



DEPARTMENT OF
SCIENCE AND
TECHNOLOGY
REGIONAL OFFICE NO.1



ANNUAL REPORT
2021

Leading the Way
through **Science**,
Technology and
Innovation in Region 1

QUALITY POLICY

We are committed to provide quality products and services to all stakeholders in Region 1, within our capabilities and resources according to standards and all regulatory and statutory requirements and to continually improve our QMS through efficient and effective risk management to exceed customer satisfaction.





DEPARTMENT OF SCIENCE AND TECHNOLOGY
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Vision

By 2022, a leader in the application of scientific and technological innovations and services in Region 1 for better quality of life and sustainable development.

Mandate

Executive Order No. 128 mandates the Department to "provide central direction, leadership and coordination of scientific and technological efforts and ensure that the results therefrom are geared and utilized in areas of maximum economic and social benefits for the people".

Core Values

We believe in demonstrated effort in Innovation, Excellence, Leadership, Integrity, Team Work, Empowerment and a deep sense of nationalism. These core values are the fundamental belief and the guiding principles that dictate our behavior and helps better understand the difference of right and wrong.



MESSAGE FROM THE **SECRETARY**

»»»

Congratulations to the Department of Science and Technology (DOST) Region 1 for its accomplishments in 2021.

To achieve its mission of spearheading scientific, technological, and innovative efforts and ensuring that these result in maximum economic and social benefits for the people of the region, DOST has aligned its projects, programs, and activities with the Sustainable Development Goals, taking into account the areas of Kabuhayan, Kalusugan, Kaayusan, and Kinabukasan.

DOST I expanded STI assistance to 52 Micro, Small and Medium Enterprises (MSMEs) and 29 associations in Kabuhayan through the Small Enterprise Technology Upgrading Program (SETUP), 19 communities through the Community Empowerment through Science and Technology (CEST) Program, and two businesses through the Innovations for Filipinos Working Abroad Program (iFWD-PHI). I also applaud you for piloting the Innovation, Science, and Technology for Accelerating Regional Technology-based Development (iSTART) through the six (6) Local Government Units in the region and for reaching out to the grassroots through the Regional and Testing Laboratory's (RSTLs) 10,700 testing and calibration services.

In line with Kaayusan, DOST I has consistently embodied the principles of a disaster risk reduction and management-capable communities through the 10 DRRM activities conducted while extending and maintaining collaborations with stakeholders and other team players in the community without getting behind its internal processes.

Your commitment to Kalusugan is admirable, as seen by the 150 water samples you collected and submitted for testing, as well as the 170 water filter units you were granted. You have overcome the hurdles and struggles of providing quality service while maintaining basic health requirements within your agency during this pandemic.

Kinabukasan is a bright spot for DOST I, as it has maintained and built two of the region's three innovation centers. With your 559 S&T promotional operations, you have also ensured that your projects, programs, and activities are known. Through your 535 supported S&T undergraduate scholars, you have also exemplified the importance of education to future generations.

“ I applaud the DOST Region I for their achievements in these areas. It is hoped that you will continue to provide STI solutions to the region. ”

FORTUNATO T. DELA PEÑA

Secretary, Department of Science and Technology



MESSAGE FROM THE **UNDERSECRETARY**



I congratulate the Department of Science and Technology Region 1 on its achievements in 2021. You have brought science closer to the wider populace despite the pandemic.

In contrast to prior years, the unique approach to service provision did not encourage much on physical services, which is a substantial departure from the usual. Instead of getting disheartened by the circumstances, you used them as a challenge and an inspiration to keep working toward your aspirations.

The remarkable achievements you made in 2021 in terms of the various programs, projects, and activities you implemented and carried out demonstrated your tenacity, dedication, and public service. You have demonstrated your strong determination to bring science closer to the people of Region 1 by adhering to and aligning your activities with the Sustainable Development Goals.

Your full engagement in R&D programs, as evidenced by the establishment of the Coastal Engineering and Management Research and Development Center (COASTER) alongside three other innovation centers and two NICERs in your region, demonstrates your dedication to improving society.

DOST 1 also did an outstanding job leading the implementation of several national programs, projects, and activities, including the Innovation, Science, and Technology for Accelerating Regional Technology-based Development (iSTART) program, which you piloted in six local government units, demonstrating your willingness to be game changers in meeting the needs of average communities based on their resources and constraints.

Your response to the pandemic by assisting the first facemask production facility in northern Luzon through the Small Enterprise Technology Upgrading Program (SETUP) displays your compassion and resiliency in the face of the COVID-19. This year's launch of enhanced nutritiun and iron fortified rice reveals that science and technology can provide a firm foundation for health and wellness.

“ I'm excited to see what DOST 1 accomplishes next year. I am convinced that, with its bright and capable staff, the agency will continue to develop creative projects that will better promote science, technology, and innovation to the public at large. ”

HON. SANCHO A. MABBORANG
Undersecretary for Regional Operations



MESSAGE FROM THE REGIONAL DIRECTOR



I applaud the efforts of the whole Department of Science and Technology Region 1 team for their tireless efforts and commitment to bringing science to the people of region 1. I would also like to thank you, for exceeding beyond what is expected of you and for bridging the agency to the people in the grassroots.

The pandemic has challenged us in different ways. The ordinary things we did became unique, and the unfamiliar things we did became routine. But rather than allowing the situation to discourage you, you used it as a challenge and motivation to continue pursuing the different programs, projects, and activities assigned to us.

It is admirable how dedicated DOST 1 is to the areas of Kabuhayan, Kalusugan, Kaayusan, and Kinabukasan. This simply serves to demonstrate the agencies' all-encompassing approach to using science and technology to improve and sustain peoples lives.

With our aid in the area of **Kabuhayan**, DOST 1 was able to increase its support to MSMEs and communities through the Small Enterprise Technology Upgrading Program (SETUP) and Community-based projects. The GIDA areas that benefited from the Community Empowerment through Science and Technology (CEST) Program continue to be steadfast in the development of economic or livelihood enterprises, human resource development, environmental protection and conservation, disaster risk reduction and management, and climate change adaptation. The Innovations for Filipinos Working Abroad Program demonstrates the dedication to helping people regardless of their circumstances (IFWD PH). I am also pleased to say that the DOST 1 successfully piloted the iSTART (Innovation, Science, and Technology for Accelerating Regional Technology-based Development) program in the six Pangasinan LGUs.

Kalusugan comes with S&T, especially now that we are more aware of the value of health and well-being than ever before. By using the services provided by the Regional Standards and Testing Laboratories to evaluate the chemical, microbiological, sensory evaluation, and shelf-life aspects of the food and water we eat, the DOST 1 upholds their commitment to safeguarding the health and safety of the public. The RxBox project has also advanced with the regional training of the responsible staff and the distribution of the RxBox devices. The DOST 1 personnel have also been dedicated to working with other agencies to train industry sectors in the most current Good Manufacturing Practices.

In keeping with **Kaayusan**, DOST 1 has consistently embodied the principles of disaster risk reduction and management-capable communities through the DRRM initiatives carried out while extending and maintaining collaborations with stakeholders and other team members in the community without getting in the way of its internal processes, which is reflected by the developed and adopted information systems, being able to maintain the ISO 9001:2015 / ISO/IEC 17025-2017, and being able to comply with the requirements of these standards.

The fact that DOST 1 has continued and maintained its promotional activities to inform the public of the most recent advancements and innovations made by the agency in keeping with its mandate to lead the way through S&T speaks volumes about the agency's success in the field of **Kinabukasan**. The Coastal Engineering and Management Research and Development Center (COASTER), together with three other innovation centers and two NICKERS in the area during the year, serves as a testament to the viability of our R&D initiatives and our commitment to advancing society through S&T. Most significantly, the scholarship programs continue to be strengthened in order to ensure the future of the youth, making the future of the scholars who have been under the care of DOST 1 dazzling in brilliance.

May these achievements continue and perhaps multiply, as the more we make science and technology accessible to the public and the wider the audience we serve, the better the future we may envision. Take these as your sources of inspiration and drive to keep striving for excellence. Let's work together to brave the storms and persevere through any obstacles we may encounter in the upcoming years.

Congratulations to us, DOST 1!

ARMANDO Q. GANAL, Ph.D., CESO III
Regional Director

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2021 HIGHLIGHTS

KABUHAYAN

OUTCOME 4

Productivity and Efficiency of Communities and the Production Sector, particularly the MSME's Improved

TECHNOLOGY TRANSFER AND COMMERCIALIZATION



SMALL ENTERPRISE
TECHNOLOGY UPGRADING
PROGRAM

52
firms assisted
Php 37.78M
investment
167
S&T interventions provided



COMMUNITY
EMPOWERMENT THRU SCIENCE
AND TECHNOLOGY

19 | **60**
communities assisted | barangays assisted
108
technology trainings conducted
1,152 | **240**
beneficiaries | jobs generated



INNOVATIONS FOR
FILIPINOS WORKING DISTANTLY
FROM THE PHILIPPINES

2
firms assisted
Php 419.60M
amount of project assistance
16 | **9**
trainings/ webinars conducted | OPWs trained



REGIONAL STANDARDS
AND TESTING LABORATORY

10.7k
Testing and Calibration
Services Provided
1.6k
Firms served | **2.3k**
customer served
Php 1.69M
Value of Assistance | **Php 5.64M**
Income Generated
100%
Testing Calibration services
delivered within agreed time



INNOVATION, SCIENCE AND TECHNOLOGY
FOR ACCELERATING REGIONAL
TECHNOLOGY-BASED DEVELOPMENT

6
LGUs assisted
3
trainings/webinars conducted
2
technology transferred

PACKAGING AND
LABELLING

66
product label designs completed
44
packaging execution completed
39
firms assisted

TECHNOLOGY
TRAININGS

156
technologies deployed
thru trainings
2,715
participants assisted

COMMUNITY-BASED
PROJECTS (CBP)

29
associations assisted
Php 3.83M
amount of project assistance
79
S&T interventions provided

TECHNOLOGY ASSISTANCE AND
CONSULTANCY SERVICES (TACS)

2
firms assisted
Php 4.19M
amount of project assistance
16 | **9**
trainings/ webinars conducted | OPWs trained

2021 HIGHLIGHTS

KALUSUGAN

OUTCOME 4

Productivity and Efficiency of Communities and the Production Sector, particularly the MSME's Improved

CEST

150

water samples collected and tested for potability

170

units of water filters awarded

1,675

weighing scales calibrated

224

community workforce trained

iSTART

6

pilot LGUs for iSTART Program assisted

168

food processors attended a Blended Food Safety Webinar and Packaging & Labelling Requirements

26

barangays were trained

TACS

53

firms were conducted food safety assessment and energy audit

TRAININGS

conducted to the general public as well as MSMEs in DOST 1 TACS Program

1

Dual-drum composter and shredder awarded

DRMHS

40

RxBox devices were delivered to DOST Region 1

29

RxBox devices were deployed to the RHUs

SUPER USER TRAINING (SUT)
successfully conducted

2021 HIGHLIGHTS

KAAYUSAN

OUTCOME 5

Resiliency to Disaster Risks and Climate Change Ensured

DRMHS

10

DRRM activities conducted

15

types of IEC materials provided

6

DRRM-related collaborations with stakeholders conducted



PUBLIC SERVICE
CONTINUITY PLAN
IMPLEMENTED
AND UPDATED



**COVID-19
RESPONSE
INITIATIVES**

OUTCOME 7

Effective STI Governance Achieved

Quality Management System/
S&T Governance

3

developed information systems

2

adopted information systems

25

information systems maintained



ISO 9001:2015

SO/IEC 17025:2017

FDA, DOH, EMB,
PNP, PDEA,
PRIME-HRM Level II



Compliance to
GAD, ARTA, SC/PWD Law,
Data Privacy, FOI



COA findings
addressed within
the prescribed period

97%

Disbursement
Budget Utilization
Rate

100%

Quarterly BFARs
submitted On time

100%

compliance to
PBB requirements

31

employees recognized
for high performance
and exemplary behavior

3

functional units
recognized for innovative
processes introduced

100%

of regular staff
provided with I&D
interventions

2021 HIGHLIGHTS

KINABUKASAN

OUTCOME 1

Innovation Stimulated

R&D MANAGEMENT

3

Innovation Centers maintained/
supported

2

NICER's maintained
and established

OUTCOME 2

Technology Promoted
and Accelerated

3

UM Applications endorsed
through the SciTech
Superhighway Program

OUTCOME 3

Critical Mass of Globally Competitive STI Human Resources Developed

SCHOLARSHIP

535

assisted S&T
undergraduate
scholars

Php 62.41M

Total fund
disbursements

3,394

No. of Undergraduate
S&T scholarship
applicants for
CY 2022-2023

500

No. of JLSS applicants
for CY 2021-2022

S&T PROMOTION

55

STARBOOKS
installed in
Region 1

17

trainings
conducted

150

participants
assisted

1

Regional STARBOOKS
Stakeholders' Convention
conducted with
4,767

559

S&T Promotional
activities conducted

59,146 engagements

1,380,811
people reached

10

Episodes of "Tekno
Presyensa: Syensya
ken Teknolohiya para
Kadagiti Umili"
conducted

2

Virtual Pressers, via
PIA Kapitan sa Ilocos
conducted

1

NSTW regional activities
conducted with
11,551 participants
promoting **57** technologies
through virtual technology
exhibits with
16,005

Conducted virtual **Invent School Program**
(ISP) attended by 70 elementary, secondary
and tertiary students

Conducted the **Regional Invention
Contests and Exhibits (RICE)**

OUTCOME 6

Productivity and Efficiency of Communities and the Production Sector,
particularly MSMEs Improved

24

Total No. of
Proposals Evaluated

9

Total No. of
Proposals Funded

2

Collaborative R&D
Projects Conducted

3

In-house R&D
funded



KABUHAYAN

OUTCOME 4



PRODUCTIVITY AND EFFICIENCY OF
COMMUNITIES AND THE PRODUCTION
SECTOR, PARTICULARLY MSME's IMPROVED



S&T innovations for MSMEs



SMALL ENTERPRISE TECHNOLOGY UPGRADING PROGRAM (SETUP)

The challenges of the present times continue to shape the global economy. As businesses scramble to adapt to fleeting government protocols and struggle to reconfigure their systems and processes to thrive amidst the COVID-19 crisis, the Small Enterprise Technology Upgrading Program (SETUP) continues to provide assistance to micro, small, and medium enterprises which have greatly contributed in the development of the economy through the creation of job opportunities and generation of income.

As the banner program of the DOST on technology transfer and commercialization, SETUP is a nationwide strategy that assists MSMEs in the adoption of appropriate technology interventions and innovations that will address their production constraints, improve productivity and operational efficiency, and enhance competitiveness of products and services.

Through its Innovation-enabling fund (iFund), SETUP capacitated the technology innovation and upgrading of 52 micro and small enterprises amounting to PhP37,780,569.04 to facilitate the acquisition of technology interventions for their enterprises; consultancy and technical advisory services; manpower trainings; product standards and testing; packaging and labelling assistance, and product development.



Share of SETUP Innovation support fund per PSTC

Table 1. Amount of SETUP innovation support fund per Provincial S&T Center

| PSTC | Amount |
|-------------------------|----------------------|
| Ilocos Norte | 7,570,628.33 |
| Ilocos Sur | 4,397,589.00 |
| La Union | 7,206,100.00 |
| Pangasinan | 8,023,200.71 |
| Pangasinan Field Office | 10,583,051.00 |
| TOTAL | 37,780,569.04 |

As shown in Table 1, the province of Pangasinan received the highest SETUP fund assistance at 49% and Ilocos Sur receiving the least at 12%.

Number of SETUP Projects implemented per sector by province

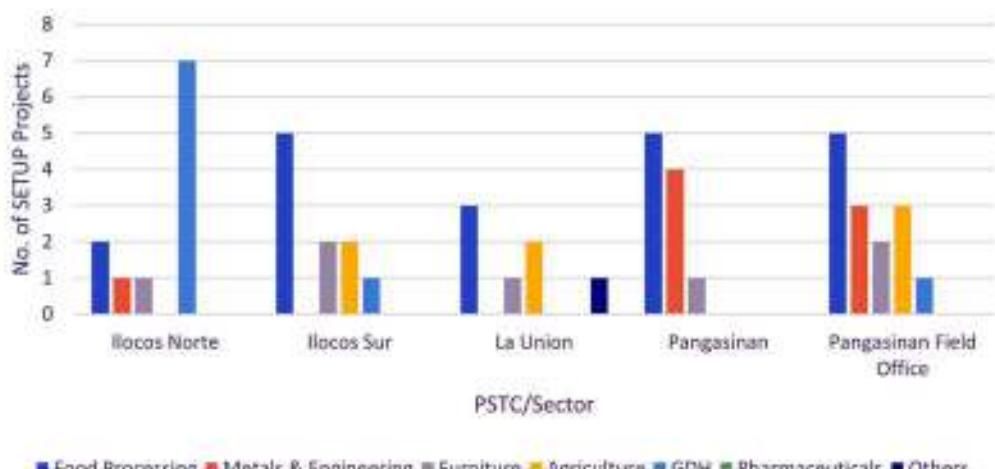


Table 2. Number of SETUP projects implemented per sector by province.

| SECTOR | ILOCOS NORTE | ILOCOS SUR | LA UNION | WESTERN PANGASINAN | CENTRAL AND EASTERN PANGASINAN | TOTAL |
|----------------------|--------------|------------|----------|--------------------|--------------------------------|-----------|
| Food Processing | 2 | 5 | 3 | 5 | 5 | 20 |
| Metals & Engineering | 1 | 0 | 0 | 4 | 3 | 8 |
| Furniture | 1 | 2 | 1 | 1 | 2 | 7 |
| Agriculture | 0 | 2 | 2 | 0 | 3 | 7 |
| GDH | 7 | 1 | 0 | 0 | 1 | 9 |
| Pharma | 0 | 0 | 0 | 0 | 0 | 0 |
| Others | 0 | 0 | 1 | 0 | 0 | 1 |
| TOTAL: | 11 | 10 | 7 | 10 | 14 | 52 |

Table 2 presents the number of SETUP projects implemented in CY 2021 by province along the priority sectors. Out of the 52 projects implemented in the region, 20 projects were on food processing, followed by 9 projects under the Gifts, Decors and Handicrafts (GDH). On the other hand, Pangasinan has the highest number of projects at 24.

Table 3 Distribution of SETUP projects by congressional district per province

| SECTOR | ILOCOS NORTE | | ILOCOS SUR | | LA UNION | | PANGASINAN | | | | | | TOTAL | |
|----------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 3 | DISTRICT 4 | DISTRICT 5 | DISTRICT 6 | DISTRICT 7 | |
| Food Processing | 1 | 1 | 4 | 1 | 2 | 1 | - | 1 | 4 | 4 | 1 | - | - | 20 |
| Metals & Engineering | 0 | 1 | 0 | 0 | 0 | 0 | - | 1 | 3 | 2 | 1 | 0 | 0 | 8 |
| Furniture | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 7 |
| Agriculture | 0 | 0 | 1 | 1 | 0 | 2 | - | 0 | 0 | 0 | 2 | 1 | 0 | 7 |
| GDH | 4 | 3 | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 1 | 0 | 9 |
| Pharma | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Others | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 5 | 6 | 6 | 4 | 3 | 4 | 1 | 2 | 7 | 6 | 6 | 2 | 0 | 52 |

Table 3 shows the distribution of SETUP projects by congressional district in each province of Region 1. As presented, there was at least one SETUP project in each congressional district in the region.

LOUIS ROY BAKESHOP

• Mr. Luis O. Sebastian
📍 40 Maravilla St., Mangatarem, Pangasinan

Php 895,200.00

Phase II



Use of the acquired Spiral mixer with inverter and semi-automatic rounder divider.

UPGRADING OF PRODUCTION EQUIPMENT FOR VARIOUS BAKED PRODUCTS (PHASE II)

Louis Roy Bakeshop was established in 1998 by Mr. Sebastian, a former OFW from Taiwan and Korea. He started his business with only one (1) experienced baker and him, as the assistant. The business is proudly known for its Burger Buns and Loaf Breads. In more than 20 years of operation, products now range on different variants of bread from loaves, burger buns, pandesal, cookies and some assorted baked products. Louis Roy Bakeshop was assisted by DOST in 2016 which really helped the firm improve its production processes and increase its sales to P1,000,000.00, allowing him to supply bigger market in Aguilar, Mangatarem, San Carlos City, and Urbiztondo Province of Pangasinan. At present, they now accept customized buns from the nearby cafes such as Kusina Nen Noy in Aguilar and Yellow Kitty Café in Mangatarem.

To increase production and quality of the products, the firm upgraded its equipment from the manual process, limited capacity, and frequent malfunction due to old age. To address the problem, the firm sought for another round of assistance from DOST through SETUP.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Spiral Mixer with Inverter, 25kg capacity
 - 1 unit Dough Roller
 - 1 unit Semi-Automatic Rounder Divider
 - 1 unit 3-Deck Oven
- Technical Assistance and consultancy
 - Food Safety Assessment
- Technology Training
 - Awareness-Seminar on cGMP and Food Safety
 - Adoption of DOST-Food and Nutrition Research Institute's Enhanced Nutribun technology in squash and carrot variants.

IMPACT:

- **15% increase** in monthly gross sales from Php 441,000.00 to Php 508,150.00.
- **50% decrease in mixing time** from 10 to 5 batches due to increase of mixing capacity of the spiral mixer.
- **33% decrease in Dough Rolling time** from 3 to 2 passes of dough.
- **67% decrease in gas consumption** (from 11kgs to 3.6kgs).
- **Eliminated manual molding of buns and pandesal** through the used of rounder divider machine.
- **Hired two (2) additional employees** namely Gerardo Naron and Ariel Johnson.

HEALTHY CHOICE CAFE

● Ms. Joyce M. Liwanag
📍 Lasip, Calasiao, Pangasinan

Php 1,154,330.00



Production workers of Healthy Choice Café are now using their newly acquired equipment such as the Spiral mixer with an inverter, Double-Chamber Vacuum Packaging Machine, and the Infrared Gas BBQ Griller that makes their production faster and efficient.

UPGRADING OF PRODUCTION FACILITIES AND IMPROVEMENT OF LABEL FOR VEGGIE MEAT PRODUCTS

Healthy Choice Café was established in 2015. Ms. Joyce is a vegan for 16 years and makes her own food. She saw the demand of it and started making homemade veggie meats and sold through online marketing. She wanted to promote healthy and vegan foods, so she launched a 40-Day Vegan Challenge.

The firm offers plant-based food products like veggie meat gluten and different recipes such as Veggie Tocino, Tapa, Pita Wrap, Sausage, Vechon Kawali, Barbeque, Burger Patty, Siopao and Shanghai. All these recipes were formulated by Ms. Liwanag, and keeps innovating products and plant-based flavorings to offer her customers. Currently, she offers franchising and has nine (9) franchise branches in Pangasinan located in San Carlos City, Manaoag, Lingayen, Villasis, Dagupan City, Mangaldan, San Fabian, Bayambang and Urdaneta City.

To cater to the demand of the franchisees, the firm needed to upgrade its production processes and equipment. The firm also needed to upgrade product packaging and labeling to ensure quality. These problems were addressed with the assistance of DOST through technology innovation fund support under SETUP.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Spiral Mixer with Inverter, 25kg capacity
 - 1 unit Double-Chamber Vacuum Packaging Machine
 - 1 unit Infrared Gas BBQ Griller
 - 1 unit Automatic Burger Patty Forming Machine
- Label design and packaging
 - Label design and execution
- Laboratory Testing and Calibration
 - Microbial and Nutritional Facts Analyses
 - Shelf-life Testing
- Technical Assistance and Consultancy
 - Food Safety Assessment

IMPACT:

- 55% Increased in annual gross sales from Php 2,481,685 to Php 3,851,718.75.
- 100% Increase in production volume due to its new franchised cafés and the capacity of the acquired equipment.
- 12% Increase in productivity from 1.58 to 1.78 rate.
- Generated five (5) new franchise cafés and markets in Bonuan, Dagupan City; Nepo Mall Dagupan, Bayambang, Urdaneta City and Mangaldan.
- Employed 10 new employees for their production and new branches (Ariel Fabia, Angelo Domenden, Roberto Resuello, Edgar Josef V. Sicabalo, Sheryl Fernandez, Zoraine Y. Fernandez, Maria Darlene Espiritu, Franilyn Sanchez, Mylene Sarmiento, Samantha Alexis Velasquez).

K-C-K FURNITURE SHOP

• Mr. Nelson C. Espiritu Jr.
Concordia, Bolinao, Pangasinan

PHP 25,000.61



Production workers can be seen working using the acquired jigsaw and band saw in their production.

IMPROVEMENT OF PRODUCTION EQUIPMENT OF K-C-K FURNITURE SHOP

Mr. Espiritu started his business in 2010. A worker encouraged him to buy a planer to finish all the furniture needed for his home. Business opportunities came when customers requested for planing services. In 2012, he applied for DOST assistance and acquired equipment to increase production efficiency and productivity. He soon gained customers and produced furniture for resorts in Bolinao such as Marlene Beach Resort, Puerto Del Sol, El Pascador, Sundowner's Hotel Villa, and neighboring restaurants. He expanded his company from renting at Liwa-Liwa, Bolinao to acquiring his own site as production and showroom.

To further enhance production process, the firm requested for another assistance from DOST through SETUP in acquiring additional equipment and facilities.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Chainsaw, 7 hp
 - 1 unit 3HP Band Saw
 - 1 unit Milton Variable Speed Band Saw, 1.5 hp
 - 1 unit Makita 4340CT Jigsaw
 - 1 unit Bosch GST80 Jigsaw
 - 1 unit Makita 5007F Circular Saw
 - 1 Makita 5806B Circular Saw
 - 1 Makita T100 Electric Planer
 - 1 unit 3.25HP Router
 - 1 unit 12mm Router

*All S&T interventions provided to the firm are pulled-out equipment

IMPACT:

- 30% Increase in production volume due to additional markets.
- 30% Increase in productivity by from 1.43 to 1.86.
- 37% Increase in gross sales (PHP 1,000,000 increased).
- Established six (6) additional markets such as Villanueva Resort in Bolinao; and contractors from Palamis Alaminos City, Sta. Maria, Alaminos City, Quinawayanan, Bani; individual customers from Catuday, Bolinao and Santiago Island, Bolinao.
- Hired two (2) additional workers (Rhian Cruz Oriaz and Carlito Versoza).

MERO SIDECAR FABRICATION SERVICES

• Mr. Crispulo C. Mero
📍 Magsaysay St., Poblacion, Basista, Pangasinan

₱ **Php 600,000.00**



TECHNOLOGY UPGRADING FOR A WELDING AND FABRICATION SHOP IN SUPPORT TO METALS AND ENGINEERING INDUSTRY

The firm is formerly registered as CN Sidecar and re-registered as Mero Sidecar fabrication services in 2011. Mr. Mero decided to settle down and start the business after long years of working in Saudi Arabia. The firm specializes in the fabrication of sidecars stainless-steel railings, stairs, tables, chairs, fences. It also makes and installs roll-up doors and supplies sliding doors and windows made of aluminum and glass.

In 2014, the firm requested DOST for technology upgrade for its pipe bending services. The project helped the firm reach larger market and additional customers. At present, the firm has become the most trusted name in motorcycle sidecar production and various stainless-steel products fabrication in Basista, Pangasinan.

The firm sought for another assistance from SETUP to acquire the latest technologies to be able to cope up with the tight competition in the stainless steel fabrication industry, address some of their outsourcing processes, further improve product quality and ensure the timeliness of delivery of job orders.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Metal Sheet Bender, 8ft
 - 1 unit Hydraulic Pipe Bending Machine 2" in diameter

IMPACT:

- Increase in the firm's savings of Php 2,000.00 per bending transaction or at least Php 10,000.00 per month.
- 80% decrease in time of sheet bending from 3-5 hours to 30 minutes.
- 75% decrease in time of pipe bending from 1-2 hours to 15 minutes.

M.E. ENTERPRISES

• Mr. Lester T. Ocampo

📍 McArtur Highway, Brgy. Gabon, Calasiao, Pangasinan

 **Php 1,268,800.00**



Lathe Machine (left) and the Universal Milling Machine (right) can fabricate industrial-type shafts and lessens the tedious work. These acquired equipment improves the quality of their finished products.

EQUIPMENT UPGRADING AND PROCESS ENHANCEMENT FOR A FABRICATION SHOP

The firm was established in 2015, when Mr. Ocampo decided to start his own machine shop business after resigning from a fabrication company. With the help of his sister for additional capital and area for the production plant, he established the firm together with his brother-in-law, Engr. Percival Villapa. Set with only two employees and few fabrication equipment, they started to accept job orders from clients and outsource services. With their excellent service and substantial products, coupled with technical expertise and natural skills in marketing, their customers increased. They targeted institutional clients and applied for accreditation from big companies in Pangasinan to become service provider and fabricator of needed parts and services. Today, M.E. Enterprises is one of the suppliers / fabricators of industrial parts and service providers of Ginebra San Miguel Corp. in Sta. Barbara, Pangasinan, San Miguel Foods Inc. in Binalonan, Pangasinan, Universal Leaf Philippines, Inc. in Agoo La Union, 1590 Energy Corp. in Bauang, La Union, LDP Farm Corp. in Rosario, La Union, and Bamcor in San Fernando City, La Union.

The lathe machines used by the firm has a small jaw chuck and short size bed and incapable to fabricate large sizes of shafts for industrial machines. The firm is outsourcing the process to other machine shops in Manila which inflicts additional production costs and causes longer production time. To address the problem of outsourcing, the firm sought the assistance of DOST through SETUP to acquire a bigger Lathe Machine together with a Universal Milling Machine. These technologies can fabricate industrial-type shafts, lessens the tedious work and improves the quality of finished products.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Lathe Machine, 4 Jaw Chuck
800mm diameter, 12ft. Bed
 - 1 unit Universal Milling Machine

IMPACT:

- Increased the firm savings of at least Php 2,500 per day or Php 10,000 - Php 50,000 per contract.
- 25% faster delivery of lathe machining service from 20 days to 15 days per contract.
- 28% faster delivery of milling service from 14 days to 10 days per contract.
- 30% increase in income.

JGH JOJO AUTO & ELECTRICAL SHOP

• Mr. Joseph G. Tabion
📍 Sto. Domingo, Urdaneta City, Pangasinan

 **Php 380,890.00**



Checking and inspection of the newly acquired Automotive Diagnostic Scanner and 2-post Car Lifter.

UPGRADING OF SERVICE EQUIPMENT OF JGH JOJO AUTO ELECTRICAL SHOP

Mr. Tabion, a trained worker and employee in an autoshop since 1996 decided to put up his own with an initial capital of PHP 50,000.00. He established JGH Jojo Auto Electrical Shop in 2000 specializing in Aircon services, underchassis, change oil, overhauling and electrical services.

The service area which also serves as his office is about 400 meters away from the City Hall of Urdaneta City. With the opening of the diversion road in the City Hall, his location became more strategic and accessible to clients. He has established connections with different vehicle owners, jeepney drivers and operators as well as government offices. The equipment purchased from the SETUP assistance gave him opportunity to accept more clients and the shop can now compete with other auto service centers in the city.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Two-Post Car Lifter
 - 1 unit Automotive Diagnostic Scanner

IMPACT:

- 76% decrease in production time from 2 hours to 30 minutes.
- 21% increase in production volume from 97 jobs to 118 jobs per month.
- 17% increase in gross sales from Php 843,000 to Php 986,451.
- 6% increase in productivity from 62% to 59% production cost.

TYCOON MACHINE WORKS

● Mr. Allan L. Cayetano
📍 Bonuan Gueset, Dagupan City, Pangasinan

 **Php 1,268,800.00**

Phase II



UPGRADING OF SERVICE EQUIPMENT OF TYCOON MACHINE WORKS

Mr. Cayetano worked as a seafarer from 1998 to 2002. After gaining experience abroad, he put up his own business in 2013 with an initial capitalization of PHP 450,000.00 and engaged in engine repair, reconditioning as well as engineering works.

In 2014, he sought the assistance of DOST Region-1 in upgrading his service equipment and facilities to improve the productivity, sustainability, and effectiveness of the firm.

INTERVENTIONS:

- **Equipment acquisition and upgrading**
 - 1 unit Reboring Machine
 - 1 unit Honing Machine
 - 1 unit Resurfacing Machine

IMPACT:

- **Increase in savings** of Php 15,000 per month due to elimination of outsourcing services.
- **50% decrease in production time** from 2 hours to 1 hour in reboring services.

EMOHRUO PRINTS

• Mr. Jerome C. Jarquio
Rizal St., Barangay Poblacion, Tayug, Pangasinan

 **Php 1,458,640.00**



Mr. Jarquio using the acquired UV Digital Printer and CO₂ Laser Cutter.

IMPROVEMENT OF PRINTING AND CUTTING PROCESS OF EMOHRUO PRINTS

Mr. Jarquio managed an internet café business and renders services such as troubleshooting computers and installing applications. He then received a heat press machine from his cousin and started providing t-shirt and garment printing services in 2012.

In 2017, the business relocated in Poblacion for a wider production area. He stopped the internet shop and focused on printing services. Through the high-quality printing services, he gained customers from the different establishments in Tayug and other towns in Pangasinan.

He sought the assistance of DOST to acquire a UV Digital Printer and a CO₂ Laser Cutter and Engraving Machine to provide faster and better printing services and add new product lines.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit UV Digital Printing
 - 1 unit CO₂ Laser Cutter

IMPACT:

- 60% decrease in production time.
- Additional product lines and services to offer such as quality decals, sticker, direct printing to all kinds of flat surfaces, cutting and engraving services, give aways and personalized items, keychains, car and motor plates.

JAMEEL MUSHROOM PRODUCTS TRADING

• Mr. Julie F. Tabones
📍 Purok 3, Paldit, Sison, Pangasinan

 **Php 116,200.00**



Mr. Tabones preparing substrate for his fruiting bags (left).
Checking of inoculated spawn bottles in the incubation area (right).

EQUIPMENT UPGRADE FOR THE IMPROVEMENT OF JAMEEL MUSHROOM PRODUCTS TRADING

Mr. Julie Tabones, has a very keen interest in mushroom farming and even spent his spare time watching videos concerning mushroom production while working as a sales technician in Jeddah. His wife, Erica, started to participate in trainings and seminars organized by Department of Agriculture – Agricultural Training Institute (DA-ATI) on mushroom production. Following this, mushroom has been cultivated as recreational and for food consumption purposes only.

Mr. Julie settled down and pursued his interest in mushroom in the country last 2017 and ventured in the establishment of Jameel Mushroom Products Trading.

The business sought assistance from the DOST to improve the overall operational and production efficiency as the current production process is done manually hence, is laborious, inefficient and burdensome.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Bagging Machine
 - 1 unit Autoclave, 32 kg capacity
 - 1 unit Mixer, 100 kg capacity

IMPACT:

- 20% increase in the production volume from 7 kilos to 9 kilos fresh oyster mushroom and from 100 bottles to 120 bottles of spawn.
- 20% increase in its gross sales from Php 43,600 to Php 52,000 monthly.
- 15% increase in productivity from 42% to 37% production cost.

ROD'S JELLYCACIES FOOD PRODUCTS

• Mr. Roderick P. Racelis
📍 247 Navaluan, Mangaldan, Pangasinan

 **Php 101,808.00**



Mr. Racelis shredding chilis and other ingredients for the Chili Oil Paste and Alamang. Sterilization of the bottled products. Mrs. Racelis puts labels for delivery.

EQUIPMENT AND FACILITY UPGRADING OF CHILI PASTE AND ALAMANG PRODUCTION

In 2017, Mr. Racelis started producing leche flan for business but stopped due to the product's short shelf-life. With a knack for business, he tried making chili sauce with his churchmates as his first customers, then later the officemates of his siblings and children. Now his chili sauce is popular to many.

He established networks of customers and resellers in Pangasinan, other provinces and in Manila. To produce more and better quality products, the firm requested assistance from DOST to improve operation.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Stainless Steel Multi-function Food Shredding Machine
 - 1 unit Stainless Steel Table with Mid and Bottom Shelves (2000mmL x 1000mmD x 900mmH)
 - 1 unit Stainless Steel Table with Mid and Bottom Shelves (1500mmL x 1000mmD x 900mmH)
 - 1 unit All American AAPC925 Heavycast Aluminum Pressure Cooker
- Technical Assistance and consultancy
 - Food Safety Assessment
- Label Design and Packaging
 - Product label design

IMPACT:

- 20% increase in the production volume from 500-600 bottles of chili garlic paste per month.
- 70% decrease in production time (grinding) from 240 minutes to 65 minutes.
- 20% increase in gross sales from Php 8,860 to Php 10,632.00 monthly.

SOSSY BITES FOOD TRADING

• Mrs. Florence A. Lasquite

📍 303 Zone 5, Flores St., Brgy. Catbangen
City of San Fernando, La Union

₱ **Php 233,000.00**



Products of Sossy Bites Food Trading (left), demonstration on how to operate the equipment provided (right).

UPGRADING OF PRODUCTION AND EQUIPMENT OF SOSSY BITES FOOD TRADING

Sossy Bites Food Trading is a home-grown business established in 2017. The business began with "Puto Bumbong" until such time that the range of products offered grew. Now, the firm caters the needs of Filipino tables from Pinoy meryendas (snacks) to desserts and native delicacies made with a twist.

DOST La Union assessed the firm's technology needs and assisted in the layout of the new production area to comply with Good Manufacturing Practices or GMP standards. With all the technical assistance provided, Mrs. Lasquite availed the DOST SETUP program to adopt technological innovations to improve the business, boost productivity, and competitiveness.

INTERVENTIONS:

- **Equipment acquisition and upgrading**
 - 1 unit One Deck Gas Oven
 - 1 unit Spiral Mixer, 20kg capacity
 - 1 unit Gas Rice Steamer
 - 1 unit 2-Door Upright Chiller, 22 cu.ft.
 - 1 unit Stainless Table/3 ft x 5 ft
 - 1 unit Stainless Table/2 ft x 5 ft

IMPACT:

17% increase in productivity from manual processing * to upgraded and improved processing.

Higher production rate from 78 % to 93% after a year * of project implementation.

Better product quality because of more even and * uniform baking at specific time and controlled temperature using the digital gas oven and the steamer.

Tools/equipment are compliant to Good
* Manufacturing Practices and food safety requirements.

SAGAT CRUST FOOD HOUSE

● Mr. Noel Oribello
📍 Brgy. Amlang, Rosario, La Union

₱ **Php 179,800.00**



Use of the acquired equipment provided for Sagat Crust Food House.

UPGRADING OF PRODUCTION PROCESS AND EQUIPMENT OF SAGAT CRUST FOOD HOUSE

Sagat Crust Food House was established on February 2, 2012, originated from a food cart business as Bowlalakaw Food Express. With passion in Culinary Arts, Chef Noel Oribello came up with a concept of putting up an old house to inspire people from all walks of life (natives and foreigners) in Traditional Filipino way of life.

He bought an old house from Nagyubuyuban, San Fernando, La Union, disassembled it and reassembled in Amlang, Rosario, La Union which he later named "Sagat Crust". The firm offers dine-in, take-out, and even delivery services. It offers mainly delicious original recipe of empanada and pizza that has unique crust. It also offers sumptuous meals such as various rice meals, pancit bihon, spaghetti, and other specialty drinks. In 2019, Mr. Oribello graduated from the Kapatid Mentor Me Program of DTI and the Philippine Center for Entrepreneurship (PCE).

In 2021, DOST La Union assessed the firm's technology needs and assisted in the layout of the production area to comply with Good Manufacturing Practices or GMP standards. He availed the DOST SETUP program to address problems in production, especially for their empanada and pizza products. With all the technical assistance provided, he managed to have a stall in Robinsons Place La Union to cater to a wider market and to further promote the products.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit One-Deck Gas Oven
 - 1 Unit Spiral Mixer, 12kg capacity
 - 1 unit 4-burner Gas Table Top
 - 1 unit SS Working Table with Bottom Shelf/ 3 ft x 4 ft
 - 1 unit SS Working Table with Bottom Shelf/ 2 ft x 3 ft

IMPACT:

- Better product quality because of more even and uniform baking at specific time and controlled temperature.
- Higher production rate from 90.74% to 108.9%.
- Products are sold at Robinson's Place La Union.
- 17% increase in productivity from manual processing to upgraded and automated processing.
- Longer shelf-life and maintained quality/freshness of cakes using the 2-door chiller because of uniform baking at specific time and controlled temperature.
- Tools/equipment are compliant to Good Manufacturing Practices and food safety requirements.

MANANG CORA SUGARCANE PRODUCTS MANUFACTURING

• Mrs. Corazon E. Nisola
 • Ambaristo St., Gongogong, San Ildefonso,
 Ilocos Sur

Php 114,649.00



Ms. Nisola operating the newly acquired heavy duty blender and steel bottle sterilizer in producing sugarcane products.

UPGRADING OF PRODUCTION FACILITIES AND PRODUCT QUALITY OF MANANG CORA SUGARCANE PRODUCTS MANUFACTURING

Mrs. Nisola worked as a domestic helper in Malaysia and Hong Kong for 12 years, but realized that her salary would not be enough to provide a comfortable life for her family, thus, decided to settle back home in 2003 and started to adopt her family's line of business attributed to the traditional culture of Gongogong, San Ildefonso, Ilocos Sur – the sukang iloko (sugarcane vinegar) and basi (sugarcane wine) manufacturing. She and her husband Armando established a sole proprietorship sugarcane manufacturing business starting with 20 pcs. earthenware jars (burnay) for sugarcane juice ("Bennal"). The first couple of years were rough, especially since the type of business is rampant within the locality, however, Armando and Corazon (now Senior Citizens) made the business work. At present, the firm has a capitalization, of at least Php 580,000 representing a hectare of a sugarcane farm, production area, and equipment. In 2021, they availed of DOST-SETUP innovation fund that upgraded the firm's equipment and acquired laboratory analyses for its compliance to food safety and good manufacturing practices.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Heavy Duty Blender
 - 2 units Stainless Steel Bottle Sterilizer
- Label design and packaging
 - Sukang iloko 700ml & 350ml
 - Label design for muscovado sugar
- Testing and Calibration
 - chemical laboratory analyses for basi, sukang iloko and spicy sukang iloko
- Technology Training
 - Operation and Maintenance of Equipment
 - Food Safety Assessment

IMPACT:

- 375% decrease in time on mincing of ingredients from 38 minutes to 8 minutes.
- Reduce prolonged exposure of ingredients possible to contamination.
- The firm has now the capacity to sterilize recycled bottles with a total capacity of 80 bottles/load at 30 mins/loading.
- 12.06% Increase in monthly gross sales from Php 124,935.00 to Php 140,000.00.
- 16% Increase in productivity from 1.33 to 1.54.
- Four (4) additional market outlets penetrated from 14 outlets to 18 outlets.
- Expanded the production area and improved working process from 45 sq. m. to 135 sq. m.
- Results of laboratory analyses passed the Philippine National Standard (PNS) parameters for Sukang iloko, Spicy Sukang iloko and Basi.
- FDA-LTO on-process of acquisition.

COSTALES RICEMILL

• Mr. Francisco A. Costales, Jr.
📍 Brgy. Napo, Magsingal, Ilocos Sur

₱ **Php 1,800,000.00**

Phase II



Drying of palay using the 2021 Hopper Type Mechanical Dryer at the Costales Rice Mill.

DRYING FACILITY UPGRADING OF COSTALES RICEMILL

From a humble 17 bags/hour milling capacity in 1996, Costales Rice Mill flourished into a 70 bag/hour multi-pass milling firm in the municipality of Magsingal, Ilocos Sur by 2015.

With its vision of continually improving its products and services, Mr. Francisco A. Costales Jr., availed of the DOST's Small Enterprise Technology Upgrading Program (SETUP) in 2017 acquiring a color sorter machine. With the intervention, the firm's constraint on producing quality milled rice is eliminated resulting to a product free from typical defects and unwanted foreign materials.

Completing his refund in 2020, he wants to continue to develop and incorporate innovations in his operations availing a second phase of the DOST-SETUP innovation fund for the purchase of Hopper Type Mechanical Dryer. This is towards his vision of achieving and be a distinguished rice miller in the province producing high-quality milled rice.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Hopper Type Mechanical Dryer
- Technology Training
 - Operation and Maintenance of the 2021 Hopper Type Mechanical Dryer.

IMPACT:

- The firm is now capable to dry palay even during rainy season.
- 16.3% increase in volume of production/service from 70,454 sacks of milled rice to 82,000 sacks.
- 30% decrease in post-harvest losses from 1,845 cavans of palay to 553 cavans.
- 19% increase in gross sales from Php 57,280,000 to Php 68,150,000.
- Hired five (5) new regular workers.

MELANIE'S TURONES DE MANI

Ms. Melanie B. De Peralta

Flores St., Bongtolan, Vigan City, Ilocos Sur

 **Php 40,000.00**



A food handler works on food safety compliant facility (left). Finished products – Turones de Mani (right)

LABORATORY ANALYSIS AND UPGRADING OF PRODUCTION FACILITIES TO ENSURE FOOD SAFETY OF MELANIE'S TURONES DE MANI

Ms. Peralta started turones de mani manufacturing as a hobby in 2011, after learning the technical know-how from her relative. Initially, she made turones de mani on orders from friends, friends of friends, and balikbayans. The business flourished as she found a niche market within the locality and numerous resellers through online marketing and social media.

In 2019, the firm became a recipient of various DOST technical and consultancy services like food safety assessment, plant layout and seminar on current Good Manufacturing Practices (cGMP), and food safety.

In 2020, Ms. De Peralta encountered a problem with business permit renewal because the local government of Vigan City strictly implemented the policy of "No FDA-LTO, No Business Permit for Food Manufacturers". Though she was still able to acquire a temporary business permit, she then realized the necessity of having FDA-LTO thus in 2021, the firm availed DOST-SETUP that upgraded the firm's equipment and acquired necessary laboratory analyses for its FDA-LTO application.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit SS Preparation Table
 - 1 unit SS Wrapping Table
 - 1 unit SS Packaging Table
 - 1 unit SS Sink
- Technical assistance and consultancy
 - Plant Layout
 - Laboratory Analyses for microbial and aflatoxin

IMPACT:

- Improved and food-safety compliant working process in the preparation, wrapping, and packaging of products with acquisition of FDA-LTO.
- **2.63% Increase in monthly gross sales** from Php 48,720 to Php 50,000.
- **9.89% initial improvement in productivity** from 1.4 to 1.54.

NIKS PRINTING SHOP

• Mr. Dionel M. Paguirigan

📍 Niks Pinting Bldg., Ayusan Norte, Vigan City, Ilocos Sur

Php 1,805,120.00



Mr. Paguirigan supervises the performance of the Embroidery Machine during the production of embroidery products.

INNOVATION SYSTEM SUPPORT FOR NIKS PRINTING SHOP

Niks Printing Shop is involved in printing T-shirts, stickers, customized jerseys (sublimation), signages, embroidered uniforms, and patches. With increasing demand for embroidery products and services in the province, the shop outsourced embroidery services in Laguna, resulting to delayed delivery of products and additional expenses due to shipping fees. These problems also limit the firm to accept other clients needing small orders.

To address these concerns, Mr. Paquirigan tapped the Department of Science and Technology SETUP Program to upgrade capability, improve current process, and boost productivity and efficiency, through the acquisition of a 6 Head Embroidery Machine.

INTERVENTIONS:

- Equipment acquisition and upgrading

- 1 unit 6 Heads Embroidery Machine; 400x450mm (15.7" x 17.7") Automatic thread trimmer, Max speed: 1000spm 270° wide cap frame-unit 5" HD color LCD

- Technology Training

- Operation and Maintenance of 6 Head Embroidery Machine

IMPACT:

- 19.4% increase in production volume from 15,300 pcs./sem. assorted embroidery products to 18,268 pcs.
- 20.76% increase in gross sales from Php 3,172,500.00 to Php 3,831,275.00.
- Generated one (1) new employment.
- New branch established in Laoag City, Ilocos Norte.
- 11.77% increase in productivity from 1.71 to 1.91.
- Additional Php 11,000.00 monthly savings due to elimination of outsourcing embroidery products.

MALAKAS FARM LIVELIHOOD DEVELOPMENT ENTERPRISES

• Mr. Robert G. Viloria
📍 Sitio Malakas, Brgy. Muraya, San Juan, Ilocos Sur

Php 396,480.00



Production of mushroom baguettes in a cGMP compliant production area using the interventions thru DOST-SETUP Program.

UPGRADING OF PRODUCTION FACILITIES UPGRADING OF MALAKAS FARM LIVELIHOOD DEVELOPMENT ENTERPRISES

Malakas Farm Livelihood Development Enterprises was established in 2016 by the couple Robert and Jessie Viloria who are former Overseas Filipino Workers (OFW). The couple decided to get into the mushroom production business since Mr. Robert had so much passion for Agribusiness. As their harvest of oyster mushrooms got bigger, they decided to process it into crispy mushrooms which they later called mushroom baguettes. Although there is already demand for the product there are still many things to do to level up the quality of their product, comply with requirements as food processor, and increase productivity.

Driven by his will to achieve what he dreams for the business, Mr. Viloria sought the assistance of the Department of Science and Technology in upgrading their current technology in processing oyster mushrooms.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Stainless Steel Deep Sink
 - 1 unit Stainless Steel Preparation Table with Undershelf
 - 1 unit Stainless Steel Breading Table with Undershelf
 - 1 unit Stainless Steel Packaging Table with Undershelf
 - 1 unit SS Deep Fryer with automatic thermal control and thermal gauge, 40-L capacity
 - 1 unit Stainless-Steel De-Oiling Machine, 5 kg cap.

IMPACT:

- 16.7% production volume of crispy mushroom increased by 16.7% from 3,000 packs to 3,500 packs.
- 16.67 % increase in gross sales of crispy mushroom from Php 360,000 to Php 420,000.
- 4.42% improvement in productivity from 1.56 to 1.62.
- No more oil spills during the frying process brought by the Stainless-Steel Deep Fryer leading to a safer hazard-free working area.
- 75% decrease on de-oiling time (shorten the de-oiling period from 40 mins. /batch to about 10 mins. /batch), and significantly reduced prolonged exposure of deep-fried mushroom that may cause contamination.
- Secure license to operate from FDA.

ROYAL MAHARLIKA WELLNESS AND LIVELIHOOD TRAINING CENTER INC.

• Mr. Efren A. Rafanan Sr.

📍 Sitio Riverside, Brgy. An-annam, Bantay, Ilocos Sur

₱ **Php 1,051,477.00**



New label and packaging designs of the Royal Maharlika Center.

PACKAGING AND LABELLING IMPROVEMENT OF ROYAL MAHARLIKA LONGANISA AND ROYAL MAHARLIKA HERBAL COFFEE

Royal Maharlika Wellness and Livelihood Training Center, Inc. was established in 2015. It was registered with the Securities and Exchange Commission with Registration No. CN201806846 with coffee as its initial product offering. In 2017, the center decided to include herbal coffee and longanisa making in the livelihood trainings. Surprisingly, due to the promising demand for the said products after introduction to the public, the center decided to make it as its source of income and a way to help the community by creating employment. Although the products sell well, the desire to enter larger markets such as supermarkets and grocery stores is uncertain due to lack of proper packaging and labelling.

For this reason, Mr. Rafanan went to the DOST office to inquire about any program that could help the center to enter the larger market for their product.

INTERVENTIONS:

- Label design and packaging
 - Packaging Materials with Standard Label Design for Longanisa
 - Packaging Materials with Standard Label Design and Metalized PET/CPP (sachet) for Herbal Coffee

IMPACT:

- **15.48% increase in Herbal coffee** from 16800 boxes herbal coffee to 19400 boxes.
- **8.2% increase in Longanisa products** from 11369 packs longanisa to 12300 packs.
- **2.97% increase in gross sales** for both products from Php 3,889,275 to Php 4,004,849.
- **7.90% improvement in productivity** from 1.7 to 1.86.
- **Established additional market in Manila.**
- **Hired one (1) additional worker as delivery boy.**

BALAHO'S FURNITURE SHOP

• Mr. Herminigildo F. Del Rosario
📍 Brgy. Amguid, Candon City, Ilocos Sur

Php 357,490.00



*One of the workers finishing the door order before polishing (left),
Del Rosario supervises the cutting of wood using the acquired 3-in-1 thickness planer (right)*

UPGRADING THE PRODUCTION FACILITY OF BALAHO'S FURNITURE SHOP

Mr. Del Rosario is a former Overseas Filipino Worker (OFW) in Europe from 1985 to 2010. Before he went abroad, furniture making was his hobby and it was a good source of income.

When he finally came home in 2010, he started the furniture business with P50,000 investment, and introduced it around Candon, Ilocos Sur.

Aiming to deal with larger market, Mr. Herminigildo sought the innovation fund assistance through the Small Enterprises Technology Upgrading Program (SETUP). Now, he has regular display of products at the Candon Farmers' Trade Center. Being the manager of the business, he also acts as production manager and quality control officer. His daughter, Ms. Jessica Del Rosario - Constante is in-charge of sales and marketing. With combined diligence, they are stepping forward in the business industry.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit 3-in-1 Machine (Thickness Planer 18", Jointer 10", Circular Saw 16")
- Technology Training
 - Operation and Maintenance of the machine
- Technical Assistance and consultancy
 - Energy Audit

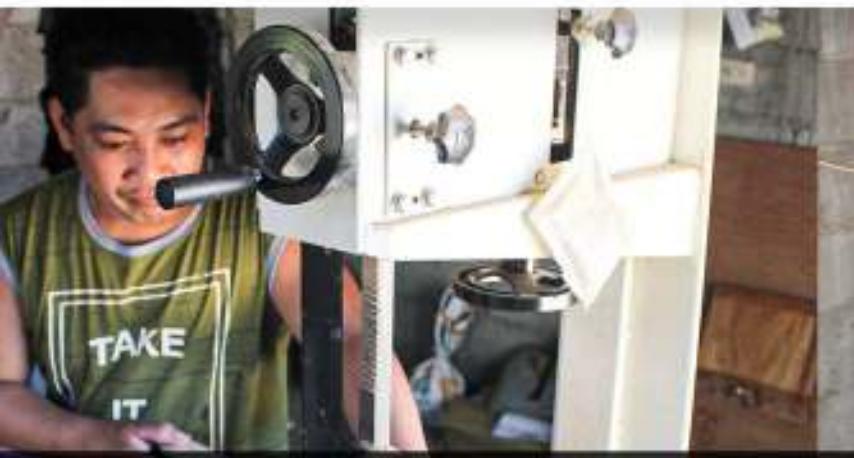
IMPACT:

- 1.53% improvement in productivity of the firm by eliminating outsourcing in cutting of woods causing delays in the production.
- 7% increase in gross sales from Php 160,000 to Php 170,900.
- 27% increase in production rate from 30 to 38 different types of furniture.

COLOMA FURNITURE SHOP

• Mr. Randy D. Coloma
📍 Brgy. Nanguneg, Narvacan, Ilocos Sur

Php 259,700.00



Mr. Coloma using the acquired bandsaw provided thru the DOST-SETUP Program.

INNOVATION SYSTEM SUPPORT TO UPGRADE THE PRODUCTION FACILITY OF COLOMA FURNITURE SHOP

With an initial capital of Php 65,000 and having the skills to start with, Mr. Coloma invested in the basic equipment for furniture making. At first, his manufacturing equipment was just right for the number of his customers. However, over time and with the increase in the number of interested clients, his equipment was no longer sufficient to deliver the orders on time. One of the things that slowed him down was the lack of a machine to cut the lumber into workable sizes, which he outsourced from another shop. Without control over the outsourcing job, there is delay in the completion of the orders.

This was the motivation of Mr. Coloma to approach the Department of Science and Technology for assistance to speed up the production and be more productive.

INTERVENTIONS:

- Equipment upgrading and acquisition
 - 1 unit Wood Bandsaw Machine

IMPACT:

- 5.16% productivity improvement from 2.0 to 2.10.
- One (1) additional worker hired.
- 50.66% increase in average monthly gross sales from Php 60,000 to Php 90,400.
- 47% increase in monthly volume of production from 15 units of assorted furniture to 22 units.
- The firm is now capable of accepting orders with intricate designs which they usually reject/turn down before.

JEZZI'S FOOD PRODUCT

• Mrs. Regina C. Sabate
📍 Brgy. Poblacion Norte, Santiago, Ilocos Sur

 **Php 74,130.00**

Phase II



Ms. Sabate operating the Silent Bowl Cutter (1st photo). Mr. Sabate packaging chili garlic bits (2nd photo). The SS Working Table used in packaging and labeling (3rd photo).

FOOD SAFETY COMPLIANCE THRU PRODUCTION FACILITY UPGRADING AND NUTRITIONAL ANALYSES OF JEZZI'S FOOD PRODUCTS

Jezzi's Food Products offers a variety of chili products. It initially operated in La Union and started making chili garlic sauce in 2012. It also sought the assistance of the PSTC-La Union regarding good manufacturing practices in their production area.

In 2017, the business was re-established in Santiago, Ilocos Sur- the hometown of Mr. Sabate. He established his production area, applying the knowledge he acquired from PSTC- La Union. To date, Jezzi's Food Products supplies its products to numerous market outlets, mainly in La Union, where they first introduced the products. With the expansion of the business, he again aspired to improve the productivity through technology upgrading and compliance with the mandatory requirements.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit SS Preparation Table with under shelf
 - 1 unit Garlic Peeling Machine
 - 1 unit SS Silent Bowl Cutter
- Testing and Calibration
 - Nutritional Analyses for chili garlic sauce, crispy garlic in chili oil
- Technical assistance and consultancy
 - Plant Layout
 - acquisition of FDA – LTO
- Technology Training
 - Webinars on Hazard Analysis and Critical Control Point (HACCP)
 - Mandatory Labeling Requirements
 - FDA Licensing and Product Registration
 - GMP Documentation and Sanitation SOP
 - Packaging and Labeling Awareness
 - Food Fraud and Food Defense Awareness
 - Workplace and Manufacturing Disinfection
 - 5S of Good Housekeeping.

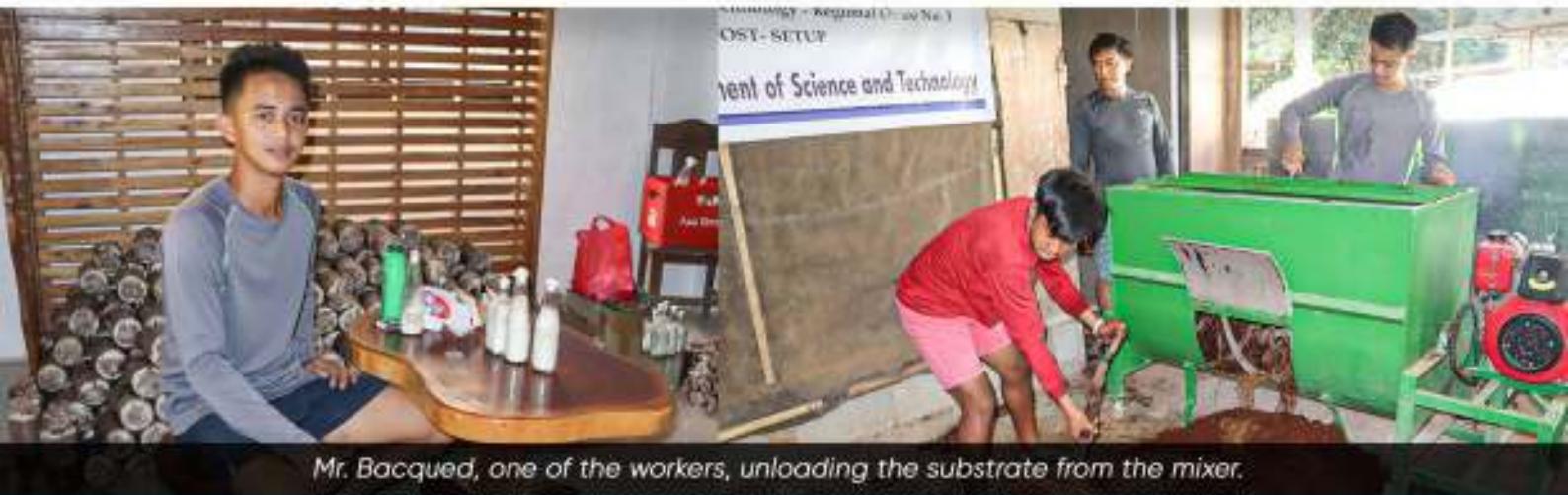
IMPACT:

- 91% decrease on grinding time from 1 hour, now 5 minutes to grind 3 kg of chili.
- 45.16% increase in annual gross sales from Php 573,840.00 (2020) to Php 833,020.00 (2021).
- 109.895% increase in the average volume of production from chili oil (559 bottles to 906 bottles); crispy garlic in chili oil (711 jars to 1208 jars); crispy garlic bits (262 to 550 pouches); chili garlic sauce (2615 to 3,838 jars).
- 95.83% reduction in garlic peeling time from 6 man-hours to 15 mins to peel 3.5 kg of garlic per production day.
- 47% increase in market from 17 to 25 physical outlets.
- 7.94% initial improvement of productivity from 1.51 to 1.63.
- 100% efficient process of grinding ingredients to desired fineness.
- Compliance with the mandatory packaging and labeling requirements as the nutritional facts attached to the labels are from accredited laboratory.
- Four additional on-call workers.
- Acquired Food and Drug Administration License-to-Operate (FDA LTO).

ALMAZAN'S MUSHROOM PRODUCTS MANUFACTURING

• Mr. Thomas B. Almazan
📍 Brgy. Poblacion, Suyo, Ilocos Sur

₱ **Php 87,000.00**



Mr. Bacqued, one of the workers, unloading the substrate from the mixer.

UPGRADING OF FACILITIES FOR MUSHROOM PRODUCTION

In 2017, Mr. Almazan attended the training on "Oyster Mushroom Production as an Alternative Livelihood in Disaster Vulnerable Areas in Region 1" under the DOST-PCAARRD's SAFE Program in the region. The activity intensified his knowledge and interest on mushroom production, and upon realizing its marketability in the locality, he engaged in the business.

Almazan's Mushroom Products Manufacturing has established the facilities for mushroom production, such as mushroom growing house, inoculation room, and improvised pasteurization drums.

As the firm expands its market, it sought assistance from the DOST SETUP to upgrade its facilities for substrate mixing and spawn production.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit substrate mixer
 - 1 unit autoclave
- Technology Training
 - Awareness Seminar on cGMP with Emphasis to Food Safety
 - Awareness Seminar on FDA LTO
- Technical assistance and consultancy
 - Proposed Plant Layout
 - Referral to a spawn production training

IMPACT:

- 83% decrease on substrate mixing period from two man-hours to 20 mins per batch (~252 kg of substrate materials/batch).
- 100% survival rate of the sterilized grain spawns/culture medium.
- 31% increase in the annual production volume of fruiting bags (for the purpose of selling) produced from 2,100 to 2,765 bags.
- 6.63% initial improvement of productivity from 1.73 to 1.84.
- Hired one (1) additional regular production worker.

JVA FURNITURE

• Mr. James V. Arcebal

📍 Brgy. 28 San Mateo, City of Batac, Ilocos Norte

Php 496,428.33



Mr. Arcebal, operating his new equipment.

UPGRADING OF TECHNOLOGY FOR FURNITURE PRODUCTION

JVA Furniture is one of the furniture producers that benifitted from the technical assistance of the Department of Science and Technology (DOST). The firm is a maker of beds, sala sets, panel doors, door jambs, and other wooden home furnishings. With the increasing demands in their quality finished products, the firm decided to engage for a second phase of the SETUP project.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Chisel Mortiser, Hydraulic Type
 - 1 unit Phase Post Drill
 - 1 unit of Single-Phase Adjustable Miter Saw
 - 1 unit Air Compressor
 - 1 Unit Jointer

IMPACT:

- **67% reduction in planing time for 100 bd. ft. from 3 hours to 1 Hour.**
- **20% increase in monthly volume of production** from 20pcs assorted wooden furniture to 30 pcs.
- **20% increase in monthly board foot usage** 1,063 bt. Ft. of assorted woods to 1,266 bt. ft.
- **8% increase in productivity** from 1.57 to 1.89.
- **40% increase in monthly average gross sale** from Php 276,583.33 to Php 387,216.33.

FAB PRINTLINE & GENERAL MERCHANDISE

• Mr. Franklin John Barroga

📍 Brgy. 2 Abian, City of Batac , Ilocos Norte

 **Php 778,000.00**

Phase II



Mass production of sublimated shirts of FAB Printline using DOST given intervention.

TECHNOLOGY UPGRADING OF FAB PRINTLINE & GENERAL MERCHANDISE

Mr. Barroga is a registered nurse, serving in a hospital but used to pursue his hobby as a graphic designer in various printing shops in the City of Batac with his brother. With that, it was his starting point in establishing the Fab Printline and General Merchandise in 2011 and became the graphic designer and a manager of his own business.

In 2017, Franklin wanted to modernize and improve his products. He availed the DOST SETUP innovation fund to improve the firms' productivity and sales.

In 2020, the firm produced customized face masks and Personal Protective Gears (PPEs) as it shifted on these product lines to help mitigate the spread of the COVID virus. With the demand, the firm cannot handle the volume of production needed, thus, sought for Phase 2 of SETUP.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit Epson Dye Sublimation Printer Epson F6330
 - 1 unit Dual Station Heat Press

IMPACT:

- Constructed new production area to accomodate acquired equipment.
- 50% reduction in production time from 2 weeks to 1 week.
- Eliminated the pick-up expenses from outsourcing to Php 40,000/month.
- 20% increase in sales from Php 380,672 to Php 456,806.40.

GCM COLLECTIONS

Ms. Martha Louise Aurora Medina-Borleo
Brgy. 2 Abian, City of Batac, Ilocos Norte

Php 970,000.00



GCM Collections Manager Mr. Rafael C. Medina flexing the newly acquired printing machine.

TECHNOLOGY UPGRADING FOR DIGITAL PRINTING OF GCM COLLECTIONS

GCM Collections began in 1994 as a small store that offered printed T-shirt and uniform. Slowly, the firm grew at an unparalleled rate becoming the pioneer on T-Shirt printing in the City of Batac, offering premium quality products at affordable prices. From being a uniform maker in the city, GCM has grown to include sports uniforms, cycling essentials, rider's gears, and even tricycle driver's protective sleeves.

Throughout the years, GCM Collection has achieved the distinction of being present virtually in the province. As it sliced through demographic divisions-age, gender, socio-economic status-a stirring slogan "GCM, Delivering Quality Goods Through The Years" became the company's abiding creed.

At present, however, the firm outsources a great number of sublimated printing jobs, especially the fully printed shirts which is the current demand of the market today. This is why the firm requested DOST Ilocos Norte for SETUP assistance, to turn potential incomes into reality by the provision of the appropriate and latest equipment.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit full large format sublimation printer, EPSON F6330 and Clamp-Type with Heat Press

IMPACT:

- Delays imposed by the outsourcing practices has been eliminated, leading to the increase in the efficiency of the workers.
- Employed four (4) new workers: one (1) graphic artist and three (3) heat press operators.
- 15.38% increase in productivity of the firm from 1.67 to 1.92.
- 40% increase in printing jobs from 300 pcs/month to 420 pcs/month.
- 11.99% increase in income of the firm from Php 180,350/month to Php 201,974/month.

MABINI SQUARE DEN

● Mr. Jan Denleigh Quelman
📍 Brgy. 6 Mabini St., Laoag City, Ilocos Norte

Php 770,000.00



TECHNOLOGY UPGRADING FOR DIGITAL PRINTING OF MABINI SQUARE DEN

Mabini Square Den was established in January 2017 with Php. 50,000 capitalization. It started with a single printer for documents and a single cutter plotter for stickers and heat-pressed T-shirts. Additional printers were added when the company got a bulk order for an election campaign.

As a result, Mr. Quelman and his team started producing full-sublimation clothes, reaching a wider scale of the market including abroad.

Due to the increase in demand and the growing network to supply, the firm is no longer able to completely cater to other printing jobs, especially those that require full sublimation resulting in a lot of lost opportunities for additional income and customers. With this situation, Jan Denleigh sought the assistance of DOST under the SETUP program to upgrade his equipment and facilities.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit 4 Heads Apollo Max 30 Large Format Sublimation Printer
 - 1 unit Clamp Type Heat Press
- Technical assistance and consultancy
 - Plant Layout

IMPACT:

- 15% increase in production from 190pcs to 218 per month.
- 20% increase in sales from Php 175,682 to Php 210,818.40.
- 7% improvement in productivity from 1.53 to 1.74.

STERLING PRINTING SERVICES

● Ms. Razel A. Miguel

📍 Brgy. 13 Nuestra Señora de Visitacion, Laoag City, Ilocos Norte



PHP 551,200.00



Production of sublimated Tshirts from Epson Printer to transferring of designs using Clamp type heat press.

TECHNOLOGY UPGRADING FOR DIGITAL PRINTING SERVICES

Sterling Printing Services was established in 2005. It started with computer rentals and document printing services, in Laoag City. It later expanded and engaged into producing souvenir items and T-shirt printing in 2013.

With the growing operation and market of the business, Razel applied for SETUP Innovation Fund Assistance for the upgrade of production equipment to cope with the demands of customers for new products but still maintaining low printing cost and guaranteed service.

INTERVENTIONS:

- Equipment acquisition and upgrading
 - 1 unit EPSON F6330 with Clamp Type Heat Press

IMPACT:

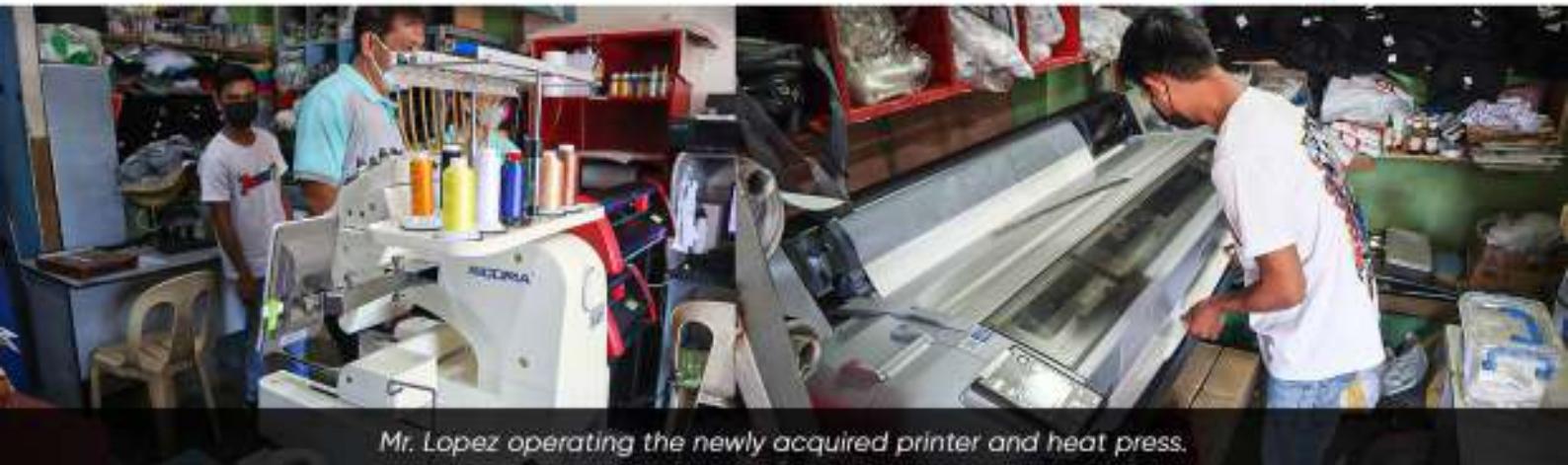
- New production area to accommodate required equipment.
- 50% reduction in production time (2 weeks to 1 week bulk orders of tshirt resulting to increased efficiency).
- 20% increase in sales from Php 175,682 to Php 210,818.40.

LORENZ TEES PRINTS AND SOUVENIRS

● Mr. Laurence B. Lopez
📍 Brgy. 11 Sta. Balbina, Laoag City, Ilocos Norte

₱ **Php 480,000.00**

Phase II



Mr. Lopez operating the newly acquired printer and heat press.

TECHNOLOGY UPGRADING FOR DIGITAL PRINTING OF LORENZ TEES PRINTS AND SOUVENIRS

Established in 2011 as a sole proprietor business, Lorenz Tees and Prints and Souvenir engaged in the production of t-shirt printing and souvenir items. The firm is an existing beneficiary of SETUP Project 2017.

It has become one of the leading printing services and souvenir providers in the province, offering a wide choice of products, designs, and services. Currently, the firm extended its market to different towns in the province. This year, through SETUP, the firm expanded its product lines namely bookmarks, calendars, posters, and even packaging and labeling for products.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Epson F6330 Printer
 - 1 unit Heat Press

IMPACT:

- 50% reduction in production time from 2 weeks to 1 week, increasing its production efficiency by 50%.
- 20% increase in sales from Php 250,000 to Php 300,000.
- 6% improvement in productivity from 2.5 to 3.1.
- 50% reduction in printing time for bulk orders from 2 weeks to 1 week.
- Hired two (2) additional regular employees.

LAOAG GRAPHICS ENGINEERING DESIGNS

Mr. JC V. Salvador

Brgy. 10 P. Gomez St. Laoag City , Ilocos Norte

Php 1,175,000.00

Phase II



The staff operating the newly acquired Embroidery Machine (left), mass production of embroidered shirt using DOST given intervention (right).

UPGRADING OF TECHNOLOGY FOR DIGITAL PRINTING OF LAOAG GRAPHICS ENGINEERING DESIGNS

Laoag Graphics Engineering Designs is a sole proprietorship established in 2011 with an initial capital of P 60,000 to produce printed T-shirts. The firm expanded its production line to digital transfer printing and customized t-shirts and the like.

In 2018, the firm was granted a SETUP Project innovation fund to acquire sublimation printer and large format heat press. With the given intervention, the firm has increased its sales, market share, and an additional market outlet. The firm has also upgraded from Micro to become a Small Enterprise.

With a nationwide market reach, Mr. Salvador availed for another DOST SETUP Assistance.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Embroidery Machine

IMPACT:

- 300% reduction in production time from 4 weeks to 1 week.
- 50% increase in sales from Php 100,000 to Php 150,000 per month.
- Generated 2 additional regular employment.
- Established 4 additional institutional markets/client in MMSU-Dingras, LGU-Pagudpod, Provincial Government of Ilocos Norte and LGU-Solsona.



INNOVATIONS FOR FILIPINOS WORKING DISTANTLY FROM THE PHILIPPINES

iFWD PH Program

In response to the influx of repatriated Overseas Filipino Workers (OFWs) in the country due to the global pandemic, the Department of Science and Technology – Regional Office 1 (DOST 1) has implemented the Innovations for Filipinos Working Distantly from the Philippines Program (iFWD PH) which aimed at providing opportunities for OFWs and their families to establish their technology-based businesses.

Comprised of two (2) phases, Phase 1 covers the capability building for the development and management of technology-based enterprise alongside with the eligibility, requirements, and screening process. Phase 2, on the other hand, focuses on the innovation-funding of the technology-based business. A maximum of PhP250,000.00 worth of Innovation Fund (iFund) support is provided to the OFW-beneficiary to cover the following: a) Entrepreneurship and technical training, 2) Product development and market testing, 3) Operational consultancy services, 4) Initial laboratory testing, 5) Packaging and labeling design and execution for market testing, and 6) Equipment Acquisition.

ACTIVITIES UNDERTAKEN IN PHASE 1 OF THE iFWD PH PROGRAM IN DOST 1:

Orientation of OFWs to the Programs

Spearheaded by the DOST 1's Regional Program Management Office (RPMO), the virtual orientation was attended by 24 OFWs from all over the region together with the staff from the Provincial S&T Center (PSTCs) who provide assistance throughout the process. The orientation was conducted online via the Microsoft Teams platform to introduce the iFWD Ph Program to eligible OFWs who have been repatriated or have returned home to the Philippines within the last three (3) years, or to their immediate family members such as the spouse, parent, or children of legal age.



OFW-participants raise their concerns regarding the iFWD PH Program. Their queries were clarified by Ms. Adelisa C. Florendo, Science Research Specialist II and Dr. Ismael D. Guntiza, the Assistant Regional Director for Field Operations. Engr. Michael Daniel L. Ramirez, Project Assistant I and Ms. Katrina F. Ronquillo, Project Assistant II served as the moderators for the virtual orientation.

TeknoLokal para sa Makabagong Bayani

In anticipation for the Capacity Building and Core Development Learning Sessions under Phase 1, the DOST 1 through the RPMO conducted a series of virtual technology pitching sessions where various Sectoral Planning Councils and Research and Development Institutes (RDIs) of the DOST pitched their innovative technologies that are available for adoption and commercialization by the OFWs for their iFWD PH projects.



Capacity Building and Core Business Development Sessions

Financial Management and Information Technology
Version 2.0

Ms. Erlene B. Palacpac of the EVFI on her discussion on the Session 12: Financial Management and Information Technology.

RATIONALE / ABOUT THE BUSINESS

Want to be healthy? Choose healthy foods... make sure the you eat more fibre healthy anyway. It is recommended to eat fresh chicken meat, never frozen, and the best way is to dress your own chicken - the way our old folks did when refrigerators were still not common and that chickens roamed around freely.

At Dy Chick'n Eggs, our chickens enjoy a lot of freedom, fresh air and happy grazing on grasses, feed on insects and worms as they find on the ground or grasslands. No hormones used, no antibiotics, not even vitamins or other commercial supplements. Our chickens are raised in a stress-free environment.

We sell premium eggs and Chicken Meat.

By Dy Chick'n Eggs and compare it to your usual chicken from the grocery. And here's great news - price difference is very minimal. Enjoying Healthy and Conscious Living.

DOST

Conduct of final business pitching sessions during the iFWD PH's Phase 1. Ms. Julie Fe F. Dy, a repatriated OFW from Aguilar, Pangasinan presents her business proposal for Dy Chick'n Eggs.

Regarded as the main highlight of the iFWD PH's Phase 1, Capacity Building and Core Business Development Sessions were conducted simultaneously by DOST Regional Offices 1, VII, VIII and MIMAROPA in partnership with Entrepinay Volunteers Foundation Inc. (EVFI). Through the virtual learning sessions, the OFWs were guided in the conceptualization of their proposed technology-based business which will then be funded during the Phase 2 of the Program. Among the topics that comprised the learning sessions were: Values and Entrepreneurship; Business Concept Development; Business Model Canvas (BMC); BMC Presentation; Business Law and Taxation; Supply and Value Chain Management; Product Costing and Pricing; Updated BMC with Business Plan; Marketing and E-Commerce; Operations Management; Organizational Management and Labor Laws; and Financial Management and Information Technology. Staff from the DOST Regional Offices and Provincial S&T Centers served as the shepherds to the OFWs to usher them to their successful course completion.

As a requirement to the Phase 1 completion, the OFWs presented their final business proposals. They had also to undergo an online examination to gauge their knowledge and understanding on the various business principles.

Concluding Ceremony of the Capability Building for the Development and Management of Technology-based Enterprise

Dubbed as the "Batch Malikhain", nine (9) OFWs from Region 1 along with 33 others from Regions VII, VIII and MIMAROPA graduated from the iFWD PH's Phase 1. As a gratitude and to give motivation to the OFW-graduates, congratulatory messages were delivered by DOST Regional Directors Dr. Armando Q. Ganal of DOST 1 and Dr. Ma. Josefina P. Abilay of DOST-MIMAROPA. Engr. Sancho A. Mabborang, DOST Undersecretary for Regional Operations also extended his congratulations to the OFWs during his inspirational message. In his keynote speech, DOST Secretary Fortunato T. de la Peña thanked the OFWs for choosing to be part of the iFWD PH Program and commended the dedication of the OFWs.



Concluding Ceremony of the Capability Building for the Development and Management of Technology-based Enterprise. Mr. Edgardo Alcantara (bottom left in the photo) who is currently in Qatar, shares his insights on his iFWD PH Phase 1 journey. Each graduating OFW were given a Certificate of Completion for having successfully completed the Phase 1.



COMMUNITY-BASED PROJECTS

Aside from the technological assistance extended to MSMEs, DOST-1 also backed the technology needs of 29 community-based organizations worth PhP3,833,680.60 through the Grants-in-Aid (GIA) Program. The said amount was allotted to provide S&T-related interventions and trainings intended for the improvement of productivity, production and product quality, packaging & labeling and technological capability.



Share of Community-based Projects Funded per PSTC

Table 1. Amount of community-based projects funded per Provincial S&T Center

| PSTC | Amount |
|-------------------------|---------------------|
| Ilocos Norte | 595,210.00 |
| Ilocos Sur | 821,061.60 |
| La Union | 798,420.00 |
| Pangasinan | 962,344.00 |
| Pangasinan Field Office | 656,645.00 |
| TOTAL | 3,833,680.60 |

As shown in Table 1, the province of Pangasinan received the highest fund assistance for Community-based organizations at 42% and Ilocos Norte receiving the least at 16%.

Number of Community-based Projects implemented per sector by province

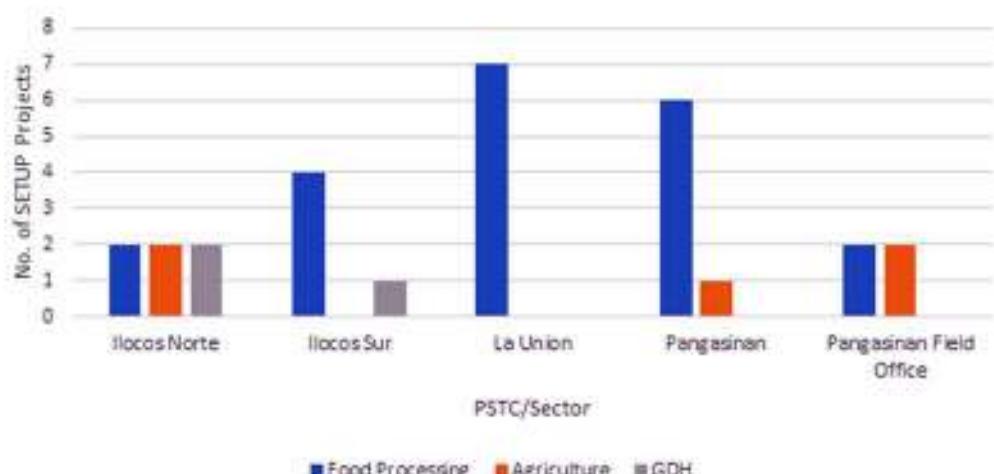


Table 2. Number of community-based projects implemented per sector by province.

| SECTOR | ILOCOS NORTE | ILOCOS SUR | LA UNION | PANGASINAN | PANGASINAN FO | TOTAL |
|----------------------|--------------|------------|----------|------------|---------------|-----------|
| Food Processing | 2 | 4 | 7 | 6 | 2 | 21 |
| Metals & Engineering | - | - | - | - | - | - |
| Furniture | - | - | - | - | - | - |
| Agriculture | 2 | - | - | 1 | 2 | 5 |
| GDH | 2 | 1 | - | - | - | 3 |
| Pharma | - | - | - | - | - | - |
| Others | - | - | - | - | - | - |
| TOTAL | 6 | 6 | 7 | 7 | 4 | 29 |

Table 2 presents the number of community-based projects implemented in CY 2021 by province and priority sectors. Out of the 29 community-based projects implemented in the region, 21 projects were under the food processing sector and followed by 5 projects under the agricultural sector. On the other hand, Pangasinan implemented the highest number of projects at 11.

Table 3. Number of community-based projects implemented by congressional district for each province in the region

| SECTOR | ILOCOS NORTE | | ILOCOS SUR | | LA UNION | | PANGASINAN | | | | | | TOTAL |
|----------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 1 | DISTRICT 2 | DISTRICT 3 | DISTRICT 4 | DISTRICT 5 | DISTRICT 6 | |
| Food Processing | - | 2 | 2 | 2 | 3 | 4 | 3 | 2 | 1 | - | 1 | 1 | 21 |
| Metals & Engineering | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Furniture | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Agriculture | 2 | - | - | - | 1 | - | 1 | - | - | - | - | 2 | 5 |
| GDH | 1 | 3 | 1 | - | - | - | - | - | - | - | - | - | 3 |
| Pharma | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Others | - | - | - | - | - | - | - | - | - | - | - | - | - |
| TOTAL | 3 | 3 | 3 | 2 | 4 | 4 | 4 | 2 | 1 | - | 1 | 3 | 29 |

Table 3 shows the distribution of community-based projects by congressional district for each province in the region.

BINMALEY UPWARD CHRISTIAN FISH PROCESSOR, INC.

● Mr. Egberto Dalmacio, Founder and Adviser
📍 Brgy. Linoc, Binmaley, Pangasinan

₱ **Php 128,704.00**



Production workers incorporating the product label in the finished product and storing it in the acquired chest freezer intended for the finished products.

EQUIPMENT AND PROCESS IMPROVEMENT FOR A FISH PROCESSING PLANT

The Binmaley Upward Christian Fish Processors, Inc. (formerly Binmaley Upward Christian Women in Community Development) was established in 2020, by the initiative of its president, Mrs. Rhida Dalmacio and her supportive husband, Mr. Bing Dalmacio. The association's primary objective is to provide employment and additional income to housewives who are also members of their church. With the assistance from Bureau of Fisheries and Aquatic Resources (BFAR), the members had undergone training on fish (Bangus) processing and entrepreneurship. With a very minimal capital, they started the processing of bangus, which is also the primary product of Barangay Linoc and the municipality of Binmaley.

Today, the association is producing different processed bangus products like marinated boneless bangus, smoked boneless bangus (tinapa), bangus shanghai, bangus relyeno, bangus chicharon and bangus longganisa. The difference of their products from other processed bangus in the market is that they don't use preservatives and it is also tastier, true to their tag line "Mapapalino sa sarap".

Through the DOST Community-Based project, the firm was provided with facilities and equipment for the improvement of the firm's operations.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Chest Freezer (for raw materials)
 - 1 unit Chest Freezer (for finished products)
 - 2 units Stainless Steel Tables (4'W x 6'L x 30'H)
 - 1 unit Stainless Steel Table (4'W x 8'L x 30'H)
 - 2 units 5-Tier Stainless Wire Rack Shelving
- Label design and packaging
- Technical assistance and consultancy
 - Food safety assessment
- Technology Training
 - Awareness on Seminar on cGMP and Food Safety

IMPACT:

- Established additional market Roxy's in Manila and in Los Baños, Laguna.
- 30% increase in production from 2,000 packs of various processed fish products to 2,600 packs.
- 10% increased in gross income from Php 124,892 to Php 137,381.20.
- Food safety compliant production process.
- Improved label design.

BANI DELICIOUS ICE CREAM, SLPA (SUSTAINABLE LIVELIHOOD PROGRAM ASSOCIATION)

● Mr. Fernando S. Verseles, President
📍 Brgy. Bani, Bayambang Pangasinan

₱ **Php 180,000.00**



From the manual process of ice cream making (left) to producing quality ice cream using the acquired ice cream maker machine (right).

IMPROVEMENT OF PRODUCTION EQUIPMENT FOR BANI DELICIOUS ICE CREAM, SLPA (SUSTAINABLE LIVELIHOOD PROGRAM ASSOCIATION)

It was in 1992 when Fernando S. Verseles of Sitio Don Pascual, Brgy. Bani first discovered how to make sorbetes or 'dirty' ice cream. He learned the technology from his elder brother, Rogelio S. Verseles Sr. with a capital of P400 a day, he was able to produce 2 tubes (10 gallons) of two flavored ice cream that he sold in different barangays of Bayambang and nearby municipalities. His relatives and neighbors soon took the interest in the trade and began to learn the ropes from Verseles and the pool of ice cream vendors from Bani was born.

Bani Delicious Ice Cream, SLPA, the association of ice cream makers was officially organized in April 2018 with the help of Municipal Operations Office (MOO) of the DSWD Region 1. The forming of the organization was to help the ice cream makers able to avail of DSWD benefits, as organizing into an accredited association was among the prerequisites.

Today, the Association continues to produce delicious ice cream since they availed capital funds and technical assistance from MSWD and LGU Bayambang for their chosen livelihood. They proved that ice cream making is viable in the long run, as the group continued to capitalize on Filipinos' craving for sweet cold treats especially in the summer months.

Through the DOST Community-Based project, the firm was provided with an ice cream maker machine to improve the firm's production process, product and its quality.

INTERVENTIONS:

- Equipment acquisition / upgrading
 - 1 unit ice cream maker machine
- Technical assistance and consultancy
 - Food Safety Assessment
- Technology Training
 - Awareness Seminar on cGMP and Food Safety

IMPACT:

- 100% decrease in processing time from 180 minutes to 20 minutes.
- Two (2) additional products developed; carrot and malunggay flavored ice cream.
- Four (4) additional markets established; Urbiztondo, Mangotarem, San Vincente Ferrer Prayer Park, Bayambang, and LGU Bayambang Mayor's office and Nutrition Office.

BUGALLON FARMERS FISHERFOLKS PRODUCERS' IMPROVEMENT CLUB

- Ms. Vita B. Mamaril, President
- Barangay Bañaga East, Bugallon, Pangasinan

Php 50,000.00



Bangus products of the Association packed in the newly acquired bottled packaging.

PACKAGING AND LABELING ENHANCEMENT AND PRODUCT IMPROVEMENT FOR A FISH PROCESSING FIRM

The Bugallon Farmers Fisherfolks Producers Improvement Club, a processed bangus producer was established in 2020 thru the initiative of the President, Ms. Vita B. Mamaril. Ms. Mamaril attended a 3-day training on "Fish Processing and Value Adding Products" and the idea of establishing an association on fish processing was conceived with an initial capitalization of P5,000.00.

Today, the association is producing different bangus products like marinated boneless bangus, smoked boneless bangus (tinapa), and bangus shanghai. The members believe that as a livelihood, milkfish production is a profitable source of income whereas milkfish provides, not only reasonably priced nutritious protein to people, but also livelihood opportunities to countless families engaged in aquaculture.

Through the DOST Community-Based project, the firm was provided label design and packaging for various processed fish products, technical assistance and training.

INTERVENTIONS:

- Label design and packaging
 - Packaging materials on various processed fish products
- Technical assistance and consultancy
 - Food Safety Assessment
- Technology Training
 - Awareness Seminar on cGMP and Food Safety and Mandatory Packaging and Labeling Requirements

IMPACT:

- Additional 1 product: bottled Spanish bangus.
- 40% increase in gross sales from Php 24,860.00 to Php 35,000.00.

SUDIPEN WOMEN INDIGENOUS PEOPLES ORGANIZATION (SWIPO)

- Ms. Marilou S. Gaoen, President
- West wing part, Sudipen Farmers Public Market
Sudipen, La Union

 **Php 104,870.00**



The Association members using the acquired interventions in producing their Rice Wine and placing the new packaging and labelling.

PRODUCT AND PACKAGING IMPROVEMENT OF RICE WINE OF SUDIPEN WOMEN INDIGENOUS PEOPLES ORGANIZATION

The association, thru the leadership of its President, started the commercial production and selling of the rice wine in 2015 with the support of the National Commission on Indigenous People. They were provided a seed capital by the NCIP for the purchase of raw materials and other kitchen tools for processing, based on their culture and tradition like the use of bamboo woven winnower, and basket and clay-made fermenting jars.

In addition to their product, they also produce Indian Mango Vinegar, Kamias Wine & vegetable pickles. They have learned the processing of these products through the skills training on food processing by TESDA in 2019.

Mr. Danny Cachola, the NCIP Coordinator in District 1, requested a training on Packaging and Labelling from DOST. Considering the great potential of the locally made rice wine, the organization was urged to upgrade its facilities and asked for assistance through the community-based project of DOST. In the same year, they were validated but the production area being proposed by the NCIP & the organization is not suitable for food production.

With their great perseverance to upgrade their production facility, they requested a production area to the Local Government of Sudipen, La Union that readily responded to the request.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 2 units Stainless Steel Table
 - 1 unit Stainless Steel Table with sink
 - 2 units Stainless Settling Tank with faucet
 - 1 unit Auto siphon
 - 1 unit Bottle Capper
 - 1 unit Heat Blower
 - 1 unit Heavy Duty Burner with LPG
 - 5 units Stainless Steel Storage Containers
- Label design and packaging
 - 3 in x 5 in laminated stickers

IMPACT:

- Compliance to good manufacturing practices and food safety standards
- Improved packaging and labeling design of Rice Wine.
- 50% reduction in processing time for cooking from 1 hour to 30 mins.
- 20% increase in volume of production from 560 bottles to 728 bottles.

GINTONG GUBAT ASSOCIATION SA SANTOL LA UNION INC.

● Susana D. Quianio, President
📍 Bry. Poblacion, Santol, La Union

₱ **Php 127,700.00**



Turnover of the equipment provided to Gintong Gubat Association.

PROCESS AND PRODUCT IMPROVEMENT OF TURMERIC TEA / POWDER OF GINTONG GUBAT ASSOCIATION OF SANTOL LA UNION INC.

The association was organized in 2019 by the Livelihood Focal Person of Santol, La Union guided by Municipal Mayor Magno A. Wailan with the members united to create a good camaraderie in the community.

The association took the opportunity of processing Turmeric tea/powder due to the abundance of the crop in the community. At first, turmeric tea/powder was made upon order. Joining trade fairs and other events of the municipality is one of their ways of promoting and selling the product to generate income. To ensure that the association produces quality Turmeric Tea/powder and in preparation for FDA Registration, the LGU, through Mayor Wailan, assured of a processing area for their Turmeric Livelihood Project.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Juicer/juice Extractor
 - 1 unit Pulverizer
 - 1 unit Small Heavy Duty Cooking Vat
 - 1 unit Impulse sealer
- Label design and packaging
 - 10 cm x 15 cm and 16 cm x 24 cm stand-up pouch
 - 100g and 750g laminated stickers

IMPACT:

- 30% increase in volume of production from 1,728 pouches to 2,246 pouches.
- 17% increase in sales from Php 172,800 to Php 224,600 per year.

GALONGEN-MARAGAYAP FARMERS ASSOCIATION OF BACNOTAN LA UNION INC.

● Mr. Romeo H. Austria, President
📍 Bacnotan, La Union

Php 125,450.00



Manual unloading of molasses from cooking vat using dipper with handle to dryer mixer carefully while the dryer mixer is operating until fully emptying the cooking vat.

PROCESS AND PRODUCT IMPROVEMENT OF MUSCOVADO SUGAR OF GALONGEN-MARAGAYAP FARMERS ASSOCIATION OF BACNOTAN LA UNION INC.

The Association has 33 members and sugarcane farming is their common source of living. In their production, they are renting an old crusher acquired in the year 1874. The existing products are muscovado, vinegar and sinakob or "panutsa". In addition to their product lines, they are also processing vinegar and sinakob or "panutsa".

In 2018, the association was able to register with the Securities and Exchange Commission (SEC) after several meetings/dialogues between the farmers and government authorities through the initiative of the Provincial Government of La Union (PGLU) and Office of the Provincial Agriculturist (OPAG) in coordination with the Local Government Unit of Bacnotan. In January 2021, the association sought assistance from DOST to adopt the production technology for muscovado and provision for labeling and packaging.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit Dryer/Mixer machine
 - 1 unit Refractometer
 - 2 units Stainless Steel working table (2ft x 7ft)
 - 1 unit Stainless Steel Dipper with handle
 - 1 unit Stainless Steel strainer with handle
- Label design and packaging
 - 14 cm x 20 cm and 18 cm x 26 cm standup pouch
 - 100g and 750g laminated stickers

IMPACT:

- Consistent quality of the end product by using refractometer.
- Accommodate larger volume of production and ease in cooking and mixing with the use of Crystallizing machine.
- 20% increase in market coverage by acquiring appropriate label design and packaging.

CONCONIG EAST FARMERS' ASSOCIATION, INC. (CEFA)

● Mrs. Chona F. Haduca, President
📍 Brgy. Conconig East, Sta. Lucia, Ilocos Sur

Php 165,654.00



CEFA members filling the PET Jars with peanut butter (1st photo) Finished with new design and packaging (2nd photo) One member operating the Peanut grinder (3rd photo).

UPGRADING OF PRODUCTION FACILITIES AND PACKAGING OF CONCONIG EAST FARMERS' ASSOCIATION, INC. (CEFA)

Conconig East Farmers' Association, Inc. (CEFA) is situated in an ELCAC Community. One of the association's main crops produced is peanut, the municipality's One-Town-One-Product.

On October 27, 2020, the Department of Science and Technology, through the Provincial Science and Technology Center- Ilocos Sur, conducted a Livelihood Training on Peanut Processing in their association. The training taught the association in processing peanuts, adding value to their produce. The participants learned to process peanut adobo with anchovies, peanut polvoron, peanut brittle, and peanut butter during the training.

Following the training, the association built its temporary production area where it started processing peanut, and marketing the products from an order of 300 packs of peanut adobo with anchovies. To further improve the association's production process, it sought assistance from the DOST through the Community-based Program.

INTERVENTIONS:

- **Technology Training**
 - Livelihood training on peanut processing
- **Equipment acquisition/upgrading**
 - 1 unit SS Working Table with under shelf
 - 1 unit SS Deep Sink Table
 - 1 unit Induction Sealer
 - 1 unit SS Peanut Grinding Machine
 - 1 unit Heavy Duty Burner
- **Label design and packaging**
 - 5,000 pcs Stand-Up Pouch (SUP) and label for Peanut Adobo with Anchovy
 - 5,000 pcs Stand-Up Pouch (SUP) and label for Peanut Polvoron
 - 2,500 pcs PET Jars and label for Peanut Butter
- **Technical Assistance and consultancy**
 - Proposed Plant Layout
 - Food Safety Assessment with Seminar on cGMP

IMPACT:

- **37.72% increase in the monthly production volume** of peanut adobo with anchovy from 546 SUPs to 752 SUPs.
- **13.94% increase in productivity** from 1.64 to 1.87.
- **Shortened roasting/ cooking time by 50%** from 80 mins to 40 mins per 6 kg of peanut per production day.
- **One (1) Additional Product line: Peanut Butter.**
- **Peanut Butter Shelf life extension** from 1-2 Weeks to 2 months.
- **Compliance/ integration with the current Good Manufacturing Practices (cGMP).**

CAOAYAN IPON BAGOONG ASSOCIATION INC.

• Mrs. Jane L. Quiaot, President
📍 Brgy. Callaguiip, Caoayan, Ilocos Sur

Php 126,650.00



Mrs. Jean L. Quiaot, Chairperson of the Caoayan Ipon Bagoong Association Inc. preparing the drums for the fermentation of bagoong ipon (left), Bagoong Ipon in its newly acquired packaging (right).

PRODUCT AND PROCESS IMPROVEMENT OF IPON BAGOONG PROCESSING FACILITY

The root of this business started in 2019 when Mrs. Jane Quiaot and the other members of the association were looking for other sources of income. They asked for assistance to the Local Government of Caoayan and organized a group and registered as Caoayan Ipon Bagoong Association, Inc.

Gobies or lunar fish also known as "ipon" is one of the marine fishes that is found along the shores in Caoayan that only appears 7-8 days after full moon during August to October and 10 days after full moon during November to February. With the volume of catch, the association processed it into fish paste (ipon bagoong.) Due to their diligence and dedication to their work, the business started to grow exponentially, from selling the products until such time that they distribute to the stores as their outlets.

In 2021, thru the interventions provided by the Department of Science and Technology, this success was followed by the additional product to the industry, the "Taburkit" bagoong. It leads the association into a new surrounding and an opportunity to increase the capability in providing Ilocanos distinguished condiments for their kitchen needs. As of today, Caoayan Ipon Bagoong Association Inc. is delivering bagoong products in the province of Ilocos Sur and nearby provinces through its resellers.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - Ten (10) HDPE food grade fermentation drums,
 - 1 unit chest freezer,
 - 1 unit stainless-steel table;
- Label design and packaging
- Technical assistance and consultancy
 - Food Safety Assessment
- Technology Training
 - Seminar on current Good Manufacturing Practices (cGMP) with emphasis on Food Safety

IMPACT:

- 53% increase in the production of ipon bagoong from 50 bottles to 1,000 bottles. The association also produced 500 bottles of bagoong taburkit.
- Improved appearance of the finished product with the appropriate packaging and labeling design.
- 16% increase in productivity of the association from 3.43% to 4%.
- Five (5) new resellers of the product within the province
- On-going process of its FDA-LTO

CALAYAB FARMERS' ASSOCIATION

● Mr. Eric M. Dela Cruz, Chairman of the Board
📍 Brgy. 37 Calayab, Laoag City, Ilocos Norte

PHP 107,100.00



RICE PRODUCTIVITY IMPROVEMENT OF CALAYAB FARMER'S ASSOCIATION

Calayab Farmers' Association was established in 1994 and was registered as Cooperative with by the Cooperative Development Authority in 2012. At present, the association is chaired by Mr. Eric M. Dela Cruz, and its members comprise of farmers, members of Pantawid Pamilyang Pilipino Program (4Ps), housewives, and barangay officials.

Since members are mostly engaged in farming, rice production has been their primary source of income. In order to increase productivity, the association sought the assistance of DOST in its desire for its members to uplift the status of living.

INTERVENTIONS:

- Technology roll-out
 - 315L Vitalgro Carrageenan Plant Growth Promoter

IMPACT:

- 15% increase in number of cavans harvested from 4.712MT to 5.4188MT.
- 15% increase in gross sales from PHP 70,680.00 to PHP 81,282.000.

NAGSUROT SOUVENIR MAKER ASSOCIATION

● Mr. Roy B. Aleta, President
📍 Brgy. Nagsurot, Burgos, Ilocos Norte

₱ **Php 105,000.00**



Mr. Roy B. Aleta, using the wood bandsaw during the production of souvenirs in their production area.

UPGRADING OF EQUIPMENT IN THE PRODUCTION OF SOUVENIRS AND NOVELTY ITEMS OF NAGSUROT SOUVENIR MAKER ASSOCIATION

The association was organized and established last March 2019 by Mr. Roy Aleta of Burgos. While he has been a souvenir maker for the past 10 years, he shares and trains his neighbors for them to have an additional income. In 2019, he established the association that is open for every resident in the barangay. Due to the high demand of national and local tourists, the association became known as a supplier of souvenir items to different tourist spots of the province.

The association made a great impact in the municipality of Burgos since it is the only souvenir maker in town that supplies its major tourist site. With the help of the municipal government of Burgos, the association sought the assistance of DOST for their process and production.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 unit 14" wood bandsaw
800mm Diameter, 12 Ft. Bed)

IMPACT:

- 25% increased in production volume from 622 pcs to 715 pcs.
- 50% reduction in production time from 2 hours to 1 hour.
- 20% increase in income from Php 25,000 to Php 30,000.
- Achieved desired quality design of crafts and souvenir items.

BALACAD FARMERS' ASSOCIATION, INC.

● Mr. Warlito D. Andres, Chairman of the Board
📍 Brgy. 41 Balacad, Laoag City, Ilocos Norte

₱ **Php 107,000.00**



Balacad Farmers' Association members received the interventions.

RICE PRODUCTIVITY IMPROVEMENT OF BALACAD FARMERS' ASSOCIATION

Balacad Farmers' Association was established in 1994 and was registered as Cooperative with the Cooperative Development Authority in 2016. At present, the association is chaired by Mr. Warlito D. Andres, with 57 members comprised of farmers, members of Pantawid Pamilyang Pilipino Program (4Ps), housewives, and barangay officials and covers a cumulative farm area of 47 hectares.

Over time, the members have learned skills such as detecting viable seeds in their fields, establishing crop calendars, and other operations such as transplanting, land preparation and harvesting. With the intervention of DOST Ilocos Norte through the provision of organic fertilizer, the association's harvest have increased.

INTERVENTIONS:

- Technology roll-out
 - Provision of 315L Vitalgro Carrageenan Plant Growth Promoter

IMPACT:

- 15% increased in volume of harvest from 3.812MT to 4.3838MT.
- 15% increase in gross sales from Php 50,280.00 to Php 57,822.00.

SIRMATA MULTI-PURPOSE COOPERATIVE

● Mr. Justo Espejo, Jr, President
📍 Brgy. Alay, Badoc, Ilocos Norte

₱ **Php 73,000.00**



The new product label of the organizations' Banana Chips (left), operating the acquired vegetable cutter (right).

TECHNOLOGY UPGRADING FOR BANANA CHIPS PRODUCTION

Sirmata Multi-Purpose Cooperative is a farmer organization of Brgy. Alay, Badoc, Ilocos Norte. In 1992, the LGU of Badoc selected the barangay for a livelihood training by Technical Education and Skills Development Authority (TESDA). It was participated by 22 members including men and women, most of which are farmers. They adopted the training and established their own products since raw materials (banana) are very abundant in their locality.

The Banana processing center was established through the concerted effort of the Department of Agrarian Reform and Department of Trade and Industry under Comprehensive Agrarian Reform Project. At present, the cooperative has 107 members.

INTERVENTIONS:

- Equipment acquisition/upgrading
 - 1 Fruit/Vegetable Cutter
 - 1 unit Stainless Steel Table

IMPACT:

- 100% Reduction in Slicing/Cutting time from 180 minutes to 30 minutes.
- Reduced handling of raw materials to avoid contamination and rapid deterioration of the quality of the finished products.
- Additional product line- Camote Chips.
- 15% increase in production from 160kg to 184kg/month.



CEST



COMMUNITY EMPOWERMENT THRU SCIENCE AND TECHNOLOGY

Engaging and empowering communities: Our shared commitment and triumph

Community Empowerment Through Science and Technology (CEST), one of DOST's primary initiatives to alleviate the socio-economic condition of the people in communities with high poverty incidence and those in geographically-isolated and depressed areas, strives to provide sustainable development to various communities across the region by providing and implementing S&T interventions along with the five CEST entry points – Human Resource Development, Disaster Risk Reduction Management and Climate Change Adaptation, Livelihood/ Economic Enterprise Development, Health and Nutrition, Environmental Protection and Conservation.

Despite the rising positive cases of Covid-19, the Department of Science and Technology Regional Office 1 (DOST-RO1) continues to implement technology-based projects and programs to partner communities bringing science and technology to the people, in the areas of S&T-based innovations and services, technical assistance, and capacity building in 2021. As the government's premier scientific and technological institution, the DOST assisted 19 communities, deployed 37 technologies, assisted 2,790 customers, and generated 508 jobs with a total project value of P20 million.

These programs and projects were implemented in line with the agency's Mandate, Vision, and Mission. The results of the STI Interventions contributed to the Sustainable Development Goals in pursuit of our country's poverty reduction and community empowerment. In order to provide a more comprehensive perspective of the agency's operations beyond the financial element, the DOST continues to use the Balanced Scorecard (BSC) methodology for target formulation, monitoring, and reporting in 2021.



TOWARDS SUSTAINABLE LIVELIHOOD PROGRAMS

In 2021, the DOST-ROI CEST Program partnered with Mariano Marcos State University (MMSU), Ilocos Sur Polytechnic State College (ISPSC), North Luzon Philippines State College (NLPSC), Don Mariano Marcos Memorial State University (DMMMSU), and Pangasinan State University (PSU) to provide S&T related interventions to CEST Communities through capability building activities that would enhance abundant resources and skills in the communities for wealth creation.

With this, training on food processing and product development of Cassava, Java plum, and Cashew were held in Carasi, **Ilocos Norte**. Through a series of training sessions, and deployment of processing tools and equipment such as Portable Solar Dryer (PortaSol), Impulse Sealer, Fermentation Vessels with Airlock, and Cashew Sheller, products namely, Duhat Jam, Duhat Wine, Duhat Candy, Cashew Jam, Cashew Wine, Cassava Chips, Cassava Cake, Pichi-Pichi, Cassava Polvoron, Cassava Flour, Cassava Crackers- Original flavor, Cheese Flavor, Barbeque Flavor, and Garlic Flavor were developed. A training session on Financial Management and Record-Keeping was also held to help the community's knowledge of business management.

On the other hand, good aquacultural practices for tilapia growing and assessment of freshwater ponds were adopted in Barangay Sasaba and Lettac sur of Santol, **La Union**. It was attended by eighteen (18) tilapia farm owners and were given 2500 fingerlings. Moreover, the production of ube halaya, ube wine, and ube chips was also aided by technology training on ube processing and product development, as well as the provision of start-up equipment such as a stove, refractometer, Auto-siphon, heavy-duty blender, and digital weighing scale.

There are two beneficiary communities in the province of **Pangasinan**: Agno and Bautista. In Agno, DOST-1 conducted a variety of training which included livelihood training on mango and duhat processing, training on nipa and coconut processing, training on fish processing, and technology training on t-shirt & souvenir printing. Some of the products developed as a result of the trainings include tinapa, fish balls, fish siomai, mango wine, mango vinegar, mango pastillas, duhat juice concentrate, duhat wine, nipa vinegar, coconut vinegar, coconut wine, bugnay wine, bukayo, and calamay. Individuals from the three beneficiary barangays, Aloleng, Palisoc, and Bobay, actively participated, with some being members of Farmers Associations, Sangguniang Kabataan, and other organizations.



Furthermore, interventions in the areas of science, technology and innovation for development to support the implementation of the whole-of-government approach to improve the socio-economic condition of the people in the ELCAC Communities of **Ilocos Sur**, particularly in Candon City, and the municipalities of Galimuyod, Salcedo, Sta. Cruz, Sta. Lucia, Suyo, Cervantes, Quirino, Burgos, Sta. Maria, Narvacan and Nagbukel.

Bamboo Production and Processing

Several S&T interventions were done in the province with fast-growing bamboos to further propagate the revenue of the beneficiary barangays. Training courses such as kitchenware making, home décor making, bamboo furniture making, bamboo crafting of souvenirs and gifts, bamboo production, proper collection, treatment, and preservation of

bamboo, bamboo finishing, bleaching and dyeing and basic Marketing strategy and pricing of the products were conducted in the communities of Burgos, Candon City, Narvacan, Salcedo, and Sta. Lucia. This also includes the provision of the set of Charcoal Briquetting technology where several trainings in bamboo Charcoal Briquetting Technology with product pricing were conducted to the communities of Legaspi, Galimuyod and Gusing, Sta. Maria. The products produced during the training were charcoal briquettes, bamboo speakers, bamboo wine holder, bamboo planters, bamboo mug holder, bamboo tissue holder, bamboo trays, bamboo lamp shade, bamboo certificate holder, bamboo condiment organizers, bamboo furnitures, bamboo center table, bamboo seater, bamboo planters, bamboo condiment holder, bamboo coaster set, bamboo serving trays, and bamboo mug stand.

Labtang Handicrafts

Sitio Kimpatubbog, Barangay Poblacion, Suyo have a lot of "Labtang" plants. To maximize the utilization of the labtang resources to their economic advantage, skills training on labtang utilization for home decors and handicrafts were conducted where 13 individuals trained.

Bee Rearing and Honey Production

With the aim to provide capacity-building activity to wild honey hunters and award bee colonies and materials towards sustainable honey production suitable to the highland forested communities of Nagbukel and Quirino; the project Bee Industry Science and Technology Support or project BISTS was established. This project benefited twenty (20) honey hunters of Malideg, Patiakan, Lamag, and Poblacion in Quirino, and 22 honey hunters of Cosocos, Nagbukel through training on basic beekeeping, and proper wild honey collection, proper utilization of honey, bee products and by-products such as propolis, beeswax, bee pollen, royal jelly, bee venom, and training on proper beekeeping practices. Honey bee Nucs, beehive set, beekeeper hat with veil, Honey extractor, Bee smoker, gloves, wired frames, wax foundation, Queen excluder, and supplemental supplies were provided as a result of the participant's willingness to engage in the industry.

Mushroom Production

The newly formed Cervantes Mushroom Growers and Processors Association, and the Laslasong Norte Mushroom Growers Association in Sta. Maria were able to produce mushroom bags utilizing the awarded autoclave after a series of training on mushroom production for both spawn for straw mushroom (*Volvariella volvacea*) and fruiting bag for Oyster (*Pleurotus ostreatus*) mushroom production.

Coffee Production and Processing

To ensure the coffee industry's continuous growth and productivity, DOST-1 provided training on the installation, operation, and maintenance of the

Coffee Roaster Machine and Coffee Grinder awarded to the Licungan Coffee Growers Association (LCGA) in Sugpon. Following the success of the coffee project, it was replicated in Barangay Dinwede East, Cervantes, by providing training in coffee production and management, coffee primary processing, and coffee roasting.

Iron Fortified Rice Production

One of the CEST priority projects for rice producers and dealers in Cervantes and Candon City is the fortification of rice for healthy and well-nourished residents. With the help of the DOST-FNRI, DOST-1 began completing the protocols and procedures for technology transfer, such as the stakeholder consultation meeting, submission of the company profile, assessment report, floor plan, GMP compliance status report, and so on. A pre-launch of the IFR was undertaken in the production site in Cervantes, Ilocos Sur.

Coconut Production and Processing, and Meat Processing

Based on the assessed needs of the people in Salcedo, DOST-1 conducted training on Coconut production, management and processing in barangay Lucuban as well as meat processing of Pork Siomai, Tocino, Skinless Longganisa, Embutido in San Tiburcio. Fish processing, on the other hand was introduced in Narvacan

Mango Processing and Vegetable Processing

In addition, DOST-FIC technology on mango wine, jam and pastillas were introduced in Burgos catering to the newly organized Bessang Food Processors Association while Mango Puree, Jam and Pastillas for Taleb Ladies Mango Processors Association in Nagbukel. Aside from these, DOST-1 rolled-out the developed squash products such as jam, dried Mikki, Fresh Mikki, and kropek in Burgos while tomato Jam, Tomato Salsa, Tomato Ketchup, Tomato Sauce were introduced in Sta. Cruz.



Furthermore, all CEST-developed products received packaging and labeling assistance, as well as product analyses such as microbiological test, physicochemical test, chemical test, and nutrition facts analysis, were performed including Mango Wine, Mango Jam and Mango Pastillas of Bessang Food Processors Association, Burgos, Mango Puree, Jam and Pastillas of Taleb Ladies Mango Processors Association in Nagbukel, Coconut Jam and Coconut flakes of Lucuban Coconut Processors in Salcedo, Tomato Jam of Camanggaan Mommy's Livelihood Class in Sta. Cruz, and Peanut Adoba of Conconig East Farmers' Association, Inc. (CEFA) in Sta Lucia.

iSTART

INNOVATION, SCIENCE AND TECHNOLOGY
FOR ACCELERATING REGIONAL TECHNOLOGY-BASED
DEVELOPMENT (iSTART) PROGRAM



"Engaging communities with innovation, science and technology-based programs and activities for development"

The iSTART Program is the corresponding program developed by DOST to implement the result of the study conducted by UP School of Urban and Regional Planning thru the Planning and Development Research Foundation, Inc. (PLANADES) that identified 20 growth areas in the Philippines. The Province of Pangasinan in Region 1 was among them. The Program, as designed, is a convergence of all the programs/projects/activities that DOST is implementing – technology transfer, training, consultancy services, S&T promotion, scholarship, R&D, etc.

The program was piloted in six (6) LGUs as recommended by the Provincial Governor Hon. Amado L. Espino III, representing each of the six (6) congressional districts of the Province namely, Sual, Bugallon, Malasiqui, San Fabian, Alcala and Balungao.

The iSTART Program sought to provide appropriate technology-based interventions along the various sectors in the municipal development plans. Through a focused group discussion, the following were obtained: **1.) Quick Wins** which are interventions that were provided in the short term by DOST and its partners/collaborators. These were classified into four clusters as (a) Training/skills development/scholarship; (b) New Technologies/equipment; (c) Information, education, and communication materials/information communication technology (IEC/ICT), and (d) Policy; and **2.) Major Projects** which are considered on a long-term implementation. These were on (a) Livelihood and Enterprise Development; (b) Alternative Energy; (c) Waste Management; (d) Disaster Resilience; and (e) Business Support Services.

Likewise, the Municipal Science and Technology Coordinating Committee (MSTCC) was created in each pilot LGU through an Executive Order. The MSTCC shall lead in the crafting of all S&T programs, projects and activities of the Municipality.

On-site validation of the identified Quick Wins or interventions was conducted as part of the drafting of the plan of activities for the pilot LGUs.





2-DAY Consultative Meeting and Workshop

DOST I ISTART team conducted the 2-day consultative meeting to guide the pilot LGUs in crafting their Tech-based Development and Communication Plan and STI-based policy. Present during the events are the representatives from the LGUs Municipal Planning and Development Office, Municipal Agriculture Office, Municipal Solid Waste Management Office, Municipal Budget and Management and others.

The consultation meeting was a multi-sectoral approach to be able to meet the objectives of the program specifically in the area of developing a technology-based plan for the agri-based, manufacturing, and service sectors through various strategies, formulation of a Science, Technology, Innovation (STI) -based policy and development of a Communication Plan.

Project SARAI

SARAI e-skwela sa Region 1

SESSION 1
06 October 2021

Topic:
Trainers' Training
on the use of
SARAI Rice Toolkit

Participants listed in the grid:

- Pauline S. Esteban
- SARAI 22 John P. Hidalgo
- Norberto L. Dominguez
- MARTE M. Nicanor Regal
- Alejandro C. Ong
- T. L. U. M. Magsaysay, Mayor
- Gloria Mae Garcia
- Media Team
- AMIO Atiles
- SESAM - Rizal Agripreneurs
- Cecilia Bascones
- Carlito Manabat
- Doris Calungsod
- Angela S. Geronimo
- Josephine B. Rodriguez
- EDSA 11 Senior Officer
- Pedro Gutierrez
- Joy Merito
- Olene Tacasa
- Grace Tocosa
- SPIDTECH
- DOST1 PSTC-R...
- SPIDTECH Program...
- DAVSRI Bulacan
- GU-SUM MAC
- CHAMPAGN毅

Smarter Approaches to Reinvigorate Agriculture as an Industry in the Philippines (SARAI)

One of the technologies identified in the agriculture sector is the SARAI Project, an action-research program, funded by the Department of Science and Technology-Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD), working towards reducing climate risks by providing agricultural stakeholders with site-specific crop advisories. The SARAI Training entitled "e-skwela sa Region I" is a series of online training on smarter technologies, practices, and innovations for agriculture and the primary objective is to train and promote stakeholders- Municipal Agriculture Officers, Agriculture Technicians and academe involved in Agriculture Course and Practice, and among others on the SARAI developed technologies, data products, and systems.

The training was conducted in six parts/sessions; Session 1 – Trainers Training on the use of SARAI Rice Toolkit; Session 2 – Trainers Training on the use of SARAI Com Toolkit; Session 3 – Navigating SARAI Knowledge Portal, CAPHE, and SPIDTECH; Session 4 – Training on crop-water stress and WAISS; Session 5- Training on AWS and Weather Data Acquisition and Session 6 – Training on Soil Properties and Management.

The training was attended by 35 participants from the six (6) pilot municipalities under the Municipal Agriculture Office together with other other LGUs like Bayambang, Urdaneta, Mangatarem, Mabini, Bautista, Manaoag and Sison identified by the Provincial Agriculture Office.



DEPARTMENT OF
SCIENCE & TECHNOLOGY
REGION I



REGIONAL STANDARDS AND TESTING LABORATORY (RSTL)

As time continues to unfold, DOST-1 RSTL never ceases to be an internationally recognized laboratory and is more eager to provide accurate services. In spite of all the challenges encountered, the goal is to promote science, technology and innovation to extend assistance and better services to the general public. The core of the services provided by the RSTL [from testing and calibration to webinars, consultations, trainings and labelling] is its mission and vision set forth for the community. Indeed, it is "Science for the people." It has remained steadfast in its recognitions, certificates, permits and licenses acquired and maintained sustain its ISO 17025:2017 Certification.

Along with that, permits and certificates from other regulatory bodies was renewed such as the Discharge Permit and Permit to Operate under DENR-EMB and Licensed to Purchase of Controlled Chemicals under PNP, Certificate of Authority to Operate Chemical Laboratories under PRC, the DENR Recognition of Laboratory and the generator certificate of Hazardous Waste under DENR -EMB.

On March 8, 2021, RSTL launched new services under the Microbiology, Chemistry and Metrology Laboratories, to expand essential laboratory services to Micro, Small and Medium Enterprises (MSME), academic institutions, hospitals, researchers, students and Local Government Unit (LGU). RSTL collaborated with the Community Empowerment through Science and Technology (CEST) program of DOST-1 by collecting water samples and assessing its safety for human consumption through microbiological analyses; testing the food products processed by the communities and calibrating equipment used for processing to ensure its accuracy and precision.

During the second quarter, DOST-1 RSTL collaborated with DTI-Pangasinan to spearhead Food Safety and current Good Manufacturing Practices webinar for MSMEs. Likewise, during the celebration of the National Science and Technology Week with the theme "Agham at Teknolohiya: Tugon sa Hamon ng Panahon", RSTL imparted a total of eight (8) webinars that have practical applications in today's challenge to guide and extend awareness and mindfulness through science and technology. In its commitment to continually improve its facilities, the microbiological and chemistry laboratory have undergone renovation. The Regional Metrology Laboratory also upgraded their building. Additionally, the Microbiology, Chemical, and Metrology Laboratory submitted an in-house research and development project to broaden its testing capabilities for an additional service for the people.

Behind the RSTL's success are the expertise, dedication and hard work of the personnel, Senior Science Research Specialist, Mr. Decth-1180 P. Libunao and the laboratory head, Ms. Lena C. Rosario under the supervision of the Assistant Regional Director for Technical Services, Ms. Racquel M. Espiritu and Dr. Armando Q. Ganal, Regional Director.

As the RSTL continues on thriving for growth with the help of science, along with it are the people that it serves.

2021 TESTING & CALIBRATION ACCOMPLISHMENT



4,824
samples
received



2,321
customers
served



10,782
test/calibration
conducted



PHP 5,636,309
total fees collected



Targets

Samples Received: 4,900

Test Conducted: 7,500

Customer Served: 2,200

Total Fees Collected: PHP 5,488,000

SUPPORT SERVICES



TECHNICAL ASSISTANCE AND CONSULTANCY SERVICES (TACS)

Even with the onslaught of COVID-19, the TACS teams was able to undertake food safety assessment and energy audit to 53 firms to assess their business operation and efficiency and recommend innovations to enhance their competitiveness and productivity. Trainings were also conducted including the general public.

TARGET

43
Consultancy

ACCOMPLISHMENT

45
111%

FOOD SAFETY ASSESSMENT

| PSTC | Firms/ Individuals Engaged | Location |
|-------------------------|--|---------------------------|
| Ilocos Norte (8) | | |
| 1 | Carasi OTOP MPC | Carasi |
| 2 | Garnaden MPC | Nueva Era |
| 3 | Comangga Upland Farmers MPC | Bodoc |
| 4 | Sirmata MPC | Bodoc |
| 5 | Goldas Noodles Manufacturing | Batac |
| 6 | Larings Meat and Processed Food Products | Batac |
| 7 | Mr. Bings Food Products | Solsona |
| 8 | Joe Ross Ice Cream | Dingros |
| Ilocos Sur (5) | | |
| 1 | Malakas Farm Livelihood Enterprises | Muraya, San Juan |
| 2 | Monang Cora Sugarcane | Caoayan, Ilocos Sur |
| 3 | Conconig East Farmers Association | Conconig East, Sta. Lucia |
| 4 | Royal Maharlika Wellness and Livelihood Services, Inc. | An-annam, Bantay |
| 5 | Caoayan Ipon Bagoong Association | Callagup, Caoayan |

| PSTC | Firms/Individual Engaged | Location |
|------------------------|--|----------------------------------|
| La Union (7) | | |
| 1 | Galongen-Maragayp Farmers' Association in Bacnotan, LU Inc | Magarayap, Bacnotan |
| 2 | Uncle Tom's Sukang Iloko | Sto Domingo Sur, Luna |
| 3 | Daramuangan Peanut Producers Association | Daramuangan, Naguilian |
| 4 | San Jose Multi Purpose Cooperative | San Jose, Caba |
| 5 | Maize Crafters de San Juan Agrarian Reform Cooperative | San Juan West, Aringay |
| 6 | LGU Agoo Fish Processing Center | Macalva Sur, Agoo |
| 7 | Chan's Bakeshop | Consolacion, Agoo |
| Pangasinan (20) | | |
| 1 | Li'l Hansam Tan Heritage and Novelty Food | Dinalaoan, Calasiao |
| 2 | Dangley Loving Mother's Association | Dangley, Agno |
| 3 | Golden West Agriculture Cooperative | San Jose, Bani |
| 4 | Planas Bakeshop and Store | Poblacion, Sual |
| 5 | Louis Roy Bakeshop | Poblacion, Mangatarem |
| 6 | Bugallon Farmers Fisherfolks Producers Improvement Club | Baniaga East, Bugallon |
| 7 | Amree Bakeshop | AB Fernandez East, Dagupan City |
| 8 | Chamber of Veggie Product Producers of Alcala | Poblacion East, Alcala |
| 9 | Havilla Food Products | Nancamaliran West, Urdaneta City |
| 10 | Bonuan's Best | Tapuac, Dagupan City |
| 11 | Santico Food Products | Mangaldan |
| 12 | Rod's Jellycacies Food Products | Navaluan, Mangaldan |
| 13 | Mang Ador's Food Products | Buenlag, Mangaldan |
| 14 | Aling Testy Water Station | Sto. Domingo, San Manuel |
| 15 | Bullets Bakery | Asingan |
| 16 | CIJ Farm Products | Batakil, Pozorrubio |
| 17 | Cacao Growers and Marketing Coop | Alipangpang, Pozorrubio |
| 18 | UpLokal Calamansi | Bari, Mangaldan |
| 19 | Reginos Bakeshop | Bautista, Pangasinan |
| 20 | Solid Brass Bakeshop | Buenlag, Calasiao, Pangasinan |
| TOTAL | 40 | |

ENERGY AUDIT

| PSTCs | Firms/Individuals Engaged | Location |
|------------------|---|---|
| Ilocos Norte (2) | JVA Furniture Shop Larings Meat and Processed Food Products | Brgy. 28, San Mateo, City of Batac Batac |
| Ilocos Sur (3) | Balahos Furniture Niks Printing Malakas Farm Livelihood Enterprises | Amguld, Candon City Ayusan Norte, Vigan City Muraya, San Juan |
| TOTAL | 5 | |

SUPPORT SERVICES



PACKAGING AND LABELING SERVICES

EXECUTIVE SUMMARY

Packaging and Labeling provides great impact to a product's identification, promotion and competitiveness in the market. The label provides the information about a product to the prospective customer. It also plays a vital role in marketing and product quality.

The Packaging and Labeling assistance of DOST 1 enables the MSMEs to be compliant on the Mandatory Label Information as stipulated in Administrative Order 2014-0030 of the Department of Health-Food and Drug Administration (DOH-FDA). Other than the improper labeling of products, some are also not properly packaged. Poor packaging, limited shelf life, no product identity, non-compliance to regulations and non-competitive product are the common issues that the Packaging and labelling services of DOST 1 aims to address.

In CY 2021, DOST 1 has seven (7) accredited graphic designers. A total of 39 firms benefitted from the service. Sixty-Six (66) products were provided with new label designs of different structure, 44 of them were executed with packaging materials. The label designs are subsidized by DOST Region 1, while the packaging execution is charged either to the SETUP/GIA project or to the firm itself.

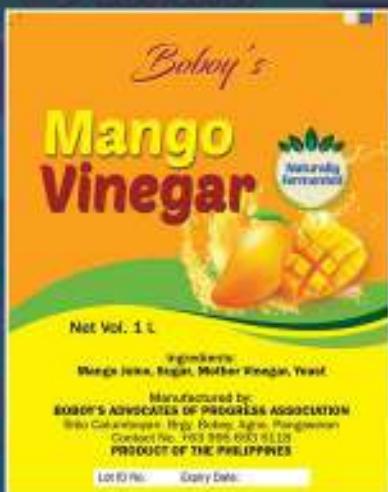
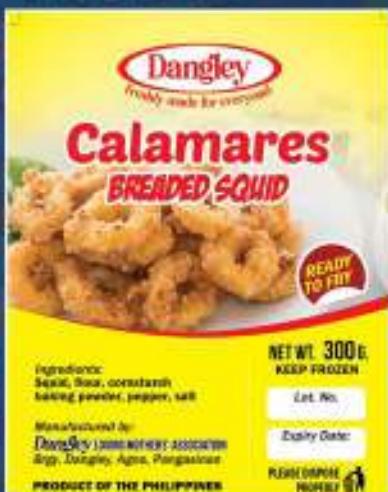
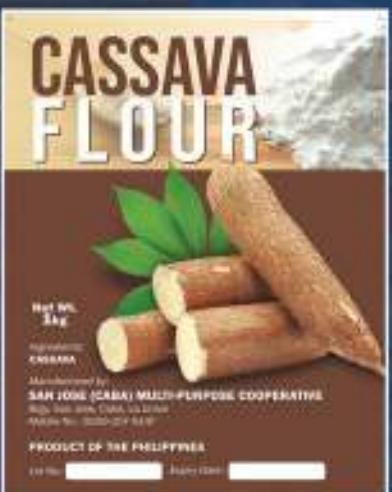


Table 1. Target vs Accomplishments.

| INDICATORS | ANNUAL TARGET | ACCOMPLISHMENTS | | % ACCOMPLISHMENTS |
|--|---------------|-----------------|-----|-------------------|
| No. of Interventions provided: | | | | |
| Packaging and Labeling Design Completed | 77 | 66 | 110 | 155% |
| Packaging and Labeling Design Executed | | 44 | | |
| No. of Customers assisted: | | | | |
| Packaging and Labeling Designs/Execution | 39 | 39 | | 100% |

The interventions provided by the Packaging and Labeling Assistance of DOST 1 is not limited to provision of package and label designs, but it also provides packaging materials as well as support to the execution or printing of the developed label and package designs. In 2021, DOST1 managed to deliver 66 new label designs of different structures and 44 products were provided with executed labels and/or packaging materials.

Table 2. Distribution of Accomplishments per unit.

| UNIT | NO. OF INTERVENTIONS PROVIDED | | NO. OF CUSTOMERS ASSISTED |
|--------------|--|---|---------------------------|
| | PACKAGING AND LABELLING DESIGN COMPLETED | PACKAGING AND LABELLING DESIGN EXECUTED | |
| PANGASINAN | 34 | 13 | 6 |
| LA UNION | 19 | 17 | 12 |
| ILOCOS SUR | 6 | 4 | 3 |
| ILOCOS NORTE | 4 | 8 | 6 |
| CEST | 23 | 2 | 12 |
| TOTAL | 66 | 44 | 39 |

MSMEs engaged in food processing were the primary customers of the P&L Assistance. The label designs developed by DOST 1 were ensured to be compliant with the Mandatory Label Information of the Philippines as set by the DOH-FDA. The firms assisted in 2021 were all food processors in Region 1. These firms were also beneficiaries of either Community Based Projects, SETUP or CEST.

Table 3. List of firms provided with product label designs.

| OFFICE/UNIT | NO. | NAME OF CUSTOMER | ADDRESS | NO. | NAME OF PRODUCT/LABEL |
|-------------------|-----|---|-------------------------------|-----|----------------------------|
| PSTC-Ilocos Norte | 1 | Lorings Meat and Processed Products | Batac City, Ilocos Norte | 1 | Longanisa |
| | 2 | Quiling Norte Peanut Processor Association | Batac City, Ilocos Norte | 2 | Tocino |
| | 3 | Vyandsweets Party Needs | Laoag City, Ilocos Norte | 3 | Peanut Butter |
| PSTC-La Union | 1 | Somahang Pangkabuhayan Ng Sasaba at Sapdaan Association (SPSSA) | Sasaba, Santol, La Union | 1 | Ground Coffee Robusta 250g |
| | 2 | Balecbec Cassava Producers Association | Balecbec, Naguilian, La Union | 2 | Cassava Chips |
| | 3 | Agoo Food Processing Center (AFPC) | Macalvo, Agoo, La Union | 3 | Ube Chips |
| | 4 | Sudipen Women Indigenous Peoples Organization | Sudipen, La Union | 4 | Rice Wine |
| | 5 | Maize Crafters De San Juan Agrarian Reform Cooperative | Aringay, La Union | 5 | Mango Vinegar (500mL) |
| | 6 | Climate Resilient Agriculture Beneficiaries Of Burgos Cooperative | Burgos, La Union | 6 | Mango Vinegar (1L) |
| | | | | 7 | Comote Chips (50g) |
| | | | | 8 | Comote Chips (100g) |
| | | | | 9 | Banana Chips (50g) |
| | | | | 10 | Banana Chips (100g) |

| | | | | | |
|-----------------|---|--|--|----|---|
| PSTC-La Union | 7 | Golongan-Maragayop Farmers Association Inc Bacnotan, La Union Inc. | Bacnotan, La Union | 11 | |
| | 8 | Noguey Rural Improvement Club | | 12 | Muscovado Sugar (1kg) |
| | 9 | San Jose Caba Multi-Purpose Cooperative | Caba, La Union | 13 | Ube Jam (220g) |
| | | | | 14 | Ube Jam (500g) |
| | | | | 15 | Ube Wine (350ml) |
| | | | | 16 | Ube Wine (750ml) |
| | | | | 17 | Rice Wine |
| | | | | 18 | Turmeric Powder 100 g |
| | | | | 19 | Cassava Flour |
| | | | | | |
| | | | | | |
| PSTC-Pangasinan | 1 | PSU-DOST Food Innovation Center | PSU-Boyambang Campus, Bayambang, Pangasinan | 1 | Classic Calamay |
| | 2 | Golden West Agriculture Cooperative | | 2 | Ube Calamay |
| | 3 | Dongley Loving Mothers' Association | | 3 | Ube Buyas |
| | 4 | Bugallon Farmers -Fishfolk Producers' Improvement Club | Bugallon, Pangasinan | 4 | Mango Vinegar |
| | 5 | Sual Dried Fish Vendors' Association | | 5 | Oregano Vinegar |
| | 6 | Havilah Food Products | | 6 | Breaded Squid (Calamares) |
| | | | | 7 | Smoked Fish (Tinapa) |
| | | | | 8 | BFF Fish Products |
| | | | | 9 | Spanish Bangus Sardines in Olive Oil |
| | | | | 10 | Tuyo Gourmet |
| | | | | 11 | Sual Dried Fish Products |
| | | | | 12 | Mushroom Chicharon (SesameLunggay) |
| | | | | 13 | Mushroom Chicharon (Garlic) |
| | | | | 14 | Mushroom Chicharon (Sour Cream & Onion) |
| PSTC-Ilocos Sur | 1 | Manang Cord Sugarcane Products Manufacturing | Manang Cord Sugarcane Products Manufacturing | 1 | Spiced Sukang Iloko 700ml |
| | 2 | Conconig East Farmers' Association | | 2 | Spiced Sukang Iloko 350ml |
| | 3 | Cocoyan Ipon Bagoong Association | Cocoyan Ipon Bagoong Association | 3 | Label Design for Peanut Polvoron |
| | | | | 4 | Peanut Adobo with Anchovy |
| | | | | 5 | Peanut Butter |
| | | | | 6 | Ipon Bagoong |
| CEST | 1 | Toleb Ladies Mango Processors Association | Toleb, Nagbukel, Ilocos Sur | 1 | Mango Pastillas, 250 g |
| | 2 | Lucuban Coconut Processors' | | 2 | Mango Jam |
| | 3 | Bessang Food Processors Association | | 3 | Mango Wine |
| | | | | 4 | Virgin Coconut Oil |
| | | | | 5 | Coconut Vinegar |
| | | | | 6 | Sweet Coconut Flakes |
| | | | | 7 | Mango Wine |
| | | | | 8 | Mango Jam |
| | | | | 9 | Mango Pastillas |

| | | | | | |
|------|---|--|-----------------------------------|----|------------------------------------|
| CEST | 4 | Boboy's Advocates Of Progress Association | Agno, Pangasinan | 10 | Mango Vinegar, 1L |
| | 5 | Cervantes Rice Millers And Traders Association | | 11 | Bugnay Wine |
| | 6 | Carasi Otop Multipurpose Cooperative | Carasi, Ilocos Norte | 12 | Duhot Wine |
| | | | | 13 | Mango Wine |
| | | | | 14 | Iron Fortified Rice, 2kg |
| | | | | 15 | Iron Fortified Rice, 25 kg |
| | | | | 16 | Cassava Crackers - Original Flavor |
| | | | | 17 | Cassava Crackers - Cheese Flavor |
| | | | | 18 | Cassava Crackers - Garlic Flavor |
| | | | | 19 | Cassava Crackers - BBQ Flavor |
| | 7 | Diaz Farmers Bakery | Brig. Diaz, Bautista, Pangasinan | 20 | Diaz Baked products |
| | 8 | Camanggaan Mommy's Livelihood Class | Camanggaan, Sta. Cruz, Ilocos Sur | 21 | Diaz Loaf bread |
| | 9 | Lucuban Coconut Processors* | Lucuban, Salcedo, Ilocos Sur | 22 | Tomato Jam, 350 mL |
| | | | | 23 | coconut Jam, 350 mL |

Another intervention being provided by the Packaging and Labeling Assistance of DOST 1 is the provision of packaging materials. This covers the funding support for the acquisition of packaging materials and printing or execution of the label designs.

Table 4. List of firms provided with packaging materials.

| OFFICE/UNIT | NO. | NAMES OF CUSTOMER | ADDRESS | NO. | NAME OF PRODUCT/LABEL |
|-------------------|-----|--|-------------------------------|-----|---------------------------|
| PSTC-Ilocos Norte | 1 | Bacarra Norte Farmers' Cooperative | Bacarra, Ilocos Norte | 1 | Banana Chips |
| | 2 | Garnaden Multi-Purpose Cooperative | Nueva Era, Ilocos Norte | 2 | Camote Chips |
| | 3 | Rayuray Mpc | Batac City, Ilocos Norte | 3 | Longganisa |
| | 4 | Larings Meat And Processed Products | Batac City, Ilocos Norte | 4 | Brown Rice |
| | 5 | Vyandsweets Party Needs | Laoag City, Ilocos Norte | 5 | Tocino 1kg |
| | | | | 6 | Tocino 1/4 Kg |
| | | | | 7 | Longganisa 1Kg |
| | | | | 8 | Generic Cake Boxes |
| PSTC-La Union | 1 | Balecbec Cassava Producers Association | Balecbec, Naguilian, La Union | 1 | Cassava Chips |
| | 2 | Agoo Food Processing Center (AFPC) | Macalva, Agoo, La Union | 2 | Ube Chips (175g) |
| | 3 | Sudipen Women Indigenous Peoples Organization | Sudipen, La Union | 3 | Ube Chips (90g) |
| | 4 | Climate Resilient Agriculture Beneficiaries Of Burgos Cooperative | Burgos, La Union | 4 | Rice Wine (750 ML) |
| | | | | 5 | Rice Wine (750 ML) |
| | | | | 6 | Rice Wine (750 ML) |
| | | | | 7 | Rice Wine (750 ML) |
| | | | | 8 | Rice Wine (750 ML) |
| | 5 | Galongen-Morogayap Farmers Association In Bachnotan, La Union Inc. | Bachnotan, La Union | 9 | Muscavado Sugar (1 Kg &) |
| | | | | 10 | Muscavado Sugar 500 G |
| | 6 | Noguey Rural Improvement Club | Bogulin, La Union | 11 | Ube Jam 220 G |
| | | | | 12 | Ube Jam 500 G |
| | | | | 13 | Ube Wine 350 ML |
| | | | | 14 | Ube Wine 750 ML |
| | 7 | Samahang Pangkabuhayan Ng Sasaba At Sapdaan Association | Santol, La Union | 15 | Ground Coffee |
| | 8 | Maize Crafters De San Juan Agrarian Reform Cooperative | Aringay, La Union | 16 | Mango Vinegar 1 Liter |
| | | | | 17 | Mango Vinegar 500 ML |

| | | | | | |
|-----------------|---|---|--|---|--|
| PSTC-Pangasinan | 1 | Havilah Food Products | Nancamiran West Urdaneta City, Pangasinan | 1 | Mushroom Chicharon (SesameLunggoy) |
| | | | | 2 | Mushroom Chicharon (Garlic) |
| | | | | 3 | Mushroom Chicharon (Sour Cream & Onion) |
| PSTC-Ilocos Sur | 1 | Manang Cord Sugarcane Products Manufacturing | Gangogong, San Ildefonso Ilocos Sur | 1 | Spiced Sukang Iloka 700ml |
| | 2 | Conconig East Farmers' Association | Conconig East, Sta. Lucia, Ilocos Sur | 3 | Packaging Materials For Peanut Butter |
| | 3 | Cocayan Ipon Bagoong Association | Collaguip, Cocaya, Ilocos Sur | 4 | Packaging Materials For Ipon Bagoong |
| | 1 | Cervantes Rice Millers And Traders Association | Cervantes, Ilocos Sur | 1 | Iron Fortified Rice, 2kg |
| | 2 | Apaing Food Processors Association (Apa) | Allem, Ilocos Sur | 1 | Banana Chips |

The Packaging and Labelling Assistance intends to facilitate the improvement of label and packaging designs of local products as a strategy to widen the products' market reach. It is indeed a great strategy of our MSMEs to come up with wider market which would result into bigger sales.

APPROVED PACKAGING AND LABELING DESIGNS



ASSISTANCE FOR ADOPTION THRU FAIRNESS OPINION REPORT

During the Year 2 implementation of the project "Support to the Issuance of Fairness Opinion Report for Technology Transfer Activities of the DOST-Generated Technologies Through the DOST Regional Offices (ROs) as Receiving Offices and FOB Secretariat", DOST-1 completed its target for the issuance of the Fairness Opinion Report (FOR).

A Fairness Opinion Board (FOB) is constituted for every FOR transaction composed of three (3) members, with at least 1 member coming from the private sector. FOB reviews fairness of the financial terms such as licensing or royalty fees, specified in the Technology Licensing Agreement (TLA).

FOR TRANSACTION

Technology: Kamangeg Cheesecake

Licensor: Mariano Marcos State University (MMSU)

Represented by:

Mishael Joy Barrera

Noraly B. Legaspi

Alecsis Villarin

Licensee: Taguiporo Paoay Lake Resort

Represented by: Ms. Margie G. Eclarin

FOB Members:

Atty. Jerry C. Serapion

Prof. Imma Concepcion G. Estabillo

Mr. Rocky D. Doctor

Timeline of Transaction: January – September 2021



| Name | Affiliation/Institution | Sector | Expertise | Office Address |
|------------------------------------|-------------------------|---------|---|-----------------------------|
| Prof. Imma Concepcion G. Estabillo | DMMMSU | Public | Food Safety and Food Science Technology | San Fernando City, La Union |
| Mr. Rocky D. Doctor | NFMC | Private | Product Development/Innovation, Business Management | Sta. Barbara, Pangasinan |

SUPPORT SERVICES



TRANSFORMING R&D OUTPUTS INTO INNOVATIONS THROUGH TECHNOPRENEURSHIP AND CUSTOMER VALIDATION (TRANSDI)

The Department of Science and Technology (DOST) launched the "Transforming R&D Outputs into Innovations through Technopreneurship and Customer Validation (TransDI)" program with the aim to fully capacitate the willing and interested 2017 and 2019 RICE winners to protect their IP, transfer and commercialize their technologies, link them to potential adoptor-investors, and further engage them to other programs and services of DOST.

INSTITUTIONAL BRIEFING

On-line meetings were conducted to inform the participants on what to expect throughout the project:

Speaker: Technology Transfer

Dr. Luis G. Sison

President, Electrical and Electronics Engineering Institute, University of the Philippines Diliman
Director, UPR System Tech Transfer, Promote and Business Development Office
Project Leader, UPSCALE Innovation Hub
09175411596, 09175411596

Graduate Researcher, Progressive Learning and Learning by Doing (PLBD)
Silver Award for Teaching, Driving Whizbee (CI) 2019
Recognized Educator Awards (UPLB)

UP SikLab & UPSCALE Innovation Hub Facilitators

RYAN CONDAGA (UP SikLab)
CETTE LEONOR (UP SikLab)
CRISILLE VELACURA (UP SikLab)
REED GORDON (UP SikLab)

Dr. Sison as the speaker and also as the head of the training team

KICK-OFF AND PROBLEM MARKET EXPERIMENT

The program kick-off was conducted last December 17, 2021 via zoom meetings to officially start the scheduled technopreneurship training for the project.

Portable Pellet Machine

Dr. Edgar A. Orden
President, Central Luzon State University

Carrageenan Plant Growth Promoter

Dr. Lucille V. Abad
Scientist I and Chief, Atomic Research Division
Philippine Nuclear Research Institute

Dr. Edgar Orden and Dr. Lucille Abad sharing the success stories of their own technology

TECHNOPRENEURSHIP TRAINING

The technopreneurship training started last December 17, 2021 and ended last May 6, 2022 and was attended by 14 participants from Region 1. The participants were from Don Mariano Marcos Memorial State University (DMMMSU), Mariano Marcos State University (MMSU) and Pangasinan State University (PSU).

SUPPORT SERVICES



ONESTORE HUB

DOST 1, PGIN Launches Online Marketing Platform Through oneStore.ph in Ilocos Norte

As a response of the Department of Science and Technology (DOST) Region 1 through its Provincial Science and Technology Center-Ilocos Norte and the Provincial Government of Ilocos Norte through its Small Medium Enterprises Office (SMEO) to help the economic status of the Micro Small and Medium Enterprises in the province, DOST and PGIN launches an online marketing platform called oneStore.ph and a hub.

The launching of the oneStore.ph Hub took place today, 9:30 AM at the Paseo De Paoay, #14 Paoay, Ilocos Norte, right across the iconic Paoay Church. Over 50 MSMEs and more than 100 Ilocos Norte-produced products were launch as part of the PGIN oneStore.ph. This will help the MSMEs in Ilocos Norte boost their sales and products by reaching a greater number of consumers.

Most of the displays are DOST assisted products, a range from agricultural items to processed local food products like ground coffee, chicacorn, baguet, banana chips, camote chips, dried noodles, shell, and bamboo crafts, woodworks and artisan furniture, heritage fabrics like the Abel Iloco and binakol, and other traditional and souvenir items. Ms. Elma O. Gabriel, head of the PGIN-SMEO shared that with the good turnout of the launching and orders from the oneStore.ph, they are expecting an increase in sales by at least 20%.

Sec. Fortunato Dela Pena attended the launching and opening of the Hub. In addition, coinciding with the launching is the awarding of a vending machine to be placed at the Provincial Capitol, and five (5) RX Box Telemedicine to 5 LGUs in the province.

Gov. Matthew J. Marcos Manotoc extends his gratitude to the agency and is expecting to have a dialogue with the Secretary and further discuss possible projects that will be implemented in the province.





KALUSUGAN

OUTCOME 4

PRODUCTIVITY AND EFFICIENCY OF
COMMUNITIES AND THE PRODUCTION
SECTOR, PARTICULARLY MSME's IMPROVED





COMMUNITY EMPOWERMENT THRU SCIENCE AND TECHNOLOGY

Health and Nutrition Support

To ensure the potability of water, quality assessment and resource mapping are carried out to eleven ELCAC communities in Ilocos Sur, plus four (4) GIDA communities in Pangasinan, La Union and Ilocos Norte.

Moreover, calibration caravan of weighing scales was done in the communities to ensure reliable data used in barangay health centers in assessing the nutritional situation in the community. Through the activity, 1675 weighing scales from barangay health centers, private entities, micro, small, and medium enterprises and market vendors were calibrated and stamped with calibration certificates while defective units were confiscated and submitted to the Municipal Licensing Office for the appropriate action.

On the other hand, the DOST – Food and Nutrition Research Institute (FNRI) hosted the blended training on Malnutrition Reduction Program – DOST PINOY (Package for the Improvement of Nutrition of Young Children) to around 224 community workforces trained in Ilocos Sur and 40 Barangay Nutrition Scholars (BNS) and Barangay Health Workers (BHW) of Bautista, Pangasinan. By training the health workers alongside mothers on preparing balanced meal and introducing complementary food technology as part of the solution for the malnutrition problem in the country, the CEST program of DOST proceeded with the complementary feeding program after gathering data through Operation Timbang of children in the beneficiary barangays. Five (5) complementary food products were provided: Rice Monggo Curls, RiMo Blend (original flavor), RiMo Blend (chocolate flavor), Brown Rice Nutty Fruity Bar, and Iron Fortified Rice which were alternately fed to 47 undernourished kids aged 24 to 54 months in Ilocos Sur.

Other training courses conducted include meal preparation for the management and prevention of prevalent illnesses in the Community of Santol, La Union and training on the safe use and preparation of herbal medicine in Carasi, Ilocos Norte. Also, provision of Infant Weighing Scales in the Municipality of Bautista, Pangasinan while 170 units of water filters were also awarded in barangays Sasaba, and Sapdaan, Santol, La Union.

1,675
weighing scales
calibrated

224
community
workforces
trained

40
barangay nutrition
scholars (BNS)
& barangay health
workers (BHWs)

5
complementary
food products
provided

47
undernourished
kids fed



Free Calibration of weighing scales in Pangasinan



DOST Staff during the water resource mapping and water sampling in ELCAC Communities of Ilocos Sur



Training on the safe use and preparation of herbal medicine in Carasi, Ilocos Norte



120-day Feeding Program of DOST-FNRI developed complementary Foods: Rice-Mongo(RiMo) Snack Curls, Brown Rice Nutty Fruity Bar, RiMo Blend, and Iron Fortified Rice, to the 47 undernourished kids in ELCAC Communities of Ilocos Sur



iSTART

INNOVATION, SCIENCE AND TECHNOLOGY FOR ACCELERATING REGIONAL TECHNOLOGY-BASED DEVELOPMENT (iSTART)

SDG
1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice and Strong Institutions
17. Partnerships for the Goals

POP CHAPTER 8
Expanding Economic Opportunities in Agriculture, Forestry, and Fisheries and Ensuring Food Security

STRATEGIC INITIATIVES 3
Countryside Development

Implementation of the Identified Projects/Programs/Activities

FOOD SAFETY ASSESSMENT

The DOST-I Food Safety Team conducted the on-site food safety assessments for: (a) Alcala Noodles Processing Center in Alcala; (b) Planas Bakeshop and Store in Sual; and (c) Bugallon Farmers Fisherfolks Producers Improvement Club in Bugallon. The team assessed their compliance to current Good Manufacturing Practices (cGMP), Food Hygiene, and Food Safety requirements based on the different regulations imposed on Food Production and Manufacturing. Recommendations on the opportunities for improvement were provided for their compliance.



WASTE ANALYSIS AND CHARACTERIZATION STUDY (WACS)

DOST-I coordinated with the Industrial Technology Development Institute (ITDI) of DOST on the conducted 2-day virtual training-workshop on Waste Analysis and Characterization Study (WACS) for LGU-Alcala, LGU-Malasiqui, and LGU-Bugallon. A total of 75 participants from the municipal and barangay level attended the training.

Experts from DOST-ITDI composed of Dr. Myra Tansengco, Mr. Joven Barcelo, Mr. Mario Josefino Capule and Ms. Maria Theresa Artuz provided insights on Solid Waste Management including formulation of the WACS plan which is an important aspect of the development plan of every municipality. Also, municipal officials came to extend their gratitude and thanks to DOST-I for providing the training that will help address the growing issues and concerns on waste management.



SEMINAR ON FOOD SAFETY/cGMP and MANDATORY PACKAGING AND LABELING REQUIREMENTS

A total of 168 Food processors in Pangasinan attended a Blended Webinar on Food Safety and Packaging and Labeling Requirements and participated by 26 Barangays from the province were trained; Nipa Vinegar from Sual, Wine Manufacturers is Bugallon, Cassava Cake Makers in Malasiqui, Tupig, Boneless Bangus and Frozen food products producers in San Fabian, Vegetable Noodles processors in Alcala and Tupig, Patupat and Tuba processors in Balungao at the designated venue in their municipality.



AWARDING OF S&T INTERVENTIONS

DOST I Provincial Science and Technology Director (PSTD) of Pangasinan, Engr. Arnold Santos along with the accredited fabricator, Mr. Marcos Aquino (Bestmark Agro Industrial Mfg.Corp.), awarded the Dual-drum composter and shredder to LGU Bugallon as intervention to the Solid Waste Management concerns of the municipality.

The dual drum composter technology enhances biodegradation of wastes was developed by the Industrial Technology Development Institute (ITDI). End-product of the process can be soil conditioner or organic fertilizer. Relative to this, training on Waste Analysis and Characterization Study (WACS) was provided to the concerned barangay officials and staff from the Municipal Recovery Facility for the proper handling, disposal, and segregation of wastes.



RXBOX PROJECT



RXBOX DELIVERY, CLINICAL ACCEPTANCE TEST (CAT) and RXDETEC UPDATING

A total of 40 RxBox devices were delivered on June 9, 2021 to DOST Region 1. The Regional Management Team conducted a Clinical Acceptance Test (CAT) Batch 1 on June 11 to 21, 2021 followed by Joint RMA with DOST IV-A and Ionics EMS. The CAT is performed by checking all its features and sensors to assess the clinical acceptability of each RxBox device. Twenty-nine (29) devices PASSED the CAT while 11 FAILED. Second Batch of RxBox devices were delivered on August 9, 2021 followed by a Clinical Acceptance Test wherein 2 devices PASSED and 2 devices FAILED. Upon the completion of the CAT, the RMT together with Mr. Enrique Rimando updated the RxDetec Application to the passed devices to monitor utilization.



CAPACITY BUILDING

The Alternate Focal Persons from the Provincial Science and Technology Centers attended the RxBox Capacity Building to equip them with knowledge on the functions of the RxBox device and provide appropriate skills in navigating its modules on a standalone mode prior to deployment.



Capacity building conducted via MS Teams on October 29, 2021

RXBOX DEPLOYMENT

A total of 29 RxBox devices were deployed to the identified RHUs with the assistance of the Alternate Focal Persons of RxBox Project. The first batch of RxBox recipients includes:

Ilocos Norte (5):

Bangui, Burgos, Laoag City, Batac City, Dingras

Ilocos Sur (8):

Caoayan, Alilem, Galimuyod, Narvacan, Santiago, Sta. Lucia, Sugpon, Tagudin

La Union (5):

Bacnotan, Balaoan, San Gabriel, Aringay, Caba

Pangasinan (11):

Alaminos City, Basista, Mangatarem, Bayambang, Mapandan, San Fabian, San Jacinto, Binalonan, Pozorrubio, San Quintin, Balungao

The RxBox Package includes the following:

| QUANTITY | UNIT | ITEM |
|----------|------|-----------------------------|
| 1 | unit | RxBox device |
| 1 | pc | Universal Adapter |
| 4 | pc | Super Users Training Manual |
| 1 | unit | router |
| 1 | unit | CPU |

In addition, Personal Protective Equipment (medical grade over-all suit) were also donated to the RxBox beneficiaries as part of DOST's initiatives to address the needs of health care facilities during the pandemic.



Ceremonial awarding of RxBox devices during the launching of the OneStore Hub in Paoay, Ilocos Norte by DOST Secretary Fortunato T. de la Peña.



RxBox devices deployed by the Alternate Focal Persons from the Provincial Science and Technology Centers

SUPER USERS TRAINING (SUT)

The RxBox Regional Management Team (RMT) successfully conducted the Super Users Training (SUT) Batch 1 on November 16, 2021 and Batch 2 on December 10, 2021. It was attended by Medical Doctors, Registered Nurses, Registered Midwives and IT Staff from the selected Rural Health Units (RHUs). Due to the health and travel restrictions of the Covid19 pandemic, the training was held virtually via Zoom platform. The lecture proper was composed of: a.) Introduction to RxBox; b.) The RxBox device and its Modules on a Stand-alone Mode; and c.) Instructional Video on How to Use the RxBox Modules (Stand-alone Mode). The lecture was followed by a discussion on the RxBox Memorandum of Agreement by the Regional Coordinator Mr. Michael John C. Maquiling. A Return Demonstration was performed by the participants (Super Users) to assess their competency and skills in navigating the RxBox modules on a stand-alone mode.



Super Users Training (SUT) Batch 1 (November 16, 2021) and Batch 2 (December 10, 2021) via Zoom Platform

The DOST 1 Regional Management Team also facilitated the submission of the needed Quarterly Progress and Financial Reports to DOST IV-A as well as Report of Disbursements and Checks Issued.

The team also continuously conducted the monitoring of RxBox utilization and consolidation of RxBox MOA during the 4th quarter of the year.





KAAYUSAN

OUTCOME 5

RESILIENCY TO DISASTER
RISKS AND CLIMATE
CHANGE ENSURED

OUTCOME 7

EFFECTIVE
STI GOVERNANCE
ACHIEVED



DRRM

The DOST 1 conducted several Disaster Risk Reduction and Management (DRRM) activities in the region through various capability building activities, deployment of monitoring stations, deployment of information systems and distribution of IEC materials.

Below is the summary of accomplishments for the Disaster Risk Reduction and Management:

Table 1. CY 2021 DRRM Target vs. Accomplishments

A. Intensify provision of information, products and services for the disaster risk reduction and climate change adaptation and mitigation (DRR-CCAM)

| INDICATORS | TARGET | ACCOMPLISHMENTS | % ACCOMPLISHMENTS |
|---|--------|-----------------|-------------------|
| No. of measures on disaster risk reduction and mitigation implemented | 16 | 25 | 156% |
| Activities implemented | 4 | 10 | 250% |
| IEC materials distributed | 12 | 15 | 125% |

B. Increase collaboration with DRR-CCAM stakeholders

| INDICATORS | TARGET | ACCOMPLISHMENTS | % ACCOMPLISHMENTS |
|--|--------|-----------------|-------------------|
| No. of DRRM-related collaboration with stakeholders | 5 | 7 | 140% |
| Percentage of provinces in Region 1 engaged in DRR and CC Learning and Development | 100% | 100% | 100% |
| Public Service Continuity Plan crafted | YES | YES | YES |
| Public Service Continuity Plan implemented/deployed | YES | YES | YES |

With the onslaught of Covid-19, wherein many communities, and establishments, private and public sectors were affected, DOST 1 continued providing services and activities to address the pandemic.

DOST 1 played a vital role in the contact tracing activities in the Region. Several information systems were deployed and implemented to help in addressing the Pandemic. The maintenance of the CovidDETECT (COVID-19 Detection and Reporting of Exposed Individuals Through Efficient Contact Tracing) and FastPass system which were developed by DOST 1 and implemented in 2020, in collaboration with the DOH-CHD1, which aimed to enhance the management of the Covid-19 Cases and Close Contacts, was continued. Likewise, the S-PaSS or Swift, Safe and Smart Passage System, a travel management system developed by DOST VI, was adopted and deployed in Region 1. Both systems helped improve the contact tracing activities and reduction of the transmission of the Covid-19 in the Region.

To increase awareness on DRRM related information, DOST 1 facilitated the distribution of IEC materials and conduct of Webinars.

To provide vital information on natural hazards, a total of 15 different types of IEC materials, adopted from DOST-PAGASA, DOST-PHIVOLCS and DENR-MGB, were distributed to the LGUs and some schools in Region 1.

Furthermore, DOST 1, in collaboration with the DILG Region 1, was also tasked to serve as information provider during the Contact Tracing Training -Enhancing COVID19 Contact Tracing Work: Advanced Guide for Local Government and Contact Tracers wherein the Contact Tracers in Region 1 were trained.

A webinar on Occupational Safety and Health in the Workplace was also held to provide awareness and knowledge on how to keep workplaces safe from various hazards including the Covid-19.

Alongside with the activities that addresses the Covid-19 Pandemic, DOST 1 also conducted a forum that promotes DOST DRRM related Technologies. The technologies presented during these forum were the DATOS and PhilSensors of DOST-ASTI, Emergency Disinfection System, Emergency Food Reserve , and Ready-to-Eat (RTE) Food Technologies of DOST-ITDI.

Likewise, a Business Continuity Webinar was facilitated to provide information on its importance and help ensure continuity of services during disruptions caused by disasters for both public and private establishments and/or organizations.

Preparedness drills were also conducted to capacitate the DOST 1 staff and its stakeholders. The National Simultaneous Earthquake Drill (NSED) was actively participated by the DOST 1. In addition to the participation to the Dock, Cover and Hold activity, a webinar on Earthquake Preparedness was also conducted to provide knowledge on preparedness measures before, during and after earthquakes.

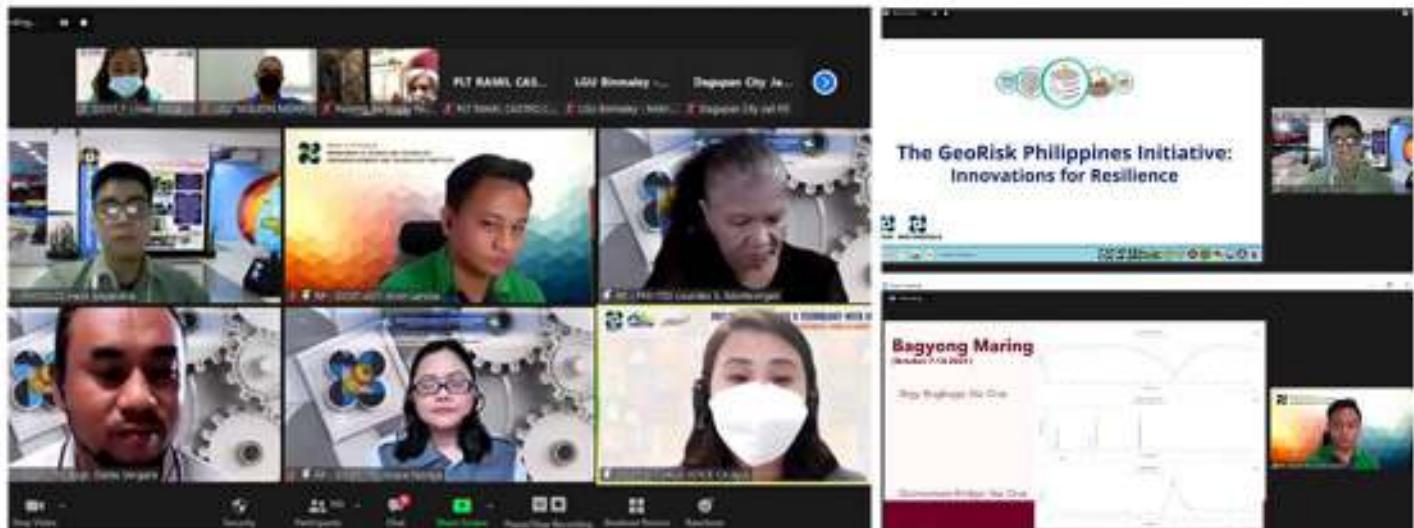
In summary, below are the DOST 1-led DRRM activities :

| Activities | Date Conducted |
|---|--------------------|
| S-Pass Deployment in Region 1 | March 3, 2021 |
| Earthquake Drill - 2Q NSED (Virtual) | June 10, 2021 |
| Webinar on Earthquake Preparedness | June 10, 2021 |
| Contact Tracing Training -Enhancing COVID19 Contact Tracing Work: Advanced Guide for Local Government and Contact Tracers | July 27-30 2021 |
| Deployment of Weather Station – Carasi, Ilocos Norte | August 2021 |
| Regional Geographic Information Network Hub Deployment | August 2021 |
| Earthquake Drill - 3Q NSED (Virtual) | September 16, 2021 |
| Forum on DRRM Related Technologies | November 9, 2021 |
| Occupational Safety and Health in the Workplace | November 10, 2021 |
| Business Continuity Planning and Management | November 11, 2021 |

A support project to the Deployment of the Regional Geographic Information Network (RGIN) Hub was also crafted and implemented. DOST 1 provided support on the cloud hosting services for the deployment of the hub. The RGIN Hub is an internet-based platform designed for on-line information sharing of spatial data to line agencies, LGUs, and other development stakeholders in the region. It offers capabilities for a range of GIS applications useful for development planning, policy formulation, project development, monitoring and evaluation, facilities management, remote sensing including Natural Hazard maps, among others.

Moreover, DOST 1 continuously supports and joins the activities of the DRRM Council of Region 1. These activities include but not limited to attendance to RDRRM Council Meetings, Regional Inter-Agency Task Force on Management of Emerging Infectious Diseases (RIATF-MEID) and Regional Task Force (RTF) Meetings.

DAY 1: WEBINAR ON DRRM-RELATED TECHNOLOGIES



DAY 2: OCCUPATIONAL SAFETY AND HEALTH IN THE WORKPLACE



DAY 3: BUSINESS CONTINUITY PLANNING AND MANAGEMENT FOR MSMEs



QUALITY MANAGEMENT SYSTEM (QMS)

QUALITY MANAGEMENT SYSTEM QMS

With DOST-1's commitment to deliver quality products and services, continuous improvement and innovation are undertaken on its operations through the implementation of its quality management system (QMS).

The implementation of ISO 9001:2015 and ISO/IEC 17025:2017 helps the agency adapt reforms and innovations that ensure delivery of products and services according to statutory requirements and customers' delight.

For CY 2021, DOST-1 was able to monitor the implementation and effectiveness of its ISO 9001:2015 QMS through conduct of remote/virtual audits and management review, as summarized in the table below:

| OBJECTIVE | TARGET | ACCOMPLISHMENT |
|---|-----------------------------------|--|
| Conduct of QMS TWG and Risk Management Committee (RMC) meetings | Quarterly meetings conducted | The QMS TWG and RMC members met on January 13-14, 2021 to review and finalize response on non-compliances raised during the reassessment audit by CIPI. Re-composition of QMS TWG and RMC members thru issuance of SO dated June 14 and June 9, respectively. The joint meetings of QMS TWG and RMC members were conducted to harmonize activities |
| Conduct of Document Review | One (1) document review conducted | A Document Review was conducted last April 14, 2021 and the corresponding results were presented during the Special ManCom meeting last April 19, 2021. |
| Conduct of Internal Quality Audit (IQA) | One (1) IQA conducted | The IQA were conducted virtually as follows: <ul style="list-style-type: none">RO – July 22-23IN – July 27IS – July 16LU – July 15 (F2F)Pangasinan – July 16 |

| OBJECTIVE | TARGET | ACCOMPLISHMENT |
|---|----------------------------|--|
| Conduct of Management Review (MR) | One (1) MR conducted | The management review was conducted on August 3, 2021 |
| Capability Building | One (1) training conducted | Process owners and Center Managers were trained on Root Cause and Latent Analysis Training last May 20-21 |
| Others: Preparation on Application for PQA | | <p>Preparation on Application for PQA:</p> <ul style="list-style-type: none"> • A preliminary meeting was conducted last April 26, 2021, initiated by the seven (7) DOST-1 staff who were trained on PQA. • A benchmarking meeting with DOST-02 focusing on Sharing the Best Practices and Innovations of DOST Region 2 in its Journey to PQA was conducted on May 19. • An Online Benchmarking with DOST CALABARZON MIS Unit's best practices, PQA preparations, and in-house-developed information systems was conducted last June 15. A benchmarking activity with DOST-9 and DOST MIMAROPA was also coordinated by the Cat-4 group. • Issued amendment on the composition of the DOST 1 PQA Team with the following champions: <ul style="list-style-type: none"> PQA Manager – Dr. Ismael D. Gurtiza <p>Category Champions:</p> <ul style="list-style-type: none"> Category 1 – Leadership – Dr. Ismael D. Gurtiza Category 2 – Strategy – Ms. Racquel M. Espiritu Category 3 – Customers – Mr. Jonathan M. Viernes Category 4 – Measurement, Analysis and Knowledge Management – Ms. Adelisa C. Florendo Category 5 – Workforce – Atty. Jasmin C. Banez Category 6 – Operations – Mr. Decth-1180 P. Libunao Category 7 – Results – Engr. Arnold C. Santos <ul style="list-style-type: none"> • Conducted a joint review of PQA Criteria and Workshop for Categories 1 and 2 last August 9-10 |

3
Info. systems developed and implemented

2
Info. systems adopted

3
Info. systems maintained

90%
reduction on process cycle time



POP CHAPTER
12

Building Safe, Healthy, and Sustainable Communities

STRATEGIC INITIATIVES

IT Administration and Governance

ITSM INFORMATION TECHNOLOGY SERVICES MANAGEMENT

The Information Technology Services Management (ITSM) Unit provides ICT services and related areas to support to the operations of DOST 1. It handles hardware and software management like the following: 1) IT Equipment preventive maintenance; 2) Development and Deployment of Information Systems; 3) Data Management and Security; and 4) Implementation of ICT Policies.

The ITSM Unit is working to improve DOST 1's work processes through information systems and applications development. In 2021, the unit was able to develop and implement three (3) information systems, adopted and implemented 2 systems, and maintained 25 systems. From 2018, the Unit already established various information systems which were developed in-house and adopted from other agencies. These information systems were implemented to improve the internal and external work-processes.

The services of the ITSM Unit extended to other agencies needing technical assistance. The CovidDETECT developed to record and manage information of Covid-19 Close Contacts provided assistance to DOH-CHD1 in the data entry for Covid19 Cases and Close Contacts. The system is one of the DOST 1's effort to help combat the Covid19-Pandemic and limit the spread of the virus.

Information and communication technology (ICT) played a vital role in DOST1's operations in CY 2020. With the Covid-19 Pandemic, the Unit introduced six (6) work-process innovations to enhance office productivity which include Email Management, Cloud Data Storage, Video Tele Conference and the Cash/Check Collection and Deposit Reporting and Monitoring. Likewise, the unit also implemented innovation on the conduct of Covid-19 Contact Tracing which include the Profiling of Identified Close Contacts and Local Mobility Management/ Tracking of Individual's Mobility.

To sustain the work process innovations in the office to lessen turn-around time and increase productivity, the ITSM unit was able to develop and implement additional three (3) information systems in 2021. One of which is the Personnel Management Information System-Attendance Monitoring System (PMIS-Attendance) which complemented with the in-house developed Attendance Logger Device. The PMIS Attendance System is an online system that is primarily used to capture and monitor the daily attendance of employees. Another system developed is the Payroll Management and Monitoring System (PMMS), an online system to automate the generation of payrolls, salary-deductions ledger and payslips. Lastly, the Events Management System to organize and manage the events during the conduct of the 2021 RSTW. Two (2) from these three (3) systems were intended to help the Covid-19 Contact Tracers in Region 1.

Along the development of these new systems, the ITSM unit maintains a total of 25 information systems to support the different processes of the office. These information systems resulted to about 90% total reduction on the processes cycle time.

Below are the information systems and applications being maintained by DOST I:

| No. | Name of IT System Maintained | Concerned Management/Process | Description | Impact | Development |
|-----|---|---------------------------------|--|---|---------------------------|
| | | | | | (In-house, Adopted) |
| 1 | DTS (Document Tracking System) | Document Tracking and Retrieval | Used to facilitate the storage and routing of communications and ensuring that these are acted upon. The DTS has been developed as a solution to improve the efficiency of retrieving documents online at any given time. It lessens the routing of printed documents, provides transparency and accountability. The system can trace the movement of documents from origin to destination/s to avoid tendencies employees in losing track and not acted on time a document. Through the Document Tracking System (DTS), documents are easily located. You can check the paper trail and history of the old documents processed. | - 99.79% reduction in cycle time on tracking status of documents routed in the organization - Ease on retrieving information | In-house |
| 2 | TRADE (Tracking, Retrieval and Archiving of Documents for Efficiency) | Document Tracking and Retrieval | Used to digitize, organize and track financial documents and measure processing time at all FAS units. TRADE also generated Receipt of Checks Issued and Summary of Obligated and Disbursed Transactions. | - automated the process of accessing and searching of financial documents. - Ease on retrieving information and generation of reports. - Allowed monitoring of efficiency of the users. | Adopted (DOST CALABARZON) |
| 3 | IMPRESSION (Information and Management of Projects, Services and S&T Interventions) | Project Monitoring | A harmonized system developed by DOST-4A through DARIUS Project which is a used to collect, store and manage project data, files and records for a more efficient management of SETUP, GIA and Roll-out projects; | - increased accessibility of information on projects implemented in the region. | Adopted (DOST CALABARZON) |
| 4 | SETUP Project Refund Monitoring (SPRM) | Project Monitoring | Monitoring of setup projects and ledger based monitoring of setup refund of beneficiaries | - Ease on retrieving information | In-house |
| 5 | SMIS (Scholarship Management and Information System) | Scholars Information Management | Contains the basic information of DOST-scholars enrolled in the region and records the financial benefits claimed/received. | - 88.89% reduction in cycle time on monitoring of status of scholars. - Ease on retrieving information and generation of reports. | Adopted (DOST IX) |
| 6 | Enhanced Unified Laboratory Information Management System (eULIMS) | Laboratory Management | An information management system being used by Regional Standards and Testing Laboratory (RSTL). It records jobs being received and generates vital reports for the operation of the laboratory. | - Ease on retrieving information and generation of reports. | Adopted (DOST IX) |

| | | | | | |
|----|---|-----------------------|--|--|---------------------------|
| 7 | Laboratory Test Scheduler System | Laboratory Management | A system that is used to record and monitor the test samples received by the RSTL. It serves as a reference of the sample receiving staff in informing the customer on when are the available test schedules and/or when the test results will be available. It helps the laboratory staff track the tests to be done and when is the target release of the results. This is also a good reference when a for accepting bookings/schedule reservation from customers. | - 50% reduction in cycle time on scheduling samples for testing. - Ease on retrieving information on available schedules. | In-house |
| 8 | eNGAS | Financial Management | Developed by COA used to record the agency's financial transactions. Its feature include accounting journal entry templates, balanced debit and credit for accounting journal, and electronic approval and posting of transactions to General Ledger, among others. | - Ease on retrieving information and generation of reports. | Adopted (DBM-COA) |
| 9 | eBUDGET | Financial Management | Developed by COA used for recording Appropriations and Allotments per GAA, Obligational Authority, Special Allotment Release Order (SARO), preparing of Sub-Allotment and approval of Obligation Request and Status (ORS). | - Ease on retrieving information and generation of reports. | Adopted (DBM-COA) |
| 10 | Payroll Monitoring and Management System (PMMS) | Financial Management | Automates the processes on Payroll generation, Payslip reporting, and Salary and Deductions monitoring. Employees can now monitor their salaries, incentives and deductions through the system. Likewise, the generation of Payslips can now be done by the staff. | - provided real-time monitoring of salaries and deductions, - More managed payroll generation - Ease of access and retrieval of information - generate and print on-demand Payslip - view actual deductions on loans/contributions | In-house |
| 11 | Collection and Deposits Reporting System (CDR) | Financial Management | Developed primarily to store information on Cash/Check being collected from payments of services. The system helped the Cashier's Office to record the information and process those information to generate the report needed. It is designed to cater the information needed in generating the various reports of the office. The system is online and through this, it can cater inputs from the Provincial S&T Centers of DOSTI. The Collection and Deposit Reporting simplifies the process and lessens the time in generating reports. | - 9993% reduction in cycle time on consolidation of reports. - Ease on report generation and retrieving information | In-house |
| 12 | HANDA (Hazard Notification, Dissemination and Awareness | DRRM | Fast tracks dissemination of disaster-related bulletins (weather, earthquake, volcano and tsunami) and provides a localized rainfall and stream-level data map from the DOST-ASTI hydromet stations installed in the region. | - automates dissemination of disaster-related information | Adopted (DOST CALABARZON) |

| | | | | | |
|----|--|--|--|--|-------------------|
| 13 | Human Resource Information Management System | Human Resources information management | A web-based system that provides employees with various employee-related information systems. | - Ease on retrieving information and generation of reports. | Adopted (DOST CO) |
| 14 | Personnel Management Information System-Attendance Monitoring System (PMIS-Attendance Service) | Human Resources information management | <p>PMIS is the next version of HRIS that aims to centralize and integration sub-modules related to employee records and transactions. Features include the real-time recording of DTR using the Attendance Device, Leaves Credits monitoring, Compensatory Time Off monitoring, and Travel Order Management.</p> <p>Personnel Management System (PMIS) – Attendance Monitoring Module (App and Device) – The Attendance Monitoring is one of the PMIS modules which is comprised of two (2) components: The Attendance application and The Attendance Monitoring Device which are in-house developed. The Attendance system innovated the attendance monitoring by establishing central repository of data. Each staff in PSTCs and RO can now log their attendance using the device and generate report (DTR) through the application which was available online.</p> | <ul style="list-style-type: none"> - Allowed generation and printing on-demand DTR - Provided centralized database of personnel attendance. - provided readily accessible Daily time records for the staff. | In-house |
| 15 | SCIMS (Stock Control and Inventory Management System) | Property and Supplies information management | The primary objective of determining/controlling stock levels within the physical distribution system. Its main function is to balance the availability of office supplies against the need of customers and effectively monitor office expenses. The system records the withdrawal of items made by end-user and receiving transactions from suppliers. The system aids the supply and accounting unit on generating reports as required by COA based on its policy guidelines. | <ul style="list-style-type: none"> - automated the process of management of stocks/ supplies - Ease on retrieving information and generation of reports. | Adopted (DOST IX) |
| 16 | Procurement Monitoring System | Property and Supplies information management | Monitors the status of purchase request. It is primarily used in logging and tracking the procurement from the Approval of the Purchase Request up to the delivery and acceptance of the items. The system provides the supply office an overview on the number of PRs that needs attention. It also stores digitized copies of the procurement documents. Through the system, the office can check if a certain PR is already completed or still on the stage of canvass. The system provided the supply office a more efficient and fast way of monitoring the procurement process. | <ul style="list-style-type: none"> - 99.17% reduction in cycle time on monitoring the status of Purchase Requests. - Ease on retrieving information. | In-house |
| 17 | RSTW Events Management | Event Registration and Management | NSTW portal where individuals may register and attend to different webinars hosted through different platforms. | <ul style="list-style-type: none"> - 99.67% reduction in cycle time on the registration of customers for the RSTW Events. - Ease on retrieving information and generation of reports. | In-house |

| | | | | | |
|----|--|--------------------------------------|--|--|----------|
| 18 | TechSupport Ticketing System | ICT Technical Support | An internal tool used by the ICT Support Team for managing support tickets. This is a system designed to help the ITSM unit in catering and monitoring Technical Assistance Requests received from internal customers. The ITSM Unit developed the system to serve as a reference on what are the requests that still needs action. It serves a venue for the unit to check some solutions undertaken that also can be applied on new technical assistance requests. | - Ease on tracking open tickets/ issues for corrective maintenance of ICT Equipment and Software and other ICT related technical concerns. - Prevents unresolved concerns to occur. - Serve as reference for work instructions to resolve for various technical issues and concerns | In-house |
| 19 | DOST-RO1 website | S&T Promotions | The official website of DOST-RO1 to disseminate S&T information and official reports to the public and other stakeholders; | | In-house |
| 20 | CovidDETECT (Covid Detection and Reporting of Exposed Individuals Through Efficient Contact Tracing) | Covid19 Case and Contacts Profiling | <p>Aims to address the region's need of technology to battle against the novel coronavirus (Covid19). The CovidDETECT System is a tool used by the Contact Tracing Teams in the conduct of contact tracing in Region 1. It is a system for managing information of COVID-19 Cases and its Close Contacts. It is developed by the ITSM Unit of DOST1 in partnership with the DOH-CHD1 and RTF Region1.</p> <p>The system was created to be a tool for the whole region to hold information of COVID-19 cases and its close contacts with their exposures and symptoms. The system analyzes the data and is presented into its dashboard which can be accessed by the public at https://coviddetect.dost1.ph.</p> <p>The Dashboard presents a quick overview of the status of COVID-19 Cases and its Close Contacts. Also, the information produced by the system can be used to help decision makers and planners as their reference on where to impose community quarantine and where it needs to be heightened or where are the areas that needs mass testing.</p> | <ul style="list-style-type: none"> - Enhanced the profiling of Covid19 Cases' Close Contacts; - Provided efficient monitoring of the status of cases and its close contacts - Ease of access and retrieval of information | In-house |
| 21 | FastPass | Covid-19 Case and Contacts Profiling | Another system developed that is designed to work with CovidDETECT is the FastPass. It is one of the solutions developed and introduced by DOST 1 to enhance the Contact Tracing activities. It aids on tracking and identification of close contacts of COVID-19 Cases. It utilizes QR Code technology to minimize the physical contact with pen, papers and logbooks. It is intended to be used by all individuals who are allowed and authorized to go out during Community Quarantine and the private and public establishments. The said system can help contact tracers in identifying the Close Contacts of a certain COVID-19 Case. It records the mobility of | <ul style="list-style-type: none"> - Improved the tracking of mobility of individuals and prevented the possible spread of the Covid19 - 74.38% reduction in cycle time on customer entry to establishments with consideration to health protocols during the pandemic | In-house |

| | | | | | |
|----|---|-------------------------------------|--|---|---------------------|
| | | | an individual by scanning the QR Code. It also serves as a tool to prevent or mitigate the spread of the virus by providing warnings to the establishments on the individuals who attempts to enter their vicinity who were tagged as LSI, Close Contact or Case. The system can record present body temperature and health declaration of an individual. The FastPass system also generate border pass QRs which can be used in border control management. Individuals and Establishments (Government, Private or Schools) may opt to register at https://fastpass.dost1.ph . Likewise, LGUs who are interested to adopt and implement the system may contact DOST 1 for their registration. The use of the system is free. | | |
| 22 | CovidDETECT Tools | Covid19 Case and Contacts Profiling | An internal tool for uploading bulk COVID19 cases and close contacts into CovidDETECT. | - ease on uploading COvid19 Cases in to the CovidDETECT System | In-house |
| 23 | Knowledge Management and Information Sharing (KMIS) | Knowlegde Management | An information management system designed to collect and share data, information and knowledge among and between staff and units of DOST-1. This systems aims to help maintain and retain organization knowledge. | Data, Information and Knowledge are readily available and accessible to DOST 1 staff. It helps maintain the Organization Knowledge and supports continuity of effective render of services. | In-house |
| 24 | STARBOOKS | S&T Information | A Philippine Science Digital Library that contains thousands of digitized science and technology resources in various formats (text and video/audio) placed in specially designed "pods" set in a user-friendly interface. | Provision of S&T Information improved. | Adopted (DOST-STII) |
| 25 | Regional Geographic Information Network (RGIN) Hub | GIS Map Collection and Sharing | The RGIN Hub is an internet-based platform designed for on-line information sharing of spatial data to line agencies, LGUs, and other development stakeholders in the region. It offers capabilities for a range of GIS applications useful for development planning, policy formulation, project development, monitoring and evaluation, facilities management, remote sensing, and among other. | - improves collection and sharing of GIS Maps among agencies - improves accessibility of information | Adopted (NEDA II) |

In summary, below are the accomplishments of the ITSM in 2021:

a) Ensure continual improvement of work

| INDICATORS | TARGET | ACCOMPLISHMENT | % ACCOMPLISHMENT |
|--|--------|----------------|------------------|
| Number of Information Systems | | | |
| • Developed | 2 | 3 | 150% |
| • Adopted//Applied | 0 | 2 | 200% |
| Number of Information Systems maintained/ upgraded | 19 | 25 | 132% |

- b) Enhance office operation efficiency through harmonized information systems:

| INDICATORS | TARGET | ACCOMPLISHMENT |
|--------------------------------------|--------|----------------|
| Using the following IT systems (Y/N) | | |
| a. TRACE | NO | NO |
| b. IMPRESSION | YES | YES |
| c. Supplies Management Database | YES | YES |
| d. STSIMS | YES | YES |
| f. HRMIS | YES | YES |

Aside from the Work-Process Innovations through systems developed and maintained, the ITSM unit was able to maintain 100% availability of ICT Equipment and 99.98% availability of network connections. This is the impact of the scheduled preventive maintenance of the ICT Equipment. Likewise, the unit garnered 100% of at least Very Satisfactory Rating on technical assistance and support from the internal customers (DOST 1 Employees).

Furthermore, the ITSM Unit ensured that the DOST 1 website contents are updated. In 2021, the unit was able to post 172 articles, updated 10 web pages, posted 32 Job Opportunities, and uploaded 59 updated contents for the Transparency Seal in the DOST 1 Website. Likewise, the ITSM continues to support multimedia development on the activities of the S&T Promotions Unit.

Through the Medium-Term Information and Communications Technology (MITHI) Program, Harmonization of Information Systems project, DOST 1 was able to acquire replacement and new ICT equipment and softwares to upgrade the computing units, Data Center and Network Facility and ultimately enhance office productivity, and support the Service Continuity plan of the agency.

Overall, the MITHI program helped DOST 1 to improve and upgrade its productivity tools and provided solutions for establishing servers to cater the available information systems of the office.

Below are the ICT Equipment and Software and other peripherals acquired through the MITHI program in 2021:

A. ICT Equipment (Capital Outlay)

| Quantity | Unit | Item | End User/Office |
|----------|--------|--------------------------|---------------------------|
| 6 | Unit | Desktop Computer (Entry) | DOST RO1, PSTCs |
| 1 | Unit | Desktop Computer (Mid) | DOST RO1 |
| 9 | Unit | Laptop Computer | DOST RO1, PSTCs |
| 2 | Unit | Rack Mount UPS | DOST RO1 |
| 1 | System | Radio System | DOST RO1, PSTC-Ilocos Sur |
| 1 | Unit | High Speed Scanner | DOST RO1 |
| 1 | System | CCTV System | PSTCs |

B. ICT Equipment (Semi-Expendable)

| Quantity | Unit | Item | End User/Office |
|----------|------|-------------------|-----------------|
| 3 | Unit | Unmanaged switch | DOST RO1 |
| 4 | Unit | Display Monitor | PSTCs |
| 6 | Unit | WiFi Router | PSTCs |
| 1 | pc | Canon 77D Battery | DOST RO1 |
| 2 | Unit | ATX PSU | DOST RO1 |
| 3 | Unit | Rack Shelf | DOST RO1 |
| 6 | Unit | UPS | DOST RO1, PSTCs |

C. Printing Equipment (Semi-Expendable)

| Quantity | Unit | Item | End User/Office |
|----------|------|------------------------------|---------------------|
| 10 | Unit | InkJet Multifunction Printer | PSTCs, DOST RO1-ASD |

D. Software Subscription

| Quantity | Item | End User/Office |
|----------|------------------------|-----------------------|
| 8 | Microsoft 365 Business | DOST1 Permanent Staff |



SDG



POP CHAPTER

6

Promoting Health, Well-being, and
Harmony: Administration of Justice

STRATEGIC INITIATIVE #4

S&T Services

GENDER & DEVELOPMENT

Engendering S&T in gender mainstreaming in Region 1

The Department of Science and Technology Region 1 (DOST 1) Gender and Development (GAD) program recognizes the role of both men and women in nation-building, ensures fundamental equality before the law of women and men, and emphasizes gender sensitivity.

The GAD Program is formulated to make Philippine governance gender-responsive through RA 7192 and RA 9710 or the "Women in Development and Nation Building Act" and "Magna Carta of Women" respectively. The program recognizes the role of women in nation-building, ensures fundamental equality before the law of women and men, and emphasizes gender sensitivity.

DOST 1 also sows buoyancy on GAD through persistent implementation of gender-responsive programs, projects, and activities (PPAs) in the region amidst the pandemic.

Henceforth, DOST 1 sustains gender-awareness and gender mainstreaming for both internal and external clienteles through the leadership of the GAD Focal Point System Members (GFPS) and the respective Provincial Science and Technology Center (PSTC) Alternates:

DOST 1 GFPS Members

8 MALE



8 FEMALE



PSTC staff as Alternate in the GFPS

2 MALE



3 FEMALE



DOST 1 PARTICIPATES IN THE NATIONAL WOMEN'S MONTH CELEBRATION, SUPPORTS GENDER EQUALITY AND WOMEN EMPOWERMENT



Group photo of DOST 1 employees in the Regional Office. Photo was taken last March 29, 2021.

This year's theme "We Make Change Work for Women: Juana Laban sa Pandemya, Kaya!", serves as a tribute, a platform, and a call to action that highlights the extraordinary roles of ordinary Juanas in society as trailblazers and forerunners of change. Hence, the celebration highlights women's participation in battling the pandemic as well as discusses gender issues aggravated by the pandemic.

In view of the celebration, the DOST 1 GAD Focal Point System (GFPS) organized various activities for DOST-1 staff, assisted micro, small and medium enterprises (MSMEs), students, and other stakeholders, which started with this episode thru the radio program, "Tekno Presensya: Syensa ken Teknolohiya para kadagiti Umili" in partnership with DZAG Radyo Pilipinas Agoo and aired via fb live in DOST 1 fb page. The Program highlighted the activities prepared by the agency and encouraged every Juan and Juana to partake in all the activities set,



HIGHLIGHTS

MARCH 8, 2021

Celebrated to be the International Women's Day, DOST 1 received the Program to Institutionalize Meritocracy and Excellence in Human Resource Management (PRIME-HRM) Bronze Award from the Civil Service Commission Region 1 (CSC 1).

The PRIME HRM awarding coincides with the ISO 9001:2015 Re-Certification, and the Launching of New Testing and Calibration Services of the Regional Standards and Testing Laboratory.

MARCH 25-26, 2021

The First Ilocos GAD Convention was organized by the Regional Gender and Development Committee (RGADC), hosted by University of Northern Philippines. Ms. Racquel M. Espiritu, GFPS-Technical Working Group Head, presented and shared Innovative Programs of DOST 1 that address the Gender Needs During Covid-19 pandemic.

MARCH 29, 2021

The cuminating activity was aired in the DOST 1's radio program, "Tekno PreSensya: Syensa ken Teknolohiya para kadagiti Umili" through the facilities of DZAG Radyo Pilipinas Agoo.

TRAININGS/WEBINARS

MARCH 8, 2021

"Women in Science Leadership" was conducted which highlighted the notable contributions of Juanas in the field of Science and Technology.

MARCH 15, 2022

A webinar entitled "7S of Good housekeeping: Setting the Pathway to a Safe and Healthy Workplace in the Period of Pandemic" transpired, which informed the participants in the identification of the costs of unsafe workplace to enterprise profitability and workers' productivity.

MARCH 17, 2021

A TechTalk webinar was done which highlighted two (2) female researchers in the region to promote matured DOST-generated and funded technologies.

MARCH 18, 2021

An online training entitled "Ube Day: Training on Ube processing" was conducted to provide alternative source of income to all participants. Ms. Princess P. Abuan, Project Assistant II of Provincial Science and Technology Center (PSTC) – La Union, served as the trainer.

MARCH 22, 2021

A webinar entitled "Serbisyo para kay Juan at Juana ng DOST 1" was organized through the initiative of the GFPS and the Human Resource Management Unit. DOST Luzon Cluster spearheaded a webinar entitled "WEE Care, We Share Forum" to unlock the doors of success and unblock MSMEs' avenues of opportunity so that women can become actors in building community resilience and in alleviating the lives of those living in the communities.

MARCH 29, 2021

As culminating activity, the GFPS of DOST 1 organized an activity dubbed as "Pagkilala kay Juan at Juana ng DOST 1", where 16 staff, 6 Females and 10 Males, were awarded with Certificate of Appreciation during the agency's flag-raising activity.

DOST 1 AS A STAUNCH ADVOCATES OF ANTI-VIOLENCE AGAINST WOMEN AND THEIR CHILDREN

DOST 1 is standing firm towards achieving a VAW-free community. Through Proclamation 1172 s. 2006, the 18-Day Campaign to End VAW is observed from November 25 to December 12 to promote awareness about the Safe Spaces Act (RA 11313), both for the public and the institutions thru the slogan "Filipino Marespeto: Safe Spaces, Kasali Tayo."



ACTIVITIES

1 Sabayang Pagbigkas Challenge and Photo Contest for DOST 1 staff.

2 Observance of the 18-day Campaign to End VAW by hanging of campaign streamers in PSTC offices.

GENDER AND DEVELOPMENT WEBINARS DURING THE 2021 NATIONAL S&T WEEK IN THE REGION



Envisioning to increase awareness and knowledge of internal and external clients in gender mainstreaming in the region, DOST 1 through its GAD program took part in the 2021 National Science and Technology Week celebration in the region.

| Understanding Basic GAD Concepts and SOGIESC | | |
|--|---|---|
| OCTOBER 11, 2021 | RESOURCE SPEAKERS: | NUMBER OF PARTICIPANTS: |
| | DR. DIANA L. IGNACIO DOST Assistant Secretary for Human Resource Management, Management Services, and Special Concerns, and Officer-in-Charge of GAD and Regional Support Services MS. MARIA FE B. SINGSON DOST Supervising Science Research Specialist and National GAD Resource Pool Member MR. ROCKY B. RINABOR Philippine Commission on Women GAD Specialist II | 69 ZOOM participants 47 FB Live viewers |

| Training on the Use of Gender-fair Language | | |
|---|---|---|
| OCTOBER 15, 2021 | RESOURCE SPEAKER: | NUMBER OF PARTICIPANTS: |
| | MS. KRISTEL MAY G. MAGDARAOG University Extension Specialist III of University of the Philippines – Diliman Gender Office | 72 ZOOM participants 33 FB Live viewers |

| Psyche It Away: Psychological and Mental Health Issues and How Gender Affects the Way We Think | | |
|--|--|---|
| OCTOBER 19, 2021 | RESOURCE SPEAKER: | NUMBER OF PARTICIPANTS: |
| | DR. DEM MINA MAMAAT Freelance Motivational Speaker | 65 ZOOM participants 23 FB Live viewers |

| Gender Issues and Students Vulnerability to covid-19 | | |
|--|--|---|
| OCTOBER 22, 2021 | RESOURCE SPEAKER: | NUMBER OF PARTICIPANTS: |
| | DR. ELEANOR R. BELIZAR University of Northern Philippines Associate Professor V and National GAD Resource Pool Member of PCW | 79 ZOOM participants 38 FB Live viewers |

| Effects of Cyberbullying, Misinformation, and Online Sexual Abuse to Students | | |
|---|---|--|
| OCTOBER 26, 2021 | RESOURCE SPEAKER: MR. JOHN MICHAEL E. MATIBAG Advocacy and Training Officer of Stairway Foundation | NUMBER OF PARTICIPANTS: 160 ZOOM participants 490 FB Live viewers |
| NOVEMBER 9, 2021 | Gender and Climate Change RESOURCE SPEAKER: MS. ROSALINA G. DE GUZMAN Chief of the Climate Data Section of DOST – Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) | NUMBER OF PARTICIPANTS: 149 ZOOM participants 60 FB Live viewers |
| WEE Care, WE Share: An Innovative Initiative to Support Women Entreps in Region 1 | | |
| NOVEMBER 11, 2021 | RESOURCE SPEAKER: DR. TERESITA A. TABAOG DOST Region 2 Assistant Regional Director for Technical Operations Services MS. JENNIFER C. FERNANDEZ DOST 1 Science Research Specialist II | NUMBER OF PARTICIPANTS: 149 ZOOM participants 60 FB Live viewers |

CAPACITATING DOST 1 GFPS AND EMPLOYEES IN GENDER-MAINSTREAMING

DOST 1 GAD Program, responded to Philippine Commission on Women Memorandum Circular 2011 – 01 on "creation, strengthening and institutionalization of the GAD Focal Point System (GFPS)".

One of the activities done by DOST 1 is pursuant to Section 36 of RA. 9710 and PCW MC No. 2011-01 is the Reconstitution of the GAD Focal Point System (GFPS). The GFPS is a mechanism established to ensure and advocate for, guide, coordinate, and monitor the development, implementation, review, and updating of GAD plans and GAD-related PPAs.

ACTIVITIES:

1 Online Validation on Gender Mainstreaming Evaluation Framework (GMEF)

January 19, 2021 via Video Conferencing

2 Preparatory Meeting for the 2021 National Women's Month Celebration

February 11, 2021 via Zoom platform

3 Orientation on Safe Spaces Act (R.A. 11313)

May 3, 2021 via Microsoft Teams platform

Resource Speaker:

ATTY. ANGELY P. MEDALLE-ALVIAR

Attorney V of the Legal Division and Officer-in-Charge of the Administrative and Legal Services of the DOST

4 CSC's implementation of Committee on Decorum and Investigation or the CODI

May 3, 2021 via Microsoft Teams platform

Resource Speaker:

ATTY. CHARISMA M. AGBAYANI

Attorney V of the Legal Services Division of Civil Service Commission Region 1

5 Orientation on Basic GAD Concepts and Office Policies for new DOST 1 staff

June 10, 2021

Resource Speaker:

MS. ANGEL LYN O. LEANDADO

GFPS Member

MS. MAUREEN HEIDI L. PEREZ

GFPS Secretariat

6 Virtual Training on Mainstreaming GAD Elements in the Project Development Cycle

-conducted for DOST Central Office and Regional Offices using the Harmonized Gender and Development Guidelines.

7 Harmonized Gender and Development Guidelines (HGDG) Workshop on the CEST Operational Manual

June 22, 2021 via Microsoft Teams/F2F

-a focus group discussion of GFPS-TWG with CEST program implementers.

8 Executive Briefing on Gender and Development (GAD)

September 3, 2021 via Zoom platform

-for the GAD Focal Point System (GFPS) members participated by 17 GFPS members, 9 female and 8 males.

9 GAD Focal Point Assembly

December 10, 2021 via Zoom platform

-participated by all GFPS members of the DOST System, spearheaded by DOST-GRSS Office.

DOST 1 PARTICIPATION TO 2021 RGADC-LED ACTIVITIES AND MEETINGS



SUPPORT TO REGIONAL DEVELOPMENT COUNCIL/INTER-AGENCY COMMITTEES

A. REGIONAL GENDER AND DEVELOPMENT COMMITTEE (RGADC)

- Attendance to Quarterly Meetings (*Hosted 4th Quarter Meeting via Zoom)
- Participation to TWG/Special Meetings
- Deepening Session for RGADC Member Agencies – December 15-17, 2021
- 1st Virtual Ilocos GAD Convention – March 25-26, 2021

B. REGIONAL INTER-AGENCY COMMITTEE ON ANTI-TRAFFICKING, CHILD PORNGRAPHY, VIOLENCE AGAINST WOMEN, AND THEIR CHILDREN (RIACAT-CP-VAWC)

- Attendance to 3 Quarterly Meetings
- Participation to 3-day Review, Evaluation, and Planning Workshop – August

C. REGION 1 ADVOCATES FOR GENDER EQUALITY (RAGE)

- Attendance to 2 Semestral Meetings for 2021 National Women's Month Celebration [NWMC] and 2021 18-day Campaign to End VAW
- Participation to the Online Fora as the culminating activity of the 2021 NWMC – March 30, 2021
- Participation to the Virtual Culminating Activity of the 2021 18-day Campaign to End VAW in partnership with RGADC – December 10, 2021



CEST-KAAYUSAN

Environmental protection and conservation

Science-based information & technologies for disaster mitigation and climate change adaptation (DRRM-CCA) was provided to assisted communities in Pangasinan, La Union, and Ilocos Norte. One of which is the Orientation/Seminar on Restricted Radiotelephone Operator's Certificate for Land Mobile Station via Zoom meeting, participated by barangay officials/ barangay police officers. The second is the training on the operation and maintenance of the automated weather stations established in Carasi and Dumalneg in Ilocos Norte.

Moreover, an automated water level monitoring station with rain gauge was installed at the Don Marcelo Nagal Bridge in Agno, Pangasinan to monitor the depth of the river and the amount of rain in the area. DOST-1 also provided 20 sets of Information, Education, and Communication (IEC) materials in Bugnay, Candon City as the counterpart to the disaster preparedness training conducted by the North Luzon Philippines State College (NLPSC).

Monitoring of these projects and activities will be conducted to assess their performance and capacity.





KINABUKASAN

OUTCOME 1

INNOVATION
STIMULATED

OUTCOME 2

TECHNOLOGY PROMOTED
AND ACCELERATED

OUTCOME 3

CRITICAL MASS OF GLOBALLY
COMPETITIVE STI HUMAN
RESOURCES DEVELOPED

OUTCOME 6

PRODUCTIVITY AND EFFICIENCY
OF COMMUNITIES AND THE PRODUCTION
SECTOR, PARTICULARLY MSMEs, IMPROVED

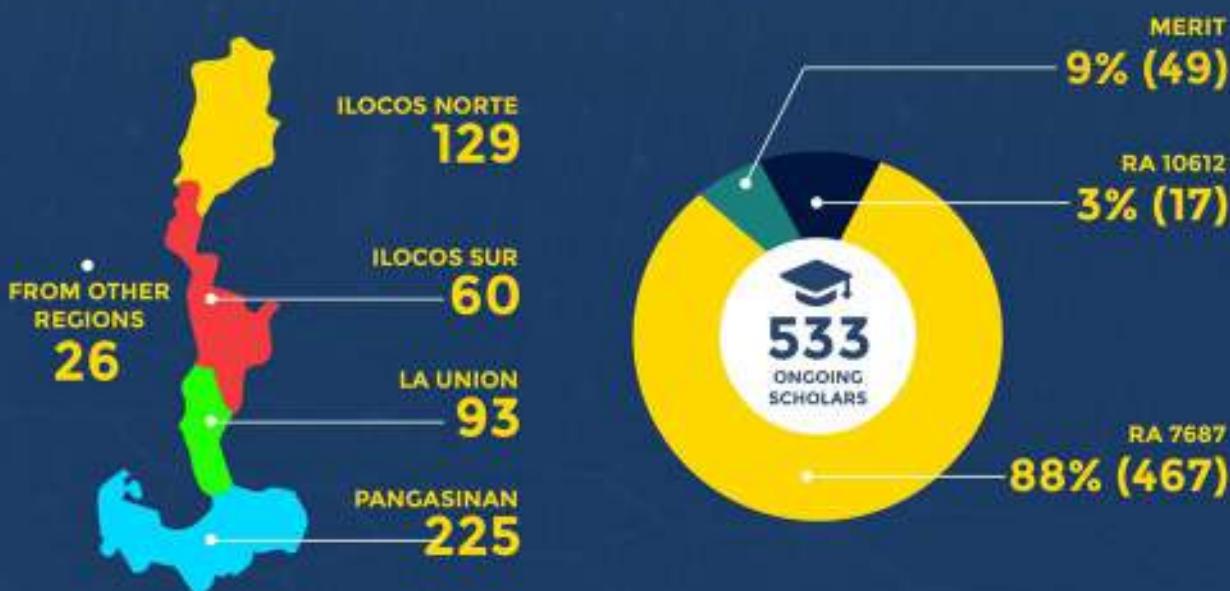


SCHOLARSHIP

Mandated to accelerate the development of the country's science and technology human resources, the Science Education Institute (SEI) of the Department of Science and Technology (DOST) continually undertakes programs and projects that stimulate the continued development of the country's S&T human resources to support the growth, innovation, as well as their utilization necessary to spur economic development.

DOST Region I, along with other regional offices, serves as the regional arm of DOST-SEI for the planning and implementation of S&T human resource development programs and projects in the region, coordinates with other government agencies like DEPED, CHED and other learning institutions, with the aim to produce leaders and decision-makers in various areas of S&T: government, academe, and private industries.

There are three types of S&T scholarship programs: S&T Undergraduate Scholarship by Republic Act No. 7687 awarded to talented and deserving students who belong to economically challenged families; Merit Scholarship by Republic Act No. 2067 awarded to students who have high aptitude in science and mathematics and who are willing to pursue careers in the fields of science and technology; and Junior Level S&T Scholarship by Republic Act No. 10612 to strengthen the country's science and technology education by fast-tracking graduates in the sciences, mathematics and engineering who shall teach science and mathematics in secondary schools throughout the country.



JUNIOR LEVEL SCIENCE SCHOLARSHIP PROGRAM (JLSS)

The JLSS Program is one of the scholarship programs implemented by the DOST-SEI by the DOST –SEI to finance the education of talented and deserving students who are in their third year of college and are pursuing degree programs under the science and technology priority courses.

The 2020 JLSS opened the online scholarship application for incoming third year college students on March 27, 2020. Due to Covid-19 pandemic restrictions, DOST-SEI implemented the full online filling of application through the S&T E-Scholarship Application System and the result was released last August 1, 2021. Unlike in previous years, DOST-SEI did not hold a national qualifying examination due to the COVID-19 pandemic. Instead, the applicants underwent eligibility screenings using the JLSS E-Scholarship Application System, where documentary requirements including grades for the first two years of college were scrutinized. Data analytics was employed to determine the qualifiers. A total of 55 regular third year students from Region 1 qualified.

On the other hand, DOST-SEI opened its online filing of application for the 2021 JLSS last September 24, 2021 thru the E-Scholarship Application System. A total of 501 applicants from Region I was recorded, and the result will be announced in the first quarter of 2022.



55 qualified students

**REGULAR THIRD YEAR
STUDENTS FROM REGION 1**

S&T UNDERGRADUATE SCHOLARSHIP PROGRAMS

DOST-SEI has officially released the list of qualifiers of the 2021 S&T Undergraduate Scholarships on August 29, 2021. In Region I, a total of 5,563 senior high school students filed their application online. Out of the total applicants, 294 qualified.

Due to the restrictions brought by the COVID-19 pandemic, DOSTI conducted scholarship orientations online thru the Zoom platform by batch from September 23-24, 2021. A separate orientation was conducted for the approved potential qualifiers. The qualifiers accompanied by their parents were oriented on the S&T Scholarship Policies as well as on the benefits of the scholarship program. Qualifiers who decided to avail the scholarship were scheduled for the signing of the scholarship agreement with the help of our Provincial S&T Centers.

On the other hand, application for the 2022 S&T undergraduate Examination was opened last October 8, 2021. Applicants were encouraged to file and submit requirements thru the E-scholarship Application System. A total of 3,550 senior high school students applied. The list of qualifiers is set to be out by May 2022.



3,550 applicants

**GRADUATING
SENIOR HIGH
SCHOOL STUDENTS**

S&T LEARNING ASSISTANCE PROGRAM

The well-being of the scholars is important for them to perform effectively; thus several personal and professional development trainings were provided virtually. The Science and Technology Learning Assistance Program (STLAP) is a year-round program designed to help assess and enhance intellectual potentials and psycho-social skills; equip with coping skills needed during college, and inculcate time-honored values such as social responsibility, leadership, academic excellence, and personal integrity.

2021 Virtual Seminar on Job Hunting Strategies & Exit Conference

DOST 1 conducted a seminar on job hunting for graduating scholars last March 12, 2021. The seminar was conducted to empower the scholar-graduates to be employment-ready and find alternatives on how to survive during the pandemic. The speakers of the virtual seminar were identified based on the needs and current trends. Mr. Gaerlan of DOLE Region 1 discussed the different skills that the scholars should possess to survive in the world of work. Dr. Gagni of MMSU discussed the topic on Navigating the World of Work in the New Normal: A Fresh Graduate Experience. In addition, representative from TESDA presented options to the scholars to help in the job search process.



Meanwhile, an exit conference was also conducted to remind the soon-to-be graduate-scholars of their roles and responsibilities in nation-building, to re-integrate the values of the scholars in relation to their commitment with DOST-SEI, and to remind them of their service obligation after graduation. The Department of Education was invited to discuss its role in the implementation of RA 10612 and RA 7687. Also discussed were the different graduate scholarship programs offered by DOST-SEI, which the scholars can apply should they decide to pursue a higher level of study.



In Touch with Excellence

Every year as part of the National Science and Technology Week, the Department of Science and Technology – Science Education Institute (DOST – SEI) celebrates the excellence of scholars as a way to showcase the truest impact of the government's science and technology scholarship program.



This year, twenty-seven (27) graduate-scholars, three (3) of them are Magna Cum Laude, twenty-one (21) Cum Laude, two (2) with academic distinction and one (1) Gawad Parangal Finalist were recognized during the very first virtual "In Touch with Excellence" on February 24, 2021 via MS Teams. Present in the said momentous event were the scholarship coordinators from fifteen (15) partner institutions, on-going scholars and concerned officials from DOST Region 1. The "In Touch with excellence" reminded all graduate and on-going scholars of their vital role in nation building and that the choices they make have a great impact in the country.



A Capacity Building for DOST-SEI Ongoing Scholars in Region I

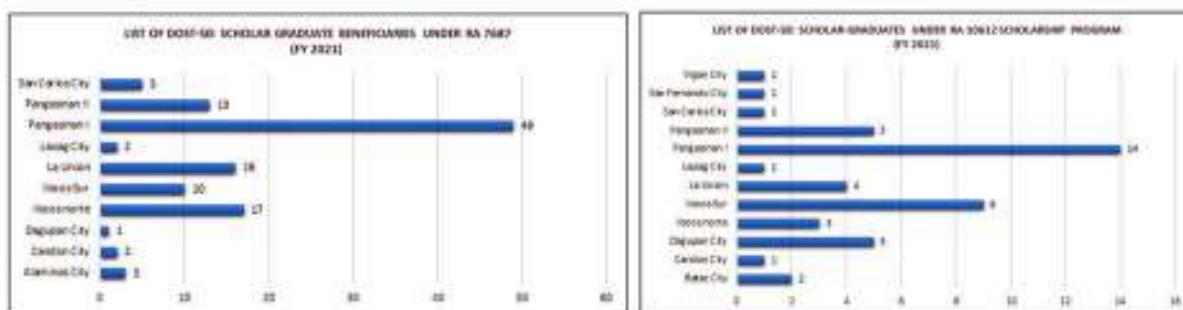
DOST 1 thru SEI conducted a capacity building webinar entitled, "Empowering the DOST-SEI Ongoing Scholars in the Region" in partnership with different private and public universities and HEIs last December 13-14, 2021, via ZOOM platform.



Attended by DOST-SEI ongoing scholars under the Merit, RA 7687 and RA 10612 program from Region I, the seminar sought to bring out their potentials to conquer the challenges in pursuing their S&T careers. Specifically to develop a sense of leadership, cooperation, and service among scholars, provide an avenue for the exchange of ideas, promote camaraderie among scholars, strengthen the established network of scholars to encourage peer counselling through the created DOST Scholars' Association and to teach scholars how to handle stressful situations with One's Fortified Emotional Stamina.

A Capacity Building for DOST-SEI Ongoing Scholars in Region I

One hundred sixty-five (165) scholar-graduates of the Department of Science and Technology – Science Education Institute (DOST-SEI) were deployed with teaching positions by the Department of Education (DepEd) Region I for the school year 2021-2022. 118 of them are RA 7687 scholar-graduates deployed in public Junior High School as Teacher I, while 47 RA 10612 scholar-graduates as Special Science Teacher I in public Senior High Schools in the Region.



THE FILIPINO PATRIOT SCHOLARS PROJECT & ACTIVITIES

The Dakilang mga Anak ng La Union para sa Matematika, Agham, at Teknolohiya (DALUMAT), in partnership with the Department of Social Welfare and Development (DSWD) Field Office I, conducted a webinar on Youth and the Social Media on February 26, 2021. The webinar promoted responsible use of social media among the youth. The two-hour-long webinar #SanaOLResponsable was hosted via Microsoft Teams and also made available on DOST Region I page via Facebook Live. It was participated by scholars and youths from the different schools in the region.

OTHER ACTIVITIES

Agyamanak Dost: Makabayang Iskolar Ako!

This is an initiative full of inspiring stories which aims to help students become more engaging to science, mathematics and engineering while encouraging them to apply for the different DOST scholarships.

Online Training on Language Strategies In Teaching Science And Mathematics

Training on Language Strategies in Teaching Science and Mathematics was conducted to promote deeper understanding and appreciation of mathematical and scientific concepts.

Online Training on Design Thinking In K-3 Science and Mathematics Teaching

Design Thinking in K-3 Science and Mathematics Training under the Science Teacher Academy for the Region (STAR) Program intended to provide teacher-participants with the opportunity to experience design thinking and adopt it as a way of thinking.

21st Century Learning Environment Model (21st Clem) in the Adaptive Normal

As part of the celebration of the National Science and Technology Week in Region I, 21st Century Model Classroom was conducted via Zoom last November 8, 2021.



S&T PROMO

In pursuit to increase public awareness and appreciation of science, technology, and innovation (STI) among the various sectors of society, the Regional Science and Technology Promotion Program Center (RSTPPC) is tasked to develop and conduct promotional and information activities that introduce the role of STI in socio-economic development. The Center promotes mature technologies generated by DOST and its partner agencies through webinar, fora and press conferences. The Center, through the active involvement of all the DOST 1 Provincial S&T Centers and Functional Units, promotes the various programs, projects and activities implemented and conducted. Press releases and social media cards and infographics were also published for wider reach of the information.

For the year, the Center has published and monitored 559 promotional activities which is 156% accomplishment from the year's target. Consequently, these activities have reached 1,380,811 people, received 59,146 engagements, and gained 28,710 new followers across all social media platforms of all DOST-1 Units/Centers.

The Center has also published two (2) issues of Ilocos S&T Trends, the official newsletter of DOST-1.



TEKNO PRESYENSYA: SYENSYA KEN TEKNOLOHYA PARA KADAGITI UMILI

On the onset of the COVID-19 pandemic, mass gathering was prohibited. The traditional activities, which entail face-to-face interaction, in promoting S&T technologies and innovations, were all cancelled. Hence, DOST-1 was hindered in disseminating S&T technologies and innovations to the people in the region due to strict implementation of community quarantine.

It was during this time that DOST-1 resorted to collaboration with broadcast media, recognizing them as potent tool in maintaining and strengthening DOST-1's relationship with its clientele, specifically the citizenry of La Union, and Region 1. Through this collaboration, dissemination of vital information, particularly on advocacies of the national government and how these are being implemented in the provinces, will enhance wider people participation and cooperation for better governance. In partnership with DZAG Radyo Pilipinas Agoo, "Tekno PreSvensya: Syensya ken Teknolohiya Para Kadagiti Umili" was born.

A memorandum of agreement (MOA) was signed between DZAG Radyo Pilipinas Agoo, represented by its Station Manager, Dr. Maricel M. Fronda, and DOST 1 Regional Director, Dr. Armando Q. Ganal in CY 2020 and renewed annually.

The Tekno PreSyensa is the official radio program of DOST-1 aired through DZAG Radyo Pilipinas Agoo facilities and DOST 1 and DZAG official facebook pages and broadcasted live on radio, every second and fourth Thursday of the month, at 9:00 AM to 12:00 NN. This show covers the present and upcoming activities, programs, and projects of DOST-1, together with its stakeholders, to strengthen Science, Technology, and Innovation throughout the region, for the promotion and acceleration of technology adoption as cited in Chapter 14 of the Regional Development Plan for 2017-2022.

| Dates of Broadcast | Featured Episodes |
|--------------------|---|
| 1-Mar-21 | National Women's Month Kick-off Activity |
| 29-Mar-21 | Implementation of CEST in Region 1 |
| 15-Jul-21 | Food Innovation Centers in Region 1 (MMSU and PSU) |
| 29-Jul-21 | PCHRD-Tuklas Lunas Development Center (MMSU) |
| 12-Aug-21 | PCAARRD-Agri-aqua Technology Business Incubator in Region 1 (MMSU and DMMMSU) |
| 26-Aug-21 | Implementation of CEST-ELCAC in Ilocos Region |
| 30-Sept-21 | Enhanced Nutribun DOST-FNRI at iba pang mga Teknolohiya |
| 28-Oct-21 | DOST-TAPI Program on Techno-preneurship |
| 25-Nov-21 | DOST-PNRI Carageenan PGP Inauguration and Launching of the 1st Facemask Production |
| 9-Dec-21 | Facility in Northern Luzon (Safetech Inc.) DOST-1's RSTL Services |

VIRTUAL PRESSERS

For the year, there were two (2) virtual pressers conducted to advocate information campaign of the following major S&T celebrations:

- Regional Invention Contest and Exhibits (RICE) in Region 1 scheduled on October 27-29, 2021
- National Science and Technology Week in Region 1, with the theme, "Agham at Teknolohiya: Tugon sa Hamon ng Panahon" set on November 8 – 12, 2021

The virtual presser was in collaboration with the Philippine Information Agency Region 1 (PIA R1) thru their regular one-hour live 'Kapihan sa Ilocos' program purposely to provide a venue for partner-agencies to advocate the implementation of various government programs and activities.

The one-hour Kapihan sa Ilocos is live - streamed via official pages of PIA Region 1 (Philippine Information Agency Region 1, PIA La Union, PIA Pangasinan, PIA Ilocos Sur, and PIA Ilocos Norte FB pages) and Northbound Philippines FB page.

The Kapihan is aired live simultaneously over the eight radio stations and the FB page of DZRD Sonshine Radio Dagupan City; DWIA 99.7 Core FM, Bantay City, Ilocos Sur; DZRL RPN Batac City, Ilocos Norte; Radyo Kaillian, ISPSC – Sta Maria Campus, Ilocos Sur; Radyo Kabinnadang, ISPSC- Cervantes, Ilocos Sur; DWRS, Radyo Pilipinas, Tayug, Pangasinan; and DZMQ - Radio Pilipinas, Dagupan City. The kapihan was also aired over DZTP Radyo Tirad Pass every Sunday.

INVENT SCHOOL PROGRAM

The Invent School Program (ISP) is a trademark program of the DOST Technology Application and Promotion Institute (DOST-TAPI) to serve as a platform for the youth to awaken their true ingenuity by stimulating their interest in creativity and inventiveness. In CY 2021, DOST 1 partnered with DOST-TAPI to bring the program in Region 1.

In May 2021, a series of ISP webinars were conducted serving a total of 70 science-inclined students, comprised of 12 elementary pupils, 26 high school and 32 college students, from private and public schools in the region.

The ISP provides an opportunity for students to awaken their minds in the field of inventing and entrepreneurship. It also creates awareness on Intellectual Property Rights (IPR) and Protection.

Students in Region 1 actively participated in the webinar-workshops and showcased their skills and capabilities that will help them become successful inventors to power the future and change our tomorrow.

The half-day webinar for elementary pupils focused on creative thinking and invention development. Interactive activities related to children's context were conducted for fun and easy learning. On the other hand, experts from DOST-TAPI facilitated the webinar for high school students focused on creative, perceptive, and inventive thinking, ideation tools and techniques, invention development, IPR and selling the invention. The webinar for college students focused on developing creative thinking, creative problem solving, invention development, prototyping, IPR, selling the invention, prior search, and basic patent drafting.

NATIONAL SCIENCE AND TECHNOLOGY WEEK (NSTW) CELEBRATION

The Department of Science and Technology Region 1 (DOST 1) conducted a blended celebration of the 2021 National Science and Technology Week (NSTW) from October to November 2021 with the theme, "Agham at Teknolohiya: Tugon sa Hamon ng Panahon".

The celebration showcased significant scientific and technological breakthroughs that support inclusive socio-economic growth in the region through the conduct of various activities such as webinars, livelihood trainings, calibration caravan and virtual exhibits.

The following shows the summary accomplishments vis-à-vis the 2021 NSTW expected outputs:

| EXPECTED OUTPUTS | ACCOMPLISHMENTS |
|--|--|
| Promoted TAPI programs and services | Allotted an exclusive wall for videos of DOST-TAPI programs/services at the DOST-1 virtual exhibit lobby which can be assessed at https://nstw.dost1.ph/exhibit/lobby |
| Promoted and showcased at least 50 technologies that are funded and generated by the DOST system and the regional scientific communities. | Promoted 57 technologies following the four thematic areas: <ul style="list-style-type: none">Kabuhayan – 23 technologiesKalusugan -15 technologiesKaayusan – 7 technologiesKinabukasan 12 technologies |
| Established a venue (thru the Virtual exhibits) for S&T experts and enthusiasts, researchers/inventors, investors, and communicators to meet and exchange ideas on the current S&T developments and technological needs of the industry. | Developed a virtual exhibit to showcase DOST-1 and DOST-TAPI programs and services as well as technologies generated by the science communities. A total of 16,005 enthusiasts visited the virtual exhibit at https://nstw.dost1.ph/exhibit/lobby . |
| Reached at least 5,000 viewers and participants and 5,000 engagements to the various trainings, webinars/ techtalks, and educational activities for the week-long celebration. | The 2021 NSTW celebration collectively accommodated 11,551 S&T enthusiasts (6,881 Facebook live; 4,562 Zoom; 108 onsite) not only from Region 1 but also from other Regions. The DOST 1 Facebook Page has reached 188,502 people from October 27 to November 28, 2021 with 61% female and 39% male audience. |
| Received a very satisfactory rating from participants of technology trainings, webinars, and techtalks. | The event attained an Excellent customer satisfaction rating of 4.71 based on the summary of participants/attendees' evaluation. |

List of pre-NSTW Activities (October 5 to November 4, 2021)

| No. | ACTIVITY TITLE | DATE/PLATFORM |
|-----|--|---|
| 1 | Awareness Webinar on Scientific and Technological Specialist (STS) Eligibility Grant (PD997) | October 5, 2021 Facebook Live and Zoom (Online Platform) |
| 2 | Virtual Orientation on Scientific Career System: Be a Career Scientist | October 6, 2021 Facebook Live and Zoom (Online Platform) |
| 3 | Understanding Basic GAD Concepts and SOGIESC | October 11, 2021 1:00 PM Facebook Live and Zoom (Online Platform) |
| 4 | Beginner's Guide on Nutrifacts and Shelf-Life | October 14, 2021 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 5 | Design Thinking in K-3 Science and Mathematics Teaching | October 14-16, 2021 8:00 AM – 5:00 PM Zoom (Online Platform) |
| 6 | Training in the Use of Gender-fair Language | October 15, 2021 1:00 PM Facebook Live and Zoom (Online Platform) |
| 7 | ScienTeach: A Virtual Symposium for the Youth (Region 1) | October 18, 2021 9:00 AM Facebook Live and Zoom (Online Platform) |
| 8 | Psyche it Away: Psychological and Mental Health Issues and How Gender Affects the Way We Think | October 19, 2021 1:00 PM Facebook Live and Zoom (Online Platform) |
| 9 | Beginner's Guide to Food Label Design Ideas | October 21, 2021 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 10 | Gender Issues and Students Vulnerability to Covid-19 | October 26, 2021 1:00 PM Facebook Live and Zoom (Online Platform) |
| 11 | Food Innovation & Development : Food Industry's Experiences of local MSMEs | October 26, 2021 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 12 | Effects of Cyberbullying, Misinformation, and Online Sexual Abuse to Students | October 26, 2021 1:00 PM Facebook Live and Zoom (Online Platform) |
| 13 | Regional Invention ConTEST and Exhibits (RICE) in Ilocos Region | October 27-29, 2021 Facebook Live and Zoom (Online Platform) |
| 14 | NRCP Regional Basic Research Caravan : "Cattle Ticks Talk" | October 27, 2021 Facebook Live and Zoom (Online Platform) |
| 15 | Introduction to Mass Metrology Calibration of NAWI | October 28, 2021 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 16 | Food Safety Webinar Series for Online Food Sellers and Delivery Services | October 29, 2021 9:00 AM – 4:00 PM Facebook Live and Zoom (Online Platform) |
| 17 | Leaner Management in the New Normal | November 4, 2021 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |

List of NSTW Regional Activities (November 12, 2021)

| No. | ACTIVITY TITLE | DATE/PLATFORM |
|-----|--|--|
| 1 | Opening Ceremony (Region 1 Celebration of NSTW) | November 8, 2021 9:00 AM Facebook Live and Zoom (Online Platform) |
| 2 | 21st Century Learning Environment Model (21st CLEM) in the Adoptive Normal | November 8, 2021, 1:00PM-5PM Facebook Live and Zoom (Online Platform) |
| 3 | Green My Enterprise in the New Normal | November 8, 2021, 2:00 PM – 5:00 PM Facebook Live and Zoom (Online Platform) |
| 4 | Master Class – Guide to Chemical Waste Management | November 9, 2021, 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 5 | Webinar on Gender and Climate Change | November 9, 2021, 1:00 PM Facebook Live and Zoom (Online Platform) |

| | | |
|----|---|---|
| 6 | Forum on DRRM-related Technologies | November 9, 2021, 1:30 PM Facebook Live and Zoom (Online Platform) |
| 7 | Occupational Safety and Health in the Workplace | November 10, 2021, 1:30 PM Facebook Live and Zoom (Online Platform) |
| 8 | Techtalk: E-Nutribun and other FNRI Technologies | November 10, 2021 Facebook Live and Zoom (Online Platform) |
| 9 | 2021 STARBOOKS Stakeholders' Regional Convention | November 9-10, 2021 Facebook Live and Zoom (Online Platform) |
| 10 | Business Continuity Planning and Management for MSMEs | November 11, 2021, 8:30 AM Facebook Live and Zoom (Online Platform) |
| 11 | Fundamentals of Liquid Hand Soap Making | November 11, 2021, 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |
| 12 | WEE Care, WE Share: An Innovative Initiative to Support Women Entrepreneurs in Region 1 | November 11, 2021, 1:00 PM Facebook Live and Zoom (Online Platform) |
| 13 | Training on the Safe Use and Preparation of Herbal Medicine | November 11-12, 2021 Face-to-Face |
| 14 | Service Quality: Building a Pandemic-Proof Customer Relations Service | November 12, 2021, 9:00 AM – 12:00 NN Facebook Live and Zoom (Online Platform) |

List of Post-NSTW Regional Activities (November 13-21, 2021)

| No. | ACTIVITY TITLE | DATE/PLATFORM |
|-----|---|---|
| 1 | Enhancement Training on Mango Wine and Vinegar Making | November 18, 2021 Limited Face-to-Face |
| 2 | Training on Social Media Management and Press release Writing cum Communication Development | November 18, 2021 Facebook Live and Zoom (Online Platform) |

List of NSTW National Activities (November 22-28, 2021)

| No. | ACTIVITY TITLE | DATE/PLATFORM |
|-----|---|---|
| 1 | Launching of Coastal Engineering and Management Research and Development Center | November 23, 2021 Facebook Live and Zoom (Online Platform) |
| 2 | Digital Payment Solutions for MSMEs | November 23, 2021 Facebook Live and Zoom (Online Platform) |
| 3 | Energy Efficiency and Conservation | November 23, 2021 Facebook Live and Zoom (Online Platform) |
| 4 | Launching of IFR in Ilocos Sur | November 24, 2021 Facebook Live and Zoom (Online Platform) |
| 5 | Technology Video on Making Ginisang Buro in a Bottle | November 24, 2021 Facebook Live and Zoom (Online Platform) |
| 6 | Launching of Facemask Facility in La Union | November 25, 2021 Blended |
| 7 | Robotics Online Workshop and Competition | November 25-26, 2021 Facebook Live and Zoom (Online Platform) |
| 8 | Blessing and Turnover of the new PSTC-LU Bldg. | November 26, 2021 Facebook Live and Zoom (Online Platform) |
| 9 | Launching of e-Nutribun in Region 1 | November 26, 2021 Facebook Live and Zoom (Online Platform) |
| 10 | Calibration Caravan | November 22-26, 2021 Limited Face-to-Face at the Calibration Base Lab |

REGIONAL INVENTION CONTEST AND EXHIBITS (RICE)

DOST 1 supported the DOST-Technology Application and Promotion Institute (DOST-TAPI) in conducting the search for the outstanding patents or registrations, and research, dubbed as the Regional Invention Contest and Exhibits (RICE), for the year 2021.

The Contest, with the theme "Imbensyan at Inobasyon para sa Kalusugan, Kaayusan, at Kinabukasan", is open to the public and composed of five categories, namely, the outstanding invention through the Tuklas Award, outstanding utility model through the Unlad Award, outstanding industrial design through the Banghay Award, outstanding creative research through the Likha Award, and outstanding student creative research for high school and college students through the Sibol Award.

The DOST 1 posted thirty-three (33) information materials, received a total of eighty-five (85) entries with forty-six (46) qualifiers. It also conducted an orientation for stakeholders and an orientation to the members of the Board of Judges (BOJ) and provided materials for the virtual exhibit.

Winners for the RICE 2021 in the Ilocos Region and (will represent the region in the National Invention Contest and Exhibits in 2022)

Best Video Presentation

1st Prize winner (Php 15,000 cash award)

The Hematopoietic Effects of Platito (*Nothopanax scutellarium*) Ethanolic Leaf Extract in Phenylhydrazine – induced Mice (*Mus musculus*). Ms. Kathlyn O. Salario

2nd Prize winner (Php 10,000 cash award)

The Effectiveness of Aloe Vera (*Aloe barbadensis mill*) Leaf Ethanol Extract against Angiogenesis, Ms. Kristel Cloire Y. Reggala, et. al

3rd Prize winner (Php 5,000 cash award)

The Effect of Chitosan Derived from mud crab (*Scylla olivacea*) Shell in Controlling Rice Blast Fungus (*Magnaporthe oryzae*) *in vitro*, Rose-mel Xiamane S. Dayoan, et. al

Sibol Award for Outstanding Student Creative Research – High School

1st Prize winner (Php 20,000 cash award)

The Hematopoietic Effects of Platito (*Nothopanax scutellarium*) Ethanolic Leaf Extract in Phenylhydrazine – induced Mice (*Mus musculus*). Ms. Kathlyn O. Salario

2nd Prize winner (Php 10,000 cash award)

The Effect of Chitosan Derived from Mud Crab (*Scylla olivacea*) Shell in Controlling Rice Blast Fungus (*Magnaporthe oryzae*) *in vitro*, Ms. Rose-mel Xiamane S. Dayoan, et. al

3rd Prize winner (Php 5,000 cash award)

The Production, Characterization, and Potential of Ngalog (*Portulaca oleracea*) as Natural Sweetener, Mr. James Philip P. Ines

Sibol Award for Outstanding College Creative Research

2nd Prize winner (Php 10,000 cash award)

Process of Volvarellia Mushroom Production in Multi-bed Chamber, Ms. Helzelle Ann L. Corpuz, et. al

Likha Award for Creative Research Category

1st Prize winner

(with an average score of 90% with Php 20,000 cash prize
to represent the region to NICE 2022)

Optimization of Mung Bean Milk-based Mango Beverage,
Dr. Charissa M. De Vera, et. al

2nd Prize winner

(with an average score of 87% with Php 10,000)

Baked Glutinous Rice Cake (Tupig) and Preparation Thereof,
Dr. Veronica C. Austria, et. al

Likha Award for Creative Research Category

1st Prize winner

(Php 25,000 cash prize
to represent the region to NICE 2022)

Multi-fuel Dryer, Engr. Zaldy A. Fernandez

2nd Prize winner

(with Php 10,000 cash prize)

The Process of Making Rice Straw Geotextile Net,
Dr. Rolando P. Javellonar

NEWS UPDATE

DOST, ILOCOS NORTE GOV'T OPEN ONESTORE HUB TO BOOST MSME'S MARKET GROWTH

This one-stop shop, similar to a "Pasalubong Center," aims to assist Ilocano micro, small, and medium enterprises (MSMEs) in marketing their products and help them augment their losses caused by the pandemic brought by the coronavirus disease 2019 (COVID-19).

Lakas ng Siyensiya

Biernes, Sept. 10 2021
3:25 PM

Sa Business Above Usual
ABS-CBN Teleradyo



Bethin-DBB Villanueva
Institute Assistant Researcher
Associate Professor
De La Salle University



Johr Leroy Basilia
GIST Coordinator
DST Regional



Ardeline Parasido
Global Head and
President Executive
Marketing Elementary School



Han. Larissa Espiritu
Alayang, Ilocos Norte



Rapeeza Salindig
Project Leader
Davao University



Mon. Michael Estany
Inca Mayor
Roxas, Ilocos Norte

Alamin ang mga Community Empowerment Through Science and Technology o CEET Projects ng DOST Region 1 at Region 2 para sa ating mga kababayan na Indigenous People o IP sa ating mga nasa geographically isolated and disadvantaged areas o GIDA!

MAYAPANINDO O MAYAPANGKIDAN ANG
LAKAS NG SIENSIYA SA MGA SUMISUSIMO:

www.dost-cbri.com

Facebook: D2NIM Teleradyo

YouTube: TeleRadio

TPG4Mentor.ph

Sky Cable Channel 26

Other Cable Providers

00057n

www.dost.gov.ph

00053403967

Tienda ni Gob Trade Fair

February 26 - March 2, 2021
1:00 PM - 9:00 PM

Riverside, Juan Luna, Laoag City





S&T LRC/STARBOOKS

The S&T Libraries at the Regional Office, PSTC Ilocos Norte, PSTC Ilocos Sur, PSTC La Union and PSTC Pangasinan likewise provided S&T information service through the DOST STII-Online Library Literacy Program and S & T Academic and Research-Based Openly Operated Kiosk Stations (STARBOOKS).

There were 1,331 participants in the Online Library Literacy program and 3,819 users of STARBOOKS in 2021, for a total of 5,150 users. Furthermore, a total of 40 STARBOOKS MOU signed and notarized in 2021.

40
STARBOOKS MOU
signed and
notarized

1,331
participants
online

3,819
users

5,150
total users of
STARBOOKS

STARBOOKS is the first S&T digital library in the Philippines. It is a stand-alone information source designed to provide S&T-based educational and learning resources in various formats to geographically isolated schools and LGUs throughout the country, as well as enhance the educational competence of students in its beneficiary schools.

DOST held the STARBOOKS Stakeholder's Regional Convention to help stakeholders gain the best of science, technology, and innovation during the NSTW celebration.

The convention gathered national and local government institution, academe, and students, and the public for the celebration of STI in the Region 1.

| | | NO. OF ATTENDEES |
|--------------|---|------------------|
| DAY 1 | - Opening Program - Learning Session | 1,902 948 |
| DAY 2 | - Testimonial and Best Practices - Awarding and Closing Ceremonies | 1,172 745 |

The table summarizes the trainings conducted and number of participants.

| | STARBOOKS Training Conducted/Webinars | No. Participants | Date Conducted |
|--------------|--|-------------------------|-----------------------|
| 1 | STARBOOKS Offline and Online Orientation and Training Urdaneta City University, Urdaneta, Pangasinan | 114 | June 16, 2021 |
| 2 | STARBOOKS Offline and Online Orientation and Training San Jose ES, San Maximo ES, Batchelor ES, Luna ES, San Narciso ES, Natividad, Pangasinan | 21 | June 18, 2021 |
| 3 | STARBOOKS Offline and Online Orientation and Training Salud Elementary School - Natividad Pangasinan Ilocos Norte Provincial Library - Laoag, Ilocos Norte | 7 | June 23, 2021 |
| 4 | DOST-STII ONLINE Library Literacy Program Northern Naguilian National High School Naguilian, La Union | 119 | May 11, 2021 |
| 5 | DOST-STII ONLINE Library Literacy Program San Juan National High School San Juan, La Union | 167 | June 18, 2021 |
| 6 | DOST-STII Online Library Literacy Program | 14 | July 14, 2021 |
| 7 | DOSTI Deployment Officer Technical Training on STARBOOKS Installation, Configuration, and Troubleshooting for DOST-I Deployment Officers | 21 | July 2021 |
| 8 | Orientation and Hands On Training of STARBOOKS for Butterfly Kingdom e-Learning Schools, Inc. | 13 | August 20, 2021 |
| 9 | DOST STII Online Library Literacy Program DOST Scholars and select private and public schools | 83 | August 26, 2021 |
| 10 | Kumustahan on the Region 1 Learning Resource Information System (R1 LRIS) cum Orientation on the DOST STARBOOKS | 17 | November 26, 2021 |
| 11 | STARBOOKS Regional Convention Day 1 (Opening and Learning Session) | 2,580 | November 9, 2021 |
| 12 | STARBOOKS Regional Convention Day 2 (Testimonials and Closing) | 1,917 | November 10, 2021 |
| 13 | STARBOOKS Orientation (Luna Elementary School, San Narciso E/S, Batchelor E/S, San Maximo E/S, Canarem E/S, Rizal E/S, San Eugenio E/S San Narciso Norte E/S & Arboleda NHS) | 7 | December 13, 2021 |
| 14 | Journal System and Digital Repository Training for Librarians | - | Dec 15-17, 2021 |
| 15 | 28 STARBOOKS Deployment to Ilocos Sur c/o CEST ELCAC | 56 | December 10, 2021 |
| 16 | STARBOOKS Admin Training to DepEd Region 1 | 9 | December 17, 2021 |
| 17 | STARBOOKS ORIENTATION AND TRAINING to Nagbukel NHS and San Emilio NHS | 5 | December 22, 2021 |
| TOTAL | | 5,150 | |

For CY 2021, DOST 1 installed 55 STARBOOKS system application to schools, universities, and barangays and the CEST program beneficiaries. The following table summarizes the list of STARBOOKS beneficiaries for the year.

LIST OF STARBOOKS BENEFICIARIES FOR CY 2021

| No. | Institutional Code | Name of Beneficiaries | Address | |
|-----|--------------------|---|--------------------------------|--------------------|
| 1. | 21-124 | STO. ROSARIO NATIONAL HIGH SCHOOL – SENIOR HIGH | San Juan, La Union | High School |
| 2. | 21-132 | Sto. Rosario National High School-Junior High | San Juan, La Union | High School |
| 3. | 21-141 | Cabilao Agro-Industrial High School | Laoac, Pangasinan | High School |
| 4. | 21-276 | Luna Elementary School - Natividad | Natividad, Pangasinan | Elementary School |
| 5. | 21-277 | San Narciso Elementary School | Natividad, Pangasinan | Elementary School |
| 6. | 21-278 | Urdaneta City University-2 | Urdaneta City, Pangasinan | College/University |
| 7. | 21-279 | Butterfly Kingdom e-Learning School, Inc. | San Carlos City, Pangasinan | Elementary School |
| 8. | 21-285 | Batchelor Elementary School | Natividad, Pangasinan | Elementary School |
| 9. | 21-293 | San Maximo Elementary School | Natividad, Pangasinan | Elementary School |
| 10. | 21-301 | Ilocos Norte Provincial Library (INPL) | Laoag City, Ilocos Norte | LGU |
| 11. | 21-331 | Arboleda National High School | Alcala, Pangasinan | High School |
| 12. | 21-343 | Rizal Elementary School – Pangasinan | Natividad, Pangasinan | Elementary School |
| 13. | 21-344 | San Narciso Norte Elementary School | Natividad, Pangasinan | Elementary School |
| 14. | 21-360 | Baybayatin Primary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 15. | 21-361 | Bessang Elementary School | Burgos, Ilocos Sur | Elementary School |
| 16. | 21-362 | Bucnit Elementary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 17. | 21-363 | Buliclic Elementary School | Santa Lucia, Ilocos Sur | Elementary School |
| 18. | 21-364 | Cadacad Elementary School | Narvacan, Ilocos Sur | Elementary School |
| 19. | 21-365 | Conconig Elementary School | Santa Lucia, Ilocos Sur | Elementary School |
| 20. | 21-366 | Dosing Integrated School | Cervantes, Ilocos Sur | High School |
| 21. | 21-367 | Quinayad Elementary School | Cervantes, Ilocos Sur | Elementary School |
| 22. | 21-368 | Gusing Elementary School | Santa Maria, Ilocos Sur | Elementary School |
| 23. | 21-369 | Iteb Primary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 24. | 21-370 | Kinpatubbog Elementary School | Suya, Ilocos Sur | Elementary School |
| 25. | 21-371 | Lamag Elementary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 26. | 21-372 | Lamagan Primary School | Cervantes, Ilocos Sur | Elementary School |
| 27. | 21-373 | Laslasong Elementary School | Santa Maria, Ilocos Sur | Elementary School |
| 28. | 21-374 | Linggawa Primary School | Santa Cruz, Ilocos Sur | Elementary School |
| 29. | 21-375 | Liqueo Elementary School | Cervantes, Ilocos Sur | Elementary School |
| 30. | 21-376 | Lucuban Elementary School | Salcedo (Baugen), Ilocos Sur | Elementary School |
| 31. | 21-377 | Malideg Elementary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 32. | 21-378 | Namitpit Integrated School | Quirino (Angkakil), Ilocos Sur | High School |
| 33. | 21-379 | Paang Primary School | Cervantes, Ilocos Sur | Elementary School |
| 34. | 21-380 | Patiacan Elementary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 35. | 21-381 | Patungcaleo Integrated School | Quirino (Angkakil), Ilocos Sur | High School |
| 36. | 21-382 | San Jose Elementary School - Sta. Cruz | Santa Cruz, Ilocos Sur | Elementary School |
| 37. | 21-383 | Suagayan Elementary School | Quirino (Angkakil), Ilocos Sur | Elementary School |
| 38. | 21-384 | Sulvec Integrated School | Narvacan, Ilocos Sur | High School |
| 39. | 21-385 | Taleb Elementary School | Nagbukel, Ilocos Sur | Elementary School |
| 40. | 21-386 | Ubog Primary School | Salcedo (Baugen), Ilocos Sur | Elementary School |
| 41. | 21-408 | A. Diaz Sr. Elementary School | Bautista, Pangasinan | Elementary School |
| 42. | 21-409 | Jacante Elementary School | Bautista, Pangasinan | Elementary School |
| 43. | 21-410 | Carasi Elementary School | Carasi, Ilocos Norte | Elementary School |
| 44. | 21-411 | Virbira-Angset Elementary School | Carasi, Ilocos Norte | Elementary School |
| 45. | 21-429 | Barangay Cosocos | Nagbukel, Ilocos Sur | LGU |
| 46. | 21-430 | Barangay Mapanit | Burgos, Ilocos Sur | LGU |
| 47. | 21-435 | Nagbukel National High School - Poblacion East | Nagbukel, Ilocos Sur | High School |
| 48. | 21-437 | San Emilio National High School | San Esteban, Ilocos Sur | High School |

Part of the convention was the 2021 awarding and closing ceremonies. Likewise, a series of contests were conducted to further promote the STARBOOKS technology and gain more adaptors. The following are the adjudged winners during the convention streamed live on Zoom platform and Facebook page of DOST-1.

BEST Testimonial Video Contest

| | |
|--|--|
| CHAMPION (P11,000) | DMMMSU Mid La Union Campus Main Library |
| 1ST RUNNER UP (P9,000) | University of Northern Philippines |
| 2ND RUNNER UP (P6,000) | Binalatongan Community College |
| 3RD RUNNER UP | Alejandro F. Oligan National High School |

PHOTO CONTEST

| | |
|--|---|
| CHAMPION (P4,000) | Mae Rosemond N. Perez |
| 1ST RUNNER UP (P2,000) | Elvira T. Calica |
| 2ND RUNNER UP (P1,000) | Mark Jaybee Biano |
| CONSOLATION WINNERS (P500) | Esthevyn V. Cabiso & Judibert E. Catbagan |

POSTER AND SLOGAN MAKING

| | |
|--|---|
| CHAMPION (P5,000) | Nicole Joi B. Gasmen, Arboleda National High School |
| 1ST RUNNER UP (P4,000) | Zyra T. Perrion, Arboleda National High School |
| 2ND RUNNER UP (P2,000) | Sheena L. Fajardo, PSU Senior High Laboratory IS |
| CONSOLATION WINNERS (P500) | John Mike D. Rimando & Bhryson James S. Dasalla |



RESEARCH AND DEVELOPMENT AND INTERNATIONAL LINKAGES

The Research and Development and International Linkages Program Management Center (RDILPMC) of DOST-1 ensures the alignment of the regional R&D activities to the Harmonized National R&D Agenda. Apart from monitoring the R&D projects of the 3 regional consortia, innovation centers, and NICER, RDILPMC together with the DOST 1 - Regional Standards and Testing Laboratory (RSTL) conduct in-house R&D projects. A total of three (3) in-house R&D projects were started in 2021.

Furthermore, RDILPMC also completed one (1) collaborative R&D project with the University of the Philippines Los Baños (UPLB) entitled "Gender Differences in Mental Health of International Graduate Students of UPLB". Another collaborative project, entitled "Smart Foods" for the Smart Future funded by DOST 1 and being conducted by the Pangasinan State University – Food Innovation Center.

RDILPMC Other Activities

13 webinars and trainings conducted

- Women in Science Leadership
- TechTalk: PSU-DOST 1 FIC Technologies and Chevron-based Products
- Invention-Based Enterprise Development Program–Component II and IBED-II and Landbank-TAPI Innovation and Technology Lending Program
- Invent School Program
- Webinar on Intellectual Property and Patent Drafting Workshop
- Balik Scientists Program Orientation and Public Consultation
- NAST Speakers Bureau Program
- Orientation on the Scientific and Technological Specialist Eligibility
- Scientific Career System Orientation
- NAST ScienTeach
- NRCP Regional Basic Research Caravan: Cattle Ticks Talk
- Regional Invention Contest and Exhibit 2021
- TechTalk: Enhanced Nutribun and other FNRI Technologies



R1HRDC

Region 1 Health Research and Development Consortium

Health and safety is a priority especially with the current situation of the COVID-19 pandemic. **R1HRDC has two (2) approved projects** concerning the Serologic SARS-CoV-2 Antibody Level and Factors Affecting Its Production After COVID-19 Vaccination Among Employees of Mariano Marcos Memorial Hospital and Medical Center, and the Prevalence and Influencing Risk Factors of Health Conditions Among Tobacco Farmers in Ilocos Norte.

ICIEERD

Ilocos Consortium for Industry, Energy and Emerging Technology Research and Development Consortium



Funded under the DOST-Philippine Council for Industry, Energy and Emerging Technology Research and Development's [PCIEERD] Good Governance through Data Science and Decision Support System (GODDESS) Program, **ICIEERD got four (4) projects approved** that enable and strengthen the government to adapt data-driven governance and evidence-based management. The **Establishment of Coastal Engineering and Management Research and Development Center**, a Niche Center in the Region for R&D (NICER) proposed by the Mariano Marcos State University, also got approved and launched on November 23, 2021.

ILAARRDEC

Ilocos Agriculture, Aquatic, and Natural Resources Research and Development Consortium



ILAARRDEC has three (3) funded projects entitled (1) Establishment of the MMSU-PCAARRD Agri-Aqua Technology Business Incubator, (2) Bio-Intensive Gardening (BIG) Panlaban sa COVID-19 para sa Ilocos, and (3) NICER: Garlic and other Agri-food Condiments Research and Development Center.

24

R&D Proposals
Endorsed &
Evaluated

9

R&D Proposals
Funded

26

Webinars &
Trainings
Conducted

3

Funded In-house
R&D Projects

1

Collaborative
R&D Project

INNOVATION CENTERS

Pangasinan State University – Department of Science and Technology Region 1 Food Innovation Center



All prototypes produced are ready for promotion and technology adoption and transfer. Moreover, the utility models of the process of making mungbean milk, vacuum packed calamay, ube calamay and ube buyos have been filed by PSU-DOST 1 FIC.

On the other hand, PSU-DOST1 FIC R&D on "Smart Foods" for the Smart Future: Development of Functional Intermediate Ingredients, Ready-To-Eat Nutritious Food Packs and Ready-To-Drink Probiotic Drinks in Region 1" was approved for extension and set to be accomplished by April 2022. The following prototypes are being developed: Spray Dried Shallots, Spray Dried Bagoong (plain), Ready-to-Eat Longganisa, Ready to Eat Ginisang Buro, Flavored Kefir and Kombucha.



Mariano Marcos State University – Food Processing and Innovation Center



The MMSU-FPIC continues to deliver its commitments through these three (3) on-going R&D projects: (1) GAA project: Optimization and Utilization of Developed Food Products for Agripreneurship, (2) DOST-GIA project: Process and Product Optimization of Black Garlic Used as Flavor Enhancer, and (3) DOST NICER Program Project: Enhanced Usability and Profitability of Garlic Through Black Garlic Processing.

The MMSU-FPIC has also been active in crafting proposals for funding in 2021. The project proposal "Production of Ready-to-Eat Food Products from Mung Bean and Cowpea cum Analysis of Microbial, Chemical and Shelf-life" was submitted to the MMSU Research Directorate. Proposals for the establishment of Food Chemistry, Food Microbiology and Sensory Laboratory Rooms were also sent to the Japan International Cooperation Agency. These laboratories will be used to service and analyze products that will be produced from the use of the FPIC machines.

INNOVATION CENTERS

Don Mariano Marcos Memorial State University-Metals and Engineering Innovation Center

2

completed projects

1

on-going project

14

prototypes developed



The MEIC has four-fold functions namely to support the metals and engineering R&D, to help in prototyping machineries, to support small scale production, and to serve as training ground for the state university students and metals and engineering MSMEs in the locality.

The groundbreaking ceremony of the 2nd phase of MEIC took place on June 10, 2021. The facility houses equipment and machineries such as hydraulic press brake, power hacksaw, and hydraulic shearing machine for R&D and trainings.

TECHNOLOGY TRAININGS & SEMINARS



Coconut products processing training in Agno Central School, Poblacion West

125

Trainings and Seminars Conducted

111

Local Experts & Highly Skilled Professionals Engaged

2,252

Clients Trained and Served



POP CHAPTER 8
Expanding Economic Opportunities in Agriculture, Forestry, and Fisheries and Ensuring Food Security

STRATEGIC INITIATIVES #3
Countryside Development

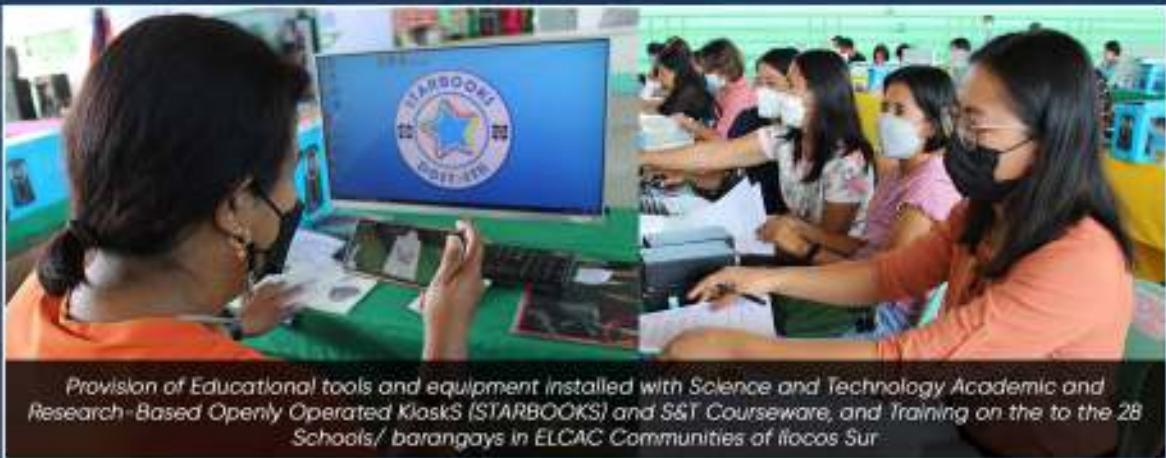
CEST-KINABUKASAN

Human Resource Development

The DOST implemented Project ACAD (Accelerating Community Academics for Development) to bridge the gap between technology and rural schools and to improve the quality of education in Geographically Isolated and Depressed Areas. The tools and equipment provided include a desktop computer installed with Science and Technology Academic and Research-Based Open-Operated Kiosk Stations (STARBOOKS), as well as S&T modules for Science and Mathematics that also come with a SMART TV which could be used in interactive learning. In addition, augmented reality tools were also introduced, and DOST scholarship programs campaigned. A total of 28 sets of educational tools and equipment were awarded to 26 schools and 2 barangays within the ELCAC Communities of Ilocos Sur at ISPSC Gymnasium in Santa Maria, Ilocos Sur.

PSTC-Ilocos Norte also launched an online scholarship campaign for undergraduates, which was attended by students from Carasi National High School. The DOST Scholarship Unit provided scholarship information and other materials. There were also career advising seminars and virtual training on the scholarly effective module in Mathematics and Science.

On the other hand, twenty-eight (28) teachers from Carasi National High School and Carasi Elementary School took part in ICT Integration in Teaching and Learning Skill Enhancement Training. Teachers learned about digital education, how to create science classes using online platforms, and how to integrate ICT.

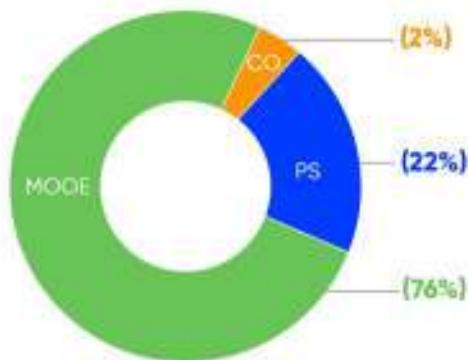


Provision of Educational tools and equipment installed with Science and Technology Academic and Research-Based Openly Operated KioskS (STARBOOKS) and S&T Courseware, and Training on the to the 28 Schools/ barangays in ELCAC Communities of Ilocos Sur

FINANCIAL RESOURCES

For CY 2021, DOST-1 received an allotment from General Appropriations amounting to Php 134,886,937.62 broken into:

| Particulars | Allotment Received |
|---|--------------------|
| Personal Services (PS) | Php 28,991,000.00 |
| Maintenance & Other Operating Expenses (MOOE) | Php 102,850,937.62 |
| Capital Outlay (CO) | Php 3,045,000.00 |



With Budget Utilization rate of 95% and Cash Utilization rate of 91.06%. The unobligated allotment was carried over the following year while the unused cash were reverted to Bureau of Treasury.

The allotment received for MOOE from General Appropriations includes the following projects:

| PROJECT | SOURCE | APPROVED BUDGET |
|---|----------|-----------------|
| TRANSDI | DOST-GIA | 87,604.80 |
| DOST REGIONAL OFFICES' INFORMATION SYSTEM HARMONIZATION PROJECT AND ICT EQUIPMENT UNDER 2020 MITHI PROGRAM | DOST-GIA | 1,972,120.00 |
| SURVEY R&D | DOST-GIA | 30,000.00 |
| SUPPORT TO THE ISSUANCE OF FAIRNESS OPINION REPORT FOR TECHNOLOGY TRANSFER ACTIVITIES OF DOST-GENERATED TECHNOLOGIES THROUGH DOST REGIONAL OFFICES (Ros) as RECEIVING OFFICES AND FOB SECRETARIAT | DOST-GIA | 613,553.78 |
| DOST HALAL S&T PROGRAM PROJECT 7: TRAINING NEEDS ASSESSMENT AND DEVELOPMENT AND DEPLOYMENT OF TRAINING MODULES ON HALAL | DOST-GIA | 201,659.04 |

The agency also received funds from other resources under Trust Accounts:

| PROJECT | SOURCE | APPROVED BUDGET |
|--|--------------|----------------------|
| SCHOLARSHIP | DOST-SEI | 40,013,248.17 |
| SUPPORT TO ILOCOS CONSORTIUM FOR INDUSTRY, ENERGY AND EMERGING TECHNOLOGY RESEARCH AND DEVELOPMENT (ICIEERD) R&D PROGRAM | DOST-PCIEERD | 1,150,000.00 |
| ROLL-OUT OF 1000 RxBOX Telemedicine Device in Selected Rural Health Centers in the Philippines | DOST IV-A | 754,468.80 |
| CELEBRATION OF REGIONAL SCIENCE AND TECHNOLOGY WEEK AND TECHNOLOGY PROMOTIONS IN REGION 1 | DOST-TAPI | 400,000.00 |
| TOWARDS LEVELING-UP ONELAB FOR RESEARCH, DEVELOPMENT AND INNOVATION | DOST-PCIEERD | 1,622,952.00 |
| TILAPIA PARA SA PAMAYANAN | DOST-PCAARRD | 3,000,000.00 |
| TOTAL | | 46,940,668.97 |



DOST 1 HUMAN RESOURCES

Atty. Jasmin C. Bañez, Chief Administrative Officer and Human Resource Management Office Designate, and Enrique G. Fernandez Jr., Administrative Aide IV- HR Staff, with Ms. Maureen Heidi L. Perez, Project Assistant II, providing additional HR Support compose the Human Resource Management Unit of DOST 1.

As one of the strategic organizational arms of DOST 1, the HR Unit continues to help achieve agency objectives relating to its core values: Innovation, Excellence, Leadership, Integrity, Teamwork, Empowerment. Believing that its people are the most important asset in the organization, it is committed to provide professional consultation and support in nurturing a respectful workplace atmosphere that continues to inspire integrity and excellence within DOST 1.

Human Resource Management plays a vital role in maximizing staff performance and productivity, maintaining teamwork in the organization and helps bridge the gap between employee performance and the strategic goals of the organization. HRMO unit ensures that the organization is compliant to all regulatory and statutory requirements through policy development, payroll administration, compensation and benefits administration, drug testing, recruitment, workforce planning, learning and development, performance management, and rewards.

In all areas of work, DOST 1 Human Resource Management Office firmly upholds the DOST 1 Core Values.

HRMO Functional Objectives: To ensure 90% of planned trainings are accomplished within the year; and to ensure that qualified personnel are hired or placed based on Civil Service Commission Qualification Standard to perform the required jobs efficiently and effectively.

94%

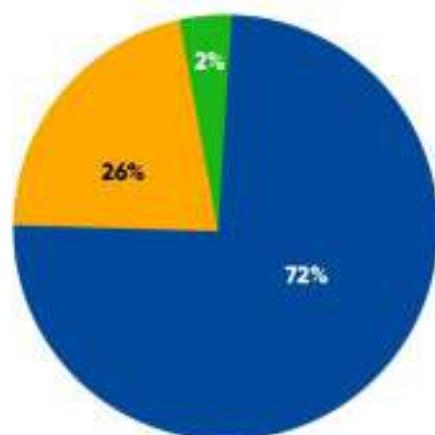
Accomplishments

RECRUITMENT, SELECTION AND PROMOTION

The process of recruitment involves the development of suitable techniques for attracting more candidates to a position vacancy, while the process of selection involves identifying the most suitable candidate for the vacancy.

Thru the Human Resource Merit Promotion and Selection Board (HRMPSB), steered by the Equal Employment Opportunity Policy (EEOP) and following the internal guidelines on Recruitment, Selection, and Promotion (RSP), job applicants are properly screened and evaluated to ensure that the employees are selected based on merit and fitness. HRMPSB serves as assistorial body to the Regional Director.

Total Number of Manpower Complement for 2021: 103



| STATUS | NUMBER |
|-----------------------------|------------|
| UNFILLED PLANTILLA POSITION | 2 |
| PERMANENT | 27 |
| COS | 76 |
| TOTAL | 105 |

■ COS ■ PERMANENT ■ UNFILLED PLANTILLA POSITION

27
PLANTILLA



16
(59%)



11
(41%)

76
CONTRACT
OF SERVICE



43
(57%)



33
(43%)



1 RETIREMENT



1 DEATH



2 VACANCIES



2 PROMOTION



2 NEW PERMANENT STAFF

PROMOTION:

Benjamin S. Mercado
Senior Science Research Specialist

Bernadine P. Suniega
Science Research Specialist II

NEW PERMANENT STAFF:

Enrique G. Fernandez Jr.
Administrative Aide IV

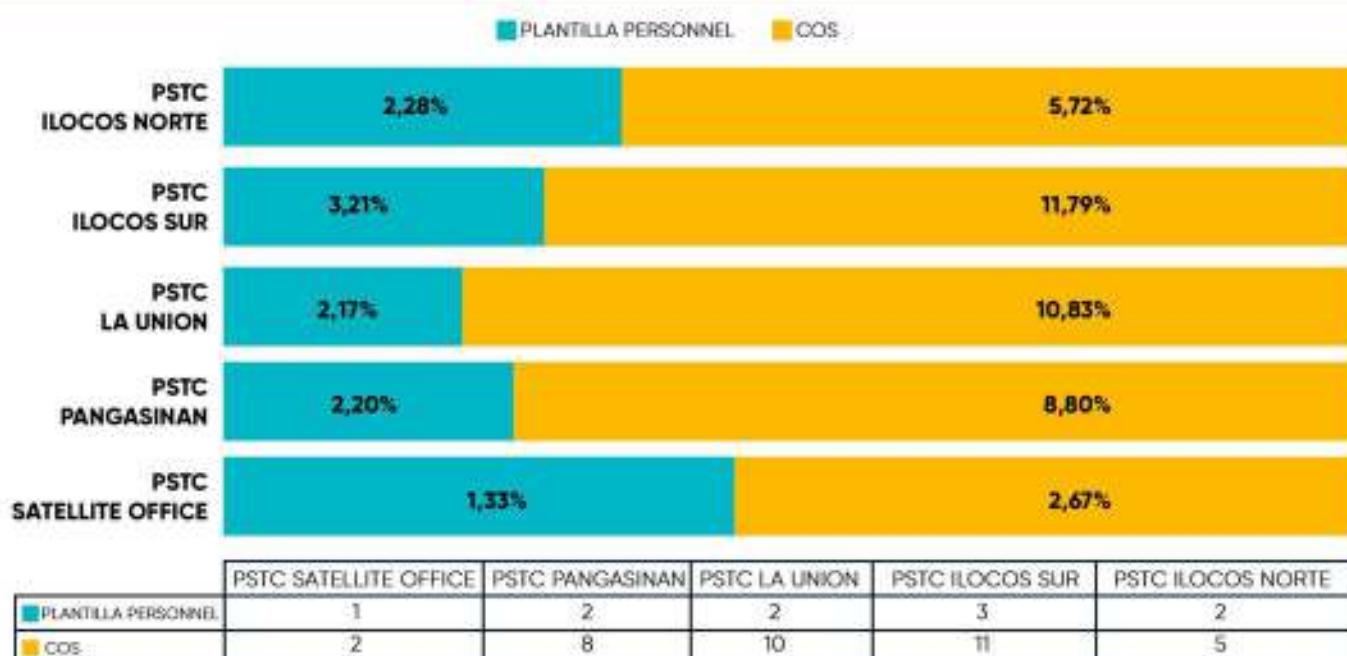
Sheryl Ann E. Balmadres
Science Research Specialist I

CONTRACT OF SERVICE STAFF: 76

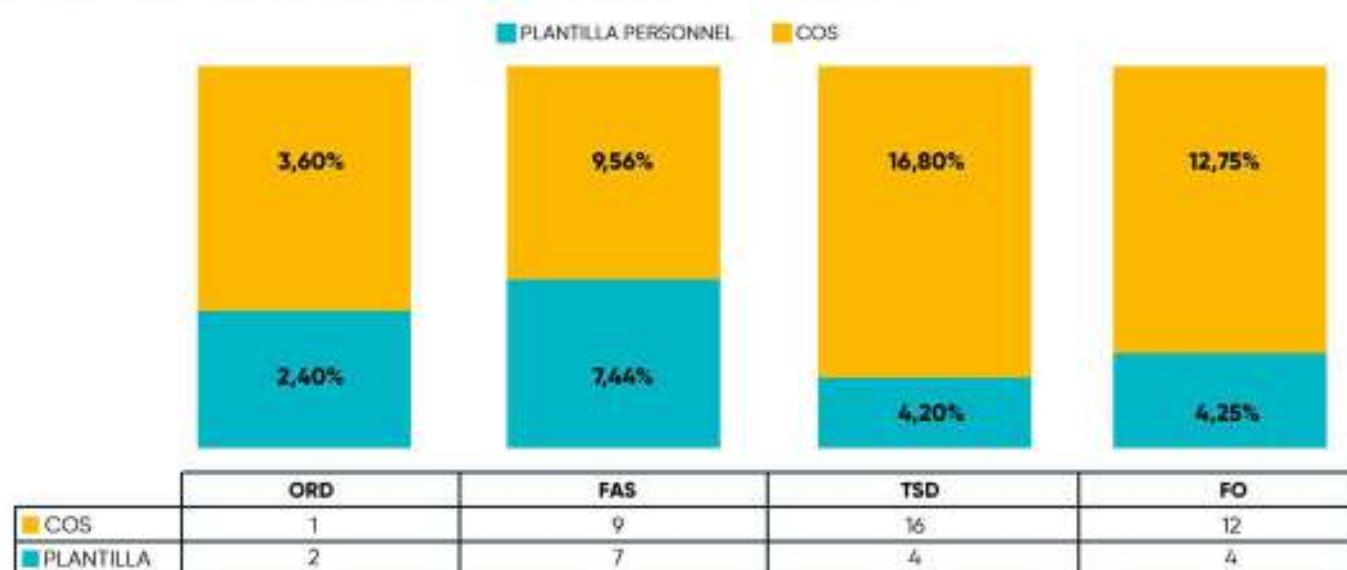
19 End- of- Contract

The total manpower compliment for 2021 was distributed in the Technical Services Division (TSD) including Regional Standards and Testing Laboratory (RSTL) and Regional Metrology Laboratory (RML), Field Operations (FO) which include Provincial S&T Offices, SETUP, and CEST, Finance and Administrative Services (FAS) Division including General Services, and the Office of the Regional Director.

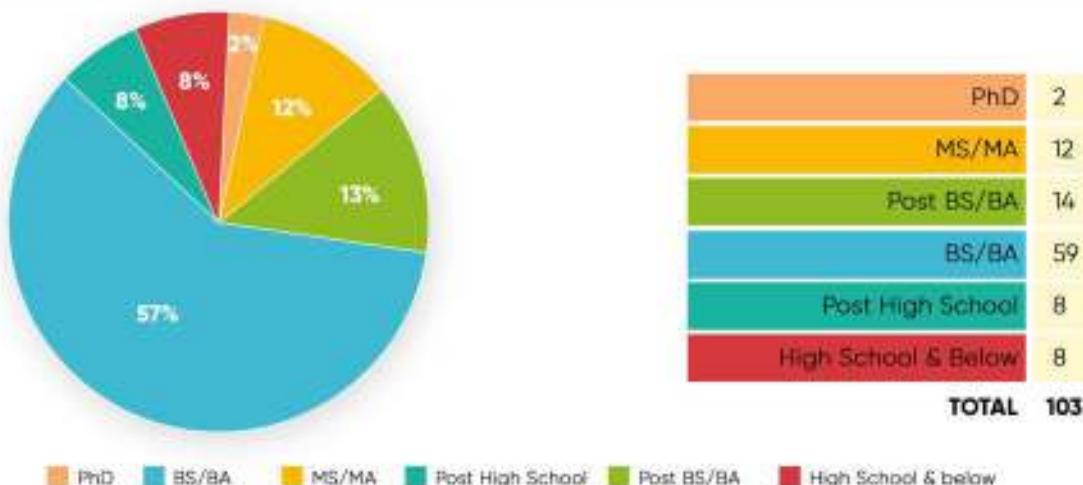
WORKFORCE PROFILE BY EMPLOYMENT STATUS IN THE PSTCs



WORKFORCE PROFILE BY EMPLOYMENT STATUS IN THE REGIONAL OFFICE

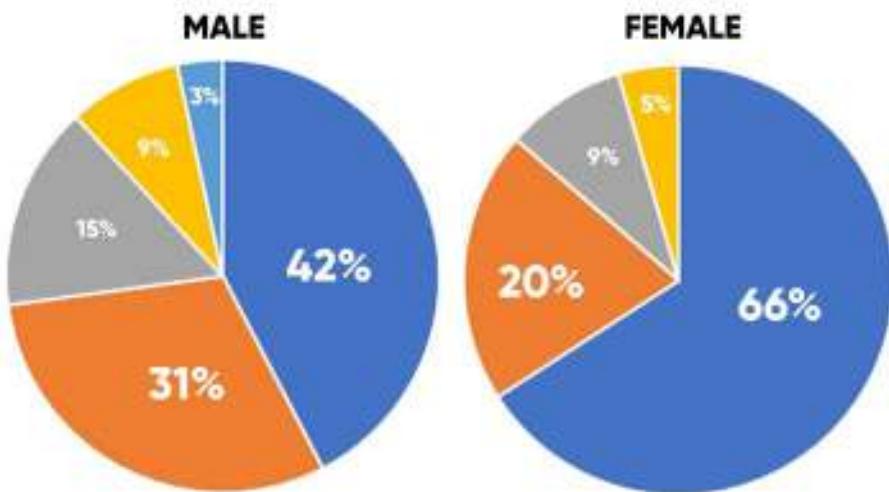


WORKFORCE PROFILE BY EDUCATIONAL ATTAINMENT



WORKFORCE PROFILE BY AGE BRACKET

| AGE RANGE | TOTAL | M | F |
|--------------|------------|----|----|
| 20-30 | 54 | 25 | 29 |
| 31-40 | 27 | 18 | 9 |
| 41-50 | 13 | 9 | 4 |
| 51-60 | 7 | 5 | 2 |
| 61 above | 2 | 2 | 0 |
| TOTAL | 103 | | |



LEADERSHIP AND DEVELOPMENT

Leadership and professional growth through Learning and Development are vital factors to ensure that employees in the government service are equipped with skills and knowledge critical to their duties and responsibilities and to cope with the current challenges..

Effective management of public service requires in-depth and high level of leadership and managerial capabilities which can be acquired and developed through learning and development.

In response to the core values of the organization: Innovation, Excellence, Leadership, Integrity, Teamwork, and Empowerment (I-ELITE), Learning and Development shall address the competency requirement essential to a government employee's responsiveness, accountability, and innovativeness towards public service.

The below indicates the list of training programs the staff has attended this year:

LEARNING AND DEVELOPMENT PROGRAMS

| TITLE OF TRAINING | DATE | NO. OF PARTICIPANTS | | |
|--|-------------------|---------------------|------|-------|
| | | FEMALE | MALE | TOTAL |
| 7s of Good Housekeeping: Setting the Pathway to a Safe and Healthy Workplace in the Period of Pandemic Virtual Session, DOST 1/ Gender and Development | MARCH 15, 2021 | 2 | 5 | 7 |
| All About Covid- 19 Vaccines, Virtual Session, DOST 1/ Gender and Development, | MARCH 11, 2021 | 24 | 13 | 37 |
| Root Cause and Latent Analysis Training, Virtual Session, by AGF Consulting Group | MARCH 20-21, 2021 | 11 | 11 | 22 |
| Serbisyo para kay Juan at Juana ng DOST 1, Virtual Session, DOST 1/ Gender and Development | MARCH 22, 2021 | 6 | 1 | 7 |
| Technology Needs Assessment, via MS Teams Online Platform, DOST 1 | JUNE 1-2, 2021 | 20 | 17 | 37 |

| TITLE OF WEBINAR | DATE | MODE | NAME | POSITION |
|--|-------------------|-----------------|--|------------------------|
| Introduction Training on Biogas System | March 21, 2021 | Virtual Session | Abad, Jordan L. | SRS II |
| Training on Ube Processing | March 18, 2021 | Virtual Session | Agro, Manilyn L. Claveron, Nida P. | Accountant III AO V |
| Luzon Regional Scientific Meeting 2021: COVID- 19 Pandemic: Learning from the Past, Coping with the Present, Moving to the Next | May 11, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| iLEAP IP: Introduction to Trademark | May 11, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| Risk Based Thinking Explained | May 7, 2021 | Virtual Session | Espiritu, Racquel M. Pido Roger C. | ARD-TSD SRS I |
| 2021 GAD Focal Point System Virtual Meet and Update | May 6, 2021 | Virtual Session | Espiritu, Racquel M. Leandado, Angel Lyn O. | ARD-TSD ADASS III |
| iLEAP IP: Introduction to Copyright | May 4, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| ISO Document Control - Explained | May 4, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| Vision 2021 | April 29, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| Capability Building on IP Formality Examination | April 22-23, 2021 | Virtual Session | Espiritu, Racquel M. Rosales, Annalie L. | ARD-TSD SRS II |
| Virtual Caravan on the Updated Philippine Development Plan 2017-2022 with the Theme 'Tayo na, Bumangon para sa Ambisyon' | April 16, 2021 | Virtual Session | Espiritu, Racquel M. Rosales, Annalie L. | ARD-TSD SRS II |
| Waste Analysis and Characterization Study (WACS) | April 13, 2021 | Virtual Session | Espiritu, Racquel M. Mercado, Benjamin Jr. | ARD-TSD SRS II |
| Juana Laban sa Pandemya: Kaya! Online Forum Series | March 3, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| ISO 9001 QMS Risk Assessment through Business Impact Analysis | February 26, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |
| SewsTELAbility: Innovations and Initiatives Toward Sustainable Textiles | April 22, 2021 | Virtual Session | Espiritu, Racquel M. | ARD-TSD |

| TITLE OF WEBINAR | DATE | MODE | NAME | POSITION |
|---|---------------------|-----------------|---------------------------------------|----------------------|
| Training on OneSETUP Store Operations and Marketing for PCAAARD- Assisted MSMEs and Consortia | April 16, 2021 | Virtual Session | Mercado, Benjamin Jr. | SRS II |
| Webinar on Patent, Trademark, and Copyright | March 26, 2021 | Virtual Session | Mercado, Benjamin Jr. | SRS II |
| HALAL Assurance System and Management System e- Series Course | March 18-19, 2021 | Virtual Session | Mercado, Benjamin Jr. | SRS II |
| Finding Happiness in the Midst of Pandemic | April 29, 2021 | Virtual Session | Leandado, Angel Lyn O. | ADASS III |
| BCYF- North Luzon CSR Council's PhilippineInnovation Forum with the Theme The Role of Innovation in the New Normal | February 9, 2021 | Virtual Session | Leandado, Angel Lyn O. | ADASS III |
| Correcting Corrective Actions | May 28, 2021 | Virtual Session | Pido, Roger C. | SRS I |
| EU- ASEAN Dialogue on Greentech and Innovations Mapping: GreenTechnologies for Plastic Value Chain Management Webinar Series 4: Plastic Wastes 31. Consolidation and Recycling Approaches | May 27, 2021 | Virtual Session | Pido, Roger C. | SRS I |
| Orientation on Records Management for DOST 1 Staff | February 21, 2021 | Virtual Session | PIMENTEL, Arceli R. Pido, Roger C. | AOV-Cashier SRS I |
| Changing Lives through Science-Driven Measures: An Online Legislative Policy, Information, and Advocacy Campaign Webinar | June 9, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Contingency Planning Training Course | May 31-June 4, 2021 | Virtual Session | Rosales, Annalie L. | SRS II |
| Competency Based Training Needs Analysis | October 26-28, 2021 | Virtual Session | Bañez, Jasmin C. | ARD-FAS |
| Manager's Role in Capacity Building | August 22-24, 2021 | Virtual Session | Bañez, Jasmin C. | ARD-FAS |
| Harmonized Region 1 Research and Development Agenda (HRRDA) 2017- 2022 Updating Workshop | March 18-19, 2021 | Virtual Session | Rosales, Annalie L. | SRS II |
| Food Industry Challenges and Responses during the COVID-19 Pandemic: An Academic Platform for Research and Publication Agenda | February 24, 2021 | Virtual Session | Rosales, Annalie L. | SRS II |
| Project Management: The Basics for Success | January 13, 2021 | Virtual Session | Rosales, Annalie L. | SRS II |

| TITLE OF WEBINAR | DATE | MODE | NAME | POSITION |
|---|-------------------------------|-----------------|--------------------------------|-----------------|
| Managing Project Risks and Changes | January 13, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Budgeting and Scheduling Projects | January 12, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Initiating and Planning Projects | January 12, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Managing Data Analysis | January 12, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Digital Transformation and Digital Ecosystems | January 11, 2021 | Virtual Session | ROSALES, Annalie L. | SRS II |
| Charcoal Production and Briquetting (Special: Levels 1&2 combined) | August 5, 2021 | Virtual Session | Alip Raymond E. | PA I |
| Oyster Mushroom Production (Paggapatubo ng Kabuteng Pamaypay) | August 12, 2021 | Virtual Session | Alip Raymond E. | PA I |
| Livelihood Opportunities from Honey-Bee Products and By-products Part II | September 28, 2021 | Virtual Session | Alip Raymond E. | PA I |
| Managing Mild Covid-19 cases at home and use of Virgin Coconut Oil and Lagundi as adjuvant therapies | October 1, 2021 | Virtual Session | Alip Raymond E. | PA I |
| 32nd Agricultural Engineering Week/ 17th International ABE Conference & Exhibition/ 70th PSABE Annual National Convention | April 26-28, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Evaluating Tests and Measurements: Analysis and its Utilization | December 4, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Educational Research and Qualitative Research Study | November 6, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Emerging Trends in Agricultural Science and Research Using Molecular Biology and Biotechnology, and Nanotechnology | October 30, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Quantitative Analysis | October 23, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Resource Efficient and Cleaner Production | August 6, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Electronic Productivity Measurement Information System (eProMIS) | July 7, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Agribusiness Investment on Organic Free-Range Chicken And Layer Production | May 4, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Intellectual Property Rights for MSMEs | July 23, 2021 | Virtual Session | Dasugo, Junalyn C. | PA II |
| Virtual Packaging and Labeling Design Training | October 4 - 8 & 11 - 15, 2021 | Virtual Session | Rimando, Fernando Ferdinand C. | PA II |

REWARDS AND RECOGNITION

The Department of Science and Technology Region 1(DOST 1), thru its Program on Awards and Incentives for Service Excellence (PRAISE) Committee, ensures that a system where people are acknowledged and recognized for their performance, superior accomplishments, personal efforts, and other extraordinary services in the public service. Recognition and Reward is present in a work environment where there is appropriate acknowledgement and appreciation of employees' efforts creating an atmosphere of importance and value in the workplace.

The recognition of employees' efforts for the organization has long been a cornerstone of effective management. It also helps employees feel that they are valued and that their efforts are great contributions to the success of the organization.

For CY 2021, the following employees were recognized:

MOST OUTSTANDING EMPLOYEE AWARDEES

Most Outstanding Employee award is granted to individuals who excelled among peers in a functional group, position, or profession.

PERMANENT

NIDA P. CLAVERON
Administrative Officer V- Supply,
Finance and Administrative Services

CONTRACT OF SERVICE

HIALEAH C. GALVEZ
Science Research Specialist I,
Finance and Administrative Services

MICHAEL JOHN C. MAQUILING
Science Research Specialist II,
IT Services and Management Unit

INNOVATION AWARDEES

This award is granted to employee or team whose contributions such as ideas, suggestions, inventions, discoveries or performance of functions results in savings in terms of man- hours and cost or otherwise benefit the agency and government as a whole.

INFORMATION TECHNOLOGY SERVICES AND MANAGEMENT (ITSM) UNIT

Personnel Management System (PMIS)
Attendance Monitoring Module
Payroll Monitoring and Management System
Events Management System for RSTW

REGIONAL STANDARDS AND TESTING LABORATORY

RSTL Webinar Series

S&T SCHOLARSHIPS UNIT

Agyamanak DOST, Makabayang Iskolar Ako

MACGYVER AWARDEE

The MacGyver Award is granted to an employee who has an initiative to fix things in the office using only the resources at hand.

BERNADINE P. SUNIEGA

Science Research Specialist II,
Technical Manager

BEST UTILITY WORKER

The award is granted to utility worker who exemplifies diligence in maintaining the cleanliness of the office premises, and in performing any other job-related duties requested by a supervisor.

JOSEPH G. NOCES

Office Assistant/ Utility Worker

CAREER AND SELF DEVELOPMENT AWARDEES

Awards given in recognition of an individual who has satisfactorily completed a course or degree within or outside the country at one's own expense.

DECETH 1180 P. LIBUNAO

Senior Science Research Specialist
Technical Services Division
Master of Science in Rural Community Development

ADELISA C. FLORENDO

Science Research Specialist II
Field Operations Division
Master of Science in Rural Community Development

EDISON M. ACOSTA

Science Research Specialist II
PSTC La Union
Master of Science in Rural Community Development

BERNALYN MARTINEZ

Project Assistant II
PSTC Pangasinan
Master in Development Management
Major in Public Management

LOYALTY AWARDEES

This award is granted to an employee who has served continuously and satisfactorily the DOST 1 for at least (10) years.



DR. ARMANDO Q. GANAL, CESO III
Regional Director, DOST 1



ENGR. ISMAEL D. GURTIZA, Ph.D.
Assistant Regional Director for Field Operations

EMPLOYEE OF THE YEAR (PER UNIT)

The Employee of the Year (Per Unit) Award is granted to employees who displayed exceptional work performance and impeccable working relationship among his peers within their respective divisions/units. The awardee is nominated by his/her colleagues within the same unit.

FINANCE AND ADMINISTRATIVE SERVICES DIVISION

MR. ZOSIMO C. GALVEZ
Employee of the Year

MR. HILARIO B. PAJIMOLA
2nd Place

MR. REYNAN PARAGAS
3rd Place

FIELD OPERATIONS DIVISION

MS. DONITA ROSE DELMENDO
Employee of the Year

MS. RENALYN ESTABILLO
2nd Place

MS. KATRINA RONQUILLO
3rd Place

TSD / SCHOLARSHIP / S&T PROMO

MS. VENUS P. ANDAYA
Employee of the Year

MS. MAUREEN HEIDI PEREZ
2nd Place

MS. MARY ANN BELEN
3rd Place

RSTL / RML

MR. HERO D. GALAGAMGAM
Employee of the Year

MS. MARINIQUE GUERERO
2nd Place

JUVENAL GAMBOA
3rd Place

ITSM UNIT / RXBOX

MR. JUSTIN MADRID
Employee of the Year

MS. GAEL MYCA DACANAY
2nd Place

MS. CARLA JOYCE CAJALA
MR. FERDINAND FERNANDO RIMANDO
3rd Place

PSTC ILOCOS NORTE

MR. KENNETH MANGASEP
Employee of the Year

PSTC ILOCOS SUR

MS. LAURINE R. SALES
Employee of the Year

MR. ARTHUR AUBREY R. ALVIAR
2nd Place

MR. ELMER AYON- AYON
3rd Place

PSTC LA UNION

MS. EIRYZ ANGELIQUE ORPILLA
Employee of the Year

MS. ERWIN PADUA
2nd Place

MR. RAYMOND ESPE
3rd Place

PSTC PANGASINAN

MS. JENNIFER C. FERNANDEZ
Employee of the Year

MS. BERNALYN P. MARTINEZ
2nd Place

MR. EDWARD E. UGALE
3rd Place

A Plaque of Appreciation is also awarded to Dr. Armando Q. Ganal, Regional Director, in grateful appreciation and acknowledge for his invaluable support and commitment to the conduct of various Programs and Projects during the Covid-19 pandemic.

2021 ACHIEVEMENTS AND AWARDS



PRIME HRM LEVEL II BRONZE AWARD

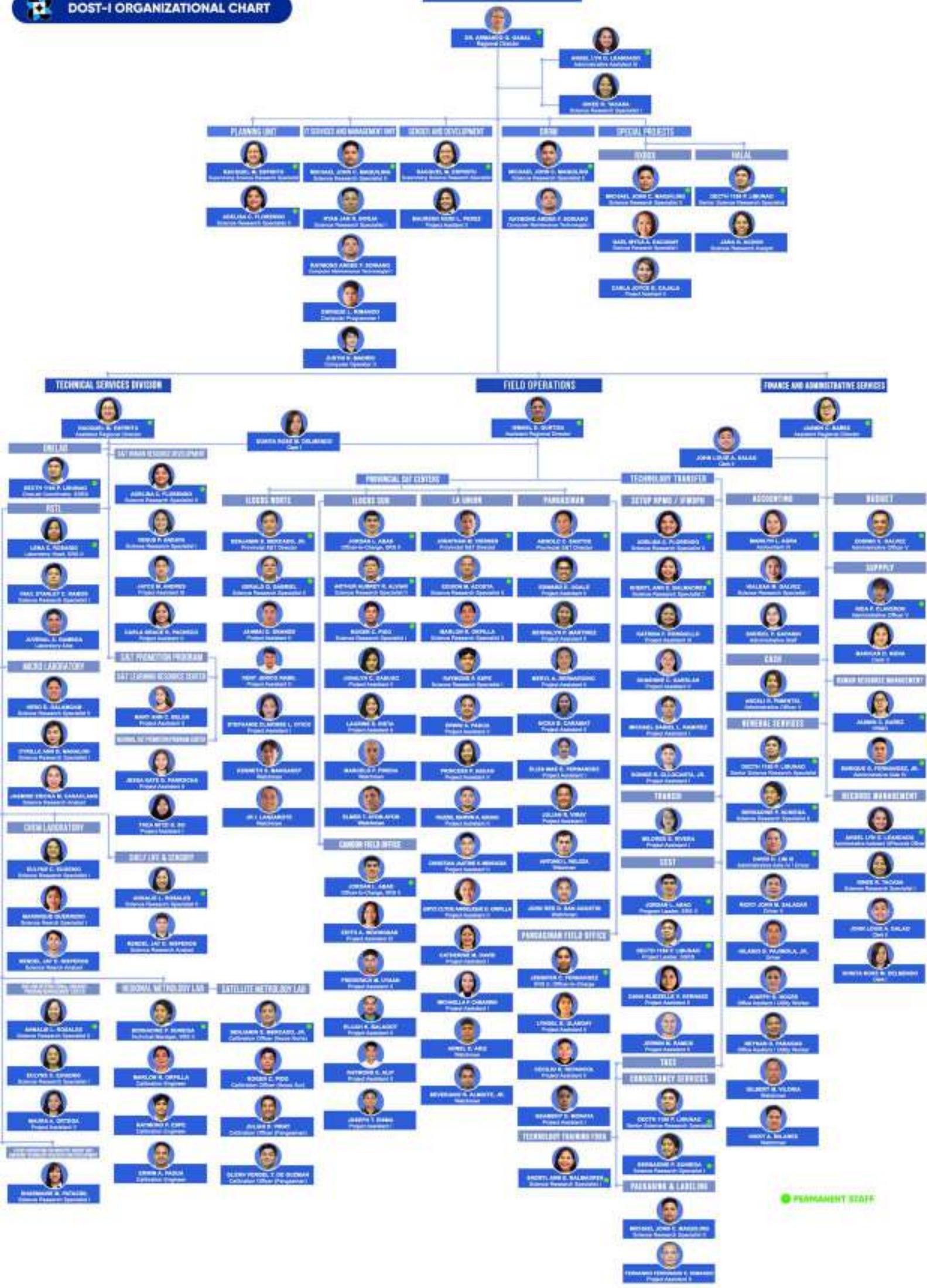
DOST-1 received two awards that signifies the commitment to excellence and dedication to public service of every Juan and Juana of DOST-1. These awards, the Program to Institutionalize Meritocracy and Excellence in Human Resource Management (PRIME-HRM) Bronze Award and ISO 9001:2015 re-Certification, are living proof that DOST-1 continues to deliver quality products and services to the people of Region 1, despite the uncertainties brought about by the COVID-19 pandemic.





DOST-I ORGANIZATIONAL CHART

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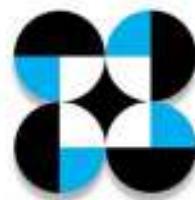


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