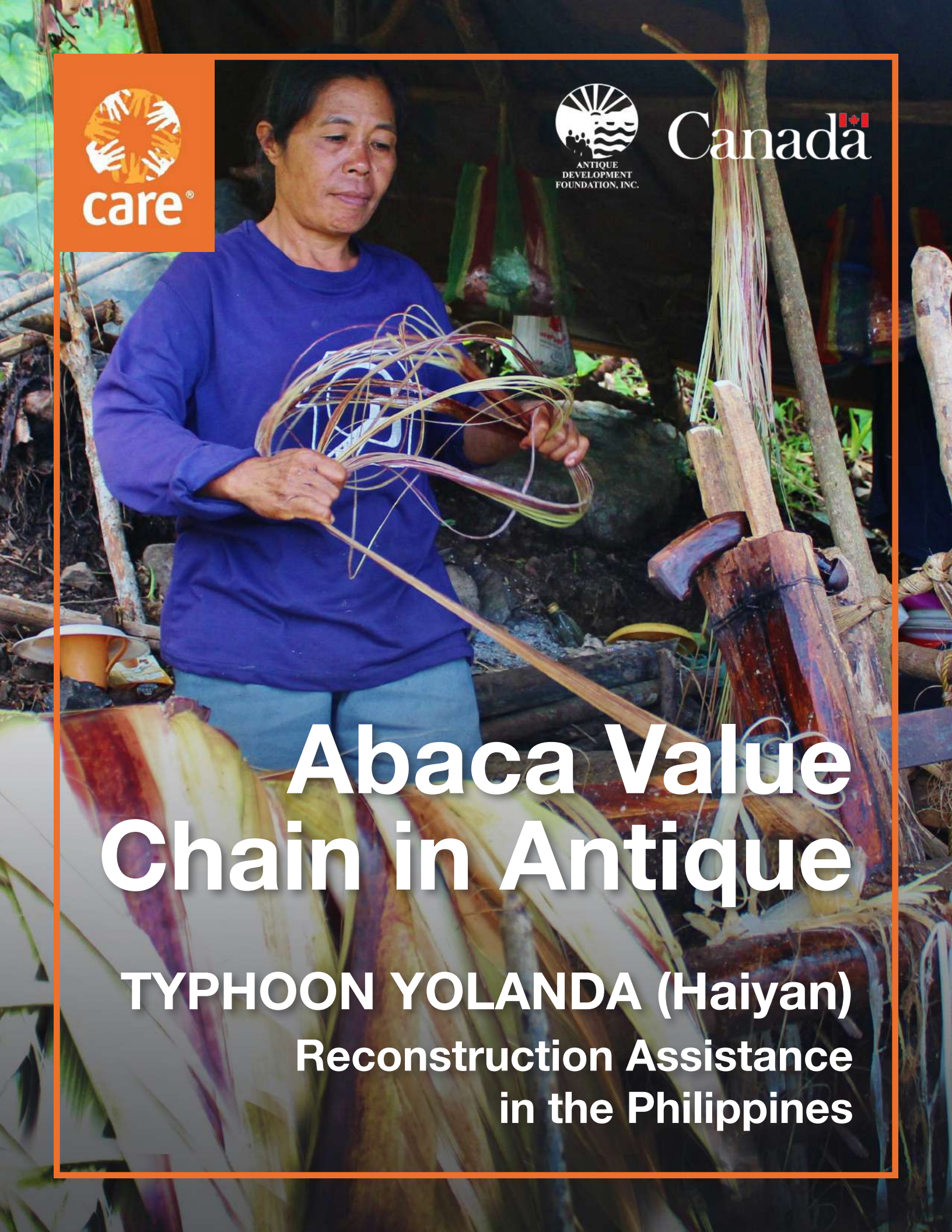


care®

ANTIQUE DEVELOPMENT FOUNDATION, INC.

Canada

Abaca Value Chain in Antique

TYPHOON YOLANDA (Haiyan)

Reconstruction Assistance in the Philippines

Abaca

Value Chain in Antique

The Typhoon Yolanda (Haiyan) Reconstruction Assistance in the Philippines (THRA) project is a four-year initiative implemented by CARE with funding from the Government of Canada through the Global Affairs Canada (GAC).

The project supports the economic recovery of people affected by Typhoon Haiyan which struck the Visayas Region in November 2013. The THRA project aims to address the root causes preventing men and women's access to knowledge, skills, products and services, with a particular focus on strengthening women entrepreneurs. CARE's interventions intend to improve the economic well-being of women and men living in the region.

The Province of Antique is one of the abaca producing areas in the Western Visayas Region. Most upland farmers derive their income from abaca fiber production but they still experience challenges and issues that hamper the development of this industry such as high production and marketing costs, poor or no transport access, low and slow fiber production process, lesser participation of women in fiber production, young farmers becoming sugar migrant workers and insufficient support facilities for farmers.

About Abaca

Scientifically called Musa textilis Nee, abaca is indigenous to the Philippines. It is of the same genus as the banana which it closely resembles except for the inedible fruit.

Key facts:

- Grown as a commercial crop in the Philippines and cultivated since the 16th century.
- It is known internationally as “Manila Hemp.”
- Stalks are more slender, the leaves are smaller, narrower and more pointed than those of banana.
- Its fiber is exceptionally strong, buoyant and resistant to saltwater, yet lightweight. Considered the most important among cordage fibers.
- The best grades of abaca are soft, lustrous, light ivory in color and fine from 0.20-0.50 mm.
- Abaca plant grows to about 10 to 15 feet high.
- Best planted at the onset of the rainy season, with maturity between 16 to 24 months.

Uses of Abaca

The principal uses for abaca includes: pulp and paper; cordage and twine; fiber crafts; textile/ fabrics; furniture; composites and construction materials. Recently, PhilFIDA has started to use abaca in the making of propellers for drones (PhilFIDA, 2017).

Abaca Industry in the Philippines

The Philippines is the world's leading producer of abaca, supplying 87.17% of the global requirement along with Ecuador at 12.77% and Costa Rica, 0.06% (PhilFIDA Stat Bulletin,2015). The total production of fiber is from 60,000 -70,000 metric tons annually, generated from 17,000 hectares of abaca farms. (Philfida Stat Bulletin, 2015)

The Philippine Fiber Industry Development Authority (PhilFIDA), an attached agency of the Department of Agriculture, has recently drafted the Philippine Abaca Industry Road Map for 2017-2022 which will set the direction of the industry for the next five years and once implemented, aims to increase the domestic output to 120,000 metric tons per year from 50,000 hectares of abaca farms in the whole country.

As of July 2017, the total Philippine export of abaca fiber is valued at US$ 15,673,166.00 with majority of these going to UK-Great Britain-Northern Ireland, followed by Japan and China, as top importers (DTI-EMB, 2017).

Abaca Value Chain in Antique

Antique is one of the six provinces comprising the Western Visayas region. It is the fourth abaca producing province in the region with a total of 1,014.74 hectares of abaca farms reported in 2015.

Eleven out of 18 municipalities in the province are actively engaged in abaca fiber production. These are: Laua-an, Barbaza, Tibiao, Culasi, Hamtic, Pandan, Bugasong, Patnongon, Valderrama, Sebaste and San Remigio. PhilFIDA recently added the capital town of San Jose in the list because of the presence of abaca in the peripheral barangays.

The Provincial Government of Antique, CARE Philippines and the Antique Development Foundation have conducted abaca value chain analyses primarily to be able to understand end-market opportunities that can spur inclusive growth, and identify key constraints.

The abaca value chain in Antique is comprised of these stages:

1. Inputs

This stage includes nursery operators who provide planting materials. Other inputs include tools and equipment, seedlings and fertilizers. There are about 9 nurseries in the province, 3 of which were supported by the THRA project:

2. Production

Abaca is mostly found in the upland communities in Antique. Some grew in the wild while others were planted as part of the Integrated Social Forestry program and Community-based Forest Management program of the government. Farmers traditionally plant abaca by using suckers or corms. Abaca grows in clay loam and sandy clay loam soil types.

Initially, it takes 16 to 24 months for an abaca plant to mature before they can be harvested and frequency of subsequent harvests is every 3-4 months thereafter. Farmers who plant abaca are usually the ones who harvest. The appearance of flagleaf indicates that the plant is already mature. The farmers primarily harvest the mature stalks by topping and tumbling. The projected harvestable abaca as of August 2016 was 263,139 stalks from the five barangays in the Municipality of Culasi, two barangays in Tibiao and six in Barbaza (ADF-BDU, 2016).

3. Processing

Topping

The leaves of the trees to be harvested are cut at the base of the petiole with the use of a knife or sickle fastened at the end of a bamboo or wooden pole. This is done to avoid damaging other abaca plant during harvesting. The leaves are being utilized as a material for packaging.

Tumbling

The stalks that have just been topped are then tumbled down with the use of a bolo knife. The stalks are cut close to the ground. After tumbling, all cut stalks are piled in a convenient place where 'tuxying' is to be done.

Tuxying

Tuxying is the method of extracting the fibre from the leaf sheaths. Entire leaf sheaths are separated from the stalk and flattened.
A specially-made tuxying knife is used to make an incision through the inner and middle layer of each sheath, close to the base or butt end to facilitate the separation of these layers from the outer layer.

Stripping

The fibers are extracted from the sheath either by hand-stripping using 0 or 24 serration knife or a stripping machine. But strippers in Antique prefer using knives and manually extract fiber as the process is easier for them. A farmer-stripper can produce an average of 10 kilos of low grade fibers for 8 working hours per day with an average price of Php42 per kilo. Higher grade fibers are priced from Php 60-80 per kilo.

Value-adding Activities

Drying and Bundling

Then the extracted fiber is sun dried or air dried for at least a day until it achieves 12% to 14% moisture content before it is stored to prevent the growth of molds or bacteria. The fibers are then classified based on grade or quality. The dry fiber is twisted and folded to a maximum of 30 kilos per bundle and delivered to storage houses, where it will be picked up by the buyer or consolidator.

Knotting

Dried fibers are pounded to produce abaca string by knotting end to end. The knot is cleaned using a small weaver's blade in order to make the connections invisible. These are then arranged in a core to produce small bundles of 1-3kg knotted fibers for weaving and other handicraft.

Twinning

Knotted strands of abaca fiber are twisted and braided manually or by the use of a twinning machine to form ropes or thin cords used in making bags, wallets, placemats, carpets and other gift or souvenir items.

Weaving

Knotted abaca fibers are used to weave mats and fabrics. ADF currently assists a team of handloom weavers to supply local requirements for mats, fabrics and handicrafts.

4. Trading

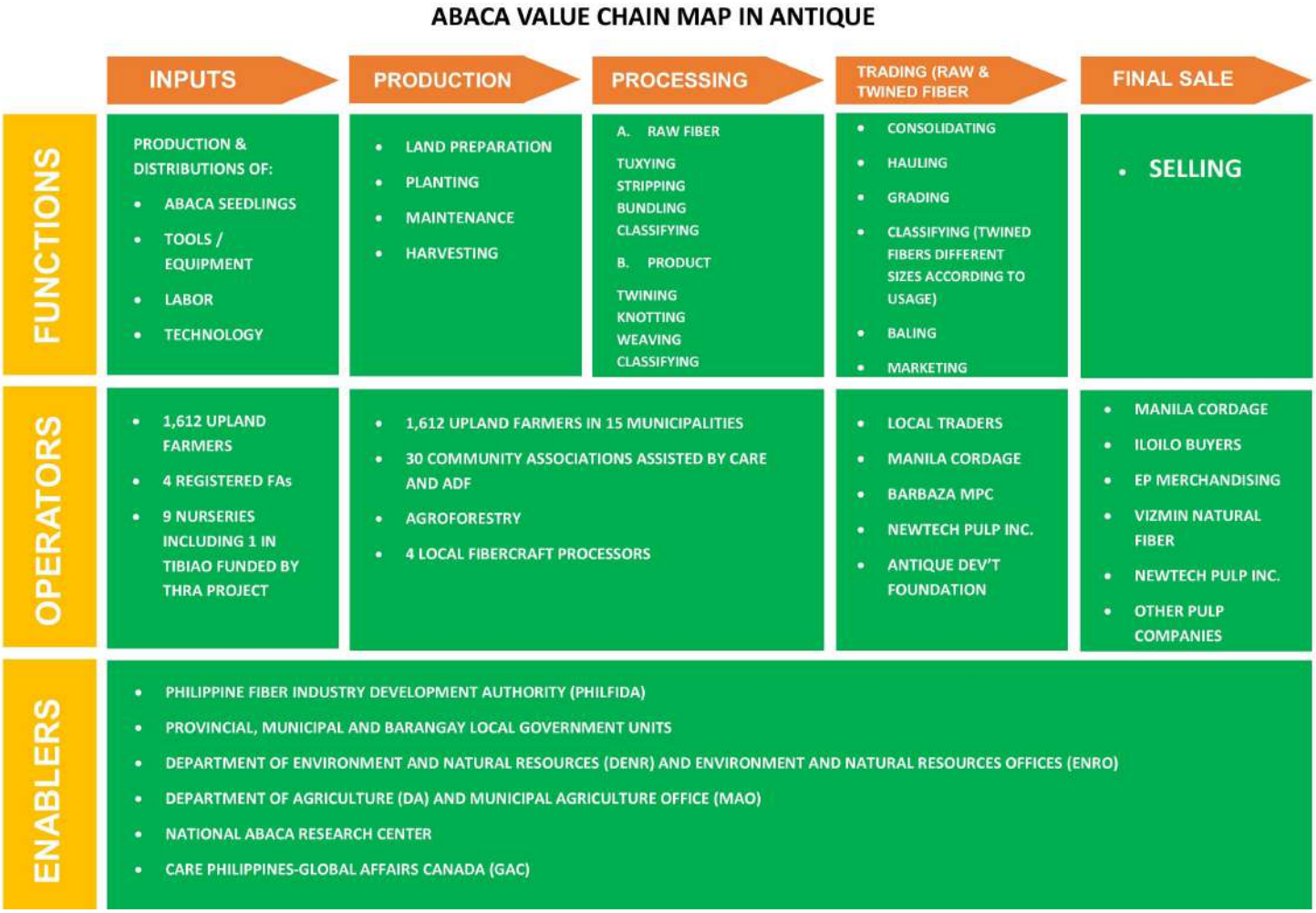
The Antique Development Foundation, Facilitating Partner for CARE in Antique is a licensed consolidator of abaca fiber and in June 2016, with assistance from CARE Philippines, set up a Business Development Unit (BDU) to undertake the consolidation of extracted fiber from the different farmer associations mostly beneficiaries of the THRA project.

The projected harvestable abaca as of August 2016 was 263,139 stalks from the 5 barangays in the Municipality of Culasi, 2 barangays in Tibiao and 6 in Barbaza (ADF-BDU, 2016).

5. Manufacturing

Pulp millers, cordage manufacturers and handicraft producers are at the other end of this value chain usually producing semi processed inputs for further processing into final product. Abaca fiber grades are classed based on their appearance. First class fibers from inner leaf sheaths are ideal for weaving and specialty product applications, while the 3rd class light brown fibers are utilized for the production of cordage and other industrial applications.

Newtech Pulp based in Lanao del Norte, a subsidiary of Glatfelter, is a processor of abaca for specialty paper and other engineered products to the world, and Albay Agro Industrial Development Corporation (ALINDECO), a producer of abaca pulp sheets are some of the big buyers and processors who has shown interest in procuring fibers from Antique.



Abaca Value Chain Map in Antique

Opportunities and Challenges

The Philippines' position in the international market as the world's biggest supplier of abaca fiber is opportunity enough to encourage expansion of abaca farms and to encourage more farmers to engage in abaca production.

Antique by far has the lowest yield per hectare, among other provinces in the Western Visayas Region at 53.8 kg and contributes only 11.4% to the total regional produce of abaca fiber (PhilFIDA, 2015). Capacity wise, only about 2.10% of the potential area for abaca production in Antique is currently utilized.

Below are some of the challenges in the development of the abaca value chain:

- Less preference of farmers to engage in abaca due to lack of financial support from land preparation to harvesting, processing, and transporting.
- Limited availability of tools and equipment such as portable stripping machines to hasten fiber extraction and reduce wastage, drying and storage facilities.
- Long production cycle from planting to harvesting: fiber processing (tumbling, tuxying, stripping and drying) to marketing.
- Some abaca farmers and strippers still prefer to work as SACADA due to considerable lump sum cash advance offered by contractors per family member.
- High delivery cost due to poor accessibility of road network going to and from production (stripping) sites since most of abaca plantations are located in far flung and hard to reach areas that also affected the farm gate prices.
- Some farmers and traders do not conform with buyers in terms of quality, grade and quantity of bought fiber.
- Abaca farmers have limited/lack access to market information, i.e. pricing (there's no tariff showing updated price of fiber per classification/grade) thus, price is easily manipulated by buyers.
- Lack of industry leadership to support and to push initiatives for abaca industry.
- Weak abaca farmers associations in terms of leadership/governance and operational management.

Through the THRA Project and ADF's facilitation, a total of 1,673 farmers were trained in abaca cultural management from nursery to post harvest management. This addresses the lack of technical know-how on good agricultural practices and appropriate harvesting and processing techniques.

Demo farms will be established in Antique to showcase good practices and new planting protocols particularly the low level, high density abaca farming technology that will increase the number of hills per hectare (PhilFIDA, 2017). Two demo farms has so far been identified: one in Bgy. Salde, Culasi and the other in Bgy. San Francisco Norte in the Municipality of Tibiao with a total area of 4 hectares.

CARE and ADF continue to provide assistance to the abaca farmers to address most of these challenges in the development of the abaca value chain. This include strengthening linkages with PhilFIDA, different LGUs, research institutions and Business Development Services and Financial Service Providers. ADF recorded 6,500 beneficiaries who have undergone various capacity building activities in the abaca value chain since the start of the THRA Project (ADF Report, March 2017).

CAREA's Typhoon Haiyan Reconstruction Assistance

Through the THRA project, CARE employs a strategy on improving access to resources required in rebuilding agricultural, livestock, fisheries and commerce-related livelihoods aimed at optimizing income and providing diversified and resilient livelihood opportunities for most affected households. As such, CARE provides financial and technical support to a number of community-based organizations (CBOs) engaged in abaca production in 15 municipalities in Antique that were heavily affected by typhoon Yolanda.

Map of CARE's operations in Antique

CARE has partnered with Antique Development Foundation (ADF) to address the low productivity of abaca production and processing as well as market access to help small-scale farmers establish abaca-based livelihoods in several municipalities of Antique.

To further boost the abaca industry, CARE provided financial grants to community associations and assisted in skill building and knowledge sharing for farmers through trainings and cross-learning activities. CARE's program approach goes beyond addressing the needs of one group, and applies the 'Value Chain Framework' to gain a deeper understanding of market dynamics, demand, supply and inter-firm relationships. Through this approach, CARE-assisted associations are involved in various phases of abaca value chain – from abaca production to processing to marketing.

To further develop and strengthen the abaca value chain in Antique, CARE continues to provide more technical trainings for farmers to improve productivity and output quality, acquiring good cultural management techniques from the Department of Agriculture and good practices in fiber extraction from PhilFIDA. A productivity improvement study was also commissioned by CARE in cooperation with the University of the Philippines Industrial Engineering Club.

Following a community-led approach to development, CARE also trained and engaged Community-based Development Facilitators (CBDFs) from assisted local communities to

become training facilitators. CARE believes that community trainings are best delivered by the local CBDFs as they have a strong sense of identification with the community members, relationships with the local people and authorities, and first-hand knowledge of the socio-economic conditions in the area making them more effective in conveying and connecting entrepreneurial possibilities.

The CBDFs assistance were valuable in the roll out trainings such as Community-Based Enterprise Development, Financial Literacy, Value Chain Orientation, Values Formation among others.

Abaca is an upland crop in Antique so considerable human and financial resources are required for on-site processing, hauling and transporting fiber to the market. CARE and ADF have facilitated with other donors and local government units the provision of a business development unit, common service facilities and equipment such as horses for hauling, portable stripping machines in strategic points in the mountains, storehouses for fiber and a coordinated schedule for fiber pick-up. The farmers are also being trained in abaca grading and classifying to help them better negotiate market prices.

The project also strengthens the technical capacity of local partners in enterprise development, monitoring and evaluation, gender, gender, disaster risk reduction and climate change adaptation. Also, CARE is partnering with various government agencies, local government units, financial service providers, training institutions in providing appropriate development services to the project participants.

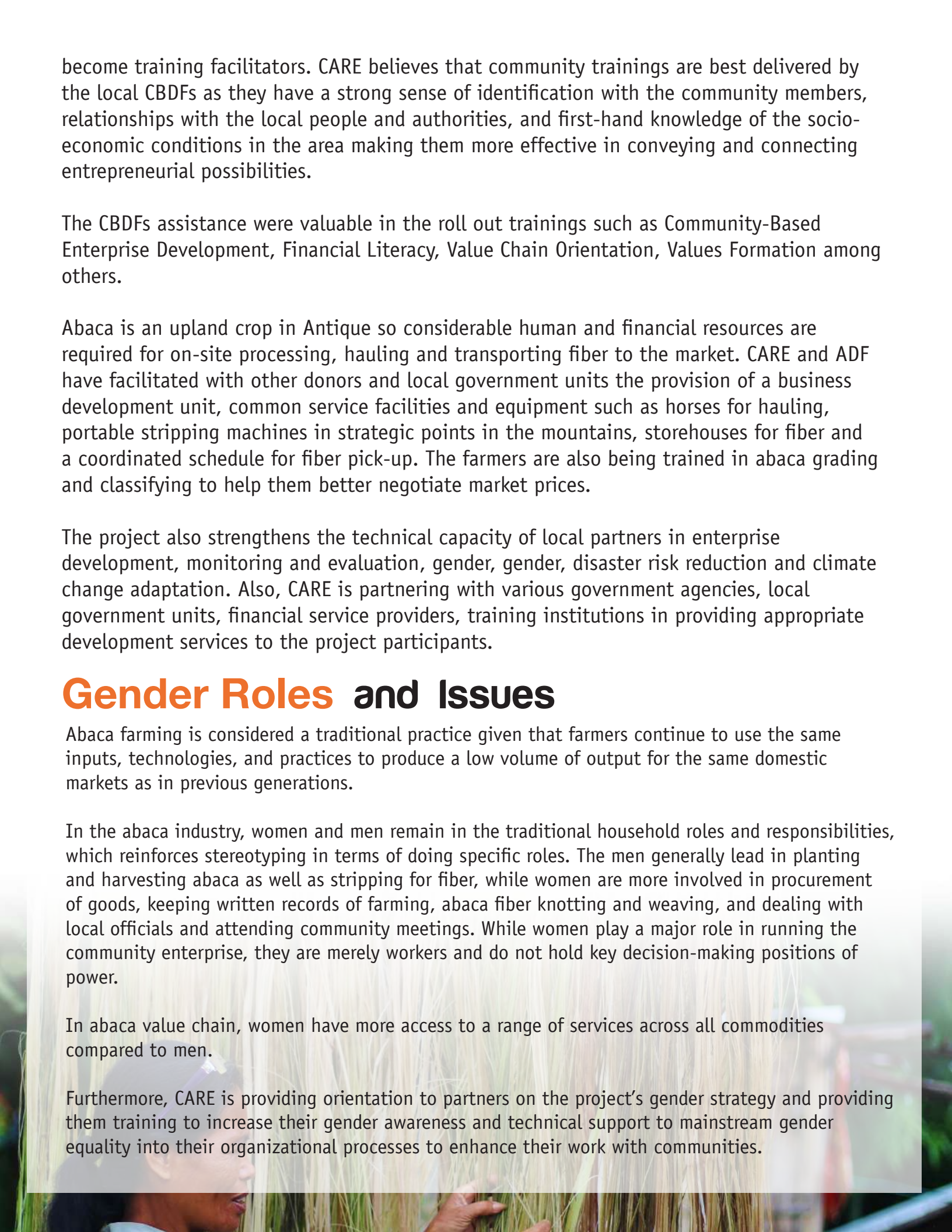
Gender Roles and Issues

Abaca farming is considered a traditional practice given that farmers continue to use the same inputs, technologies, and practices to produce a low volume of output for the same domestic markets as in previous generations.

In the abaca industry, women and men remain in the traditional household roles and responsibilities, which reinforces stereotyping in terms of doing specific roles. The men generally lead in planting and harvesting abaca as well as stripping for fiber, while women are more involved in procurement of goods, keeping written records of farming, abaca fiber knotting and weaving, and dealing with local officials and attending community meetings. While women play a major role in running the community enterprise, they are merely workers and do not hold key decision-making positions of power.

In abaca value chain, women have more access to a range of services across all commodities compared to men.

Furthermore, CARE is providing orientation to partners on the project's gender strategy and providing them training to increase their gender awareness and technical support to mainstream gender equality into their organizational processes to enhance their work with communities.



Existing knowledge, skills, and practices in Abaca Farming identified in the focus group discussion	
• Women are the ones who look for creditors • Women are the ones attending meetings and seminars • Couples share in the decision making regarding abaca farming • Women do the marketing	
Gaps in Knowledge and Skills	Negative Practices
-Sorting and classification of fibers -Proper pest control and management -Fertilizer application (These gaps are especially apparent in women farmers)	-Farmers, especially women, are exposed to hazards (pests) -Male farmers migrate for work (sacadas) in Negros after planting abaca leaving women -Preference to manual stripping over machines

Environmental Management

Abaca in the Philippines plays a vital role in the growing global advocacy or environmental protection and forest conservation. Being the strongest among all natural fibers and having superior qualities over other materials, abaca fiber is preferred by top manufacturing companies over man-made fiber such as plastics and other synthetic materials.

An abaca plant can be harvested to produce useful fiber after two years from planting. Within its short term cultivation, abaca farmers can produce the natural materials repeatedly needed by various industries thus saving more trees worldwide.

Erosion control and biodiversity rehabilitation can be assisted by intercropping abaca in former monoculture plantations and rainforest areas, particularly with coconut palms. Also, a lot of farmers in Antique refrain from cutting trees and start to rehabilitate denuded forestlands when they learned through trainings and info sessions that abaca needs shade from taller trees to grow healthier.

Planting abaca can also minimize erosion and sedimentation problems, particularly siltation, in coastal areas which are important breeding places for sea fishes. The water holding capacity of the soil will be improved and floods and landslides will also be prevented. Likewise, the abaca plant contributes to climate change mitigation as it is able to absorb excess carbon dioxide from the atmosphere. Abaca waste materials are also used as organic fertilizer.

References: Philippine Rural Development Project (PRDP). (2015). Abaca Value Chain Analysis: Province of Antique.
Industrial Engineering Aid – University of the Philippines Diliman. (2017). Productivity Improvement Study of Abaca Production in Antique l Bolanos, A. Value Chain Analysis Report on Abaca Enterprise in Antique. Agri-Aqua Development Coalition-Mindanao l Abaca Philippines. About Abaca. http://www.abacaphilippines.com/abaca.php?go=about l Philippine Fiber Industry Development Authority. Abaca Technoguide. http://www.philfida.da.gov.ph/images/Publications/Technoguides/ABACA.pdf l Ordonez, E. Abaca's unfulfilled potential. Philippine Daily Inquirer l http://business.inquirer.net/106549/abacas-unfulfilled-potential

Founded in 1945, CARE is a global leader within a worldwide movement dedicated to ending poverty. We are known everywhere for our unshakeable commitment to the dignity of people. CARE has worked in the Philippines since 1949, providing emergency relief when disaster strikes, helping communities prepare for disasters, and implementing sustainable livelihood projects.

CARE implements the THRA project in collaboration with:

DEPARTMENT OF AGRICULTURE
PHILIPPINE CROP INSURANCE CORPORATION

Municipalities of Libertad, Pandan, Sebaste, Culasi, Tibiao, Barbaza, Lauaan, Bugasong, Valderrama, Patnongon, San Remigio, San Jose, Sibalom, Hamtic, Tobias Fornier

Unit 512 Cedar Executive Bldg. II, Timog Avenue
corner Scout Tobias St., Quezon City, Philippines

+63 2 351 6458

carephl.info@care.org

www.care-philippines.org

CARE Philippines

@CAREphl

CAREPhilippines