Workshop activity outline
Risk and change (90 minutes)

Aim:
To systematize collective local knowledge about risk and change through participatory mapping, supported by complementary documents and personal testimonies.

Materials needed:
- Base map
- Sheets of paper
- Pens
- Flipchart paper
- Markers or highlighters
- Adhesive (e.g., tape, sticky tack)

Facilitating the activity:

Moment 1: Identifying Risk and Change in the Fishery (20 minutes)
Participants are invited to reflect on situations where they—or their fishing activities—have experienced risks or undergone changes that impacted their way of life or fishing practices.
At this initial stage, encourage participants to freely and informally note any situations that come to mind. Each situation should be briefly described—ideally in one sentence or a few simple words—on half a sheet of paper or a card. Emphasize that detailed explanations are not necessary at this point.

The time for writing should remain flexible but guided by the facilitator. When most participants seem to be finished, the facilitator may ask, "Shall we move on to the next step?"
Next, the facilitator collects the cards and displays them on a wall using adhesive. Allow participants time to review the displayed cards and offer comments or suggestions. If there are duplicate or overlapping situations, these may be merged—with the group's consent—to avoid redundancy.

The group is then invited to suggest ways to categorize the cards. This could be by theme, time period, type of risk or change, or any other structure that emerges from the discussion. Participants may continue adding new cards as more situations come to mind.

Once the cards are organized, the group collectively identifies which situations are:
- Most common
- Represent the highest risks
- Involve the most significant changes
- These prioritized situations will serve as the focus for the next stage of the activity.

Moment 2: Describing Key Risk and Change Situations (70 minutes)

Working in small groups, participants will select specific situations identified in Moment 1 and develop more detailed descriptions. For each selected situation, the group will complete the following steps:

1. Situation Description
The participant who originally contributed the card will describe the situation based on personal experience. The rest of the group is encouraged to add relevant information. A flipchart will be used to record the discussion, guided by the following questions:

- What happened?
- Who was affected?
- What caused the change or risk?
- What were the consequences?

2. Temporality
Using a timeline drawn on a flipchart, participants will locate the event in time. Consider the following prompts:

- Was this a one-time event or an ongoing situation?
- Did it repeat or follow a pattern?
- How long did it last?
- What was the situation like before it occurred?

3. Geographic Distribution
Using the base map and a set of predefined symbols, participants will mark where the situation occurred. Guide them with questions such as:

- Has the geographic area affected changed over time?
- Did it occur in multiple locations?
- Has the situation led to physical changes in the territory (e.g., land use, access, or marine space)?

After 70 minutes, each group will display their completed flipcharts on the classroom walls for all participants to review. This visual summary will support collective learning and further discussion.

Methodological Design: Pile Sorting for Participatory Risk and Change Assessment[1]

Overview

The pile sorting methodology was embedded within a broader 90-minute participatory workshop titled "Risk and Change," designed to systematize collective local knowledge regarding changes and risks in small-scale fisheries. The activity facilitated shared reflection among participants through structured group exercises, participatory mapping, and storytelling. The pile sorting component constituted a foundational step for organizing community perceptions and served as a bridge to deeper qualitative exploration in small groups.

[1] Adapted from an outline by Alberto Fernandez and Nemer E. Narchi. Guadalajara, Jalisco. May 23, 2022.

Objectives

The pile sorting process aimed to:

1. Elicit a wide range of individual and collective experiences related to risk and change in fisheries.

2. Generate categories of these experiences through participant-led sorting and discussion.

3. Prioritize key situations based on frequency, perceived impact, and perceived risk level.

Materials

* Pre-printed base map of the fishing region

* Half-sheets of paper or blank cards

* Pens

* Flipchart paper and markers

* Adhesives (sticky tack or tape)

* Colored stickers for prioritization (optional)

Procedure

Moment 1: Elicitation and Pile Sorting (20 minutes)

1. Individual Reflection and Card Creation

Participants were invited to individually recall and write down distinct situations in which they or their fishing practices experienced risk or change. Each situation was written as a short phrase or sentence on a card (half-sheet of paper), with an emphasis on informal, brief descriptions rather than detailed narratives.

2. Collective Display and Initial Grouping

Once written, all cards were collected and displayed on a wall using adhesive. This collective visual prompted open discussion. Duplicate or semantically similar situations were identified by participants and, with group consent, merged or placed in proximity.

3. Participant-Led Categorization

The facilitator then invited participants to suggest ways to categorize the cards, effectively initiating a pile sorting process. Categories emerged inductively based on participants 'own frameworks—these could include thematic domains (e.g., environmental, economic, regulatory), time periods (e.g., recent vs. historical), or severity (e.g., high-risk vs. minor change). Participants physically grouped the cards on the wall accordingly.

4. Prioritization of Key Situations

Through group discussion and, where helpful, visual voting tools such as stickers or raised hands, participants identified:

* The most commonly experienced situations

* Those representing the highest perceived risks

* Those reflecting the most significant changes

These selected situations were noted and carried forward into the next stage for in-depth exploration.

Analytical Rationale

The pile sorting approach is derived from cognitive anthropology and ethnographic methods. It is particularly useful for mapping shared mental models and categorizing community knowledge. In this case, it enabled participants to externalize their experiential knowledge in a tangible and manipulable format. The method allowed patterns to emerge naturally through participant interaction rather than researcher-imposed taxonomies.

Results of Pile Sorting Activity

Across all workshop sessions (12 workshops with a total of 117 attendees), the pile sorting activity yielded a total of 250 unique situation cards. Following the collaborative sorting process, participants collectively organized these into 33 emergent categories. The most frequent and salient categories included:

- Environment/Climate Change (e.g., declining fish stocks, water pollution, changes in tides)
- Market comercialization (e.g., Market clousure, reduce market demand, low pricess)
- Social Problems (e.g., isolation, lack of communication infrastructure, shortage of basic services such as potable water and waste collection, crime, insecurity, limited access to education, and rising prices of basic goods)
- COVID-19 Pandemic (e.g., market closures, rising prices of products, shortage of healthcare and hygiene supplies, contagion/infection)

- Natural Resource Exploitation (e.g., resource scarcity, ocean warming, mortality of key species, disappearance of common and important species, price instability, overexploitation, changes in fishing bans, closures, and size limits, piracy and illegal fishing)

- Political or Government (e.g., crises, poor administration, issues with permits and concessions, unemployment, lack of support and fisheries-focused programs)

- Other - This category includes issues that were not repeated across other communities or that involved unique topics participants preferred not to group under other categories (e.g., earthquakes, sea lions, migration and tourism control, technological advancement and training, general risks).

Based on interviews, participatory workshops, and thematic coding, fishers and cooperative members highlighted a series of challenges that they consider the most urgent and impactful in their daily lives:

1. Climate Change and Its Effects on Fisheries

Across the board, people spoke of how climate change is hitting the ocean hard—and with it, their livelihoods. Warmer waters and shifting currents were blamed for the massive die-offs of key species like abalone, sea urchins, snails, and other mollusks. Many remembered past events, like Hurricane Nora in 1997, which wiped out much of the snail, clam, and lobster catch in certain areas. They also described how oxygen levels in the water have dropped due to warming, suffocating marine life. The appearance and unusual behavior of seaweed species such as *Macrocystis* and *Pele cochi* were linked to these environmental changes, affecting both fishing grounds and marine biodiversity. Most described these phenomena as completely out of their hands—"you can't fight against that"—and recognized that the more frequent these events become, the more production drops. That drop in turn brings financial stress, affecting not just individual families but the entire cooperative.

2. Ongoing Financial Struggles

Economic uncertainty is a recurring theme. Fishers spoke of long periods when the cooperative just doesn't have enough income to cover costs—what many described as being in a "slump" or crisis. With expenses constantly rising (fuel, bait, gear) and prices for their catch often falling short, it's hard to stay afloat. Delays in payments to members are common, and it's becoming more difficult to sustain social benefits. Some pointed to past financial mismanagement and debts, including personal loans tied to the cooperative, as part of the problem. Even during boom years, when catches and prices were good, savings weren't built up—something people now regret. They attributed this to a lack of planning or simply to a culture of spending everything without thinking about the future.

3. Internal Management and Loss of Cooperative Spirit

Many participants expressed frustration with the way things are run internally. Poor administration, lack of clear long-term goals, and little transparency around finances have led to critical situations in the past—even bankruptcy in some cases. Internal tensions are common, often tied to past decisions or leadership. People spoke about how hard it is to implement new rules or adapt to changes, especially when some long-time members resist anything that feels unfamiliar. Sanctions are sometimes needed to enforce agreements, which can create more tension. But perhaps the biggest concern was the feeling that the cooperative spirit is fading—that sense of shared responsibility and

solidarity. Instead, some members act only in their own interest, with a “just pay me and don’t ask me for more” attitude.

4. Piracy and Illegal Fishing

Illegal fishing and piracy were described as a constant, exhausting threat. Fishers talked about how these practices directly undermine their efforts to manage resources responsibly, especially for high-value species like abalone and lobster. Pirates operate without respecting seasonal bans or minimum size regulations, and for a time, were even described as the dominant force in some areas. Although cooperatives have increased monitoring, the problem hasn’t gone away. What hurts even more is when some of their own members choose to sell catch to illegal intermediaries rather than through the cooperative—an act seen as betrayal by many.

5. Bureaucracy and Lack of Government Support

Working with government agencies is seen as more of a burden than a help. Excessive paperwork, long waits, and unclear rules make it extremely difficult to get or renew permits, sometimes stalling operations for years. Many feel that regulations are outdated and don’t reflect the reality on the ground or in the ocean. There’s a strong sense that when real emergencies hit—like major production losses tied to climate change—the government is nowhere to be found. “We’ve never gotten any support during a crisis,” was a phrase repeated in different ways. On top of that, constant policy shifts with every new administration add to the feeling of instability. A common complaint was also the lack of serious enforcement against illegal fishing, which leaves cooperatives feeling like they’re on their own.