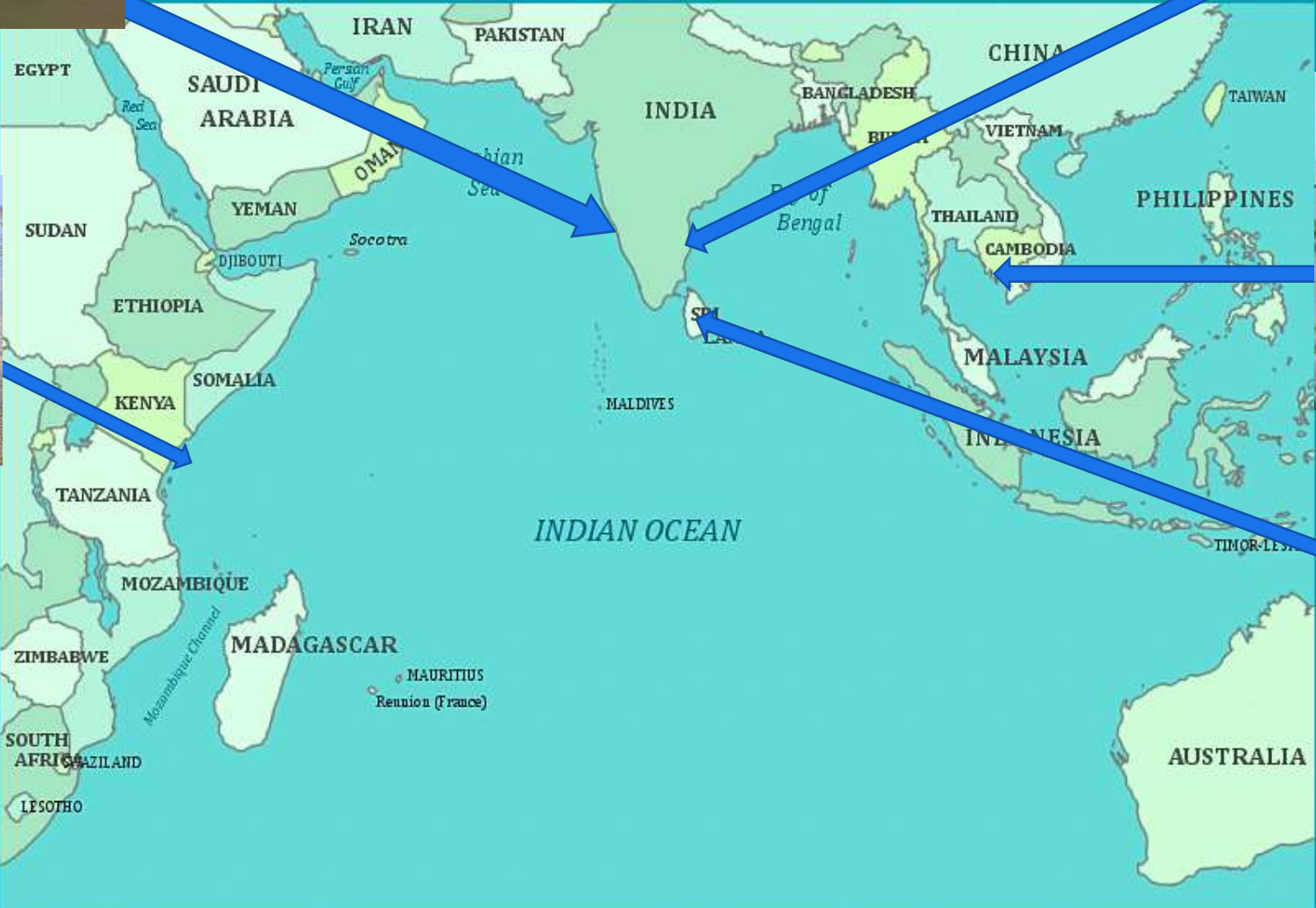
Research Questions:

How do different kinds of rupture (environmental, political, economic) impose divergent stresses on small-scale fisheries?

How do different regional social economies of fisheries in the IO shape possibilities for adaptation to rupture?

How do particular social, economic, institutional, and environmental conditions generate divergent possibilities and outcomes for participants in small-scale fisheries in periods of rupture?

Case studies



Methods and approach

- Observations
- Surveys
- Semi-structured interviews
- Focus group discussions
- Key informant interviews
- Analytical review of state policies, regulations, and data
- Transect walks and mapping
- GIS mapping and visualization
- Iterative process of comparative interdisciplinary discussion and field research

Collaborative Process



Rupture and Shrinking Space

Rupture

- Modified idea from social-ecological systems thinking (Turner et al. 2003)
- Moment of shift from one state to another, often with destructive effects for human groups - “disruptions, dislocations and dispossessions”

Shrinking space

- Drawing on David Harvey, how capitalist accumulation is physically, discursively, and institutionally constraining access by small-scale coastal actors to spaces for action

Dialectic of rupture and shrinking space

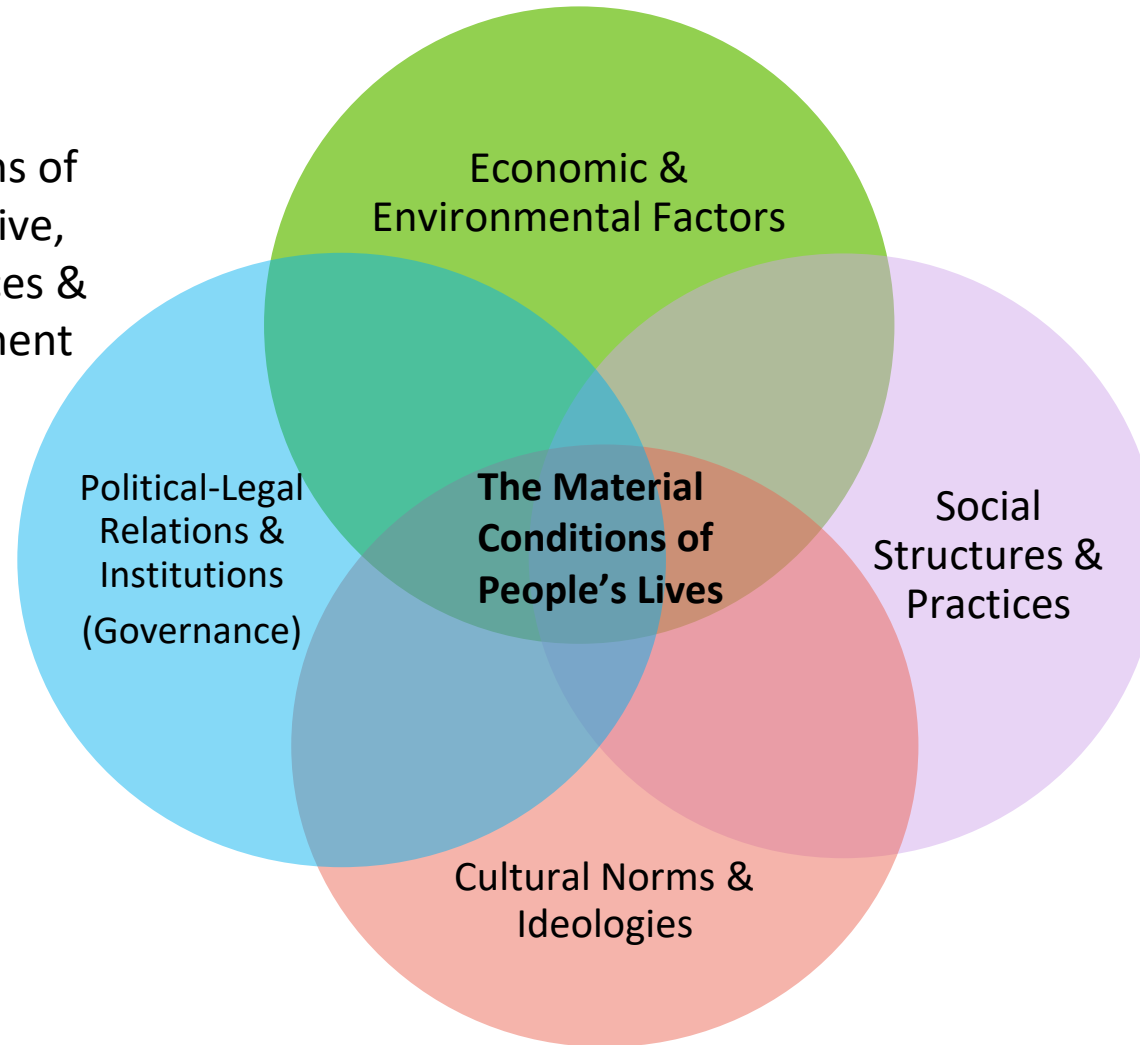
- Predominant development ideologies in the IOR premised on growth by dispossession
- Hastens conditions for ruptures
- Ruptures, local and regional, challenge development models
- Support for small-scale actor groups may shift the dialectic towards greater social-ecological resilience

Gendered Adaptations: Materialist Feminist Approach

Economic/Environmental:

Resource base; physical environment; organization of economy; livelihoods; divisions of labor – productive, reproductive, community; access to resources & education; mobility; employment markets; wages

Political-Legal: Rights of property, inheritance, voting, participation in governance, household decision-making; Power relations that structure access to rights and resources



Social: Kinship, descent, systems; marriage/ sexuality; household composition; family structure; social norms; social privilege

Cultural: identities; moral authority; ideologies & beliefs; constructions of power and authority; constructions of space (public/ private) and social status – other examples?

Rupture and Gendered Adaptations

- How do gender ideologies in different communities construct economic roles and access to resources? How do these then inform household livelihood strategies and the organization of local fish economies?
- How do *ruptures* impact men and women, and different groups of men and women, differently as a result of gendered economies?
- What are the implications of these impacts for adaptations? How are adaptations gendered? How do different groups negotiate ruptures and what spaces are available for collective action or resistance?
- How might ruptures and gendered adaptations rework gender norms, ideologies and relations within households and communities?

⇒ Diversity across Place, Diversity in Place – variations in adaptive capacity



Kenya

Kenya: Shimoni – Vanga Seascape

Kwale County, South Coast of Kenya. 250 Kilometer coastline, 62Km² land mass under water

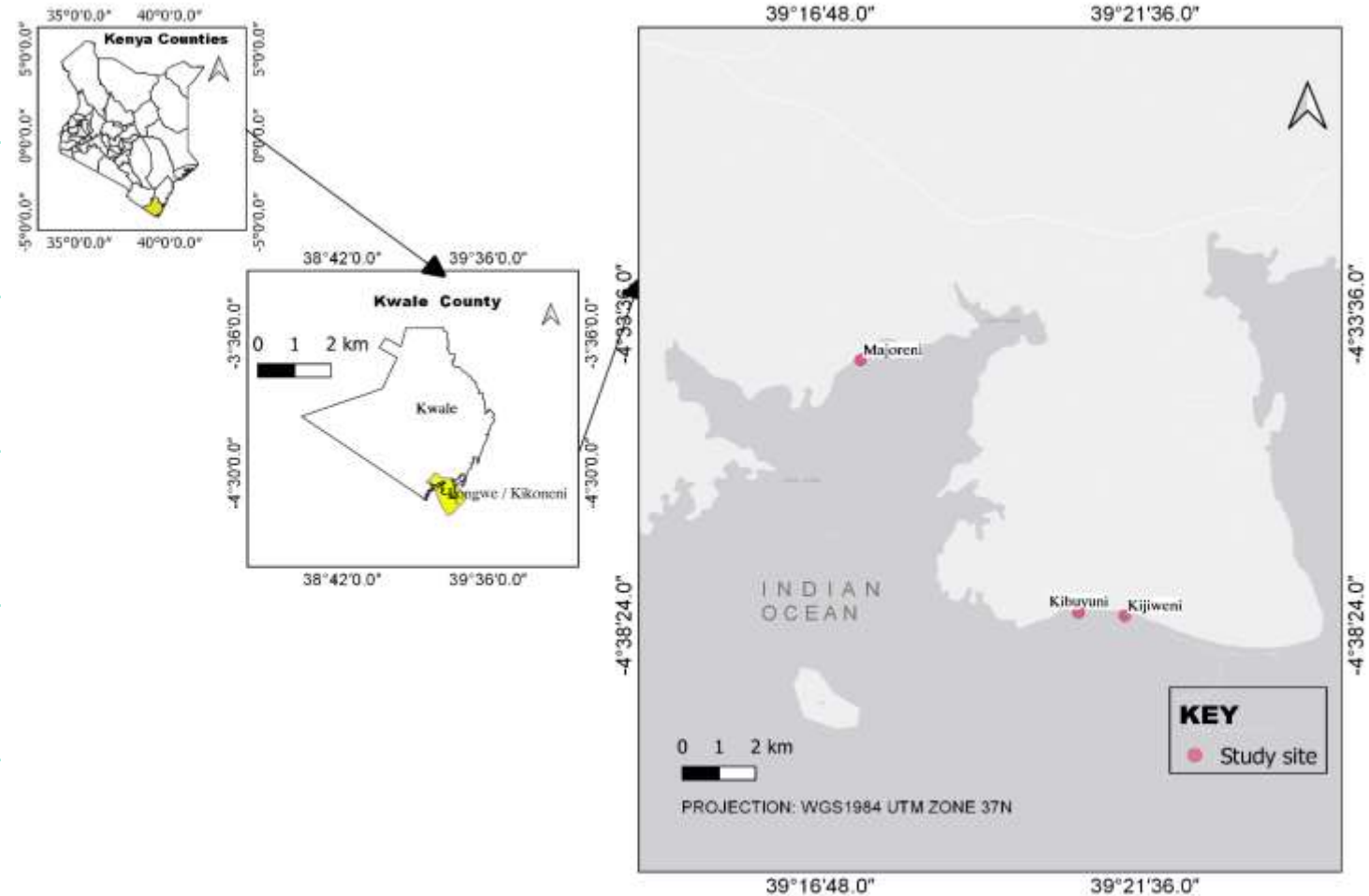
Population: 866820 persons; 425121 men, 441681 female and 18 intersex

Study site: Kibyuni, Kijiweni & Majoreni villages

Adjacent to the Indian Ocean, communities depend on marine resources for livelihood options

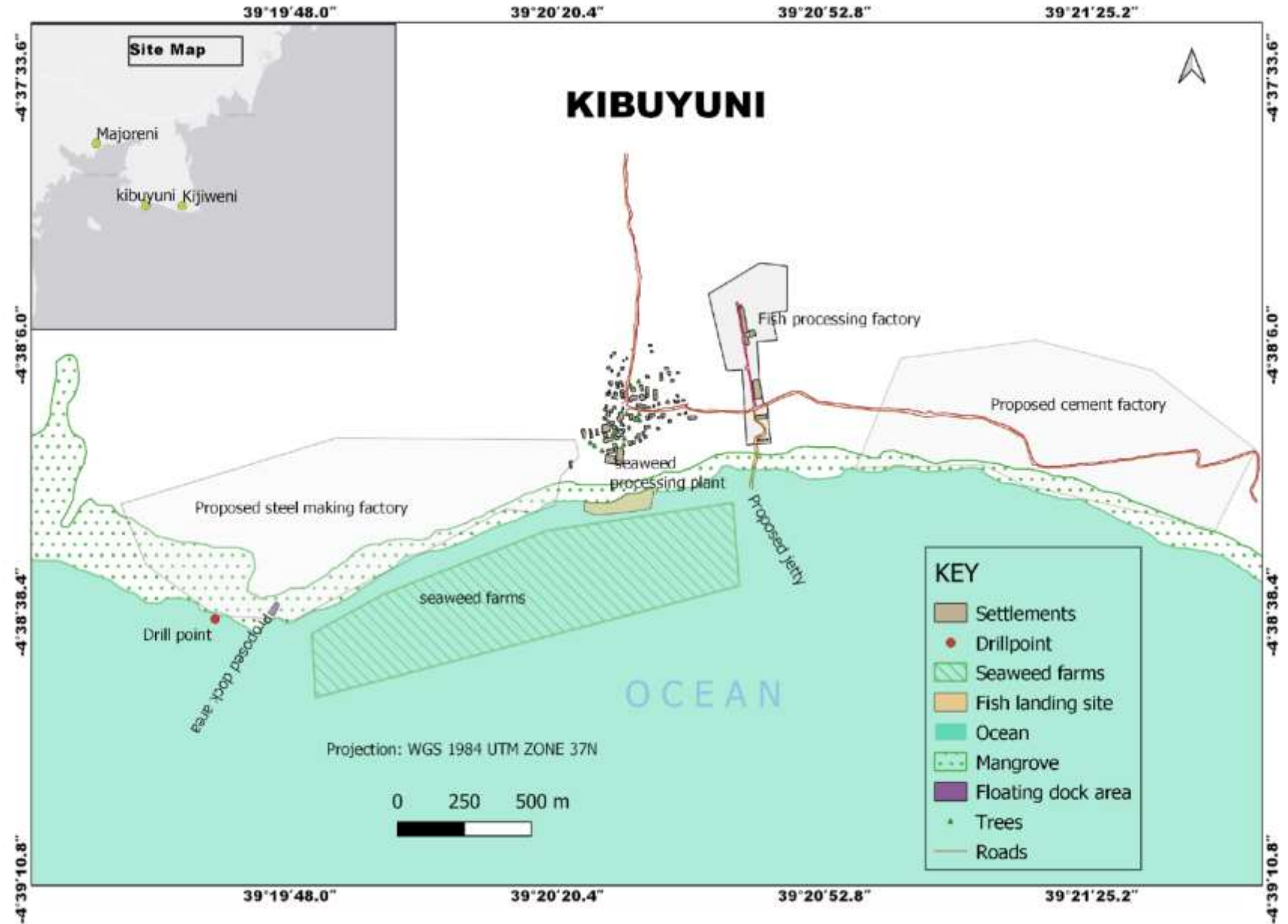
Blue developments in the area threaten community livelihoods

Concerned community feel disenfranchised. Scared their village will die.



Predominant ruptures and drivers of these ruptures

Ruptures	Drivers
<p>Blue Developments</p> <ul style="list-style-type: none"> ➤ Fish processing factory ➤ Proposed steel making factory (drilling is ongoing) ➤ Proposed cement factory (clearing of vegetation for construction is ongoing) ➤ Seaweed storage facility and processing plant 	<ul style="list-style-type: none"> ➤ increased investment in the blue economy ➤ Increased private investment in the blue space ➤ Political interest



Impact of blue developments



Drilling by steel making company



Rotting of seaweed

Drilling has caused pollution, leading to rotting of seaweed, and loss of fishing space. Fishers reported reduced harvests (fin fish from 20kgs to 5kgs) and (octopus from 5kgs to 1kg).

Conflict brought by fish processing company

- Increased conflict between sardine fishers/boat operators and seaweed farmers
 - i. Passing boats cut seaweed ropes in the farm
 - ii. Waste water from the boats is drained in the farms causing death of seaweed
 - iii. Some fishermen fish in the seaweed farms and they cut seaweed ropes



Seaweed farmers working in the farm

Rupture, manifestation and collective action

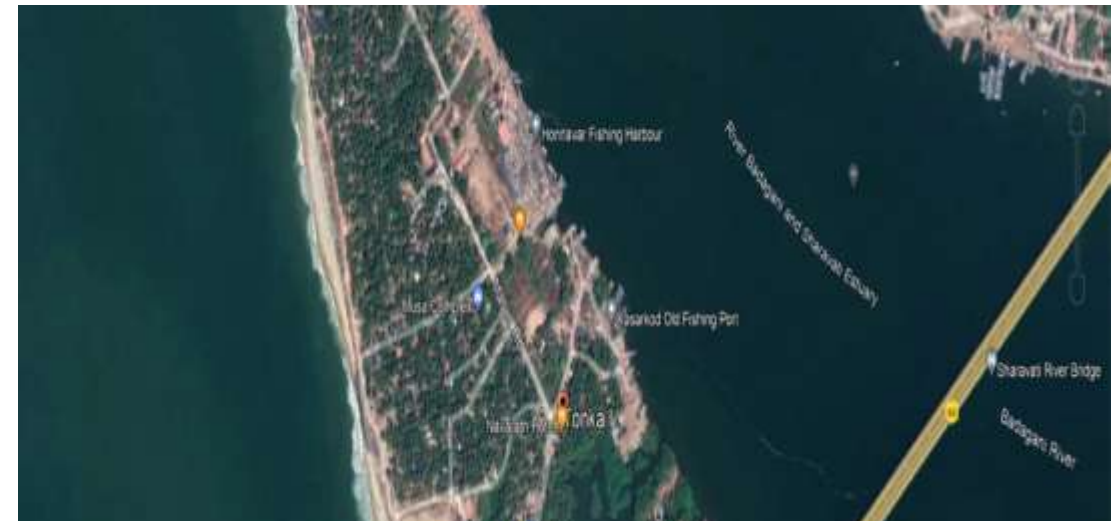
Rupture	Manifestation	Collective action
<p>Blue developments</p> <p>(Steal making company; cement company; fish processing company)</p>	<ul style="list-style-type: none"> ❖ Loss of working space for men and women (fishing area, seaweed farming) ❖ Loss of land for settlement, village expansion (men and women) ❖ Loss of income for men and women involved in small scale fisheries as a result of destruction of the common pool resources (fish, marine environment) ❖ Loss of land for burial and shrines, to construction of industries infrastructure ❖ Increased resource use conflict (seaweed farmer and fishermen/boat operator harvesting sardines) ❖ Loss of mangrove and vegetation ❖ One village completely enclosed/relocated/Separation of families 	<ul style="list-style-type: none"> ❖ Protest from members of the community (temporal stop of operations) ❖ Involving local leaders & politicians ❖ Dialogue between the community and developing companies ❖ Mangrove restoration/ tree planting ❖ Seek compensation ❖ Stakeholders engagement (involve other government agencies)

India-West Coast



➤ The study site

- Tonka 1 & 2 wards, Kasarakoda village, Honnavara taluk, Uttara Kannada district, Karnataka state, India
- The study site is shown in different levels of detail in the three pictures



Predominant ruptures of small-scale fisheries of Honnavara and their drivers

Ruptures	Drivers	Manifestations
Construction of a commercial port	Political economy	<ul style="list-style-type: none"> • Fishers evicted; • Loss of property and livelihood;
Tourism development	<ul style="list-style-type: none"> • Privatization; • Globalization 	<ul style="list-style-type: none"> • Fishers denied access to commons spaces; • Loss of traditional livelihoods
COVID	Biophysical	<ul style="list-style-type: none"> • Financial loss; • loss of livelihoods
Increasing competition from the fishmeal industry	<ul style="list-style-type: none"> • Governance failure (inappropriate priorities); • Resource degradation 	<ul style="list-style-type: none"> • Increased price of fresh fish; • Decreased fish supply in local and regional markets;
Increasing competition from coastal aquaculture	<ul style="list-style-type: none"> • Governance failure (inappropriate priorities); • Resource degradation 	<ul style="list-style-type: none"> • Increased price of fresh fish; • Decreased fish supply in local and regional markets; • Pollution
Coastal erosion	Climate change	Displacement of fishers

Kasarakoda- Fishers have been deprived of the commons space for drying fish



Kasarakoda harbor: no place for traditional fishers to dock their boats



16.08.2022 17:10
14.27784, 74.42986
7CGH+RP6, Kasarkoda, Karnataka

Kasarakoda eco-beach: cleaner stretch of the beach separated from the rest of the beach.



A harvest of small-sized mackerels in Honnavara being sent to fishmeal factories in Mudaga, Karwar



Mushrooming of cage aquaculture units in the Sharavati estuary in which fresh fish are used as feed



Farming of the Asian seabass/Barramundi/Kuruday meenu in Kannada/Chonak in Konkani (*Lates calcarifer*), a carnivorous fish, in cages

Collective action in response to ruptures in Honnavara

- Collective action against the construction of private commercial port
 - Lot of anger among fishers against the private port
 - Trawler boat fishers' association, fish sellers' association, labour organization, and women laborers' association- collaborated and discussed the issue
 - Legal actions taken by fisher collectives
 - Honnavara Taluka Hasimeenu Vyaparasthara Sangha
- Fishers and the local community do not appear to feel too strongly against the Eco-beach

Gendered impacts of the ruptures in Honnavara

- Port construction has severely impacted fish drying, an activity where women play a dominant role
- Any rupture that affects drying and/or marketing of fish would have impacts on fisherwomens' income and livelihood
- Fisherwomen feel the struggle for space, for procuring fish, and in general to sustain their traditional livelihoods
- Port construction can offer alternative livelihoods
 - Fishers do not want to work for others now, having been self-employed all their life
 - Most of the new jobs would be for men
 - Local fisherwomen are not well-educated
 - Even local fishermen are not well-educated for taking up new jobs coming up at the port

India-Tamil Nadu on the East Coast





- ❑ Field Area: Pamban Island, Ramanathapuram district, Tamil Nadu.
- ❑ This district has the largest number of fishing villages in the State - a majority of them are multi-caste/class settlements - it has seen many changes in the last couple of decades.
- ❑ Focus: Aquaculture farming and its impacts



Pamban Island

Ruptures and drivers

- Commons, proletarianised and segmented
- Practicing both fishing and agriculture
- Capital and business enterprise
- Accumulation by dispossession

Women seaweed farmers



Photo by Saravanan (2022)

Collective action



Photo by Saravanan (2022)

Aquaculture farm

- Caste panchayat - Aquaculture Capital
- Civil society - awareness campaign
- Communist Party of India (Marxist) - local movement
- Farmers struggle and the Supreme Court Judgement in 1996
- Cost and time to mete out justice

Manifestation in gendered spaces

- Employment
- Local vegetation and pollution of lake
- Salinity of groundwater
- Seaweed farming
- MGNREGA
- Access and usage of beach space



Effluent of aquaculture farm

Photo by Bhagath Singh (2022)

Illegal shrimp farm

- CAA, 2005
- Adjacent to seaweed farming
- Encroachment on seashore



Sri Lanka



The case of Negombo

STUDY AREA



- Nested within a complex socio-ecological system-lagoon sea and wetlands
- Involves a diverse set of stakeholders-men, women, small/large scale fishers
- Interacts with and is affected by other industries and livelihoods: Mega city development, industrial zones and tourism



Fish suppliers

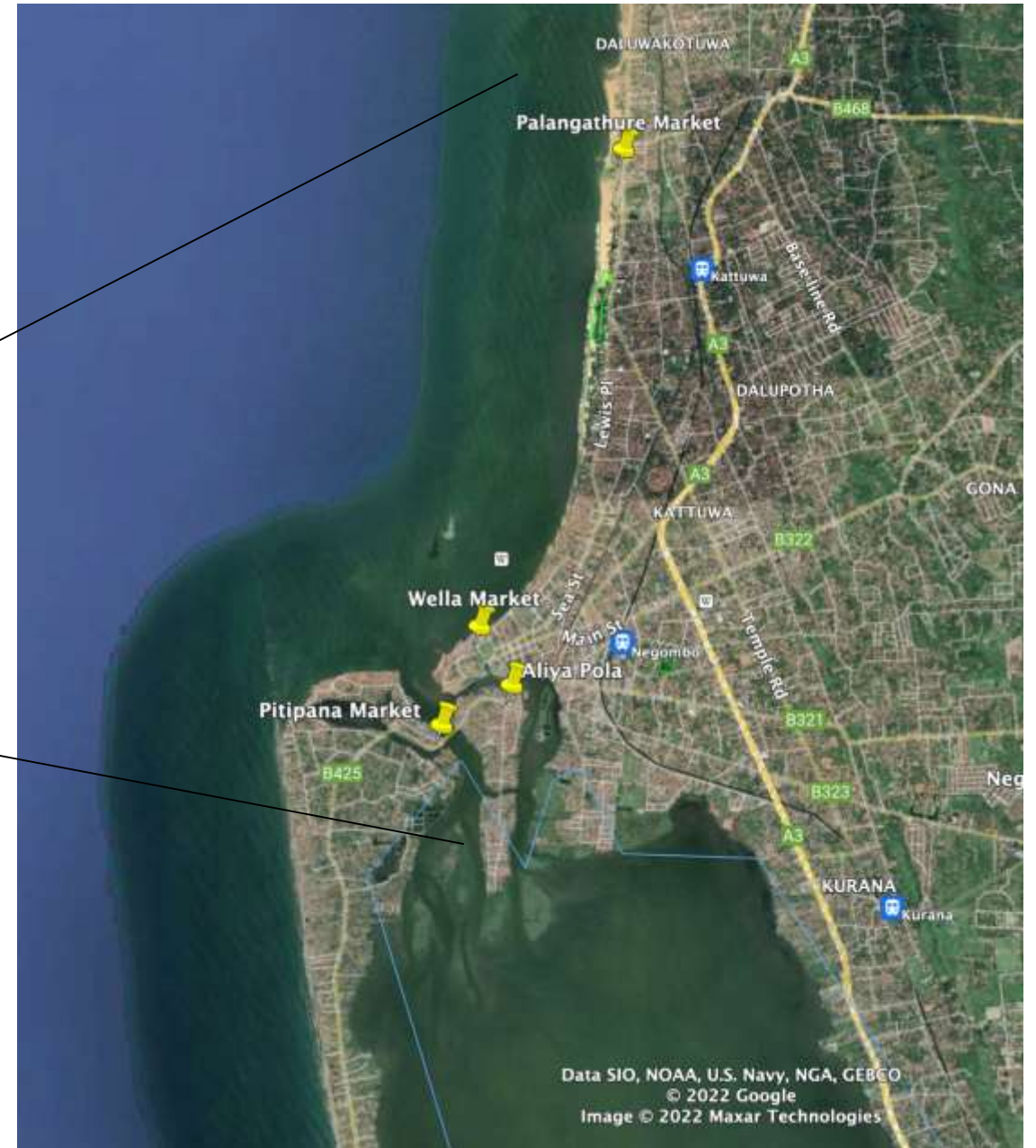


Labourers



Business Owners

Study sites



Ruptures	Manifestation (Gendered)
Reduction in catch	<ul style="list-style-type: none"> ● As catch reduced and demand increased, it was more feasible to bring fish from outside Negombo ● The market became masculine and were considered unsuitable for women ● Women were excluded from the markets or pushed to the margins
Construction of Port City	<ul style="list-style-type: none"> ● No compensation for women vendors
COVID-19 pandemic	<ul style="list-style-type: none"> ● Vendors were not permitted to sell ● The inability of fishers to go to sea impacted the entire fisheries value chain
MV-Xpress pearl ship disaster	<ul style="list-style-type: none"> ● Environmental damage due to the oil spill and nurdles ● Women were employed to clear the nurdles ● Women sellers and fish processors did not receive any compensation as they were not apart of any fisheries societies
Ongoing economic and political crisis	<ul style="list-style-type: none"> ● Fishers were unable to go to sea due to lack of kerosene (only non-mechanised vessels operated) ● No fish being landed impacted the entire value chain ● Price of fish significantly increased due to reduction in supply ● Women who sold fish from traditional non-mechanised boats were able to continue sales ● Women with strong networks were able to source fish that were brought from outside Negombo ● Since women sellers were not a part of any fisheries societies they were excluded from support by societies such as distribution of dry rations.

Being pushed to the margin

The space became more masculine as sellers and fish came from outside the community and district

Many mothers and grandmothers of Kattudel fishers were vendors. Their wives aren't. They describe the space unsuitable for women

"My wife used to help with selling the catch and she also looks after our children. She used to sell at the lellama at 6.00 AM. Before it was women who use to sell. About 40 years ago our aunts "Punchilage" use to buy and sell the catch. This doesn't happen anymore. The kind of language that is spoken in the market is different. It is quite vulgar and not suitable for women. I don't like taking my children or my wife to the lellama because of this." - Kattudel fisher, Duwa Pitipana

The younger generation is not seen in markets

"If we take our daughters there none of the men will work, they will keep looking at them"- Vendor at Aliya Pola

Women sellers at the margins



'Holding space'



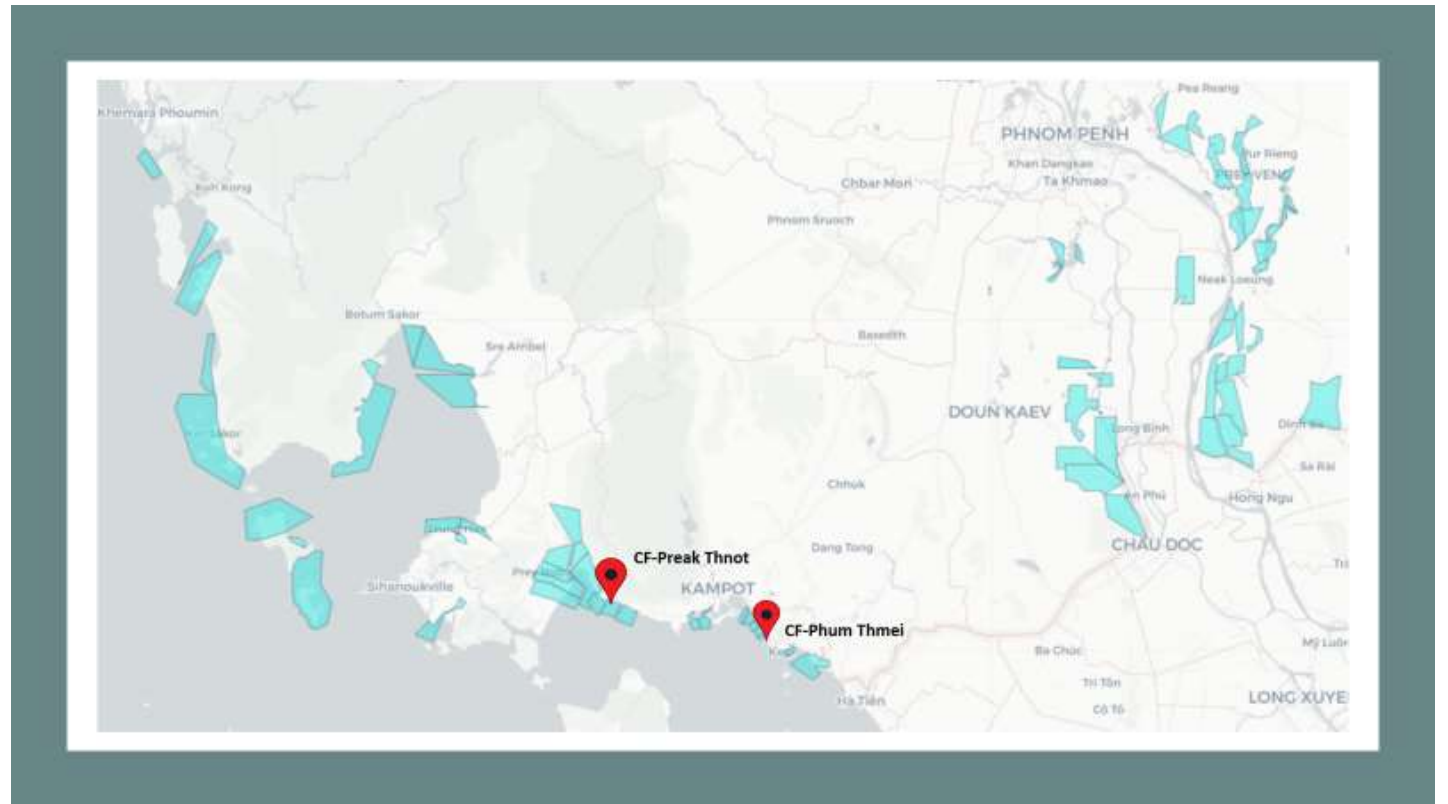
What is the role of collective action in response to these ruptures?

1. Women aggregating together in market spaces
2. Everyday resistance- a women seller standing up for another seller's unfair arrest
3. Formation of a women's fisheries society to fight against land grabbing in the area

Cambodia



Map of the study area



6 FGD, 96 questionnaire survey (59 women, 37 men), 19 IDI (13 women, 6 men)

Village 1, Kampot: resort development





Village 1, Kampot

Village 2, Kep: Beach extension, eco-tourism and sand sedimentation





Village 2, Kep

សហគមន៍ទេសចរណ៍
ធម្មជាតិភូមិថ្មី

អង្គការលក់កញ្ចប់ប្រហិត
សាច់តោអាំង មីនា!

Gradual shrinking of space and gendered impact

- Gradual shrinking of space that they used to know
 - Abundance of fish ☒ Decrease in fish resources around the shore
 - Decrease felt more by women – men fish in deep seas
 - “Before, women went fishing more than now. Now, because of the construction of the coast, we need to change the place where we moored our boats. Now we need to go around the area to get the boat out to the sea, so we need to drive further. So, we need a motorized boat. With motorized boat, women do not go fishing as often as before” (Ms MS, Kampot)



Adaptation

- Diversification of income (eco-tourism, factory work, construction, couple fishing rather than hiring workers, migration to Thailand, work as fish worker on others' boats, hired worker to clean net) ☐ non-fish activities done by women and youths
 - “I have always tried out this and that so that I can supplement the household income.” (Ms. OK, Kampot)
- Get children educated ☐ graduation from fishing
- Borrow money
 - “When we do not have enough income, women need to go and borrow money” (Ms. O, Kep)
- But what they can do can be restricted because of household work
 - “I do not do much of these work [hired work to clean nets] since I have to look after the grandchild.” (Ms. MS, Kampot, her daughter works in a factory)
 - “men can focus on one thing, but for women, she needs to think about many things like work and household” (Ms SS, Kampot)

Conflicts and divided communities

- “Two years ago, there was a floating ball demarcating the area where the company is planning to develop. Fishers have cut the marks, and now only the concrete poll remains.” (Ms. ML, Kampot)
- Divided communities
 - Organized petitions for government support (Kep and Kampot)
 - Divided communities: Collecting signature in both camps (Kampot)
 - “I have been to the meeting with fisheries officer twice. I have been to the meeting with company twice. There were more people who were supportive of the company’s investment. I was angry and I decided not to sell fish to those people” (Ms. ML, Kampot)
 - Mistrust to leadership
 - “CF committee has divided the land and planning to sell the land to the company. CF is on the investment side.” (Mr. IO, Kep)

Feeling of disempowerment

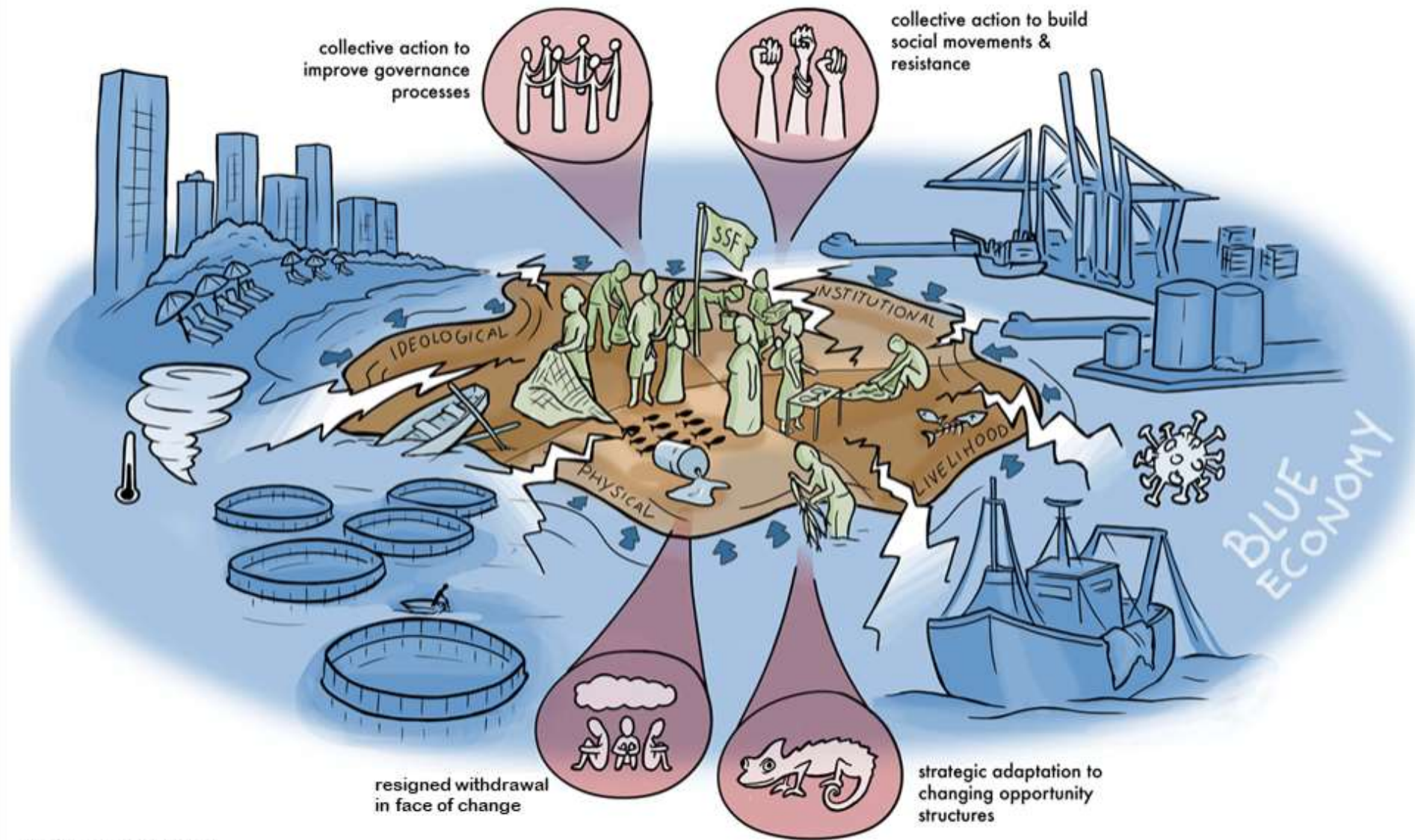
- “Villagers cannot say anything to whatever the government does. These government investment just happens. They just implement without consulting us. We do not want this kind of development.... If they say that this is government land, we cannot say anything. I do not have any ownership to this land.” (Mr. TT, Kep)
- “We have been petitioning about this issue [sand sedimentation in the waterway] for 20-30 years already, but never been heard. We have made petition with thumbprints 2-3 times already.” (Mr. IT, Kep)
- “We cannot win over companies. They have power” (Ms. MT, Kep)
- “There is another place where the company reclaimed land and planted coconuts. The fishers around the area complained to the province but still the construction went ahead. Police were deployed for security. The fishers there are richer than here. And still they were not able to win” (Mr. LR, Kep)

But in Kampot,
especially women
are actively
resisting

- Maybe because they are not in “the establishment”
 - “I will complain if the company comes to invest. No other benefit can replace the fishing ground.” (Ms. MM, Kampot)
 - “It is sometimes advantageous to be a woman. When women speak, people do not interrupt. People give priority to women” (Ms. YS, Kampot)
 - “There are some people who criticize me. They tell me that why are you against [investment]. We do not have any power. But I do not care. I tell them that we just sit and don’t do anything or protect our resources” (Ms. YS, Kampot)
 - “It is difficult to complain to the company alone. I have never gone to talk about this. If such construction happens, I cannot fish, so it is a problem. I will tell the community leader. I am just a simple villager, so I need to depend on the village leader” (Mr. PS, Kep)
- Or because of their social network
 - “It is not possible to win over the company. But I will join if CF ask me to join the protest. But I think we cannot succeed” (Ms. OK, Kampot)



Synthesis and Conclusions



Design: LauraEggens

Diversity in and across Place and Space:

Cambodia: Women buffer shock to fisheries by taking up non-fishing work

Sri Lanka: Women displaced in dried fish industry, but involvement in non-fish work is minimal

Kenya: Women seaweed farmers organize to lobby the State for assistance and attention.

India-East: Increased salinity of water-women's burden; changing social relations

India-West: Women's livelihood issues invisible

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