

Global Research Alliance- related Agricultural Activities in the Philippines

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Adaptation and Mitigation Initiatives in Agriculture (AMIA)



AMIA is a flagship program of the Department of Agriculture for climate adaptation and mitigation. Coordinated and managed by the Systems-Wide Climate Change Office (DA-SWCCO).

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"A pearl buried inside a tightly-shut shell is practically worthless. Government information is a pearl, meant to be shared with the public in order to maximize its inherent value. The Transparency Seal, depicted by a pearl shining out of an open shell, is a symbol of a policy shift towards openness in access to government information. On the one hand, it hopes to inspire Filipinos in the civil service to be more open to citizen engagement; on the other, to invite the Filipino citizenry to exercise their right to participate in governance. This initiative is envisioned as a step in the right direction towards solidifying the position of the Philippines as the Pearl of the Orient – a shining example for democratic virtue in the region."

Program Framework



Program Milestones



Program Objectives



**The Climate Change Act of 2009 (RA 9729)
mandates the**

*“mainstreaming of Climate Change in policy formulation such
that policies and measures that address climate change are
integrated in development planning
and sectoral decision-making.”*

**We have Four Strategic Objectives
for the AMIA Program**



1 Increase the Adaptive Capacity and Productivity potentials of Agriculture and Fisheries livelihood

modifying commodity combinations to better meet weather issues and natural resource endowments.



2 Redefine the Strategic Agricultural Fisheries Development Zone (SAFDZ)

Including Climate Change Vulnerabilities as part of mapping variables.



3 Redefine Agricultural Development Planning Framework

As the basis for agricultural planning by including key factors/variables associated with Climate Change.



4 Develop a new framework and plan for the provision of a "new" government agricultural services

Towards the accelerated development of Climate Smart Agriculture and Fisheries Industries.



The Four Strategic Objectives are made to make the Department of Agriculture's Plans and Programs to become Climate Change Compliant or Climate-Proof.

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Figure 10. AMIA Implementation Schedule

Intervention	Specific deliverables	Requirement	Year 0	Year 1				Year 2				Year 3				Year 4				Year 5				
1. Provision of FFS Manual on Water Management	Updating of FFS Manual to highlight AWD implementation (measurement and monitoring of water level or moisture adequacy, possible effects on pests and diseases, nutrient management, mechanization, micro climates, etc.)	14 subject matter specialists and 4 support/ writeshop staff	Writeshop for 4 days; allocation for lodging, meals and honaria; cost of layouting and proofreading of the final draft; cost of printing of 500 copies of the manual	Q1-4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2. Training of 150 Field Officers	150 persons trained for work in the field for five years	Trainers/ resource persons, training facilities	Training for two months to incorporate AWD principles with respect to the PalayCheck system																					
3. Conduct of Fieldwork	Fieldwork conducted for one year for each IA	Each RSO/ AEW to handle four IAs per season	To cover all the IAs under the NIS, IS (under NIA) and SWISA (under BSWM) (150 field officers x 4 IAs per year x 250 ha per IA x 5 years = 750,000 ha)		Batch 1				Batch 2				Batch 3				Batch 4				Batch 5			





Before implementation begins, PhilRice and the DA will conduct an information campaign among IAs and farmers about the AMIA and its benefits. IAs and the field officers can start preparing project proposals for AMIA implementation after that. As the AMIA is expected to start in 2016, the first batch of proposals should be collected by the end of November 2015. Based on the proposals received, the AMIA implementer will prepare a concrete annual technical assistance plan; engage, assign and dispatch field officers; and start discussions with the individual IAs.

Currently each field officer is expected to cover approximately four IAs per season for two cultivation seasons annually. This will allow 150,000 ha of rice fields to adopt AWD each year.

At the end of every year IA will collect data on the operation of the AMIA, including the area where AWD has been adopted, farmers' compliance and so on. Most of the data have already been described in the MRV section, although further data may be required, for example, by donors making payments to cover the ISF payments discount.

Towards the end of the fifth year of AMIA implementation, it is expected that 750,000 ha of rice fields will have adopted AWD as their standard irrigation practice. The donor funds will have been completely retired and the AMIA will be implemented entirely with domestic funding and support, chiefly from the annual budgets of the DA and NIA. There will be a reduction in emissions of approximately 9.5 million tCO₂e annually, significantly mitigating the impact of the rice sector on climate change. Additionally, there will be improvement in the efficiency of the national and communal irrigation systems, increase in the rice yield across the areas adopting AWD and an increasing number of rice farmers planting alternative crops.

Furthermore, by 2020, the Philippines will have a more resilient rice production sector capable of withstanding many of the challenges of climate change.

Rice Crop Manager (RCM)



IRRI KNOWLEDGE TOOLS
Sustainable Impact

Rice Crop Manager Advisory Service



A web-based platform for field-specific information on crop and nutrient management to increase yields and income of rice farmers in the Philippines

✓ Background

The International Rice Research Institute (IRRI) and its partners developed site-specific nutrient management (SSNM) principles to identify the best nutrient management practices for specific rice fields. Consideration of the timing, quantities and types of fertilizers are some of the key components of these findings.

Following the SSNM principles, IRRI launched Rice Crop Manager (RCM) in 2013 in partnership with the Philippines Department of Agriculture (DA) and the Philippines Rice Research Institute (PhilRice) to provide personalized advice to farmers on crop and location-specific nutrient management. It is a web-based decision-support tool systematically enhanced for rice farming in the Philippines. RCM has expanded its capabilities to provide advisory services through complementary tools that are integrated into one web-based platform, the Rice Crop Manager Advisory Service.

RCM recommendations are provided to farmers through a one-page print-out and a short messaging service (SMS) to improve and guide crop management. It enables extension workers to use a computer or smart phone to provide farmers with crop management recommendations matching their field condition.

✓ The Challenge

Rice fields in Asia are often small and have great variability in terms of fields and farmers. Fields vary in crop variety, yield level and fertility level. Farmers vary in their access to resources and technologies. Field-specific crop and nutrient recommendations are needed to optimize yields and profit tailored to fields and farmers.

► Results¹

Since RCM was launched in 2013, farmers across the country have benefited from the recommendations provided for their specific fields.

- Over **1.3 million RCM recommendations** have been generated across 16 rice-growing regions in the Philippines.
- Use of RCM recommendations provided an average **yield increase of 0.4 tons (400 kg) per crop per hectare** equivalent to about **USD100/ha/cropping season added net benefit**.

✓ How does it work?

RCM Advisory Service is a suite of web-based applications that can be used individually or in combination with each other.

1. Extension workers register farmers and their fields' information to the **RCM Farmer and Field Registration** app.
2. Farmers receive a unique farmer ID number. The field size is measured using Global Positioning System (GPS) and is assigned a corresponding field ID. ID cards for registered farmers are printed and distributed through the **RCM Farmer ID Maker**.
3. Before the cropping season, extension workers interview farmers using the **Rice Crop Manager (RCM)**.
4. Farmers receive a unique recommendation on nutrient and crop management, including the right source, timing and amount of fertilizers to be applied. The seed rate, weed management, crop health management and safe alternate wetting and drying (SafeAWD) are also provided in the recommendation.
5. The Philippines Department of Agriculture staff uses **RCM Messenger** to interview farmers and validate the actual sowing date and variety planted to initiate sending of crop management reminders through short messaging service (SMS) to a farmers' phone.
6. After harvest, extension workers interview farmers using the **RCM Farming Monitor** to determine actual practice and uptake of RCM recommendation.



The nutrient management recommendations of the RCM provides the application of nutrients from the right source at the right amount and applied at the right time. This increases nutrient-use efficiency, thereby, reducing nutrient losses specifically nitrogen. Another recommendation provided by RCM is safe AWD, especially in pump-irrigated rice fields.

- Approximately **50,000 farmers and 89,000 fields** (equivalent to approximately 27,000 hectares) were registered nationwide using the RCM Farmer and Field Registration app.
- Almost **35,000 fields** (39% of registered fields) have been measured using global positioning system (GPS) to provide farmers with their exact field area.
- RCM has been included in the **Philippines Rice Road Map**, which sets the targets and strategies for achieving rice production to 6.0 tons/hectare by 2022.

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WateRice

Water-efficient and risk-mitigation technologies for enhancing rice production in irrigated and rainfed environments

Water is a vital component for a successful and sustainable rice production. Any shortfall in water supply can affect agricultural and economic growth, quality of life and the social stability of the country. Along with these challenges, the water scarcity also bring secondary issues. When water is scarce, weeds become another problem for farmers. Weeds directly compete with crops for water. It is even more pronounced in rainfed areas that constantly struggle with water shortage because of lack of irrigation.



What's new!

- [WateRice: New joint Philippine-IRRI water project kicks off](#)
- [Why invest in optimizing water use in rice farming?](#)

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WP2: Developing an irrigation advisory service using AutoMon^{PH} for improving water productivity and enhancing coordination among water-user associations

This work package will focus on developing an irrigation advisory service which will automate monitoring of water level and sharing of relevant information on irrigation scheduling to the farmer, water-user association leader, or irrigation water resources technician (Fig. 2).

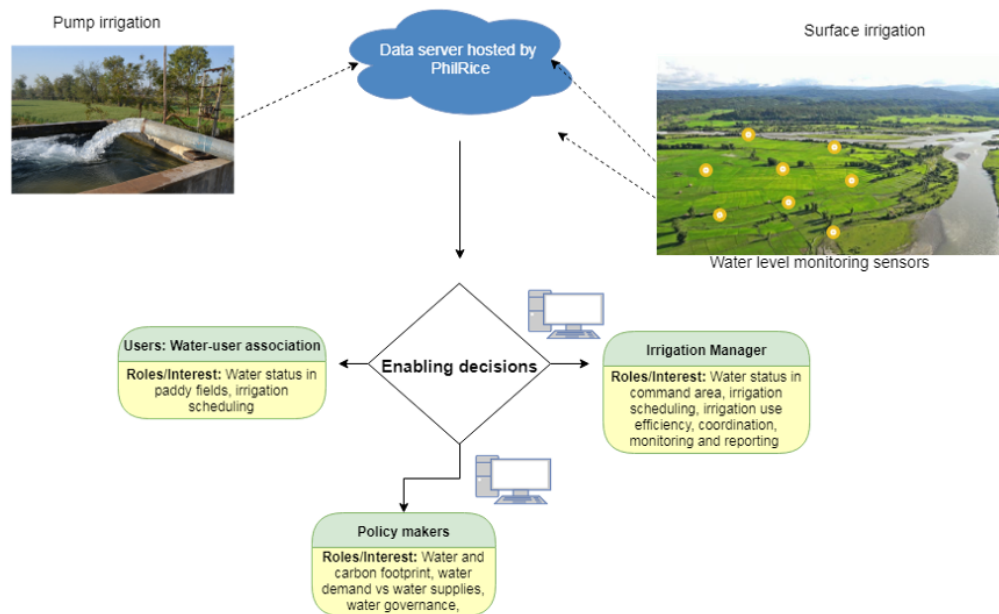


Fig. 2. The conceptual framework of irrigation advisory service using AutoMon^{PH}

PALAYAMANAN PLUS



Climate Change at Pagpapalayan

Palayamanan Plus

Ang Palayamanan Plus ay isang *rice-based production system* na nagtuturo sa mga magsasaka kung paano gumamit ng *diversification, intensification, at integration* sa pagsasaka. Layunin ng teknolohiyang ito na gawing *agri-enterprises* ang mga maliit na sakahan upang makapagdulot ng mas malaking kita sa mga magsasaka.



Mga Benepisyo ng Palayamanan Plus

- Nagkapagbibigay ng karagdagang kita
- Napakikinabangan ng husto ang lupa at panahon
- Nakapagbibigay ng ibang oportunidad dahil nagagamit ang *biomass* sa ibang *production systems*
- Nakababawas ng polusyon, *greenhouse gases* (GHG), at *carbon sequestration*
- Natuturuan ang mga magsasaka na maging *agripreneurs*

PALAYAMANAN PLUS

Palay = rice

Kayamanan = wealth

This is a rice-based production system that mainstream the practice of crop diversification, intensification and integration to enhance the nutrition and income of farming families

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Palayamanan adheres to the principles of:

- **diversification** to increase productivity and profitability, diversify income sources, reduce financial risks, and address climate change issues of agricultural systems (Delgado & Siamwalla, 1997; Altierie, 1999; Parry et al., 2005; Howden et al., 2007; Rota and Sperandini, 2010; Lin, 2011; Metocha et al., 2012, Corales & Rasco, 2015; Corales et al., 2016);
- **intensification** to increase farm productivity in time and space by altering the crop geometry and improving resource efficiency (Tilman et al., 2011; FAO, 2011; Smith 2013; Campbell et al., 2014, Corales & Rasco, 2015); and
- **integration** to make farming more profitable and dependable (Behera et al., 2004; Howden et al., 2007; Ismail, 2009; Scherr et al., 2012; Seyer et al., 2013, Corales & Rasco 2015; Corales et al., 2016). The closed-loop biomass resource recovery system is also instituted to optimize resource- use efficiency through nutrient cycling. This forms part of an agricultural practice that preserves the nutrient and carbon levels within the soil and allows farming to be sustainably carried out (Corales et al., 2005).



Home > Business > Agri-Commodities

Business Agri-Commodities

Rice farmers in 23 provinces to plant other crops–PRIR

By **Jasper Y. Arcalas** - October 7, 2019

361



A total of 23 provinces will shift from planting rice to other crops and hog raising based on the draft of an industry road map crafted by the government which details its strategies for boosting the competitiveness of the rice sector.

The Philippine Rice Industry Roadmap, which the government is currently finalizing, indicated that the 23 provinces are more competitive in producing other agricultural products. The crafting of the PRIR was mandated by the rice trade liberalization law, which took effect on March 5.

Under the draft PRIR, the government will prioritize public investments, particularly the roll out of the Rice Competitiveness Enhancement Fund (RCEF), in 57 out of the 80 rice-producing provinces in the country.

The draft blueprint will still undergo further contextual analysis before it is submitted to the chief of the Department of Agriculture (DA).

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