

Traditional Wisdom and Climate Change: Exploring Lived Experience of the Koli Community

Field Report- Machimar Nagar

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The following fieldwork was carried out as part of university coursework in September 2023, at 'Machimar Nagar,' a sub-locality in Cuff Parade located close to Colaba, Mumbai. The fieldwork was carried out by a group of 10 members among the 'Koli Community,' one of the oldest fishing-based communities in the region. Over a period of 3-4 weekends, each member of the group conducted interviews with fishermen, fish sellers, youngsters in the community, cooperative society office bearers, and other localities in the region. The following research essay represents my findings from the field linked to relevant literature on the subject. Due to the fieldwork coinciding with the Ganpati season, we were unable to interview leaders of the community, thereby creating a limitation in the findings. Other than the interviews, field observation was carried out at the 'Sasson Dock Fish Market' early in the morning, around 6-7 a.m. Our primary contact in the field was Mr Kailash, who is from the community and has also studied the community as part of his PhD thesis. From the interviews mentioned above and observation, insightful knowledge was gained regarding the community's perspective on issues concerning their livelihoods, the impact of a changing climate, their attitude towards government policies, a stark philosophical difference between traditional and modern fishing, and their own conceptualization of the very idea of sustainability. The report below presents the findings along with relevant secondary literature. Due to the limitation of time and scale, the report only becomes a beginning point toward understanding the views and issues of the community.

A Changing Arabian Sea: Impact on Life and Livelihoods

“If you had come a few years ago, we would have given you all a basket of fish and told you to take it for free; however, today, we don’t get enough for our livelihood itself,” exclaimed one of the fishermen who has been doing fishing for more than two decades. He went on to tell us how the quantity of fish they could capture had been reducing for years, and it had reached a low, making it even unsustainable financially speaking. The above comment was not a one-time reference but a recurring point of view throughout our field interviews. Everyone in the community seems to be in agreement regarding how modern fishing methods have been a cause

for the reduction in fish, a phenomenon that will be explored in detail later on in this report. However, a second reason seems more related to the changing Arabian Sea. The fishermen tell us stories of how their fathers and grandfathers could predict the weather by just looking at the sea, a kind of passed-on knowledge they still claim to have. However, they do acknowledge how it has become more unpredictable over the last few years, making it more challenging to plan ahead. The intense cyclones in the sea have severely affected fishing activities. Today, we know from the scientific literature that global warming has made the Arabian Sea more conducive to cyclones, a phenomenon earlier prominent only in the Bay of Bengal (Nandi, 2023). According to research findings, the sea surface temperatures over the Arabian Sea increased by 1.2 Degrees C in recent decades compared to four decades ago. The fishermen were aware of mainstream discourses around climate change and had their own conceptualization regarding these questions, which will be discussed later. Some of the fishermen suggested that they observed a clear shift in the pattern of waves, which made it difficult for them to carry out the fishing activity.



Figure 1- Sasson Dock

The major cultural festival of the Koli Community in Machimar Nagar is ‘Narial/Narali Purnima.’ It falls on the full moon day, i.e., Purnima, in the month of Shrawana as per the Hindu calendar. The celebration also coincides with Raksha Bandhan at times. On this day, the Koli community and several other fishing communities worship the sea/ ocean by offering coconut (Narial). It is believed that the worship is for seeking blessings from the sea to safely carry out their fishing activities post-season of monsoon. The community informed us how, on this day, even their children who are not into the profession of fishing stay there to celebrate and thank the sea for all their prosperity. The wide

belief of the community is that the sea will calm down after the Purnima and the monsoon shall subside, where fishing becomes safe and easy. The tradition of Purnima goes back generations and is deeply embedded in the community’s collective memory and identity. However, this tradition faces the threat of changing climate today! Even after the Purnima, cyclones, and

monsoon continue as a result of changed weather patterns in the Arabian Sea. The beginning of the fishing season that traditionally coincided with Narali Purnima faces a challenge today.

As a result of the above changes, there is severe stress faced by the community on account of reduced catch from the sea. They report how the income is simply not enough for sustenance. The community seems to be extremely proud of employing and paying workers on their boats, who are young men from rural Maharashtra and tribal areas, including Damu, Palghar, etc. As a result of this change, many in the young generation do not prefer the livelihood of fishing, and parents avoid the occupation for their kids. For the community, the number one culprit is not climate but rather modern fishing, an issue being discussed in the next section.

Worldview Beyond Sustainability: Traditional vs Modern Fishing

If one issue came up repeatedly during the conversations with the community, it certainly was the deep anger and complaint against the illegality and ideals of modern fishing techniques. According to existing Indian law at the central and state levels, fishing within 12 nautical miles is reserved for traditional fishing methods, which do not use industrial equipment. It is beyond 12 nautical miles of the sea that deep-sea fishing is allowed with industrial equipment such as 'LED Fishing.' In 2017, the union government made a landmark decision to ban LED fishing based on complaints received from traditional fishermen across the country (Mendoza, 2017). In LED fishing, it is seen that the lights attract large quantities of fish, decreasing catch by traditional means and also killing small fish, thereby significantly harming the total population of fish in the sea. All the community members living at Machimar Nagar practiced traditional fishing methods, and none of them had shifted to modern means, let alone LED fishing. One fisherman who used to go into the sea during the 1970s claims that some fishes are not even visible anymore, pointing towards a loss of biodiversity, a discourse most of us are familiar with in the mainstream.

Few members of the community were silent when asked if there was negligence from the authorities in the implementation of the ban. It is important to note that the lack of state capacity is adversely affecting both traditional fishing communities and additionally impacting the total fish population itself. Before the ban, there were more than 130 LED boats that functioned with permission; some allege that many continue to do so even after the ban.

On further observation, the difference between traditional fishing and modern fishing may not be restricted to that of legality or technology; instead, it is one of attitude, philosophy, and worldview itself. For traditional communities, including the Kolis, the sea is not a mere natural

resource or a means of livelihood. In their own words, "Humara Bhagwan, Jeevan, sab kuch yehi hein," a sentiment felt across the community. For the community, the sea is worshipped as their god; their existence itself is built around their relationship with the sea. For them, sustainability is not a concept being imposed from outside by regulation or an impending climate crisis but rather a way of living within a system of knowledge being passed from generation to generation. The Narali Purnima is a clear demonstration of how the community is defined by an interdependent relationship with the sea. The guiding idea of modern fishing is one of profits and maximum extraction, while for traditional fishermen, the rationality is one of a deep knowledge of reverence and interdependence with the sea. It would indeed be a fascinating study to delve deeper into the communities' myths and stories to understand their cosmology and explanations in line with Eduardo De Castro's work with the Amerindian tribes (Castro, 1998). Only a further study can reveal if this difference in philosophical outlook has a deeper origin in differing cosmological outlook. The limited duration of this fieldwork allows only for speculation in that direction.

Government Policies: Questions of Community Rights

"Kisan jo kheti karta hein, Unko jo hak hein, who Samudra kheti karne walom ko kyu nahi milta hein," roughly translated as, if the farmer who does farming gets their rights, why aren't the fishermen who farm in the ocean allowed to have theirs? A sentiment that was visible in the community as they raised issues ranging from community rights on the sea to property rights of individuals. The community raised an essential question on what is the rights of the fishing community when it comes to the sea, with which they have a relationship spanning centuries. According to the legends that the members narrated, the community located itself as far back as the time of Chatrapathi Shivaji Maharaj. Then comes an important question: Shouldn't the community have a say when it comes to development projects or decisions that affect the sea? The members do strongly feel that their voices become significant due to several reasons, such as their traditional knowledge regarding the breeding of fish, sea wave movements, and, additionally, since their very livelihood depends on the sea. The community narrated incidents where breeding areas of fish were destroyed by projects that had external approval and did not consult the community's traditional knowledge.

An answer to this puzzle may be found in the groundbreaking work of Elinor Ostrom, the first woman recipient of the Nobel Prize in economics. Ostrom's theory regarding the management of the commons attempts to overcome what is traditionally referred to as the tragedy of the

commons. She emphasizes the importance of involving local communities in governance efforts, facilitating effective monitoring, and fostering cooperation between local actors and regulators to ensure sustainable community-centric management (Ostrom, 2015). While Ostrom indeed studied small communities, policy analysis has shown how it can be applied to the high seas and thereby applied to the situation described above, too (Murtazashvili, 2023). Similarly, in his conceptualization of eco-Swaraj, Ashish Kothari uses examples of coastal sites governed by local fishing communities called locally managed marine areas (LMMAs) as an alternative to modern fishing's unsustainable ways (Kothari, 2018).

It is fascinating to note that the community's policy suggestions were extremely close to Ostrom's principles, a derivation they made from practical lived realities. The members of the community argued for their consulting to be made step-in projects being sanctioned in and around their area of fishing in the sea. Secondly, they argued that there should be members of the community included in the fisheries surveillance teams and coast guards since they understand the sea and working of the industry. At the moment, they do have a cooperative society that has been operational since 1968, which raises voices for their rights and also ensures help when someone in the community is in need of the same.

Concerning the other policies of the government, there seemed to be a skeptical optimism among the community members. The Prime Minister's Matsya Sampada Yojana was seen as a step in the positive direction. However, the community complains that most of these schemes are made with the big fishermen in mind, and they do not help small fishing communities like themselves. The members also raised a pertinent question regarding property rights. At the moment, the Machimar Nagar community members do not hold private property rights over the homes or land where they have been living for generations. This becomes a hurdle for them in accessing credit for both personal and business needs. Another important need that was raised was increasing the compensation under the National Disaster Management Act, which at the moment is too little to cover the costs of loss being suffered due to natural calamity. With the increasing intensity of natural disasters, the above and the need for proper insurance becomes significant for the community. The community is seeing the Matsya Yojana insurance scheme in a positive light.

Future of the Community?

What will be the future of the community is a question that is visible in the community itself. Neither does the next generation want to engage in fishing nor does the current generation want

their children to do so. However, this is not from an aversion to the profession but rather mainly from the helplessness stemming from the fact that it is not financially sustainable anymore. One of our teammates did raise the question of what happens to all of their knowledge if the next generation does not take up the profession, and the answer was a silence that said more than any answer could have. The ancient Greek word often cited in anthropological writing is '*techne*,' which describes the cultural and contextual nature of knowledge and skills based on practical association with an activity. It is different from the formal knowledge gained through scientific understanding, often called *episteme*. When communities like the above are forgotten, it is a rich repository of knowledge that is being forgotten. By the logic of modernization, what is happening is a natural process, where the inefficient means making way for modern profit-generating ways of carrying out the same activity. It is, however, the question of sustainability, regeneration, and interdependence that has problematized the simple assumption of modern development in the current day. As already seen above, traditional fishing communities are clearly more sustainable in their extraction of fish from the sea. Can there be a means by which those who wish to continue this profession are provided a ground to do so? The community certainly believes so. If there is more inclusive community-centric decision-making along with increased state capacity to counter illegal activities, they believe their livelihood can be made financially plausible once again.

Conclusion:

In conclusion, the fieldwork was extremely thought-provoking and knowledge-enriching. It provided further proof regarding how the question of climate change and sustainability problematizes the simple division between nature and culture (Latour, 1993). Has fishing become unsustainable due to a change in sea temperature, or is it due to modern extractivist fishing? Or is it a complex interplay between both? And what are the causes of the temperature increase itself? Is it natural or cultural? Secondly, the fieldwork also gave important pointers into how traditional communities visualize their relationship with nature, the sea in this case, different from the modern understanding of natural resources. As the world confronts the crisis of a changing climate, traditional knowledge and viewpoints of communities such as these become more significant than ever. Ideas such as community governance by scholars such as Elinor might provide pathways toward allowing these communities to thrive once again.

One of the members during the interview summed up their deep love and devotion towards the sea in the following line, originally in Marathi, translated by them into Hindi, "Samundar kitna

bhi purana ho, har bar Dikne mein toh naya lagta hein”, which translates into English as, The sea may be older than most things, yet, each time we take a look at it, it feels new to us.



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