

SOUVENIR PROGRAM  
and  
ABSTRACTS OF PRESENTATIONS

# 34<sup>TH</sup> UGNAY PALAY

National Rice Research for Development (R4D) Conference

“Advanced science & technology for  
prosperous rice-farming communities toward  
sufficient & affordable rice for all”

December 7, 2022 | CBC Plenary Hall



Philippine Rice Research Institute  
Central Experiment Station  
Maligaya, Science City of Muñoz, 3119 Nueva Ecija

Quality Rice. Quality Life.





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## **DA-PhilRice Vision:**

Advanced science and technology for prosperous rice-farming communities toward sufficient and affordable rice for all

## **DA-PhilRice Mission:**

To improve the productivity, profitability, and well-being of rice-farming communities toward a resilient and sustainable industry and nutrition-secure Filipinos through climate-smart, socially inclusive, demand-driven, and partnership-based rice research for development and extension

## **Core Values and Attributes:**

Responsiveness, Resilience, and Relevance  
Integrity, Innovativeness, and Inclusivity  
Collective Spirit, Client-centricity, and Convergence  
Excellence, Equity, and Empathy

## **Integrated Management System (IMS) Policy Statement:**

“DA-PhilRice adheres to a system of quality management, environmental protection, and occupational health and safety in its operations to advance rice research for development.”

***#PhilRiceIMS***







## RATIONALE and OBJECTIVES

**E**xecutive Order No. 1061 (November 1985) mandates DA-PhilRice to develop and implement a national rice research for development (R4D) program to improve and sustain rice production in the country. Together with its government and private sector partners and collaborators, DA-PhilRice has succeeded in implementing its Strategic Plan 2017-2022 through its rice R4D programs and projects on the ground with a positive outlook for wider coverage to reach more rice and rice-based farming communities nationwide.

Themed “Advanced science and technology for prosperous rice-farming communities toward sufficient and affordable rice for all,” this annual conference provides a venue to acquire and exchange knowledge and experiences to address current issues and emerging problems besetting rice R4DE and the industry. It will highlight the accomplishments of our Strategic Plan 2017-2022 and present the fresh plan for the next 6 years. This is in view of and in response to the President and concurrent Secretary of Agriculture’s tall order of achieving sufficient and affordable rice for all Filipinos using science-based information and strategies. Further, on top of providing interaction among rice industry stakeholders in identifying appropriate and efficient strategies for rice R4DE and areas of collaboration in developing, promoting, and scaling rice and rice-based technologies, the conference will also gather feedback and advice on relevant rice R4DE thrusts and initiatives to achieve rice self-sufficiency along with making rice affordable for all as part of the national stakeholders consultation for the draft DA-PhilRice Strategic Plan 2023-2028.

Brought together by the concept of Ugnay Palay, where the rice science community and its stakeholders gather through and for rice, the conference will be held in a blended format where the speakers and minimal in-person participants will be gathered at the DA-Crop Biotechnology Center Plenary Hall while the general audience will be gathered virtually via Zoom.



# ABOUT the GUEST of HONOR and KEYNOTE SPEAKER



**DOMINGO FLORES PANGANIBAN**, currently the Senior Undersecretary of the Department of Agriculture, has been a Filipino public servant for more than 35 years.

He is a story of hard work and persistence in education as means of getting ahead. His transition led to his conviction of a life so blessed it should be lived in service to others.

After his secondary education, he enrolled at the UP Los Baños (UPLB) where he studied agronomy and plant protection. He was part of the achieving Freshman Batch 1956 and earned his Bachelor of Science in Agriculture degree in 1961.

He began his career as a Plant Pest Control Worker to Officer for the Bureau of Plant Industry in Zamboanga del Sur. He helped farmers increase their yields by establishing viable pest control regimens in the field.

Senior USec Panganiban earned his Master's degree in Public Administration at the University of the Philippines from 1968 to 1970. By this time, he was already with the Ministry of Agriculture as Deputy Executive Director of the National Food and Agriculture Council in his concurrent capacity as Regional Field Director in Region 3.

More than his ranks, it was his strengths as a leader and a field technician that earned him the respect of his peers. His expertise came to the fore in 1973 when the Philippine government embarked on Masagana 99, an agricultural program to address the local rice shortage.

The success of the Masagana 99 program led the country to export rice to its neighboring Asian countries from 1977 to 1978. He played a key role in the effective implementation of the rice program by ensuring the delivery of high-yielding rice varieties, training and extension services, farm inputs and agricultural credit to farming communities.

The late President Ferdinand E. Marcos appointed Senior USec Panganiban as Deputy Minister of Agriculture in 1984 in recognition of his invaluable service to the nation during the rice crisis.

By 1986, he left the public service for the private sector as a consultant for Agriventures, Inc., Development Specialists, Inc. and Purefoods, Inc. He joined the Food and Agriculture Organization as a Policy Specialist in Rice Production Technology for Cambodia, Laos and Vietnam.

Senior USec Panganiban returned to public service in 1996 under then-President Fidel V. Ramos as his Presidential Assistant for Agriculture and Undersecretary of the Department of Agriculture.

He became the Secretary of Agriculture in 2001 under President Joseph Estrada and then again under President Gloria Macapagal-Arroyo in 2005. He also became the Chief of Staff of Senator Loren Legarda-Leviste until 2004. President Macapagal-Arroyo appointed him as the Secretary and Lead Convenor of the National Anti-Poverty Commission (NAPC) from 2006 to 2010.

President Ferdinand R. Marcos, Jr. appointed Panganiban as the Senior Undersecretary of the Department of Agriculture on August 12, 2022.

Over the years, his hard work and productivity as a public servant earned him countless awards. In 1967, he attracted national attention when the late President Ferdinand E. Marcos awarded him the Presidential Plaque of Merit for his initiative, skills, industry and other sturdy virtues. He also received the prestigious award for the Ten Outstanding Young Men for his contributions as a public servant in 1969; the epitome of the operations man who will always render public service to help the small Filipino farmers who had been the object of his passionate advocacy for the last fifty years.

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# SCHEDULE of ACTIVITIES

**7 December 2022 (Wednesday)**

**8:30 am Preliminary Activities**

## Opening Program

**9:00 am** Prayer and National Anthem

**9:10** Welcome Remark

**Dr. Eduardo Jimmy P. Quilang**

OIC, Office of the Deputy Executive Director (DED)  
for Research, DA-PhilRice

**9:20** Opening Message and  
Introduction of the Guest of Hon-  
or and Keynote Speaker

**Dr. John C. de Leon**

Executive Director, DA-PhilRice

**9:30** Message of the Guest of Honor  
and Keynote Speaker

**Senior Undersecretary Domingo F. Panganiban**

Department of Agriculture

**10:00** Presentation of New DA-PhilRice  
knowledge products

**Ms. Hanah Hazel Mavi B. Manalo**

Senior Science Research Specialist (SRS), DA-PhilRice

## Plenary Session 1: Plans and Programs for Prosperous Rice-Farming Communities Towards Sufficient and Affordable Rice for All

**10:15 am** National Programs and Plans  
on Rice

**Engr. Arnel V. De Mesa**

Assistant Secretary for Operations, DA

On the Frontlines:  
The DA-PhilRice Strategic Plan  
2017-2022 Terminal Report

**Dr. Karen Eloisa T. Barroga**

DED for Development, DA-PhilRice

The (draft) DA-PhilRice Strategic  
Plan 2023-2028

**Dr. Flordeliza H. Bordey**

DED for Special Concerns (RCEF), DA-PhilRice

Open Forum

**12:00 nn** Lunch Break

## Plenary Session 2: Rice Research for Development for Prosperous Rice-Farming Communities Toward Sufficient and Affordable Rice for all

**1:30 pm** Rice Seeds Systems 2.0 Program

**Dr. Loida M. Perez**

Supervising SRS, DA-PhilRice

**2:00** Scaling Modern and Adaptive  
Rice Technologies toward  
Prosperous Farming Communities  
(SMART Farm) Program

**Mr. Dindo King M. Donayre**

Senior SRS/Scientist I, DA-PhilRice

Continued...

## Plenary Session 2: (Continuation)

- |                |   |   |
|----------------|---|---|
| <b>2:30 pm</b> | Rice Business Innovations System<br>(RiceBIS) Community 2.0 Program | <b>Dr. Diadem G. Esmero</b><br>Supervising SRS, DA-PhilRice                                   |
| <b>3:00</b>    | Institutional Development   | <b>Mr. Abner T. Montecalvo</b><br>DED for Administrative Services and Finance,<br>DA-PhilRice |
| <b>3:30</b>    | Open Forum  |   |

## Closing Program

- |                |                                       |                                     |
|----------------|---------------------------------------|-------------------------------------|
| <b>4:30 pm</b> | Synthesis and Ways Forward            | <b>Dr. Eduardo Jimmy P. Quilang</b> |
| <b>5:00</b>    | Closing message and<br>Vote of thanks | <b>Dr. John C. de Leon</b>          |

# NEW RICE KNOWLEDGE PRODUCTS

**Ms. HANAH HAZEL MAVI B. MANALO**

Senior Science Research Specialist, DA-PhilRice

The knowledge and services generated by the Institute are captured and converted into knowledge products (KPs) by translating them into simpler, attractive, effective, and useful forms. These KPs are strategically distributed to help usher the stakeholders from the stage of knowledge to higher levels of practice and advocacy in the behavior change process.

A total of 116 KPs have been produced this year. These are in the forms of books, magazines, journals, calendars, posters, booklets, brochures, handouts, flipchart, videos, audio clips, and reports. They are strategically designed for the right audience with the right message, channels, tactics, and timing.

For copies, you may contact the DA-PhilRice Development Communication Division through: 0917-111-7423 (SMS/Call); [prri.mail@philrice.gov.ph](mailto:prri.mail@philrice.gov.ph) (E-mail); and DA-PhilRice (Facebook). You may also access the knowledge products via the Pinoy Rice Knowledge Bank ([www.pinoyrice.com](http://www.pinoyrice.com)).







# **ABSTRACTS of PLENARY PRESENTATIONS**





# **PLENARY SESSION 1**

## **PLANS and PROGRAMS for PROSPEROUS RICE-FARMING COMMUNITIES TOWARD SUFFICIENT and AFFORDABLE RICE for ALL**

**The session will highlight and feature the recent rice R4D agenda (National Rice Program), accomplishments and insights from key lessons and recommendations in achieving the Strategic Plan 2017-2022 deliverables, and the implementation plan and target activities that will transform the lives of rice farmers and other stakeholders.**



**ASec. ARNEL V. DE MESA** is one of the youngest and brilliant leaders in agri-fishery sector development, given his valuable contributions to the advancement of technology in the agriculture sector that have cascaded into better policy strategies and procedures in rural development and engagement with local government units. As such, in 2006, he was appointed as deputy program director of the DA-World Bank-assisted Mindanao Rural Development Program (MRDP).

He is an agricultural engineer by profession who graduated from the University of the Philippines – Los Baños in 1996. He was among the country's top ten engineers in the 1996 licensure exams. He was given the 2019 Outstanding UPLB Alumni Award for Rural Development and Governance. He also has academic credits on master's in agrometeorology at the same university. His skills in project development were further honed when he took up a project and procurement management course at the Asian Institute of Management, and a country project implementation and administration course at the Asian Development Bank.

He is a Career Executive Service (CES) Officer who was at the top ten during the 2013 written examination for CES Professional. He was then appointed as DA Regional Technical Director for Davao Region in the same year.

On January 04, 2018, he was conferred as CESO IV by the CES Board and promoted to CESO III rank on August 12, 2021. He served as Regional Executive Director of DA-CALABARZON and was designated as DA Assistant Secretary for Operations since December 2020. He was appointed full-fledged Assistant Secretary on August 11, 2022.

With all his successes, ASec. de Mesa is a loving father of three wonderful children – Lisa Andrea, Luis Adrian, and Lorraine Anne, and a good husband to his wife Melissa Lourdes.

# NATIONAL PROGRAMS and PLANS ON RICE

## **ASec. ARNEL V. DE MESA**

Operations, DA

The growth in our country's palay production in 2016-2021 necessitated a steady growth in yield. On top of the factors that contributed to the growth of the sector is the continuous support of the Department of Agriculture (DA) through the provision of various production inputs, machinery and equipment, and capacity-building services, among other interventions. However, research and development also has an invaluable contribution to this progress with the advancement of smart agricultural technologies (SATs) that enabled rice-farming communities to reach their production targets.

The presentation shows a brief viewpoint of the country's current rice industry, the most notable mature rice technologies currently used, ongoing research funded by the National Rice Program (NRP), as well as the pipelined studies for the next year. Lastly, the NRP would like to also present our vision of the future of Philippine rice technology.

Among the highlighted mature SATs for rice are the (1) Philippine Rice Information System (PRiSM); (2) Rice Crop Manager Advisory Service (RCMAS); and (3) Pest Risk Identification and Management (PRIME). The PRiSM uses satellite imagery to produce information regarding planted rice area, seasonality, yield, and risk to crops which the DA uses to formulate program policies and plans. The RCMAS provides free site-specific recommendations to its end-users regarding the appropriate crop management with the aim of increasing their productivity and income. Lastly, the PRIME generates targeted pest advisories and pest management recommendations based on ground pest-surveillance, remote sensing, and pest modeling vital in managing production losses.

The NRP reports that there are 27 rice-related research studies for completion within the year. The topics of the research vary from enhancement of existing smart digital agricultural technologies for rice production to diversification, and baseline studies to sustain the policy and decision support for the NRP.



Currently the Deputy Executive Director for Development of DA-PhilRice, **Dr. KAREN ELOISA TANZO - BARROGA** is among the Institute's strongest pillars. She has been with DA-PhilRice for more than three decades in different leadership capacities. As DED for Development, she sets the direction and strategies, makes policies, and ensures efficient and effective execution of the Institute's development interventions.

She had led/co-led projects, such as the promotion of hybrid rice, certified seeds, and golden rice; the development and promotion of the PalayCheck System; the institutionalization of knowledge sharing and learning, and other knowledge products at DA-PhilRice; and the development of a new breed of rice extensionists known as AgRiDOCs. These accomplishments had been blessed with recognitions from DA-PhilRice, the Crop Science Society of the Philippines (Achievement Award in Extension), and the UPLB College of Development Communication (Outstanding Alumna Award for Agricultural Extension and Communication).

Karen had also served as member and chair in the Steering Committee of the Irrigated Rice Research Consortium (IRRC) of IRRI and the Swiss Agency for Development and Cooperation; a resource person on extension/development at the International Food Policy Research Institute; an external reviewer for IRRC's project on Closing Rice Yield Gaps in Asia; and President of the Philippine Extension and Advisory Services Network. At present, she serves as a member of KOPIA-Philippines' Steering Committee and vice-chair of the technical working group of RCEF Extension.

Karen obtained her BS and MS in Dev Comm from UPLB, with cognates in agriculture and rural sociology; while her PhD degree was from the University of Western Australia under ACIAR's John Allwright Fellowship and DA-PhilRice's Staff Development Programs. She also has a master's degree in Development Management from the Development Academy of the Philippines and recently completed the Executive Masterclass from the Asian Institute of Digital Transformation.

# ON THE FRONTLINES: THE DA-PHILRICE STRATEGIC PLAN 2017-2022 TERMINAL REPORT

## **Dr. KAREN ELOISA T. BARROGA**

Deputy Executive Director for Development, DA-PhilRice

The period 2017 to 2022 can be described as game-changing, strategy-testing, and crucially challenging years for all organizations. With COVID-19, among other major conundrums, the world has been forced to reorganize the order of things—from which DA-PhilRice cannot escape.

Such was the setting of the 2017 to 2022 execution of the PhilRice Strategic Plan. The five years could be summed up as time of pushing for innovations, both in terms of producing new technologies and implementing development projects.

In the Exit Report of the Strategic Plan, we show how PhilRice has managed to deliver its self-imposed outcomes. We report how we have created ripples of impacts on the lives of our stakeholders across the country, and how we have re-oriented our systems so we could fulfill our mandate better.

For Outcome 1, our commitment to increasing productivity and profitability is reflected in the 28 new rice varieties developed with impressive characteristics, improvements in our Genebank, as well as our work in PRIME and pest management technologies. Cost-effectiveness is shown by the new machines developed, with some of them already deployed for use.

As we promised to improve rice trade through efficient postproduction, better product quality, and reliable supply and distribution system, we continually crafted machines, systems, and technologies for rice and rice-farming systems to be able to produce rice at the least expense.

For Outcome 3, we developed more nutritious rice, rice by-products, and the portable brown rice machine made more accessible to consumers rice that has better safety, health, and nutrition, even providing farm families with extra income.

PhilRice subscribes to the Japanese principle of Kaizen in all facets of its operations. In the past 5 years, we embarked on developing cutting-edge technologies and platforms to step up our game.

For Outcome 6, we have sealed 1, 128 agreements with various stakeholders, both here and abroad. Our non-traditional partners NutriAsia, MayanaPH, and EastWest Seeds helped us in our various development projects that had direct impact on farmers. Thousands of stakeholders were reached through our various engagements, which resulted in better informed farmers and other players in the rice industry. Additionally, our trainees have been achieving significant strides in helping promote rice science and technology across the country.

Optimizing its institutional capabilities, PhilRice has been in a much better position to deliver its mandate. Our scientists and newly fielded staff members are crafting high-caliber proposals that would step up the game of rice R&D in the Philippines. We are doing this both with collaborators from within the country

and abroad. Our processes and newly acquired properties have facilitated doing business with our clients within the Institute and outside. Our acquired intellectual properties will help make available our technologies to interested parties. In 2018, PhilRice was lauded by the DOST for its record-breaking achievements in the areas of IP protection, utilization, and commercialization.

We have also shown and manifested our impact on the ground through our Rice Business Innovations System (RiceBIS) program where we poured our interventions in participating communities. Cooperatives have managed to significantly improve their revenues by complying with PhilRice's recommendations, specifically on crop and income diversification. Paradigm shifts among farmers—specifically the importance of being agripreneurs and being highly adaptable to various shocks that may come their way—have been fueled.

The year 2019 onwards was also a test of PhilRice's versatility as an organization as evidenced by its exemplary implementation of the Rice Competitiveness Enhancement Fund (RCEF) programs. While not traditionally known for implementing humongous development projects, the Institute has hurdled the challenges of the operations-focused nature of RCEF, reaching the remotest rice-farming communities and bringing to them high-quality rice seeds. In 2021, the country hit a record-breaking palay output of 19.96 M metric tons largely credited to RCEF's efforts.







**Dr. FLORDELIZA HIDALGO BORDEY**, or Doc Liza as she is fondly called, is a Deputy Executive Director IV at DA-PhilRice and duly designated as Director of the Rice Competitiveness Enhancement Fund-Program Management Office (RCEF-PMO) since 2019. Prior to her RCEF load, she was DED for Research.

She is a distinguished economist, rice R&D practitioner, and a respected policy advocate. Her exemplary leadership and scientific R4D works led to the creation of various rice policies implemented throughout the country through the DA and PhilRice. Most notable of which is her book - “Competitiveness of Philippine Rice in Asia” – which served as a major reference in the enactment in 2019 of Republic Act No. 11203 – An act liberalizing the importation, exportation, and trading of the rice, lifting for the purpose the quantitative restriction on rice, and for other purposes.

She was one of the 2021 Presidential Lingkod Bayan Awardees, for her commendable stewardship of the RCEF that helped boost rice farmers’ yield, thereby helping the country achieve record-high palay output in 2020 and enhancing rice farmers’ income and competitiveness.

Bordey led the establishment of the RCEF-PMO and approval of the required staff complement to effectively implement the RCEF Seed Program. She also steered the crafting of the Program’s operational protocols and work and financial plans. She led the RCEF Seed Program with clear plans and targets, and through nurturing partnerships with DA and its regional field offices, other RCEF implementing agencies, provincial/city/municipal local government units, Senate and House of Representatives oversight committees, DA-Bureau of Plant Industry – National Seed Quality Control Services, and seed grower cooperatives and associations (SGC/A), to ensure smooth implementation of the Program.

Dr. Bordey also initiated innovations such as the RCEF Seed Monitoring System – a tool that uses ICT applications to enhance the efficiency of operations, monitoring, data gathering, and progress reporting of the Program. Placing premium on customer experience, she conceptualized the piloting of Binhi e-Padala to make it easier for farmers to claim their seed benefits. It is a digital technology-aided RCEF seed distribution mode that ensures the ease and timeliness of claiming seeds while accelerating payments to partner SGC/A.

Under her stewardship, the RCEF Seed Program was able to deliver and distribute >10.41 million bags of certified seeds within six planting seasons from 2020 Dry Season to 2022 Wet Season, benefitting approximately 1M farmers and estimated to have planted about 1.5M ha annually. This resulted in yield improvement of seed beneficiaries which contributed in achieving the record-high palay output at almost 20 million tons in 2021 and improving the nation’s food security.

A daughter of public servants and rice farmers, Dr. Bordey, 41 years of age, is from the Science City of Muñoz, Nueva Ecija. She obtained her bachelor’s and master’s degrees (BS and MA Economics) at UP Diliman; and her Doctor of Philosophy in Agriculture Economics at the University of Illinois Urbana-Champaign, USA. She is married to Eugene M. Bordey and a proud mother of two – Elyse and Emily.

# NEW DA-PHILRICE STRATEGIC PLAN 2023-2028

**Dr. FLORDELIZA H. BORDEY**

Deputy Executive Director for Special Concerns and RCEF-PMO Director

Rice – the staple food of the Filipinos – remains at the front and center of the nation’s food security concerns. While the rice industry achieved great strides with back-to-back record-high production in 2020 and 2021, perennial challenges continue to hound the industry players. A great number of rice farmers are still poor and afflicted by low productivity and high cost of production. This is aggravated by war-caused disruptions in the global food supply chain making agricultural inputs such as fertilizer and fuel more expensive.

Oftentimes, farmers encounter low product value as they have limited participation in the value chain. Small farm sizes also reduce their scaling opportunities. Frequent occurrences of natural calamities associated with changing climate further raise their production risk and minimize their livelihood options. Weak institutions such as fragmented agricultural extension systems and unclear roles between the national agencies and local government units make it more difficult for farmers to access agriculture services that could help them.

As the country has transitioned to a more liberal international trade, rice market players face stiff competition with better-quality and cheaper but sometimes smuggled imported rice. On the demand side, rising food prices affect consumers’ purchasing power eventually leading to lower food intake and higher malnutrition.

Cognizant of these conditions, DA-PhilRice endeavors to build back better by crafting a new Strategic Plan 2023-2028 which stands on the achievements gained and lessons learned from the past. Toward a vision of “Advanced science and technology for prosperous rice-farming communities toward sufficient and affordable rice for all”, the institute shall advance climate-smart, socially inclusive, demand-driven, and partnership-based Research for Development and Extension (R4DE).

DA-PhilRice shall work with partners so that by 2028: 1) rice farming communities become prosperous and empowered through use of smarter and climate-resilient technologies, and engagement in viable rice-based enterprises; 2) consumers, particularly urban and rural poor, have adequate access to safe, affordable and nutritious rice; 3) local institutions can implement decentralized rice programs anchored on science-based policy; and 4) the country have stable rice supply and sustainable rice industry.

Guided by its core values, the institute shall implement three flagship programs to deliver outputs that will contribute in achieving the foregoing impacts. First is the Rice Seeds Systems (RSS) that will ensure the availability and accessibility of high-quality rice seeds at the right time. Second is the Scaling Modern and Adaptive Rice Technologies (SMART Farm) which intends to integrate and facilitate widescale use of modern, climate-smart, and best-fit crop management technologies and practices through employing digitally enhanced learning platforms. Third is the Rice Business Innovations System (RiceBIS 2.0) which will revitalize the engagement of rice-farming communities in viable rice-enterprises and level-up their participation across the value chain. Leveraging on digital transformation, DA-PhilRice shall continuously pursue institutional development to deliver high-quality and client-centric R4DE services.





## **PLENARY SESSION 2**

# **RICE RESEARCH FOR DEVELOPMENT FOR PROSPEROUS RICE-FARMING COMMUNITIES TOWARD SUFFICIENT AND AFFORDABLE RICE FOR ALL**

**The session will introduce the new R4DE programs of DA-PhilRice. Rice science and technologies for increasing yields and incomes; systems and tools for improving the rice value chain; strategies for better access to nutritious rice; and mechanisms for enhancing mitigation and adaptation capacity will be expounded upon.**



**Dr. LOIDA M. PEREZ** started dealing with rice seeds in January 1998 when she joined the Plant Breeding and Biotechnology Division of DA-PhilRice. She has been involved in numerous rice research endeavors in the areas of rice genetics, hybrid breeding, disease resistance, submergence tolerance, application of molecular markers associated with grain quality traits like aroma, low phytic acid, crack resistance, molecular diversity studies as well as DNA fingerprinting of rice and conservation of heirloom germplasm. She conceptualized the STR DNA fingerprinting for rice varietal identification and her team led the development of DNA-based protocols for hybrid seed purity analysis using SSRs.

She has authored/co-authored over 90 papers (ISI/non-ISI journals) and abstracts presented in national and international fora.

She was a Norman Borlaug Fellow on International Agricultural Science and Technology in 2010, a KOICA Fellow on Agricultural Genetic Resources Management in 2012, and a Sida Fellow on Genetic Resources and Intellectual Property Rights in 2013.

Dr. Perez is the former head of the Genetic Resources Division and takes pride in the team who helped establish the standard operating procedures of DA-PhilRice Genebank, which houses millions of rice seeds from over 7,000 accessions.

She has a Master's degree in Genetics minor in Plant Breeding from UP Los Baños, and a PhD in Molecular Biology from Mississippi State University, USA.

# RICE SEEDS SYSTEMS 2.0 PROGRAM

## **Dr. LOIDA M. PEREZ**

Supervising Science Research Specialist, DA-PhilRice

Food security can be equated to having rice on the table of every Filipino household. The new DA-PhilRice Strategic Plan 2023-2028 envisions sufficient and affordable rice for all. This vision translates to the need for high-quality seeds which are crucial in increasing the yield and income of farmers.

The Rice Seeds Systems Program targets improving and ensuring a sustainable and vigorous seed supply chain in the country and ensures high-quality seeds will be produced in sufficient quantity in a timely manner. In partnership with rice stakeholders, the seed production components expected to deliver rice seed sufficiency include inbred seed production and hybrid parentals/F1 seed production of which the primary outputs are high-quality rice seeds for distribution and utilization by the RCEF, NRP, and other rice stakeholders in the seed value chain. The implementation of these two components shall be supported by a robust and strengthened seed quality control, modernized seed purity analysis using high-throughput DNA fingerprinting, improved seed processing and storage conditions, and stricter crop health monitoring of all seed production areas in DA-PhilRice CES and the branch and satellite stations. Other aspects toward ensuring rice seed security including production of rice seeds for special market and seed value chain analysis will be discussed.



**Mr. DINDO KING M. DONAYRE** is a Senior Science Research Specialist at the Crop Protection Division of DA-PhilRice. He is a graduate of MS in Plant Pathology at UP Los Baños. He obtained his bachelor's degree in Agriculture, major in Plant Protection, from the Visayas State College of Agriculture (ViSCA), now Visayas State University.

With more than 14 years of R4D experience, he was conferred as Scientist I by the Scientific Career Council in 2017. Many of his scientific works are important in the development, implementation, and promotion of effective, economical, and eco-friendly rice pest management strategies in the Philippines.

A prolific author, he has published books, book chapters, scientific papers, other knowledge products, and utility models. He is also instrumental in the development of e-damuhan, a weed identification and management app. He won best paper

and poster awards in various international and national scientific gatherings. He created a Facebook group 'Usapang mga Damo sa Palayan, Maisan, at Gulayan sa Pilipinas', where members are farmers, extension workers, professors and teachers, students, entrepreneurs, and decision-makers.

Mr. Donayre is often invited as technical resource person in trainings, seminars, and radio interviews, for topics on common weeds of rice and their management. Often tapped as co-advisor, he mentors college and high school students who wish to pursue weed science and plant pathology researches.

He has received numerous awards, among them the Marcos Vega Memorial Award I Weed Science given by the Weed Science Society of the Philippines (2015) and Outstanding Senior Researcher awarded by DA-PhilRice (2016).

He is currently the project leader of "Ecology and non-chemical ways of managing rice pests in the Philippines, and Modernized rice production technologies for rainfed lowland ecosystem in the Philippines". He also leads the DA-BAR funded projects such as the "Development of weed management options for drip-irrigated aerobic rice, and the Water efficient and risk mitigation technologies for enhancing rice production in rainfed environment (WaterRice).



# **SCALING MODERN AND ADAPTIVE RICE TECHNOLOGIES TOWARD PROSPEROUS FARMING COMMUNITIES (SMART FARM) PROGRAM**

**Mr. DINDO KING M. DONAYRE**

Senior Science Research Specialist | Scientist I, DA-PhilRice

The current annual rice production volume of the country needs to increase further despite the steady growth of the national rice yield average over the years. Increasing the rice yield averages appears to be more realistic and achievable in the short term as the yield gaps between the potential and actual yields can still be narrowed through adoption of mature technologies and best-fit management practices in rice farming.

SMART Farm is a new program that aims to strategically scale-out modern, mechanized, precise, and biotechnology-completed mature rice production technologies for transplanted and direct-seeded rice through a package of technologies (POT) and a farm cluster approach starting in all PhilRice stations. In the succeeding years, these POTs will be deployed in communities through the same cluster approach involving collaborations with local government units and relevant agencies. The program also aims to digitalize the integrated system of POT to lay down the foundation for a digitally enabled rice production system in the country.



**Dr. DIADEM B. GONZALES-ESMERO** is a 1998 alumna of Central Luzon State University (CLSU) with a degree Bachelor of Arts in Social Science. She pursued a Master of Science in Development Communication degree at UP Los Baños as a (DA-PhilRice) scholar. She obtained her Doctor of Philosophy in Anthropology degree at the Australian National University as a Ford Foundation International Fellowships Program scholar.

She is currently the Head of the Development Communication Division, GAD Focal Point System Focal Person, and Senior Curator of the Rice Science Museum at DA-PhilRice. She also spearheads the strategic communication component of the Rice Competitiveness Enhancement Fund (RCEF) Program.

She has been into development work for more than 20 years and was recognized by various institutions for her exemplary performance. As a GAD advocate, she was recognized for her outstanding research papers in gender mainstreaming in rice research and development. She won best paper and best posters in GAD National Conferences in 2019 and 2020. In the same year, she was recognized as Dangal ng PhilRice for Senior Development Worker and Lingkod Bayan Presidential Awardee – NCR Regional winner for her works in promoting rice science.

She is also recognized under the Distinguished Alumni in Culture and Arts by UP Alumni Association and CLSU for creatively promoting rice science in various art formats.

She has authored various popular and research papers. Her latest research publication was on “gender mainstreaming in rice research and development” published in DA-PhilRice’s Rice-Based Biosystems Journal. She also led the packaging of a training module on gender sensitivity and gender analysis tools in the context of rice research and development.

Dr. Gonzales-Esmero is a certified member of the Philippine Commission on Women (PCW) National Gender and Development Resource Pool.

# **RICE BUSINESS INNOVATIONS SYSTEM (RiceBIS) COMMUNITY 2.0 PROGRAM**

## **Dr. DIADEM B. GONZALES-ESMERO**

Supervising Science Research Specialist, DA-PhilRice

The Rice Business Innovations System (RiceBIS) Community 2.0 Program is geared at developing rice and rice-based enterprises within a province to address farmers' needs—from production, to processing, to marketing—in a resilient and sustainable manner, ensuring available and affordable rice. Unlike the conventional technology transfer approaches which are production-driven, this program draws more on agribusiness framework.

It will focus on introducing business innovations in three program components: product, process, and market innovations. Product innovation is the introduction of improved quality of rice and rice-based products and enhanced service by helping farmers get necessary farm and production certifications. Process innovation will focus on capability enhancements, and technologies that will be used to produce, deliver, and support a product or provide a service. Market innovation, on the other hand, will focus on the improvement of the mix of target markets, creation of institutional markets and on new distribution processes in the local market. All these efforts are expected to develop rice and rice-based product/services investment portfolios for potential investors, small-medium-large business innovation models for diverse groups of farmers; strengthen partnerships both in the public and private spheres to increase competitiveness of farmers, and relevant policies to provide enabling mechanisms for our farmer-entrepreneurs.

Overall, this program aims to revitalize rice-based farming communities through agro-enterprise model development with improved value chain efficiency.



**Mr. ABNER T. MONTECALVO**, the current Deputy Executive Director for Administrative Services and Finance, earned his Master in Applied Business Economics, major in Food Systems Management, at the University of Asia and the Pacific as a DA-ATI scholar; and Bachelor of Science in Agricultural Administration at the De La Salle Araneta University as a COCOFED scholar.

Immediately after college graduation in 1981, he started his career in the government as a Community Organizer in the National Irrigation Administration until 1984. He became a Field Assistant in the International Rice Research Institute from 1984 to 1992. His love for teaching surfaced when he served as College Instructor in the Misamis Oriental State College of Agriculture and Technology from 1994 to 1995.

He has accumulated extensive field experience in research management since serving PhilRice in various capacities beginning in 1995. He rose from the ranks from Science Research Specialist (SRS) II to Chief SRS, to Director I. He led PhilRice Agusan on June 1, 1998 to December 31, 2002, then January 1, 2011 to December 31, 2017. Under his strong and dignified leadership, Agusan was recognized as Outstanding Station in 2013 and 2016. He became the DED for Administrative Services and Finance in 2018.

His competence, commitment, dedication, and untiring efforts were recognized repeatedly as he was awarded as PhilRice Outstanding Official in 2002, 2013, and 2016. He was also a recipient of the 2014 PhilRice Executive Director's Award. These awards are testimonials to his outstanding research management skills and leadership in PhilRice Agusan.

His being a servant-leader was magnified when he led the General Administrative Support Services (GASS) sector. He advocates principle-based decision-making and influences others to be patriotic, to serve the nation with integrity, humility, and excellence. He spearheaded various improvements in administrative processes and financial management that led to an increased efficiency and productivity.

He is also active in volunteer work and shares his knowledge on seed production, community organizing, and food systems management in various civic and non-government organizations. He is a member of the Kapatirang Plebeians, Philippine Association of Research Managers Inc., International Marketing Group, Knights of Columbus, and a volunteer of Gawad Kalinga.

He is happily married to Mila Casiño-Montecalvo and they are blessed with three children: Rufus Rey, Laya Lou, and Ace Angelo. The family resides in Claveria, Misamis Oriental.

# Institutional Development

## **Mr. ABNER T. MONTECALVO**

Deputy Executive Director for  
Administrative Services and Finance, DA-PhilRice

Behind the excellence of the Institute in rice R4D is its solid commitment to strengthening its internal capacity in light of ensuring continuous improvement. Its foremost goal is to reconstitute the Board of Trustees with 12 active members as the highest officials. The creation of the Procurement Management Division and RCEF-Program Management Office in 2019 increased the Institute's plantilla items, 332 at present or 18% of the total workforce including 1,505 (82%) contracted personnel. The restructuring plan submitted to DBM with proposed additional 741 plantilla positions (325 regular and 416 casual) is hoped to transform the whole picture of DA-PhilRice's workforce structure.

Government subsidies for the past five years showed an average of P684.0M, shared among eight branch and four satellite stations operating nationwide. The Institute moves toward obtaining higher government appropriation of not less than P1.0 billion and allocate at least 50% of its operating budget to R4DE programs, projects, and activities. The Institute's physical assets have been growing as evidenced by P1.1B net book value of Property, Plant, and Equipment, largely composed of land, infrastructures, facilities, machineries, and equipment. DA-PhilRice intends to procure more high-end equipment and facilities that can cope with the operational requirements of rice research undertakings and bulk of administrative transactions, acquire at least 16 more service vehicles to be deployed to the branch stations, and construct necessary building structures.

The present land area of the entire Institute covers a total of 581 hectares – utilized for office, facilities, grounds (18%); experimental area (14%); and seed production area (68%), both owned and leased. In aid of the RCEF-Seed Program, the Institute foresees the need to expand its seed production area and improve yield performance. To achieve this, the agency will acquire additional land properties which has started with DA-PhilRice Los Baños. Likewise, branch and satellite stations are pressed on to analyze yield constraints on the ground and devise operational strategies.

As a government corporate entity, DA-PhilRice generates income from selling rice seeds and rice-based products; providing hostel services; and commercializing intellectual property. Generated income augments some expenditures on capital outlay and overhead costs. As a corporation, there is a high pressure to increase income, hence the need to develop more aggressive and viable business strategies and venture into enterprises with high returns to attain not lower than P50 million annual net income.

Capitalizing on the existing management information systems that have significantly increased process efficiency, digital transformation and automation of processes are among the top priorities. DA-PhilRice sustains its ISO certifications on 9001:2015 (Quality Management Systems), 14001:2015 (Environmental Management System), and OHS 18001 (Occupational Health and Safety) that set standards to secure the employees' welfare, protect the environment, and provide quality products and services to its clients.



# WORKING COMMITTEES

COMMITTEE	CHAIR and MEMBERS
Steering Committee	ManCom members
Overall Coordinator	Joselito A. Kalaw
Invitation, Program, and Online Registration	Recille G. Aquino, Steffi L. Briones, Jennylyn Arang, John Brian A. Cali, Patricia Jean B. Duldulao, Melissa Grace Joy R. Angoluan, Amherstia Llou L. Rosas, and Glendaline L. Kalaw
Onsite Registration and Protocol	Laarnie L. Mandia, Lorelie Vee C. Domingo, ComRel and HRMO staffers
Editorial and Publications	Charisma Love B. Gado-Gonzales, Anna Marie B. Berto, and CSD staff
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IT and Online Platform Arrangement	Luis Alejandro I. Tamani and ISD staff
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Supplies	Abegail T. Donayre, Christopher Dave B. Musa and PPMU Staff
Food and Tokens	Amelia V. Morales, Patricia Jean B. Duldulao, Lynnden C. Lucas, Michael E. Reyes, and CSD Staff
Accommodation	Irmina R. De Gracia and Hostel staff
Evaluation	Corporate Services Division



The Philippine Rice Research Institute (PhilRice) is a government corporate entity (Classification E) under the Department of Agriculture. We were created through Executive Order 1061 on 5 November 1985 (as amended) to help develop high-yielding and cost-reducing technologies so farmers can produce enough rice for all Filipinos. With our “Rice-secure Philippines” vision, we want the Filipino rice farmers and the Philippine rice industry to be competitive through research for development (R4D) work in our central and seven branch stations, including our satellite stations, coordinating with a network that comprises 60 agencies strategically located nationwide.

## CONTACT US



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**DA-PhilRice**



**PhilRiceTV**



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