



Food and Agriculture  
Organization of the  
United Nations

## The Philippines

# Impact of Early Warning Early Action

Exploring the interplay between El Niño-induced drought, conflict and gender



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Efficient humanitarian assistance  
requires anticipation. For FAO, this means  
harnessing risk information systems to act  
faster and avert acute hunger.

**QU Dongyu**  
**FAO Director-General**

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**The Philippines**

# Impact of Early Warning Early Action

Exploring the interplay between El Niño-induced drought, conflict and gender

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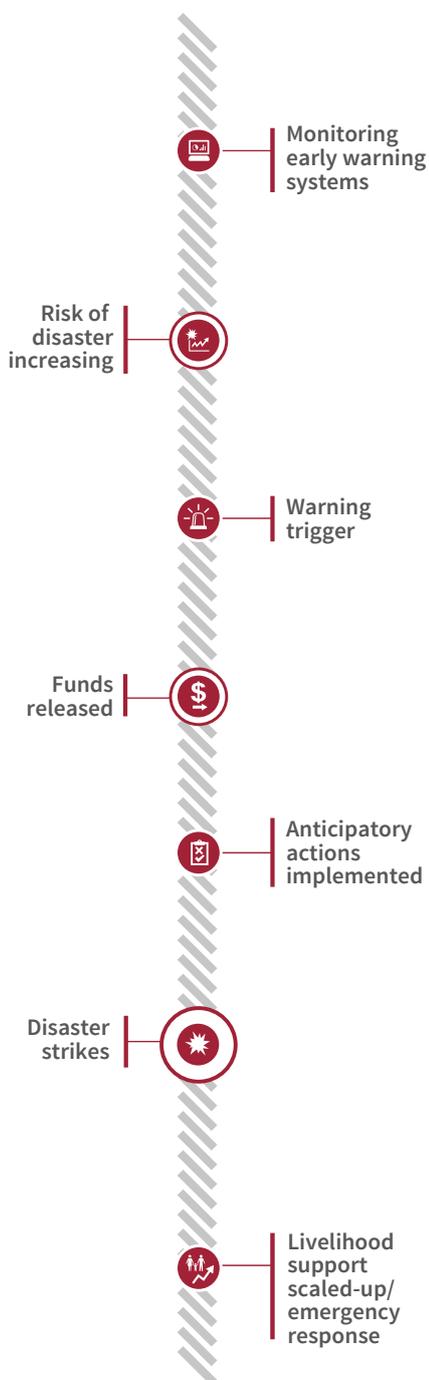
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# Contents

From Early Warning to Anticipatory Action .....	1
Challenges for Mindanao .....	2
Crisis timeline for the 2018/19 drought in Mindanao .....	5
Triggers for anticipatory action .....	7
Deciding how to intervene.....	8
Return on investment .....	13
Protecting food security and nutrition .....	14
The effects on family life .....	15
More disposable income, less debt .....	15
Changes in gender dynamics .....	15
More stability in times of conflict .....	16
Farmers' voices.....	17
Lessons learned .....	22



# From Early Warning to Anticipatory Action



The intensity and frequency of natural hazards and conflicts is increasing, and they are leaving in their wake an unprecedented level of humanitarian needs. Natural hazards alone occur nearly five times as often today as 40 years ago. The number of people displaced by conflict, meanwhile, is the highest ever recorded, and millions more are driven to migrate out of necessity.

Not surprisingly, the impact on local economies, on people's lives and their livelihoods has increased, too. In some of the worst-hit places, it can seem unrelenting. One crisis will follow another, every time stripping away at the hard-earned but limited assets of the poorest and most vulnerable. Along with their assets, it's depriving people of their self-reliance and their dignity.

Globally, expanding needs, competing priorities and limited resources call for new tools to make humanitarian interventions as effective as possible. This includes new ways to ensure that the impacts of hazards are limited before they can grow into even more devastating and costly disasters.

That is why the Food and Agriculture Organization of the United Nations (FAO) has been a long-time advocate of anticipatory interventions and works closely with governments and partners in the humanitarian and scientific community to anticipate crises before they reach a crest.

By building country-specific Early Warning Early Action (EWEA) systems, FAO and its partners are able to monitor key indicators that predict shocks and trigger anticipatory action once they exceed pre-defined thresholds that raise the alarm.

That's when FAO's Special Fund for Emergency and Rehabilitation Activities (SFERA) comes into play and through its Early Action Window makes funds available when signs point towards a looming crisis. Along the way, it draws on FAO's greatest asset – its technical knowledge and expertise in supporting rural livelihoods.

Anticipatory actions are varied and flexible, but highly time-sensitive. They can range from cash transfers that help fishers store their gear ahead of a cyclone to livestock treatments that boost the health of a goat farmer's herd ahead of a drought. Anticipatory action may build flood defences that protect crops against a severe rainy season, or provide agricultural inputs and technical support to increase food production ahead of potential food crises.

This study analyses the outcome of acting early on the island of Mindanao in the Philippines between 2018 and 2019, ahead of an El Niño-induced drought. It evaluates the effectiveness of anticipatory actions and highlights families' perspectives on the benefits of acting early.



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## Challenges for Mindanao

Apart from the threat of violence, farmers in Mindanao live in constant fear of climatic shocks.

Farmers in the Philippines are no strangers to natural hazards. Droughts, floods, cyclones and other shocks regularly affect communities across the archipelago and they cause extensive damage. Population growth and climate change are just two factors that drive up the social and economic costs of disasters in the country. Add existing vulnerabilities and it's easy to understand why some communities find it increasingly hard to recover when calamity strikes.

This is particularly true for smallholder farmers. The island of Mindanao is home to many such families. They make a living growing rice, corn and a variety of fruits and vegetables in an area that is widely considered the breadbasket of the Philippines. When drought hits Mindanao, it's not just individual families who suffer – it disrupts food supplies and trade for all of the country.

Two of the poorest and most vulnerable areas in the country are located in Mindanao: the provinces of Cotabato and Maguindanao. Here, between a third and two-thirds of the population live below the poverty line, compared to about 20 percent in the rest of the country. In reality, this means that farmers often have to borrow money in order to buy enough seeds to plant for the season. When their harvest fails, it leaves them trapped in debt.

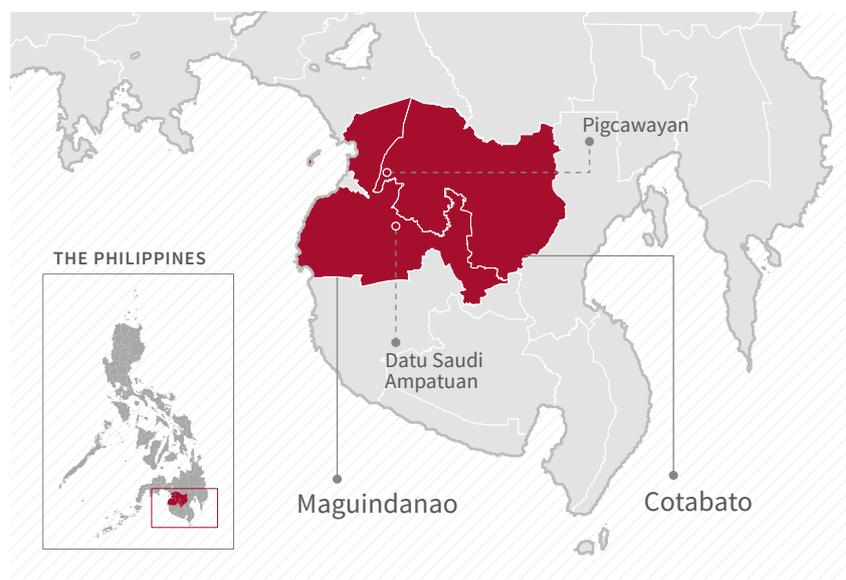
Peace, too, is fragile in this part of the Philippines. For decades, Mindanao has been ravaged by conflict between the government and various armed groups, which has taken the lives of more than 100 000 people and stifled development. A process of disarmament started in 2018 with a peace deal with the Moro Islamic Liberation Front (MILF), the largest insurgent group in the island. But some groups remain active, such as the Bangsamoro Islamic Freedom Fighters, a breakaway group of the MILF. In early 2019 alone, violent clashes displaced some 50 000 people across Maguindanao from their homes and farmland. Events like this disrupt families' livelihoods and threaten their food security.

Apart from the threat of violence, farmers here live in constant fear of climatic shocks, some of which are brought on by the El Niño phenomenon. When El Niño occurs, the warming of the Pacific Ocean alters normal weather patterns and can cause intense drought in this part of the Philippines. The rainy season becomes shorter and more erratic and farmers often suffer major crop failure. Livestock owners lose animals to exhaustion and the aquaculture sector quite literally dries up.

For farming families who already have little, the devastation left behind is often hard to recover from. During the 2015/16 El Niño, Filipino farmers lost 1.5 million tonnes of crops and more than 400 000 needed assistance to get back on their feet. Mindanao suffered substantial damages and losses, worth USD 325 million. Climate change is making disasters more frequent and more intense. It has also driven up temperatures, making extreme heat more common across the country. Such changes make it increasingly challenging for the Filipino government to protect its population from shocks, particularly those who are most exposed.

Acting before vulnerable farming communities face stress is a way to protect their assets, keep them food secure and harness agriculture's potential as a driver of stability.

#### Intervention areas

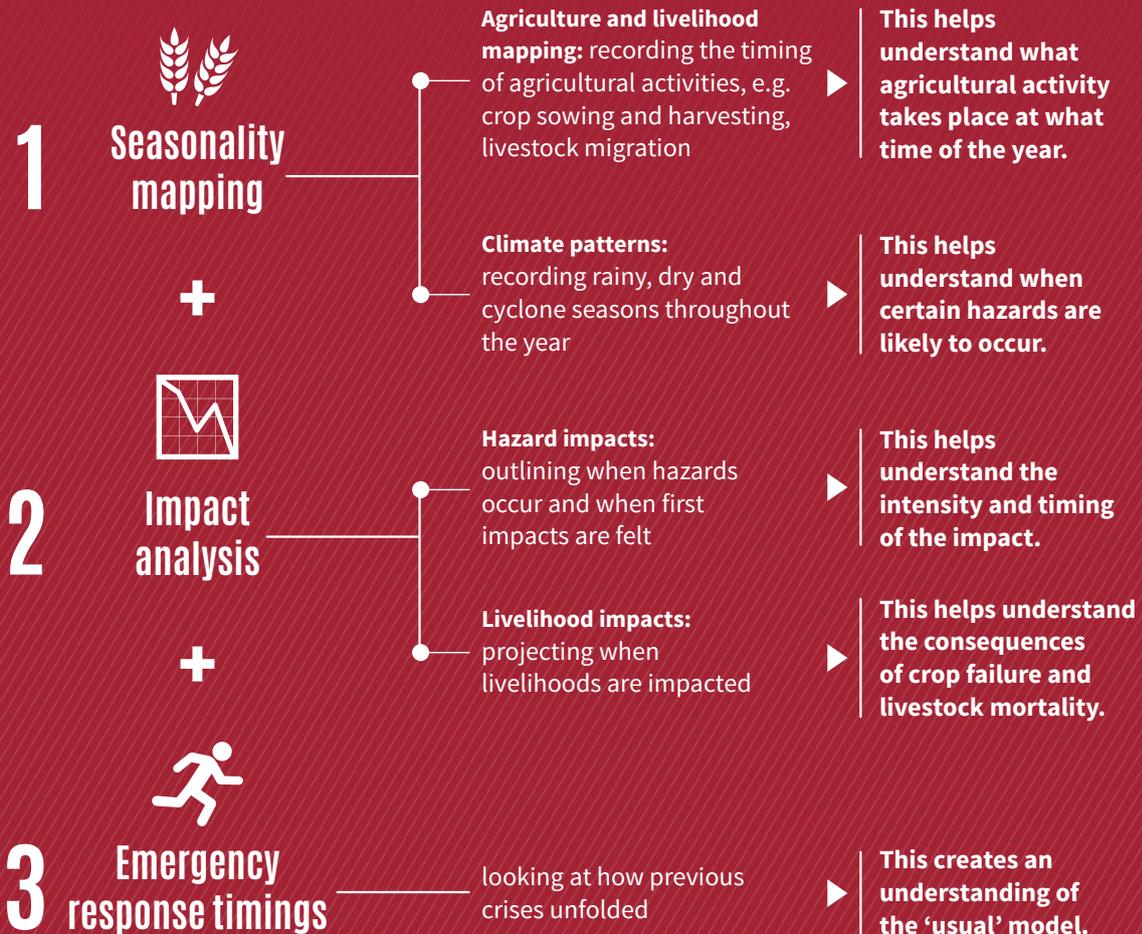


Source: OCHA, April 2020. Conforms to UN Southeast Asia map, March 2012.

# Crisis timeline

Crisis timelines can help us understand the evolution of a hazard and its impacts. More specifically, it highlights when and how hazards will impact people and their livelihoods. It combines multiple strands

of information, including seasonality mapping, impact analysis and past emergency response events. With this information, actors can identify appropriate early warnings and contextualize anticipatory actions.



Combining this information can help us work out the timing for:



## Early warning

what the most important warning signs are, and when alerts have to be released to ensure timely and effective action



## Anticipatory action

in particular, to understand (1) when actions should start; (2) what livelihoods they can protect; and (3) when they should end



©FAO/Maria Navales

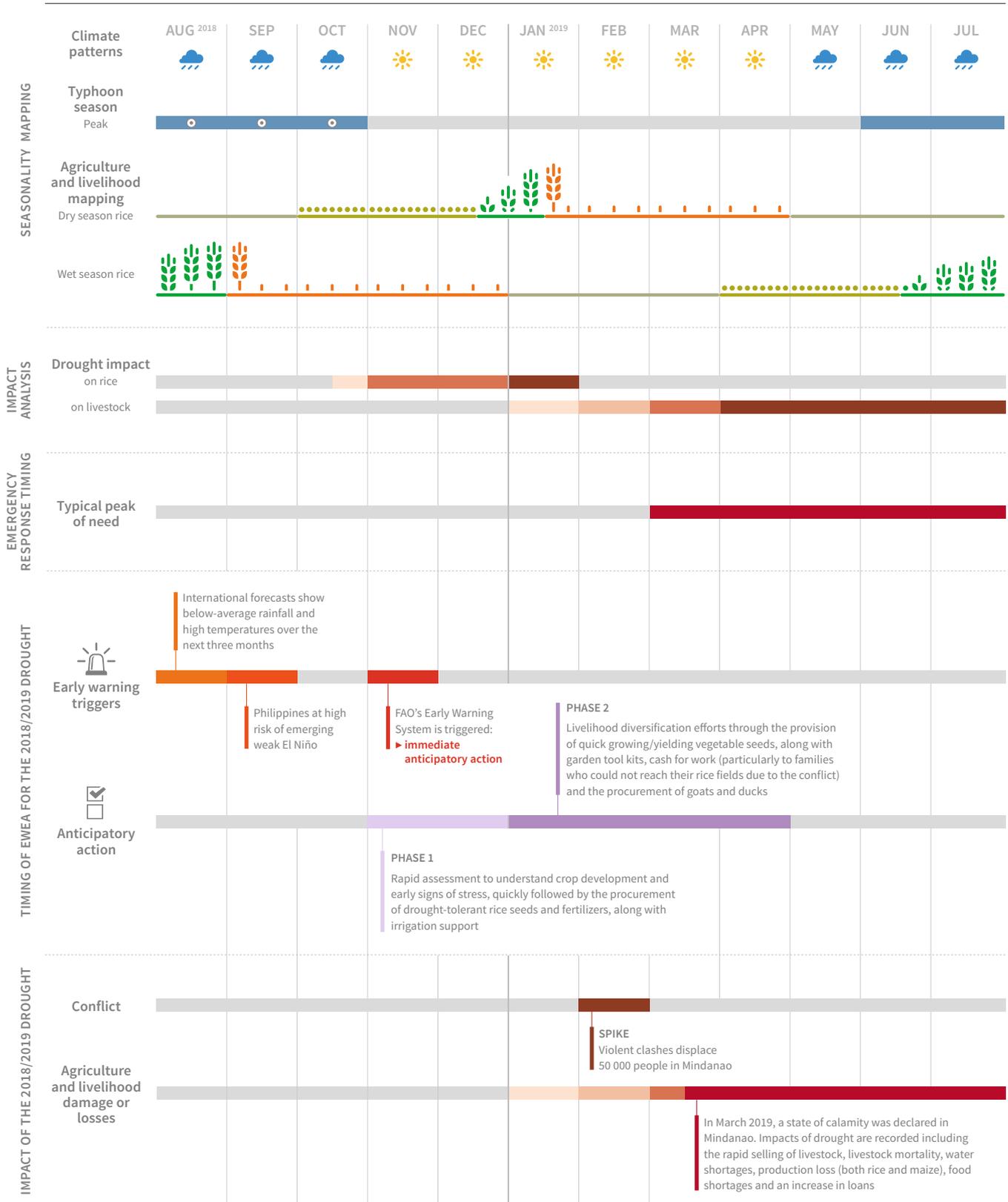
## Crisis timeline for the 2018/19 drought in Mindanao

For the Philippines, the crisis timeline for drought was designed in the planning stages of setting up the EWEA system. FAO mapped out the seasonality information for rice – a staple crop on the island of Mindanao. This was complemented by climate information for the dry, wet and cyclone seasons. It was clear that the early warning system, which was monitored on a monthly basis, needed to capture the progression and the outcome of the wet season, as this was key for the rice sowing and growing periods from November onwards. By linking the peak of humanitarian needs to the usual time and stages it takes to respond to a drought, the window of opportunity emerged to mitigate the impact – November to mid-March. The timing was determined from historical information highlighting the past impact and response to drought, and pairing this with the aforementioned critical seasonal information.

By November 2018, the early warning system signalled warnings to trigger anticipatory actions. This came at a critical time, when the sowing for the dry season rice had begun. Drought was expected to affect dry season rice, which relies heavily on the groundwater recharge from the rainy season (for irrigated rice) combined with the few rains that fall during the dry season. FAO, alongside the government, managed to change the way the government and humanitarian partners would normally respond to a drought in Mindanao.

Typically, response to drought begins mid-March but actions to mitigate the 2018/19 drought were initiated four and a half months earlier than usual. This allowed FAO and the government to safeguard the livelihoods of vulnerable communities in Mindanao.

### Mindanao crisis timeline



# Triggers for anticipatory action

Having relevant information in advance ensures enough time to launch and implement anticipatory actions on the ground.

Anticipatory actions in Cotabato and Maguindanao were set in motion by a monitoring and trigger system that FAO and partners designed specifically to anticipate drought across the island of Mindanao. Since February 2018, the system has been tracking weather forecasts, remote sensing data on vegetation and other indicators that can pick up on worrying signs at an early stage. Seeing these trends emerge makes it possible to foresee larger changes down the line and what impact they would have on farmers.

The tool produces monthly situation reports, which started to flag a steady increase in signs of potential drought in August 2018. By September 2018, the World Meteorological Organization announced a 70-percent chance of El Niño striking from late 2018 through early 2019.

The Philippines' own Atmospheric, Geophysical and Astronomical service Administration (PAGASA), likewise, declared an "El Niño Watch" in July 2018.

Based on this information, FAO, together with the UN Office for the Coordination of Humanitarian Affairs (OCHA), activated the Inter-Agency EWEA Standard Operating Procedures for El Niño/La Niña (ENSO) events. The first step was to convene the ENSO Cell, a group of technical experts to understand the potential implications of El Niño forecast. The ENSO Cell prompted Inter-Agency Standing Committee partners to send joint messages about the potential effects of El Niño, focusing in particular on a list of 25 countries most at risk. The Philippines was one of them.

This meant keeping an extra close eye on any areas of the country passing the drought threshold.

By November 2018, the early warning system suggested a strong likelihood of drought in Cotabato and Maguindanao provinces that could threaten the food security of vulnerable families. The rainy season had performed unfavourably, while national and global forecasts warned Mindanao could experience below-average rainfall and high temperatures that could compromise the dry season rice crop.

Within days, a team was sent into the field to talk to farmers, who confirmed the changing situation on the ground and their worries for the next planting season. With robust evidence in hand, FAO activated its Early Action Fund. When El Niño was declared and drought fully hit Mindanao months later, in early 2019, it was clear that the system had worked.

The intervention in the Philippines shows the ideal scenario of how EWEA should work: a warning system is set in place early on, the system flags changes that suggest a drought is coming, and action is triggered as soon as the data hits the threshold for drought.

Having relevant information in advance ensures enough time to launch and implement anticipatory actions on the ground. It provides time to talk to farmers, government counterparts and local experts to find out what their needs are and build tailored plans that not only provide support but also put farmers on a stronger footing to face future shocks.



## Deciding how to intervene

As soon as conditions called for anticipatory action, and thanks to financial support from Belgium, FAO quickly released USD 400 000 through its Early Action Fund. Since the fund is designated for anticipatory action, money was available within days after action was triggered.

### Box 1. National targeting systems

The National Household Targeting System for Poverty Reduction, also known as *Listahanan*, was developed within the Philippines' Department of Social Welfare and Development and is an information management system that employs geographic targeting, household assessment and data validation. It is a tool that provides government agencies with information on vulnerable groups in the Philippines and helps identify and select potential beneficiaries for poverty alleviation and social protection programs. The Registry System for Basic Sectors in Agriculture and the Department of Agrarian Reform Beneficiaries database contain basic information on farmers and fishers and connect them with various benefits under the Philippines agrarian reform programme.

Because FAO already had an EWEA Plan for Mindanao, there was a blueprint from which to quickly design interventions that fit the local context. The choice of interventions built on decades of local government and FAO experiences in reducing disaster risks at the farm level. This has included working closely with the government and local partners to implement good practices across the Philippines. In this process, FAO increasingly has been linking anticipatory actions with longer-term work that builds farmers' resilience in areas prone to recurrent hazards.

The main goal in Mindanao was to support vulnerable rice farmers by shielding their livelihoods against drought and creating alternative income opportunities. The project focused on two municipalities: Pigcawayan in Cotabato Province and Datu Saudi Ampatuan in Maguindanao Province.

Beneficiaries were selected with local government counterparts using the national social register and various agriculture registries (see Box 1 for more details). This ensured that farmers were selected quickly and transparently, and in line with national objectives to alleviate poverty and increase social protection.

Because the planting season runs differently in the two provinces, it was clear that the EWEA intervention needed flexibility to provide different kinds of support to the two communities: drought-tolerant rice seeds

The goal was to shield farmers' production and build other livelihood activities to boost their income and diet.

for Cotabato farmers who hadn't planted yet, and small livestock and vegetable gardens for Maguindanao farmers whose rice paddies were already planted.

Another major factor to consider in Datu Saudi Ampatuan was the growing tension across Maguindanao province, which could erupt into violence and cut off access to rice fields. This was another reason to help families in Datu Saudi Ampatuan build alternative livelihoods with a variety of activities.

Women's farmers' cooperatives received a mix of ducks and goats – some 2 500 in total – to produce eggs, milk and meat, and to shore up their asset base. The animals were kept at community farms where all families worked together to rear their livestock and share the gains. The farm also served as a training hub where men and women could learn to integrate crop and livestock farming in ways that would soften the impact of drought. Importantly, the farms were set up in safe areas close to community shelters. This way, families were guaranteed to have fresh eggs and vegetables even if future conflict would force them to seek shelter.

Next, families received seeds, tools and irrigation support to set up small vegetable gardens at home, too. This was meant to boost their nutrition and generate extra income. About half of the garden kits were given directly to women. Local women's groups were involved in setting up the gardens with seeds like ampalaya, okra, pechay and eggplant.

Some began to see their rice harvest strain, which was their core income. If the rice harvest fails, families would be short on staple food or lack cash to cover other basic needs. To make up for the potential loss of income, men from the most vulnerable families in Datu Saudi Ampatuan received cash in exchange for their work cleaning local water canals that had fallen into disrepair and were critical for irrigation in the area. This in turn also helped other farmers outside the perimeters of the project who were potentially affected by the dry conditions.

With drought looming, irrigation was a top priority in both communities. That's why the project partnered with local government to install wells and pump irrigation systems to make it easier for farmers to water their crops. In all, 50 small-scale irrigation kits were installed to support 1 500 families across the two municipalities.

In Cotabato, where the rice-planting season was just about to start, FAO distributed more than 50 tonnes' worth of drought-tolerant rice seeds and fertilizer to get farming families ready for the season. And about half of the farmers in Cotabato received squash and mungbean seeds after they mentioned that it would be a useful addition to their rice production.

Finally, the government, FAO and other organizations went town-to-town in a public awareness campaign that alerted farmers in nearly all provinces across the Mindanao region of the coming drought and provided tips on how best to protect their crops against the impacts.

# Early Warning Early Action project in the Philippines





# Return on investment

The benefits to households were four times higher than the cost of acting early.

FAO alongside its government counterparts and local partners were keen to know how the intervention affected the farmers in Cotabato and Maguindanao. That's why in June 2019 a team went back to both provinces to conduct interviews and surveys with families after the project had ended. Families who benefited from the actions, as well as families who didn't, were both interviewed. This way, staff could compare and better gauge the impact of anticipatory action.

They measured how much food families produced, what income they were making from selling vegetables and eggs, and what losses they avoided by keeping their plots irrigated throughout the drought. But the conversations also touched on changes in gender dynamics, feelings of security in times of conflict and new aspirations for the future.

In Datu Saudi Ampatuan, the analysis showed that for every dollar FAO spent, families reaped benefits worth USD 4.4. The vegetable garden kits and the ducks were particularly popular and brought families the largest rewards for their labour.

They saw fewer crops fail and harvested larger amounts of vegetables than families who did not have the same drought-tolerant seeds and had not received training. Families in the project also cultivated larger plots of land and grew a wider variety of vegetables than other families in their area. In all, each family harvested about 182 kg of vegetables during the project, which was critical for nutrition and food security.

The ducks added a whole new income stream. After subtracting the costs of running their duck farm, families in the project made a net profit of USD 17 each from the eggs they collected. In all, families reaped some USD 538 in benefits, avoided losses throughout the project and added new kinds of nutritious foods to their diet.

In the case of Cotabato Province, most farmers in the Pigcawayan project had not harvested their rice yet as they delayed planting due to the unfavourable conditions. This meant that the team could merely collect farmers' impressions of the project so far, but it was too early to collect hard data – farmers could only estimate how much rice they would be harvesting from their drought-tolerant seeds and irrigation system. That's why, when it came down to calculating the impact, FAO focused only on farmers in Datu Saudi Ampatuan in Maguindanao.

Farmers in Cotabato, nevertheless, rated the project highly. They credited the support with getting their rice production back on track and preventing them from taking on debt to do so. And the improvements to water supply in their community and their home made them feel confident about their rice yield.

But there were benefits beyond the two target communities, too. Thanks to the traveling information caravan, farmers across Mindanao could attend workshops on how to anticipate an El Niño episode and how they can adjust their planting and irrigation to limit losses when drought strikes.

# Protecting food security and nutrition

Families were less likely to revert to negative coping strategies in order to buy food, like taking on debt or selling critical assets.

Thanks to the support received ahead of the drought, farmers were able to maintain an acceptable diet despite the failed rains. They ate more often than other families in the area and particularly upped their intake of healthy vegetables.

When FAO and partners went to talk to farmers who participated, they said that there was little to no rain between November and May when the project was active. This had a major impact on their crop production, especially rice, which requires a lot of water.

But farmers still got a decent vegetable yield, thanks in large parts to the water pumps and drums they got through the project, which allowed them to store water near their plots. The vegetables themselves also required minimal water to grow. The ducks, too, thrived throughout the drought and their eggs became a steady source of fresh protein for the families and added valuable nutrients to the diets of young children in the households at an important time in their development.

Not only did families have more food to eat, the kinds of food they produced were more diverse and varied than what non-beneficiary families were harvesting. Mungbean and squash, for example, were only growing in the gardens of families taking part in the project.

What's more, women were able to buy fruits, rice and other staples with the money they made from selling their extra vegetables in the community.

By acting early with interventions tailored to drought conditions, FAO and partners were able to not only keep families food secure but also make their nutrition and income sources more diverse.

None of the local families interviewed, beneficiaries and non-beneficiaries, had 'poor' food consumption scores, but some were borderline – meaning they were at risk of slipping into poor diets. Among the families who participated in the FAO project, only four percent reached the borderline stage. In the non-beneficiary families, that percentage was almost twice as high.

Importantly, participating families were less likely to revert to negative coping strategies, like taking on debt or selling critical assets. This means the shock of the drought did not turn into a personal crisis that would weaken their ability to meet future food needs and withstand other shocks.

What's more, while farmers didn't use their new goats to produce meat and milk yet, they have been trained in the best ways to do so. This means they can add this to their production at any time in the future. In the meantime, the goats are a source of fertilizer for their gardens and a valuable addition to their asset base, which they can further grow through breeding.

# The effects on family life

Stress within the household was less, because the drought didn't turn into an existential crisis for the family.

## More disposable income, less debt

Net profits of small-holder rice farmers in Mindanao are very limited, even when rains are sufficient and harvests are normal. Because of the lack of safety nets, a failed or poor harvest often takes a heavy toll on families' incomes. Women, who traditionally do much of the budgeting in this part of the Philippines, were worrying about how they would cover basic needs and still pay for their children's school fees.

During the interviews, many families said that the distribution of drought-tolerant seeds prevented them from having to buy seeds on credit, which comes with hefty interest rates of up to 15 percent. This was particularly the case for the rice farmers in Cotabato. Those who had already taken out some seeds on credit were confident that their drought-tolerant seeds and irrigation systems would produce a harvest that's good enough to pay back the lender quickly.

Even though they were affected by the drought, the families who received vegetable seeds and ducks managed to produce food quickly to eat and sell. This meant they had disposable income and were able to keep their kids in school. Education was one of the key priorities for parents in both provinces and many saw it as a way to giving their children a chance at a more stable future.

Without the support to build new sources of income ahead of the drought, it's likely that these families would not have made enough money to cover all their needs, which would have forced them to resort to negative coping strategies, like keeping their children home from school or selling off valuable assets.

## Changes in gender dynamics

Forty percent of the farmers who took part in the project in Mindanao were women. For many it was the first time they were generating income of their own and producing food for their family.

Women's cooperatives took ownership of the vegetable gardens and the duck farms. They made them their responsibility and source of income. They were proud to contribute more directly to their family's income and of having the means to support their husbands through a period that would usually put a lot of stress on the family. The men, in turn, felt relief that the burden of earning money was no longer falling squarely on their shoulders. The result was a relief for both.

Stress within the household was less, because the drought didn't turn into an existential crisis for the family. What's more, the new water drums installed near the house made arguments over who would fetch water every day obsolete – once the drums were filled with water from the well, it would last the family for days.

Families were able to harvest and cook from their gardens and bring healthy meals back to evacuation centres.

## More stability in times of conflict

Halfway into the project, fighting broke out again between the government and rebels in the Datu Saudi Ampatuan area of Maguindanao. Due to the fighting, families would spend up to a week in nearby schools and community halls that were transformed into make-shift evacuation centres. They sheltered together in courtyards under mosquito nets and most of the food that was provided was processed. Whenever it was safe, families were allowed to leave the shelter for a few hours during the day to check on their homes and gardens, but many worried that without constant care they'd lose their crops in the drought.

When FAO designed the intervention in Datu Saudi Ampatuan, it anticipated that conflict might escalate at any point during the project. That's why it set up the duck farms and community gardens in areas that were considered safe zones not usually affected by the ongoing violence. This meant families were able to collect eggs and harvest vegetables throughout their time in the shelters. It was also an opportunity for families to work and learn together on a shared project. Those who could go home during the day did and used the time to harvest, cook and bring healthy meals back to the shelter with them.

The fact that the vegetables were short-cycle crops meant that the first food was ready to harvest within two months of planting, and by the time violence broke out, gardens were already up and running. The new wells that FAO installed together with the local government made it easier for families to water their crops, as did the water drums families now had near their garden.

Rice fields, in comparison, were often farther away from the home. Farmers who had been evacuated were often unable to attend their fields. For these farmers, the cash-for-work part of the project was a lifeline that allowed them to earn money despite these circumstances. This prevented the family from taking on more debt and sliding deeper into poverty.

### Box 2. Principles of conflict-sensitive planning

When designing anticipatory actions against climate hazards, it is vital to ensure activities do not inadvertently cause harm to individuals or communities. When FAO and its partners implement activities in fragile, conflict-affected or post-conflict settings, these activities are informed by a thorough context analysis, keeping in mind that institutions may be weak in these situations, societal relations may be fractured and access to resources may be constrained or highly competitive. Working in a conflict-sensitive way, FAO keeps a close eye on the interaction between the local context and the project and does so at all stages – from the design to the implementation and evaluation of the project.

This supports the goal to reduce any potentially negative impacts and maximise positive impacts in the community. Where necessary, FAO makes adjustments along the way to better meet the needs of beneficiaries.

Further information on FAO's approach to context analysis can be found here:

► [www.fao.org/3/ca5968en/CA5968EN.pdf](http://www.fao.org/3/ca5968en/CA5968EN.pdf)

FAO's participatory conflict analysis approach can be accessed here:

► [www.fao.org/3/ca5784en/CA5784EN.pdf](http://www.fao.org/3/ca5784en/CA5784EN.pdf)

# Farmers' voices

## Tintin Sulaiman

Municipality: Datu Saudi Ampatuan



“I’m saving for the first time, because I don’t buy vegetables at the market. Instead, I make money!”

Rice farming and fresh water fishing have been mainstays for Tintin Sulaiman and her family of three – but both activities rely on the constant flow of water.

“My husband usually does the fishing,” she says. They have two *talik* – a type of traditional fish trap – that, on lucky days, bring in around 100 pieces of fish. “Our main source of income is rice, though – my husband works hard in the fields.” This year was different though. The rains were sparse and what usually flows into the rice fields was limited.

As Tintin’s worries started to grow, “FAO gave me seeds and a space in the nursery with a cooperative. I learned how to grow the seedlings, so we were much better off.” The seeds were drought-tolerant and could yield with little water, a source that Tintin’s family relied heavily upon.

Tintin now divides her time between the community farm – where she works collectively with other families – and her own vegetable garden at home, which has become a point of pride for her. “I love the garden. My husband is not allowed to touch it. He’s only allowed to stand and watch – I manage the garden.”

Her labour is bearing fruit. “With FAO’s help, every two weeks I harvest chillies, okra and eggplant.” She brings in around 4 kg each time, which she uses for cooking but also to sell in the market. “I’m saving for the first time, because I don’t buy vegetables at the market. Instead, I make money!”

In addition to vegetables, she sells duck eggs – another income source she was able to build thanks to the 10 ducks she got through the project. All together, she saves about 200 Philippine Peso (PHP), or around USD 4, per week. “I can buy basic things for the house: three bottles of oil for PHP 50, sugar, onions and garlic.”

And her family is eating healthier than before – an important point since she’s pregnant with her second child. “I have eggs and vegetables and now I can buy fruits,” she says. “Instead of choosing between all three, I can have all of them and I can buy medicine for myself and for my baby.”

Her one-year-old daughter is healthy and she really loves the eggs, she says. “She can eat two of them in a day!”

The support came at an important time for her family. Her husband’s rice crop was showing signs of stress and one yield loss could potentially strain the family’s finances. Halfway into the FAO intervention, Tintin’s family was also evacuated because of violent clashes near her house – also meaning her husband was banned from visiting his rice field and maintaining it at this crucial time.

To prevent further stress on the family, Tintin’s husband Saidin was part of the cash-for-work project in their community. Rice needs close monitoring and attention during drier periods, and being banned from his farmland

meant his yield was destined to fail. But, the cash-for-work provides an alternative source of income. Tintin's vegetable garden and ducks also remained a lifeline throughout her time in the evacuation centre.

Tintin was keen to contribute financially as well, releasing some of the burden from her husband. "I manage the money. When my husband finishes work he brings his earnings to me," she says. "Now, I can help. Instead of my husband giving me money to buy things for the house, I can get it. I feel empowered – I am helping with the household."

"Over the last few months we have been on and off in the *barangay* halls. We can come to our house during the day, but we always have to return when the military says," she explains. "We cannot go to the market, so it was useful to quickly go to my garden and harvest fresh food. I don't want my baby to eat processed foods. So I would cook eggplant and okra to take with us."

Tintin is adamant to keep saving even during the conflict. "I don't want to spend money on buying food, I want to save. Thankfully, I could harvest my food quickly."

For now, she's saving for emergency needs while she's pregnant. "Eventually, I hope I can save enough so my daughter can finish school."



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## Cynthia Oliveiras

Municipality: Pigcawayan



“We were less worried about this year. We got vegetable seeds, which we could easily plant to grow food for the family.”

Cynthia Oliveiras is used to long days. “In the morning I wake up around 4 a.m. I cook food and feed the animals, pigs and chickens,” she says. Then she makes breakfast for her elderly mother, takes care of the house, washes clothes, and takes the kids to school. “I spend the rest of my day working in the garden.”

She’s been a farmer for about 10 years. In addition to rice, she grows vegetables on a 10-by-15 m patch of land, which she uses to feed her family and sell locally. “I don’t usually go to the main market, but I sell my vegetables at the church or the community hall to help my neighbours,” she says. “Particularly during this drought period.”

When TV and radio news first announced in 2018 that a drought was on the way, she was anxious. “We experienced drought very badly three years ago,” she remembers. “Drought creates additional work for women in my community – it is more effort to take care of our plants. It makes us question: when is the next time we will get food?”

When FAO came to her community ahead of this drought, it eased her mind, she says. “We were less worried about this year. We got vegetable seeds, which we could easily plant to grow food for the family,” she says.

Although FAO’s plan originally didn’t foresee giving vegetable kits to families in Cotabato – where most farmers received rice seed instead – some families asked for vegetables specifically, so FAO shifted gears.

“I also got a water drum, which is expensive. And garden tools.” These are the kinds of items that make a difference during dry spells but which are hard to buy when families have been struggling with consecutive droughts and their resources are depleted. “The number one stress during drought is money. It is very hard to go through drought if we don’t know what to do.”

Another side benefit of storing water close to home is that she and her husband don’t have to stress anymore about carrying water from their distant well to the garden. “With the drum, we store water easily and quickly take care of our plants.”

## Halid Olong

Municipality: Datu Saudi Ampatuan



“The cash-for-work helped provide things that my rice crop was reserved to do.”

“Education is a parent’s gift that we can give to our children, and our girls.”

Halid Olong supports a family of five with the money he makes as a rice farmer in Datu Saudi Ampatuan.

While he’s waiting for his harvest, he usually tries to make some extra money driving a motorcycle. But when drought strikes, neither of his jobs is enough to support his family. “I have to find other ways to earn money,” he says, which is how he got through the last drought in 2016.

By the time FAO came to Datu Saudi Ampatuan in early 2019, Halid was worried that the crop he already planted would turn out poor because of the worsening dry conditions.

But the fact that his family had to spend weeks sheltering in the local *barangay* hall while conflict was going on around them meant his rice crop was left unattended. “My farm was already affected by the drought and leaving it alone was risky, even for a few days.”

While he was in the shelter, Halid was approached about participating in the cash-for-work activity that FAO added to its anticipatory action intervention in Datu Saudi Ampatuan. He took the opportunity and earned PHP 2 000 in the process. “The cash-for-work was conducted in a safe place, so I was able to keep earning an income while my rice farm was left untended.”

Because of the conflict, his crop failed in the end but “the cash-for-work helped provide things that my rice crop was reserved to do,” he says.

Mainly, he spent it to keep his three daughters in school. “I was able to help my children go to school, pay for their expenses and even for one of their *kundali* [graduations].”

The certificate of his daughter’s graduation is displayed prominently in their house.

“Education is a parent’s gift that we can give to our children, and our girls. We need to make sure they have a good life and this is one treasure I can give to my girls.”

## Michelle Sandigan Mohammad

Municipality: Datu Saudi Ampatuan



“The project gave us more chances. We didn’t have to buy seeds and we could use the saved money for other basic needs.”

Being a single mother, Michelle Sandigan Mohammad realized she would have to struggle even more to raise her three-year-old daughter. Luckily, she could count on the support of her mother and two sisters. She also knows how to grow crops.

Even since she was a little kid, Michelle used to help her parents in the rice fields, learning everything there is to know about planting seeds, growing the plants, harvesting the crops and storing the produce.

She is an experienced farmer by now, also thanks to the wise advice of the elderly. “When a drought comes, we ask our grandparents, what are the best crops to plant, and when to plant them. But the impact on our income is huge.”

Thanks to an early information campaign by the government and FAO, Michelle knew about the risk of El Niño affecting her area and a failed rice-cropping season, so she could start planning ahead of time. FAO arrived in the community long before the seasonal rains were expected and provided her with good quality vegetable seeds and water drums. This allowed Michelle and other farmers to produce alternative, short-cycle crops, regardless of the dry conditions. The project also supported her women’s cooperative by setting up a duck and goat farm that they could use for additional food and income.

“The project gave us more chances, since we didn’t have to buy seeds and we could use the saved money for other basic needs during the drought,” she said. “These seeds are good quality.”

With the money earned through the sale of eggs and vegetables, Michelle was also able to start a little *sari sari* [grocery store]. “I hope I can continue running my store and taking care of the vegetables and the farm. This is giving me hope for my child, and I feel less scared about future droughts.”

# Lessons learned

## EWEA systems must build on existing Disaster Risk Reduction and Management (DRRM) strategies

FAO has a long-standing collaboration with the government of the Philippines to support the design and implementation of context-specific DRRM strategies and programmes. They are designed to strengthen the resilience of farmers and protect their agricultural livelihoods against recurrent hazards. Mindanao has long been a priority area and vulnerable farming and fishing households have previously benefited from improved technologies, good practices and community-based DRRM processes.

When FAO established the EWEA system for drought in Mindanao, it leaned on the national and local authorities responsible for meteorological services, disaster risk reduction and management. This approach was crucial to the effectiveness of the interventions and made sure the short-term anticipatory actions would contribute to the larger process of building long-term resilience in farming and fishing communities in Mindanao.

## It is possible to anticipate and mitigate El Niño's impact on agriculture and food security

The EWEA approach in Mindanao shows that setting up tailored systems that pick up specific climatic data from local and international sources makes it possible to see trends unfold and start planning actions months before drought actually strikes. FAO has been a long-time advocate for this kind of risk monitoring and early intervention.

The drought-monitoring system FAO put in place in early 2018 was successful because it offered a clear step-by-step guide for different actions to take in response to pre-defined early warning triggers. When the system signalled that the thresholds were met, FAO and its partners already had seeds prepositioned and an intervention plan at hand to quickly roll out support to paddy farmers. Importantly, the process involved global experts on El Niño to help assess the data and project what impacts drought could have on agriculture. FAO together with OCHA led the first-ever inter-agency process on anticipatory action to ENSO episodes. The process was activated for the first time in 2018 and showcased that bringing global and local experts together can help successfully forecast and mitigate the impact of climate hazards.

While El Niño still caused losses for farmers, its impact on their overall livelihoods was significantly less, particularly for those families who were able to build alternative income sources through the project. Currently, the national government is continuing to monitor the drought early warning system that was set up in 2018 – with the aim to further refine and scale up the model to anticipate future shocks across the Philippines.

## Not all early interventions are equally effective

While both groups of farmers, in Datu Saudi Ampatuan and Pigcawayan, reaped benefits from anticipatory actions in their municipalities, one group had an easier time mitigating the drought than the other.

In the end, the intervention that got the best results was the one that provided a mix of inputs such as short-cycle vegetables and alternative livelihoods.

In Pigcawayan, the intervention focused mostly on softening the impact of drought on rice production by distributing stress-tolerant seeds and setting up better water supply systems in the community. But drought still had a strong impact on rice yields. This was also the case in Datu Saudi Ampatuan, but the new vegetable gardens and duck farms, along with the new water systems, allowed families to grow alternative food quickly. This means they were able to compensate – at least partially – for the losses they suffered on their rice crop. This move away from monoculture farming toward more diverse food and income sources also makes their livelihood overall less vulnerable in the future.

**In specific contexts, anticipatory actions have to be conflict-sensitive**  
When working in a context like Mindanao, actions need to be tailored to the daily needs and realities of families living under the shadow of conflict. This means it's not enough to consider the impacts of drought – actions also need to consider what will happen if farmers get displaced from their homes or can't access pieces of land they've already planted, because it's too dangerous. Cash for work, for instance, allowed displaced farmers who could not access their land to work in safe areas and help other farmers by restoring irrigation canals. Home gardens were helpful, because in the case of Datu Saudi Ampatuan, the military usually allows evacuated families to return to their homes for a few hours a day – enough to water crops and harvest food to bring back to the shelter. Likewise, the locations of the duck farms were carefully chosen, in safe areas close to community shelters. This allowed evacuated families to get fresh eggs to eat and sell whenever they needed, even in the weeks they spent at the shelter.



Going forward, anticipatory actions need to be strategic, well-designed and conflict-sensitive. Climate hazards occur in complex environments, and the success of future interventions depends on a solid understanding of the local context and a commitment to truly do no harm.

### Making women and men equal partners in anticipatory action brings benefits beyond food security

Women and men were working side by side on community farms where they received training and produced food together. While the heavy labour of the cash-for-work activity was a job done only by men in the project, other parts of the anticipatory action specifically targeted women and women's associations, like the vegetable gardens and the duck and goat farms. The fact that women were directly contributing to their family income – many, for the first time – was a win-win for men and women in the household. For the women, it boosted their self-esteem and financial independence, while for the men it reduced the pressure that came with being the sole breadwinner of the family.

The concept of gender is very context-specific, but has to be part of the conversation when discussing EWEA initiatives. Gender roles and dynamics can influence the way stakeholders are involved and participate in actions, and they can decide who can access the benefits of EWEA interventions. Acknowledging this and involving communities in open discussions about gender can ensure that anticipatory actions fit the community, and that the benefits extend to everyone.

### Social protection systems play a fundamental role in mitigating disaster impacts

For future activities, working through existing social protection mechanisms in the Philippines could help increase the efficiency, effectiveness and inclusiveness of anticipatory actions.

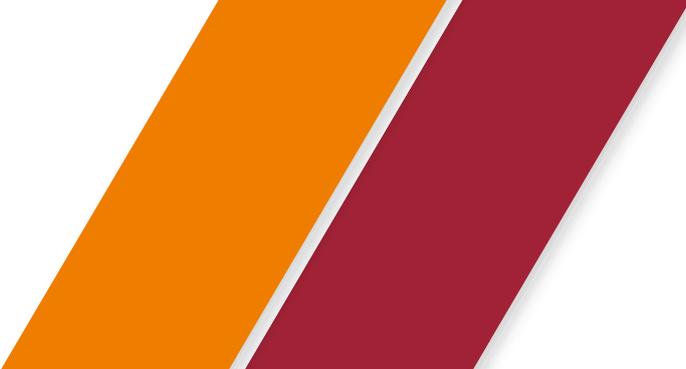
For this intervention, beneficiaries at the local level were selected using registries from the National Household Targeting System for Poverty Reduction, the Registry System for Basic Sectors in Agriculture, and the Department of Agrarian Reform Beneficiaries database. For future activities, a more systematic use of these tools is advised in order to ensure that support to the most vulnerable is guaranteed, and that the identification process is rapid, transparent and fully aligned with national poverty and vulnerability indicators. FAO, in turn, could contribute to making existing systems and registries stronger by providing updated information from the field on exposure to drought and related livelihood vulnerabilities.

Using established social protection systems to deliver aid and support to farmers would cut costs and time, and further scale up activities. It would help to have agreements in place with the Department of Social Welfare and Development that make it possible to systematically channel anticipatory action through these national social protection programmes. Building these stronger ties would make it easy to adjust the provision of benefits in the event of a shock and make the coordination between government and humanitarian actors stronger and more coherent.

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Anticipatory action safeguards lives  
and livelihoods, builds resilience to future  
shocks, and eases pressure on strained  
humanitarian resources.

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FAO's Early Warning Early Action uses risk analysis and forecasts to trigger interventions before a crisis escalates into a humanitarian emergency.

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