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COALITION FOR AGRICULTURE MODERNIZATION IN THE PHILIPPINES, INC.

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CAMP Welcomes its New Members

by *RICKY BRYAN BIAGTAN*

During the 6th CAMP Board of Trustees (Virtual) Meeting last June 25, 2022, two new members were added in the expert roster as Dr. Cesar B. Umali Jr. and Capt. Gaudencio C. Morales took their oath of membership.

DR. CESAR B. UMALI JR.

He is a Development Planning Specialist and led the preparation team of the National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP). With his 40 years of experience in rural-urban economic development, multi-sectoral project management, and theory of change-based monitoring and evaluation, he has been working with various government and non-government organizations, agencies, and institutions in different countries in Asia, Africa, and the Pacific. He is also a licensed environmental planner and has published two books and several journal articles on developmental planning.



CAPT. GAUDENCIO "JESS" C. MORALES

Capt. Jess Morales is the president of various maritime organizations such as the Filipino Association for Mariners Employment (FAME), Integrated Seafarers of the Philippines (ISP), and Philippine Association of Coastal and Inland Water Ferries, Inc. (PACIWFI). He is also a convener of the Movement for Maritime Philippines (MMP). Aside from these organizations, he is also the president of four manning agencies i.e. Astra Marine International Inc., Abosta Shipmanagement Corp., Alpha Shipmanagement Corp., and Alpheria Marine Services Inc.. He is also involved in the domestic shipping and ship-building business as president of Metro Ferry Inc. (Cebu), PMH Shipping and Marine Services Inc (Cebu), and IMP Shipyard and Port Services Inc. (Leyte).

"science and technology for agriculture and fisheries transformation"

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COALITION FOR AGRICULTURE MODERNIZATION IN THE PHILIPPINES, INC. (CAMP)

is a non-stock, non-profit organization whose members are men and women from agriculture, agribusiness, academe, government, professional groups, and international organizations that advocates and promotes sound agriculture policies and programs; massive utilization of climate-resilient and environment-friendly agricultural innovations; and, improved governance and management systems to help improve the livelihoods of Filipino farmers and fisherfolk to achieve a productive, profitable, globally competitive, modernized, and sustainable Philippine agriculture for inclusive national development.

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Photo from CEM Facebook page

Serving the National Purpose through Better Agriculture: An IPB-CAMP-CEM-sponsored Convocation

by RICKY BRYAN BIAGTAN

Last June 14, 2022, the UPLB-CAFS Institute of Plant Breeding (IPB) in collaboration with the Coalition for Agriculture Modernization in the Philippines, Inc. (CAMP) and the UPLB College of Economics and Management (CEM) hosted a convocation on "Making Agriculture Work to Better Serve our National Purpose" as part of the IPB's 47th Founding Anniversary celebration. Featured as keynote speaker, Hon. Joey Salceda talked about his "New Framework for Food Security and Agricultural Development".

Present in the convocation were IPB Director Dr. Fe M. Dela Cueva who highlighted the accomplishments of the Institute in ensuring food sustainability in the country; UPLB Chancellor Dr. Jose V. Camacho Jr. who emphasized the need for the next administration to prioritize and support the agriculture and fisheries sectors as a means for post-pandemic recovery; National Scientist Emil Q. Javier introduced the speaker and the relevance of his topic in realizing fast economic recovery; and other university administrators, faculty, and students.

Hon. Jose Ma. Clemente S. Salceda, a former governor and incumbent congressman of Albay, presidential economic adviser, and UN Global Champion for Climate Change Adaptation and Disaster Risk-Reduction, is known for his expertise in financial market and economics. In his talk, Cong. Salceda started with an overview of some of the pressing issues the country is facing today such as food insecurity and high prices, elevated debt level, international relations with giant economies, investment liberalization, labor and

employment, and healthcare system reforms, and energy security. With all these and an expected continuous increase in inflation rate, Cong. Salceda that a healthy populace and workforce can help in recovering from this crisis' effects. How can we make agriculture- source of food, nutrition, and of revenues of the country- be more productive?

Cong. Salceda's key suggestions on his speech on Food Security and Agricultural Development Framework were:

- (a) Restructuring agricultural support proportionally to production output and potentials of sectors e.g. universal tariff-funded sectoral support programs for corn, banana, coconut, and livestock;
- (b) Effectively managing and utilizing of water resources by creating an integrated water agency, expanding irrigation coverage, exploring micro-irrigation, and empowering irrigators' associations; and,
- (c) Encouraging technology transfer from local and international scientists to the end-users.

Different questions were also raised by the panelists - CEM Dean Dr. Agham Cuevas, CAMP President and Academician Dr. Eufemio T. Rasco Jr., and CEMSC Vice Chairperson Johann Punzalan. Key takeaways of the discussion were the needs to:

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Screencaptures from the UPLB Facebook livestream during the speech and panel discussion

by RICKY BRYAN BIAGTAN

Support Public R&D to develop technologies especially varieties with resistance or tolerance to biotic (disease and insect pests) and abiotic (drought, water-logging, extreme pH) to complement those of private sector's.

Turn to Crop Rotation to increase the yield, farmers' income and soil fertility preferably corn-legume rotation as suggested by a multi-locational study of IPB and DA-BAR.

Publicize Commercialized GM Technology
with lapsed patents to develop cheaper yet good
quality seeds and help in lowering the production
(seed) costs

Screencaptures from Dr. Salazar's presentation



Photos from UPLB Website and Business Diary PH

He served as the National Coordinator of DA's Corn Program (2002-2005).

Aside from authoring and co-authoring several scientific publications, conducting research projects in corn breeding, and teaching graduate courses in advanced plant breeding, he is also involved in extension programs related to corn production and utilization, the latest of which is in promotion of quality protein maize as a food staple to supplement rice. His works and contributions in corn production were recognized through the various international and local awards such as Outstanding UPLB Alumni Award (2016), LEADS Agri Research Award (2018) and Asian Scientist 100 (2019).

Recently, he was involved in a project related to digital agriculture and use of native corn varieties to develop biotic and abiotic stress-tolerant varieties and varieties with good nutritional properties using basic and advanced plant breeding techniques. He is also a Board Member of PhilMaize Cooperative.

The Role of Ship Building Industry in Uplifting Lives of Fisherfolks

by RICKY BRYAN BIAGTAN

Newly inducted member Capt. Jess Morales presented last June 25, 2022 during the 6th CAMP Board of Trustees (Virtual) Meeting how can the shipbuilding industry help improve the lives of small fisherfolks and fish-based value chain.

In his presentation, Capt. Jess emphasized the important role of maritime industry in the economic success of the country. A strong coastal and inland water transport system is necessary to support various economic sectors in an archipelagic setting like ours i.e. moving people and products; however, the Philippines has yet to achieve one.

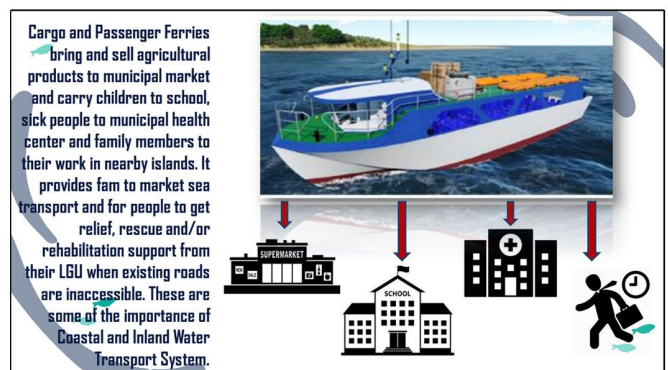
A decline in marine municipal and commercial fisheries production was observed last year. In Albura, Leyte, fisherfolk barely make profits even if they go beyond the three-mile municipal fishing zone with their wooden boats. Capt. Jess expressed the need "to explore more fishing grounds allowed by law to get our fair share of fish stocks in the ocean".

In doing so, we would also need to (a) refleet or modernize cargo/passenger and commercial fishing vessels and (b) enhance the ship building capability to produce fishing and shipping vessels at a lower cost.

However, this entails a huge capital and ferry operators and small fisherfolks cannot keep up with this immediately on their own; and policies are not favorable enough for local shipbuilders.

Capt. Jess also shared that IMP Shipyard and Port Services, Inc. tries to address this problem by building vessels below 50m LOA and offering them to ferry operators by bareboat charter or rent-to-own scheme. Moreover, IMP also plans to build commercial fishing vessels and offer them to Fishing Cooperatives in collaboration with BFAR. It can be offered in a rent-to-own scheme also depending on the capability of local fishing operators and willingness of investors.

Furthermore, to lessen the cost of vessel production, he suggested that the same tax reliefs and incentives given to foreign shipbuilders should also be given to local shipbuilders, as well as the creation of a duty-free hub where imported raw materials are coursed through.



Screenscapture from Capt. Jess' presentation

Notes for the New Secretary of Agriculture (First 100 Days)

by EMIL Q. JAVIER, National Scientist and CAMP Chairman

The most immediate challenges are physical availability of food and high food prices. The imperative to tame food-induced inflation is to produce more food and create jobs in the countryside. However, significant drops in farm productivity is expected due to high fertilizer and high fuel and transport costs. Since agricultural productivity and competitiveness are complex and multidimensional, these require no less than a whole-nation, whole-government approach.

OPPORTUNITIES IN THE SHORT TERM

Solutions are necessarily long-term and institutional and must have no shortcuts. The keys are to:

1. *Organize our small farmers and fisherfolk (SFF) into larger management units (cooperatives/farmers' associations) to attain economies of scale, and make sure they are formal, equitable players in the food value/supply chain.*

a. The immediate opportunity is to mobilize food production in the LGUs, particularly the 81 Governors. This is by calling a Food Summit with governors and institutionalizing the Province-led Agriculture and Fishery Extension System (PAFES) approach.

b. A second immediate opportunity is to mobilize/appeal to the corporate sector to rally to the flag, à la G.O. 47 style, to (a) enroll farmer coops and food-based Small and Medium Enterprises (SMEs) into their corporate food supply/value chains and/or (b) target them in their Corporate Social Responsibility (CSR) portfolios. Call a separate Food Summit with Taipans and Food and Beverage Majors.

2. *Endorse the new National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP) 2021–2030* for consideration by the President/Congress, and work with the legislated agriculture and fisheries councils to translate/ rationalize/ reconcile the strategic directional plans of NAFMIP into operations aligned with existing stakeholder-inspired commodity/industry road maps.

IMPROVING AGRI-FISHERY GOVERNANCE

1. Work closely with the Office of the President and Congress to *raise the budget for the Department of Agriculture (DA) under the General Appropriations Act (GAA) from 1.7% to 4.0%.* It is very important to submit additional budget requests for FY 2023, specifically for initiatives with immediate impacts (18 months). Also, seek President/Congress authorization/continuing appropriation of unspent balances from previous years (tens of billions pesos).

2. *Streamline procurement process in the DA;* unplug tens of billions pesos disallowances; negotiate/appeal directly with Commission on Audit (COA) for relief, otherwise DA will not be able to move even with additional GAA.

3. Executive Order (and budget) for the *national implementation of the PAFES* particularly the provision for national counterpart funds from DA to encourage LGUs to allocate more funds for agriculture from the Mandanas-Garcia IRA windfall.

4. Imperative to *cluster and consolidate small farms into larger, more efficient management units.* Cooperatives will be the principal mode, like our Northeast and Southeast Asian neighbors have demonstrated. Perhaps, rename DA into Department of Agriculture and Cooperatives (like the Ministry of Agriculture and Cooperatives of Thailand).



Re-establish a Bureau for Agri-industrial Cooperatives (BAIC) in the DA out of existing staff and facilities, plus immediate temporary part time detail of cooperatives specialists from the State Universities and Colleges (SUCs) (e.g. the Agriculture Credit Cooperative Institute (ACCI) at UP Los Baños).

Outsource business management and entrepreneurship expertise for strengthening cooperatives from non-government organizations (NGOs), private management service providers, corporate social responsibility (CSR), Philippine Business for Social Progress (PBSP), and SUCs.

5. A second best complementary synergistic move for farm consolidation (and strengthening of supply chains) is *promotion of contract growing as a business model for commodities beyond broilers, bananas, pineapple and tobacco*. This needs an Executive Order to provide incentives to integrators, including supermarket chains and major food and beverage corporations to help organize and source produce from cooperatives.

6. Relatedly, *create a joint task force with the Department of Trade and Industry (DTI), Department of Science and Technology (DOST), Department of Interior and Local Government (DILG) and Land Bank of the Philippines (LBP)* to strengthen food-based small and medium enterprises (SMEs) by linking them to markets, adding value to agricultural produce, and very importantly, creating more jobs instantly.

7. Similarly, work closely with the National Economic Development Authority (NEDA), Philippine Statistics Authority (PSA), Department of Trade and Industry (DTI), Department of Information and Communications Technology (DICT), and Philippine Institute for Development Studies (PIDS) to *put together a distributed but comprehensive, digital, real-time information system for agriculture, fisheries and natural resources* upon which to base legislation, policies and programs, and investments. This includes databases for farmers' registry, natural resources and climate/weather information, farm level statistics, market information, and international trade.

8. Move for *immediate rehabilitation and modernization of local market LGU "bagsakan's" and what is left of FTI Taguig; establishment of similar FTIs in the regions*.

9. *Rural credit, propose the following to the LandBank of the Philippines (LBP) Board:*

- a. Imposition of additional metrics on LBP management beyond the Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity (CAMELS) standards of Bangko Sentral ng Pilipinas (BSP) i.e. number of Small Farmers and Fisherfolks (SFF served), amount of loans, performance of borrowers, and repayment rates;

- b. Exempt LBP for the next 10 years from Government-Owned and Controlled Corporations (GOCC) requirement to remit half of annual earnings to the National Treasury, with which to cross-subsidize rural lending. (this needs authorization by the President with endorsement from the Department of Finance);

- c. Hire more rural credit officers; establish branches and/or mobile lending offices in underserved communities; digitalization for inclusive financing; and,

- d. Consider creating a LBP subsidiary exclusively dedicated to rural lending.

10. With Congress approval/Executive direction, *realign the ₱30 billion National Irrigation Administration (NIA) budget* to redirect more efforts to:

- a. irrigation systems' rehabilitation, maintenance, and provision of canal linings;

- b. irrigation management transfer (IMT) to the Irrigators Associations (IAs); and,

- c. embedment of more small irrigation units (pumps, shallow tube wells, farm ponds/reservoirs) in the large national/communal irrigation systems to promote diversification

11. *Designate an Undersecretary for Research, Innovation and Extension* to mobilize the science and academic community (the SUCs) and the corporate sector in the modernization, industrialization and export reorientation of the sector. *Designate and fund regional SUCs to provide technical and training backstop* to the DA-RFOs and PAFES.

12. *Curb smuggling of agricultural products and rigorously collect tariffs on legitimate imports.*

- a. Work closely with Finance, Customs, Department of Trade and Industry (DTI), Department of Interior and Local Government (DILG), and the Philippine National Police (PNP) to enforce laws/regulations;

- b. Automatic allocation of collected tariffs to agriculture modernization of affected sub sectors e.g. Rice Tariffication Law (RTL); and,

- c. Institute safeguard measures, as needed.

13. *Support accession to Regional Comprehensive Economic Partnership (RCEP) but conditional on assurances of congressional and executive support to doubling the budget for agriculture under the GAA (Item No. 1) and addressing smuggling (Item No. 12).*

14. *Address morale and competency issues of DA professional staff.* Many staff are still Officers-in-charge (OIC), temporary, and on contractual appointments after several years even though there are thousands of unfilled plantilla positions. DA must seek Department of Budget and Management (DBM) authorization to fill up these positions. Relatedly, *retool/re-empower DA professional staff with upskilling courses and graduate level training*, which had been taken for granted in recent years.

IMPROVING SUPPORT SERVICES AND OPERATIONS



FERTILIZERS

- The most immediate adverse impact of global fertilizer shortage and high fertilizer prices is lower applications of fertilizers.

- There is a need for government-to-government negotiations for fertilizers with Indonesia, China, Russia, Qatar, etc.

- Subsidized fertilizer vouchers must be immediately distributed to bonafide farmers to increase fertilizer usage (Alert: needs controls to avoid misappropriation)

- Production and distribution of bio-fertilizers must be scaled up (% BIOTECH-UPLB; DA-RFOs; Planters Products; private sector). This has already started but needs follow up and further scale up.



IRRIGATION WATER

- Raise water use efficiency from existing irrigation systems (1.8 million hectares); immediate target is to raise average cropping intensity to 2.0 (realize about 600,000 hectares of "missing hectares") Immediate repair and maintenance of irrigation canals (creates jobs in the countryside).

- Partial redirection of NIA budget to installation of small irrigation units (water pumps; Shallow Tube Wells (STW), small reservoirs) embedded in the large systems not only to raise yields but also to promote crop diversification and raise cropping intensity.

- Put in more effort to strengthen the Irrigators Associations (IAs); realign ₱1.0 billion for IAs (from current ₱100 million out of ₱30 billion).

- Require NIA and Bureau of Soils and Water Management (BSWM) to work closely together.



SEEDS

- For publicly-developed varieties (open-pollinated) : scale up of seed production operations of seed growers/cooperators with support from PhilRice, Institute of Plant Breeding (IPB-UPLB), Bureau of Plant Industry (BPI), Regional Field Units of the DA (RFOs), LGUs, SUCs (in progress).

- For privately-developed seeds (mainly hybrids) : provide subsidy for rice, corn, and vegetable hybrids to promote usage.



MECHANIZATION

- Our agriculture is grossly under-mechanized compared with China, Taiwan, Japan, South Korea.

- We have a long way to go but modest investments were made lately, particularly under Rice Tariffication Law; however, we need to institute more rigor and discipline in evaluation of placement and utilization of assets. We need to seriously reconsider support for domestic manufacturing.

- Quick gains can be achieved by supporting, capitalizing small time countryside service providers e.g. Filipino mechanics are very adept at servicing motorcycles.



ANIMAL & FISH FEEDS

- The global shortage of feeds and grains is exacerbated by the war in Ukraine.

- We need to scale-up production of cassava and sweet potato as part substitutes for corn; appeal to feed millers to promote/adopt contract grower schemes to assure markets for fresh roots (e.g. reactivation of San Miguel root crop schemes).

- Rapid scale up of protein-enriched copra meal (PECM) technology developed by BIOTECH-UPLB; beneficiated copra meal as less costly part substitute for imported soybean meal



REPOPULATION OF SWINE HERDS

- National swine herd significantly reduced by African Swine Fever (ASF) (~20%)

- ASF now almost fully controlled; can now safely repopulate but with caution; continue testing of vaccines

- Re-population by backyard raisers is problematic due to difficulty in maintaining quarantine.

- For now, it is better to direct more efforts to re-population by commercial raisers for faster turnaround, and also to mass produce weanlings for distribution to backyard raisers.

- However, commercial raisers need strict veterinary support, credit and insurance.



LIVESTOCK COOPERATIVES WITH FEED MILLS & GRAIN DRYERS FOR CORN

- The most successful and largest cooperatives in the country are livestock coops with feed mills.

- Upgrade selected livestock coops in the regions by providing them with feed mills.

- Link corn growers with the livestock coops by attaching grain dryers to the feed mills.

- Attention: Land Bank; NEDA to prioritize feed mills/grain centers for bilateral support (South Korea/Japan).



CORN SUBSECTOR

- To deal with high fertilizer prices, provide fertilizer vouchers, subsidies; promote bio-fertilizers as substitutes; also encourage/appeal to corn “financiers” to sustain support to corn farmers.

- Huge grain losses in September harvest require installation of grain dryers, linked with feed mills of livestock cooperatives.

- Promote corn rotation with grain legumes such as mungbean, peanut, and soybean; corn-legume rotation is more profitable, good for human nutrition, and soil health (based on research studies by BSWM, FNRI, and SUCs).

- To deal with low yield of white corn, use of commercial hybrids may be needed; however, there are no commercial F1 hybrids yet; in the meantime promote white varietal hybrids from IPB-UPLB.



DAIRY INDUSTRY

- Further accelerate build-up of national dairy herd; emphasis on artificial insemination.

- Provide more incentives to artificial insemination technicians for each hybrid animal produced; e.g. ₱2,000 bounty for every Carabao x Murrah hybrid produced.

- Import more purebred milk buffaloes from quality herds from India and Pakistan to further broaden breeding base.

- Develop total mixed ration (TMR) technology and industry to raise level of cow nutrition to consistently elevate milk yields.



SMALL RUMINANTS (SHEEP & GOAT)

- Quick population build-up with sheep and goats.

- Expand barangay animal dispersal program to provide incentives for retention of breeders.

- Sheep meatier, more sturdy and easier to raise; import more tropicalized hair-less sheep breeders under US PL 480.



COCONUT

- The Philippine Coconut Authority (PCA) is grossly understaffed; there is a need to empower PCA with more professional staff to spearhead implementation of recently approved CFIDP; enlist SUCs in the regions to immediately assist PCA.

- Prioritize fertilization and intercropping of existing coconut farms.

- Promote intercropping with annuals as well as with fruit trees and industrial crops; also integration of small ruminants.

- It is best to concentrate production in strategic locations into e.g. coconut/coffee towns; coconut/cacao towns; banana, pineapple to facilitate extension, product assembly and processing.

- Include replanting with PCA hybrids; set target of 10 million hybrid seed nuts per year; democratize coconut hybrid seed nut production by coconut farmer-entrepreneurs under supervision of PCA (on-going).

- Also provide technical, credit and market support to coconut-based SMEs, both to produce food and create jobs (DTI; DOST).

- Follow up with Department of Energy (DOE) and Department of Trade and Industry (DTI) raising of biodiesel transport fuel content from 2% to 5%; also requiring use of coconut oil for soap/detergent manufacture.



URBAN, PERI-URBAN, COMMUNITY, SCHOOL GARDENS (ALSO COMMERCIAL GARDENS)

- Urban gardening is the quickest way to produce cheap, nutritious food readily available to consumers in urban centers; 20% of population in Manila, Cebu, Davao,

Cagayan de Oro urban centers.

- It is easy to grow leafy vegetables, tomato, pepper, legumes in vacant lots, small plots and containers, and improvised protected cultivation.

- There is a need to produce seeds and planting materials and make these easily accessible to communities.

- BPI must provide leadership, with LGUs, SUCs, DepEd and NGOs helping in urban gardening and promotion of commercial greenhouses.



MUNGBEAN PRODUCTION

- Mungbean deserves special attention because it is very easy to grow, short maturing (65 days) and very nutritious (vegetable protein). Mungbean can be grown alone or after/between rice/corn crops.

- Major production areas are in Isabela, Pangasinan, Iloilo. Target planting of 100,000 hectares to replace 70,000 tons of annual mungbean imports.



CAPTURE FISHERIES (MUNICIPAL)

- Fuel subsidies and boats for small fishermen; more cold stores, ice plants in fish landing ports.

- Rehabilitation/establishment of more fish sanctuaries and marine protected areas (MPAs); Attention: LGUs, Bantay Dagat.



REVIVAL OF FISH CULTURE IN LAGUNA DE BAY

- To provide for immediate fish needs of the National Capital Region (NCR)

- Environment objections to fish culture in Laguna de Bay is grossly exaggerated; fish culture accounts for less than 1% contribution to lake eutrophication.

- Finalize zoning of Laguna de Bay (Attention: Laguna Lake Development Authority (LLDA); proceed with allocation of areas for fish culture to 10% of 90,000 hectares.

- Large fishpond operators in Laguna are willing to engage in 40–60 hectare fishponds joint ventures with fish cooperatives (scale up for efficiency and higher fish yields). Attention: LLDA; Bureau of Fisheries and Aquatic Resources (BFAR); LGUs; LBP.



FISH FRY & FINGERLINGS & MARICULTURE PARKS

- Shortage of fish stocks is a continuing major constraint in aquaculture.

- Funds are actually available for legislated fish hatcheries. It is better to implement legislated fish hatcheries as joint ventures with private sector; this is more efficient and more sustainable in the long run.

- Invest in selected mariculture parks (with LGUs and LANDBANK) to provide bases for national expansion of mariculture.



TROPICAL FRESH FRUITS EXPORTS

- Plan and work closely with private sector to further expand banana, pineapple, and mango exports; concentrate production in strategic areas and link with processing plants and packing houses.

- Obvious priority for scale up of mango production is in the west coasts (Ilocos, Pangasinan, La Union, Zambales, Bataan, Batangas, Mindoro); also Guimaras

- Identify and target for export expansion other tropical fruits like avocado, pili, jackfruit, etc.; assure export promotional support from DTI and Department of Foreign Affairs (DFA).

- Tactically, as much as possible intercrop with coconuts, for economic reasons and for environment conservation. Address the Fusarium wilt disease as it is an existential threat to our banana industry.



BROWN RICE & RICE -WHITE CORN MIX

- Brown rice and rice-corn mixtures are cheaper and healthier than pure white milled rice. Brown rice has 10% higher milling recovery

- Mixing white corn extends availability of rice

- NFA, FNRI, and PhilRice ought to lead in their popularization and commercialization



AGRO- & ECO-TOURISM

- Build in tourism considerations in farm development and rural extension initiatives

- With LGUs and Department of Tourism (DOT), help identify and set up more cultural, bed-breakfast farm resorts.



44TH ANNUAL SCIENTIFIC MEETING

PAGTANAW 2050: Agham Tungo sa Mabuting Kinabukasan
(FORESIGHT 2050: Science for a Sustainable Future)

13-14 July 2022 | Manila Hotel



Screencapture from NAST PHL livestream. from left to right
Acd. William Padolina, Chairman, 44th ASM Resolutions Committee;
Acd. Arsenio Balisacan, Secretary, NEDA; Usec. Renato Solidum Jr., OIC, DOST;
Mr. Rey Anthony Chua III, Chairman, Science and Information Technology Committee, FFCCCII



44th ASM's Resolution: *Pagtanao hanggang sa Pagkamit* by RICKY BRYAN BIAGTAN

The National Academy of Science and Technology held its 44th Annual Scientific Meeting (ASM) last July 13-14, 2022 at the Manila Hotel. Since 1978, the Annual Scientific Meeting has been an avenue in presenting groundbreaking researches in the field of Science and Technology, recognizing young Filipino scientists, and providing government and private sector science-based solutions and policies. This year, with the theme PAGTANAW 2050 : Agham Tungo sa Mabuting Kinabukasan, ASM has formulated a resolution that guides both the government and non-government entities in realizing the PAGTANAW 2050 goal - prosperous, archipelagic, maritime nation by 2050.

The recently drafted PAGTANAW 2050 was the first DOST-funded multidisciplinary, interdisciplinary, and transdisciplinary project that foresees the development of the Philippine Science, Technology, and Innovation and challenges that may arise along the way. As part of the steering committee, CAMP Chairman and National Scientist Emil Javier pushed to emphasize the archipelagic and maritime features of the country while CAMP President Acd. Eufemio Rasco Jr., National Scientist Dolores Ramirez, Acd. Ruben Villareal, and Acd. Reynaldo Villareal helped in preparing the food systems and nutrition chapter.

Acd. William Padolina, Chairman of the 44th ASM Resolutions Committee, presented the said resolution which is as follows:



Republic of the Philippines
Department of Science and Technology
NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY

44th ANNUAL SCIENTIFIC MEETING
Theme: **PAGTANAW 2050: Agham Tungo sa Mabuting Kinabukasan**
(FORESIGHT 2050: Science for a Sustainable Future)
13-14 July 2022

RESOLUTION

WHEREAS, a thorough understanding and appreciation by all Filipinos of the current and emerging developments in science and technology (S and T) are necessary to be economically competitive and to pursue sustainable development;

WHEREAS, “Foresight in science, technology, and innovation” is now being adopted by many countries to craft a forward-looking S and T agenda which anticipates trends that are driving the preparations for the challenges and opportunities of the future;

WHEREAS, the population of the Philippines is projected to reach 145 million by 2050 which along with other major challenges, such as climate change, serve as significant drivers for science, technology, and innovation;

WHEREAS, upon the initiative and with the support of the Department of Science and Technology (DOST), PAGTANAW 2050, “The Philippine Foresight in Science, Technology and Innovation,” was completed by the National Academy of Science and Technology Philippines (NAST PHL), as the first multidisciplinary, interdisciplinary, and transdisciplinary endeavor in the Philippines to conduct foresight in science, technology and innovation;

WHEREAS, PAGTANAW 2050, is a living document that needs continuous updating in collaboration with local and foreign foresight expertise to create awareness of the current and emerging developments in science and technology that can be harnessed to achieve a “Prosperous, Archipelagic, and Maritime Nation by 2050;”

WHEREAS, NAST PHL in completing PAGTANAW 2050 harnessed the talents of relevant stakeholders by forming multidisciplinary, interdisciplinary and transdisciplinary teams to provide the information and insights to enhance the resilience and agility of the Filipino people towards the realization of its aspirations;

WHEREAS, the Strategic Investments Priority Plan, approved by President Duterte under Memorandum Order No. 61 dated 24 May 2022, has been aligned with PAGTANAW 2050, the Philippine Development Plan 2017-2022, and the Inclusive Innovation Industrial Strategy of the Department of Trade and Industry;

WHEREAS, there is an urgent need to increase the talent pool constituted into teams that will periodically update and implement PAGTANAW 2050 in the light of current and emerging challenges and opportunities;

WHEREAS, the shortage of expertise to deal with the local concerns related to the operational areas was identified during the Regional Science Meetings and discussions with selected Regional Research, Development, and Innovation Councils;

NOW, THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED, that both the government and the private sector:

1. Take immediate steps to accelerate and increase investments in time, talent, and funding for PAGTANAW 2050 to enable a sustainable and inclusive development agenda that gives due consideration to the diversity of our maritime and terrestrial resources and opens the doors of opportunity to the scattered communities in the many islands of the archipelago.
2. Institutionalize a foresight process at all levels of governance and to ensure continuity in the implementation of the PAGTANAW 2050 that will guide the transitions towards a truly sustainable development future such as the shift towards an inclusive and competitive maritime and circular economy.
3. Intensify and expand the development of highly trained and skilled workforce in STI, by ensuring that the basic needs of the Filipino youth are met, especially in food, nutrition, health, and access to quality basic, higher, graduate, and vocational-technical education.
4. Initiate immediate measures to improve the quality of teaching and learning in Science, Technology, Engineering and Mathematics (STEM) in basic, higher, graduate, and vocational-technical education, including in the training and recruitment of STEM teachers.

5. Exhort the relevant higher education institutions to initiate programs and establish academic units dedicated to maritime and oceanographic studies.
6. Institute measures to recruit, attract and retain talent that will assess, design, communicate, and implement, in a timely manner, the appropriate technologies and tools in science and technology and provide insights to anticipate and prepare to deal with complex problems in all the 12 operational areas through interdisciplinary and transdisciplinary endeavors:
 - i. Blue Economy
 - ii. Governance
 - iii. Business and Trade
 - iv. Food Security and Nutrition
 - v. Health Systems
 - vi. Energy
 - vii. Water
 - viii. Environment and Climate Change
 - ix. Shelter, Transportation, and Other Infrastructure
 - x. Digital Transformation by Harnessing Information and Communications Technology
 - xi. Science Education and Talent Retention
 - xii. Space Exploration
7. Facilitate the deployment and presence of talent in the regions and the Local Government Units (LGUs) that will develop local versions of foresight taking into account the unique local conditions as follows:
 - i. Plan and manage expertise development soonest by affirmative action in upskilling local talents preferably with full support of the local governments.
 - ii. Organize consortia and networks to improve accessibility of quality basic, higher, graduate, and vocational-technical educational institutions to produce a workforce that can optimize the use of our terrestrial and maritime resources.
 - iii. Upgrade the skills of LGU-based agriculture and fisheries extension workers and barangay health workers.
 - iv. Establish an Industrial Extension Network especially for Micro, Small, and Medium Enterprises.
 - v. Ensure active engagement of the Social Sciences in foresight exercises and impact assessment.
 - vi. Inculcate awareness of trends, shocks, risks, uncertainties and adjust foresight in a timely manner,
8. Operationalize a system of results-based monitoring and evaluation to keep track of the progress of PAGTANAW 2050 by the public and private sectors and Philippine society, in general.

FURTHER RESOLVED that copies of PAGTANAW 2050 and this resolution be furnished to all government departments and offices, the Philippine Senate and the House of Representatives, professional organizations, private business organizations, public and private higher education institutions, non-government organizations, civic and religious organizations.

DONE this 14th day of July 2022 in Manila, Philippines.

Signed: (Members of the 44th ASM Resolutions Committee)



After the presentation, representatives from different organizations/ agencies responded upon receipt of the resolution. Mr. Rey Anthony Chua III, Chairman of Science and Information Technology Committee of the Federation of Filipino-Chinese Chambers of Commerce and Industry, Inc. (FFCCCII) emphasized the need more youth in S&T in order to achieve development and address crises. Acd. Arsenio Balisacan, Secretary of National Economic Development Authority (NEDA), on the other hand, said that we need not just be a part of the global value chain but be a prime mover along it. Lastly, Usec. Renato Solidum Jr, OIC of the Department of Science and Technology (DOST), underscored the value of collective efforts in realizing the resolution's recommendations and consequently, the vision of Pagtanaw 2050.