

PHILIPPINES

INTEGRATED RISK MANAGEMENT IN KINATARCAN, SANTA FE, CEBU

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Photo: Juan Miguel Torres

In cooperation with the Partners for Resilience a global alliance of Netherlands based, and national and local actors throughout the world, Cordaid promotes Integrated Risk Management (IRM) as a key approach to resilience - building. IRM is the systematic integration of Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Environmental Management and Restoration (EMR) and is founded on the analysis that risks are evolving causing increased disaster frequency and magnitude as climate change exacerbates hazards as do unabated ecosystem degradation.

In 2017 Cordaid worked with the community of Kinatarcan Island including the Barangay Governments of Hagdan, Kinatarcan and Langub, the Cebu Provincial Disaster Risk Reduction Management Office, and the Municipality of Santa Fe, Caritas Singapore, the Arch-Diocese of Cebu and East West Seeds Company on Integrated Risk Management, which:

PUTS PEOPLE AT RISK CENTRE-STAGE

CORDAID WORKED WITH THE KINATARCAN COMMUNITY AND STAKEHOLDERS TO EXPLORE ISSUES OF DISASTER, CLIMATE AND ENVIRONMENTAL RISKS

Water scarcity is a critical issue on Kinatarcan island. Households traditionally collect rainwater to use for drinking, washing and agricultural activities. Of the 8905 people of the island, only a quarter have access to well water, which is becoming increasingly salty as seawater starts to enter the water sources.

During the dry season some wells run dry. Almost 7,000 people depend entirely on rainwater harvesting during the 5 months dry season. To be able to meet needs for drinking, cooking and washing 20,000 litres of rainwater need to be harvested and stored on a daily basis.

The impacts of climate change; increase in extreme storms and changing rainfall patterns affect day to day living of those living on Kinatarcan Island. The main community livelihoods of fishing and cassava production were hard hit by Typhoon Haiyan (locally named Yolanda) in November 2013.



WORKS ON DIFFERENT TIMESCALES TO ENSURE ADAPTIVE PLANNING

CORDAID WITH KINATARCAN COMMUNITY MEMBERS, LOCAL GOVERNMENT AND OTHER STAKEHOLDERS IMPLEMENTED A COMPREHENSIVE ASSESSMENT OF RISKS: IDENTIFYING EXISTING CAPACITIES AND GAPS TO ADDRESS STRATEGIES TOGETHER

Climate smart farmer field schools now have 10-day and long term weather forecasts from the Government Municipal Disaster Risk Reduction and Management Office to help plan ahead of disasters, to protect their farms as well as plan farming activities; what crops to plant, when and what water is needed to cope with the changing weather patterns

Each purok came together to implement a risk assessment to identify what is at risk from each of the hazards identified: typhoon, strong wind, storm surge, and drought. Maps of assets and capacities were also generated including – people – shelter – water – livelihoods – fishing equipment – safe areas to protect.

The community risk assessment helped to identify level of risk of community resources from the different hazards and climate change impacts. When consolidated across the island, the information was used as a basis of planning at both purok and island wide level.

Based on the joint assessment, plans and priorities for action were identified.



10-day weather forecast posters are located on communal farms to help plan farming activities, what crops to plant, when and what watering regimes are needed to cope with the changing weather patterns.



Children from Yellow Tops community pose beside their community risk map where assets, capacities, resources, livelihood, and hazard safe areas are illustrated.

INTEGRATES DISCIPLINES AND APPROACHES TO ENCOMPASS DIFFERENT RISKS

CORDAID WORKED WITH KINATARCAN COMMUNITY MEMBERS AND STAKEHOLDERS TO ENSURE INTERVENTIONS ADDRESSED WATER RISKS THROUGH ENVIRONMENTAL, SOCIAL AND ECONOMIC ACTIONS



The school garden drip irrigation system.

Kinatarcan National High School Climate Educators in their school-based vegetable garden using climate-smart technologies. Students have applied their own improvised drip irrigation system through low cost materials such as recycled plastic bottles to ensure water efficiency as it flows directly to the crops.



Students from Kinatarcan High School in their school-based vegetable garden. These Grade 11 students make it a habit to check on their garden after school ends.



A Mung Bean crop in Yellow Tops community.

Cassava is traditionally planted on the island for food, but cassava plants deplete the soil of nutrients and reduce soil fertility. This results in poor cassava harvests. Cordaid works with the Municipal Agriculture Office to encourage farmers to grow Mung Beans between the rows of cassava plants. Mung beans enrich the soil nutrients and at the same time provide a protein rich food source and option for additional income.

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ADDRESSES RISK AT LANDSCAPE LEVEL

AN ISLAND WIDE APPROACH WAS TAKEN TO PLAN WATER MANAGEMENT – DISASTER RESPONSE – ENVIRONMENTAL PROTECTION – CONNECTING EVERY PUROK IN ALL BARANGAYS ON KINATARCAN ISLAND

An Island wide mapping of hazards, capacities and gaps was done with a special focus on water to identify priority actions.

Information and Education Campaigns were also done in every purok across the island in order to ensure greater awareness and motivate community members to join joint actions to tackle risks.



Kinatarcan Island Water Risk Map



Awareness raising activities at purok level.

MANAGES AND RESTORES ECOSYSTEMS

CORDAID WITH THE KINATARCAN ISLAND COMMUNITY IMPLEMENTED SUSTAINABLE PROJECTS THAT NOT ONLY ADDRESSES ISSUES ON FOOD SECURITY AND RISK MANAGEMENT, BUT ALSO PROTECTION AND RESTORATION OF NATURAL RESOURCES



The newly established village nurseries are community managed. Each household contributes 5 forest or fruit seedlings to support the restoration and protection the water source. The seedlings are grown in the nursery until they are strong and tall enough for replanting around the water sources. The nursery also uses rain-fed water technology to water the seedlings.

Lita Oftana from Langub village had prepared the 5 seedlings she will donate for the community nursery.

“When these trees grow, they will not only bear fruit which we could eat, they could also improve and protect the environment.” she says.



Lerna Cullarin, a community leader with their village nursery in the back ground. Being the purok leader, Lerna is in charge of making sure that members of her community contribute 5 seedlings for their nursery.



Improved Drip Irrigation on one of the farms on Kinatarcan using low cost, low maintenance technologies.

LINKS LOCAL REALITIES WITH GLOBAL PROCESSES

CORDAID IN PARTNERSHIP WITH THE COMMUNITY OF KINATARCAN, MUNICIPAL AND PROVINCIAL GOVERNMENT AND CARITAS SINGAPORE HAVE SUPPORTED WATER HARVESTING, ENABLING:

- **94,000 LITRES EXTRA WATER STORAGE FROM HOUSEHOLD AND COMMUNITY INFRASTRUCTURE**
- **31,000 LITRES EXTRA WATER COLLECTION FOR AGRICULTURAL ACTIVITIES**
- **SUCCESSFUL ADVOCACY WITH THE GOVERNMENT RESULTED IN GOVERNMENT CONTRIBUTION OF 5,000,000 PESOS OR 100,000 EUROS FOR WATER STORAGE AND IMPROVED PIPING ON THE ISLAND IN 2017**

Water scarcity is a critical issue on Kinatarcan island, resilience strengthening actions are linked with smart water harvesting methods, water management, and projections for rainfall and storms.



Farmers from Yellow Tops community fill up their tanks with water from their desalinator.

Desalinators are able to produce an extra 3 litres of water a day and are available for families living on the parts of the Island with least access to water.



"Any person can build a desalinator for less than 500 pesos (10 Euros). Construction is simple and materials are available locally. The idea is simple; when it rains, it collects water. When it does not rain, you put seawater in and the sun separates the water and salt through evaporation. It also leaves behind salt that you can use for cooking."

Dodo Hijapon, a resident of Langub village was one of the first community members trained to construct the desalinator and has also taught other members of his community how to build them.



Maria Victoria Batiancila stands behind her group's farm and mini-dam, a simple rainwater collection system.

Owner-driven, low cost, low technology, rainwater harvesting by the farm - collecting water when it rains, to use to water crops. A UV plastic mesh covers the mini-dam to stop debris, the breeding of mosquitoes, and reduce evaporation of water harvested.



Cordaid Water Specialist stands in-front of the Kinatarcan High School rain-fed water tank.

Building on local capacities: cleaning and maintaining the Kinatarcan National High School water collection tanks to allow up to 31,000 litres of rainwater to be collected and stored safely.

LINKS HUMANITARIAN AND DEVELOPMENT DOMAINS BY FOCUSING ON LIVELIHOODS

CORDAID WITH THE COMMUNITY OF KINATARCAN FOCUS ON DEVELOPING ALTERNATIVE LIVELIHOODS THROUGH VEGETABLE FARMING, CASSAVA POST PRODUCTION, AND ROMBLON WEAVING



Romblon is a shrub that is found throughout the island; traditionally women have used its leaves for weaving home products. Now they are learning to weave and dye the romblon to produce a range of handicrafts for sale on near-by islands. The weavers have plans to protect and develop the naturally growing romblon and sell their products to near-by islands and tourists.



Colorful hand woven romblon bags for sale



Assorted cassava pastries and delicacies



Farmers selling their organic vegetables

During the first Kinatarcan island-wide market and harvest festival, the newly formed weavers groups on Kinatarcan proudly showcased and sold their colorful romblon weave bags, selling 300 bags to a Cooperative based in Cebu City. Cordaid has also supported cassava farmers to produce many different kinds of delicacies from cassava, including cakes, chips and other pastries which were also on display and sold during the island-wide harvest festival.

The new vegetable farmers were given the opportunity to sell their harvest during the first island-wide festival and market. Farmers from different parts of the island were able to showcase their organic produce in their community built stall. In the two weeks following the harvest festival vegetable farmers received orders of over 50 kilograms worth of vegetables from other islands.

Recognizing the importance of the island market, the municipality of Santa Fe has committed to build a permanent community market on the island.



“There are a lot of cassava farmers on this island who became discouraged to plant again after Typhoon Yolanda destroyed farms. When Cordaid trained us on other farming methods and we saw with our own eyes how easy it was to grow vegetables, a lot of farmers were hopeful and encouraged again.”

Belinda Placencia is a sari-sari (small convenience) shop owner, it is her first time to plant vegetables and she has already saved more than 2,000 pesos or almost 40 Euros in selling bitter melon and other crops in the past month. With this additional income, she plans to pay for her children’s education costs. Normally families would have to borrow to cover costs for education.



“All we knew before was how to plant and harvest cassava for our family’s food. We would just plant it and leave it alone. At first just thinking about ploughing and shoveling (to grow vegetables), we thought we could not do it. Thanks to Cordaid we now have gardens of vegetables, we grow vegetables for our family to eat and can earn extra income (from selling vegetables to our neighbours).”

Teresa Goudines from Kinatarkan explains that by selling just the bell peppers, she has earned 5,000 pesos or 100 Euros in the past month. She was able to use the additional income for school costs of her children.



Community members from San Francisco, Bitoon Village, Kinatarkan Island with Cordaid Project Leader Ivy (far left) meet to discuss next steps in farming; creating a community managed savings and credit association. The group will assist farmers to save and lend money inside the group – helping people to cope at times of crisis. The group also plans to identify potential markets to sell their products and organize training on financial literacy.

PARTNERS WITH COMMUNITIES, CSO, GOVERNMENT, KNOWLEDGE INSTITUTES, PRIVATE SECTOR AND THE MEDIA

INTEGRATED RISK MANAGEMENT FOSTERS PARTNERSHIPS



FARMER FIELD SCHOOL TOUR: A cassava producer (in yellow) learns from a vegetable farmer (in green) on climate smart farming techniques. The women are from different villages on the island, this is the first time learning between villages has been done.



Launching the project in 2017, partnership secured between the Governor of Cebu province, the Mayor of Santa Fe, the villages of Hagdan, Kinatarcan and Langub on Kinatarcan Island and Cordaid, with the support of the Philippines Atmospheric Geophysical and Astronomical Services Administration (PAGASA), Cebu.



Genda Aguipo a Village Health Worker of Kinatarcan is one of the community leaders trained by Cordaid and East West Seeds to teach her community about climate-change, climate-smart farming, and coping with risks.

In the photo she shows her illustration of the water cycle which she taught to members of her village and also uses to demonstrate how to save and collect water properly.

PARTNERSHIP FOR POLICY DEVELOPMENT AND COMMUNITY MANAGED ENACTMENT AND ENFORCEMENT ACROSS DIFFERENT SECTORS

Community planning with the Municipal Government to cope with hazards such as typhoon, storms and strong winds identifying households and also livelihoods assets that are most at risk – and making a plan at local level, across the island and with the municipality to prepare and respond when hazards come. In 2018 island wide policies to implement disaster preparedness and response will be developed and tested.



GOVERNMENT, CIVIL SOCIETY, PRIVATE SECTOR, THE CHURCH AND COMMUNITY STRATEGY PLANNING TO EXPAND, STRENGTHEN AND SUPPORT COMMUNITY ACTIONS ON KINATARCAN. A PLATFORM FOR COOPERATION IS ESTABLISHED ACROSS ALL ISLAND BARANGAYS TO FURTHER DEVELOP RESILIENCE STRENGTHENING EFFORTS STARTED IN 2017



In 2018, the Kinatarcan Island Development plan will be reviewed and revised to ensure Integrated Risk Management (IRM) is included.

Kinatarcan Island actions have motivated the Municipal Government in Santa Fe to develop a Local Climate Change Action Plan. Linking the different Government Departments and villages across the municipality with the Church through the Arch Diocese of Cebu Relief and Rehabilitation Unit and Civil Society Groups. In 2018 community, government, civil society will develop a climate risk reduction strategy to be approved for implementation by the Mayor of Santa Fe, Gov. Mayor Jose Esgana with the support of the Governor of Cebu Province, Hilario Davide III.



Farmers from Sitio Yellow Tops in Kinatarcan Island.

ABOUT CORDAID

We have been fighting poverty and exclusion in the world's most fragile societies for a century. Cordaid delivers innovative solutions to complex problems by emphasizing sustainability and performance in projects that tackle basic services, disaster risk reduction and economic

CONTACT

Anat Prag
Country Director Philippines
Cordaid

Cordaid Office Philippines
19C, Sepulveda Street,
Barangay Zapatera,
Cebu City, Philippines, 60000
+63 917 718 0003

Cordaid
Lutherse Burgwal 10
2512 CB The Hague
+31 (0) 70 - 31 36 300
www.cordaid.org

PARTNERS



Roman Catholic Archbishop of Cebu
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