

Fishing Along the Davao City Coastal Road: Narratives of Displacement

Raymundo R. Pavo  and Ryan C. Songcayauon 

Abstract

The construction of the Davao City Coastal Road has changed the lives and practices of fishing households along the coast. These changes, this study holds, are reflective of forced displacements in the guise of local development. Built as a development project for urban dwellers, the community members ask this relevant question: What is at stake with these development projects for their fishing communities as they live along the coast? Through a qualitative case study of three coastal barangays, this paper argues for the need to address the pressing issue of ecological, social, and livelihood displacements experienced by fishing communities and offer policy recommendations to address or mitigate the problems or difficulties experienced by these coastal communities. In conclusion, the study emphasizes the importance of effective community participation in the planning and development processes to ensure that the needs and concerns of the fishing communities are adequately addressed. The study further suggests implementing measures to facilitate smooth access to the sea, ensuring safe and stable docking areas for fishing boats, and possibly enacting ordinances to protect new fish spawning grounds by utilizing the coastal road's protective features. These recommendations are proposed to mitigate the adverse effects of urbanization projects, such as coastal roads, on the fishing communities and fine-tune support mechanisms that can forward the communities' sustainable development.

Keywords: fishing communities, urbanization, displacement, Davao City

Introduction

What is the influence of the construction of the Davao City Coastal Road on the socio-economic and cultural profile of small-scale fisherfolk in the coastal fishing communities in the City of Davao? Stretching 17 kilometers, the coastal road project overlaps with 18 coastal barangay communities. This is around 70 percent of the total 26 barangays in Davao City that live along the city's coasts. Eight kilometers of the Davao City Coastal Road were opened to the public on July 1, 2023. The Philippine Information Agency's (PIA) website cites that the Davao City Coastal Road is constructed not only as a thoroughfare, but also as a storm surge barrier and as a promenade and park.

With the construction of the Davao City Coastal Road, the influence of this structure as part of the city's urbanization program on fishing households warrants detailed documentation and critical analysis. Thus, this study contextualizes and appraises the effects of the changes brought about by the Davao City Coastal Road on the fishing communities. A key interest in documenting the changes in the area includes the lost spaces in the community, the kinds of fishery resources that longtime fishers in the affected communities used to enjoy, and the changing cultural activities as a result of the big-ticket development projects.

In doing this study, it is important to note that studying small-scale fishing communities in urban settings is a marginal topic compared to studies of small-scale fisheries (SSF) in rural areas (Allison & Ellis 2001 as cited in Kadfak 2020). The Food and Agriculture Organization (FAO) even commits to the rural framing of the small-scale fishery by locating artisanal fishing communities in remote vicinities (FAO 2015). Thus, this study aims to contribute to the reframing of fishing communities by including small-scale fishing communities in urban settings. Manejar (2022) also notes that with growing urbanization patterns comes the emergence of peri-urban spaces where fishing communities along the coastlines belong. Additionally, these peri-urban zones are natural offshoots of the archipelagic nature of the country (Manejar 2022). Peri-urban spaces, in this regard, loosely refer to "spaces at the periphery of cities whose resources, such as land and water, are appropriated to support urban expansion" (Narain and Nischal 2007 as cited in Rajendran et al. 2024).

From a critical lens, this study uses Massey's (1994, 2005) sense of place in interpreting the fishing communities' narratives of forced displacements. By considering a place as processual and an intersection of emerging identities and agency, this study looks at space-place attachments of fishing communities as the embodied counterpart of what fishing means to these communities.

Fasal and Manalodiparambil (2023, 235) add that it is this sense of place that locates the fishing community's right to the city, and to their participation in the re-making of urban life. The study draws upon Massey's theory to stress the human dimension of artisanal or small-scale fishing communities in urban settings. The study, in turn, mitigates the biological bias of fishery studies and underscores the social, cultural, historical, and institutional aspects of the artisanal fishing communities (Mariz et al. 2014, 637-38), and is a perspective highlighted in the Socio-Ecological Systems as a bio-cultural integrated approach to SSF (Arkham et al. 2022). This human and social science-oriented approach, therefore, stands as a critique and response to the privileged ways of homogenizing fishers and their communities (Knudsen 2012, 481).

This study aims to: (1) document and analyze the narratives of forced displacement of fisherfolk, (2) critically assess what development means for people from the concerned barangays, and (3) offer policy recommendations. This study also reframes rural-oriented studies on fishing communities by studying fishing villages in the city and stressing the human and social dimensions of fishing communities in contrast to the homogenous approach to the fishery sector. With both general and specific aims, the study provides a platform for the voice of the fishing communities given the development and expansion programs of the local government, such as the Davao City Coastal Road, and describes how these projects affect the life worlds of fishing and coastal communities. Thus, this study presents socio-cultural issues from the ground, and critically appraises narratives with Massey's notion of place-making, and concludes with policy recommendations to practically address identified issues in the studied communities.

Review of Related Literature

Urbanization and its effects on fishing communities in urban city centers are a topic qualitatively explored in India (Fasal and Manalodiparambil 2023), Brazil (Mariz et al. 2014), and some countries in Southeast Asia. This topic on the impact of big-ticket development projects in urban centers, however, remains critically unexamined, as in the case of the construction of Davao City's coastal road.

Our literature review begins with a study in India, which looks into this query: Does the state regard the fishing community as mobile and displaceable populations in urban expansion projects? This is a query asked by Fasal and Manalodiparambil (2023, 221) in their discussion of the fishing communities along Chennai, India. Stressing the inextricable relation between tenurial land

claims, livelihood, and dwelling issues, their study highlights the communities' strong sense of place and their stance to negotiate and resist the tendency of urban development to usurp their places of residence and livelihood. These similar concerns can be raised given the construction of the Davao City Coastal Road along coastal and fishing communities in the city. Hence, this question is in order: Are there emerging displaced socio-cultural spaces due to the construction of the Davao City coastal road and dikes along fishing communities?

The cultural status of fishing among fishing communities in urban city centers is a topic also explored in Mariz et al.'s (2014) study of fishing communities in Brasília Teimosa, along the long coasts of the city of Recife, Brazil. With the youth being lured into the urbanization process, the study highlights the risks of the youth being averse to fishing, thereby contributing to its discontinuity as a cultural practice. Given that households in urban centers have increasingly diversified sources of income, fishing families may eventually lose fishing as a cultural practice. The intergenerational concern about the status of fishing is also a shared interest among fishing communities along the coasts of Davao City. With the construction of the coastal road in Davao City in the name of urban progress, it also remains to be seen how these changes will affect the youth, their role in perpetuating or curtailing fishing as a cultural practice, and the local government's position about the future of fishing in coastline communities.

With regard to fishing communities in the country, most studies are in rural areas. There remains a scant scholarship on fishing communities in urban city centers. This bias is also shown in the kind of studies done on fishing communities in the country by Zayas (2016), de la Pena (2016) in Panay, Pastor (2016) in Davao Oriental, Mangahas (2016) in Batanes, and Lanticse (2017) in Davao Oriental. The study of Pastor (2016), for instance, narrates the life story of three deep-sea women fishers in Governor Generoso, Davao Oriental. In this paper, she describes the agentive capacities of women to determine their lives, which counters the narrative that women are marginalized or disempowered in the fisheries sector. This counter-narrative is an important perspective given women's narratives in the coastal communities in Davao City and how they were specifically affected by the construction of the Davao City coastal road.

In another local study of coastal communities, Knudsen (2012) discusses the struggles of poor fishing families to obtain tenure rights or formal lease agreements. In the absence of financial resources to support such applications, Knudsen explains two models, namely, the *katungod* (prerogative) model and the property law model. In the *katungod* model, families underscore

the length of stay and attachment to the place, even citing the number of years that their families have spent in the place. Moreover, tax receipts and inheritance of these dwellings are also invoked as proof of ownership. To this approach, Knudsen (2012) cites Gatmaytan's (1992) account of customary land tenure practices as always subject to change, testing, and experimentation. On the other hand, Knudsen (2012) describes the property law model as one in which formal rights to land are acquired through the judiciary arm of the state. In the absence of these formal rights, all dwellers on the coastlines are considered squatters and can be evicted by the formal owner; usually the rich have the means and resources to make such applications and demands. Between the two models, Knudsen (2012) holds that most poor fishing families invoke the katungod, or customary, model when challenged over tenurial access and rights. Given the tenurial challenges of living along the coast and the long history of marginality (Knudsen 2012), this question is in order: How do fishing communities negotiate their fishing practices and small-scale fishing knowledge given the expansion projects in urban centers such as the construction of the Davao City Coastal Road?

With fishing communities affected by urban expansion, Banzon-Bautista (1998), in her paper on "Culture and Urbanization: The Philippine Case," holds that the social and cultural modifications brought about by the urbanization projects are most felt by marginal communities. Kaushal (2009) refers to these projects as development-induced displacements (DID). Banzon-Bautista (1998) adds that it is the lower socioeconomic classes who are usually affected by urban expansion, with those on the periphery, such as coastal communities, suffering the most from relocation and cultural changes brought about by new infrastructure. In the case of Davao City's construction of the coastal road, this development project certainly benefits other urban dwellers, and it remains to be seen what fishing communities along the coast can benefit from these constructions.

With a lack of studies on the impact of the construction of the coastal road in Davao City, it is to this gap with the present study contributes to. This study describes the unique challenges that coastline communities in Davao City experienced vis-à-vis development projects such as the coastal road.

Methodology

This study utilizes a qualitative research design. Specifically, the project used a combination of surveys, focus group discussions (FGDs), and key informant interviews (KIIs). The survey considered at least thirty (30) households whose main livelihood is fishing in each of the selected three barangays. In the

actual survey, a total of 108 fishing households were surveyed. Based on the list of members in their fishers' organization, there are currently 217 fishers in Barangay 23-C, 80 fishers in Barangay Matina Aplaya, and 71 fishers in Barangay Talomo. This survey identified details related to the practice of fishing, years involved in fishing, and the fishery resources available in the community. Following purposive sampling, the selection criterion is that these households have been fishing in the same barangay for the past 10 years. This criterion is used to ascertain the historical character of fishing in the coastal area up until the establishment of the Davao City Coastal Road. For gender parity, the household interviews involved 15 female members and 15 male members of the community. With the survey results, a total of six FGDs involving at least 20 households commenced per barangay to articulate narratives of forced displacement. Each FGD lasted for at least one hour. The two FGDs per barangay were participated in by 10 female and 10 male household representatives who were selected based on the survey results. Specifically, the team considered the participants with the greatest length of years spent in fishing and residence in the community. These discussions centered on the changes brought about by the Davao City Coastal Road to their communities, adjustments to fishing as a livelihood and socio-cultural practice, and alternative livelihoods of household members because of the changes.

To locally ground the FGD, community map-making before and after the construction of the coastal road adjacent to their barangays was conducted to help visualize the key spaces and institutions in the community. The community map was described from when they first settled in the barangay in order to take into account the important changes in the community as a result of the construction of the Davao City Coastal Road. Four semi-structured interviews with key informants per barangay from the fishers' organizations and the local barangay officials were conducted, and participant observations in the areas were also used to allow a close-hand encounter with the perceived influence of the coastal road in the everyday life of the fishing households. These methods provided a way to describe the fishing community's sense of place and how this sense of dwelling contributes to their narratives of forced displacements.

The results of the study were also presented for validation in a public forum on November 22, 2024. The activity was attended by the community representatives and representatives from various government agencies. This event allowed the communities to express additional perspectives and raise questions, which facilitated in-depth discussions.

Selection of Study Sites and Participants

According to the Environmental Impact Assessment Report for the Davao City Expressway Project (2022), “Davao City has 26 coastal barangays with a total coastline of 60.1 km. The coastal communities have a total population of 302,699 persons consisting of 56,749 households. The coastal barangays have 6,253 registered fisherfolk as of November 2019, according to the City Agriculture Office (2019). Data show that only one barangay (Daliao) is fully dependent on fishing as its main source of livelihood, while eight coastal barangays have 25–50% dependency on fishing. Less than 25% of households in 15 coastal barangays depend on fishing as their main source of income. A total of 50%–75% of households in Barangays Talomo and Lizada are dependent on fishing for their livelihood” (CCCC Highway Consultants Co., Ltd. and CCCC-AECOM Eco-Environmental Co., Ltd. 2022).

Given this report, the current project decided to focus its study on three key coastal communities along the Davao City Coastal Road, namely, Barangay 23-C (Isla Verde), Barangay Talomo, and Barangay Matina Aplaya. These barangays are selected because they have at least 50 percent of households dependent upon fishing for Barangays Talomo and Matina Aplaya, and the fishers are the minority in Barangay 23-C; these barangays are within the stretch of the Davao City Coastal Road. It is important to note that in the case of Barangay 23-C, the coastal road in this area is yet to be opened for public use.

Figure 1. A Portion of Davao City Coast Showing the Stretch of Coastal Road and the Three Study Areas



Source: Google Earth

Figure 2. Barangay Talomo, Davao City



Source: Google Earth

Figure 3. Barangay 23-C (Isla Verde), Davao City



Source: Google Earth

Figure 4. Barangay Matina Aplaya, Davao City



Source: Google Earth

Ethical Protocol

During the interviews, individuals were assigned a numerical identifier to protect their identity and personal data. Sensitive information was anonymized in the reports or publications, upholding the participants' privacy rights as per the prevailing laws of the Philippines. The research team is given full access to the dataset. This information set was securely transferred to a web-based database governed by stringent access controls, and all individuals seeking entry will be required to sign a confidentiality agreement. Data requests and access permissions are granted solely for processed data, ensuring that the personal details of participants are omitted. Hard copies of the interview and survey documents were securely stored in a locked metal cabinet and will be disposed of in a proper manner post-data processing, following ethical approval guidelines.

Before the study commenced, participants were briefed on the objectives and goals of the research. They were informed about what was expected of them, the overall participant count, and the potential advantages and disadvantages of taking part in the study. The briefing highlighted the point that their involvement is completely voluntary and they are free to discontinue

participation whenever they choose. Following this session, participants were asked to sign a consent form to acknowledge their understanding and acceptance of these conditions.

Following the UP Mindanao Research Ethics Committee's (REC) clearance last June 19, 2024 (UPMin-REC-2024-002), the research team engaged with selected barangays in Davao City via an official communication to seek approval for the study and request collaboration. After the barangays' consent and the identification of interview participants, the researchers dispatched invitations for the scheduled interview. Each barangay is expected to contribute at least 30 interviewees. The researchers, assisted by a research aide, conducted data gathering from June to October 2024. All stakeholders, including the research ethics committee, participating barangays, and respondents, were kept informed about the schedule. The data collection lasted between 30 and 45 minutes, while the FGDs lasted for an hour per group. After the interviews and FGDs, the researchers proceeded with the data processing using thematic analysis with the aid of the QDA Miner Lite free software.

Theoretical Framework

This study engages Massey's conceptualization of space as a product of relations, as being open and predisposed to the language of multiplicity (Massey 1999). These intersecting notions of space are useful in understanding the fishing community as a space that is a product of interrelations and interactions within the community, which is constituted by interactions, and marked by the complexity of issues and meanings and heterogeneity (Fasal and Manalodiparambil 2023, 227). These particular layers are of key interest in the analysis of space, as these contribute to the unfolding processes and identities of what a fishing community can become and embody. In Massey's (1999) perspective, the notion of open space holds an anti-essentialist stance and has a concern for differences. This notion of open space means that it is always in a state of becoming and that the future is undecided. It consequently allows for negotiations to ground its unfolding identities. In other words open space is "never a completed simultaneity" (Massey 1999). This open stance on what the future may unfold importantly stands as a critique of grand narratives on what constitutes progress, development, and modernization (Massey 1999), which oftentimes have been structured and determined by those who are in a position of control and influence. Thus, by listening to the narratives of forced displacements of fisherfolk, the counter-narratives of development, progress, and modernization may be voiced and given space for discussion.

Results and Discussions

Using the QDA Miner Lite free software, the data from the total of six focus group discussions, two in each barangay, with a total of 60 participants from the three barangays, generated the following recurring themes of displacements:

Table 1. Themes of Displacements from the Focus Group Discussions

	Count	% Codes	Cases	% Cases
Changing fishing practices and challenges	47	20.5%	9	100.0%
Nostalgia (of the past)	40	17.5%	8	88.9%
Lack of social preparation	33	14.4%	8	88.9%
Needing a safe boat docking and passage area	109	47.6%	9	

From the data gathered, four themes of displacements emerged, namely: (a) changing fishing practices and challenges, (b) nostalgia (of the past), (c) lack of social preparation, and (d) needing safe boat docking and passageway.

The Need for Safe Boat Docking and Passage Area

The need for safe boat docking and passageways stands as the primary experience of forced displacement among the three communities. With the shorelines being replaced with dikes, the fisherfolk stress the key changes in their docking patterns and the difficulties that came along with such changes. In both Barangays 23-C and Matina Aplaya, their shorelines are already replaced with dikes, which consequently forced them to create makeshift docking stations by creating floating barrels with customized bamboo flooring. These floating barrels with bamboo flooring served as temporary stations for their fishing vessels at sea. These floating barrels with bamboo flooring can be seen in these photos:

Figure 5. Fishing Vessels in Barangay 23-C are stationed at sea with floating barrels



Source: Authors, Nov. 21, 2024

Figure 6. Fishing Vessels in Barangay Matina Aplaya are stationed near the dike with floating barrels



Source: Authors, Sept. 29, 2024

Since the vessels are stationed at sea, the fishers in Barangay 23-C shared that they would need to swim from the dike towards their boat. In their narratives, they would need to swim around 500 meters at 3:00 AM to reach their fishing vessels. Upon their return around noon time, they would need to swim back with their fish catch that is placed in a box, so they could bring their catch ashore. These are some of the key adjustments to their fishing experience in the absence of a docking place.

Figure 7. Fishing Vessel in Barangay Talomo Stationed at a Makeshift Post across the shoreline



Source: Authors, Nov. 15, 2024

In Barangay Talomo, the case is a bit different since they still have a workable shoreline, which allows them to station their fishing vessels along the shores. Interestingly, their boats are still susceptible to damage as the shoreline continuously shifts its contours, which the respondents attributed to the coastal road construction, and they would need to create makeshift station posts that they can use to tie in their vessels and hope that their vessels are still there when high tide sets in. The community is also still observing if there are shifting patterns for the sand contours in their area. But in the absence of makeshift posts, some fishers park their vessels across the shorelines.

With the three photos, one could observe the significant change and adjustment for fisherfolk in where and how to dock their fishing vessels. These adjustments can be recognized as their way of dealing with emerging challenges and difficulties. The first challenge that they need to contend with is the safety of their fishing vessels. As their primary source of livelihood, the fishers had to invent floating devices that could assure them that they would be able to find and use their vessel the following day. Given that they could no longer directly see their vessels from their households, which they were able to do before the construction of the coastal road, the fishers hoped that their makeshift floating device and posts would be enough to protect their vessels from the strong winds and waves. As one informant notes, “*Ang mga bangka karon, naa na sa gawas. Ang panahon sauna tong wala pa ang coastal, naa diri ang bangka, natago*” (The boats are now out in the sea. Before the coastal road, our boats were secured here along the coastline).

The second challenge the fishers needed to address was the passageway to the sea. This concern was most evident in Barangay 23-C. For this Barangay, their dike was constructed with one passage area so some boats could still park near the coastline. This port of entry, however, for many fishers is too narrow and could be extra challenging, especially during high tide. With high tides, particular concern was raised about the height of the fishing vessels not fitting into the height of the passageway. Some boats were also trapped inside the community as the boats' fins or wings do not fit the passage hole, and make it impossible to move the boats from the shoreline to the sea. An informant adds that the narrow passage space also makes it difficult for them to see if there are other boats entering the passage route. With this difficulty, the fishers can only hope that fishing vessels do not ram one another. The fishers also note that this small entrance cannot be used if there are big waves, since there is a tendency for boats to ram into the concrete walls. As one informant shared, *"Kung balod na, dili na man mi ka agi dira. Mangitag agianan, unsaon pa. 10 by 10 lang ang iyaha bangag, lisod kaayo"* (If the waves are big, you could no longer use the hole since its size is limited. At times, one also needs to look for other passageways so the fishing vessel can be docked). With its narrow size, the fishers hoped that the government could have considered a bigger entry for this passageway in their area, which could have made it easier for them to use. This situation can be gleaned from this photo:

Figure 8. View of the Boat Entrance in Barangay 23-C



Source: Authors, Sept. 29, 2024

The third concern of the fishing folks is the lack of safety for their fishing vessels from ill-intended human actions. This concern was most pronounced in Barangay Talomo since their fishing boats are no longer visually accessible to them. They share instances when some people steal the boats' engines and even the vessel's fuel. They tried to address this lack of security by having rotating shifts in guarding the boats, but they explained that this setup can only be done if the weather is good. As one informant explains, "*Sa usa ka gabii, katulo ka mumata para mabantayan nimo. Pero usabay ulan man*" (In one night, you wake up three times just to check on your boat. But at times, it rains, which makes it difficult to oversee the boats).

With the foregoing challenges, the three barangays hope that the government will provide them with docking sites that could accommodate the number of fishing vessels in their barangay. This, to them, will address most, if not all, of their problems about the safety and security of their fishing vessels and their livelihood. As to the size and location of these ports, the fishers are also hoping that they will be consulted, as they know the terrain of the sea that they have been working and living with, and the kinds and sizes of fishing vessels in the community. The question also arises as to why some barangays were constructed with docking ports while others were not included in the plan. This begs the question as to how the decision was arrived at. And since this is a national project, it is also important to note that the local government unit (LGU) has a limited role in the planning and implementation. No available file, such as the Environmental Impact Assessment (EIA), exists online. The research team requested it via the Freedom of Information portal (www.foi.gov.ph) on January 6, 2024, but it was forwarded to another government agency and was later tagged as closed.

Changes in Fishing Practices and Fishing Experience

The next form of displacement has to do with the changes in the fishing resources and fishing experiences due to the changes in the environment. With the shorelines changed to dikes, the three communities recount the lost fishery resources in the local area. They commonly stated that the shells, shrimps, and crabs that used to be abundant in the areas are no longer available. In Barangay Talomo, specific reference to the presence of *bangus* (milkfish) is an example of a local resource that is no longer present. This community laments that the mangroves in their place used to be a spawning area for milkfish. They recounted days when they used to sell *bangus* fingerlings to local buyers. Although quantitative catch data would strengthen this analysis,

requiring such data as a prerequisite may be inappropriate for informal fishing communities whose livelihoods are largely undocumented. A proposed mixed-method approach that reconstructs pre-construction conditions through fishers' accounts may provide a more contextually appropriate assessment of livelihood impacts.

With the removal of the mangroves in the area, these resources are no longer available to them for food and income. This resonates with Cao et al's., (2017) observation that expansion of urban spaces that affect island or coastline ecosystems means loss or reduction of spawning grounds, nurseries, and habitats (Manejar 2022). With some fishery resources no longer available, the question as to how these changes affect the poverty incidence in the area looms. The PSA (2017) notes that the fishing households in the country had a 34.0 percent poverty incidence in 2015. The significant changes in the local mangroves and vegetation can be recognized in the before and after photos of Barangay Talomo:

Figure 9. Barangay Talomo, with its shoreline and some mangroves, before the construction of the dike, while the construction of the coastal road was proceeding



Source: Barangay Talomo Community, no date

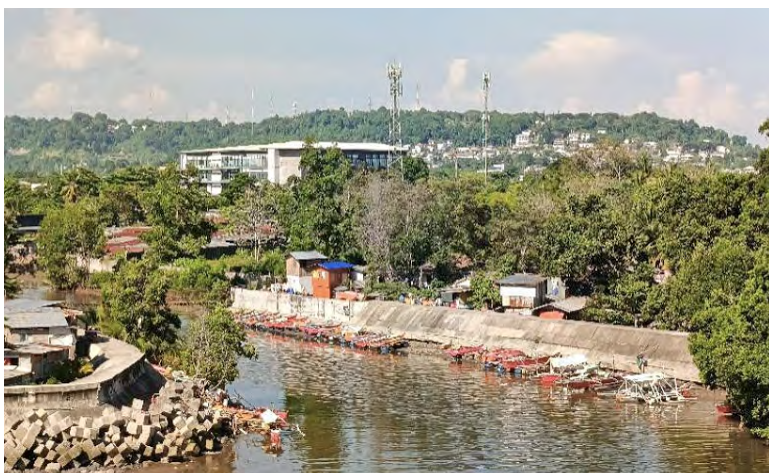
Figure 10. The current shoreline in Barangay Talomo, with the dike and boulders, and the depleted mangrove forest



Source: Authors, Aug. 20 2024

In Barangay Matina Aplaya, the eradication of their shoreline can also be recognized in the dikes built in the area, through this photo:

Figure 11. Dikes in Barangay Matina Aplaya



Source: Authors, Aug. 20 2024

With the changes in the environment, many of the informants recounted the lesser fish catch, especially while the construction of the coastal road and dike was proceeding. One informant shared, “*Ang sauna, kung sauna makakuba mig tag baynte (20) kilos nga nukos, karon, maka chamba nalang*

ka makakitag 10 kilos” (Before, one could get around 20 kilos of squid; today, it is pure luck if you could get 10 kilos). Abroguena et al. (2012) even hold that 80 percent of coastal fish can be traced back to the food chain found in the mangrove ecosystem. For the informants, the big change has to do with the depletion of mangrove forests in the area. Here is a sample of a remaining local *Nipa* (*Nypa fruticans*) mangrove, which the informants shared was bulldozed using backhoes during the dike construction:

Figure 12. Remaining *nipa* (*Nypa fruticans*) in Barangay Matina Aplaya



Source: Authors, Sept. 29, 2024

Another displaced socio-cultural fishing-related practice is when locals are allowed to get a portion of the fish catch to sell within the day and only pay for it at a later time. The community in Barangay Talomo shared that with the construction of the coastal road, the practice changed. Instead, one would need to first pay the commensurate weight/kilos of fish before one could sell it. For the locals, the change in this practice meant that they would need to have a working capital before they could sell the fish to their neighborhood. Consequently, fewer people are involved in fish vending in the community. One informant explained that one possible reason for the change is the unfolding difficulties in fishing due to their adjustments to the presence of the coastal road and dikes. As one informant noted,

“Kaniadto kanang bangka na isda, mangompra or angkat isuroy namo unya pag abot namo una pa bayran, nya kadlawon isuroy angkat-angkat. Sa pagkakaran di na, wa na di pwede angkaton ang isda cash to cash na”

(Before, one could pick up fish and sell it in the neighborhood before paying the fisherfolk. Today, this transaction is no longer practiced. You would need to pay first before you can sell the fish).

While there are other possible factors contributing to this change in practice, the respondents believe that the lesser fish catch brought about by the constructions in their areas contributed to such a change.

Lack of Social Preparation

The third form of displacement, lack of social preparation, refers to the number of households demolished in the area due to the construction of the dike in the community. From the FGDs, there are about 48 households demolished in Barangay Talomo, A, 70 in Barangay Matina Aplaya, B, and 190 estimated households in Barangay 23-C. With these demolitions, one informant narrated that “*Naa gani ilang bangka diha, kulob no wala na nagamit. Pero katong nangahawa, medyo naguol oy kay ialng panagat wala na nagamit. Tua na man silag bukid diha, wala man silay ka-landingan*” (Their boats are still here, and no one is using them as of this moment. Some of them are now living in the rural areas since they do not have a place to live in our community). In the absence of relocation sites within the area, they were paid meager amounts based on the size of their previous houses. For these families with demolished households, some went back to their parents and families, while some decided to rent within the community. For these affected families, they had to contend with occupational immobility, lacking alternative livelihoods, which is usually the case for families with low-level education (Betcherman and Marschke 2016, 31). For others, they had to give up fishing and start anew in the rural areas of the city, where land is vast and more affordable, leaving behind their fishing vessels. The concern over the effects of the coastal road construction on the safety of fishing boats was already documented in a CBPC News, which narrates a key concern raised by the fisherfolk in Barangay Talomo during a Franciscan Dialogue Program (FDR). In this dialogue, the fisherfolk narrated that at least ten fishing vessels were damaged after hitting the boulders along the pavement in their communities (Basallajes 2018).

The fear of house demolition also emerged in the process of explaining the project in the three communities, especially when they were asked if they were willing to sign the consent forms. They worry that their signatures may mean allowing the local government to demolish their households. They openly joked about this possibility, and the research team assured them that this activity is done for the sole purpose of research. Thus, there is a need to

Figure 13. An abandoned boat along the shores of Barangay Talomo



Source: Authors, Nov. 15, 2024

look into the best ways to prepare communities that will be affected by urban construction and help families meet the challenges of dislocation. As fishing communities along the coast are informal settlers, we take note of Manejar's (2022) point that historically, "fisheries receive less attention on tenurial security compared to their agrarian counterparts."

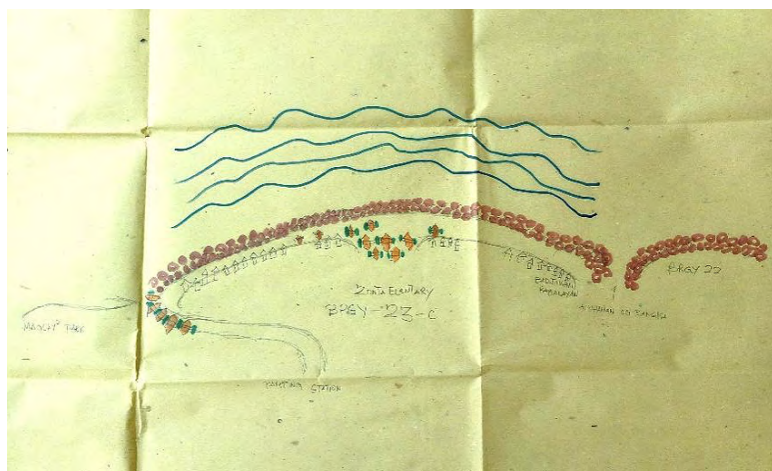
The potential future reclamation of the area where these communities live – since the sea is now blocked by the coastal road and a potential inland area could be created – raises questions about how existing occupants' interests, expectations, and vulnerability to displacement should be considered even in the absence of formal land ownership. Title is one indicator of tenure security, but tenure security is not reducible to title. There is also a question of created value. Before the construction of the coastal road, the areas were physically exposed to the sea, occupation was informal, and the land had relatively low development potential. When the coastal road was constructed, it changed accessibility, altered the relationship between the settlement and the shoreline, potentially facilitated land formation/reclamation, increased accessibility and development potential, and potentially increased the future economic value of the adjacent land. The interesting question becomes, who benefits from the transformation of the land, and who bears the cost of displacement resulting from that transformation?

Nostalgia of the Past

For the fourth form of displacement, we have accounts of the participants' memories of their past communities before the construction of the coastal

road and dikes. This theme refers to the communities' nostalgia (of the past), specifically when they first lived in the area. This form of spatial displacement refers to their memories of the kind of life, environment, and socio-cultural practices and relations that they had before the construction of the coastal road and dikes in their community. While most of them have accepted the reality of these constructions, the fishers choose to remember how their previous situation in their respective communities helped them live a productive life as fishers. Their recognition of their displacement from the environment that they grew up in meant choosing to inquire about how to adjust and live in the present fishing-related spaces in the community. As one informant described their past community, "*Dako kaayo ang lugar, nya dili sya igang kay ang hangin, musulod man tanan.*" (The area was expansive, and it was not hot since air could freely flow). This image of the community before the creation of dikes and coastal roads can be recognized in a community map made by the male fishers in Barangay 23-C:

Figure 14. Community map of male fishers in Barangay 23-C



Source: Authors, Aug. 23, 2024

In this map, the open sea space can be directly seen. There are stone boulders in the area, which also serve as the community's docking site for their fishing vessels. Based on this drawing, one can surmise the ease of going to the open sea and returning to their docking area. Their boats are also visible from where the people are residing, which gives them a sense of security regarding the safety and status of their boats. Betcherman and Marschke (2016) note that this open access to nature forms part of the safety net of fishing households, as this set-up requires less capital and still provides economic and subsistence benefits to their families.

When critically appraised, the data gathered from this study, engaging with the lens of Massey on negotiated space, allows us to discuss the broader meaning of narratives of forced displacements. Broadly construed, displacement stands for what Massey refers to as the experience of dislocation, fragmentation, and disorientation in people's explorations of the concept of "home," "place," "locality," and "identity" (Massey 2018, 159). In the case of this study, "fragmentation" of the environment is also evinced in some cultural changes within the community, especially about fish vending, and changes in the regulating ecosystems in the local environment with the reduction of mangroves in the shorelines of the community.

With forced displacements, Massey notes a possible explanatory condition – that "power is related to size" (Massey 2018, 160). Given that the LGU is implementing national projects in the city, one can see the disparity in power between the state and the community of fishers. What can the fishing communities do with big-ticket projects of the national government? Can the community of fishers negotiate how the designs of the dike and coastal road were to be made? To answer these questions, the forced displacements experienced by the fisherfolk attest to the precarious and disempowered position of fishing communities who are informal settlers on public land. Thus, displacements in this study are taken to mean (a) dislocation from their safe docking area for their fishing vessels, (b) fragmentation of the environment specifically the mangroves thereby affecting their fishing practices and resulting in challenges such as lesser options for food such as shells, crabs, and shrimps, (c) displacement in terms of demolished households and dislocation from fishing as a livelihood activity, and (d) disorientation in terms of their memories of the place and their sense of place with the community. All of these experiences of forced displacement suggest that their narratives and voices were not carefully considered. Although consultations with the local barangay leaders took place, the participants in the study shared that the side of the fishers was not taken into consideration. Thus, the marginalization of the fishers' life worlds, values, and sense of well-being stands as forced displacements with the construction of the coastal roads and dikes in their community. The gravity of the effects of the displacements experienced by the fisher folks can only be estimated negatively, given that small-scale fishers are highly dependent on the availability of fish resources in their environment. As socio-ecological systems (SES) underscore, there is a need to examine the tensions and interdependencies between the limits and capacities of the natural environment and social development (Restrepo-Gomez et al. 2022).

Given that the fishers struggled to find avenues and opportunities to express their voice to the concerned local government agencies, how do fishers relate to the material constructions such as the dikes and the coastal road? Noting Massey's notion of space as a "product of relations" (Massey 2018, 306), how do the fishers make sense of their place as their life worlds are now mediated by these local constructions? Based on the fishers' experience of forced displacements, we can infer that there is an ongoing tension and unfolding of questions about how the fishers presently construe their sense of place and their relation with these constructions. This tension revolves around their experience of uncertainty as they grapple every day with the unforeseen effects of the constructions on their community.

While informal settlers may have experienced a degree of tenure insecurity before the construction of the road, informality should not be equated automatically with perpetual or uniform uncertainty. Many households may have experienced relatively stable patterns of residence and livelihood over extended periods despite the absence of formal tenure. The construction of the road may therefore have introduced a qualitatively different form of uncertainty, particularly concerning future displacement, continued access to coastal resources, livelihood security, and the potential transformation or redevelopment of the occupied area. The relevant analytical question is consequently not whether uncertainty existed before the project, but whether and how the infrastructure intervention altered the nature, intensity, or sources of uncertainty experienced by the affected communities.

With these experiences of forced displacement, fishers feel the urgency to deal with these queries: What can be done, given that these constructions are here to stay? How do we deal with the experience of dislocation, fragmentation, and disorientation as fishers and residents of the coastal communities? These questions are important to raise, especially since changes in ecosystem structures due to urban expansion vis-à-vis fishing communities are rarely assessed and looked into (Manejar 2022).

Recommendations

With the foregoing discussions, the following recommendations can help address or mitigate the influence and impact of the construction of the Davao City Coastal Road and dikes among the three barangays considered in this study:

Community Participation and Planning

1. The LGU needs to look into the needs of each barangay for a safe docking port, as it is the most urgent, given the everyday struggles of fishers in each of the three barangays. The proposed docking area should consider the number of fishers in each barangay. To date, there are 217 fishers in Barangay 23-C, 80 fishers in Barangay Matina Aplaya, and 71 fishers in Barangay Talomo;
2. The local government agencies, such as the Department of Environment and Natural Resources (DENR) and Bureau of Fisheries and Aquatic Resources (BFAR), within the year, conduct a physical inspection of what remains of the coastline and assess which type of mangroves is best suited in the place to help rehabilitate the denuded mangrove forests;
3. The LGU needs to improve its community consultation protocol, especially for big-ticket projects that can affect the lives of communities living in the margins, such as coastal communities. These include the men, women, and the youth in each barangay. A standard on what constitutes a successful or reliable consultation or pulong-pulong with the community should be explored and established.

Fishing Communities as Essential Spatial Aspects

1. Convey the results of the study to the ongoing discussion among fisheries advocates, LGUs, and Environmentalists for consideration in the discussion on the National Land Use Act, specifically highlighting the influence of urbanization projects on fishing communities in the country in terms of conservation, production, settlement, and infrastructure (Parrocha 2020 as cited in Manejar 2022). It is important to note here that the country has been trying to finalize this bill for three decades now (Reyes 2024).
2. Researchers can also explore the concept and context of fishing coastal communities as peri-urban spaces in Davao City and other regions, and

raise this query: What is the nature of peri-urban spaces in contrast to urban and rural appropriations of space?

3. Researchers can help reframe the value of fishing along the coastal road as part of the urban food supply chain to help put more premium on the fishers' efforts within the broader scale of the urban community;

With these recommendations, this study hopes that the emerging needs in the fishing communities as a result of the construction of the coastal road and dikes such as having safe and stable docking areas for fishing boats, and the need to rehabilitate the once thriving mangroves forest in the area will be seriously considered by the local government unit, and that the true value and contributions of fishing communities in urban economies such as urban food chain will be given due merit and consideration. May these suggestions mean that the government will seriously consider the situation and needs of fishing communities across the city and regions in the face of local development plans and projects, as new and more inclusive directions of urban space making unfolds, This specific type of local specificity of space, Massey (2005) holds underscores place-specific relations of human and nonhuman trajectories and looks into the power relations that subsist in and condition their intersections.

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Appendix

Appendix 1. Profile of Respondents

Barangay Talomo			
		N	%
		6	16.7%
Gender	Female	15	41.7%
	Male	15	41.7%
Age	26–35	2	5.6%
	36–45	5	13.9%
	46–55	9	25.0%
	56–65	9	25.0%
	66–75	4	11.1%
	N/A	1	2.8%
Highest Level of Education	Elementary Level	9	25.0%
	Elementary Graduate	4	11.1%
	High School Level	7	19.4%
	High School Graduate	4	11.1%
	Technical Vocational	2	5.6%
	College Level	1	2.8%
	N /A	3	8.3%
Number of Years in Fishing	5–10 years	2	5.6%
	11–20 years	4	11.1%
	21–30 years	9	25.0%
	31–40 years	5	13.9%
	41–50 years	3	8.3%
	More than 50 years	2	5.6%
	N/A	5	13.9%

Barangay 23-C			
		N	%
		1	2.2%
Gender	Female	23	51.1%
	Male	21	46.7%
Age	18–25	9	20.0%
	26–35	9	20.0%
	36–45	14	31.1%
	46–55	9	20.0%
	56–65	3	6.7%
Highest Level of Education	Elementary Level	11	24.4%
	Elementary Graduate	5	11.1%
	High School Level	8	17.8%
	High School Graduate	2	4.4%
	Junior High School Level	3	6.7%
	Junior High School Completer	1	2.2%
	Senior High School Level	3	6.7%
	Senior High School Graduate	3	6.7%
	College Level	2	4.4%
	N/A	6	13.3%
Number of Years in Fishing	5–10 years	9	20.0%
	11–20 years	11	24.4%
	21–30 years	7	15.6%
	31–40 years	8	17.8%
	Below 5 years	5	11.1%
	N/A	4	8.9%

Barangay Matina Aplaya			
		N	%
		1	2.9%
Gender	Female	15	42.9%
	Male	19	54.3%
Age	18–25	1	2.9%
	26–35	4	11.4%
	36–45	10	28.6%
	46–55	9	25.7%
	56–65	6	17.1%
	66–75	3	8.6%
	more than 75 years old	1	2.9%
Highest Level of Education	Elementary Level	12	34.3%
	Elementary Graduate	4	11.4%
	High School Level	11	31.4%
	High School Graduate	2	5.7%
	Senior High School Graduate	1	2.9%
	College Level	2	5.7%
	College Graduate	2	5.7%
Number of Years in Fishing	5–10 years	5	14.3%
	11–20 years	11	31.4%
	21–30 years	7	20.0%
	31–40 years	3	8.6%
	More than 50 years	2	5.7%
	Below 5 years	4	11.4%
	N/A	2	5.7%