

## 4. Data analysis: Seaweed

### 4.1 Seaweed farms

#### 4.1.1. Profile of respondents

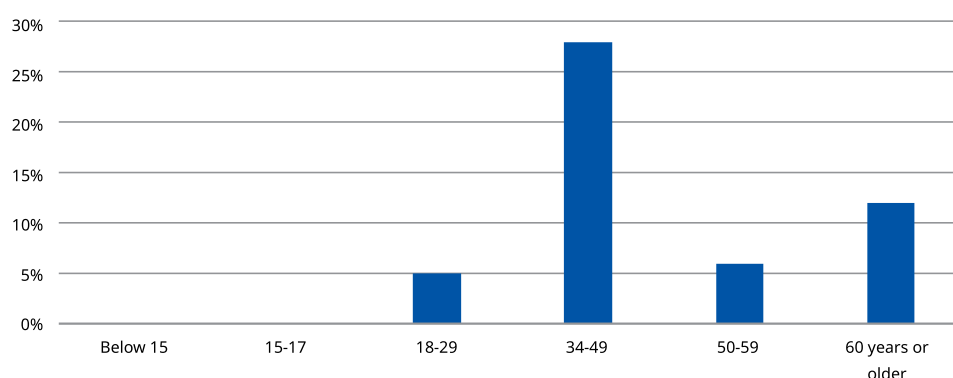
Seaweed farmers are aging and have limited formal education.

Fifty (50) seaweed farmers in Zamboanga City participated in the study. They were interviewed in their residences during their rest hours. Barangay representatives, farmer association representatives, and the farmers themselves were informed of the study prior to the interviews. The farmer focus group discussion was held after the meeting to introduce them to the study.

All seaweed farmers interviewed are self-employed individuals and are considered as workers in the informal sector.

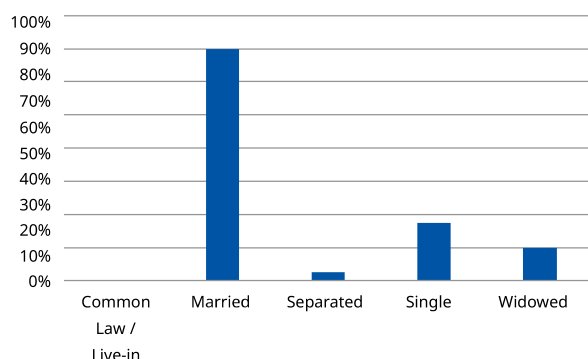
Among the farmers interviewed, 58 per cent were male and 42 per cent were female, with the majority (55 per cent) falling within the 30-49 age bracket. Although the aging population trend is not as pronounced, the BFAR-Fisheries Policy and Economics Division (BFAR-FPED) noted a decline in young adults entering the sector, partially attributing this to the children of seaweed farmers being able to attain higher education and choosing not to enter the sector.

► **Figure 47. Ages of seaweed farmers**

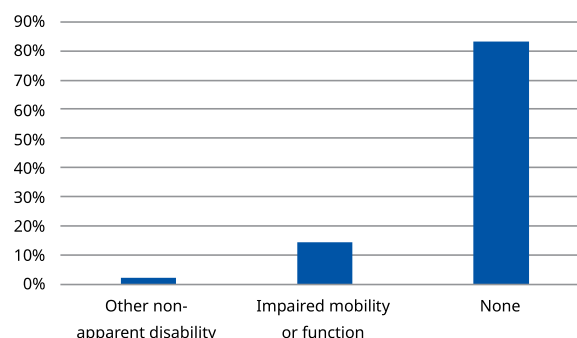


Most seaweed farmers (75%) are married, with the average number of children being four. Moreover, most farmers (83 per cent) do not have any disabilities.

► Figure 48. Civil statuses of seaweed farmers

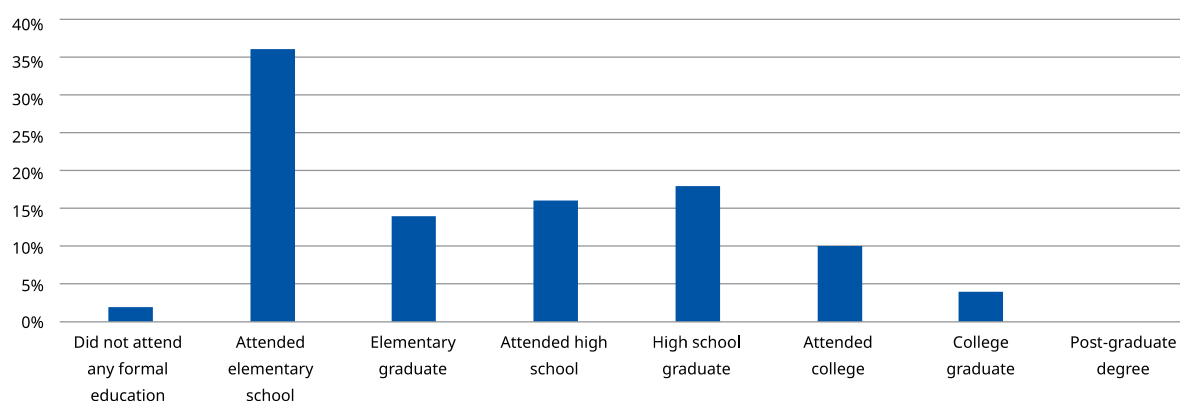


► Figure 49. Disabilities among seaweed farmers



The average educational attainment of seaweed farmers is at the elementary level, with 50 per cent of them having attended or completed grade school. This reflects the low barrier to entry for the sector, such that higher education is not a prerequisite for seaweed farming.

► Figure 50. Average educational attainment among farmers



There are 4,800 hectares of registered and licensed seaweed farms in Zamboanga City. Licensing and registration of seaweed farms is under the mandate of the Office of the City Agriculturist (OCA)-Fisheries Division.

Tasks and responsibilities are divided into the pre-planting, growing, harvest, and post-harvest stages. The pre-planting stage consists of cutting off young branches from the source seaweed plant and tying the seaweed propagules to a thin rope. The completed lines are brought to the planting area, where they are tied to stakes. During the growing period, the farmer regularly checks and cleans the lines and removes foreign materials from the seaweed. Once the seaweed reaches a certain size or after a certain number of days, the seaweed are harvested. The harvested seaweed may be sold wet or dry. Drying is typically done through sun drying.

## 4.1.2. Employment creation

### 4.1.2.1. Recruitment practices

Seaweed farmers enter the trade because they learned it from their families and as an alternative source of livelihood.

Many farmers inherit the trade from their parents or siblings, and proximity to bodies of water also plays a significant role. Early exposure to the work and the prevalence of seaweed farming in their community further influence individuals to enter this occupation. Transitions from related occupations, such as fishing, are common.

#### 4.1.2.2. Skills development

Most seaweed farmers do not have any formal training in seaweed farming, and instead learned on-the-job with family members or other community members.

Majority of seaweed farmers have not received any formal training in seaweed farming. Of those who received training, they attended free vocational programs provided by government agencies such as BFAR and TESDA.

Although not mentioned by the farmers, DTI-Region IX also provides training programs. DTI-Region IX considers seaweed farmers to be microentrepreneurs, so their training programs for farmers are in line with producing value-added products such as seaweed crackers and pickles, as well as financial literacy (done in collaboration with DSWD Sustainable Livelihood Programme).

Also not mentioned by the farmers is the OCA-Fisheries Division, which conducts training on Good Aquaculture Practices on seaweed farming, as well as refresher training prior to the distribution of farming inputs, such as seedlings.

#### 4.1.2.3. Termination practices

As they are self-employed, seaweed farmers do not experience “employee termination”.

#### 4.1.2.4. Insecurity and non-standard forms of employment

Seaweed farmers are “self-employed” so considerations such as security of tenure do not apply to them. Some farmers also shared that farming gives them independence.

*“Kasi ikaw pa ang boss diyan. Walang taga-ano ‘Ganito gawin mo, ganito, ganyan’.”*

*You’re the boss here. No one to say “Do this, do that.”*

*“Kasi once may seaweeds ka, tapos. Kasi wala man yang bossing diyan sa seaweeds. Ikaw mismo yung bossing nya.”*

*Once you have seaweeds, that’s it. You don’t have a boss in seaweeds [farming]. You’re the boss.*

#### 4.1.2.5. Emerging environment and technological issues

Climate change is affecting seaweed farming and will have an even larger impact in the coming years. Mechanization of seaweed farming is also in development.

The farmers cited climate change as something that will have a significant effect on their livelihood in the next five to ten years, due to stronger typhoons and higher temperatures. Climate change will also increase the prevalence of “ice-ice” disease.

*“Meron talaga, sa climate change. Yun talaga ang sabi ng eksperto. Totoo naman sobra ang init ngayon. Sa sobrang init, ang mga lumot, lumulutang at aanod ito papunta sa seaweeds. Tinatabunan at didikit siya. Una, lalaki ang lumot kaysa sa seaweeds. Pagkatapos, ang seaweed ay bubulok siya at may ice-ice na hindi makahinga.” (seaweed farmer)*

*Climate change will have [an impact]. That’s what the experts say. It’s true that it’s so hot now. It’s so hot that the algae float [to the surface] and are carried by the waves towards our seaweeds. The algae cover the seaweeds and stick to them. First, the algae will grow bigger than the seaweeds. Next, the seaweed will rot and will have ice-ice [disease] and won’t be able to breathe.*

“Ice-ice” disease results in seaweed turning white (bleaches) and disintegrating. It’s associated with higher sea water temperatures, decreased salinity, and bacterial infections, but no single or combined causes have been identified. The algae that the farmers are referring to may be epiphytic filamentous algae that attach to the seaweed and break through the outer layer, leading to tissue damage and disease (Ward et al. 2021).

At present, seaweed farming in Zamboanga City is still done entirely manually, whether it is in the shallow coastal areas or in deeper water. BFAR is developing mechanical solutions such as an enhanced mechanical dryer and mechanical harvester to reduce farmer working hours. They're also looking into developing deep sea planting set-ups that can be temporarily sunk about one to two meters below the surface to prevent damage to the crop from high sea surface temperatures and strong waves from typhoons. However, timelines for these were not mentioned.

### 4.1.3. Standards and rights at work

#### 4.1.3.1. Working conditions

Seaweed farmers typically work 8 hours a day, though this may change on the specific tasks that need to be done.

Seaweed farm workers usually work from 6:00 AM to 11:00 AM or 12:00 PM, take a lunch break, and then continue from 1:00 PM to 3:00 PM (total 7-8 hours of work per day). This may change if they are able to outsource some of the work involved, such as having family members tie the seaweed propagules to the line.

#### 4.1.3.2. Wage-related benefits

As workers in the informal sector, seaweed farmers do not receive wage-related benefits such as holiday pay and leaves.

#### 4.1.3.3. Wages

Despite working eight hours a day, seaweed farmers earn less than the regional minimum wage, with almost 50 per cent of farmers earning half or less than half the minimum wage. Local traders control the buying price, buying seaweeds from the farmers at a low price but selling it to the carrageenan processors at a much higher markup.

70 per cent of interviewed seaweed farmers in Zamboanga City earned less than the monthly minimum wage (Php 368 or 6.30 USD per day for agricultural workers; Php 9,568 or 163.75 USD for 26 working days per month), with 46 per cent of farmers earning half or less than half of the minimum wage. It is also assumed that this figure is their gross income, as only two respondents specifically identified their declared income as net of expenses (Php 3,200 or 54.77 USD for 800 kg harvest per month; Php 1,500 or 25.67 USD for 300 kg harvest per month). In comparison, 2018 data (BFAR 2022) show that farmers from Agutaya, Palawan (Php 28,333.33 or 484.91 USD gross, Php 16,762.53 or 286.88 USD net income) and Sibutu, Tawi-tawi (Php 21,327.50 or 365.01 USD gross, Php 10,494.04 or 179.60 USD net income) earn more per month.

Seaweed farmers earn by selling wet or dry seaweed to traders, and their income is based on per kg of wet or dried seaweed harvested multiplied by the prevailing price. The traders consolidate the delivered seaweed to meet the minimum required volume of the processors, then sell to the processors.

Farmers reported a median harvest of 500 kg per farming cycle, with a median income of Php 5,500 (94.13 USD). Median farming cycle is 30 days. The 500 kg median harvest is assumed to be the wet weight, as the median income per kg of seaweed (Php 7 or 11.98 US cents per kg) correlates with the typical buying prices for wet seaweed. However, this is also assumed to be gross income, rather than net income, as declared net incomes ranged from Php 1,500 to Php 3,200 (25.67-54.77 USD) per month.

*"Malinis\* na yung Php 3,200 namin sa kada buwan. Mabuti nalang ay binibigyan kami ng mga materyales ng mga agency tulad ng BFAR kaya hindi na kami bumibili ng materyales. Kung kami na bibili ng materyales, hindi na kasya yung Php 3,200 kasi mahal ang tali." (seaweed farmer)*

*"The Php 3,200 (54.77 USD) per month is our net income. It's good that we receive materials from agencies like BFAR so we don't need to buy materials anymore. If we had to buy our materials, then Php 3,200 (54.77 USD) per month is not sufficient [for our families] because the ropes and ties are expensive."*

*\*Malinis is translated as “clean” or “neat”. In this case, it refers to net income because expenses have already been deducted (is “clean” income).*

The common wet-to-dry ratio of the seaweeds delivered to the processors is 7:1, or 7 kg of wet seaweed is reduced to 1 kg of dried seaweed (BFAR 2022). However, the buying price of dried seaweed is much higher compared to fresh/wet seaweed. Based on the buying prices at the time of the study, a 1,000 kg harvest would sell for Php 4,000 (68.46 USD) fresh but Php 5,714.28 (97.80 USD) dry, resulting in a 42.86 per cent increase in gross income.

► **Table 18. Price and gross income of seaweed**

| Weight                                | Status | Price per kg            | Gross income          |
|---------------------------------------|--------|-------------------------|-----------------------|
| 1,000 kg                              | Wet    | Php 4 (6.84 US cents)   | Php 4,000 (68.46 USD) |
| 142.85 kg (Reduced from 1,000 kg wet) | Dry    | Php 40 (68.48 US cents) | Php 5,714 (97.79 USD) |

However, farmers find it difficult to dry the seaweed due to the lack of space and the waiting time, so they sell it wet, even if the price is lower. As drying is typically done through sun-drying that takes several days, they also see the waiting time as “lost” earnings, even if the earnings at the end of the waiting period are higher.

*“Unlike sa wet, everyday ang earning mo. Pero sa dry naman, ilang araw ka pang maghihintay para magpa-tuyo. So masasayang yung ilang araw ng earnings mo.” (seaweed farmer)*

*With wet [seaweed], you earn every day. But for dry [seaweed], you need to wait for several days for drying, so you lose several days of earnings.*

This point of view may be due to the farmers’ economic situation. They need the income immediately and are unable to wait the few days for additional income, and that any day that they are not actively selling their crop is income that they are not physically holding in their hands and is “lost”. Farmers already sometimes harvest amounts of seaweed to tide them over while waiting for the rest of the crop.

*“Pag wala nang pang-bigas, kumukuha ako ng mga 2-3 linya [ng seaweed].” (seaweed farmer)*

*If we have no more money to buy rice, I harvest two to three lines [of seaweed].*

Some farmers also reported harvesting their seaweed as soon as 10 days after planting. This contrasts with the farmer participants in the focus group discussions who said that the typical growing period is 30 days. The much shorter growing period is attributed by the OCA-Fisheries Division to the farmers’ need for faster turnover of the seaweed crop for faster cash earnings.

*“Pero doon sa small-time talaga, after 10 days magha-harvest na kasi wala ng pang-bigas. Doon talaga kami nahihirapan magbigay sa kanila ng advice kasi yun na nga, kaldero na yung walang laman sa kanila.” (Office of the City Agriculturist-Fisheries Division)*

*The small-time farmers will harvest after 10 days because they have no more money to buy rice. We find it difficult to give them advice because it’s their cooking pots that are empty.*

Another concern is the volatile buying price of seaweed because the price depends on the international buying price. At the local level, traders control the buying price. In 2023, the Zamboanga City farmers were paid Php 30 to 40 (51.34-68.46 US cents) per kg (June), Php 5 (8.56 US cents) per kg (October), and none (December, when the traders stopped buying) of dried seaweed.

Perspectives on the presence of traders vary. The OCA did not see traders as an issue, though they did note that fluctuating buying prices were problematic. Farmers interviewed individually did not identify traders as

a problem, but farmers in the focus group discussion specifically identified them as an issue because of their control over the prices.

*"Kasi bibili siya [trader] sa amin ng 10 pesos sa isang kg ng wet [seaweed]. Pagdating sa company, binibili sa kanya ng 15 to 30 pesos [per kg of wet seaweed]. So mababa sa amin. Tutubo pa siya sa gastos nya. Pag dating sa dry, binibili sa amin ng 45 [pesos per kg of dried seaweed], pero ibebenta nya ng 55 to 60 [pesos per kg] pag nasa company na. Kaya ang laki ng tubo. Ang mga tumutubo ng malaki, yung nasa finished product na. Lessen pa ang labour nya, unlike yung mga pinagdaanan ng mga tao dito na magtanim, magtali, magpatuyo, lahat ng proseso. Yun yung nakikita namin. Kung pwede sana, wala na si middleman. Direct na kami sa [seaweed processing] company." (Seaweed farmer)*

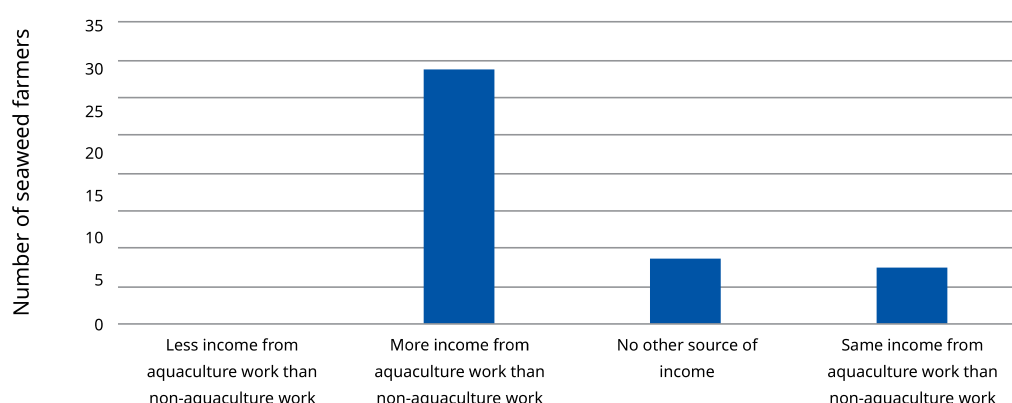
*The trader will buy from us at Php 10 (17.11 US cents) per kg of wet seaweed. The seaweed processing company buys from him at Php 15 to Php 30 (25.67-51.34 US cents) per kg. The price is low when he gets from us. He [the trader] will earn from buying from us. For dry seaweed, he buys it from us at Php 45 (77.02 US cents) [per kg], but he sells it at Php 55 to Php 60 (94.13-102.69 US cents) to the company. He earns so much. The ones who earn so much are the ones with the finished product. Their labour is less, unlike what the people who plant, tie, dry go through. That's what we see. We wish there was no middleman. We sell directly to the company.*

The farmers also allege that the traders tamper with the seaweed they buy from them by adding salt to it. The added salt causes the seaweed processor to reject the delivered seaweed due to quality issues and stop buying from the trader. The trader goes back to the farmers with the stop buying order but says that they will still buy seaweed from the farmers but at a much lower price, such as Php 2 (3.42 US cents) per kg for wet seaweed. The trader stockpiles the reduced-price seaweed in their warehouse then sells it to the processor once the price goes back up. However, this could not be verified through other sources.

As seaweed farming is typically a family enterprise, the cost of family members' labour is often unaccounted for. The BFAR Enhanced Philippine Seaweed Development Programme (EPSDP) is working on a feasibility study to study the economic viability of seaweed farming if the monetary value of family members' labour were considered.

Most seaweed farmers (83 per cent) have to supplement their income with non-aquaculture jobs such as selling street food snacks, working at canning factories, and open-sea fishing. Among those with additional jobs, 82 per cent say that still earn more from seaweed farming.

► **Figure 51. Seaweed farmers with/without non-aquaculture sources of income**



Some farmers have said that they prefer working in seaweed farming because it allows them the leeway to work other jobs because they can just leave the seaweed and “it will just grow”.

*Mas maganda ang seaweed. Dahil ang seaweeds, pwede mo naman siya pabayaang, kasi tumutubo lang naman siya. Hindi katulad nung pangangisda at pag-karpintero, kung hindi ka pupunta, wala kang sahod. Yung seaweed, tutubo lang talaga. Kahit maliit lang, pwede ka makahanap ng ibang trabaho, maka-sideline ka. Yun talaga ang maganda sa seaweed. Maiwanan lang siya tapos pwede kang maghanap ng ibang trabaho.*

*Seaweed [farming] is better. Because you can just leave the seaweed alone and it will just grow. It's not like fishing or carpentry where if you don't go, you don't get paid. But for seaweed, it will just grow. Even if it's [seaweed] just small, you can look for another job, get a side-job. That's what's good with seaweed. You can just leave it alone and you can go look for another job.*

However, this is also a testament to the low income that seaweed farming provides that farmers find it necessary to work other jobs during their time away from their farms.

#### 4.1.3.4. Occupational Safety and Health (OSH)

Seaweed farmers are reliant on past experience and observing others to learn how to keep safe at work.

As they are self-employed, seaweed farmers do not have formal written OSH policies and procedures. They gain their knowledge on health and safety procedures at work by observing other farmers and through personal experience. Although not mentioned by the farmers, the OCA also provide training on safety at work, in coordination with the City Disaster Risk Reduction office. Personal protective equipment is limited to long-sleeved shirts, pants, and hats to protect from direct sunlight, and sometimes life jackets.

Seaweed farmers initially said that “no” injuries had occurred while at work but when pressed, shared that common safety and health incidents/issues included fatigue from the heat of the sun, cuts from knives, and bruises and cuts from slips. Other work-related injuries or illnesses mentioned were fever, body aches, and coughs. Cuts and bruises from equipment (e.g., knives) were not “accidents” and were considered the norm. Typical responses to these injuries were self-treatment with first-aid kits at home and seeking medical attention at the barangay health centre or hospital if necessary. Notably, none of the interviewees mentioned reporting occupational injuries or illnesses to DOLE.

Labour groups highlight that financial interventions such as access to microfinancing should be paired with access to social protection programs like SSS, Pag-IBIG, and Philhealth. Low OSH compliance and the absence of OSH awareness increases the risk of occupational injury and disease. Without adequate social safety nets, workers will use the proceeds of microfinancing loans to pay for medical care, rather than the original purpose of improving their livelihood. This makes them unable to pay their loan, which further contributes to poverty.

#### 4.1.3.5. Equality, inclusion, and non-discrimination

Gender-based division of labour is considered the cultural norm, with women and children doing light tasks and men doing more strenuous work.

Among seaweed farmers, men generally take more strenuous work (e.g., seaweed planting), while women support by cutting and tying the seaweed cuttings to ropes in preparation for planting. This was also observed by previous studies (Ramirez et al. 2020). However, female seaweed farmers report that they can take over typically male tasks if needed (planting, harvesting, etc.).

Although gender-based division of labour was clearly observed, but the respondents did not consider this to be discriminatory. They consider it as a cultural norm because seaweed farming is a labour-intensive industry and men are physically stronger than women.

Most interviewed workers attest that they have not experienced any form of discrimination and that there is equality and inclusion in their workplaces. However, it should be noted that seaweed farming is typically a family business.

Any instances of violence, discrimination, or harassment are reported to the barangay or police officials. Members of the Muslim community can also report to their tribal leaders (panglima). If they are members of associations, they also report concerns here.

#### 4.1.3.6. Child labour and forced labour

Since seaweed farming is typically a family business, children often assist with farming on the weekends or days when they have no classes. Most of the interviewees (51 per cent) themselves started seaweed farming at age 17 or below. Fifty four percent (54 per cent) of respondents said that they were aware of workers aged 15 to 17, while 26 per cent are familiar with workers aged below 15 years old. They perform light tasks, such as tying the seaweed propagules for the lines for planting. If the children assist their families, this is considered as part of the family labour. If they assist other farmers, they are paid PhP 10 (17.11 US cents) per 10 meters of completed planting line.

Respondents do not consider children aged below 15 years old working for other farmers to be “child labour” because most of the children still go to school full-time and only work on the weekends or after school. The children also earn pocket money for school. However, this understanding is not in line with RA 9231, which states that children below 15 years of age should not be employed except “when a child works directly under the sole responsibility of his/her parents or legal guardian and where only members of his/her family are employed.”

Another concern is that some of the farmers who are familiar with workers aged below 15 years old are 4Ps beneficiaries, and 4Ps beneficiaries are made aware of child labour policies through seminars. One beneficiary reported a child worker below 15 years old that did not attend school, but it was unclear as to whether they were referring to their own child or not. However, another beneficiary specifically said that their child worked for other farmers and was paid a wage.

### 4.1.4. Social protection

#### 4.1.4.1. Social security

Seaweed farmers have minimal access to social protection programs because they find these too expensive.

As informal workers, seaweed farmers who wish to avail of social protection programs must register and pay for the monthly premiums themselves or access them through other means. Out of the three standard programs (SSS, Philhealth, and Pag-IBIG), farmers have most access to Philhealth (37 per cent of respondents). Of those who explained how they have access, only one said that they self-pay for the premium. The others have access as part of the benefits of the DSWD 4Ps, as a senior citizen, or as part of formal employment. The minimum monthly Philhealth contribution (as of writing) is PhP 500 (8.56 USD) per month, applicable to those with monthly income of PhP 10,000 (171.14 USD) and below.

*“Oo, ako po [ang nagbabayad ng Philhealth]. Importante yan sa amin, sir. Kapag hindi natin alam [kung anong mangyayari]. Kay libre yan kahit konti. Sa anak ko [na-claim].” (seaweed farmer)*

*Yes, I paid for the premium. It's important to us, especially because we don't know what will happen. It [the hospitalization] is free, even a little bit. My child was able to use it.*

*“Malaking tulong yan sa amin po. Kasi pag na-ospital kami sir, diyan kami kumukuha ng bayad. Wala naman kaming panggastos.” (seaweed farmer)*

*[Philhealth is] a big help to us because if we get hospitalized, that is where we will get the money to pay. We don't have any money to spend [for hospitalization].*

Farmers have the least access to SSS and Pag-IBIG. This was attributed to the high cost of the premiums, as the minimum monthly SSS contribution (as of writing) of PhP 570 (9.76 USD) per month (PhP 560 SSS + PhP 10 ECC) is 10.4 per cent of their median gross monthly income.

*“Kung magbayad ako ng SSS, wala na ako pagbili ng pagbigas.” (seaweed farmer)*

*If I pay for SSS, I won't have money to buy rice.*

The unaffordability of social protection programs was also identified by labour groups as one of the most urgent labour issues of the informal sector.

*“Although meron nang social protection [programs] pero very expensive, like SSS, Philhealth. Dati lack of access pa, pero in fairness, marami nang access. You can pay anywhere na. Ang issue ngayon namin is affordability... Kasi no one is shouldering for the informal labour. Walang counterpart, amin lahat. So pagtaas ng SSS at Philhealth, madaming bumagsak [sa] pagtaas ng mga premiums kasi nga, marami ang hindi makaka-afford.” (Labour group)*

*“Although there are social protection [programs] like SSS, Philhealth, they are very expensive. Before, it was the lack of access. But in fairness, it's accessible now. You can pay anywhere. The issue now is affordability because no one is shouldering the counterpart [payment] for the informal labour. It's all on us. So when SSS and Philhealth increase their premiums, many [workers] crashed because they can't afford it [the premiums].*

#### 4.1.4.2. Calamity-related assistance and other assistance

The seaweed farming sector is unsustainable, as farmers are unable to earn a decent living without dole outs.

The seaweed farmers received assistance during calamities in the form of grocery items such as rice, canned goods, and sugar from the local government unit.

For general assistance, they received temporary employment through DOLE's TUPAD programme, cash assistance and other benefits from DSWD's 4Ps, and unspecified training and assistance from Ateneo de Zamboanga University (ADZU).

For livelihood, they received farming inputs such as seedlings, straw ties, rope, buoys, and boat engines and from BFAR and OCA. They also received cash assistance from BFAR.

It was not mentioned by the farmers, but DTI-Region IX also provided shared service facilities, such as land-based seaweed dryers.

The farmers acknowledge the importance of the livelihood assistance but say that it is not enough. Not all members of the farmers' association receive the assistance and the inputs themselves are not enough.

*“Yung katulad din yun sir kanina na sinabi, mga gamit. Yung bago ngayon mga kagamitan, pero kulang din yun.” (seaweed farmer)*

*Like what I said earlier, the [farming] materials. The materials are new, but still not enough.*

However, BFAR representatives say that the farmers have become too complacent and are too reliant on the subsidies provided by the agency. They want the farmers to be self-reliant, as BFAR has a limited budget.

The difference in perspective underscores the unsustainability of the current state of the seaweed farming sector, that the farmers who form the base of the carrageenan supply chain are unable to earn a decent living without government subsidies. This situation may also indicate a need for long-term planning for the existing livelihood assistance programs, as the consistent reliance of farmers on dole outs discourages the eventual phaseout of these programs.

#### 4.1.5. Social dialogue and tripartism

Seaweed farmers acknowledge the need and benefits of organizing themselves, but they lack the capacity to do so.

On a national scale, there are 329 workers' associations that are related to seaweed registered with DOLE. However, it is unclear how many of these associations remain active and whether labour issues and the advancement of decent work are part of their agendas.

Most of the interviewed seaweed farm workers are part of a seaweed farmers' association, a requirement set by agencies like BFAR and DTI that provide funding and equipment to associations rather than individual farmers. The farmers are also aware that individually, they cannot meet the minimum volume requirements set by the seaweed processing companies for acceptable deliveries. They are also aware that they can achieve that minimum volume by banding together.

*"Pag naka-direct kami sa company, hindi rin naming kaya yung gusto ng company na isang ton. Mababa yung isang ton na araw-araw naming ibibigay sa kanila. So hindi yun kaya ng small-scale tulad namin, unless magkaisa lahat kami sa isang area, like po sa Talon-talon, makaya yun."* (seaweed farmer)

*"If we sell directly to the company, we can't meet the company's requirement of one ton [of seaweed]. One ton per day delivery is low for them. So small-scale farmers like us can't meet that, unless all of us in one area unite, like in Talon-talon."*

However, there are issues within their own communities that hinder the formation of effective farmers' organizations.

*"Lahat gusto mag-earn. Kaso hindi lahat nagkakasundo... Yung dalawang area, hindi nagkakasundo, may conflict sila. Yun yung isa sa nakikita naming problema. May mga tao na gustong siya mag-lead. Gusto naman ng isa, siya mag-lead. Marami pa talagang kailangang ayusin."* (seaweed farmer)

*Everybody wants to earn. However, not everyone gets along. Two areas don't get along, they have conflicts. So that's one of the problems we've seen. One person wants to lead. The other person wants to lead too. There are lots of things we have to fix.*

There are success stories of what happens when farmers successfully organize. They found it difficult to explain and convince the farmers to form a cooperative, with only 38 out of 500 farmers initially participating. Even coming up with the needed capitalization was difficult, but over time, the cooperative became successful. In 2018, the cooperative bought 20 MT of dried seaweeds every month from members and non-members for selling to a processor, with a net income of Php 82,132.54 (1405.66 USD) per trading cycle (BFAR 2022)

*"Yung one thousand (pesos), jusme. Bente-bente pesos pa, para lang makabuo, para ma-register sila. Pero alam nyo, ang kanila ngayong co-op, from 38,000 [pesos], nasa almost 9,000,000 [pesos] na ang kanilang ano [capitalization]. Because of their performance, sabi namin "Bibigyan namin kayo ng bodega". Bumili sila ng lote [as] equity. It's just a matter of mentoring, continuous and patiently."* (BFAR-EPSDP)

*"The [Php] 1,000 (17.11 USD), my God. [They contributed] Php 20 (34.23 US cents) each time, just so they could complete [the one thousand pesos], so they could be registered. But now, their co-op, from [Php] 38,000 (650.35 USD), it's now almost Php 9,000,000 (154,030.46 USD) [capitalization]. And because of their performance, we said "We will give you a warehouse." They bought the land as equity. It's just a matter of mentoring, continuous and patiently.*

Aside from the organizing, BFAR also cited the need for capacity building for the farmers on how to choose their leaders for the cooperative.

These gaps underscore the need for capacity building for the farmers on how to organize and the skills necessary to advocate for themselves. Region IX has an Industry Tripartite Council (ITC) on seaweeds, with the Western Mindanao Seaweed Industry Development Foundation, Inc. (WMSIDFI) serving as the worker representative. However, WMSIDFI is a business support organization that has members from other segments of the seaweed supply chain such as traders and exporters associations and carrageenan processors.



## 4.2 Seaweed processing plants

### 4.2.1. Profile of respondents

#### 4.2.1.1. Processing plant employers

All of the seaweed processing companies approached in Cebu and Zamboanga City either declined or did not respond to requests to be interviewed for the study.

#### 4.2.1.2. Processing workers

Seaweed processing workers are of legal working age and have a high school-level education.

The seaweed processing workers interviewed for the study are from two companies in Cebu and one company in Zamboanga City. One company's workers were pre-selected by the company to participate in the interview and these interviews were done onsite within company premises. Other respondents were identified through the assistance of the barangay and through the referrals of a retired seaweed processing worker. These interviews were done in the respondents' homes.

The majority of the interviewed workers were male. All were of legal working age, with 74 per cent having either graduated high school or pursued higher education. Most of the processing workers were married, and among all respondents, 87 per cent indicated having children. Most (96 per cent) of the of the interviewees did not have disabilities.

Seaweed processing plants employ different workers to perform different tasks. The seaweed delivered by traders is first cleaned by sorters who pick debris from the seaweed, such as sand and tying materials. This is followed by sun drying if needed, performed by utility workers. The seaweed is then washed and placed into cooking tanks and processed at specific temperatures, cooking times, and with chemicals at different concentrations depending on the intended product, which is carried out by machine operators. After being cooked, the seaweed is then washed and treated to achieve the desired carrageenan product. From there, the finished product is packed and loaded into container vans for delivery.

### 4.2.2. Employment creation

#### 4.2.2.1. Recruitment practices

Seaweed processing workers undergo a formal recruitment and employment process.

Both contractual and regular employees are present in seaweed processing plants. Majority of workers are recruited directly or apply directly at the processing companies, though some workers are hired as contractual workers under a manpower agency first, before being absorbed by the processing company as a probationary worker. The workers are then regularized after successful completion of the probationary period.

The workers were not charged with any recruitment fees at any stage of the employment process and were informed of the job requirements, terms of employment, and other relevant information beforehand. Workers typically have written contracts that are written or explained verbally into languages that the workers understand.

#### 4.2.2.2. Skills and enterprise development

Seaweed processing workers receive training that is relevant to their jobs, while enterprises receive development opportunities from local government agencies.

Seaweed processing workers have a higher rate of training compared with respect to their farmer counterparts, with instruction opportunities being delivered through on-the-job training and training seminars from their

employers. The scope of these trainings involved Good Manufacturing Practices, the same topic taught to the shrimp processing employees, alongside trainings on fire safety and food safety.

However, some workers reported that they don't receive training related to their jobs because their employers expect them to already know what to do.

*"Minos ang training. Kay ay training ron mga ginagmay nalang, kanang sa fire. Wala sila magkuan ron [training related to the job] kay ilang kuan ron, ilang expectation, kamao na puros operator nagkuan gud, katong mga pa kay ing-ana, karong ing-ana puros karaan naman ang nag-operate diha ron nakabalik man puros. Gawas naay bag-ong makina gipa-sulod diha, mga daan man ang makina diha." (seaweed processing worker)*

*There are few trainings. The trainings are so few, like for fire. They don't conduct that [training related to the job] since they*

*expect us operators already know what to do. They would teach us if there's new machinery, but now since all machinery are old..."*

DTI-Region IX reported nascent enterprise development programs for the processing node of the seaweed supply chain through BOI. DTI and BOI organized meetings with local seaweed processors to both introduce the incentives these businesses can avail under the Republic Act No. 11534 or the CREATE Law, and the process for availing these incentives. However, DTI-Region IX does not consider the seaweed processors to

be priority constituents because they are already medium-sized enterprises.

#### 4.2.2.3. Termination practices

Termination practices for seaweed processing workers follows the requirements set by the Labor Code.

Most seaweed processing workers are aware of instances of employee termination. The most common reasons for this being behavioural issues and end of contract. Others were terminated due to theft. None of the workers cited concerns with their employers' reasons for terminating employees as the companies follow procedures, such as issuing Notices to Explain and checking CCTV footage. Some respondents said that their employers follow procedures because they know that the workers can file cases with DOLE if they don't follow termination procedures.

*"Dili sad hinuon diretsoon, naa gyuy ingon nga written explanation unya homan mobuhat gihapon kay suspensohon, mobuhat gihapon mao nana. Dili ingon nga diretsoon gyud kay illegal. Ma-foul gyud ka sa DOLE ana." (seaweed processing worker)*

*They always give written explanations and yet if the employee still violates, they will proceed with the suspension. It's not*

*direct because that's illegal. They'll get in trouble with DOLE.*

#### 4.2.2.4. Emerging environment and technological issues

The availability of seaweed for processing was reported as an issue by a worker, who mentioned that another seaweed processing plant in the region had to shut down temporarily due to a lack of seaweed,

despite BFAR reporting a 15 per cent increase in total seaweed production from 2021 to 2022. A possible cause could be that the seaweed supply was bought up by other processing companies to increase their production output. As processing companies appear to be able to have three working shifts such that the facility operates 24 hours, the presence of companies operating only one or two shifts may indicate that peak carrageenan processing capacity has not yet been achieved and greater volumes of raw dried seaweed can be absorbed by the processors. This may also indicate that it should be a seaweed seller's market, given the capacity to absorb more seaweed, but this is not reflected as increased income for farmers.

### 4.2.3. Standards and rights at work

#### 4.2.3.1. Contracts and employment arrangements

Both contractual and regular employees are present in seaweed processing plants. However, workers from one company reported that DOLE inspected their facility in 2021-2022 and contractual workers were regularized after that inspection.

*"Mag-2 years ko mag-regular pa, pero 5 years naku diria. Contractual nya. Dugay kay mi na-regular. Pag adtong nasudlan sa DOLE, aw Labour diria ayha, pami naka-kuan."* (Seaweed Processing Worker 1)

*[I've been] a regular for two years but I've been here for five years. I was contractual. It takes a long time to be regularized.*

*When DOLE entered [inspected], that's when [I was regularized].*

*Interviewer: Nganu nasudlan sad mo ato bossing?*

*Why did [DOLE] enter here?*

*Worker 2: Ambot. Naa siguro to'y nisumbong ato. Mao tong giari mi, gipangutana mi. Wala sila kahibaw mao tong nasudlan. Among kauban usa kay gi-interview nya [Department of] Labour diay to.*

*I don't know. Maybe someone reported it. We were called and asked. They didn't know the company was being entered [inspected]. One of our colleagues was interviewed and it turns out it was Department of Labour.*

*Interviewer: Unsa may ilang interview about kanang?*

*What is the interview about?*

*Worker 3: Minimum naba mi diri, naa ba mi benefits. Kanus-a ko nagsugod diri, kanus-a ko na-regular ing-ana ba. Regular na*

*Do we get the minimum [wage], do we have benefits. They asked when I started, when was I regularized. I was regular already [when I was interviewed].*

Another worker at a different company shared that it was very difficult for a contractual worker to be absorbed by the company as a regular employee and that contractual workers tend to remain as contractual.

*"Gahi-gahi na maabsorb kay wala paman nikuha og regular. Contractor raman ilang kuan. Marunong man, kamao man gyud ang management ba. Mo-kuha sila og kuan mga contractor nalang."* (seaweed processing worker)

*It's very hard to get absorbed since they haven't gotten anyone to be a regular [employee]. They just get contractors [contractual workers]. The management is so shrewd. They just hire contractors [contractual workers].*

#### 4.2.3.2. Working conditions

Workers generally work an eight-hour shift. However, the number of shifts per day depends on the employer. The employers of the workers interviewed ranged from operating one shift (6:00AM to 2:00PM, or 7:00 AM to 4:00 PM), two shifts (6:00 AM to 2:00 PM; 2:00 PM to 11:00 PM), to three shifts (12:00 AM to 8:00 AM; 8:00 AM to 4:00 PM; 4:00 PM to 12:00 AM; 24 hours operations). The varying number of shifts is related to the target output volume and the availability of seaweed material. Workers also reported undergoing twelve-hour workdays, which would last from 6:00AM to 6:00PM.

Notably, few seaweed processing workers reported having five-day work weeks. Workers tend to report to

work for six days every week, with few reporting working every day. Break times for workdays varied from 15 minutes to 105 minutes in a day.

#### 4.2.3.3. Wages

Wages of seaweed processing workers meet the requirements of the Labor Code but some workers still work additional jobs for more income.

Workers receive at least the minimum daily wage for non-agricultural workers for their respective areas (PHP 468 or 8.01 USD in Cebu, PHP 381 or 6.52 USD in Zamboanga City). Seaweed processing workers typically receive a monthly salary ranging from PhP 5,000 to 9,999 (85.57-171.13 USD), followed by 39 per cent that receive salaries that range from PhP 10,000 to 14,999 (171.14-256.70 USD).

Some workers felt that the income from their aquaculture jobs were insufficient, which can explain the prevalence of workers supplementing their income with non-aquaculture sources of income. These other sources included *habal-habal* (motorcycle driver for hire), selling items, and selling food, and could also involve the spouse of the worker.

#### 4.2.3.4. Wage-related benefits

Generally, formally employed seaweed processing workers have consistent access to the minimum statutory monetary benefits. The following table summarizes access to these benefits among seaweed processing workers:

► **Table 19. Access to benefits among seaweed processing workers**

| Minimum government-mandated benefits                                  | Seaweed processing workers with access |
|-----------------------------------------------------------------------|----------------------------------------|
| Holiday pay                                                           | 94% (17/18)                            |
| Premium pay                                                           | 93% (13/14)                            |
| Overtime pay                                                          | 100% (21/21)                           |
| Night shift differential                                              | 94% (17/18)                            |
| 13th month pay                                                        | 100% (21/21)                           |
| Separation pay                                                        | 94% (17/18)                            |
| Retirement pay                                                        | 88% (16/18)                            |
| Service incentive leave                                               | 90% (9/10)                             |
| Maternity leave                                                       | 86% (6/7)                              |
| Paternity leave                                                       | 78% (7/9)                              |
| Parental leave                                                        | 80% (4/5)                              |
| Leave for victims of violence against women and their children (VAWC) | 50% (1/2)                              |
| Special leave for women                                               | 100% (1/1)                             |

They are also aware of the multipliers involved in calculating their pay, such as 130 per cent pay for overtime and 200 per cent pay for working on regular holidays, which leads some workers to maximize overtime hours and working on holidays to be able to earn more.

#### 4.2.3.5. Equality, inclusion, and non-discrimination

Seaweed processing companies also exhibit a gender-based division of labour. Men handle physically demanding tasks and operate machinery, while women perform office work. Unlike shrimp processing, female workers also engage in physical labour, removing foreign debris from seaweed before processing.

The respondents did not report experiencing discrimination or inequality. However, further questioning reveal instances of discrimination experienced by their co-workers. For example, a respondent noted that physical fitness takes precedence so physically weak workers were not accepted. Female workers were only accepted for stationing in the production area if they can take on the same tasks as male workers. This resulted in one female utility worker and one female LGBTQIA+ machine operator as the only female workers in the production area.

Another worker reported that Muslim workers were not hired due to preference of the employers.

*“Wala naman [diskriminasyon]. Pero hindi lang po pwede pumasok doon yung Muslim. Ayaw nila.”*

*“There is no [discrimination]. But Muslims are not allowed to enter [the company workforce]. [The employers] do not want that.”*

A worker also reported that when the processing plant changed ownership, the new owner only rehired

workers who were around 30 to 40 years old. The new owner also hired mostly contractual workers, compared to the previous owner who had more regular employees.

*“Unya katong mga karaan operator ang wala matawagi katong gulang-gulang na. Katong mga bata-bata pa naa sa 30,*

*40-plus [years old] maoy gitawagan. Katong mga gulang-gulang wala matawagi kay pila nalang ka serbisyo mo-retire na, mao ilang gikuanan ba. Kato ng [old company] sauna kargado regular man. Karon more on contractor raman gipatrabaho nila.” (seaweed processing worker)*

*Among the operators, the older ones weren't called back. They only called the younger ones, those around 30, 40-plus [years old]. They didn't call the older ones back because they will retire after only a few years. They wanted to avoid that. With [old company], even the warehouse staff were regular [employees]. Now, it's mostly contractual workers.*

In the event of violence, harassment, or discrimination, workers report the instance to their employer, either through the respective supervisor or the employer's human resources department.

#### 4.2.3.6. Child labour and forced labour

There are no underage workers formally employed in seaweed processing plants. However, there is no information on the sorters who are hired informally.

There were also no instances of forced labour among all interviewees. In interviews where it was not asked directly, the responses imply that forced labour is absent.

#### 4.2.3.7. Occupational Safety and Health (OSH)

Seaweed processing workers reported the presence of Occupational Safety and Healthy (OSH) policies and practices, which they are trained on prior to working in their respective stations. Workers also note the presence of a designated safety officer, and a workplace that is generally well-lit and well-ventilated. However, the control measures in place to prevent accidents appear to be inadequate, as workers report incidences of injuries that could have been prevented with proper maintenance of the equipment and workplace.

*“Dili siya ingon nga samad pero murag paso ba. Ma-ana lang og tubo gamay. Sauna naa man toy cladding ang mga... labi na ang mga hot line. Karon wala na.” (seaweed processing worker)*

*It's not exactly a cut, more like a burn. You get cut because there's a small tube. Before, there used to be cladding on the hot lines. Now, there isn't.*

*"Ginagmay ra gud kaayo. Ma-cut ra gamay ang kamot, masamad labi na kana. siyang naay mga tungod na sa kakaraan na sa building naay mga portion didto nga dili mabantayan nga hait na kaayo magunitan. Dili man nila ireport dili nalang mo-kuan. Mahulog gyud og ing-ana. Mag-sige nalang mi og report nga hazard na siya area. Sige sige lang, action-an nato. Karon layo kayo."* (seaweed processing worker)

*It's really small. Small cuts on the hands. Since the building is old, there are parts of it that are not well-maintained and can easily be overlooked. They don't report it. They just ignore it. It's really like that. We keep reporting the hazards in the area. The just keep saying that they will take action. It's so far [from what it used to be].*

Workers receive certain PPE, depending on what work they are assigned to do, which are paid for by the employer. PPE include masks, gloves, gowns, face shields, gas masks, hard hats, safety goggles, safety shoes, and safety belts, but it is unclear which worker roles receive which equipment. Workers also report the availability of first aid kits in their areas. Only one employer had a nurse, and the nurse was only present during the morning shift.

When asked about typical injuries and ailments at work, workers reported experiencing body pain and fatigue due to the physically demanding nature of the work, and sometimes due to the heat. Exposure to hazardous chemicals is limited to personnel who have received specific training on handling chemicals, and the chemicals are stored separately from the production area.

There was one reported fatality in a seaweed processing plant, which occurred under previous management. An investigation took place after the incident and stricter safety protocols were implemented as a result. However, the stricter safety protocols were not carried over by the new management.

*Interviewer: Naa kay nahibaw-an o ikaw mismo nakasinati og work related injury*

*Have any employees been injured at work?*

*Respondent: "Karon wala man mi kuan kaayo. katong kuan sauna sa [REDACTED] naay namatay diha, napiit sa makina. Pagpiit adto...wala makuan dayun wala mapalong dayun ba. naay tao layo pa distansya nagdagan pa, pag-abot nakaon sa gear, napiit man siya sa gear."*

*We haven't had any recent work-related injuries. There was a fatality at [REDACTED] in the past due to a machine accident. The machine wasn't turned off immediately. There was someone running towards him, since the distance isn't really near, and when he arrived, it was too late. He was already crushed by the machine [got caught in the machine gears].*

## 4.2.4. Social protection

### 4.2.4.1. Social security

Formally employed seaweed processing workers generally have access to the government-mandated social protection programs (SSS, Philhealth, and Pag-IBIG). They also report being able to access these benefits.

► **Table 20. Access to social security among seaweed processing workers**

| Minimum government-mandated benefits | Seaweed processing workers with access |
|--------------------------------------|----------------------------------------|
| SSS                                  | 100%                                   |
| Philhealth                           | 96%                                    |
| Pag-IBIG                             | 95%                                    |

### 4.2.4.2. Calamity-related assistance and other assistance

Most seaweed processing workers received calamity-related assistance from their employers. The assistance came in the form of cash assistance, rice, canned goods. They also received similar forms of aid from their local government unit.

## 4.2.5. Social dialogue and tripartism

There were no current unions for seaweed processing workers in Cebu nor Zamboanga, with workers perceiving no need for them as long as they are paid on time, and another worker reporting that unions only bring trouble. However, they acknowledge that unions might be necessary if timely payment of their wages becomes an issue.

*“Kasagaran mga union kanang naa may kuan gud wala say mga dagko nakakuan ba. kuyaw manang union naay dagko nga makadala, makarecruit og mga trabahante unya mag grupo ba maoy delikado. magkinto nasad ang kompanya anang masudlan og union, labi ng demanding nga union. maglisud na sila og kuan.”*

*“Usually, unions bring trouble, and there are no significant benefits. Unions can be risky; they can recruit workers and form groups. It’s dangerous for the company to be associated with a demanding union. They will have a hard time.”*

A worker from Zamboanga reported the existence of unions in years prior but did not share any details regarding these. One worker mentioned that their employer forbids its employees from organizing, however neither of these claims could be verified through other channels. Regarding other worker associations, there is an employee cooperative in Cebu, which provides loans for its members. On a more general level of social dialogue: of the workers’ associations with ties to seaweed registered with DOLE, it is unclear whether these groups’ membership extends to processing workers.

In the absence of unions, workers report their concerns or grievances through a variety of channels. These include their teams’ respective leaders or supervisors, the company’s HR Department, or a dedicated grievance committee described as having a physical box in the workplace where workers can drop their comments and suggestions.

