



# FISEARCH

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**“Generating enough supply of both raw and value-added products from the sea and inland waters should (also) be one of the major outputs of the agency’s programs”**

*- DA Sec William Dar*



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**Cover photo:**

Ms. Nomie Garcia feeding milkfish in Pangasinan. Read her story on page 10.

Photo credit:

Ms. Nomie Garcia & Mr. Francisco Santos

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## From the Interim Executive Director



**W**elcome to our new and improved FiSearch, NFRDI's official newsletter.

*It has been a while since the last publication of FiSearch, and now, we bring to you this revival issue that came into fruition at a critical stage of our transformation.*

*After long years of waiting, NFRDI just received its Notice of Organization, Staffing and Compensation Action or NOSCA on October 14 of last year. Just as we were attempting to fill the gaps in our organization, we were halted by a more turbulent environment in the first quarter of CY 2020.*

*We were startled by the eruption of Taal Volcano in early January, and now, with COVID-19 pandemic that has infected and taken its toll on many lives across the globe. Yet, despite these dilemmas, we have proven our resilience and creativity. Even under a Work-from-Home scheme, NFRDI managed to create strategies that bridge us and continue to keep us together, though we are apart.*

*I am proud that amid the COVID-19 pandemic and Enhanced Community Quarantine or ECQ, we were able to come up with a "refashioned" newsletter that will connect NFRDI to its clients, both internal and external. This is how NFRDI is greatly committed to delivering excellence and aspiring to continuously improve its services even with the hurdles.*

*Rest assured that we will do our best towards increasing the platforms for connecting with you to bring to your doorstep updates of our serious effort to achieve the DA Secretary's vision for a Masaganang Ani at Mataas Na Kita in the agri-fishery sector. In the face of the current crisis, let us join hands and work together to heal as one.*

*Furthermore, let me take this opportunity to thank our former NFRDI Executive Directors for their contributions to where we are now. Their encouragements, inspiration and extraordinary ability saw us through in our journey towards the achievement of our vision for the fisheries sector. However, without the support and counsel of our Governing Board, it would have been impossible to concretize our plans. All the more, we are grateful that our DA Secretary, William D. Dar, provided us well-defined vision where we anchored our plans to better serve our stakeholders. But above all, we thank our GOD ALMIGHTY whose presence and Divine Intervention have always guided us in dealing with the challenges that come our way.*

*Thank you and may you continue to enjoy reading our newsletter.*

*Lilian C. Garcia*

**Dr. LILIAN C. GARCIA, CEO V**



**From the Undersecretary of Fisheries, DA  
Bureau Director, BFAR &  
Current Chairperson, NFRDI Governing Board**

**O**ur resiliency as Filipinos has been tested throughout the years. With the emergence of the CoVID-19 pandemic, we are once again called to remain resilient and surpass this crisis together as a nation.

Amid community quarantine preventing the spread of pandemic, the government through the Department of Agriculture’s Bureau of Fisheries and Aquatic Resources has implemented measures ensuring unhampered fish supply. This is in line with the strong resolve of the Department of Agriculture, in partnership with the fishery sector, to provide our communities with easy access to safe and affordable food while the whole nation faces health crisis situation.

We cannot afford to put our services to the public in halt. Essential operations including food security-focused research activities must continue. This is the very reason why the DA-BFAR’s research arm, the National Fisheries Research Development Institute unceasingly fulfills its mandate on industry-based research activities prioritizing commodities such as tuna, tilapia, bangus and shrimp among others.

More than ever, now is the time for people observing physical and social distancing to acquire new research-generated knowledge outside of the usual face to face mass learning set-up. Hence, the continuous stream of communication is vital in efficiently delivering our services and seamlessly reaching out to our clients’ needs as we transition to the “new normal”.

The publication of Fisearch Newsletter is timely and relevant while we seek to inform and educate the public about scientific findings that are useful to everyday life. It will also serve as an effective platform to engage our stakeholders in fisheries development under the “New Thinking” principle of the Department Agriculture.

I wish to congratulate the NFRDI management and its committed staff who generously shared their time and talent producing this Fisearch Newsletter. May you continue to conceive more unique ideas that would realize the positive impact of fisheries research in the life of ordinary fisherfolk – and create a ripple effect benefitting the whole fishery sector.

*Maraming Salamat at Mabuhay ang Sektor ng Pangisdaan!*

**Commodore EDUARDO B. GONGONA**

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**From the Secretary**  
**Department of Agriculture**

**O**n behalf of the Department of Agriculture family, I commend the **National Fisheries Research and Development Institute (NFRDI)** for coming up with this edition of **FiSearch** during the time of the new coronavirus of Covid-19 pandemic.

The revival of this publication is indeed timely, not only as it serves as the chronicler of NFRDI's activities and accomplishments being the research arm of the DA-Bureau of Fisheries and Aquatic Resources, but also as a forum to discuss our strategies during this challenging time when we are exhausting all efforts to help provide adequate, accessible, and affordable food for every Filipino family.

In fact, the implementation of initiatives "Urban Aquaponics Project" and the "Enhanced Aquaculture and Sustainable Capture Fisheries in Inland Water" all form part of the core blueprint dubbed *Ahon Lahat, Pagkaing Sapat* or ALPAS COVID-19, popularly called *Plant, Plant, Plant* program.

The country's agriculture sector is expected to play a major role in pursuing a socio-economic response framework to the Covid-19 pandemic recovery efforts. Through all these, we call on NFRDI to adopt and carry out inclusive and market-oriented development approaches in all your current and future researches, guided by the vision of a food-secure Philippines with prosperous farmers and fisherfolk.

Rest assured that the Department will continue to support *FiSearch* and all your other undertakings to sustain the development and modernization of the agrifishery sector for national food security and a more meaningful socio-economic progress.

We therefore look forward to reading more issues of *FiSearch*. Congratulations and more power! *Mabuhay!*

*William D. Dar*  
**WILLIAM D. DAR, Ph.D.**  
 Secretary

***Editor's Note***

The new normal.

This is what everybody had been hearing for the past few days since the implementation of the Enhanced Community Quarantine or ECQ on March 16, 2020 due to COVID-19 pandemic. Social distancing. Quarantine pass. Work from home.

Working from home (WFH) is not actually a new thing. Camarines Sur Second District Representative Luis Raymund "LRay" F. Villafuerte revealed that, 28% of companies in the country are already implementing this scheme in 2019 (The Philippine Star - May 13, 2019). The Business Mirror published in April 2020 stated that, 87% of the employees are ready to shift to WFH when required by their employers. (Business Mirror, April 2020)

Before COVID-19, WFH was already being pushed by Republic Act (RA) 11165 (An Act Institutionalizing Telecommuting as an Alternative Work Arrangement for Employees in the Private Sector) as one of the best and innovative ways of maintaining the productivity of both employers and employees in light of worsening traffic in major cities across the country. The Act also promotes work-life balance to address the demands of the changing labor demographics.

At-home workers experience 25% less stress according to the study conducted by Staples in 2011 (Staples, 2011) which may account for the 77% performance increase reported by CoSo Cloud in 2015 (CoSo Cloud, February 2015). These workers were also less likely to quit their job. (The Quarterly Journal of Economics, November 2015; Harvard Business Review, January 2014).

With the implementation of the ECQ, government workers were forced to stay home and were expected to work from home. NFRDI is no exception. Being a research institute, this is one of the most ideal setup for researchers comprised mostly of millennials needing to strike work-life balance and flexible work hours to ensure productivity according to the study of Bentley University.

Under the present circumstances, WFH scheme can only last until the ECQ has been lifted. An amended RA 11165 that would include government agencies whose function is non-frontline service in nature would be ideal for an agency like NFRDI. Until then, we would still be a part of the population that must brave all the elements on our way to our workstations. ○

*Watch out for our June Issue...*

- \* Estimating fish loss during catch
- \* Implementation of BFAR's National Organic Aquaculture Program
- \* Ciguatera fish poisoning in the Philippines: Do reef fishes really contain toxins?
- \* Femininity is Power: Breaking the pedestal

*... and much more!*



## Ways Forward Highlighted in the 2nd GB Meeting



Undersecretary for Fisheries and BFAR Director Eduardo B. Gongona (in checkered polo, center), also NFRDI's Governing Board Chairperson, presided the 2nd GB meeting

The 2nd Governing Board (GB) meeting for CY2020 of the Department of Agriculture-National Fisheries Research and Development Institute (DA-NFRDI) was held last March 11 at the Freshwater Fisheries Research and Development Center (FFRDC) in Butong, Taal, Batangas.

The meeting focused on the so-called *Ways Forward* which consists of issues and instructions raised by the Department of Agriculture (DA) Secretary William D. Dar during the 1st GB meeting held last January 9. Essentially, *Ways Forward* is NFRDI's blueprint towards *Masaganang Ani at Mataas na Kita* vision of the DA Secretary for the agri-fishery sector. According to Secretary Dar, this vision seeks to enrich the farmers and fishers not only through their increased production, but also for them to be more prosperous. To this, the Secretary, during the meeting, called on Bureau of Fisheries and Aquatic Resources (BFAR) and NFRDI to be guided by DA's specific target to double the income of fishers and farmers in the next five years.

Immediately, Dr. Lilian C. Garcia, NFRDI's Interim Executive Director (IED), set the pace to concretize actions that will appropriately address the Secretary's directives. Thus, during the 2nd GB meeting, Dr. Garcia updated the GB on initiatives undertaken by the agency and presented NFRDI's platform that will contribute towards achieving the Secretary's vision.

The IED reported the reconfiguration/realignment of NFRDI's physical and financial targets and presented the new line-up of R&D projects for CY 2020. The realignment took into consideration projects that will yield not only abundant harvest but also high income.

For the Big Brother (Commercial) - Small Brother (Municipal) partnership in capture fisheries, the IED informed the group of the approved proposal for this venture. Drafting of a Memorandum of Agreement that will highlight job generation, opportunities for postharvest and food security is now underway and will be facilitated soon.

Another Way Forward is the assessment of the Fishpond Lease Agreement (FLA) program in the country. There are 57,000 hectares of FLAs with current lease at an estimated amount of Php1,500.00 per hectare per year, and by law, this is one source of budget for NFRDI's R & D for aquaculture. The IED reported that NFRDI has coordinated with BFAR-Fisheries Regulatory and Licensing Division in the finalization of the proposal on FLA Assessment last January 27. The GB urged the immediate identification of cancelled or terminated FLAs to see if these are suitable for aquaculture or silviculture. Such move will help contribute to fisheries productivity.

Dr. Garcia also updated the GB on: the public-private program for aquaculture; harmonization and strategic planning of fisheries research and development in the country; National Stock Assessment Program; NFRDI projects; project collaborations with BFAR national centers; NFRDI's strategic communication plan; proposed programs/projects and budget for FY2021; and, NFRDI National Centers Expansion Program.

Led by its Chairperson, DA Undersecretary for Fisheries and BFAR National Director Eduardo B. Gongona, the GB was toured by Dr. Garcia in the FFRDC Complex which now houses newly-constructed and renovated structures, laboratories, offices and dormitory.

The GB lauded NFRDI's efforts and the meeting successfully concluded with the GB's signing of a Resolution approving the submission of policy recommendations to DA-Office of the Secretary (DA-OSEC). The policy recommendations which address sustainability gap and market of targeted commodities, were the results of four (4) Value Chain Analysis (VCA) projects on the following commodities: *maliputo* (*Caranx ignobilis*), *tawilis* (*Sardinella tawilis*), marine and freshwater ornamental fish industry in the Philippines. As of this writing, the proposed policies have already been submitted to DA-OSEC for implementation, with BFAR as lead agency. (MDAlonte)

## NFRDI R&D Priorities Reshaped

The NFRDI will allocate a total of Php24 million to aquaculture research and development activities in compliance with the directive of DA Secretary William D. Dar. Said amount will be distributed to the six (6) national centers under the Bureau of Fisheries and Aquatic Resources (BFAR) National Centers, namely: National Freshwater Fisheries Technology Center (NFFTC); National Integrated Fisheries Technology Development Center (NIFTDC); National Integrated Fisheries Technology Center (NIFTC); National Brackishwater Aquaculture Technology Center (NBATC); National Seaweeds Technology Development Center (NSTDC); and the National Mariculture Center (NMC). Through this collaborative agreement, each of the six BFAR National Centers will be awarded four (4) million each for their desired projects. Below are the projects of the different BFAR National Centers:

### NFFTC:

- Refinement/Development of Induced Breeding and Larval Rearing of Mudfish and Climbing Perch
- Technology Verification of Low-cost Feed for Fry Rearing of Tilapia
- Culture and Breeding Evaluation of Jungle Perch

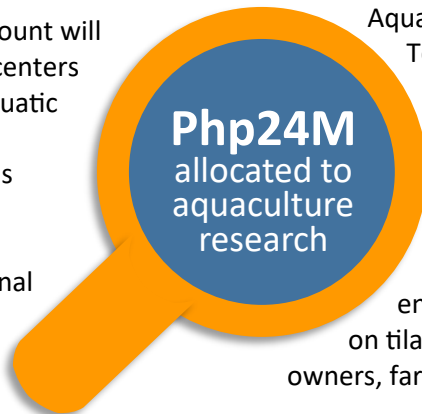
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## Small-Scale Farmers Trained on Tilapia Culture

NFRDI, in collaboration with the Bureau of Fisheries and Aquatic Resources-National Freshwater Fisheries Technology Center (BFAR-NFFTC), Regions 1 and 3 and Villar Sipag Foundation, organized a training on tilapia culture for thirty-five (35) small-scale farmers from regions CAR, 1, 2, and 3.

The training, which was held last February 11-13 at the BFAR-NFFTC, aimed to enhance the knowledge and skills of the trainees on tilapia culture. The participants were fishpond owners, farm managers and cooperative officers who

*Continued on page 10*



Senator Cynthia A. Villar (2<sup>nd</sup> from left, 1<sup>st</sup> row), together with USec for Fisheries and BFAR Director Eduardo B. Gongona (in white polo shirt) and Regional Director Wilfredo M. Cruz (left side of Sen. Villar) watch participants in their practical exercise.

## NFRDI Harmonizes with PCAARRD

Department of Agriculture (DA) Secretary William D. Dar directed the NFRDI and the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCAARRD) to “collaborate to have the same monitoring and evaluation and data management systems...” The call was made during the first Governing Board Meeting held last January 9 at the DA Conference Room.

The Secretary believes that research will continue to contribute to find better and more productive ways to increase farmers’ productivity and profitability. Anchored on this

belief and on his *Masaganang Ani at Mataas na Kita* vision for the agriculture and fisheries sectors, he instructed the two agencies (NFRDI and PCAARRD) to share information.

This sharing of information will help PCAARRD to achieve a ‘programmatic convergence’ of projects not only for fisheries but also for agriculture commodities. PCAARRD sits as a member of NFRDI’s Governing Board. One of its primary functions is to set directions for research to ensure a well-defined national R & D program.

In response, NFRDI convened a meeting with PCAARRD last February 5. It was attended by PCAARRD’s Dr. Reynaldo V. Ebor, Mesdames Mari-Ann M. Acedera, and Procy B. Sobreviñas. The two

agencies agreed that NFRDI will come up with a consolidated list of projects (completed and ongoing) to be compared with that of PCAARRD-funded projects to determine existing initiatives, gaps, needs, and to avoid duplication of researches. It was further agreed that, the current NFRDI organizational plan will be included in the Harmonized National Research and Development Agenda (HNRDA) of PCAARRD, and the output will be among the highlights in the forthcoming National Research and Development Conference.

Dr. Ebor also committed four (4) slots of scholarship for either MS or PhD to interested NFRDI personnel who meet the eligibility criteria. *(JLCaser)*



## NFRDI Supports Lobster R&D Project

The Bureau of Fisheries and Aquatic Resources (BFAR) is pushing for the establishment of a sustainable and export-oriented lobster industry in the country.

Lobster is among the priority high-value commodities identified by BFAR and the Department of Agriculture (DA). As noted by Mr. Joseph Martin Borrromeo, NFRDI Governing Board member, trades that involve juveniles and lobster products in the country have not been prioritized. He added that, “exact records could not be determined in the development of the lobster industry since most of the transactions are in the black market.”

Mr. Borrromeo further mentioned that a Fisheries Administrative Order (FAO) that will regulate the trade of

“baby lobsters” (*puerulus* stage) including the juveniles, is now being finalized by DA.

“Baby lobsters” or seedlings are produced in millions every year in Mati, Davao Oriental, Surigao, and Zamboanga. These places are considered the main lobster-producing areas in the country. Particularly, in Lingig and San Agustin, Surigao del Sur, supply of “baby lobsters” (*puerulii*) abound.

Currently, lobster juveniles are being exported in large scale to Vietnam for nursery culture. Only a few are being farmed locally.

With capture fisheries having reached its peak in production, aquaculture seems to be the last frontier of

*Continued on page 15*



Cagayan Province stakeholder representatives with BFAR PFO assess their area using FishVool (@MDSantos)

## FGD Held to Validate FishVool Data and Create Vulnerability Maps for Capture Fisheries and Aquaculture Sectors

A Focus Group Discussion (FGD) was held to validate the collected data on capture fisheries and aquaculture using the Fisheries Vulnerability Assessment Tool, or FishVool. As a vulnerability assessment tool, FishVool is simple and offers an effective data collection tool for identifying areas that are highly vulnerable to climate change impacts. During the FGD, experts from the NFRDI were able to generate vulnerability maps for the capture fisheries and aquaculture sectors in the six provinces (Albay, Catanduanes, Camarines Sur, Camarines Norte, Masbate and Sorsogon) of the Bicol Region who participated in the activity.

Dr. Mudjekeewis D. Santos, NFRDI’s Scientist, Academician and Editor-in-Chief of *The Philippine Journal of Fisheries* who currently heads the Training Division of NFRDI, served as the resource person in the activity. He was supported by his staff from the Training Division: Gilda Joannah A. Calderon, Mark Christian C. Bermejo, and Sherwin B. Santos. (MDAlonte)

## Association of Small and Medium Scale Commercial Fishing Operators Supports Project on Post-harvest Losses Assessment

The Association of Small and Medium Scale Fishing Operators, through its President, Ms. Leonida Jusay, has expressed support to the activities of NFRDI and BFAR in assessing post-harvest losses in medium scale commercial fishing (ring net and purse seine) in a meeting on March 4, 2020. Ms. Jusay committed the association’s support in the presence of: Dr. Ulysses M. Montojo, Chief of NFRDI’s Post-Harvest Research and Development Division (PHRDD); Mario Ruinata, Chief, Research Division of BFAR Region 7; Edgardo Delfin, Provincial Fisheries Officer (PFO) of Cebu; and representatives from the Bisayas Alliance of Fisherfolk and Operators for Reform (BAFOR) Incorporated, Cebu-Bohol.

Reduction of food losses along production and

*Continued on page 15*



Dr. Ulysses M. Montojo (at the far end of the table), Mr. Mario Ruinata (Chief, Research Division of BFAR Region 7), Mr. Edgardo Delfin (Provincial Fisheries Office, Cebu), and representatives from Bisayas Alliance of Fisherfolk and Operators for Reform (BAFOR) Incorporated.

## Now, Officially NFRDI

After more than two decades, incumbents of the NFRDI were officially appointed to their respective positions and assumed duty effective January 16, 2020. Their appointments were signed by the Department of Agriculture (DA) Secretary, Dr. William D. Dar.

Since its creation in 1998 (by virtue of Section 82 of RA 8550 as amended by RA 10654 or better known as the Philippine Fisheries Code of 1998), the Institute became operational through an interim structure. The Interim Executive Director (IED), mid-managers and personnel were seconded staff from the Research Division of the Bureau of Fisheries and Aquatic Resources (BFAR). Thus, researchers have been designated to hold administrative functions on top of their official duties.

When the Institute finally received its Notice of Organization, Staffing, and Compensation Action (NOSCA) from the Department of Budget and Management (DBM) on 14 October 2019, moves were immediately started for the placement of the incumbents to their comparable positions. The NOSCA was the fourth and last document being required by the Civil Service Commission (CSC) before NFRDI can proceed with the placement.

Dr. Lilian C. Garcia, the Institute's IED, set out to lead the strategic moves to finally achieve the placement of the



**Dr. Lilian C. Garcia, DA-NFRDI Interim Executive Director, led the oath-taking of incumbents.**

interim staff. Dr. Garcia drove her staff, especially those from the Human Resource Management Unit (HRMU) to the limits to achieve tangible results.

An election for the 1<sup>st</sup> and 2<sup>nd</sup> level representatives who would constitute the Placement Committee was held in the presence and guidance of Ms. Cynthia Luga, HRM Officer of BFAR thru nomination and secret ballot. Elected members were Dr. Ulysses M. Montojo (elected 2<sup>nd</sup> level representative), Myla M. Muyot (elected 1<sup>st</sup> level representative), and Rene Ledesma ((Employees' Union representative). While Dr. Mudjekeewis D. Santos, and Ma. Salvacion F. Ferrer were the other members to the

*Continued on page 11*

## TPJF: Its Successful Revival and Milestones

The Philippine Journal of Fisheries (TPJF) is the official joint publication of the Bureau of Fisheries and Aquatic Resources (BFAR) and the NFRDI. It is a semi-annual, open-access journal that accepts full paper, review articles, and short communications, among others, on relevant topics covering all aspects of fisheries, both in basic and applied sciences.

The inception of TPJF in the early 1950s was among the



**Relaunching of TPJF during the 7th Fisheries Scientific Conference in Tagaytay City with the then NFRDI Interim Executive Director Drusila Esther E. Bayate, CESO IV (in white blouse)**

major leaps of enthusiasm in fisheries research. Its pilot issue appeared with the publication of the January-June 1951 Volume 1 Nos. 1 and 2. It had already published 23 volumes when its circulation ceased in 1992.

In 2015, NFRDI created a project to revive TPJF with the guidance of the Interim Executive Director that time, Ma'am Drusila Esther E. Bayate. That same year, the organization of the journal administrative board started with the appointment of the current Editor-in-Chief, Dr. Mudjekeewis D. Santos, and the creation of the editorial board members composed of local and international experts in the field of fisheries science. TPJF was relaunched in Tagaytay City during the 7th Fisheries Scientific Conference held on September 29-30, 2016.

The following year, two special issues of TPJF were published: *Fisheries Resources and Ecological Assessment of Manila Bay 2012-2015* and *Pollution in Manila Bay Aquaculture Farms*, which served as TPJF Vol. 24 Nos. 1 and 2, respectively. To date, TPJF Volume 25 Nos. 1 and 2 has been published, and more are yet to come.

Since its revival, TPJF sought necessary journal accreditation and indexing to keep up with the standards of national and international journals. NFRDI now has its own digital object identifier (DOI) prefix, which can be used in all of its publications. TPJF articles are now accessible in the Aquatic Commons website.

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## SSQS Rendered Frontline Service During Taal Volcano Eruption

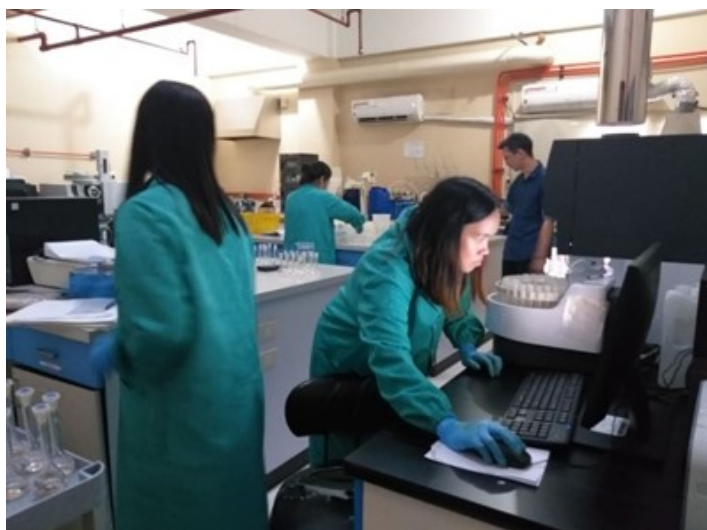
The National Fisheries Research and Development Institute - Seafood Safety and Quality Section (NFRDI-SSQS) was in the frontline service when Taal Volcano erupted last January 12.

Due to Taal Volcano’s eruption, thousands of families living within the vicinity were greatly affected since most of them derive their livelihood from the lake itself. At risk were around 6,000 fish cages in the lake, with an estimated production loss of 15,033 metric tons.

Thus, when the Department of Agriculture (DA) gave instruction to conduct water quality tests at Taal Lake, the NFRDI-SSQS responded by working with the Bureau of Fisheries and Aquatic Resources Region IV-A (BFAR IV-A) on sulfur, sulfates, minerals and heavy metals analyses in tilapia (*Oreochromis niloticus*) and water samples. NFRDI also tapped the Philippine Coconut Authority (PCA) and a private laboratory for parallel testing.

A total of seventy three (73) samples were submitted consisting of eleven (11) tilapia samples, one (1) sediment, and sixty one (61) environmental water collected from three (3) sampling stations: Aya, Talisay; Quiling, Talisay; and Ambulong in Tanauan, Batangas.

Despite the dangers posed by unpredicted and recurring earthquakes in the vicinity of Taal Volcano, NFRDI and BFAR IV-A staff were unfazed and continued taking



NFRDI-SSQS team during sample analysis

daily samples for five (5) consecutive days since January 13 (the day right after the major eruption).

Based on the analyses of the week-long results gathered by BFAR IV-A and NFRDI after the eruption, BFAR released an official statement that fish from Taal Lake is safe for human consumption, as long as properly cooked (Philstar.com, January 20, 2020). This allayed the public’s anxiety whether tilapia from Taal was still fit for human consumption. *(FDCambia, KBSPerelonia, KCDBenitez, RJSBanicod and GCTadifa)*

## NFRDI Gives Relief to Taal Volcano Eruption Victims

No one has foreseen that the turn of the new decade would bring huge disaster to the world. Even as early as January, our nation was surprised by the sudden eruption of Taal Volcano.

Taal Volcano, one of the Philippines’ most active volcanos, had its last eruption in 1977, about 43 years ago. The recent eruption left behind a desolate landscape of destroyed houses, trees, buildings, and entire villages covered in thick layers of ash in the province of Batangas where the volcano is situated.

Among other reasons, Taal is also significant to the National Fisheries Research and Development Institute (NFRDI) because its Freshwater Fisheries Research and Development Center (FFRDC) is located in that place. Thus, with the initiative from Interim

Executive Director Dr. Lilian Garcia, all personnel in the NFRDI Central Office helped in buying, packing, and sending relief goods for our affected fellow employees and *kababayans*. The relief packs included rice, coffee, canned goods such as sardines, corned beef, and corned tuna, noodles, soap, toothbrush, and bottled water. About 200 relief packs worth Php100,000 were distributed to them. *(CMMoncawe)*



NFRDI Central Office employees repacking relief goods for affected fellow employees

## Raising Our Defense

With the impending threat of COVID-19, NFRDI security guards were provided with digital thermometers and hand sanitizers at their posts. Anyone entering the Institute’s premises must undergo thermal scanning and are required to fill out a tracking form. Those with body temperature of 37.8°C and higher are automatically denied entry while employees who develop fever while on duty shall be sent to the nearest hospital.

Meanwhile, majority of the employees work from home in compliance to enhanced community quarantine guidelines. A skeleton workforce is maintained so as not to hamper office operations and other processes. *(NCGatdula)*

## Medical Worker Turned Successful Fish Farmer

In 2001, the concept of a “Mariculture Park” was first tried by the Bureau of Fisheries and Aquatic Resources (BFAR) in Davao Gulf coastal waters of Samal Island in Davao del Norte. After its successful implementation, BFAR initiated the setting up of other marine parks in the country in collaboration with Local Government Units (LGUs) which are mandated by law to manage coastal waters in the country.

A year earlier, a former medical worker, Nominisa Rarang Garcia, nicknamed Nomie, returned to Pangasinan to start a new life and invest something feasible and viable. A registered Nurse who worked overseas for quite some time, Nomie invested on mariculture in floating fish cages for the production of milkfish in Anda and Sual.

Now, Nomie is a major fish producer in Pangasinan, harvesting an average daily yield of 20 metric tons. She started with three floating cages stocked with 50,000 milkfish fingerlings in Nara Island. The business turned out to be feasible and profitable. She was able to sell her harvest of fish weighing 450 to 500 grams each after 120-150 days of culture.

In 2009, she had 60 cages of her own. But, aquaculture has its own risks. Her fish cages were affected by Typhoon Emong. But, she did not give up. Instead, she started all over again.

The National Fisheries Research and Development Institute (NFRDI), BFAR, and a private company provided Nomie with the needed technical assistance to ensure a bountiful harvest. Since aquaculture feeds comprised 60-65% of the total operating cost, a feed milling manufacturer provided the financial assistance.

Currently, F&N Garcia Fish Farm operates not only its own 100 fish cages, but it is also into business partnerships with other fish farmers. Their farms have been providing livelihood for fisherfolk within the coastal areas of Anda and Sual in Pangasinan.

The enhanced community quarantine in Luzon did not deter F&N Garcia Fish Farm to continue its aquaculture activities. The farm regularly harvests and delivers milkfish daily to the nearby markets, including Navotas and Malabon.

With the COVID-19 pandemic as our nation’s big challenge to food security, F & N Garcia Fish Farm is on the front, well and ready to help beat it! As stated by DA Secretary William D. Dar, “Food production in farms must continue. We will run out of food when no one is working in the farms.” (FFSantos)



Nomie showing sample of her harvest

*Small-scale farmers ... - Continued from page 6*

could eventually establish a farm school in their localities. They were updated on the current status of Philippine Aquaculture.

To achieve the training objective, the following topics were discussed: Modified Intensive Tilapia Hatchery Management; Feeds and Feeding Using Locally Available Feed Ingredients; Extruded Aqua Feeds; Farm Grow-out Management & Economics; Good Aquaculture Practice; and Tilapia Health Management. Lectures were complemented with practicum activities such as tilapia egg collection, fry collection, stocking and feed formulation.

Senator Cynthia A. Villar, Chairperson of the Committee on Agriculture and Fisheries, graced the Closing Program during which each participant was awarded a Certificate

and starter farm kit such as feed mincher, feeds, and 1,000 pieces tilapia fry/fingerlings. Also present during the occasion were the Department of Agriculture (DA)- Undersecretary for Fisheries and BFAR National Director Commodore Eduardo B. Gongona, who is also the current NFRDI Governing Board Chairperson. He was accompanied by NFRDI Interim Executive Director Lilian C. Garcia, BFAR3 Regional Director Wilfredo M. Cruz, BFAR1 RD Nestor Domenden, Philippine Carabao Center Executive Director Arnel del Barrio and City Administrator of Muñoz, Nueva Ecija.

In her speech, Senator Villar expressed her concern over the apparent decline of fish stocks. “*Seriously consider what you have learned from this training and share these learnings to other fish farmers in your community because aquaculture is the future of our country*”, thus said the Senator to the trainees. (FFSantos)



## NFRDI-BFAR Joint Force on FLA Assessment

Non-payment of rentals, cancellation of contracts, unutilized and abandoned areas are among the many problems of the Fishpond Lease Agreement (FLA) Program in the Philippines.

Consequently, during the 1st NFRDI Governing Board (GB) Meeting held last January 9, Department of Agriculture (DA) Secretary William Dar directed NFRDI to work closely with the Bureau of Fisheries and Aquatic Resources (BFAR) to conduct a comprehensive inventory of the issued FLAs in the country. Data that will be gathered from this inventory will provide information to improve the FLA Program and to conceptualize appropriate policy on fisheries.

Thus, as an immediate response to the call of Secretary Dar, NFRDI convened a meeting with BFAR last January 20. In the said meeting, NFRDI and BFAR committed to work together for the improvement of the FLA Program in the country.

The team reviewed the FLA policies and its processes, including updates on the use of Aquafarm Registration (AquaR System) as a tool for the inventory of FLA and non-FLA areas. Thereafter, a Technical Working Group (TWG) was created. The TWG's primary concern shall be to monitor the FLA implementation and address the issues afflicting the program.

Among others, the potential benefits that can be derived from FLA assessments are the following:

(1) improvement of processes and systems for more effective FLA program implementation; (2) increase of rental payment; (3) rational use of FLA areas to improve productivity that would help address food security in the country; and, (4) formulation of other related policy recommendations that are relevant to development and improvement of the country's fishery industry.

As of this writing, the proposal on the Assessment of the FLA Program in the Philippines is on its final stage of review. *(MSRFerrer)*



Ms. Ma. Salvacion R. Ferrer (far right in black blazer), OIC, Aquaculture Research and Development Division of NFRDI, emphasizing a point during the meeting on FLA assessment

### TPJF: Its Successful Revival ... - Continued from page 8

Aquatic Commons is a thematic digital repository covering the natural marine, estuarine, or brackish, and freshwater environments.

Regarding indexing, TPJF is now indexed under Aquatic Sciences and Fisheries Abstract (ASFA), the premier reference in the field of fisheries, aquatic, and marine sciences. ASFA is managed by the Food and Agriculture Organization (FAO) of the United Nations.

Last February 28, TPJF's managing editor and its layout

artist received an award at the De La Salle University for being indexed under the Andrew Gonzalez Philippine Citation Index (AGPCI). AGPCI is a journal indexing and citation database for Philippine academic journals. It aims to assist local journals improve their quality and attain international accreditation. TPJF is one of the pioneer journals indexed under AGPCI.

The journal's ultimate goal now is to be indexed under Scopus and ISI to attract more Filipino researchers in the field of fisheries to publish their work and contribute to the local and international body of knowledge. *(CMMoncawe)*

### Now, officially NFRDI .. - Continued from page 8

Placement Committee that was duly authorized by DA Secretary William D. Dar, and chaired by Dr. Garcia. The Placement Committee strictly observed the Omnibus Rules on Appointment and Other Human Resources Actions (ORAOHRA) in the placement process under the guidance of CSC DA-Field Office.

After a long wait and with the incumbents legitimately appointed, we are now officially NFRDI. *(NCGatdula)*

Whatever you do, **work heartily,**  
as for the **Lord**  
and not for men... **You are serving**  
the **Lord Christ**

Col. 3:23-24

## NFRDI's Fisheries Recommendations

For more than two decades, NFRDI coped with the challenges of being the research arm of BFAR, albeit working under interim status. With dedication and perseverance, the Institute ably recommended developed technologies and policies to BFAR that would help in the development of the country's fisheries and aquatic resources.

Six out of the twelve policy recommendations were already adopted.

### *Policies Adopted*

1. Establishing Closed Season for the Conservation of Sardines in East Sulu Sea, Basilan Strait and Sibuguey Bay (FAO 255 series of 2014)
2. Establishing a Closed Season for the Conservation of Small Pelagic Fishes in Davao Gulf (Joint DA-DILG Administrative Order no. 02 series of 2014)
3. Establishment of a Closed Season for the Management of Galunggong (roundscad: *Decapterus spp.*) in Northern Palawan (Joint DA-DILG Administrative Order No. 01 series of 2015)
4. Closed fishing season for Tawilis for the period of (2) two months during March and April in the entire Taal Lake (Taal Volcano Protected Landscape Protected Area Management Board Resolution No. 49, Series of 2018)
5. Establishment of four (4) Tawilis Reserved Areas (TRAs)/

Tawilis Sanctuaries in the lake vicinity of the municipalities of Balete, Mataas na kahoy, Cuenca and San Nicolas, Batangas (Taal Volcano Protected Landscape Protected Area Management Board Resolution No. 64, Series of 2019)

6. Promotion on the use of extruded floating feeds for Tilapia and Milkfish cage culture (Sec 6i of Taal Volcano Protected Landscape-Unified Rules and Regulations for Fisheries)

### *Proposed Policies\**

1. Use of gill net mesh size #11 K (3.04cm) instead of mesh size # 12 K (2.77cm) for catching Tawilis in Taal Lake
2. Closed fishing season from February to May (Blue Swimming Crab) Eastern Visayas
3. Closed fishing season from February to May (Blue Swimming Crab) Malampaya Sound, Palawan
4. Policy regulation on the collection of marine ornamental fish in the Philippines
5. Policy on accreditation of traders on the local transport of ornamental fish
6. Policy to replace traditional fishing vessels into freezer boats or similar technologies for High Seas Pocket 1 (HSP1)

*\*These proposed policy recommendations were already presented to the Governing Board last October 1, 2019 and submitted to BFAR-CO last October 22, 2019 for appropriate management actions.*

*Continued on page 15*

## #HealAsOne: DA's Contributions to Help Fight COVID-19

Guided by Protocols on Enhanced Community Quarantine (ECQ) on social or physical distancing and considering skeleton workforce on barest minimum due to the spread of the coronavirus disease 2019 (COVID-19), the following were recommended by the Department of Agriculture (DA) to the Inter-Agency Task Force (IATF): allow all farming and fishing activities to continue; exempt all healthy farmers and farm workers, fishers and agribusiness personnel from quarantine restrictions; let the agricultural supply stores/outlets and veterinary clinics operate; reiterate unhampered movement of all supplies used for agriculture, including food packaging and manufacturing materials; reactivation of the Local Price Coordination Council (LPCC) to strengthen the price monitoring and enforcement (MC77); upscaling KADIWA ni Ani at Kita in support for food availability, accessibility, and price stability; and support the DA program "Ahon Lahat, Pagkain Sapat (ALPAS) kontra COVID-19".

One of the issues that rose since the declaration of ECQ is the sudden drop in supply of various food, medicine, and basic goods which resulted in some

unreasonable price spikes. This is the reason why DA, Department of Trade and Industry (DTI), and Department of Health (DOH) forged an agreement to reactivate LPCC to closely monitor and prevent price spikes of farm and fishery products, processed goods, and medicines sold in markets in Metro Manila and other urban centers nationwide, and through online. The agencies warned that any person or entity found violating the Price Act will be fined between P5,000 and P2 million, and will face imprisonment between five and 15 years.

DA also came up with the food pass accreditation and sticker which are free of charge. Food pass applicants may download, fill out, and e-mail scanned documents including the vehicle's official receipt and certificate of registration to DA, DA-Regional Field Office, or the bureau concerned. After receipt and checking of documents, DA will e-mail back the food pass with a Quick Response (QR) code which the applicant should print as reference.

Task Force Food Helpline was also created for anyone with concern regarding foodlane, food supply, livestock and poultry, fish, prices, and plant quarantine, among others. There were instances where suppliers and truckers were not allowed to pas through some

*Continued on page 15*



Issuances in the form of Memoranda and NFRDI Office Order (NOO) are normally circulated for communicating policies, procedures, or other related official business matters. To facilitate the identification of a specific issuance when employees are occasionally requesting for copies, the following list has been provided by the Human Resource Management Office to serve as reference that will guide and update employees.

Category	Subject	Document Date
Memo	Adoption of Department of Agriculture Logo and Tagline as NFRDI's Letterhead	January 06, 2020
Memo	Submission of Required Documents under the Existing Rules and Regulations of the Civil Service Commission (CSC) and other Philippine Laws	January 07, 2020
NOO No. 2	Reconstitution of the NFRDI Bids and Awards Committee (BAC) Secretariat. Technical Working Group, Technical Inspectors, Canvassers and Inventory and Disposal Committee	January 14, 2020
Memo	Submission of Annual Accomplishment Report per Division/Center	January 15, 2020
NOO No. 1	Designation and Re-assignment of NFRDI Personnel	January 15, 2020
Memo	Submission of Papers for Peer Review and Publications to the Philippine Journal of Fisheries	January 16, 2020
NOO No. 3	Reconstitution of NFRDI Gender and Development Focal Point System (GFPS)	January 21, 2020
Memo	Termination of Ongoing Projects CY2020	February 04, 2020
Memo	Submission of Monthly Narrative Accomplishment Report	February 11, 2020
Memo	NFRDI Information and Education Social Media and Print Campaign Procedures	February 18, 2020
Memo	Contract of Service Employee Absent Report Form	February 26, 2020
Memo	Adoption of Department of Agriculture Payroll Deduction/s Request Form	February 26, 2020
Memo	2020 National Women's Month Celebration	February 26, 2020
Memo	Reinforcement to the Accounting Procedures	March 04, 2020
NOO No. 6	Creation of NFRDI Civil Servants' Health and Wellness Month Activity Committees	March 04, 2020
Memo	Employee Recollection	March 05, 2020
NOO No. 5	Technical Working Group for the BFAR National Centers Collaborative R&D Projects	March 06, 2020
Memo	Endorsement of R&D Project Proposal for CY2020	March 09, 2020
NOO No. 4	Designation of NFRDI Personnel as Members of FISH REFUGIA in the Implementation of the Project "Establishment and Operation of a Regional System of Fisheries in the South China Sea and Gulf of Thailand"	March 09, 2020
Memo	Provision of Work from Home Scheme and Related Concerns, Both Public and Private Employees are Prohibited to Work and Go Out from their Respective Homes except on the Circumstances Stated in the Memorandum	March 17, 2020
Memo	Daily Health Monitoring	March 19, 2020
Memo	Personnel Registration at Department of Agriculture Work from Home (WFH) Database and Report Management System Portal	March 20, 2020
Memo	Weekly Targets and Accomplishment Report of Personnel Under Work From Home (WFH) Arrangement	March 20, 2020
Memo	Submission of PDS, SALN, IPCR and Office ID Application	March 20, 2020
Memo	Dissemination by Individual Personnel of Relevant Information on DA Programs, Projects and Related Matters, Particularly on the Departments Intervention Relative to the Current Emergency Situation Due to the COVID-19 Pandemic	March 20, 2020
Memo	Realtime Online Submission of Employees' Daily Health Monitoring Form	March 23, 2020
Memo	Administrative Order No. 26 by the President of the Philippines	March 23, 2020
Memo	Commission on Audit (COA) and Government Procurement Policy Board (GPPB) Joint Memorandum Circular No. 126 March 26, 2020	March 30, 2020
Memo	DBM Circular Letter 2020-6 "Revised Payment Arrangements of Employer (Government) Share in Retirement and Life Insurance Premium (RLIP) Contribution Remitted to the Government Service Insurance System (GSIS)"	March 30, 2020

## What is the Status of Fisheries in Lake Taal After Taal Volcano Eruption?

Lake Taal is the country's third largest lake with an area of 24,236 hectares. It is one of the deepest lakes with an average depth of 80 meters and a maximum depth of 198 meters (Castillo et al. 1975; Castillo and Gonzales 1976). Within the lake rises the Taal Volcano which erupted on January 12, 2020.

The fisheries sector has been the most affected by the Taal Volcano eruption since fishing (through capture and aquaculture fisheries) is the major source of livelihood for 2,761 sustenance fisherfolk living around Lake Taal. The lake is home to the endemic freshwater sardine *Sardinella tawilis*, which was previously listed as endangered by the International Union for the Conservation of Nature in 2018. Tilapia (*Oreochromis sp.*), Maliputo (*Caranx ignobilis*) and other aquatic species also thrive in Lake Taal.

To assess the status of fisheries (capture and aquaculture) in Lake Taal after the volcano eruption, the Freshwater Fisheries Research and Development Center (FFRDC) personnel conducted field and phone interviews to the fisherfolk from January 14 to February 28, 2020 and consolidated information on species caught, volume of catch, gear used, price and other observations. At the same time, NFRDI's Fisheries Post-Harvest Research and Development Division (FPHRDD), together with BFAR Region IV-A, conducted laboratory analysis for water and fish samples and through the advisory given by the Department of Agriculture, the consumption of fish from Taal Lake was declared safe (The Philippine Star, January 20, 2020; Manila Times and Business Mirror, January 21, 2020).

Aquaculture in Taal Lake is one of the major sources of tilapia in CALABARZON and NCR. According to the

Municipal Agriculturist of Talisay, Laurel, Agoncillo and San Nicolas, the recent eruption of Taal Volcano caused significant loss to aquaculture with around 44% of total cages damaged due to heavy ashfall and upturned cages. The heavy ashfall also damaged feeds and feeds storage, boats, and fish ports. Out of the 6,000 fish cages installed around Taal Lake, losses for the culture of tilapia and some milkfish (bangus) species was estimated at Php1.6 billion (www. da.gov.ph). Before Taal's eruption, according to the Taal Lake Aquaculture Alliance, Inc. (TLAAI), daily harvest from Taal Lake ranges from 120 to 150 tons of milkfish and tilapia. About 60% of these is consumed in Batangas, Cavite, Laguna, and Quezon and the remaining 40% is sent to Metro Manila market (Philippine Inquirer, February 3, 2020).

Despite the danger associated with the eruption, fishermen, whose livelihoods are dependent on their daily catch, continued venturing into the waters surrounding Taal Volcano. Interviewed fishermen revealed that about 10-100 kgs (in some cases exceeding a hundred kilogram) of tilapia per fisherman per day were caught after the eruption and these were sold at Php25.00, Php50.00 to Php100.00 per kilogram at 3 to 4 pieces per kilogram. The abundance of tilapia was attributed to damaged fish cages in Taal Lake.

Other species caught were kitang (*Scatophagus argus*), muslo (*Caranx sexfaciatus*), bangus (*Chanos chanos*), dalag (*Channa striata*), red tilapia (*Oreochromis niloticus x O. hornorum*), kanduli (*Arius manillensis*), ayungin (*Leiopotherapon plumbeus*), ningning (*Ambassis miops*), muang (*Apogon hyalosoma*), siliw (*Zenarchopterus buffonis*) and dugong (*Parachromis managuensis*). (MTMMutia, MLMagistrado, MCMuyot, MLMerilles, BTordecilla, JBaral, MTAcazar)

### NFRDI R&D Priorities... - Continued from page 6

- Molecular Identification of Bacterial Tilapia Diseases and Other Emerging Bacterial Pathogens in Freshwater Fishes
- Genotyping of Strains of Tilapia Towards Marker-assisted Selection in Breeding and Production

### NIFTDC

- Sensory Characteristics and Biochemical Properties of Oyster Fed with *Skeletonema sp.* Reared in Ponds with Plastic Liners
- *Siganid* Culture and Hybridization for Quality and Increased Production

### NIFTC

- Larval Rearing of Natural Bred Ayungin (silver perch, Sc. Name: *Leiopotherapon plumbeus*) and Biya (goby fish, Sc. Name: *Glossogobius giurus*): Focus on Diet and Nutrition

### NBATC

- Technology Verification on the Areas of Hatchery and Nursery Rearing of Mangrove Crab.

### NSTDC

- Sea-based Culture on the Hatchery of *Kappaphys Alvarezii* Propagules
- Preliminary Study on the Land and Sea-based Culture of *Sargassum*
- Development of Cryopreservation Protocol for Some Economically Important Seaweeds in the Philippines

### NMC

- Growth and Survival of Milkfish Fingerlings in Floating Marine Cages and Brackishwater Ponds Using Commercial Feeds at Different Stocking Density
- Growth and Survival of Tiger Lobster in Nursery Marine Floating Cage at Different Stocking Densities. (TJJBuico)



**Fisheries Recommendations... - Continued from page 12**

**Technologies Developed\*\***

**A. Finfishes**

1. Maliputo Breeding and Culture Technology
2. Culture of Red Mangrove Snapper in Pond and Cage
3. Breeding and Culture of Common Carp (*Cyprinus carpio*)

**B. Ornamental Fish**

1. Breeding and Culture of Angel Fish
2. Breeding and Culture of Siamese Fighting Fish
3. Breeding and Culture of Goldfish
4. Breeding and Culture of Japanese Koi
5. Breeding and Culture of Livebearers (Guppy, Molly, Swordtail, Platy)
6. Breeding and Culture of Tinfoil Barb
7. Breeding and Culture of Red Pacu
8. Breeding and Culture of Golden shark
9. Breeding and Culture of Rainbow shark
10. Breeding and Culture of Hammer head shark
11. Nursery Rearing for Blue Swimming Crab (*Portunus pelagicus*)

**C. Invertebrate**

15. Hatchery Rearing of Sea Cucumber (*Holothuria scabra*)

\*\*All the technologies were already forwarded to BFAR last October 27, 2019 for their appropriate action.

**Association of small and medium ..., -Continued from page 7**

supply chains, including post-harvest losses in food (fish included), is among the targets (Target 12.3) of the United Nations under Sustainable Development Goal (SDG) Number 12 (*Ensure Sustainable Consumption and Production Patterns*). There are 17 SDGs identified by the UN in its 2030 Agenda for Sustainable Development, and each of these is an urgent call for action by all countries.

In response to this call, NFRDI is conducting studies to determine economic, physical and financial losses on fish and fishery products and to identify which chain has the most losses. Data from these studies will help in formulating policies and strategies to innovate handling practices that will reduce fish loss in the different supply chain. *(UMMontojo)*

**Got a story to tell?**

Use **#NFRDIInAction** and **#NFRDITeach** in your FB posts or submit your articles to [iestd.nfrdi@gmail.com](mailto:iestd.nfrdi@gmail.com)

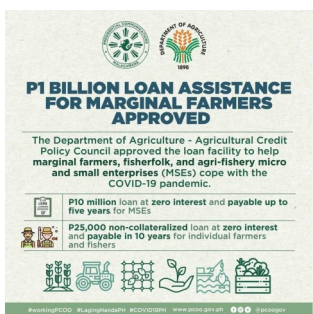
**#HealAsOne... - Continued from page 12**

checkpoints. In this instance, they can easily ask for help by calling the DA Food Pass hotline numbers and provide the following information: location of the checkpoint, time, vehicle's plate number, type of vehicle, product or goods carried or transported.

Agriculture Secretary William D. Dar and Department of Interior and Local Government Secretary Eduardo Año assured the public that checkpoint protocols at the municipal/city and barangay roads will be adjusted accordingly to ease movement of agricultural products and commodities, and other agri-fishery personnel.

Finally, a P1-billion loan facility for marginal farmers, fisherfolk, and agri-fishery micro and small enterprises (MSEs) was approved by DA-Agricultural Credit Policy Council to help them cope with the impact of COVID-19 pandemic. This financial assistance includes P10 million loan at zero interest and payable up to five years for MSEs, and P25,000 non-collateralized loan at zero interest and payable in 10 years for individual farmers and fishers.

DA has been doing its part to help our fellow Filipinos #HealAsOne. Let's not forget also to thank our farmers and fishers for feeding the country in this time of crisis. They too are our heroes and frontliners. *(CMMoncaue)*



**NFRDI supports lobster.... - Continued from page 7**

fisheries to meet the increasing demand for high-value species like lobsters. But, this entails the development of environment-friendly technologies and farming practices. Thus, a study on the nursery grow-out of lobster in floating cages has been conceptualized. The study will be

conducted by the NFRDI, in collaboration with BFAR-National Mariculture Center in Panabo, Davao del Norte.

Success of this lobster R&D project will help boost the lobster industry in the country. It also promises an effective approach for reducing pressures on the exploitation of our marine fisheries resources. *(FFSantos)*

## Unwanted

Most fishing operators and owners do not allow women to go on-board their commercial fishing vessels. This is due to the nature of the job on-board the vessel. Hence, they see women as hindrance in the fishing operation.

On a visit to the Navotas Fish Port Complex last February to do some works on the identification of a large commercial fishing vessel using purse seine to be assessed by fish observers for our project on fisheries post-harvest losses, we learned that women on-board is a big no-no.

Anecdotal reports indicate that women have long been “unwanted” in sea fishing due to cultural and social reasons. Cultural reasons is linked to the attitude of men or husbands towards women or their wives which is usually associated to traditional family roles. Men can be away from home for long periods of time while women cannot as they are expected to do traditional women-related roles such as taking care of children, cooking, doing laundry work and many more. Despite these limitations, women are visible in the pre- and post-fishing activities, such as preparation of nets in the case of small-scale fishing, to processing and marketing of the catch.

Needless to say, the dangerous nature of fishing is the major reason that restrains operators and owners from employing women. Examples of the danger include bad weather, the condition of the sea, and accidents that may happen most especially if the vessel is in poor condition. Then, there’s the stereotyping of men as being physically stronger than women and can move faster than women (especially in setting and hauling of gears).

Thus, unless we apply a gender lens on how women can engage in activities on-board fishing vessels, fishing on-board will remain as a man’s world and women will always be “unwanted.”

Perhaps, modernization in fishing and the use of modern technologies could be one of the keys for achieving the dream of women being “wanted” on-board commercial fishing vessels. **(RABassig)**

## NFRDI Celebrated NWM 2020

This year’s celebration of the National Women’s Month (NWM) might be the most memorable for NFRDI since a lot of its scheduled activities for NWM were cancelled. This is due to the implementation of the enhanced community quarantine relative to COVID-19 on March 16, 2020.

However, amidst the threat of the pandemic COVID-19, the Institute’s employees managed to show the spirit of the event by donning purple outfit every Fridays - one of the suggested activities by the Philippine Commission on Women (PCW).

Though this year’s celebration was put into a halt, it was inspiring to note that employees’ support and awareness of the advocacy is still alive as seen in their participation in Purple Fridays and in their committed submissions of GAD-related articles. **(NCGatdula)**



Photo courtesy of Ms. Cleng Fernandez

### WE WANT YOU EMPOWERED!

Report Sexual Harassment at

[bit.ly/NFRDICF2019](https://bit.ly/NFRDICF2019)

For GAD training needs fill out the form at

[bit.ly/GADTNA](https://bit.ly/GADTNA)

Email us at [gadsec.nfrdi@yahoo.com](mailto:gadsec.nfrdi@yahoo.com)



# G Ra D

## GAD for Research and Development