



Numo Organic Farmers Association members participating in the Women's Market in Sultan Kudarat.  
Photo: Denvie Balido/Oxfam

## EMPOWERING POOR WOMEN AND MEN IN BUILDING RESILIENT AND ADAPTIVE COMMUNITIES IN MINDANAO (EMBRACE PROJECT)

End-of-Project Evaluation Report

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This evaluation assessed the achievements of the extension phase of the EMBRACE project, which focused on improving the livelihood and social status of vulnerable poor women and establishing partnerships between farmers and local government units for climate adaptive farming. The study involved key informant interviews, focus group discussions, a case study and a survey of 436 respondents (319 EMBRACE and 117 non-EMBRACE participants). Overall, it found that 32% of EMBRACE farmers who shifted to organic farming experienced higher yields and spent less on farming inputs.

## ACRONYMS

BINDS	Building Resilient and Adaptive Communities and Institutions in Mindanao
CCA	Climate change adaptation
COM	Community Organizers Multiversity
CRFS	Climate Resiliency Field School
DA	Department of Agriculture
EMBRACE	Empowering Poor Women and Men in Building Resilient and Adaptive Communities in Mindanao
LGU	Local government unit
NGO	Non-government organization
NOFA	Numo Organic Farmers Association
R1	Rice Watch Action Network
RDISK	Rural Development Institute of Sultan Kudarat
SCALE	Landscape-based Climate Adaptive Livelihood Field School
SIMCARRD	Sustainable Integrated Area Development (SIAD) Initiatives in Mindanao – Convergence for Asset Reform and Regional Development
WE-Care	Women’s Economic Empowerment and Care

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# EXECUTIVE SUMMARY

Oxfam Pilipinas implemented the Empowering Poor Women and Men in Building Resilient and Adaptive Communities in Mindanao (EMBRACE) project from 2014 to 2016. In 2017, it started a two-year extension which focused on improving the livelihood and social status of vulnerable poor women and establishing partnerships between farmers and local government units for climate adaptive farming. In the same year, Oxfam also implemented the Women's Economic Empowerment and Care (WE-Care) project in the EMBRACE project sites. This project aims to increase recognition of care work as a gender equality issue, reduce the time spent by women and their families on difficult unpaid care tasks, promote redistribution of unpaid care work within the household and community, and push for adequate representation of carers and their organizations in decision making. It complements the EMBRACE project by ensuring that women can effectively engage in other non-care work activities, and thus improve their social and livelihood status.

This evaluation was conducted to assess the level of achievement of project outcomes during the extension phase of the EMBRACE project. The descriptive research combined quantitative and qualitative approaches, using data gathering methods including a survey, key informant interviews, focus group discussions, and a case study. A total of 436 respondents (319 EMBRACE and 117 non-EMBRACE participants) were involved.

The study revealed that 32% of EMBRACE farmers who shifted to organic farming experienced higher yields and spent less on farming inputs (e.g. labor, fertilizer and pesticides) which helped increase their savings and raise their incomes to an average of PHP 15,321 (or US\$294) per month. Non-EMBRACE beneficiaries earned an average of PHP 12,886 per month and had less savings than EMBRACE participants.

The study also showed that the husband and other household members of EMBRACE and non-EMBRACE participants were generally more involved in farm activities than women. But women in EMBRACE areas were more engaged in farm, household, and community activities compared with women in non-EMBRACE areas. The majority of EMBRACE participants were likewise more actively engaged in organizational and community activities.

In EMBRACE areas, men spent more time doing productive activities than women, while the latter spent more hours doing house chores. Men also spent more time doing non-work activities such as leisure and relaxation than women. Women who received care work assistance spent fewer hours performing household activities, enabling them to use the saved time for leisure and rest, doing farm activities, and engaging in other domestic activities.

Overall, the EMBRACE project, with support from the WE-Care project, improved the livelihood and social status of its beneficiaries, particularly women in the project areas.

# 1 INTRODUCTION

## a. Project background

Oxfam Pilipinas, with funding support from Oxfam GB's Projects Direct window, implemented the EMBRACE project in 2014. The project was built on the gains of Oxfam's Building Resilient and Adaptive Communities and Institutions in Mindanao (BINDS) project.<sup>1</sup> The EMBRACE project aimed to build the capacities of poor women, men and communities in Mindanao to withstand the effects of shocks and uncertainties, become more resilient to the unavoidable impacts of climate change and improve their overall well-being.

A two-year extension was granted in April 2017. This phase aimed at improving the livelihood and social status of 3,570 vulnerable poor farmers (60% of whom are women) and establishing partnerships between farmers and local government units (LGUs) for climate adaptive farming. Oxfam implemented EMBRACE together with its partners, the Community Organizers Multiversity (COM), Rural Development Institute of Sultan Kudarat (RDISK) and Sustainable Integrated Area Development (SIAD) Initiatives in Mindanao – Convergence for Asset Reform and Regional Development (SIMCARRD). The project covered 65 villages within 10 municipalities in the provinces of North Cotabato, Sultan Kudarat and Maguindanao,

In the same year, Oxfam together with its partner organizations implemented the Women's Economic Empowerment and Care (WE-Care) project in the areas covered by EMBRACE. WE-Care is a three-year initiative that aims to make care work visible as a key issue in achieving gender equality and overcoming poverty. Its desired outcomes are:

1. Reduction of the intensity and amount of time required for unpaid care through innovative technologies and effective implementation;
2. More participation of men and boys in care activities and more equitable distribution of unpaid care work between men and boys and women and girls;
3. Increased recognition by decision makers (including government, service providers and private sector) of the positive role policy and practice can play in addressing heavy and unequal care work; and
4. Joint action by Oxfam, partners and allies to strengthen the quality and impact of WE-Care interventions in countries where it is implemented.

## b. Background of the final evaluation

The final evaluation of EMBRACE was conducted from October to November 2018 to gather information about project execution and results and help prompt reflection and learning among project partners and other key stakeholders. Since the activity coincided with the mid-term evaluation of the WE-Care project, questions relating to WE-Care were included in EMBRACE's final evaluation to maximize resources and time.

The final evaluation aimed to:

- a. Assess the achievement of project outcomes based on prioritized indicators, partners' goals and assumptions, and other unintended results from EMBRACE 2's implementation;
- b. Determine how the project's financial resources represented a more cost-effective alternative in comparison with that of other similar climate change adaptation (CCA) initiatives; and
- c. Analyze the project's potential for sustainability and scaling up and assess whether the conditions to sustain project gains and strengthen resilience programming are present.

Since the evaluation covers two projects, the following terms were used to describe the different groups of respondents in the study:

**EMBRACE participants** – respondents who have received assistance from Oxfam under the EMBRACE and WE-Care projects.

**Non-EMBRACE participants** – respondents who have not received assistance from Oxfam. They serve as the comparison group in this study.

**EMBRACE farmers** – respondents who are EMBRACE participants and farmers who plant rice, corn, and other crops or who raise livestock.

## 2 EVALUATION METHODOLOGY

### a. Research design

This was descriptive research that used a combination of quantitative and qualitative methods. It applied the with–without approach, where a treatment group (EMBRACE participants) is compared with a comparison group (non-EMBRACE participants) that closely resemble the characteristics of the treatment group but were not recipients of the intervention (White and Raitzer, 2017). Since individual baseline data of the targeted research participants were not available, the evaluation used a one-time survey, employing a quasi-experimental pipeline design as used in Thailand (Coleman, 1999) and in an impact evaluation in the Philippines (Kondo, 2007), among other instances. Apart from the survey, the evaluation also used key informant interviews, focus group discussions, a case study and desk research to collect and triangulate data.

### b. Data gathering methodology

A series of small group presentations were conducted before, during and after the data gathering. Oxfam and its partners participated in finalizing the research instruments and informing the respondents included in the list. The initial study results were presented to partners and Oxfam for validation, analysis and finalization.

Key informant interviews were conducted with officers of people's organizations (organizations formalized to represent various sectors of society such as senior citizens, persons with disabilities, young people, among others) and several staff of the implementing partners. Informal interviews were also undertaken with Oxfam project staff. The interviews used guide questions and were recorded with the permission of informants. A case study was also conducted of the partnership between the Numo Organic Farmers Association (NOFA), RDISK, and local government officials of Esperanza municipality in Sultan Kudarat province.

Seven focus group discussions were carried out among adult women (2), adult men (4), and youth (1) in the project areas. The questions focused on their awareness of project interventions, contribution to climate adaptive farming, LGU-farmers partnership, marketing, and project challenges, impact, and sustainability.

A survey was also carried out among 436 respondents, 319 of whom were beneficiaries of either EMBRACE or both WE-Care and EMBRACE, while the rest (117) were non-EMBRACE participants. The original design and agreed budget did not include a comparison group. Hence when a decision to have one was made, the number of respondents for the comparison group was determined based on the initial approved budget. Furthermore, it is important to note that while surveys can be used to apply results to a bigger population, the limited number of participants in this evaluation means it may not be appropriate to generalize its findings. Nonetheless, the findings can provide insights on both EMBRACE and non-EMBRACE participants. Also, the sample of people reached through the EMBRACE project was randomly selected proportional to gender and area distribution across accessible and strategic *barangays* (the smallest administrative unit in Philippine society), and therefore may well represent the characteristics of the actual people reached.



### **c. Study respondents**

A total of 436 individuals from 17 villages in eight municipalities participated in the evaluation. Many were involved in phases 1 and 2 of the EMBRACE and WE-Care projects. Two villages were selected for the comparison group: Barangay Salabaca and Barangay New Panay in Esperanza municipality in Sultan Kudarat province. These villages were selected because of their similar landscape characteristics to the treatment group.

The majority of EMBRACE participants are women (75%) while non-EMBRACE participants are mostly men (56%). In selecting the sample for the non-EMBRACE participants, all the women farmers were selected while only a subset of male farmers were randomly selected. This was done to match the percentage gender distribution in the treatment group.

Around 31% of EMBRACE participants are rice farmers, many of whom have other sources of income outside their farms. Around 32% of non-EMBRACE participants are not farmers and earn their income from either trading or as service providers. Many of the respondents are adults, ranging in age from 31 to 59 years old, and are married. Most have graduated from secondary school and belong to a nuclear type of family, with four to six members comprising a husband, wife and children.

The farm lands of EMBRACE participants are larger, averaging 2.2 hectares, compared with those of non-EMBRACE participants (1.7 hectares). However, more non-EMBRACE than EMBRACE participants own the land they till. More non-EMBRACE participants practice monocropping, compared with EMBRACE farmers who practice intercropping, diversified farming, integrated farming, and crop rotation. Only about 25% of the latter group practice monocropping. Both farmer groups do not hire outside laborers in their farm, but rather their family members (husband, wife, and children) engage in farm work. Most EMBRACE farmers sell their produce at the local public market: only a few sell their produce at the nearest city market.

### 3 RESULTS AND DISCUSSION

**Key finding 1: Landscape-based climate adaptive farming and innovations aimed at reducing time spent on care work help improve the levels of incomes and savings of women, men, and young farmers.**

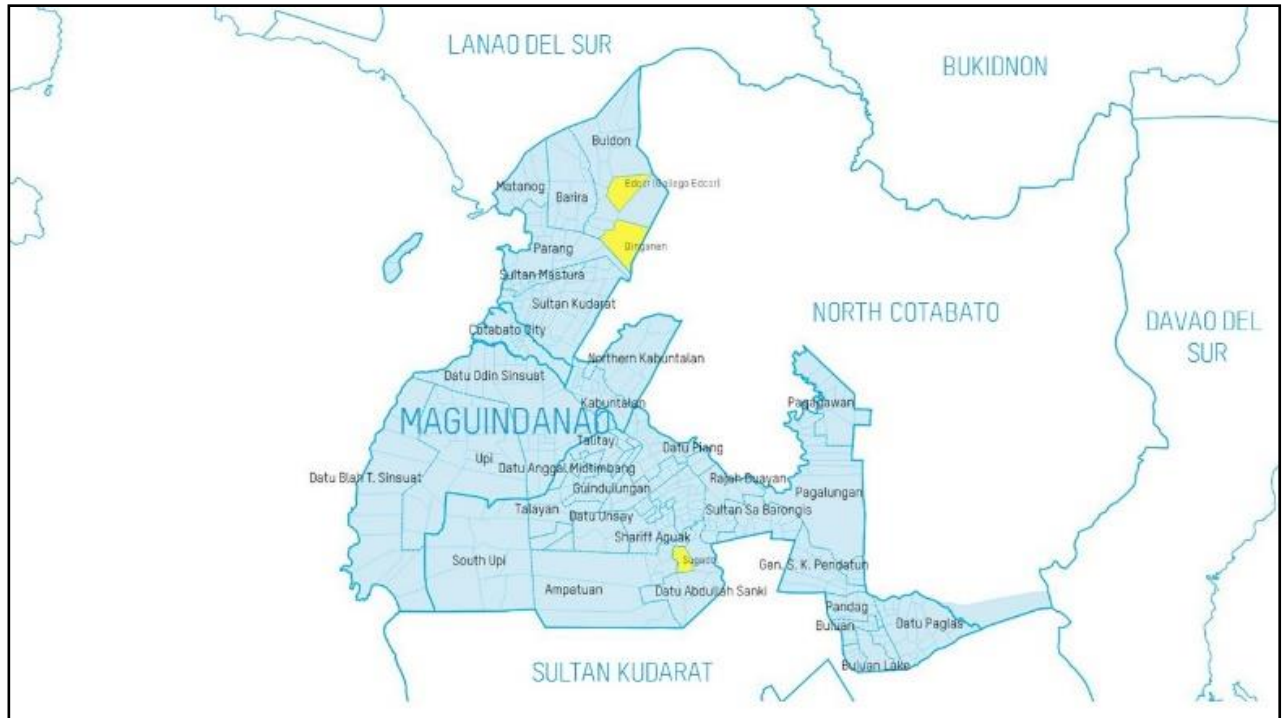
EMBRACE adopted two approaches to improve the livelihood and social status of vulnerable poor women. First, the landscape approach determines the appropriate farming methods to apply on a piece of land based on the characteristics of the landscape. The project was implemented in two landscapes: the Libungan River System and the Daguma Mountain Range (see Figures 1 to 3).

Second, the climate adaptive farming approach protects farmers' crops from adverse climate changes by training them to adjust their planting schedules and practices based on weather and climate information disseminated by the LGUs. Through the Landscape-Based Climate Adaptive Livelihood Field School (SCALE), partner NGOs, assigned agricultural technicians from partner LGUs and trained farmers facilitate season-long training of farmers on climate adaptive farming practices. SCALE intends to build farmers' learning through hands-on application of theoretical concepts, observation, experimentation and experiential learning. SCALE traces its roots from the Climate Resiliency Field School (CRFS) developed by the Rice Watch Action Network (R1) and implemented by COM, RDISK and SIMCARRD during the BINDS project. Its modules and methodologies have since evolved through a series of collective reflection, learning and action based on farmers' experiences.

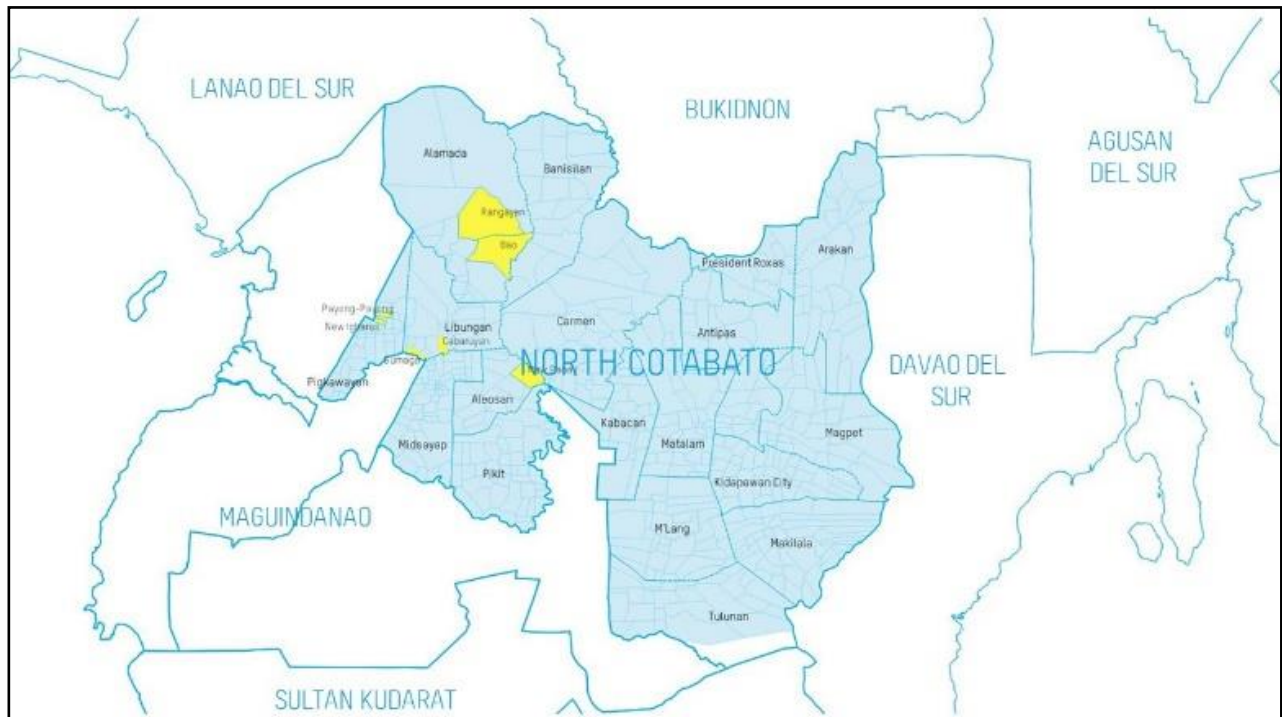
Rice farmers, corn farmers and farmers planting other crops or raising animals were asked whether their incomes changed in the past two years. Figure 4 shows that in both groups, most respondents (about 40% of EMBRACE participants and 52% of non-EMBRACE participants) expressed that there were no changes in their income in the last two years. At least 36% of EMBRACE farmers slightly increased their incomes compared with 10% of non-EMBRACE farmers (see Table 1). These include income from on-farm activities, where EMBRACE farmers earned more (PHP 9,670 per month) than non-EMBRACE farmers (PHP 8,211), and off-farm activities where EMBRACE farmers also earned more (PHP 5,651) compared with non-EMBRACE farmers (PHP 4,675). While EMBRACE farmers perceived that their income had remained the same for the past two years, their total average monthly family income was still higher than non-EMBRACE participants by approximately PHP 2,400. At the same time, while the sample population may be different, the average monthly family income of EMBRACE participants at approximately PHP 15,000 is significantly higher than the average income in the same areas in 2014 at PHP 6,628 (Oxfam Mindanao Programme, 2014).

Among EMBRACE farmers, 76% of those who changed their farming methods to organic and diversified farming reported to have experienced an increase in income. On average, their income is higher by of PHP 3,882 compared with those who opted to retain their old farming practices (see Table 2).

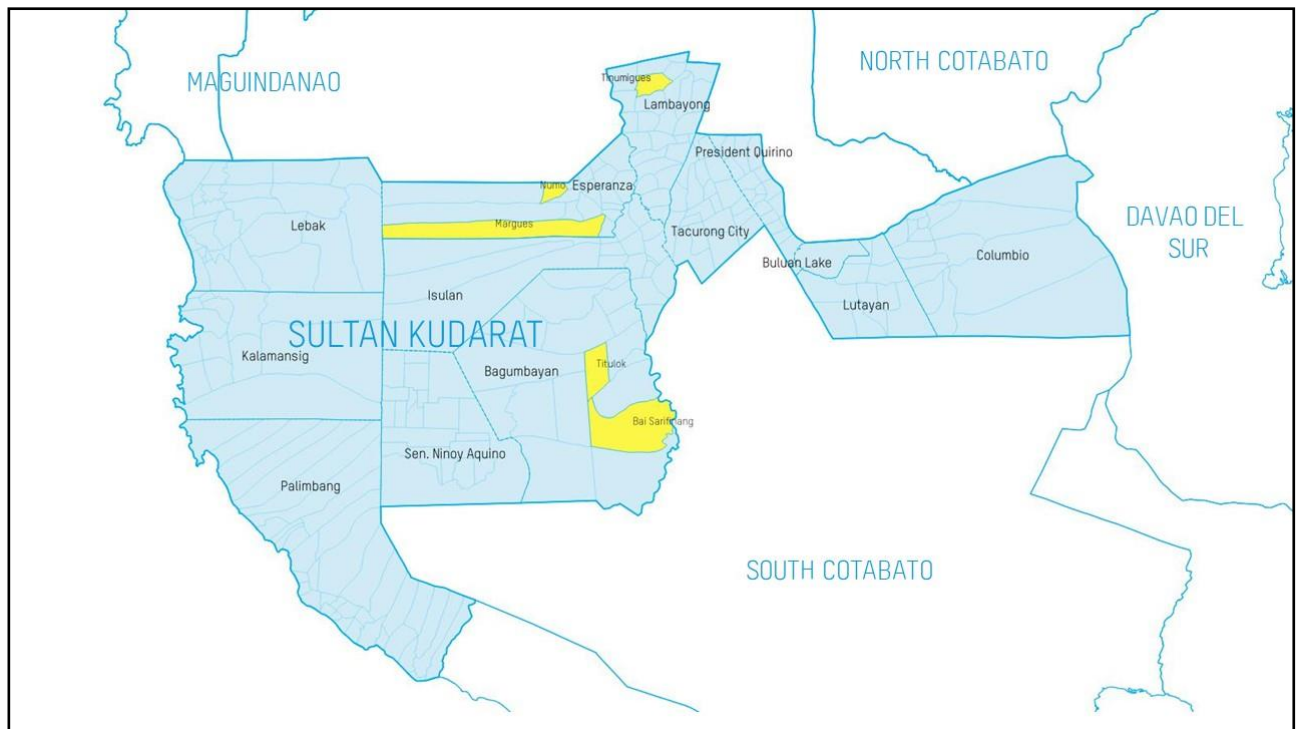
**Figure 1: Project area in Buldon and Datu Abdullah Sangki, Maguindanao (Libungan River System)**



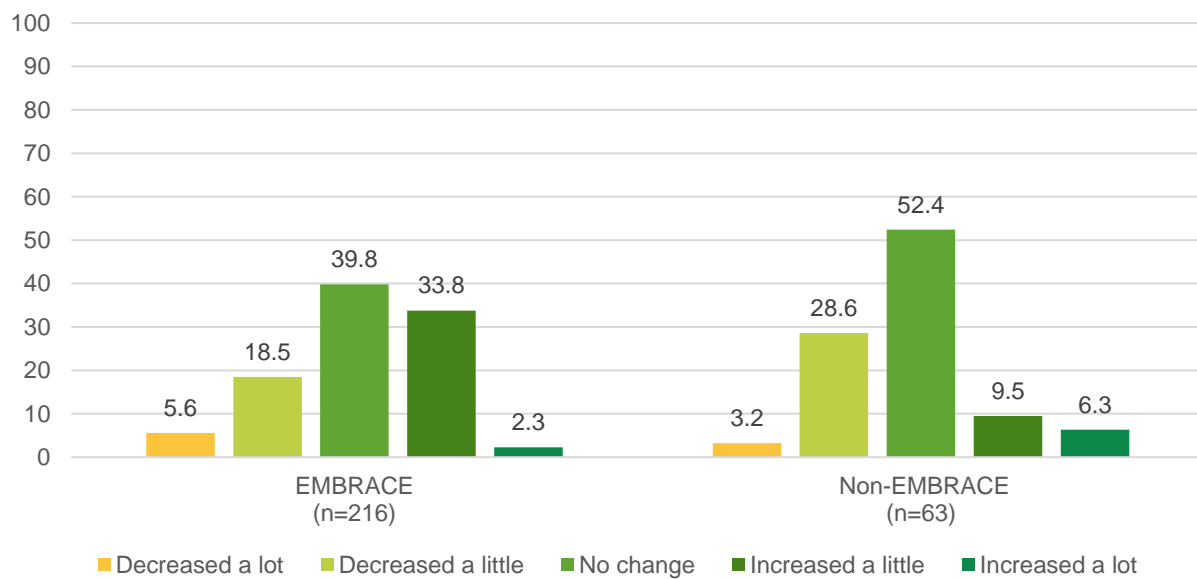
**Figure 2: Project area in Alamada, Pigcawayan, and Libungan in North Cotabato (Libungan River System)**



**Figure 3: Project area in Bagumbayan, Esperanza, and Lambayong in Sultan Kudarat (Daguma Mountain Range)**



**Figure 4: Percentage distribution of respondents by change in income**



**Table 1: Average monthly family income of respondents from on-farm and off-farm activities**

Sources of income	Research participants		Difference (A–B)
	EMBRACE (A)	Non-EMBRACE (B)	
On-farm income			
Rice farming	4,020.23	4,565.61	-545.38
Corn farming	2,801.60	1,251.57	1,550.03
Crop farming	1,864.07	1,455.00	409.07
Raising animals	984.48	939.00	45.48
Subtotal	<b>9,670.38</b>	<b>8,211.00</b>	<b>1,459.38</b>
Off-farm income			
Trading (buying and selling)	1,814.63	1,279.00	535.63
Providing services	3,836.16	3,396.00	440.16
Subtotal	<b>5,650.79</b>	<b>4,675.00</b>	<b>975.79</b>
Total	<b>15,321.17</b>	<b>12,886.00</b>	<b>2,435.17</b>

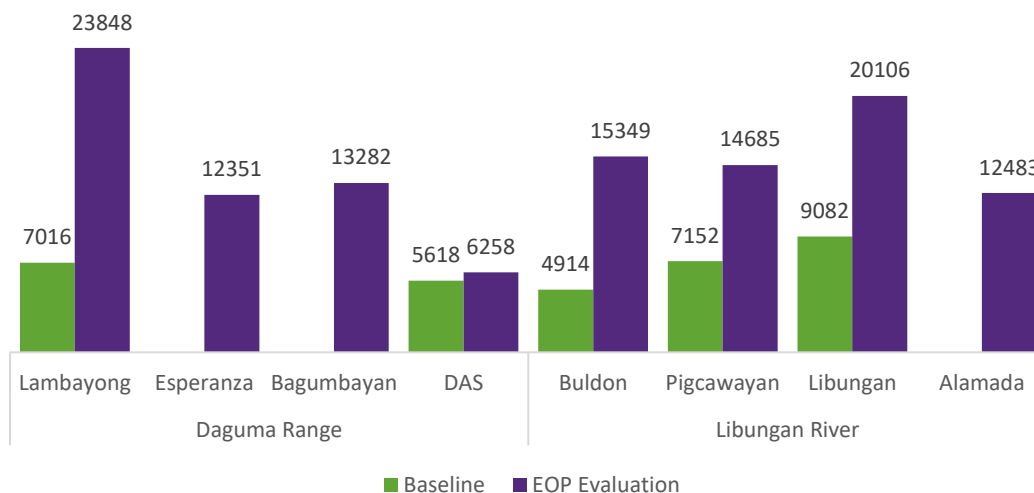
**Table 2: Average income of adopters and non-adopters of new farming methods**

Sources of income	Research participants		Difference (A–B)
	Adopters (A)	Non-adopters (B)	
On-farm income			
Rice farming	4,962.19	4,807.58	154.61
Corn farming	4,302.12	3,067.11	1,235.01
Crop farming	2,700.34	1,526.47	1,173.87
Raising animals	1,996.30	678.06	1,318.24
Total	<b>13,960.95</b>	<b>10,079.22</b>	<b>3,881.73</b>

Across the municipalities covered by EMBRACE, participants from Lambayong had the highest average monthly family income at PHP 23,848, followed by participants from Libungan (PHP 20,106) and Buldon (PHP 15,349) (see Figure 5). Participants from Datu Abdullah Sangki had the lowest monthly family income at PHP 6,258. It is interesting to note that Lambayong municipality also had the highest percentage of EMBRACE farmers who adopted organic farming. These farmers shared that they can directly sell their organic products at a higher price than they would receive through local traders.

Lambayong rice farmers had the highest net income, earning an average of PHP 13,689 per month, in part by spending less on labor and farm inputs at approximately PHP 15,419 per hectare. This was a reduction on the previous farm costs of PHP 20,206 per hectare. According to some Lambayong farmers who practiced organic farming, the reduction in the cost of farm inputs was partly because they produced their own fertilizers and pesticides.

**Figure 5: Average monthly family income of EMBRACE participants by municipality**



Note: There is no available data on average monthly family income for Lambayong (EOP Evaluation) and Esperanza, Bagumbayan, and Alamada (Baseline).

EMBRACE participants living in Daguma Mountain Range who received crop production training had significantly higher income than those who did not receive the training. Women from the area also earned a higher income than the men. In Libungan, there was a positive correlation between farm size and income, whereby a larger farm area produces a higher farm income.

More EMBRACE participants than non-EMBRACE participants practice diversified farming by planting permanent crops and raising farm animals. Households that plant permanent crops have an average of 257 trees planted composed of coconut, banana, mango, durian and other fruit trees while non-EMBRACE participants only have 167 trees. Apart from being a regular source of income, these crops and livestock are used during emergencies to help households cope with and recover from climatic and market shocks.

Climate condition was the most important factor affecting the incomes of all farmer respondents. It can either produce a good harvest or wipe out the crops in a season. EMBRACE farmers shared that shifting to organic farming and increasing their time on the farm helped increase their income by PHP 2,435. They can spend more time at the farm because of the care work innovations distributed by the WE-Care project.

Non-EMBRACE farmers considered the market price of crops as the most important factor for increasing their income. The provision of financial assistance, reduced market costs, and changes in farming methods were considered less important, while the length of time spent on their farm was not considered an important factor in improving their incomes.

Farmers identified extreme weather events as the main cause of decline in their income. Farmer respondents from Datu Abdullah Sangki, who had the lowest monthly family income at PHP 6,258, recalled that the long dry spell and infestation they experienced in the previous two years dried their rice fields and affected their harvest. Eight of the 16 farmers interviewed from the area said that their losses

*There are more EMBRACE participants who practice diversified farming than non-EMBRACE participants.*

amounted to about PHP 43,000 in one cropping alone.

More EMBRACE participants (60%) had savings per cropping in the past two years than non-EMBRACE participants (37%). They spent most of their savings on emergency expenses (e.g. hospitalization, burial), farm investments (e.g. farm equipment, livestock), education, and constructing or renovating their house. Of the municipalities covered by EMBRACE, the following had the highest number of farmers with savings: Bagumbayan (89.5%), Alamada (88.2%), and Buldon (87.5%) (see Table 3).

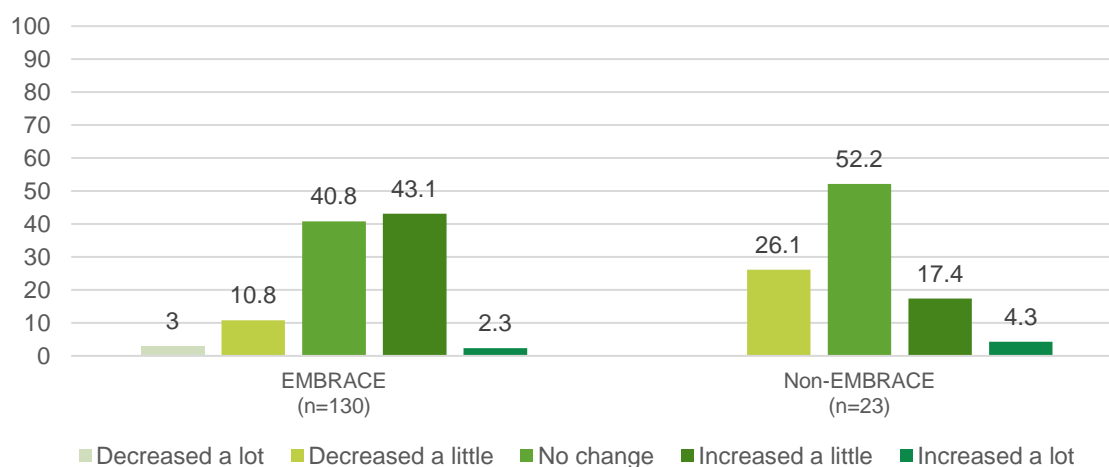
**Sixty percent of EMBRACE participants had savings per cropping in the past two years, compared with 37% of non-EMBRACE participants.**

**Table 3: Percentage distribution of EMBRACE farmers with savings by municipality**

Municipality	No. of farmers	No. of farmers with savings	%
<b>Libungan River System</b>			
Pigcawayan	61	38	62.3
Alamada	34	30	88.2
Libungan	32	15	46.9
Buldon	16	14	87.5
Subtotal	143	97	67.8
<b>Daguma Mountain Range</b>			
Bagumbayan	19	17	89.5
Esperanza	21	8	38.1
Datu Abdullah Sangki	16	5	31.3
Lambayong	17	3	17.6
Subtotal	73	33	45.2
<b>Total</b>	<b>216</b>	<b>130</b>	<b>60.2</b>

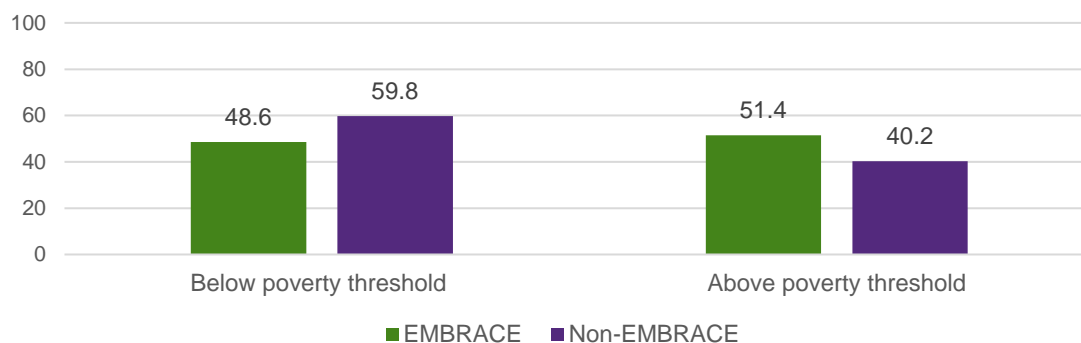
Around 45% of EMBRACE farmers said that their savings from farming increased in the last two years, compared with 22% of non-EMBRACE farmers. More non-EMBRACE farmers (52%) also shared that their savings had not changed in the previous two years, compared with 41% of EMBRACE farmers. There were also more non-EMBRACE farmers who reported a decrease in savings compared with EMBRACE farmers (see Figure 6).

**Figure 6: Percentage distribution of respondents by change in savings**



Despite the perception of EMBRACE participants that there were no improvements in their incomes in the past two years, the figures show that through the training and livelihood support provided by EMBRACE and We-CARE projects, the income and savings of EMBRACE participants improved, enabling about 51% of them to live above the poverty threshold<sup>2</sup> and decreasing their poverty incidence from 71% in 2014 (Oxfam Mindanao Programme, 2014) to 49% in 2018.<sup>3</sup> On the other hand, only 40% of non-EMBRACE participants were above the poverty threshold, hence a poverty incidence of 60% exists within the group (see Figure 7).

**Figure 7: Percentage distribution of respondents by poverty status**



Notes: The 2015 monthly family threshold in Region 12 was PHP 8,760 (PSA, 2017). With an annual 16.5% increase from 2009 and 2012 data, the projected monthly family threshold for 2018 is PHP 10,209.

**Key finding 2: Training and livelihood support<sup>4</sup> on organic and diversified farming increased the income of farmers, thus strengthening their resilience to climatic stresses and pest infestation.**

A majority of the EMBRACE participants mentioned that they received most of their farm support from Oxfam through local partners, the Department of Agriculture (DA), LGUs and other NGOs. This support included vegetable gardening, crop production training, and provision of farm inputs. Four percent of EMBRACE farmers specifically mentioned receiving marketing assistance for their farm products in the form of the ‘women’s market’ under the project.

According to 179 farmer respondents, Oxfam was their main source of assistance for crop production. Season-long community field schools called SCALE were set up. These are sometimes referred to as ‘farmers’ field schools’ where farmers are trained on environment-friendly farming practices. Farmers, most of whom were women, were taught farm diversification practices such as integrating livestock and high-value crops. They were also taught how to make their own organic fertilizers using materials from their farms, and had lessons on soil conservation through a no-tillage system, rain water harvesting and planting fruit-bearing trees, raising livestock, and crop management. The Department of Agriculture and LGUs also provided crop production training. In the Daguma Mountain Range, those who participated in the field schools had significantly higher income than those who did not participate.

*Sixty percent of those who changed farming practices were women.*

Respondents also mentioned vegetable gardening as another support they received from the project. Reports showed that at least 490 women in 14 EMBRACE villages were trained on vegetable gardening and provided with assorted vegetable seeds. Called ‘organic kitchens’, the gardens were set up mostly by women in their backyards or in areas near their houses so they could balance their time for care



work and economic activities. The gardens also served as additional sources of income and nutritious food for the household.

Aside from crop production and vegetable gardens, the respondents also received farm inputs (fertilizers, pesticides, and seeds) and livestock, including cattle, swine, goats, chickens and ducks, from Oxfam, the LGUs and DA. Under the project, each farm household was given livestock to raise and breed. Farmers' associations in the areas have a mechanism whereby individual farmer beneficiaries return at least one livestock offspring to the association after a certain period. The association then identifies new beneficiaries to receive the livestock support.

Of the 255 EMBRACE farmers who were interviewed, 82 (32%) changed their farming methods and practices on seed selection, crops planted, raising animals, land preparation, planting, fertilizer application, or pesticide application after participating in the training provided by the project. Sixty percent (49) of those who changed their farming practices were women. Among the municipalities, Lambayong had the highest percentage (55%) of farmers who changed farming methods, followed by Buldon (48%), Bagumbayan (38%), and Pigcawayan (36%). The following practices were some of the changes applied by EMBRACE farmers to their farm land.

**Seed selection.** The farmers' previous practice was to plant 'second-generation seeds' or seeds selected after harvest and preserved for the next cropping. Some of these are native seeds that have been planted and adopted in the areas for many years. Their current practice, however, is to use commercially available certified or hybrid seeds that usually come with recommended synthetic fertilizers and pesticides as part of the technology.

EMBRACE promoted the use of traditional seeds available in the area. However, farmers, including project beneficiaries, had already received certified seeds from the DA as part of the government's strategy for food self-sufficiency. Despite this, there were EMBRACE farmers who practiced seed banking.

**Crops planted.** Farmers used to practice monocropping on their lands. Through the intervention of EMBRACE, farmers learned the importance of diversifying their farming methods and started planting multiple crops in an area. Fifty percent of the EMBRACE participants started intercropping, 15% were practicing diversified farming while 8% were applying integrated farming. These practices make farmers more resilient to market fluctuations and climatic factors.

**Fertilizer and pesticide application.** Farmers previously applied synthetic inputs on their farms. With support from EMBRACE, farmers gradually shifted to organic farming. Some mixed organic and synthetic inputs while others used purely organic fertilizers and pesticides. Several farmers opted to retain their old practice of applying synthetic inputs in their farms.

*Most of those who adopted the technology owned the land they tilled.*

Farmers who decided to retain their old farming practices perceived difficulties in adopting the new technologies, particularly organic farming. They were hesitant to try the new method as they still had limited technical knowledge about it. They did not see the need to change their existing practices, which they were comfortable with. Additionally, some had limited land to farm or did not own the land they were farming. The decision to change farming practices depended on the landowners.

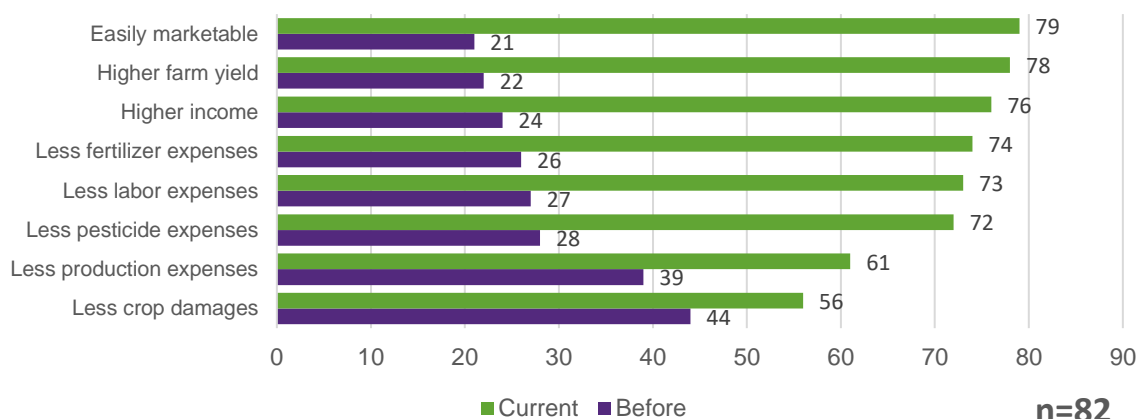
Tenant farmers were also hesitant to diversify their farming practices and plant long-term crops because they doubted its benefits and were uncertain if the landowners would take back their land. Most of those who adopted the technology owned the lands they till.

Others mentioned lack of capital, laborious technology, and fear of failure as reasons for not changing their farming methods. Some farmers mentioned that the farming system introduced to them was not suitable for their areas. For example, some farmers in Lambayong cannot apply diversified farming due to frequent floods in the area.

A total of 76% of respondents claimed that the new technologies improved their incomes (Figure 8). Among those who adopted the new farming practices, 73% claimed that they spent less on labor, 74% said that their expenses on fertilizer had decreased, and 72% spent less on pesticides. The new methods were seen to provide higher yields (78 %) and easily marketable products (79%). The farmers also said that the new practices were more resilient to crop damage caused by climatic stresses and pest infestation.

*Findings show that encouraging farmers to shift to organic farming entails more than information dissemination and training.*

**Figure 8: Percentage distribution of adopters who consider past or current farming methods beneficial**



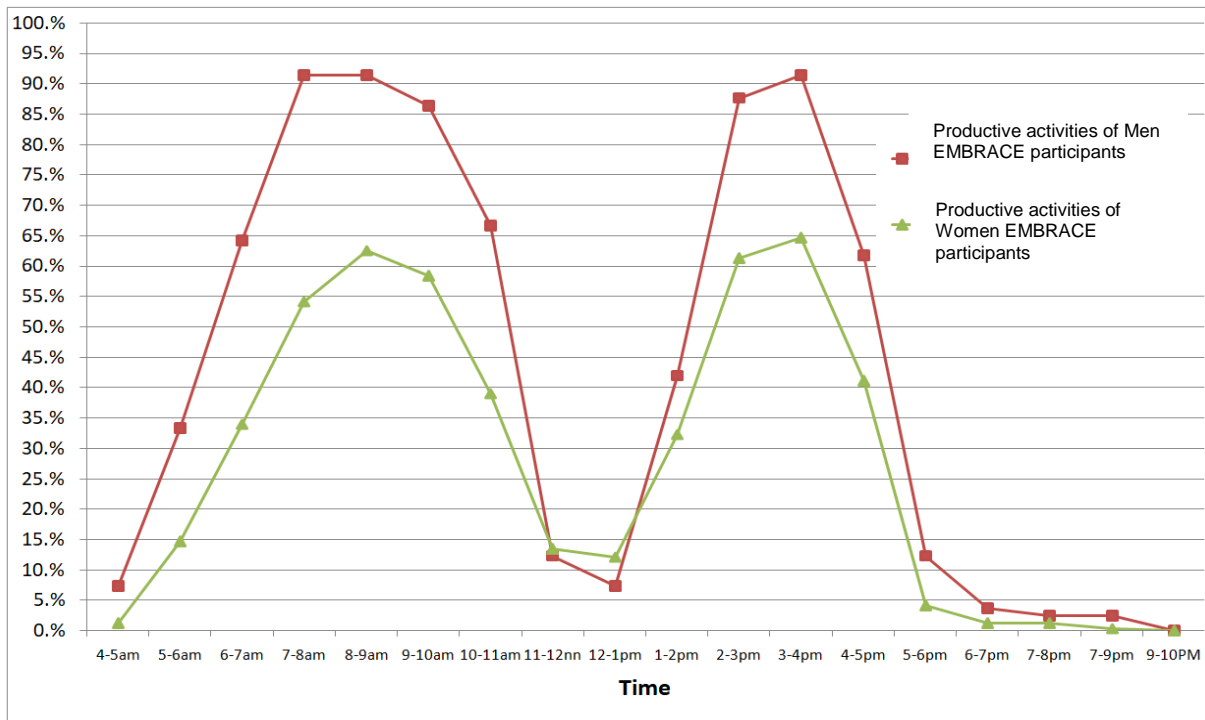
For those who opt to retain their old farming practices, the findings show that encouraging farmers to shift to organic farming entails more than information dissemination and training. As the majority of the farmers are tenants, issues around land ownership and tenant-land owner relationship need to be considered in future interventions. A thorough analysis of the landscape, including current and potential natural hazards in the area, should be undertaken to determine the suitable farming methods for the land. Lastly, combining software (training) and hardware (capital and technology) can help encourage farmers to adopt organic farming as it reduces their fear of losing assets from applying new technologies.

**Key finding 3: Women spend more time performing household and community activities than men.**

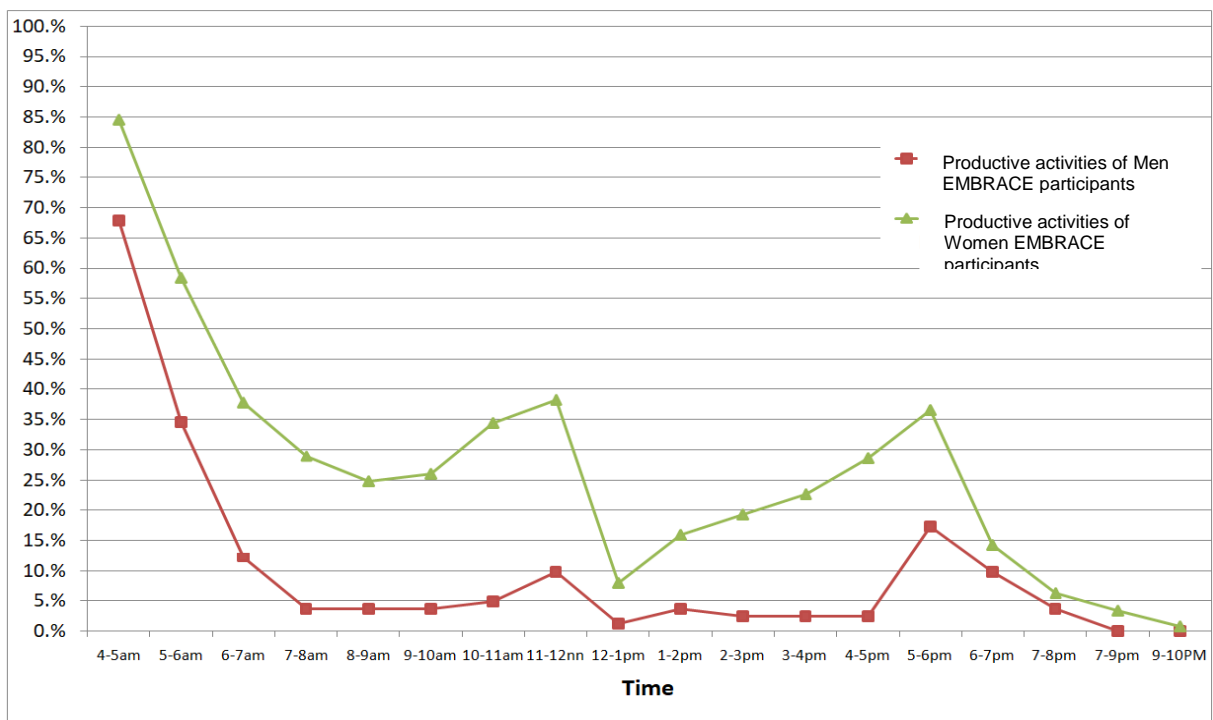
In general, women allocate more time to household and community activities, while men and other household members (children and other family members) spend more time in productive activities like farming. Men still carry out most of the productive activities, which include farming, tending to farm animals and other non-farm income-

generating activities (see Figure 9), while women focus their time on care work (see Figure 10). This includes buying household supplies and groceries, washing and drying clothes, cooking, boiling water, preparing food, cleaning the house, caring for children, the elderly and disabled, and collecting water and fuel. This work arrangement is similar to the finding of the WE-Care Household Care Survey, that women spend more time on care work than men (Rost and Koissy-Kpein, 2017).

**Figure 9: Percentage of men and women EMBRACE participants who engage in productive activities**



**Figure 10: Percentage of men and women EMBRACE participants who engage in household activities**

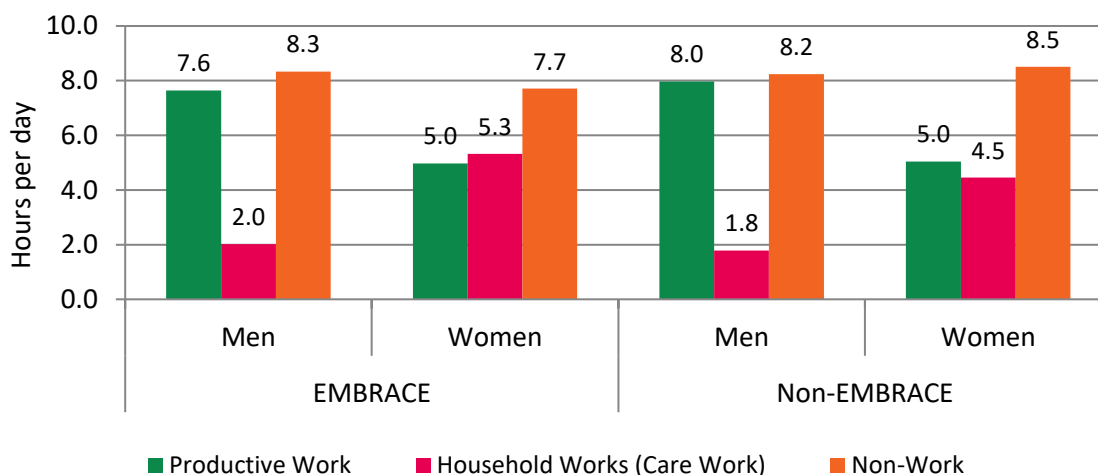


Among the women respondents, those who participated in the EMBRACE project were more involved in farm, household, and community activities than their counterparts who did not participate. Community activities include holding positions in the village, resolving local conflicts, attending to school problems and applying waste management practices. EMBRACE participants shared that most of the key positions in their community organizations are held by women.

The findings also showed that more EMBRACE participants (91%) than non-EMBRACE participants (90%) were active in community and organizational activities. It was observed that as participants attended meetings more frequently and spaces for communication were opened, misunderstandings among community members were prevented.

The evaluation also showed that men who participated in EMBRACE spent more time doing household work (2 hours) than their counterparts who were not part of EMBRACE (1 hour and 48 minutes) (see Figure 11). Across the women’s groups, those who participated in EMBRACE spent more time on care work and less time in non-work or leisure than their counterpart. This may be linked to the type of livelihood support provided by the project (e.g. vegetable gardening). Among EMBRACE participants, men spent more time on productive activities and non-work or leisure activities than women. On the other hand, women spent more time on care work than men. Adding up the hours spent on productive and care work by each gender group, women spend more time (10 hours 18 minutes) working than men (9 hours 36 minutes), but less time (7 hours 42 minutes) for non-work or leisure than their male counterparts (8 hours 18 minutes).

**Figure 11: Average hours spent per day on types of work by gender**



In general, women still spend more time doing care work than men, while the latter devote more time to productive work. Combining the hours spent on productive and care work, women spend more time performing work activities than their male counterparts while having less time for leisure and rest.

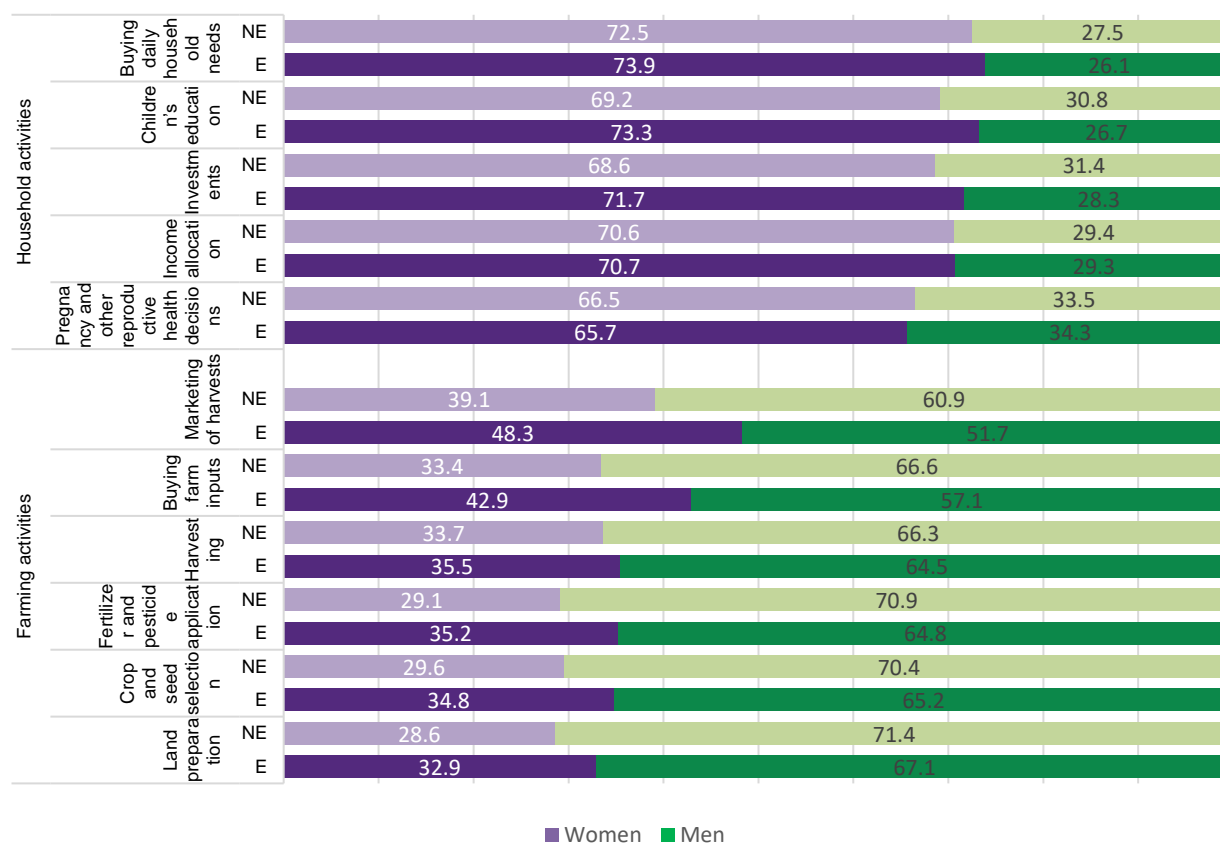
**Key finding 4: Women have more power to decide on household and family care matters, while men have more authority to decide on productive activities.**

The findings above showed that women farmers who changed their farming practices experienced an increase in their income. Such an improvement in income coupled with increased participation in income-generating activities can lead to an increase in women’s decision-making power (Shakib, 2016).

EMBRACE and non-EMBRACE participants were asked which member of the household decides on matters involving farming and household activities. In general, decisions in most areas of farm work, except the marketing of produce, were still dominated by men, while decisions within the household (including pregnancy and other matters around reproductive health) were made mostly by women (Figure 12).<sup>5</sup>

*The provision of water containers and the construction of water sources were the most relevant time- and labor- saving innovations introduced.*

**Figure 12: Average score on decision-making allocation among EMBRACE and non-EMBRACE participants by gender**



Notes: NE = non-EMBRACE participants; E = EMBRACE participants.

It is interesting to note that while decisions involving household activities are generally dominated by women, matters involving reproductive health and pregnancy were where they had the lowest authority to make decisions, and men the highest among household activities. This relationship could be a possible area for future studies on women and care work.

**Key finding 5: Care work innovations decreased the time spent by women in unpaid care work, giving them more time to engage in other activities.**

Table 4 shows that Oxfam was the top source of care work innovations received by the EMBRACE participants. Most of the participants received bigger water containers, followed by new sources of water and gas/kerosene stoves. In Daguma Mountain Range, those who received bigger water containers and new sources of water significantly reduced their time spent by on care work compared with those who did not receive the innovations (see Annex for statistical analyses on the effects of time and labor-saving equipment (TLSE) and other Oxfam interventions).

Participants expressed that they liked the new water sources as the old source produced oily water. In Numo, the installation of tanks and tap stands provided households with a complete water supply, thus decreasing the time spent collecting water for the household.

**Table 4. Sources of care work assistance received by respondents**

Received assistance	Sources					Total
	Oxfam	NGA	LGU	Other NGOs	Personal	
<b>Bigger water containers</b>	141	1	4	17	0	<b>163</b>
<b>Construction of a water source</b>	74	1	24	11	2	<b>112</b>
<b>Gas/kerosene stove</b>	21	0	0	1	0	<b>22</b>
<b>Kerosene, solar, or electric lamp</b>	12	1	1	2	2	<b>18</b>
<b>Total</b>	<b>248</b>	<b>3</b>	<b>29</b>	<b>31</b>	<b>4</b>	<b>315</b>

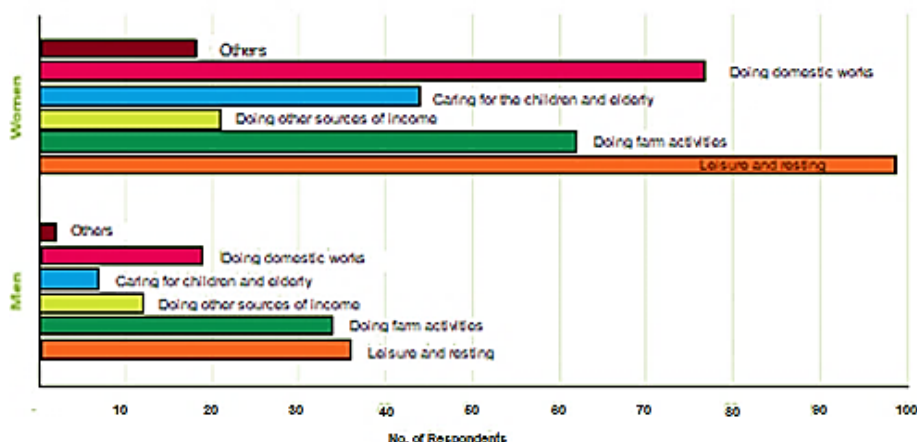
Of the time- and labor-saving innovations introduced by EMBRACE, respondents thought that the water containers were the most relevant, followed by the construction of a water source. Table 5 lists EMBRACE participants' views on the benefits of each innovation.

**Table 5. Most relevant innovations received by EMBRACE participants**

Rank	Innovations	Benefits
1	Bigger water containers	<ul style="list-style-type: none"> <li>• Used to store water that the family use in the evening or during times when collecting water is difficult.</li> <li>• Water in bigger water containers is filtered, making it taste better and reducing contamination.</li> <li>• Bigger water containers are also used for storing clothes during the flood season and to keep out rats and cockroaches.</li> </ul>
2	Construction of a water source	<ul style="list-style-type: none"> <li>• Easier and faster water collection.</li> <li>• Women can do more domestic activities since their time and effort collecting water is reduced.</li> <li>• More potable and safer water source which can avoid water-borne diseases.</li> <li>• Children can help in water collection since the source is nearer and safer.</li> <li>• The availability of a water source makes it easy for women to irrigate their plants and practice vegetable gardening.</li> <li>• Washing clothes is easier.</li> <li>• With lesser time spent collecting water, farmers can be at the farm earlier and thus be more productive.</li> <li>• Improved sanitation and hygiene.</li> </ul>
3	Gas/kerosene stove	<ul style="list-style-type: none"> <li>• Easier and faster to use.</li> <li>• Women can now do other domestic works while cooking.</li> </ul>
4	Kerosene, solar, or electric lamp	<ul style="list-style-type: none"> <li>• Solar lamps are more economical to use.</li> <li>• Children can now review their lessons at night.</li> <li>• Improved safety and protection of women and girls.</li> </ul>

Research participants were asked if the innovations they received reduced the time they spent doing household activities. Ninety-seven percent of respondents answered in the affirmative. Most also shared that they used the time saved for leisure and rest (e.g. watching TV, spending time with family). More than half engaged in farm activities and performed domestic chores such as cleaning, cooking, and washing clothes. Others used the time to care for their children and elderly, while the rest spent it on additional income-generating activities (see Figure 13).

**Figure 13. Uses of saved time among EMBRACE participants**



*Ninety percent of respondents reduced the time they spent on care work by 96 minutes after innovations were introduced.*

The results revealed that of all the innovations introduced, the water containers significantly reduced the time spent on care work in the project areas. Ninety percent of respondents reduced the time they spent on care work by 96 minutes after the innovations were introduced (see Table 6). Aside from the care work innovations, other Oxfam interventions such as crop production and provision of livestock and poultry in Daguma Mountain Range also reduced the time allocated by women to care work, but not to a significant degree.

**Table 6. Number and percentage of respondents with reduced time for care work due to the innovations**

Indicators	Men	Women	Total
Number of respondents who received care work interventions from Oxfam	54	166	<b>220</b>
Number of respondents with reduced time doing household work	50	148	<b>198</b>
Percentage of respondents with reduced time doing household work	93	89	<b>90</b>
<b>Average time saved</b>	<b>88 minutes</b>	<b>99 minutes</b>	<b>96 minutes</b>

On the other hand, there were non-care work interventions that increased the time spent on care work. In Daguma Mountain Range, the introduction of vegetable gardens significantly increased the respondents' time allocated to care work. In the Libungan River System, all the interventions (i.e. crop production, vegetable gardening, provision of farm inputs, and provision of livestock and poultry) increased the time allocated by the respondents to care work.

Based on the findings, the objectives of each project were accomplished through the respective activities implemented. Technologies introduced by WE-Care such as bigger water containers and new sources of water reduced the time spent by women on care work, enabling them to engage in productive and leisure activities. The introduction of organic farming increased the incomes and savings of EMBRACE beneficiaries. However, the findings also show how the introduction of diverse farming methods has increased women's time spent on care work. Future studies could determine the appropriate farming interventions that lessen women's time on care work and enable them to participate in other activities that improve their well-being and social status.



## **Key finding 6: Women and men agree on equal sharing of care and productive work.**

To check the respondents' expectations and views on care work, three vignettes depicting different arrangements among couples on care work were presented to them. Respondents were then asked to state whether they strongly approve, approve, disapprove, or strongly disapprove of each scenario.

### **Vignette 1: The story of Susan and Brian**

(Most paid/care work by women)

As narrated by Susan:

'My husband Brian works as a carpenter: he leaves the house early and comes back in the evening. After preparing breakfast for my family, I work in the field in the mornings. I return to prepare lunch for my children. I fetch water and firewood, make sure the house and compound are clean. When my husband comes back from work, he is very tired. I bring him water to wash his hands and serve him food. I do the dishes and prepare the beds for all of us.'

Vignette 1 illustrates a work arrangement where men mostly take charge of productive activities while women perform care work.

Women from both groups approved or strongly approved the arrangement, with more non-EMBRACE participants (88%) agreeing to the division of labor than EMBRACE participants (83%) (see Figures 14 and 15). Only 17% of women who participated in EMBRACE either disapproved or strongly disapproved this scenario. Among men, there were more EMBRACE participants (81%) who approved or strongly approved the set-up than non-EMBRACE participants (78%).

### **Vignette 2: The story of Sarah and John**

(Shared paid and care work by men and women)

As narrated by Sarah:

'Ever since we got together, my husband John and I have shared responsibilities. We get up around the same time, prepare breakfast, clean the house and help the children. We work on our farm together. When we come home from the field, he carries the vegetables and I carry some firewood. We both go and fetch water whenever we need it. I take the lead on cooking, but my husband helps me in chopping the vegetables and cleaning the kitchen and compound.'

Comparing these results with the 2017 baseline data, the number of respondents who approved of the arrangement increased from 52% to 83% among women, and 54% to 81% among men.

Most of the respondents from both EMBRACE and non-EMBRACE groups (more than 90%) approved or strongly approved of this arrangement in which the husband and wife share household responsibilities and productive work. This result is similar to the baseline study where 87% of women and 92% of men agreed with the work arrangement.

*The introduction of diverse farming methods has also increased the time spent on care work.*

### Vignette 3: The story of Katherine and Michael

(Paid work by men, care work by women)

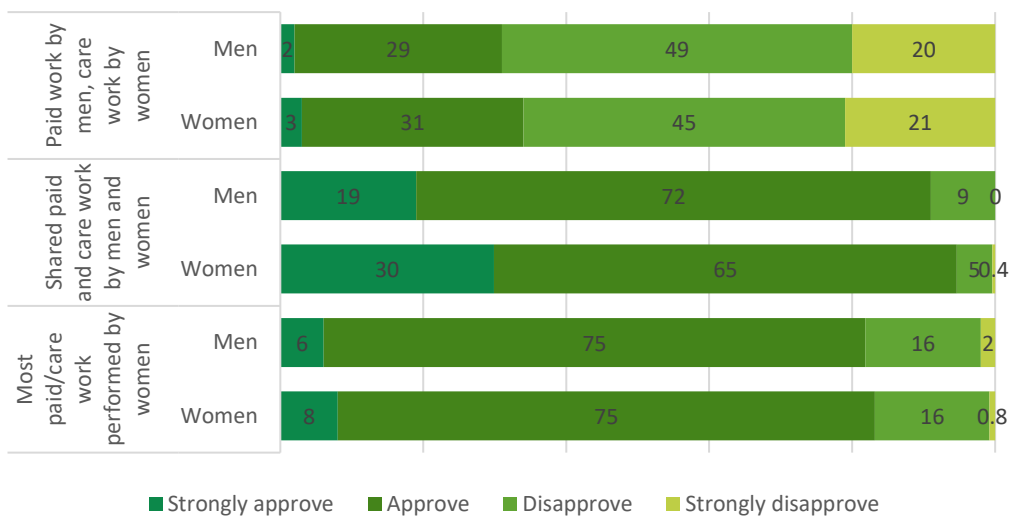
As narrated by Katherine:

'I do a lot of work. I work on the farm and do all the housework, bathing the children, collecting water and fuel, cleaning, cooking, making sure the house is okay. My husband Michael does some agricultural work and some casual labor. He often meets up with friends to chat or relax. Usually he does not help me with my work. But sometimes he might get water or cook if I am sick or not at home.'

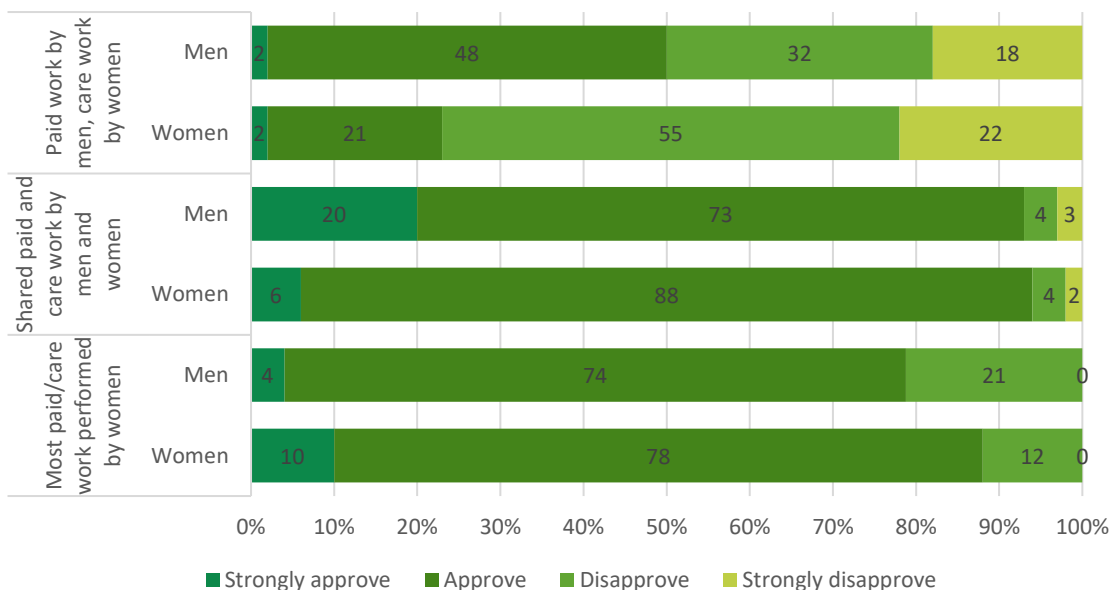
Unlike the first two cases, this case of a woman performing most of the productive and household activities earned the disapproval of most respondents from both groups, except men who were not part of EMBRACE. Half of this group agreed with the arrangement while the other half disagreed.

*Comparing the actual work distribution between men and women raises the question as to why favorable views on shared work have not translated fully into actions.*

**Figure 14. Attitudes on the division of labor between husband and wife among EMBRACE participants**



**Figure 15. Attitudes on the division of labor between husband and wife among non-EMBRACE participants**



Comparing these findings with the actual work distribution between men and women (Figure 11) raises the question as to why such favourable views on shared work have not translated fully into actions. These views extended to the role and responsibilities of girls and boys in care work. It is interesting to note that all the respondents from both groups believed that after the husband, girls should help a woman with care work in the household, followed by boys. This relationship between perception and behaviour change in relation to care work could be a subject of future studies.

**Key finding 7: Partnerships with local governments and other networks and groups help strengthen and sustain farmers' climate adaptive farming initiatives.**

Local government units supported the EMBRACE participants in various ways, from shouldering the costs of farmers' logistical needs during their meetings to providing livestock, farm inputs and technical support. Many LGUs also accredited and recognized the organizations of EMBRACE beneficiaries and help them organize their members and comply with documentary requirements. They also passed local policies supporting organic farming and helped disseminate information about the farmers' activities in other areas.

The following case study shows how a partnership between a LGU and a farmers' organization led to the success of the latter group's climate adaptive farming initiatives.

**From production to market access: the partnership of NOFA and LGU in Esperanza**

The Numo Organic Farmers Association (NOFA) is a farmers' organization formed and operating in the village of Numo in Esperanza municipality, Sultan Kudarat province. It was formed in 2013 by a group of farmers who participated in the Climate Resiliency Field School implemented by R1. The farmers wanted to come together and create a dynamic organization to advance organic agriculture in the country.

Since then, the membership of NOFA has expanded to 52 people, 34 of whom are women. They were among the first organic farmers in Esperanza to bring organic rice and organic vegetables to the market. NOFA members participated in EMBRACE's SCALE field school. They processed a juice known as *catangsi* – a combination of sweet potato, lemongrass and calamondin – and sold this in the 'women's market, in the public market, and through social media. They also produced fertilizers and pesticides, initially using raw materials provided by Oxfam and RDISK. Oxfam through RDISK also extended technology and livelihood support and provided high-value crop seedlings to NOFA.

NOFA also received a Pinawa Rice Mill through the PhilMech initiative of the Department of Agriculture. The milling facility is designed for organic rice milling only and serves organic farmers in nearby municipalities.

**Setting up the market outlet and digital marketing**

In 13 July 2018, the women members of NOFA launched the women's market to serve as an outlet for their organic products. 'The women's market will empower women economically as it will give them the opportunity to use their time to raise

income,’ said Ms. Aguirre of RDISK.

NOFA arranged the schedule of women such that everyone had the chance to sell their products. Some farmers bring their products to the store and those who take charge of selling these collect PHP 2 per PHP 10 of revenue. A minimum amount (.50¢) is collected by NOFA to maintain the store. The LGU provided the space for the store, free of electricity charges. The market outlet therefore provides income not only for the members but also for the organization. ‘Each member earns about PHP 500 to PHP 1,000 per day during their schedule and up to PHP 6,000 per month,’ Ms. Aguirre continued.

Aside from the women’s market, NOFA also showcases its products in exhibits and trade fairs. Its reputation for producing quality products spread such that they were able to market their products through social media. Digital marketing became a significant channel for promoting their products. NOFA used this channel to get advance orders through online or text messaging. ‘Most of the farmers’ children are involved in marketing the products online’, said Ms. Aguirre. Oxfam provided financial support to set up the markets while the LGU and RDISK helped promote NOFA’s products.

Engr. Christopher Dable, the organic agriculture coordinator and founding President of NOFA, emphasized the need to establish a market.

‘As a former president of NOFA and as a government worker, maintaining the market and the farmers were the key to every farmer’s success. Farmers are recognized as producers, but it is also important to turn them into business persons. A lot of things need to be improved like the marketing aspect. Sometimes farmers are overloaded with tasks as they take charge of producing and marketing their products, plus they also do household activities. But we need to expand so we can also cater to the demand and participate in activities related to consumer awareness’, he shared.

The Municipal Agricultural Office closely monitors the activities of NOFA and holds regular weekly meetings with the organization. The Office also lobbied for a budget to be allocated to organic farming.

‘The LGU already has an existing ordinance on sustainable agriculture. It passed a resolution in 2017 adopting Republic Act 10068 or the Organic Agriculture Act of 2010. The resolution advocates for the development and promotion of organic farming in the municipality of Esperanza. A budget was allocated the LGU’s Internal Revenue Allotment to implement the law in 2019. Our advocacy on organic farming is still expanding but for now we are limited only to rice and vegetable growers. All funds that we get from the NGO and LGU are used to expand the project to other villages that wanted to follow Numo’, Engr. Dable explained. When asked how NOFA and LGU were able to work well together, Engr. Dable said, ‘It was not difficult for us to approach the local government officials since they also know that they can benefit from us. If the regional office asks them for an area which practices organic farming, they come to us.’ Engr. Dable shared that Numo has the highest number of organic practitioners among the villages in the municipality.

***Ninety-seven percent of EMBRACE participants wanted to continue the innovations of the project.***

## **Getting the license and certification**

In 2016, NOFA was accredited as an association in Esperanza that produces organic products. So far, it is the only organization in the municipality with this accreditation. The accreditation is one of the requirements for organic certification. As a result of this accreditation, NOFA has been invited to different regional and national events, such as the Kalimudan Festival, to showcase its products.

Moving ahead, NOFA plans spread the knowledge that they get from organic farming training to other farmers. They will make their own demonstration farm and continue to produce organic *catangsi*. They will also continue to digitally market their products while encouraging other farmers to convert to organic farming.

The case of NOFA demonstrates how a good partnership with the LGU can help an endeavour succeed. Local governments ensure the sustainability of an initiative by providing an enabling policy environment and continuous financial support through the local budget. NOFA provides the technical knowledge, local resources and manpower to ensure that the technology is developed, improved, promoted and sustained.

### **Key finding 8: Sustaining a technology entails institutionalizing it through policies and organizing, expanding, and providing continuous learning to its practitioners.**

A total of 319 respondents were asked whether they wanted to continue the project's innovations. The vast majority of them (97%) answered in the affirmative and all were willing to encourage other farmers to adopt the practice.

Policies have been passed by the Esperanza municipal government promoting organic farming in their area. The municipal government has also included the RDISK, the implementing partner of Oxfam, as a member of the ICS Monitoring Team, which inspects and monitors individual and group application of organic farming based on standard protocols.

Some EMBRACE farmers are trainers and promoters of sustainable farming practices. Champion farmers have been identified and are requested to speak about organic farming in different events. Some NOFA members provide lectures and demonstrations to schools on organic vegetable gardening and processing organic products.

Learning continues as organic farming practitioners participate in other activities related to organic farming such as the Regional Organic Agriculture Conference. They also joined the Organic Farmer's Assembly and Organic Product Showcase and organic cooking contests.

A federation of organic farming practitioners has been created with 493 members to further strengthen the movement. Through the federation, producers can better synchronize their decisions, enabling them to further scale up their production and organize the market. The organized farmers can also easily access assistance from both government and non-government organizations.

# 4 CONCLUSIONS AND RECOMMENDATIONS

From the key evaluation findings, the following conclusions and recommendations can be considered in future interventions involving farmers' livelihood and wellbeing, and care work as a gender equality issue:

## CONCLUSIONS

- The EMBRACE project increased the incomes and savings of men and women beneficiaries.
- Training and livelihood support on climate adaptive farming practices encouraged farmers to change their farming methods, which consequently produced higher yields and income.
- Women farmers were able to increase their household income by participating in the women's market.
- Through the care work innovations introduced by the project, women were able to save time accomplishing care work and allocate the free time to farming and other income-generating activities such as the women's market. Their time allocated for productive activities increased from 2 hours and 23 minutes in 2017 to 5 hours in 2018.
- In general, project beneficiaries have become more involved in organizational and community activities. Women have increased their participation in farm, household and community activities.
- Local government units are important project partners as they can provide policy, technical, and financial support to farmers' organizations.
- Policy support and the growing mass of organized and skilled practitioners of organic farming help to ensure the sustainability of project gains.

## RECOMMENDATIONS

- Additional training needs to be conducted so more farmers fully understand and adopt the practice of organic farming. The training needs to include raw materials for the initial production and basic farm machinery.
- There is a need to increase local demand for organic products, going beyond health-conscious consumers to include other sectors of society.
- Practitioners of organic agriculture need to be part of a local decision-making body (e.g. Municipal Development Council, Technical Working Group for Organic Agriculture) so they can participate in conceptualizing, implementing, and monitoring policies, programmes and activities related to the technology. This will facilitate lobbying and advocacy work to promote organic agriculture and potentially make it more effective.
- Further studies on farmers' behaviour and attitudes towards adopting climate adaptive farming are recommended. The studies need to investigate the reasons why some farmers still prefer conventional farming methods despite knowing the benefits of organic farming. These studies can yield strategies and innovations to

motivate farmers to adopt the technology.

The EMBRACE and WE-Care projects aimed at improving the wellbeing of farmers, particularly women farmers, in selected areas in the Philippines. Both projects produced positive results, as women reduced their time spent on care work with the help of the care work innovations introduced, and farmers, including women farmers, increased their incomes through the adoption of organic farming. Based on the findings of the evaluation, further studies need to be undertaken on how farming innovations can complement the need to reduce women's time on care work. Finding the right formula for this relationship can significantly improve women's wellbeing by promoting the redistribution of care work within the household and community and improving women's economic and social status.

## ANNEX: STATISTICAL ANALYSES

Table A-1: TLSE used by reduced care work minutes, women's decision making, total income, and farm income in Daguma Mountain Range

Variables	Men					Women				
	Water container	Water source	Kero-sene stove	Others	Any TLSE	Water container	Water source	Kero-sene stove	Others	Any TLSE
	<b>Reduced care work minutes</b>									
<b>No reduced minutes</b>	10.0	16.7	0.0	85.7	41.7	11.1	11.5	0.0	94.7	36.5
<b>30 minutes or less</b>	10.0	16.7	0.0	0.0	8.3	0.0	7.7	0.0	0.0	3.2
<b>31 to 60 minutes</b>	60.0	25.0	0.0	0.0	25.0	38.9	26.9	0.0	0.0	22.2
<b>61 to 120 minutes</b>	10.0	33.3	0.0	7.1	16.7	27.8	23.1	0.0	5.3	19.1
<b>More than 120 minutes</b>	10.0	8.3	0.0	7.1	8.3	22.2	30.8	0.0	0.0	19.1
<b>Mean</b>										
<b>N of cases</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>36</b>	<b>18</b>	<b>26</b>	<b>0</b>	<b>19</b>	<b>63</b>
<b>Women's decision making</b>										
<b>Men decide more</b>	80.0	75.0	0.0	100.0	86.1	50.0	65.4	0.0	89.5	68.3
<b>Women decide more</b>	20.0	25.0	0.0	0.0	13.9	50.0	34.6	0.0	10.5	31.8
<b>Mean</b>										
<b>N of cases</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>36</b>	<b>18</b>	<b>26</b>	<b>0</b>	<b>19</b>	<b>63</b>
<b>Total monthly income</b>										
<b>Negative income</b>	0.0	0.0	0.0	21.4	8.3	0.0	3.9	0.0	10.5	4.8
<b>Under PHP 17,500</b>	70.0	75.0	0.0	64.3	69.4	72.2	57.7	0.0	79.0	68.3
<b>17,501 to 47,000</b>	10.0	16.7	0.0	14.3	13.9	22.2	30.8	0.0	10.5	22.2
<b>Above 47,000</b>	20.0	8.3	0.0	0.0	8.3	5.6	7.7	0.0	0.0	4.8
<b>Mean</b>										
<b>N of cases</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>36</b>	<b>18</b>	<b>26</b>	<b>0</b>	<b>19</b>	<b>63</b>
<b>Increase in farm income</b>										
<b>No change</b>	42.9	25.0	0.0	30.8	32.1	33.3	25.0	0.0	25.0	26.7
<b>Decreased a lot</b>	0.0	12.5	0.0	30.8	17.9	0.0	10.0	0.0	0.0	4.4
<b>Decrease a little</b>	42.9	37.5	0.0	23.1	32.1	11.1	10.0	0.0	31.3	17.8
<b>Increased a little</b>	14.3	12.5	0.0	15.4	14.3	55.6	50.0	0.0	43.8	48.9
<b>Increased a lot</b>	0.0	12.5	0.0	0.0	3.6	0.0	5.0	0.0	0.0	2.2
<b>Mean</b>										
<b>N of cases</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>13</b>	<b>28</b>	<b>9</b>	<b>20</b>	<b>0</b>	<b>16</b>	<b>45</b>



**Table A-2: TLSE used by reduced care work minutes, women's decision making, total income, and farm income in Libungan River System**

Variables										
	Men					Women				
	Water container	Water source	Kero-sene stove	Others	Any TLSE	Water container	Water source	Kero-sene stove	Others	Any TLSE
<b>Reduced care work minutes</b>										
<b>No reduced minutes</b>	5.6	0	0	88.9	38.7	12.86	3.7	16.7	88.2	40.7
<b>30 minutes or less</b>	27.8	12.5	0	5.6	15.9	15.71	14.81	16.7	4.4	11.3
<b>31 to 60 minutes</b>	38.9	62.5	0	0	27.3	35.71	48.15	50	4.4	26.6
<b>61 to 120 minutes</b>	5.6	25	0	5.6	9.1	21.43	22.22	8.3	2.9	13.6
<b>More than 120 minutes</b>	22.2	0	0	0	9.1	14.29	11.11	8.3	0	7.9
<b>Mean</b>										
<b>N of cases</b>	<b>18</b>	<b>8</b>	<b>0</b>	<b>18</b>	<b>44</b>	<b>70</b>	<b>27</b>	<b>12</b>	<b>68</b>	<b>177</b>
<b>Women's decision making</b>										
<b>Men decide more</b>	77.8	75	0	88.9	81.8	68.57	29.63	33.3	54.4	54.8
<b>Women decide more</b>	22.2	25	0	11.1	18.2	31.43	70.37	66.7	45.6	45.2
<b>N of cases</b>	<b>18</b>	<b>8</b>	<b>0</b>	<b>18</b>	<b>44</b>	<b>70</b>	<b>27</b>	<b>12</b>	<b>68</b>	<b>177</b>
<b>Total monthly income</b>										
<b>Negative income</b>	0	0	0	0	0	5.7	0	0	0	2.3
<b>Under PHP 17,500</b>	55.6	62.5	0	72.2	63.6	71.4	55.7	75	64.7	66.7
<b>17,501 to 47,000</b>	38.9	25	0	16.8	27.3	20	40.7	25	23.5	24.9
<b>Above 47,000</b>	5.6	12.5	0	11.1	9.1	2.9	3.7	0	11.8	6.2
<b>Mean</b>										
<b>N of cases</b>	<b>18</b>	<b>8</b>	<b>0</b>	<b>18</b>	<b>44</b>	<b>70</b>	<b>27</b>	<b>12</b>	<b>68</b>	<b>177</b>
<b>Increase in farm income</b>										
<b>No change</b>	46.7	42.7	0	41.7	44.1	65.8	21.4	42.9	38	45.9
<b>Decreased a lot</b>	0	14.3	0	0	2.9	0	7.1	0	6	3.7
<b>Decrease a little</b>	26.7	0	0	25	20.6	7.9	14.3	28.6	18	14.7
<b>Increased a little</b>	26.7	28.6	0	33.3	29.4	26.3	50	28.6	36	33.9
<b>Increased a lot</b>	0	14.3	0	0	2.9	0	7.14	0	2	1.8
<b>N of cases</b>	<b>15</b>	<b>7</b>	<b>0</b>	<b>12</b>	<b>34</b>	<b>38</b>	<b>14</b>	<b>7</b>	<b>50</b>	<b>109</b>

**Table A-3: Oxfam interventions by reduced care work minutes, women's decision making, total income, and farm income in Daguma Mountain Range**

Variables	Men						Women					
	CP	VG	PFI	PLP	Others	Any	CP	VG	PFI	PLP	Others	Any
	<b>Reduced care work minutes</b>											
<b>No reduced minutes</b>	0	0	55.6	34.8	66.7	41.7	0	57.1	29.4	34.6	38.5	36.5
<b>30 minutes or less</b>	0	0	0	13.0	0	8.3	0	14.3	0	3.9	0	3.2
<b>31 to 60 minutes</b>	0	0	33.3	21.7	33.3	25.0	0	0	29.4	26.9	15.4	22.2
<b>61 to 120 minutes</b>	100	0	0	21.7	0	16.7	0	28.6	29.4	11.5	15.4	19.1
<b>More than 120 minutes</b>	0	0	11.1	8.7	0	8.3	0	0	11.8	23.1	30.8	19.1
<b>Mean</b>												
<b>N of cases</b>	<b>1</b>	<b>0</b>	<b>9.0</b>	<b>23</b>	<b>3</b>	<b>36</b>	<b>0</b>	<b>7</b>	<b>12</b>	<b>26</b>	<b>13</b>	<b>63</b>
<b>Women's decision making</b>												
<b>Men decide more</b>	100	0	88.9	82.6	100	86.1	0	71.4	70.6	80.8	38.5	68.3
<b>Women decide more</b>	0	0	11.1	17.4	0	13.9	0	28.6	29.4	19.2	61.5	31.8
<b>N of cases</b>	<b>1</b>	<b>0</b>	<b>9.0</b>	<b>23</b>	<b>3</b>	<b>36</b>	<b>0</b>	<b>7</b>	<b>17</b>	<b>26</b>	<b>13</b>	<b>63</b>
<b>Total monthly income</b>												
<b>Negative income</b>	0	0	0.0	13.0	0	8.3	0	0	5.9	3.9	7.7	4.8
<b>Under PHP 17,500</b>	0	0	88.9	60.9	100	69.4	0	57.1	82.4	53.9	84.6	68.3
<b>17,501 to 47,000</b>	100	0	0	17.4	0	13.9	0	42.9	11.8	30.8	7.7	22.2
<b>Above 47,000</b>	0	0	11.1	8.7	0	8.3	0	0	0	11.5	0	4.8
<b>Mean</b>												
<b>N of cases</b>	<b>1</b>	<b>0</b>	<b>9.0</b>	<b>23</b>	<b>3</b>	<b>36</b>	<b>0</b>	<b>7</b>	<b>17</b>	<b>26</b>	<b>13</b>	<b>63</b>
<b>Increase in farm income</b>												
<b>No change</b>	0	0	28.6	27.8	100.0	32.1	0	0	21.4	20.0	83.3	26.7
<b>Decreased a lot</b>	0	0	14.3	22.2	0	17.9	0	0	7.1	5.0	0	4.4
<b>Decrease a little</b>	100	0	28.6	33.3	0	32.1	0	20.0	28.6	15.0	0	17.8
<b>Increased a little</b>	0	0	28.6	11.1	0	14.3	0	80.0	42.9	55.0	16.7	48.9
<b>Increased a lot</b>	0	0	0	5.6	0	3.6	0	0	0	5.0	0	2.2
<b>N of cases</b>	<b>1</b>	<b>0</b>	<b>7.0</b>	<b>18</b>	<b>2</b>	<b>28</b>	<b>0</b>	<b>5</b>	<b>14</b>	<b>20</b>	<b>6</b>	<b>45</b>

Notes: CP = crop production; VG = vegetable gardening; PFI = provision of farm input; PLP = provision of livestock and poultry; Any= Any Oxfam intervention

**Table A-4: Oxfam interventions by reduced care work minutes, women's decision making, total income, and farm income in Libungan River System**

Variables												
	Men						Women					
	CP	VG	PFI	PLP	Others	Any	CP	VG	PFI	PLP	Others	Any
<i>Reduced care work minutes</i>												
<b>No reduced minutes</b>	0	40	50.0	50.0	10	38.6	55.6	25	50.0	29.0	51.7	40.7
<b>30 minutes or less</b>	0	10	12.5	12.5	30	15.9	0.0	15	10.7	16.1	6.9	11.3
<b>31 to 60 minutes</b>	0	20	25.0	31.3	30	27.3	22.2	45	28.6	30.7	15.5	26.6
<b>61 to 120 minutes</b>	0	20	12.5	6.3	0	9.1	11.1	10	7.1	17.7	13.8	13.6
<b>More than 120 minutes</b>	0	10	0	0	30	9.1	11.1	5	3.6	6.5	12.1	7.9
<b>N of cases</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>16</b>	<b>10</b>	<b>44</b>	<b>9</b>	<b>20</b>	<b>28</b>	<b>62</b>	<b>58</b>	<b>177</b>
<i>Women's decision making</i>												
<b>Men decide more</b>	0	50	100	88	90	81.8	66.7	50	50	51.6	60.3	54.8
<b>Women decide more</b>	0	50	0	13	10	18.2	33.3	50	50	48.4	39.7	45.2
<b>N of cases</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>16</b>	<b>10</b>	<b>44</b>	<b>9</b>	<b>20</b>	<b>28</b>	<b>62</b>	<b>58</b>	<b>177</b>
<i>Total monthly income</i>												
<b>Negative income</b>	0	0	0	0	0	0	0	5	0	3.23	1.72	2.26
<b>Under PHP 17,500</b>	0	70	75	50	70	63.6	55.6	60	57.1	67.7	74.1	66.7
<b>17,501 to 47,000</b>	0	30	0	38	30	27.3	44.4	30	25.0	24.2	20.7	24.9
<b>Above 47,000</b>	0	0	25	13	0	9.1	0	5	17.9	4.8	3.5	6.2
<b>N of cases</b>	<b>0</b>	<b>10</b>	<b>8</b>	<b>16</b>	<b>10</b>	<b>44</b>	<b>9</b>	<b>20</b>	<b>28</b>	<b>62</b>	<b>58</b>	<b>177</b>
<i>Increase in farm income</i>												
<b>No change</b>	0	75	60	21.4	42.9	44.1	60	36	36.8	40.5	62.1	45.9
<b>Decreased a lot</b>	0	0	0	7.1	0.0	2.9	20	7.1	0.0	2.4	3.5	3.7
<b>Decrease a little</b>	0	12.5	0	21.4	42.9	20.6	0	14	21.1	16.7	10.3	14.7
<b>Increased a little</b>	0	12.5	40	42.9	14.3	29.4	20	43	42.1	38.1	20.7	33.9
<b>Increased a lot</b>	0	0	0	7.1	0.0	2.9	0	0.0	0.0	2.4	3.5	1.8
<b>N of cases</b>	<b>0</b>	<b>8</b>	<b>5</b>	<b>14</b>	<b>7</b>	<b>34</b>	<b>5</b>	<b>14</b>	<b>19</b>	<b>42</b>	<b>29</b>	<b>109</b>

Notes: CP = crop production; VG = vegetable gardening; PFI = provision of farm input; PLP = provision of livestock and poultry; Any= Any Oxfam intervention

**Table A-5: Reduced care work minutes by women’s decision making, total monthly income, and farm income in Daguma Mountain Range**

Variables												
	Men						Women					
	No reduced min.	30 min. or less	31 to 60 min.	61 to 120 min.	More than 120 min.	All	No reduced min.	30 min. or less	31 to 60 min.	61 to 120 min.	More than 120 min.	All
<b>Women's decision making</b>												
<b>Men decide more</b>	93.3	100.0	88.9	50.0	100.0	86.1	78.3	50.0	71.4	58.3	58.3	68.3
<b>Women decide more</b>	6.7	0.0	11.1	50.0	0.0	13.9	21.7	50.0	28.6	41.7	41.7	31.8
<b>N of cases</b>	<b>15</b>	<b>3</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>36</b>	<b>23</b>	<b>2</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>63</b>
<b>Total monthly income</b>												
<b>Negative income</b>	13.3	0.0	0.0	16.7	0.0	8.3	13.0	0.0	0.0	0.0	0.0	4.8
<b>Under PHP 17,500</b>	73.3	100.0	66.7	50.0	66.7	69.4	78.3	50.0	57.1	83.3	50.0	68.3
<b>17,501 to 47,000</b>	13.3	0.0	0.0	33.3	33.3	13.9	8.7	50.0	35.7	16.7	33.3	22.2
<b>Above 47,000</b>	0.0	0.0	33.3	0.0	0.0	8.3	0.0	0.0	7.1	0.0	16.7	4.8
<b>N of cases</b>	<b>15</b>	<b>3</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>36</b>	<b>23</b>	<b>2</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>63</b>
<b>Increase in farm income</b>												
<b>No change</b>	42.9	50.0	25.0	20.0	0.0	32.1	23.5	0.0	11.1	25.0	50.0	26.7
<b>Decreased a lot</b>	21.4	0.0	0.0	20.0	33.3	17.9	0.0	0.0	0.0	12.5	10.0	4.4
<b>Decrease a little</b>	21.4	50.0	50.0	40.0	33.3	32.1	29.4	0.0	11.1	25.0	0.0	17.8
<b>Increased a little</b>	14.3	0.0	25.0	0.0	33.3	14.3	47.1	100.0	66.7	37.5	40.0	48.9
<b>Increased a lot</b>	0.0	0.0	0.0	20.0	0.0	3.6	0.0	0.0	11.1	0.0	0.0	2.2
<b>N of cases</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>28</b>	<b>17</b>	<b>1</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>45</b>

**Table A-6: Reduced care work minutes by women’s decision making, total monthly income, and farm income in Libungan River System**

Variables												
	Men						Women					
	No reduced min.	30 min. or less	31 to 60 min.	61 to 120 min.	More than 120 min.	All	No reduced min.	30 min. or less	31 to 60 min.	61 to 120 min.	More than 120 min.	All
<b>Women's decision making</b>												
<b>Men decide more</b>	94.1	71.4	91.7	50	50	81.8	59.7	50.0	59.6	33.3	57.1	54.8
<b>Women decide more</b>	5.9	28.6	8.3	50	50	18.2	40.3	50.0	40.4	66.7	42.9	45.2
<b>N of cases</b>	<b>17</b>	<b>7</b>	<b>12</b>	<b>4</b>	<b>4</b>	<b>44</b>	<b>72</b>	<b>20</b>	<b>47</b>	<b>24</b>	<b>14</b>	<b>177</b>
<b>Total monthly income</b>												
<b>Negative change</b>	-	-	-	-	-	-	1.4	5.0	-	4.2	7.1	2.3
<b>Under PHP 17,500</b>	76.5	57.1	41.7	50.0	100	63.6	63.9	55.0	76.6	66.7	64.3	66.7
<b>17,501 to 47,000</b>	17.7	42.9	41.7	25.0	-	27.3	23.6	35.0	21.3	29.2	21.4	24.9
<b>Above 47,000</b>	5.9	-	16.7	25.0	-	9.1	11.1	5.0	2.1	-	7.1	6.2
<b>N of cases</b>	<b>17</b>	<b>7</b>	<b>12</b>	<b>4</b>	<b>4</b>	<b>44</b>	<b>72</b>	<b>20</b>	<b>47</b>	<b>24</b>	<b>14</b>	<b>177</b>
<b>Increase in farm income</b>												
<b>No change</b>	36.4	71.4	40.0	33.3	33.3	44.1	45.1	38.5	54.2	50.0	28.6	45.9
<b>Decreased a lot</b>	-	-	10.0	-	-	2.9	5.9	-	4.2	-	-	3.7
<b>Decrease a little</b>	27.3	14.3	10.0	-	66.7	20.6	13.7	23.1	-	7.1	14.3	14.7
<b>Increased a little</b>	36.4	14.3	30.0	66.7	-	29.4	33.3	30.8	-	42.9	57.1	33.9
<b>Increased a lot</b>	-	-	10.0	-	-	2.9	2.0	7.7	3.7	-	-	1.8
<b>N of cases</b>	<b>11</b>	<b>7</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>34</b>	<b>51</b>	<b>13</b>	<b>24</b>	<b>14</b>	<b>7</b>	<b>109</b>

**Table A-7: Predicting reduction of care work minutes**

Method: OLS regression

	Daguma		Libungan	
	Model 1-a	Model 2-a	Model 1-b	Model 2-b
<b><i>Sociodemographic variables</i></b>				
Age	-1.1743	-0.1374	-1.4186	-1.1655
Female	16.3989	29.7645	4.6728	0.0362
High school graduate	18.1156	33.6374	2.8795	6.4204
Household size	4.0451	4.2594	0.6208	0.0793
<b><i>Land-related variables</i></b>				
Farm size	-6.8804	0.8019	-0.0496	1.5283
Farm experience	1.0287	1.2688	0.4644	0.0027
Owns land	6.4932	-38.37664*	28.19363**	35.5837
<b><i>TLSE used</i></b>				
Water container	89.35146***		66.1903***	
Water source	56.68266***		13.0135	
Gas/kerosene stove	NA		3.2699	
<b><i>Other Oxfam intervention received</i></b>				
Crop production		36.9223		-2.6454
Vegetable garden		-66.4469**		-17.6456
Provision of farm input		-12.5294		-11.6655
Provision of livestock and poultry		29.6402		-8.9391
Others				
Constant	24.3966	28.8750	48.4043	96.31513**
N	73	73	143	143
R2	0.3438	0.2173	0.2617	0.1035
Adjusted R2	0.2501	0.0761	0.2058	0.0282

Notes: \* significant at 10% level or p-value < 0.1, \*\* significant at 5% level or p-value < 0.05, \*\*\* significant at 1% level or p-value < 0.01

**Table A-8. Predicting women's decision making in Daguma Mountain Range**

Method: Logistic regression

	Model 2-a		Model 2-b		Model 2-c	
	<b>Coeff</b>	<b>Odds Ratio</b>	<b>Coeff</b>	<b>Odds Ratio</b>	<b>Coeff</b>	<b>Odds Ratio</b>
<b><i>Sociodemographic variables</i></b>						
<b>Age</b>	0.097	1.1020*	0.089	1.094	0.094	1.098
<b>Female</b>	-0.294	0.745	-0.162	0.850	-0.227	0.797
<b>High school graduate</b>	-0.091	0.913	-0.001	0.999	-0.025	0.976
<b>Household size</b>	-0.824*	0.4388**	-0.760**	0.4677**	-0.836	0.433
<b><i>Land-related variables</i></b>						
<b>Farm size</b>	-0.039	0.962	-0.120	0.887	0.084	1.088
<b>Farm experience</b>	0.014	1.014	0.022	1.022	0.022	1.022
<b>Owns land</b>	-1.6217*	0.1976*	-1.509	0.221	-1.7653*	0.1711*
<b>Redistributed care work minutes</b>	0.005	1.005				
<b><i>TLSE used</i></b>						
<b>Water container</b>			1.376	3.9608*		
<b>Water source</b>			0.303	1.353		
<b>Gas/kerosene stove</b>				NA		
<b><i>Other Oxfam intervention received</i></b>						
<b>Crop production</b>					-0.208	0.812
<b>Vegetable garden</b>					-0.179	0.836
<b>Provision of farm input</b>					-0.342	0.711
<b>Provision of livestock and poultry</b>					-0.268	0.765
<b>Others</b>						
<b>Constant</b>	-2.337		-2.781		-1.496	
<b>N</b>	<b>73</b>		<b>73</b>		<b>73</b>	
<b>Pseudo R2</b>	<b>0.3455</b>		<b>0.3679</b>		<b>0.3337</b>	

Notes: \* significant at 10% level or p-value < 0.1, \*\* significant at 5% level or p-value < 0.05, \*\*\* significant at 1% level or p-value < 0.01

**Table A-9. Predicting women's decision making in Libungan River System**

Method: Logistic regression

	Model 3-a		Model 3-b		Model 3-c	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
<b><i>Sociodemographic variables</i></b>						
Age	0.007	1.007	-0.005	0.995	0.006	1.006
Female	1.2838**	3.6104**	1.2286**	3.4163**	1.128	3.090
High school graduate	-0.347	0.707	-0.413	0.661	-0.171	0.843
Household size	-0.012	0.988	-0.005	0.995	0.010	1.010
<b><i>Land-related variables</i></b>						
Farm size	-0.1948*	0.8230*	-0.2242*	0.7991*	-0.209	0.812
Farm experience	0.019	1.019	0.030	1.031	0.016	1.016
Owns land	-0.076	0.927	0.036	1.036	0.055	1.056
Redistributed care work minutes	0.008	1.007889**				
<b><i>TLSE used</i></b>						
Water container			-0.124	0.883		
Water source			1.2500**	3.4905**		
Gas/kerosene stove			1.087	2.965		
<b><i>Other Oxfam intervention received</i></b>						
Crop production					-0.595	0.551
Vegetable garden					0.837	2.309
Provision of farm input					-0.539	0.584
Provision of livestock and poultry					-0.076	0.927
Others						
Constant	-1.802				-1.332	
N	143		143		143	
Pseudo R2	0.114		0.1164		0.094	

Notes: \* significant at 10% level or p-value < 0.1, \*\* significant at 5% level or p-value < 0.05, \*\*\* significant at 1% level or p-value < 0.01



**Table A-10. Predicting income**

Method: OLS regression

	Daguma			Libungan		
	Model 6-a	Model 6-b	Model 6-c	Model 7-a	Model 7-b	Model 7-c
<b>Sociodemographic variables</b>						
Age	201.91	132.42	254.04	-302.79	-278.91	-280.34
Female	6364.94	7964.60**	7909.65*	3491.32	1389.69	1808.71
High school graduate	5107.42	1951.95	4595.81	4631.72	6109.36	4932.75
Household size	1136.50	2079.58*	1155.02	-1264.43	-1363.99	-1400.65
<b>Land-related variables</b>						
Farm size	2151.90	872.96	1782.38	3723.7***	4003.7***	3809.8**
Farm experience	91.63	57.45	34.66	443.49	322.08	393.12
Owns land	2911.46	9413.65**	3915.39	-6125.42	-5542.77	-6313.76
Women decides more	1770.68			-6690.21		
<b>TLSE used</b>						
Water container		19007.83***			-7086.07	
Water source		6538.29*			-7980.75	
Gas/kerosene stove		NA			-3695.09	
<b>Other Oxfam intervention received</b>						
Crop production			7744.466*			1164.51
Vegetable garden			-98.16			-4626.99
Provision of farm input			405.13			-237.16
Provision of livestock and poultry			2755.68			3682.98
Others						
Constant	-14169.26	-23991.51	-21580.62	25829.34	29709.46	25342.79
N	73	73	73	143	143	143
R2	0.1286	0.3815	0.1862	0.1047	0.1142	0.1021
Adjusted R2	0.0196	0.2931	0.0394	0.0512	0.0471	0.0267

Notes: \* significant at 10% level or p-value < 0.1, \*\* significant at 5% level or p-value < 0.05, \*\*\* significant at 1% level or p-value < 0.01

## NOTES

- 1 The farmers' project, funded by the Australian DFAT and implemented between 2012 to 2014 in the same areas covered by EMBRACE, laid the foundation for Oxfam's CCA initiatives in the country. Like EMBRACE, BINDS involved farmers in training on climate-resilient practices and engagements with the local government on CCA and disaster risk reduction.
- 2 Poverty threshold is the minimum income required to meet basic food and non-food needs such as clothing, housing, transportation, health, and education expenses of the family.
- 3 The poverty incidence in the area is still high compared with the poverty incidence (31%) in Region 12, as calculated by the Philippine Statistical Authority in 2015 (PSA, 2017).
- 4 In the form of organic farming inputs, seeds and seedlings, and livestock (e.g. poultry and ducks).
- 5 Survey respondents were asked to allocate a score totalling to 10 between men and women in their household, based on their contribution to each decision area or activity. The percentage scores for men and women were obtained by taking the percentage of the total scores allocated to men or women over the overall total scores allocated among men and women.

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