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AGRICULTURE AND DEVELOPMENT NOTES
CLIMATE CHANGE ADAPTATION

Climate Field School: An Innnovative Approach to Agricultural Adaptation

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Dumangas, Iloilo is a coastal town located in the island of Panay, Visayas, Philippines with most of its area devoted to agriculture and fisheries. However, the town experiences two extreme conditions: drought during the dry season, and flooding during the rainy season—where for the latter, 65% of the total area of Dumangas is usually inundated. Consequently, farmers experience difficulty in monitoring and maintaining their crops.

As the local government's initial step to help the farmers adjust to the adverse impacts of climate change, the municipal government of Dumangas started the Climate Field School (CFS) Program in 2007. The CFS Program was first launched and applied in Indramayu, Indonesia. The Municipality of Dumangas is the first in the Philippines, and second in Asia, to adopt this program. Aside from being able to help the farmers increase farm production, the CFS program enhances the farmers' adaptive capacity, while addressing poverty and reducing vulnerability and their causes.

In 2008, Dumangas had a significant increase in rice production. It even surpassed the municipality of Pototan, Iloilo—the biggest rice producer in Western Visayas. In 2011, Dumangas continued to be one of the dominant rice producers. The municipality and the farmers saw this success as a result of the CFS program. CFS enabled them to monitor the changing weather and adjust their farming practices. Hence, they were able to maintain good quality agricultural products despite the continuous threats posted by climate change.

CFS program

The CFS program is a flagship activity under the Climate Forecast Application for Agriculture and Climate Change Adaptation Program of Dumangas. In line with this, Municipal Ordinance No. 2011-02 was enacted—declaring CFS as a Learning Institution for the Climate Forecast Application for Agriculture.

The CFS aims to enhance the capacity of extension workers and farmers to understand and apply climate information to reduce risks in agriculture. It is an innovative way of addressing the problems on climate extremes, essentially through capacity building of farmers. Through CFS, the farmers learned to identify what crops are suitable to grow at the onset of a predicted climate event. In addition, it helps the farmers in scheduling appropriate farm operations.

The CFS areas have discovered innovative approaches to managing disasters side-by-side with climate change adaptation.

The objectives of the CFS program are to:

- enable farmers to understand climate related risks in agriculture and the rice crop management system;
- show the importance of climate in plant growth and development, as well as its relationship with plant pests and diseases;
- familiarize the participants on forecast implementation, climate parameters and instruments;
- help farmers learn to integrate weather and climate information with disaster management and agricultural planning; and
- create awareness of participants on disaster risk reduction and climate change adaptation.

Dumangas Agro-Met Station

One of the important facilities of the CFS is the Agro-Meteorological (Agro-Met) Station. The Agro-Met Station was established in November 2002, and is supported by Asian Disaster Preparedness Center (ADPC). It is the pilot project of Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and ADPC in the Philippines.

The Agro-Met Station helps the farmer participants of the CFS through its forecast of local weather conditions.


Dumangas Agro-Met Station

The station collects weather data and sends them to PAGASA for interpretation. The data will then be sent back to the station in Dumangas in easier and laymanized terms. These interpreted data are then disseminated to the farmers, fishpond operators, government units, and other stakeholders. The data forecasts will advise the farmers what to do, and even give possible scenarios that would arise from a particular weather condition.

Evidently, it has played a key role in local climate-weather forecasts for information and advisories given to the stakeholders, especially the farmers and other users of agricultural applications.

Methodology

In CFS training of farmers, agricultural technologists collaborate in developing the modules. The Municipality has seven local agricultural technologists from the Municipal Agriculture Office. They conduct the CFS program once a week for 12 sessions.

The CFS has eight modules, namely:

1. Climate, Pest and Diseases, Crop Growth and Development
2. Cropping System/Pattern and Climate-Related Risks
3. Understanding Weather and Climate and Climate Parameters
4. Weather and Climate Information Products and Forecast Generation
5. Forecast Interpretation, Translation and Communication and Incorporating Climate Forecasts in Decision Making
6. Learning and Implementing the Rice Integrated Crop Management System or "Palay Check"
7. Summary of Key Checks and Assessment, Monitoring, Analysis and Improvement
8. Establishing Cropping Calendar and Review of Philippine Seed Board (PSB/NSIC) Rice Varieties

As of February 2012, the CFS already has 370 graduates, with 314 farmers (84.40%) affirming to practice what they have learned from the program.

Impacts


CFS Graduates

Program evaluation results show that through the CFS program, farmer participants have become more knowledgeable and well equipped in their farming practices. Some of the reported improvements in their practices include synchronized planting; enhanced soil, nutrient, pest, water, and land management; selection of better quality seeds; and timing in planting input application and other farming activities.

Moreover, the farmers are now able to identify available management options in order to lessen climate-related risks. They are now able to understand the process of forecast interpretation, translation, and communication for agricultural applications.

Furthermore, the CFS program contributed in uplifting Dumangas' socioeconomic status. It has lessened damages on agriculture and government resources and utilized such for other developmental endeavors to attain increased agricultural production.

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