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**Evaluation of the Programme to Reduce  
Vulnerability in Coastal Fishing Areas in Djibouti**

**Qualitative Findings**

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## ABSTRACT

We present findings from a qualitative study conducted as part of an impact assessment of the Programme to Reduce Vulnerability in Coastal Fishing Areas (PRAREV), supported by the International Fund for Agricultural Development (IFAD) and implemented from 2013 to 2021. This study was designed to focus solely on the gender aspects of PRAREV, which overall aimed to support fishing communities and actors in the fishing sector in Djibouti, specifically those living in rural coastal areas affected by climate change, by reducing their vulnerability to the effects of climate change and promote co-management of marine resources. The program targeted those who are poor and who rely on fishing, particularly women involved in fish processing and marketing. The qualitative findings shared in this paper complement findings from an accompanying quantitative study, which found positive effects of the program on incomes, production, women's influence on decisions, and food security, but not on resilience or nutritional status (Boukaka et al. 2022)

We used multiple qualitative methods, including semi-structured interviews and focus group discussions with program staff and men and women leaders and members of fishing organizations to examine the following research questions focused on the gender component of the program: 1) How the program was delivered from multiple perspectives; 2) How the program strengthened the fishers' and fishmonger associations; and 3) The benefits and costs of the program in the areas of climate change resilience, livelihoods, and changes in the fishing sector.

While PRAREV aimed to take a gender-sensitive approach, the gender strategy and its delivery could have been improved. PRAREV mainly reached women by intentionally including women fishing organizations so that they could benefit from access to collective resources, training, and knowledge. PRAREV trainings often were not communicated to women members of fishing organizations, which led to women's relative exclusion compared to men members.

However, participants shared both positive and negative feedback on the PRAREV program. They generally agreed that when delivered, the trainings were well received and increased knowledge and awareness of climate change and knowledge of upgrading techniques in the fishing sector. The climate change trainings developed awareness about the drivers of climate change and taught best practices on the preservation of local marine resources. However, these trainings did not address adaptation to depleted fish populations in mangroves or reefs. Other trainings focused on value chain upgrading were well received and when delivered, increased relevant knowledge. However, their reach was limited, particularly among women fishing organization members.

Finally, PRAREV provided organizations key resources for value chain upgrading and integration in the fishing sector in a way that preserved the local marine environment (e.g., boats, knives, fishing wires, nets). While fishing organization members spoke positively of these resources, there were challenges in delivering them. They were delivered late in the project, often without training or a sustainability plan, or were often not delivered as promised, creating frustration and tension among group members. They were also often delivered in smaller quantities than originally communicated and as such, the recipient fishing organizations limited their use. Overall, group members felt there was limited transparency in delivering these resources.

Based on these findings, we share recommendations for PRAREV and similar programs. We suggest conducting formative research on the local fishing sector to identify how men and women want to participate and the key barriers they face in doing so. With respect to resource provision, programs should provide resources earlier and should deliver them with a sustainability plan that has community buy in. Implementers should aim to understand how groups could make use of high-value common property to enable transparency and sustainability. Trainings should also be tailored to the local context and be more in-depth. Importantly, program staff should ensure that all intended beneficiaries, especially women, are invited and able to participate in program trainings so that all members can benefit from the knowledge, awareness, and skill building gained at each training event.

Programs should implement a more robust monitoring plan to ensure resources are adequately used and equitably distributed, and that all intended beneficiary groups benefit equitably. Finally, although PRAREV was designed to undertake a gender-sensitive approach, further refinement of this approach could likely improve program delivery and impact. A gender accommodative approach would have supported and empowered women from within the traditional gender roles that they feel more comfortable with to participate and upgrade in their respective fishing activities.

**Keywords:** Collectives, Djibouti, Fishing Sector, Gender, Women's Empowerment, Qualitative Evaluation

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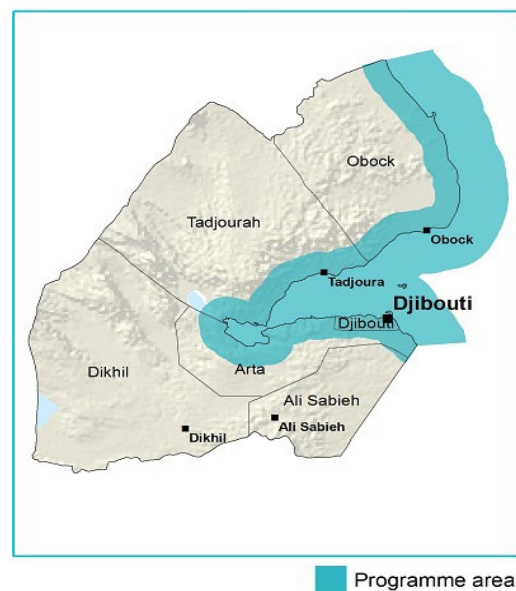
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## ACRONYMS

|        |  |
|--------|--|
| EDD    | Electricity of Djibouti  |
| FGD    | Focus Group Discussion   |
| FO     | Farmer's Organization  |
| GoD    | Government of Djibouti   |
| IFAD   | International Fund for Agriculture Development   |
| IFPRI  | International Food Policy Research Institute   |
| KII    | Key Informant Interview  |
| km     | kilometer  |
| ONEAD  | National Office of Water and Sanitation in Djibouti                                    |
| PdP    | Porte de Pêche   |
| PRAREV | Programme d'appui à la réduction de la vulnérabilité dans les zones de pêches côtières |

## INTRODUCTION

We present findings from the qualitative gender study conducted as one component of an International Food Policy Research Institute (IFPRI) led impact assessment of the Programme to Reduce Vulnerability in Coastal Fishing Areas (PRAREV). PRAREV was co-financed by the International Fund for Agricultural Development (IFAD) and National Government of Djibouti (GoD) and implemented by the project management unit and community stakeholders from 2013 to 2021. The project aimed to support those who relied on the fishing sector to support their livelihoods in fishing communities in Djibouti. The program targeted rural coastal areas and was implemented in Tadjourah region, Obock region, Djibouti-ville, and the localities of Arta, Loyada and Damerjog (Figure 1).



**Figure 1. Map of the Programme to Reduce Vulnerability in Coastal Fishing Area implementation area in Djibouti**

Source: IFAD, 2021

Djibouti is considered highly vulnerable to the effects of climate change (World Bank 2021). Coupled with the adverse effects of the COVID-19 pandemic, Djibouti is expected to experience negative biophysical and socio-economic outcomes of increased temperatures, increased aridity, reduced precipitation, rising sea levels, and increasing demand for scarce resources (World Bank 2021). While

Djiboutian coral reefs are relatively healthy compared to global reefs and do not exhibit similar effects of significant human impacts, rising sea surface temperatures and rapid coastal development are likely to threaten the health and viability of these reefs, as well as the human population dependent on them for their livelihoods (Cowburn et al. 2019).

PRAREV aimed to support those living in rural coastal areas affected by climate change to improve their resilience and reduce their vulnerability to the effects of climate change and promote co-management of marine resources (IFAD 2021). The specific goals of the program were to increase the local population's ownership of climate change resilient activities, strengthen fishing cooperatives and associations to respond to the effects of climate change, improve incomes and living conditions for intended beneficiaries, and increase the number of fishing vessels without affecting fish populations. According to the program theory of change (available in greater detail in Boukaka et al. 2022 and IFAD 2021) PRAREV was comprised of three program components: 1) Support for the resilience of coastal habitats, 2) Support for the fishing value chain, and 3) Capacity building for political support. The first component on the resilience of coastal habitats aimed to reduce the vulnerability of coastal areas as a consequence of climate change, primarily through monitoring the marine environment, identifying climate change adaptation measures, rehabilitation of the coastal habitat, and increased availability of water resources. The second component on supporting fishing value chains by strengthening fishing cooperatives and increasing the availability of infrastructure and equipment, as well as financial services. The final component on political support focused on integrating climate change adaptation into national strategies to strengthen policies and related knowledge. The program targeted poor individuals living in rural coastal areas that participate in and rely on the fishing sector to sustain their livelihoods. Of particular importance to this report, the program targeted women as *“one of the key stakeholders...as they are a major pillar within fishing value chains, where they provide 80 percent of fish commercialization and support part of production activity with inputs, fuel, and provisions by making small loans to fishers who in turn provide them with fish”* (IFAD 2021). Women were targeted based on the Government's

gender strategy, which focused on collecting sex-disaggregated monitoring data as an approach to increase the number of women who participated in PRAREV activities.

A quantitative impact assessment of multiple program outcomes was conducted simultaneously to this qualitative study. The quantitative study found significant, positive impacts on program participants' household incomes, fish production (specifically tuna), fish sales, and boat ownership (Boukaka et al. 2022). Women involved in the program had higher levels of influence (three to four percentage points) in decision-making on fishing activities than women who were not involved in the program. The assessment also found that while the program did not yield any significant effects on resilience or nutrition indicators, it was associated with large decreases in food insecurity (35 percent). These findings are encouraging in that the program yielded positive economic, livelihood, and wellbeing benefits for men and women who participated.

Our study presented in this report was designed to address a more limited scope of questions focused on the program's gender and women's empowerment components to understand program implementation, value chain integration, and collective efficacy with a gender lens. The following research questions guided this study's design and implementation with the overall goal of understanding the program's gender-sensitive approach:

- How was PRAREV delivered from the perspective of both program implementers and program beneficiaries?
  - What aspects of program delivery were successful and what aspects could be improved upon?
- How did the program work to strengthen the fishers' and fishmonger associations?
  - How were resources provided to local groups, and how were they managed and utilized by these groups?
  - How did the project lead to changes in group functioning and the group's collective efficacy?

- What were the benefits and costs of the PRAREV program for intended beneficiaries, particularly in the areas of climate change resilience, livelihoods, and changes in fishing, processing, and marketing practices?

## METHODS

### Qualitative discussion guides

The qualitative instruments used in this study were developed by the authors and included a community profile, key informant interviews (KIIs) with program staff, KIIs with fishing group leaders, focus group discussions (FGDs) with men's and women's fishing group members, and separate KIIs with men's and women's fishing group members.

A community profile was conducted with one to three men and women who were knowledgeable about community dynamics in each study community. The community profile asked about topics related to the general community structure, infrastructure, transportation infrastructure, education, livelihoods, and status of women.

Program management staff (herein referred to as 'program staff') KIIs were conducted with one general program coordinator and one program gender specialist. These KIIs asked respondents about their role in and understanding of PRAREV, the project's staffing, intended beneficiary engagement, project dynamics and impacts, collective efficacy in program groups, opportunities and challenges in value chain programs, and their own personal experiences.

Additional data collection activities were designed to collect data from fisher organization leaders and members. Fisher organizations include both organizations of fishers and organizations of fishmongers, who were primarily women. KIIs were conducted with one man and one woman fisher organization leader in each PRAREV region. These interviews asked respondents about their background and experience as a leader, how the group was developed and functions, how organizations were selected for PRAREV, experience in PRAREV, group membership and dynamics, and climate change mitigation and adaptation activities. KIIs were then conducted with two men and two women members of each fisher organization in each respective region. These interviews asked respondents about their background in their respective value chain node, experience in their respective value chain node, experience in PRAREV, dynamics of their respective fisher organization, experiences with loans, and climate change mitigation and adaptation.

Finally, one FGD was conducted with members of both men's and women's fisher organizations in each respective region that participated in PRAREV. Two sex-disaggregated (one men and one women) FGDs were conducted with eight to nine members of a fisher organization in each region.<sup>1</sup> FGD participants were asked about their respective group, experience in an organization under PRAREV, group dynamics and collective efficacy, and climate change mitigation and adaptation activities.

### **Training and data collection team**

For this study, we worked with Initiative pour le Developpement de l'Afrique (IDA) in Djibouti-ville to coordinate the fieldwork and data collection. The field team consisted of two women and two men, all of whom had qualitative data collection and gender-focused research experience in Djibouti. The team worked together as facilitators and notetakers to collect the data from the four regions of Djibouti where the program was implemented.

The training for the qualitative component of the IFAD PRAREV impact assessment was held remotely due to the COVID-19 related travel restrictions in October 2021. The training covered background on the IFPRI-IFAD impact assessment portfolio, background on the Djibouti PRAREV program, gender, women's empowerment, value chains, collective efficacy, and best practices for high quality and ethical qualitative data collection. The team reviewed each data collection instrument in-depth and then carefully translated each interview guide from French into both Afar and Arabic with careful attention to ensuring consistent interpretation of the questions.

The field team piloted the KII and FGD discussion guides with PRAREV participants in Djibouti-ville. The team leader participated in the project pilot and worked with the team and lead author to clarify questions that arose from the pilot. The team then returned for two days of remote training to discuss the pilot feedback, data collection, and transcription expectations.

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<sup>1</sup> The women's FGD in Arta included only 3 participants who represented all the women who participated in a PRAREV-supported organization in Arta.

## Sampling

This study was conducted in the four regions of Djibouti where PRAREV was implemented: Djibouti-ville, Tadjourah, Arta, and Obock. The data collection team traveled together in each region to conduct the KIIs and FGDs. Within each region, the targeted fisher organizations were randomly selected from a list of all fisher organizations involved in the PRAREV program. Fisher organizations were eligible if they had participated in or received support from the PRAREV program and if they were available to participate in the study. Given the limited number of women participating in PRAREV in the Arta region, the only women's organization was purposively selected. The PRAREV program had staff located in Djibouti-ville that served all PRAREV regions, therefore one program coordinator and one program gender specialist were purposively sampled to participate in a KII. Table 1 presents the number of men and women selected to participate in each data collection activity by region.

**Table 1. Study sample by location, instrument, and sex**

| Region                        | Djibouti-Ville |       | Tadjourah      |       | Arta |                | Obock |       | Total     |
|-------------------------------|----------------|-------|----------------|-------|------|----------------|-------|-------|-----------|
|                               | men            | women | men            | women | men  | women          | men   | women |           |
| Community profile             | 1              |       | 1              |       | 1    |                | 1     |       | 4         |
| KII program coordinator       | 1              |       |                |       |      |                |       |       | 1         |
| KII program gender specialist | 1              |       |                |       |      |                |       |       | 1         |
| KII group leader              | 1              | 1     | 1              | 1     | 1    | 1              | 1     | 1     | 8         |
| KII group member              | 2              | 2     | 0 <sup>1</sup> | 2     | 2    | 0 <sup>2</sup> | 2     | 2     | 12        |
| Total KIIs                    |                |       |                |       |      |                |       |       | <b>26</b> |
| FGD group member              | 1              | 1     | 1              | 1     | 1    | 1              | 1     | 1     | 8         |
| Total FGDs                    |                |       |                |       |      |                |       |       | <b>8</b>  |

<sup>1</sup> The men in Tadjourah were extremely dissatisfied with the PRAREV program and refused to participate in additional KIIs as they did not want to spend additional time sharing feedback for PRAREV. Several men did participate in an FGD.

<sup>2</sup> The women's group in Arta only included three women, all of whom participated in the FGD. Therefore, additional KIIs could not be completed.

## Data processing and analysis

All KIIs and FGDs were conducted in Afar, Arabic, or French. Each KII and FGD was audio recorded with the participants' consent. The audio recordings were transcribed and translated into French. A

notetaker took notes in French during each activity and the first author provided feedback to the interview notes to monitor data quality. The first author then reviewed all transcripts and developed a codebook with deductive and inductive codes. The first author analyzed the transcripts by conducting thematic analysis using NVivo software.

### **Ethics and compensation**

This study was approved by the Institutional Review Board of IFPRI as well as the National Institute of Statistics of Djibouti. The interviewers all received training on research ethics and the process for seeking informed consent. Before each KII or FGD began, the facilitators read the prepared statement of voluntary consent for participating and all participants provided oral informed consent. Additionally, all participants were asked for their consent prior to audio recording the interview. Participants did not receive monetary or in-kind compensation for their time but were provided with food and refreshments during the interview or discussion.

## RESULTS

### **Description of study areas**

Within each of the four regions sampled for this study, one community was selected where men's and women's fisher organizations supported by PRAREV operated. The four communities included Plage d'Arta (Arta region), Port de Pêche (PdP, Djibouti-ville), Khor Angar (Obock region), and Tadjourah-ville (Tadjourah region).

Across the four communities, there were several similarities. For example, issues around access to land do not exist for men and women as land is typically extremely poor quality and these communities do not engage in agricultural activities. Men and women rely on the fishing sector as their main livelihood strategy across all four communities, and men often engage in other non-agricultural income generating activities. Across all four communities, women who are educated, married, and contribute to the household income are highly regarded and considered empowered. The main differences among the communities are whether they are rural or urban. Two communities, Porte de Pêche (Djibouti-ville) and Tadjourah-ville (Tadjourah), are urban and provide ready access to resources and services, whereas Plage d'Arta (Arta) and Khor Angar (Obock) are very remote, rural communities with much more limited access to resources and services. The following section describes each community included in this study.

### ***Plage d'Arta (Arta)***

Plage d'Arta is known for the natural resources they extract and manage from the sea, as the population relies on fishing from the ocean and selling their fish in the nearby town of Arta-ville. It is a much smaller and transitory community, where many people come daily to Plage d'Arta to fish and return to Arta-ville in the evening, approximately 17 kilometers (km) away. Everyone in Plage d'Arta is Somali except for one person, who is Afar.

A vast majority of households are monogamous; polygyny is extremely rare in the community. Most girls in the community marry at the age of 15 or older. Educated women are highly regarded in the community. Should a woman divorce her husband, she is entitled to her dowry as well as a four-month

pension from her husband. Should her husband die, she is married to his brother to continue her access to housing and land. Woman, in theory, have access to land for agriculture but all the land in the community is infertile, therefore no one uses land for agriculture.

PRAREV provided the village with solar panels in 2021 as their primary electricity source, which all households use to charge their mobile devices and meet other electrical needs. No shops or vendors accept mobile money as a form of payment. The closest market is in Arta, approximately 20 km from Plage d'Arta. There are many stalls available for selling in Arta market, but more women occupy stalls for selling items than men. Most important services are available in Arta-ville, approximately 17 km away, including the closest bank (Salam Bank), a smaller market for selling products, public transport options, and educational options such as primary schools, high schools, and colleges. Public transport options available in the community include bus and a *bajaj* (a four-wheel bike). The French Army has been improving the quality of the tracked roads leading into Plage d'Arta over the last five years, as they were significantly deteriorating.

The only access to drinking water is from salty wells over 25 years old, but there are no conflicts over water within the community, as it is mostly transient. The community members reported being actively involved in managing and preserving the coral reefs and mangroves around Plage d'Arta with no conflicts.

The town has seasonal tourism, which is considered as an important community resource in addition to fishing (coral reefs and mangroves). There is a hotel management school that trains individuals on how to manage and serve at local hotels and provides certificates of completion. The main economic activities in Plage d'Arta for men are fishing and tourism. And while women do not participate in any economic activity in Plage d'Arta, they do sell fish at markets in nearby areas (Arta and Arta-ville).

### ***Porte de Pêche (Djibouti-ville)***

PdP is a large community near Djibouti-ville—Djibouti’s capital—generally known for fishing, but also its important regional role for trade and migration. PdP has historically served as an exit port for Ethiopian migrants traveling to Asia for seasonal work.

It is a large town, with approximately 500,000 people, although the population decreases when universities are on break and students return to their rural communities. Most people that live in PdP are Somali (~50%), Afar (~40%) and Arab (~10%), although many migrants have been stuck in PdP due to COVID-19 restrictions that blocked their travel. While this population surge has been noted by respondents as impacting population pressures in the town, they reported that everyone has coexisted peacefully.

Most households are monogamous (~70%) and around 30% are polygynous. Most girls marry around 18 years of age in PdP. It was explained that this is due to the fact that marriage requires an identity card that one cannot receive before turning 18. However, if a girl becomes pregnant before age 18, she will typically be married, and her future husband’s family will pay the bride wealth. Should she divorce her husband, she does not have any rights, but if her husband divorces her, he must pay her, and she has rights to communal items. Should her husband die, typically his family will take care of her or less often, his brother will marry her to continue taking care of her.

PdP residents have used the national electrical grid, Electricity of Djibouti (l’EDD), as their main electrical source since the 1990s. Mobile phones are very common in PdP; phone credits are sold in almost every store, and telephone booths also offer mobile phone charging stations for approximately 50fd.<sup>2</sup> Many important services are readily available throughout the community in PdP. There are several market options throughout PdP with varying sizes and offerings; the main market is in city center where most commercial activities take place. Mostly women occupy stalls to sell goods in all the markets, but in certain areas, men also occupy stalls. There are several banks throughout the community as well,

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<sup>2</sup> Approximately \$0.28 USD.

including East Africa Bank, Western Union, and informal money transfer kiosks. There are several primary, high school, college, and vocational schools throughout PdP. All roads are paved throughout PdP and Djibouti-ville, and it is easy access to access public transportation throughout the community, including mini-buses, *bajaj*, taxis, and larger buses.

In PdP, potable drinking water is readily available through the national water service, the National Office of Water and Sanitation in Djibouti (l'ONEAD). There is a consensus that coral reefs and mangroves should be cared for, but commitments are inconsistent, and there are no formal or informal committees designated to managing their conservation.

Men typically occupy more formal sector jobs in PdP, whereas women more often work in the informal sector. The main economic activities for men in PdP include fishing, public service, construction, port dockers, entrepreneurs, restaurants, and many informal jobs. Respondents observed a stark increase in construction and port jobs for men over the last five years. Youth also sell Ethiopian *Khat* as a key source of income. The main economic activities for women in PdP are typically in the informal sector, including restaurant work, or selling *Khat*, coffee, tea, or breads.

### ***Khor Angar (Obock)***

Khor Angar is a small, coastal community known for fishing, particularly for lobster and other crustaceans. Due to its location, Khor Angar is an important entry between Djibouti and Yemen. Approximately 400 households live in Khor Angar, all of whom are Afar.

A majority (~90%) of households are monogamous with a polygyny minority (~10%). Girls typically do not marry before the age of 18, when it is considered acceptable to marry; however, in certain circumstances a girl may marry around 17 years old, only if she becomes pregnant and both families agree. Should she divorce her husband, she would return home to her parents without access or rights to any communal resources. Should her husband die and there are children, her husband's family would take care of her and the children; otherwise, she would return to her parent's home.

Khor Angar uses solar power to provide most households (except 10) with a continuous energy supply since 2017. These panels were first provided to the community by the Ministry for the Advancement of Women and were supplemented with more panels by PRAREV in 2017. Mobile phones have been very common since 2013 in Khor Angar, and credits are available for purchase at local kiosks. However, vendors do not accept mobile money in Khor Angar. There is no local market in Khor Angar; people sell their items at their home, as explained by one respondent, “*We are a small community, and we know each other. There is no local market here because each person who sells something does so at his own home and customers come to the seller*” [W, fishmonger]. Almost all necessary services are located far from Khor Angar in Obock town, approximately 54 km away (~1 hour 30 minutes by car). These include the closest formal market, banks, social services, health services, primary school, high school, and colleges. PRAREV supported the construction of a coeducational private school in Obock town, as well as a fishery. There is one coeducational primary school in Khor Angar, but the rest of the education opportunities exist in Obock town. While educational opportunities are limited, one respondent shared that many trainings focused on women’s empowerment are available in Khor Angar, include those focused on creating and selling traditional crafts, raising awareness on female genital mutilation, and gender sensitization trainings from the Ministry of Women and the Family.

With regards to the market, previously, mostly women sold items, but as population dynamics shifted with an increasing number of Yemeni refugees, more men occupy market stalls where they sell vegetables, fish, meat, and other items. There are no public transport options for individuals living in Khor Angar. All public transportation options exist in Obock town. Those living in Khor Angar use four-wheel drive vehicles to travel the tracked roads to Obock town when they need to but indicate this is rare.

The only drinking water in Khor Angar comes from desalinated seawater that the community manages using a desalination machine provided by the government in 2015. All water is free for all community members. Prior to the machine, community members used well water and now rarely do, except when the desalination machine breaks, and they need to wait for it to be repaired. Participants indicated that because water is plentiful and free, there are no observed conflicts among community

members over water or access to water. There are no formal or informal reef or mangrove conservation programs in Khor Angar, but the community manages their conservation collectively. For example, one respondent shared, *“We try not to catch small fish and if that happens, we throw them back into the sea immediately. We also do not fish for species prohibited from fishing, such as sea turtles. In fact, it’s the only resource we have here, is the sea...This locality and the people who live here survive thanks to the sea”* [M, fisher].

The main economic activity for men in Khor Angar is fishing. They now use boats provided by PRAREV to fish for longer periods of time and at further distances. Men may also sell their fish in either Djibouti or Yemen as well. Women also participate in fishing using fishnets and sell the fish at their home. Women have also recently started sewing clothes and traditional crafts using machines provided by the Ministry of Women and Family as a source of income.

### ***Tadjourah-Ville (Tadjourah)***

Tadjourah-ville is a larger community known for fishing and trade, given its proximity to the port. The population of approximately 5,000 individuals and 500 households varies throughout the year, particularly during university breaks, when students return to their rural communities, and during seasonal periods of high temporary migration. Most of the population are Afar (~95%), whereas the remaining 5% includes Somalis (~2%) and transitory migrants (~3%).

Most households are monogamous (~70%) and around 30% are polygynous. Most girls marry around 18 years of age in Tadjourah-ville, as marriage requires an identity card that can only be received after turning 18. However, if a girl becomes pregnant before age of 18, she will typically be married, and her future husband’s family will pay the bride wealth. Should she divorce her husband, she does not have any rights, but if her husband divorces her, he must pay her, and she has rights to communal items. Should her husband die, typically his family will take care of her or in fewer cases, his brother will marry her to continue taking care of her.

The population of Tadjourah-ville had used the national electrical grid, l'EDD, as their main electrical source since the 1970s. Mobile phones are very common; phone credits are sold in almost every store, and telephone booths also offer mobile phone charging stations. Many important services are in the city center and throughout the community. A large market is located at the city center, where mostly men and some women sell items or goods at the stalls. There are several banks throughout the community as well, including East Africa Bank, and informal money transfer kiosks. There are two primary schools, one high school, and one college in Tadjourah-ville. There used to be a vocational school run by the Catholic Mission that offered training in electricity, plumbing and refrigeration, but it is no longer open. All roads are paved and there is easy access to public transport options throughout the community, including mini-buses and *bajaj*.

Potable drinking water is readily available through the national water service (l'ONEAD) with no conflicts. There is a consensus that coral reefs and mangroves should be cared for to at least some degree, but no formal or informal committees committed to managing this conservation.

Similar to PdP, men typically occupy more formal sector jobs in Tadjourah-ville, whereas women more often occupy informal sector forms of employment. The main economic activities for men in Tadjourah-ville include fishing, public service, and construction, and informal sector work. Respondents reported a stark increase in construction and port jobs for men over the last five years. The main economic activities for women are typically informal work, selling cakes or coffee, or working in restaurants.

### **Local gender norms in the fishing sector in Djibouti**

Participants mostly described local gender norms specifically as they are related to activities and participation in the fishing sector in Djibouti. Most respondents agreed on these dynamics, but only a few elaborated on the reasoning behind the differences in which men and women normatively participated in different fishing activities.

Primarily, men do the actual fishing at sea or along the mangroves to collect and catch the fish. Men, in turn, sell or work with women who then preserve, process, and market the fish in local or regional markets. Typically, women either process fish by drying or preserving with salt, or they sell unprocessed fresh fish, depending on their target market. Respondents attributed men's role as the fisher to his ability to leave the home for long periods of time, for his strength to navigate the ocean, and his access to resources to have and operate a boat and fishing equipment. Several respondents explained that due to gender normative household responsibilities, fishing is not possible for women. For example, a woman shared that fishing can be considered too difficult of a task for some women, "*Women cannot go fishing with a boat on the high seas and sleep on the boat for almost a week. It is not feasible since it is very difficult for them. Apart from that, women can do everything in the field of fishing*" [W, fishmonger]. A fisherman also explained,

*"In fact, women do the same activities as men in the field of fishing, the only things that differentiates them is just the fact that men take the boat and go fishing on the high seas and sleep there. They are gone for days or even a whole week to bring in the most fish. To my knowledge, I have not yet seen a woman go to the high seas and spend entire days at sea. This is surely because women have to take care of the home and the children while the men go fishing"* [M, fisher].

Further, several fishmongers (women) explain that beyond household responsibilities, women do not fish, mostly due to a lack of access to the necessary resources and training. A woman from Arta elaborated, "*Indeed, women lack practices, know-how and means for fishing*" [W, fishmonger]. Another noted, "*In practice, women do not fish since most of them do not have the boats and equipment needed to fish on the high seas. Thus, in general it is the men who go fishing and the women resell the fish products. These two specific roles or jobs do not mean that it is forbidden for a woman to fish. If a woman has the equipment as well as the know-how of fishing, no one will forbid her*" [W, fishmonger].

Respondents also described that while women do not participate in fishing activities, men can sell fish at the markets in addition to women, depending on the circumstance and the men's preference. A fisherman explained,

*“In general, the role of men is often linked to deep sea fishing and women mainly work in the sale and marketing of fish. But these roles are not exclusively reserved for men and women. It can happen, depending on the needs, that a man sells fish without it causing problems for him or his family and vice versa. I explain why there are no limits between genders in the areas of fishing. Everyone takes care of their property in order to feed their families, so men work like women and women also work like men”* [M, fisher].

Another fisherman explained that it is possible that women will sometimes fish at sea with their husbands, but typically out of necessity, *“It is possible to see some women go to sea to fish if it is absolutely necessary for their livelihoods, or if they have the means to do it. The community does not see any problem with the women doing fishing”* [M, fisher]. However, none of the respondents indicated that they themselves participated in fishing activities beyond these gender normative roles.

Beyond fishing, respondents shared a few examples where men and women participate in other types of activities. For example, as an alternative source of income, most men also work in tourism in addition to fishing across all four communities, either working at a local hotel or taking tourists to snorkel with whale sharks. None of the women interviewed worked in the tourism sector. Some women near the urban areas, such as Djibouti-ville or Tadjourah-ville, manage small businesses, like selling coffee, tea, or baguettes on the sidewalk, as additional sources of income to supplement sales from fish preservation and marketing. The women in rural areas typically only relied on fish sales as their main source of income, whereas their husbands were able to profit from tourism in those regions. They noted that there were no other opportunities to earn an income in their areas.

## **Program delivery and operations**

### ***Program objectives, staffing, and delivery***

Both program staff interviewed for this study indicated that PRAREV's objectives centered around improving the fishing sector and upgrading fishing value chains in Djibouti through better environmental practices and provision of necessary tools and equipment. Specific objectives cited include helping to improve the capacity of fishing organization members to meet their daily livelihood needs and overall to reduce poverty, to improve the technical capacity of fishers to increase their catch without exploitative practices, to improve the technical capacity of fish sellers to better cut fish for higher resale value, and engaging fishing communities and associations to protect mangroves and coral reefs. Overall, the project took a value chain approach and sees women as integral to the fishing value chain, mostly as fish processors and sellers.

Neither of the program management unit staff interviewed for this study cited women's empowerment or reducing gender inequalities as central objectives of the PRAREV program but did elaborate on their perspective of the intended and realized outcomes of PRAREV's activities for improving women's economic empowerment (discussed below in Section 3.6.5. Program Impacts for Women's Empowerment and Gender Dynamics).

With respect to staffing, the program staff who delivered the PRAREV program throughout Djibouti included six individuals based in Djibouti-ville who traveled as needed to the regions. These staff entailed three technical managers (one woman and two men), one technical monitoring and evaluation manager (woman), one capacity building manager (man), and one overall project coordinator (woman), representing a roughly even split between men and women program staff. Additional staff members responsible for procurement and finances were also women.

Challenges specific to delivering the gender aspects of the program are discussed in the next section. However, program staff did share that establishing and maintaining partnerships with the fishing organizations were very difficult throughout the course of the program delivery. Specifically, program

staff had challenges in following up and monitoring adequate performance of partners in advancing the goals of the program.

### ***Gender and program delivery and intended outcomes***

The gender specialist indicated that her job was to, “*introduce and sensitize women in the field of fishing, to push the women to fish like men, and to make certain that all of men’s tasks can be done by women too*” [W, Gender Specialist]. However, her greatest challenge in fulfilling the job requirements for PRAREV was pushback she received from the women themselves. She shared, “*One of the worst times as a gender specialist was women’s opposition to the gender approach. Somehow women disagreed that women can better access fishing*” [W, Gender Specialist]. Interestingly, the program coordinator shared that, “*As part of this project, we did not have to deal with social norms that were hostile to the participation of women in the fishing industry*” [W, Program Coordinator], suggesting that program staff beyond those directly involved with gender-focused objectives (as the gender specialist) were not attuned to nuanced gender or social dynamics or how to navigate them.

Both program staff indicated that there were no issues or challenges for male or female staff to work with intended beneficiaries of the opposite gender. Both emphatically described positive relations between staff and intended beneficiaries. However, intended beneficiaries indicated that there was not much interaction between them—both men and women—and program staff. A fishmonger shared, “*The interaction between us and the PRAREV staff was limited to the day of the donation*” [W, fishmonger]. This perspective helps to qualify program staff’s perspective on interactions between beneficiaries of the opposite sex, as such interactions were minimal, if at all present. It is also not clear if program staff may have interacted more with intended beneficiaries, but perhaps did not make their affiliation with PRAREV known when they did so. Both staff members also indicated that throughout the duration of the program, they did not receive pushback from community members or spouses on the activities, specifically by aiming to increase women’s economic empowerment and involvement in the fishing value chains, because as the gender specialist shared, “*We had no resistance from [women’s] spouses, because*

*these communities are very poor with little income. They welcome the economic support*” [W, Gender Specialist]. None of the intended beneficiaries interviewed disagreed with this perspective.

According to program staff, PRAREV targeted advancing women’s economic empowerment and reducing gender inequalities in the fishing sector in Djibouti by providing trainings and resources to women in the fishing sector to improve their incomes via value chain upgrading and integration. In Djibouti, women are heavily involved in the fishing sector specifically as processors (fishmongers) and sellers. In all four regions, women were cited as being the main occupants in local market stalls to sell fish and other goods.<sup>3</sup> As described by the gender specialist, *“This project has enabled and made possible a great involvement of women in the fishing sector, especially at the marketing level by providing them with the support to develop their activities and through training to strengthen their knowledge on issues of protecting the fisheries and marine environment”* [W, Gender Specialist]. However, intended beneficiaries across all regions explain that while program staff delivered many trainings on value chain upgrading and climate change topics, women were not included invited to the PRAREV trainings and were often left out. A woman shared, *“Indeed, the men of our association have benefited but we women have benefited from no training. I don't know, but we weren't asked [to attend a] training”* [W, fishmonger]. None of the intended beneficiaries indicated that they had attended or benefitted from a specific training on gender or gender sensitization from PRAREV.

### ***Program staff’s understanding of women’s empowerment***

Program staff understood women’s empowerment as when women are both able to earn incomes, and to make decisions to advance their own goals or manage their own and their family’s “destiny”. The program coordinator shared, *“Empowering [women] to pursue a professional activity, capable of providing a decent income for themselves and their families...it also means increasing the decision-making power of women and giving them a voice to truly influence the destiny of their communities”* [W, Program Coordinator]. While the program coordinator described a focus on empowerment including

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<sup>3</sup> Although, changing population dynamics with increased numbers of Yemeni refugees living in Djibouti were noted to shift the proportion of men and women selling in the market in certain communities.

women's influence in decision-making, the gender specialist solely focused on increasing women's skills and abilities to earn an income to become less dependent on others.

## **How was the program experienced and delivered at the community level?**

### ***Who was included and excluded?***

Intended beneficiaries of the PRAREV program described how fishing organizations were either newly established or modified as part of their participation with PRAREV. Prior to PRAREV, fishing organizations consisted of men fishers and women, in general, were not organized related to their participation in fishing activities. But PRAREV encouraged women to organize into fishing organizations, which they then either merged under a larger, men's fishing organization (to become a mixed organization) or operated as their own fishing organization. Several women participants indicated that it was because of the PRAREV program that enabled their participation in such organizations as PRAREV either helped them to establish their own organizations or enabled their integration into larger, previously men-only organizations.

While no respondents shared instances where potential community members were intentionally excluded from participating in the fishing organization<sup>4</sup>, many respondents shared experiences where certain organization members were excluded from PRAREV activities, support, and trainings. Namely, women members of mixed organizations were not invited to participate in PRAREV trainings. A group leader shared, "*The women have not received the trainings, but the men, they have benefitted from various trainings*" [M, leader]. A women-only fishmonger organization shared that even though every one of the women members is invited to participate in their trainings, sometimes the trainings are only for women who can read, which in effect, excludes most of the women members as a majority are illiterate, "*The*

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<sup>4</sup> All participants indicated that the only requirement to participate was a Djiboutian identity card and that the person was active in the fishing value chain. It is not clear which segments of people having an identity card may have excluded, if at all. Additionally, there were no Yemeni refugees who participated in the fishing organizations, although it is unclear if this is due to an intentional exclusion or a lack of interest.

*training is open to all members. Except if the training given to us is limited to educated women [as then the women] leave first, because most of them are illiterate” [W, fishmonger].*

Fishermen in Arta established a new policy that whichever group members attended the trainings had to share their learnings with organization members (men and women) to enable all organization members to benefit. As one man shared,

*“You know, it was a very interesting and very important training for us but there were only a few members of the group who had the pleasure of participating in this training so the president and the executive committee adopted a new decree so that all benefit from this knowledge, the participants who have the chance to participate in the trainings have in turn to train and share their knowledge with the other members of the group, in particular on the different fishing techniques as well as all that they have learned during the training with PRAREV” [M, fisher].*

In addition to study participants feeling that only select group members were invited to the trainings, some also felt that PRAREV did not equitably distribute resources to the organizations. This issue is further discussed below in Section 3.4.3, and its implications were that intended beneficiaries could not benefit as fully from the PRAREV program.

### ***What worked well?***

In general, among those who were able to participate in these activities, respondents discussed enjoying and benefitting from PRAREV’s trainings, provision of resources (to an extent), and the intentional focus on including women in the fishing organizations.

According to project staff and respondents from the fishing organizations, PRAREV delivered trainings on climate change and environmental protection, and improved fishing and fish processing techniques. A fisherman shared, *“These trainings have been very beneficial to us... We are more aware now, for example, of how to preserve the marine environment”* [M, fisher]. Another shared, *“We learned important factors such as not throwing garbage into the sea and even less bags, especially since plastic*

*bags are very harmful to fish directly*” [M, fisher] (see Section 3.6.3. on impacts of PRAREV for climate change adaptation and mitigation).

For those who participated in the trainings, respondents also liked the trainings for best practices and benefitted from knowledge that improved their fishing activities, including for fish catching, processing, and marketing (see Section 3.6.2. on impacts on the value chain).

The respondents shared mixed results on how and if the resources provided by PRAREV were beneficial. In some cases, these resources were helpful to improve the intended beneficiaries’ abilities to upgrade their value chain activities. For example, a fisherman explained the importance of receiving boats from PRAREV for their ability to fish, *“Thanks to this help [from PRAREV], our group has implemented profound changes. Before, to do the fishing, we used Yemeni boats. But since the arrival of the program, it is with our own boats that we fish, which gives us great freedom and autonomy”* [M, fisher]. Fish mongers cited the benefits of receiving knives and cold storages to improve their ability to process and store fish for sale. However, the delivery of these resources was often late and inequitable, causing tensions among organization members, and often failed to function after initial delivery (this is discussed in the next section).

Finally, respondents explained that PRAREV’s intentional inclusion of women in the fishing organizations was very well received. PRAREV did encourage women specifically to join organizations, which women previously had not done before nor were they typically included in organization activities even though they are active in marketing activities (see Section 3.6.4 for discussion of PRAREV’s impacts on women).

### ***What did not work well?***

While intended beneficiaries raised several positive aspects about PRAREV’s implementation, they raised more issues related to challenges and difficulties faced with the project over the course of its performance. Specifically, respondents described disappointment and challenges with women’s exclusion from certain trainings and resources, inequitable resource distribution, training design and delivery, late

and unsustainable resources with no follow up, limited engagement with the project staff, lack of training on needed topics such as organizational management, and project staff back tracking on promises made to organizations.

As previously noted, several intended beneficiaries noted that women were often excluded from PRAREV trainings and therefore did not receive key elements of the project's service delivery. There was also unequal resource distribution among and between organizations, where members had to determine how to fairly distribute a limited number of resources for many members so all could equally benefit. And for certain resources, like boats, women did not receive access to these, despite their desire and need for boats and similar equipment to engage in fishing activities. Additionally, while relations with the PRAREV service providers were amicable, they had barely any interaction with them, except for trainings and the day the staff provided physical resources to the groups. There was very little interaction between PRAREV staff and intended beneficiaries, which was perceived negatively by intended beneficiaries.

While trainings on value chain upgrading techniques were often useful, as described in the previous section, respondents noted that trainings with useful content were not delivered with enough frequency to be impacted. Other intended beneficiaries noted that trainings were pre-designed, not contextualized, not responsive to feedback, and were conducted in a hurry. These concerns are described in more detail below. A group leader shared,

*“Interactions with service providers are good. When there is a training opportunity, they inform us of this opportunity in advance and we immediately respond favorably. However, we have noticed that the service providers do not involve us in the process of developing the activities to be implemented with our association. They come with pre-designed activities that they just do in a hurry. In my opinion, the PRAREV program would be much more beneficial if the community was involved from conception to implementation” [M, leader].*

Group leaders, both men and women, shared similar reflections of their experience with the training delivery issues. A woman shared, *“It was an interesting training with five members who had participated, except that most of the content of the program was not adapted to our sea, because we do*

*not have mangroves or dolphins here in the Tadjourah region” [W, leader]. And a man who was more critical explained, “We benefited little from the trainings, since they were brief and of short duration and above all, negative because they brought little, just a waste of time. And these trainings and the activities resulting from PRAREV disappointed us. It did not meet our expectations and really impacted our morale and dedication” [M, leader].*

In addition to unequal provision of resources, respondents also described challenges with the donated resources breaking or not being something that was adapted to their current environment, making them obsolete in attempting to serve a purpose. A fisher shared, *“To date, we have had no disagreements or conflicts with service providers. But some people in the community, as well as our group, are disappointed because all the materials provided by PRAREV have broken down, such as the fishmonger's cold room. It no longer works because of the solar panel supply, which is not suitable for Arta, and there is not much sun. In addition, the refrigerated container encounters the same problems that forced us to call on the intervention of the ODEC every week” [M, fisher].* This issue is further discussed under Section 3.6.1, but was a significant challenge faced by intended beneficiaries of PRAREV.

Fishing organization members indicated that although they benefitted from PRAREV’s work to establish new organization and integrate women into them, they shared that PRAREV did not supplement this with the necessary tools and monitoring to enable the organization to be successful. Respondents raised issues of corrupt group dynamics and poor organization management that hindered their success to work collectively. A woman leader, who represented the women’s organization that “merged” into the larger men’s organization, was concerned that the resources provided by PRAREV may have been reserved only for the leadership, *“Indeed, common resources are privatized by the president and the executive committee, which means that most members of the cooperative are excluded. Then no action is undertaken for the use of either the member or the group” [W, leader].* Other organization members did not highlight this issue so specifically, suggesting that they might not be aware of such dynamics. Respondents indicated that PRAREV did not intervene to assist or monitor for corruption in organization dynamics. A group leader shared recommendations to improve this, *“Actively follow the beneficiaries*

*until they are more autonomous. Help the beneficiaries in the allocation of tasks by clarifying for each position its attributes. Engage the community to actively participate in the program” [W, leader].*

Finally, study participants felt that PRAREV made promises to fishing organizations that they did not keep over the course of the project implementation. A specific group who faced these challenges is the men’s fishing organization in Tadjourah.<sup>5</sup> A group leader explained some challenges in general,

*“I would like to say that at the beginning, the PRAREV project was really beyond our expectations. They promised us several things, whether in terms of equipment, more specifically the boats. I remember they said you will have 20 boats for the area. A little later, we noticed that 10 boats were handed over to the Arta region. I admit that we did not understand anything, especially this region does not have many fishermen. In the end, we only received 10 boats, which we should then share with the other small towns in our region. In the end, we just received three boats for our cooperative. Frankly, we were very disappointed with the activities of PRAREV”*  
[M, leader].

In addition to the challenges related to resource provision, the leader explained challenges faced with the trainings,

*“There were different types of training, namely training on fishing and the different ways of doing it, namely illegal fishing. [There was] another training on fish processing and conservation, and PRAREV suggested a staff person from the chamber of commerce to assist us in terms of management and negotiations to facilitate the sale price. Finally, they approached the subject, but did not train us. They also let us know that this training would lead to a follow-up of six months, but none of this was done”* [M, leader].

Finally, discussions with PRAREV staff and organization members highlight differences in perspectives on some of these issues, particularly with respect to a fishery that was built supported by PRAREV. The gender specialist highlighted that the Tadjourah organization faced challenges over

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<sup>5</sup> The men fishing organization members were so upset with PRAREV that they refused to participate in additional interviews with this study. They only granted the FGD on the basis to share their disappointments with the program.

deciding whether to privatize their fishery and that PRAREV could not be involved, *“the Tadjourah fishing cooperative struggled with the decision to privatize their fishery. This challenge is still present, and we have not been able to do anything to help these fishermen deal with this problem”* [W, Gender Specialist]. The Tadjourah group leader shared a different perspective, noting that the group was actually not involved at all with the privatization of the fishery, *“The morale of the group is down, because at the beginning, PRAREV asked us a lot about our needs, namely the construction of a fishery, which was finally built. And so, what? We have been informed that the fishery is going to be privatized by the government”* [M, leader]. A fisherman expressed how this affected morale, *“But our hopes, dreams, and goals for developing our fishing activities were all tied to the fishery. It's important you know. That's why it's really sad”* [M, fisher].

## **Collective efficacy**

### ***How did the community and organizations experience collective efficacy?***

In general, most fishing organizations included in this sample were recently formed by PRAREV and therefore, reported that they did not have many examples to share regarding how they collectively addressed challenges, achieved common goals, or worked together in the community. However, they did describe some insights into how the organizations operated, generally, even if outcomes were not yet available. A couple of organization members did note that due to COVID-19, organization activities were suspended, which may have delayed the organizations' ability to convene.

Although the organizations were young, a few members explained what they wanted to become and focus on as an organization. In Arta, the fishing organization was only established in 2020, and therefore they did not have much experience in negotiation or working together as a group to build collective agency. A man from a young fishing organization shared, *“You know we are young, and that given that the capacities of our cooperative are limited and that we do not have many means, our help is generally limited to the members of the cooperative and sometimes exceptionally the most vulnerable people in our community. We would like to be able to expand our help and support to the whole*

*community but what prevents us from doing so is the lack of means” [M, fisher]. Another organization had been around for a longer period (around 3 years) and members had more to share on the benefits of participating in the organization, “I have been in this cooperative for 3 years. The advantages of being in this cooperative are numerous. Being in a group allows us to benefit from donations and training. In addition, there is solidarity and mutual aid among members” [W, fishmonger].*

The fishing organizations did not hold regular meetings and only called each other to meet when it was necessary for a training or to discuss an important matter. All respondents shared that the group decision-making process was done equally and that every member contributes. A group leader explained, *“In case of disagreement, the final decision is adopted by democratic vote” [W, leader].* However, in some organizations, members disagree on how decisions are made. One woman shared, *“All the members meet to participate in the same ways, and there is a vote. And it is the voice of the majorities that prevails”* while another in the same group shared that, *“There is no collegial decision-making within our cooperative. Decisions are taken by a select committee and the other members are informed afterwards” [W, fishmonger].* In general, respondents indicated that when there are limited resources to be divided among organization members, that the leadership and members decide together how to split these resources, prioritizing the elderly or the most vulnerable within the organization.

### ***How did the community and individual members benefit from the organization’s activities?***

#### ***Examples of how individual members benefitted***

Across the sample, almost all respondents shared positive feedback for how they were able to benefit from their participation in their respective fishing organization activities, as well as provided examples for how the organizations also impacted their local communities. In general, men and women members shared how their participation improved their own intrinsic agency, enabled them to access a broader network and pool of resources, have an impact on their community, and collectively support one another to advance individual goals or needs.

Women members of fishing organizations shared that their participation, encouraged by PRAREV, had improved their own personal feelings of confidence, self-worth, and self-efficacy. For example, a woman who was part of a recently established organization shared *“I like participating in the group, because now I am being confident and counting on the solidarity of the group if I ever need it. It is very beneficial for everyone and me... Now my goals have developed a little, my personal opinions have also developed and diversified, and I hope to gain more thanks to the support of the group”* [W, fishmonger].

Women and men members cited that their participation in their respective organizations enabled them to access a broader pool of resources, networks, social support, and tangible benefits. For example, a woman shared, *“[We] also have donations from the authorities or organizations (training, materials, financial). It is easier to find donations or funding when you are a united group of individuals”* [W, fishmonger]. Another woman highlighted that she now could access capacity building trainings as well as financial resources, *“Being a member of this cooperative has many advantages, such as the fact that we support each other and that we have capacity building programs for the benefit of members. These are the two aspects that make it particularly beneficial to belong to this cooperative. Thanks to it, we are able to mobilize donations and aid as well as support from the government or NGOs”* [W, fishmonger]. The resources she mentioned were provided by both PRAREV and other projects or government entities.

Mostly women cited additional ways in which their respective organization enabled collective support for one another during times of crisis or shock. While PRAREV did not directly facilitate this collective support, it did enable women to organize formally to work together on fishing activities and other related tasks. A woman shared how the group was instrumental for helping each other withstand impacts of COVID-19. In particular, she said,

*“This support has been warmly welcomed by the community, and more particularly the members of our cooperative, because they have allowed us to better face certain difficulties in life (especially during the COVID crisis) and also to have the means to exercise our fishing profession better and better meet the needs of our families”* [W, fishmonger]. Another woman

shared, *“I totally trust the members of the cooperative, because we know each other very well and help each other as if we were brothers and sisters. I would say we are one big family. Indeed, I was able to ask a friend once to borrow knives [for cutting fish] and I got them. This is how our group operates. We help each other and, in this way, we overcome obstacles, thanks to the solidarity and brotherhood that prevails within the group. It cannot be otherwise because the life of a fisherman or a fish seller/cutter is really very difficult here”* [W, fishmonger].

Another woman shared how the organization works to financially support members in case of shocks, such as a family death, *“Yes, indeed, as they say, unity is strength. For example, the group has a fund with membership fees. This allows us to help each other and help those most in difficulty among us. In the event of bereavement, the association helps, for example, the bereaved member of the cooperative”* [W, fishmonger]. Men also indicated that the cooperative fund supported members during times of crisis or need. A man shared, *“Thanks to this organization, the group was able to have a cooperative contribution fund, which helps us a lot if in case we need it”* [M, fisher].

Finally, several women explained how participating in their organization brought their community a strong sense of pride, even though they are still experiencing challenges to become officially registered with the Djiboutian government. The group leader explained,

*“First of all, the main idea of creating an association came from me and the president of the Tadjourah cooperative. We brought together several women from the community, and we proposed the idea to them. They found it very interesting. We proposed the funding to PRODERMO (The Ministry of Agriculture, Livestock, and Fishing) and the women's association was born. And the whole community helped us, whether it was women, men, and young people. We started with 5 women and now we are 15. However, I will say that the community is proud of us and has a consideration for us”* [W, leader].

### ***Examples of how Community Members Benefitted***

Both men and women respondents shared examples for how their broader communities were able to benefit from the fishing organization’s activities. First and foremost, both men’s and women’s

organizations worked to create awareness of the benefits of fish consumption within the community and increase local fish consumption, which was an objective of the PRAREV project. This awareness not only had a benefit to the fishing organizations, who in turn created larger, local markets for their fish, but it also improved fish consumption among rural Djiboutian diets as a key source of diverse nutrients.

The PRAREV gender specialist highlighted the example of a women's fishing group in Arta that was successful in not only improving their fishing techniques, but also increasing the consumption of fish throughout the remote community, "*There is example of Plage d'Arta, which is interesting. This association has contributed to the development of fishing activities among women in the region and has also contributed to the development of fish consumption in the Arta region*" [W, Gender Specialist].

Fishing organization members in Arta confirmed this observation, saying, "*Indeed, our group is perceived positively by the community...Because thanks to us, they can buy fresh fish at home in Arta for the first time, which is enormously profitable for them, because before the households who wanted fish, had to travel to go to Djibouti-ville to buy some...Our group made it much easier for them to access the consumption of fish*" [W, fishmonger].

Respondents also improved local fish access and consumption, but donating fish catch or products to local hospitals, as shared by a fishmonger, "*We distributed fish donations to regional hospitals such as Ali Sabieh and Obock*" [W, fishmonger] and in another community, "*In addition, the association helps the poorest in Tadjourah hospital by offering donations of fish cooked and ready to eat at Tadjourah hospital*" [W, fishmonger].

In addition to improving local fish access and consumption, several fishing organizations facilitated wider community events for women and girls. A women's group participates in the regional International Women's Day, and the leader explained, "*The fishing organization participates in the organization and logistics of this event by providing ice boxes, umbrellas...*" [W, leader]. The organization also works to improve women's and girls' swimming skills in the Tadjourah region, "*The group has conducted awareness sessions on the theme of swimming. Indeed, we actively participate in the*

*days of women's swimming competitions in Tadjourah by convincing as many girls as possible to participate in these competitions but also by bringing refreshments and vests” [W, leader].*

Finally, respondents also share examples for how they conduct community awareness campaigns and clean up events around climate change and waste reduction, another objective of the PRAREV project. A woman shared, *“Yes, the Khor Angar cooperative has been able to carry out awareness-raising activities for the protection and preservation of the marine environment, cleaning the sea, avoiding throwing garbage such as bags and plastics into the sea” [W, fishmonger].* Another member of the same organization separately explained, *“Faced with the problem linked to the degradation of the marine environment, our cooperative has mobilized to carry out awareness-raising actions for the benefit of the local population on the preservation and protection of coastal and marine areas to carry out coastal cleaning actions by Khor Angar. Thus, the whole community was able to benefit from it” [W, fishmonger].*

#### ***How did PRAREV facilitate collective efficacy?***

The evidence provides mixed feedback with respect to whether and how PRAREV facilitated the collective efficacy of the fishing organizations associated with the program. First, several respondents attribute many benefits to their participation in the fishing organizations, many of which were new and established under PRAREV or with support from PRAREV. PRAREV ensured that women were able to organize collectively and participate just as men had been able to, which opened access to collective benefits as articulated in the previous section. However, several challenges that emerged over the course of PRAREV’s implementation hindered the collective efficacy or potential collective efficacy of these organizations. These are described below.

For example, the provision of solar panels in one community initially facilitated collective efficacy among the organization members, as it enabled them to easily reach their goals and have a reliable source of electricity. The provision of key resources and infrastructure, such as the solar panels, initiated a morale boost among the organizations to work together on their fishing activities. But the

subsequent failure of the solar panels contributed to the decline of fish mongering sites, including the cold storage, and the organization lost over 500kg of fish. The group leader explained, “*No, because at the very beginning [of PRAREV], we had started well and we could help each other, but following the power failure of the fish market and the refrigerated container located at the beach, our activity weakened and is on the way out*” [W, leader].

Additionally, broken promises and negative experiences with the PRAREV implementation hindered group cohesion in Tadjourah. A group leader shared, “*The biggest challenge I faced as a leader was the decline in the morale of the fishermen following the bad adventure with PRAREV and their broken promises. To cope, we are looking for more partners to be able to improve the situation*” [M, leader]. More specifically, PRAREV only provided the organization three boats, which was not enough to support all fishers in the organization and thus stirred friction and tension among group members. The group leader explained, “*As part of the program, we have only obtained three boats from PRAREV. These material resources could not be shared since if we give two fishermen one boat, at the end there would be fishermen who will end up with no boat. So that's when to impose conditions, that those boats are at the disposal of the association. There was a certain agreement, but in the end, we are still unable in come to terms for how to share these resources*” [M, leader].

Although PRAREV was successful in integrating women into organizations and establishing new fishing organizations, the program stopped short by not providing needed support to these new organizations, such as trainings and team building exercises for best management practices. One organization self-reflected that their organization was the weakest due to social friction among members,

*“In Djibouti we are the only group operating in the fishing sector. Compared to other beneficiaries of the PRAREV program in other regions, such as the region of Obock, Tadjourah and the region of Arta, their productivity as well as their development is greater and more developed than us, because in these regions, all the members of their association are more united and help each other mutually and are closer to each other, because they all come from the same background, grew up in the same environment and come from the same community or ethnicity.*”

*What makes their integration and understanding between the members of the group is more important than those of us. Moreover, it is their strength that helps them overcome certain obstacles in their lives. The only common point between us is that we all evolve in the sector of activity, which is fishing” [W, leader].*

When asked about areas for improvement, several men and women indicated that better management of their organization and teambuilding was necessary to be successful as a collective organization. A men’s organization in Djibouti-ville, that generally had positive things to share about the PRAREV program, asked that in the future, PRAREV or programs similar would give trainings on better group management practices to improve their ability to work together as a cohesive group: *“Yes, we would like to receive more training and above all that this training be given to as many people as possible. More specifically, we would like training on the management of the cooperative from PRAREV to teach us how to better organize and manage the activities of the cooperative.” [M, fisher].*

Respondents from other regions noted that better organizational practices, training, and support would be necessary to enable their organization to grow and continue to success. A woman shared, *“I would say that the functioning, organization, and cohesion that prevails in the association suits me. I would like us to be even more numerous and to develop our group at the national and even international level. With the fishery that will soon be operational and if we get help to meet the high expenses of boat fuel, we can sell our fish in Djibouti-ville more often and even in the gulf countries, thanks to a cooling room allowing to keep our fish in good, sellable condition” [W, fishmonger].*

## **Program Impacts**

### ***Provision of resources to support fishing value chains without exploitation of marine and natural resources***

As previously described, a key component of PRAREV was to deliver necessary and critical resources to fishing organizations to improve fishers’ and fishmongers’ ability to upgrade in their respective value chain node. Most intended beneficiaries thought of program resources only in terms of capital or physical

resources. PRAREV delivered a variety of key resources to the different fishing organizations included in the study, including (but not limited to) boats, fishing lines, knives for cutting, solar panels, cold storage facilities, and a processing facility.

Fishers and fishmongers alike described the benefits of receiving these resources and how it has helped to improve their activities in the value chain. For example, a fisherman from an extremely remote community shared that the boats provided from PRAREV were extremely useful in enabling and expanding their ability to fish further distances so as not to continue exploiting the same fishing areas, *“Now we have boats for fishing. Before, we fished offshore with our artisanal tools. With the fishing boats, we can fish far away and sometimes stay for days to have enough harvest for our consumption, but also to sell the rest”* [M, fisher]. A fishmonger noted the types of resources she benefitted from PRAREV, *“The PRAREV program has supported us through the fish market with the various necessary equipment but also the materials for our fish processing and conservation activities such as knives, coolers, balances, etcetera.”* [W, fishmonger].

Other well received resources provided from PRAREV included solar panels in remote communities that previously did not have reliable sources of electricity. These solar panels provided a critical gap that enabled fishmongers to not only preserve fish catch (which does not require refrigeration), but also to reserve catch in cold storage to transport and sell in different markets. However, as previously mentioned, these resources were delivered without consideration of their sustainability and were not distributed equally among or within the organizations. Program staff also noted that the provision of resources came too late in the program. Staff suggested that they should have been delivered in the first two years of the program, especially since—for the example of the solar panels—served as the sole source of electricity for the communities.

Many of the resources provided to intended beneficiaries failed sometime after delivery and either required significant upkeep from the organizations themselves to fix or were completely obsolete at the time of data collection. A fishmonger shared, *“You know, the materials break over time”* [W, fishmonger]. For example, the solar panels in one community had failed and were not well considered in

their implementation, as the specific region in which they were provided has low sun exposure. A fishmonger explained how this affected their abilities to continue and expand their activities,

*“Indeed, we would like the PRAREV program to help us change the source of electricity from the fish market to photovoltaic energy, which is not adapted to our environment, because solar exposure is low in our region, to help us connect our premises at the EDD. However, it is the most important obstacle that led us to stop our activity altogether. On the other hand, we would also like the program to grant us a car, a means of transporting fish from Arta beach to the Artaville fish market”* [W, fishmonger].

Another organization also faced issues of broken resources and noted that PRAREV did not help them fix the issues, *“Apart from the cold storage, I don't see any other support that PRAREV provides us... You know PRAREV made a lot of promises to us and none of these promises were kept. They flouted all our programs and our objectives. And they disappeared completely without any news”* [M, fisher].

Had these resources been properly designed, implemented, and delivered to each organization, they had the potential to significantly improve regional connectivity and market expansion for fishers and fishmongers, particularly the cold storage and refrigerators. PRAREV could have worked with the fisher organizations prior to delivering resources to provide those with the exact types of resources needed to improve their value chain activities and could have ensured that the resources were appropriate to each location based on needs and existing infrastructure to operate and sustain those resources. For example, a leader indicated that a refrigerated truck would enable organizations to expand their marketing to meet export needs, *“Other activities include fish exports to other countries such as Ethiopia or other inland regions, but a lack of a refrigerated truck and material does not make this possible for us”* [M, leader].

Another leader reiterated the desire of organizations to expand their market potential, but noted the limited means to do so, *“Indeed we would like to diversify and develop our activities in the fishing sector and these different techniques and even export our fish to other cities in other countries. It is the lack of means, materials like cold storage and know-how that prevents us from achieving our objectives”* [M, leader]. Another key resource that was not provided by PRAREV but repeatedly shared by

respondents as necessary to improving their value chain activities and market inclusion was fuel both to fish in areas further away from the coast and to travel to further markets to sell. PRAREV could have held consultations with fisher organization leaders and members to identify the most needed resources and provided such resources in a way that navigated existing barriers to access and to sustain such resources.

### ***Benefits and challenges for fishers and processors under PRAREV***

#### ***Fishers***

PRAREV delivered technical and capacity building trainings for fishing organizations, which translated into better fishing practices with higher catches, as reported by several fishermen included in this study. For example, a fisherman shared, *“The PRAREV program supported us through training on capacity building for fishermen and on the different fishing techniques. This training was very useful to us because it provided the members of our association with tools on fishing activities. The training material also included videos shown on how to cut and preserve fish”* [M, fisher]. Additionally, several fishermen noted that the provision of resources, such as boats and nets, were useful to enable fishermen to go further out to sea and rely on their collective resources to maintain their livelihoods.

However, several fishermen shared negative perceptions of the PRAREV project in terms of their ability to upgrade their value chain activities. Such negative perceptions are related to issues of limited resource distribution or a lack of providing the needed resources or continued support to operate such resources. For example, an organization leader shared, *“At the beginning, we came together with the aim of better organizing ourselves and, with a little help, to face our difficulties ourselves. But hey, so far, the few aids provided by PRAREV have not had a big impact because too little and above all a real disconnect between us fishers and the agenda that PRAREV released afterwards. We don't even have a wharf to deal with bad weather or a fishery to develop our activities”* [M, leader].

#### ***Fishmongers / Sellers***

PRAREV also delivered technical and capacity building trainings for fishing organizations that targeted better processing and marketing techniques that improved the quality of product and negotiation skills to

garner a higher price. For example, a fishmonger explained the types of training they received, *“We had training on the technique of selling, cutting, preserving fish, meaning how to dry fish. We also had two days of training on resilience and global warming and its consequences”* [W, fishmonger]. Another woman attributed the benefits of attending this training to improved quality and techniques, *“Thanks to this training from PRAREV, we were able to improve the way of cutting the fish and to preserve it better, which allowed us to achieve better storage of fish for sale. Our way of cutting fish has completely changed since this training”* [W, fishmonger].

These trainings were targeted towards the fishmonger participants, who were mainly women. However, when trainings were delivered to mixed gender organizations, the trainings only included men and often were not relayed to the women members. A woman shared, *“Indeed, some members of our association benefited from training, but it was just men, no women... The resources we [women] have received, we use them together”* [W, fishmonger]. Another woman shared, *“To date, we the women of the cooperative have not had the chance to participate in training, whether through the PRAREV program or other [programs]. In all faith, we would very much like to have training on our activity because we need to learn and gain knowledge in the fishing sector”* [W, fishmonger]. Women did share that sometimes men, who attended the trainings, would share information with them that they learned in the trainings, specifically around effects of climate change. And in one instance, a leader of a women’s organization explained how she participated in and learned from a training tailored towards best fishing practices,

*“We had specific training related to fishing. This training focused on how to properly arrange the fishing net to have more fish and in complete safety, how to catch fish in quantity without damaging marine biodiversity and improving our production. [It also focused on] the preservation of the sea and the protection of mangroves. Yes, it was an important training because I was able to learn how to fish and have more fish while preserving and protecting the sea as well as other marine species. I am convinced that the fishermen of our association have benefited a lot from these trainings and have applied the techniques and methods learned during these trainings”* [W, leader].

PRAREV also supported fishmongers and sellers to upgrade their activities by providing key resources, such as knives and cold storage. PRAREV also supported fishmongers and marketers with resources to support the development and maintenance of a local fish market. One woman shared, “*The PRAREV program has supported us through the fish shop with the various necessary equipment but also the materials for our fish processing and conservation activities, such as knives, coolers, swings, etcetera*” [W, fishmonger]. However, several of these resources specifically were poorly adapted and now defunct. One woman explained,

*“Indeed, our group benefited from a local fishmonger with these necessary materials, such as coolers, knives for cutting and transforming fish. It was PRAREV who provided these resources and are used and maintained together by us, the women members of the association. This fish market broke down and no longer works; same as the coolers, which were essential for the conservation of fish because it is supplied with photovoltaic energy sources, which are not adapted to our environment. In the Arta region, the solar exposure is low. So, all this together means that our activities have also stopped. We no longer keep up our activities and they have faded since the time of the project. Our products perished (500 kg of fish), moreover the refrigerated container on the beach also has the same problem”* [W, fishmonger].

### ***Evidence of cross node-integration***

Participants in this study shared a few examples of cross-node integration facilitated by PRAREV. In general, such examples centered around a facilitated integration of women’s fishmonger organization better connecting with men’s fisher organizations so women have a more reliable and diversified supply of fish to source from. The gender specialist shared an example of women’s groups that successfully integrated with the men’s fisher groups,

*“Some groups of women dealers or fishmongers are more successful than others thanks to their dynamism, their ability to create networks with fishermen who may see them as their best customers, but also their ability to retain customers at their points of sale. In addition, if a woman has the means to invest, she can sponsor fishing by paying in advance for the fishing trip,*

*such as fuel. This allows them to buy fish at a good price and therefore reap slightly higher profits than the others” [W, Gender Specialist].*

This perspective was corroborated by several women fishmongers who participated in PRAREV. A group leader shared fishmongers were able to better integrate their processing and marketing activities in the fishing sector by building networks and strengthening collaboration with men fishers. However, she further elaborated how women fishmongers wanted to further expand their role into fishing activities and link with additional markets, *“We would like to bring the women to fish by themselves, because at the moment women are only involved in the sale and the cutting of the fish. And moreover, we would also like to expand our marketing in the rest of the region. This could only be achieved by granting a transport vehicle from organizations such as PRAREV and the government” [W, leader].*

A fishmonger explained why women wanted to expand into fishing activities directly, *“In fact, for the moment, we women are only selling the fish that the men have caught. Like we buy the fish from the fishermen on the boats, and we resell them at the market. And as the fish are scarce lately, the fishermen sell us the fish at a very high price. It directly affects our market, and we don't make any profit from it” [W, fishmonger].* However, although women expressed a desire and interest to expand their participation into additional nodes of the value chain, they were limited in this pursuit due to lack of resources and opportunity, as explained by a fishmonger,

*“However, we would like to have women who do the fishing themselves and thus sell these fish. What prevents us from doing this is the fact that none of the women in the association has a boat and the appropriate equipment for fishing. So, we would like to have training, boats, and all the necessary equipment that goes with it. This is also one of the key points to ensure the empowerment of women in our region” [W, leader].*

### ***Impacts on the fishing sector in Djibouti***

Prior to PRAREV, according to program staff, there was virtually no data or studies on the fishing sector.

The program staff noted that the creation of a statistical monitoring system of the fishing sector in Djibouti was one of the greatest contributions of PRAREV to Djibouti’s fishing sector as a whole,

*“[PRAREV] created a lot of knowledge around fishing in our country. We have set up a statistical monitoring system for landings and now we know how many fish are caught each day, how many fishermen there are; [it also captures] a lot of knowledge on the marine environment, on mangroves, solar equipment, micro-finance, artisanal fishing, the marketing of seafood...”* [W, Project Coordinator]. However, this was not corroborated or mentioned by other respondents included in this study.

### **Climate change mitigation and adaptation impacts**

According to most participants in this study, PRAREV delivered trainings that improved participants’ knowledge of impacts and drivers of climate change and best practices for preserving local marine environments. A fishmonger from Arta shared, *“Indeed, our association participated in a training for raising awareness on the theme of resilience and climate change in collaboration with DJIBOUTI-NATURE. The activities of this day consisted in informing the community of the importance of keeping the sea clean with sessions rubbish and waste collection on the entire coast of the sea”* [W, fishmonger]. A fisherman attributed his improved awareness to the trainings delivered by PRAREV, *“These PRAREV trainings have been very beneficial to us, and we can capitalize on these achievements today. We are more aware now, for example, of how to preserve the marine environment”* [M, fisher]. A fishmonger highlighted how the trainings were important for her to better understand issues around climate change and environmental degradation, *“These trainings opened my eyes to the importance of taking the environment into account and to better consider the effects of climate change on fishing activities. Yes, these training courses have caused a change in our behavior vis-à-vis the sea and the marine environment. We are now more aware of the impact of human and climatic activities on the marine ecosystem”* [W, fishmonger].

These trainings translated into fishing organizations taking action to clean up their communities and preserve their local marine environment. A woman from Arta shared that the organization used the information learned in the PRAREV trainings to organize community beach clean-up events, *“Yes, we have participated in the awareness raising and collecting garbage on the coast with men and certain*

*members of the community to fight against climate change” [W, fishmonger]. While the climate change trainings were very useful, several respondents indicated that they were not frequent enough, “We learned a lot of things in this training that we did not know about the preservation and protection of the sea in general. And it was beneficial for all participants. Even we would have liked to have had more training, and more often, not just once” [M, leader].*

Participants in this study shared their perceptions for the largest issues around climate change on fishing activities in Djibouti as well as their livelihoods. A fisherman reflected on the key issues related to climate change that affects his livelihood in the fishing sector,

*“For us, one of the biggest challenges related to climate change is the depletion of the fish stock and therefore the impoverishment of the community due to a lack of resources. A reduction in the fish stock causes fishermen to travel very long distances to be able to catch fish. This leads to increased fishing costs, particularly fuel for boats, the prices of which are already at high levels and constitute a burden. This is important and affects the income of fishermen as we increasingly have to deal with mass fishing carried out by Chinese trawlers, who come to use our waters. This leads to a depletion of fish, mangroves, coral reefs, and other marine species. Faced with this situation, we alerted the authorities through social networks, but no action was taken to stop them” [M, fisher].*

Study participants shared that PRAREV did not address these larger issues and did not support the fishers and fishmongers in adapting to such negative effects of climate change on their value chain activities, by, for example, establishing a financing mechanism in collaboration with the Djibouti government that would enable fishermen to access fuel at a subsidized or consistent cost. A former fishmonger similarly described the key issues associated with climate change that impacted her ability to earn a livelihood from her value chain activities,

*“For us, the biggest challenge is the scarcity of fish due to the disruptions linked to climate change. This leads to high fish prices, which complicates the lives of fishmongers, who find it difficult to find a market to sell their goods. This is why I stopped selling fish and turned to*

*selling donuts. The PRAREV program has so far only brought us trainings. Apart from that, we have not received any other support from PRAREV to face the challenges of climate change. Our cooperative has very limited means to help us face this challenge of climate change. We would have liked the fishery to be operational and to have more resources. For example, boats for the women, as well as other support from the government, particularly regarding fuel, which is too expensive for us” [W, fishmonger].*

Similarly, a fisherman shared, *“The PRAREV program has not provided us with any support so far to face this challenge. In terms of support, we would like the fishery to be operational as soon as possible and we ask that the government set up a preferential price for fuel for the benefit of fishermen, a special price that is fair for fishermen” [M, fisher].*

### **Women’s empowerment and gender dynamics**

As described in the introduction, the quantitative impact assessment found significant positive impacts on women’s input in decisions about fish trading and (Boukaka et al., 2022). At the same time, the qualitative findings from interviews with PRAREV participants and implementing staff indicate that gender considerations could have been better taken into consideration in both the design of the program, as well in its delivery. In doing so, it is likely that they program could have afforded a broader range of benefits to women and helped facilitate women’s greater improvements in women’s empowerment. Moreover, the quantitative results suggest that impacts were larger among participants who had been exposed to the program for a longer period, and that there were limited impacts for those had participated for less time. Some respondents of the qualitative study state that whereas PRAREV was able to reach and to some extent benefit women in the fishing sector in Djibouti, the limitations in terms of program delivery limited the full potential of program impacts on women’s empowerment. The project did target women in fishing organizations with the intention of providing them access to opportunities and resources to participate in the fishing value chain. From project staff perspective, this had observable impacts on women’s status in the community and in the household, and in their view, women’s empowerment. The

gender specialist observed that women who participated in PRAREV trainings earned larger profits because of better negotiation and processing techniques, which may have also shifted dynamics within their households. Program staff also observed that women who participated in PRAREV were now perceived as engaged actors within their communities and garnered more respect from community members. The program coordinator shared, *“Many women have come out of dependency on their husbands and now are actors within their own communities,”* suggesting that women are more active in community life and economic activities [W, Program Coordinator]. While the gender specialist shared, *“The women are active women who rely on themselves and can help their families. So, the community respects them more now...With PRAREV, the women beneficiaries have become members of the community, bringing resources to their families and to the community”* [W, Gender Specialist].

However, overall, women members of fish organizations (i.e., the intended beneficiaries) did not share this view on the project’s impact on women and their empowerment. As a qualification, many women did say that PRAREV, in conjunction with other efforts from PRODERMO, did benefit women and communities by ensuring women are now registered and organized in the fishing organizations. For example, members of the fishing associations cite that due to support from PRAREV and another project that women were encouraged to join the fishing associations and participate in fishing activities, *“In the past, women were not involved in the fishing sector, let alone in an association. Our role was limited to household chores and certain activities specific to women in society. But it was when the first fisher associations were created that we were encouraged to apply to join the cooperative to represent women. It is thanks to the support of the PRAREV program and PRODERMO that our group was born and was able to be part of this association”* [W, fishmonger].

Several respondents did elaborate on how participation in the fishing organizations did improve their respective value chain activity and thus, incomes and status within the community. A fishmonger shared,

*“[PRAREV] has indeed affected [us] in a positive way, because of the donations and the various materials that the fishing association of Khor Angar has received. We have been able to fish more*

*efficiently. GPS, fishing lines, and boats improve the number of fish caught and therefore, our [catch]. I think that fishermen and fishmongers would not be what they are if they did not come together in the association. With my work as a fishmonger, I was able to have my own boat, and I am independent. Participation in the Khor Angar fishermen's association has allowed me to live from the results of my work and take care of my family. In addition, the association ensures that the fishermen and fishmongers of Khor Angar have a legal status and recognition as fishermen and fishmongers” [W, fishmonger].*

Not all women participants shared similar feedback, as women’s exclusion from trainings and certain resources served to undermine their ability to benefit from PRAREV. Several intended beneficiaries, both men and women, shared that more women from the communities should be included in the organizations, suggesting that perhaps not all women were able to participate (although it is unclear why from the qualitative data). Additionally, women shared that they were excluded from trainings and therefore did not benefit the same way their male counterparts did in terms of gaining access to information about fishing or other topics. Finally, resources were provided to men and women intended beneficiaries according to gender normative roles in the fishing value chain, which reinforced potential inequalities between men and women to fully participate and benefit from their activities. One woman shared,

*“I would really like more women in our association of female fish sellers and cutters. In addition, I would like women to be able to go fishing like men and resell the results of their harvests. But unfortunately, we do not have the appropriate equipment for fishing. Almost all the boats and other fishing equipment are the property of the men who fish. In the future, I would like this to change to encourage the vocation of women perch in our region” [W, fishmonger].*

## DISCUSSION

While study participants shared mixed feedback regarding the impact of the PRAREV project overall, they generally agreed that when delivered, the trainings were well received and were effective in improving participants' knowledge and awareness of climate change and improving skills in upgrading their respective value chain activities. The trainings specifically around climate change were useful in raising participants' awareness about climate change and its drivers, and for teaching best practices for climate change mitigation and environmental preservation of local marine resources. These trainings, however, were limited in that they did not address or support participants to adapt to existing impacts of climate change on respective value chain activities, such as depleted fish populations in mangroves or reef environments. Other trainings focused on value chain upgrading practices were well received and when delivered, improved fishers' methods for catching fish as well as fishmongers' practices for preserving, processing, and marketing fish. However, while these specific trainings were well designed, they did not reach many intended beneficiaries, specifically women members, who were reported to be excluded.

These trainings to improve intended beneficiaries' knowledge and awareness often translated into actions within the community. As an example, study participants observed improved awareness among community members of the nutrition benefits of fish consumption, increasing both local consumption and generating a larger market for fishmongers to sell their product in closer markets. This benefit was directly attributable to the knowledge gained from the PRAREV trainings.

While the project aimed to take a gender-sensitive approach, the gender components would have benefited from more thorough development, and their delivery could have been improved. The strategies used by PRAREV enabled the program to reach women to the extent that women and women's fishing organizations were intentionally strengthened and integrated into men's fishing organizations. Doing so, in turn allowed them to gain access to and to some extent benefit from access to collective resources, training, and knowledge. At the same time, however, PRAREV trainings often were not communicated to women members of fishing organizations. As such, women members often did not participate or benefit

from trainings in the same way that men did. Moreover, there were no mention of specific improvements to women's confidence, decision-making inputs, or other areas of women's empowerment, although the impact assessment did find marginal improvements (approximately three to four percentage point increase) in women's influence in decision-making around fishing and fishery activities (Boukaka et al., 2022).

Finally, PRAREV provided fishing organizations key resources to enable value chain upgrading and integration in the fishing sector in a way that preserved the local marine environment. Such resources, including boats, knives, fishing wires, nets, among others, were well received by the fishing organizations. However, intended beneficiaries cited several concerns associated with the delivery of these resources. First, they were delivered late in the project period and were often delivered without training on their use, upkeep, and without a sustainability plan. Several key resources, such as the solar panels in Arta, went defunct by the time of data collection and were no longer in use (neither were the resources dependent on them as a source of electricity, such as refrigerators). Second, PRAREV promised a certain number of resources to each group, and group members often reported that they did not receive these resources in the quantities expected, which created frustration and tension among fishing organization members. Finally, PRAREV often delivered a limited number of resources to fishing organizations, which in turn caused organizations to allow only certain members to benefit from each resource. There was little transparency or monitoring for how resources were delivered, shared, and used among fishing organization members by PRAREV, which could have alleviated some frustrations among members.

## **Recommendations**

Based on the findings from this qualitative study, several recommendations are provided to improve the design and delivery of future programs like PRAREV in Djibouti, or other similar contexts. The following recommendations are organized to address program design, program delivery, and the integration of gender into both design and delivery to advance women's empowerment.

The program design would have benefitted from strong formative research on the fishing sector and value chain activities in Djibouti, with particular attention to how men and women currently participate in and want to participate in the fishing value chain. Such research would have enabled the communities and fishing organizations to share their feedback and priorities on what they needed most from programs like PRAREV. Specifically, such research could have pointed to women's desire to participate in fishing activities and highlighted their lack of equipment and resources to do so as a key barrier. Such research could have also enabled a more strongly tailored design and delivery of resources that were appropriate to each community with community buy-in from the beginning. Additionally, formative research could have highlighted the important issue of fishers' lack of access to fuel. Doing so may have allowed the program to develop a financing mechanism to allow fishers to secure the fuel needed for longer fishing trips.

Several recommendations are shared to improve the delivery of a program like PRAREV. With respect to resource provision, programs like PRAREV should aim to provide capital resources earlier in the program period and should deliver resources with a plan for sustainability that is accepted by the local community. Doing so would enable the program adequate time to periodically follow up on how the resource is functioning during the program period and would also enable recipients to be prepared to maintain the resources beyond the period of the program. Additionally, PRAREV should implement a more careful consultation with the fishing organizations to better understand how groups could make use of high value common property. This would strengthen transparency and sustainability in the distribution of resources.

With respect to trainings, participants indicated that additional training topics would have benefitted the respondents, including trainings on fishing activities for export orientated sales, and trainings on better organizational management practices, which would have benefited the organizations to work together in a more cohesive manner. Trainings should also be tailored to the specific community-level context and not generalized across contexts. Even in a country as small as Djibouti, many of these details differed across locations (e.g., the presence of mangroves and reefs as described by one

respondents). Additionally, the trainings should be delivered in longer duration to continue and reinforce learnings among intended beneficiaries. Importantly, program staff should ensure that all intended beneficiaries, including and specifically women, are invited and able to participate in trainings delivered by the program so that all members can benefit from the knowledge, awareness, and skill building gained at each training event. Although it does happen, programs should not assume that information delivered at trainings are subsequently transmitted to spouses and other group members.

PRAREV and similar programs should implement a more robust monitoring plan to ensure resources are adequately used and equitably distributed, and that all intended beneficiaries were equally benefitting from program activities. A robust monitoring plan, where PRAREV staff meet with organization leaders as well as members in separate meetings, would enable staff to identify any issues or barriers to participation and adapt program delivery to address those issues as they arise.

Finally, although PRAREV was intended to undertake a gender-sensitive approach, both its design and implementation could have been strengthened to better deliver on this objective. A gender accommodative approach would have supported and empowered women from within the traditional gender roles that they feel more comfortable with to participate and upgrade in their respective fishing activities. Formative research, as previously mentioned, would also have enabled the program design to identify that while many women want to participate as fishmongers and sellers, there are also women who want to engage directly in fishing activities but are constrained in doing so due to lack of capital and resources. In training and resource delivery, programs should offer opportunities to participate to all participants, regardless of assumed value chain activity or gender.

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