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# 1 out of 4 children in Mindanao are underweight

By Geraldine Bulaon-Ducusin, DOST-STII

**T**here is one out of four children in Mindanao found to be underweight. This is based on the nutrition survey results presented during the recently concluded Online Technology Forum for Bangsamoro Autonomous Region for Muslim Mindanao by the Department of Science and Technology-Food and Nutrition Research Institute (DOST-FNRI).

The first 1,000 days of a child's life, which begins in pregnancy, is critical because the damage is irreversible if the child does not get proper nutrition during this period, according to Lea B. Landicho, a science research analyst at DOST-FNRI.

The trends in the prevalence of malnutrition among children less than two years old or 0-23 months in the Philippines show a decline in four nutrition parameters between 2015 to 2019: underweight (from 17.2 to 13.9); stunting (25.7 to 21.9); wasting (10.2 to 7.0); and overweight (4.2 to 2.6). Despite the decline, however, underweight and stunting are still prevalent in most parts of Mindanao.

One out of four children, less than five years old, are underweight, which is a condition where children are found to weigh below the standard weight for the child's age. Underweight prevalence generally increased except for Lanao del Sur.

For the same age group, four out of 10 are stunted. Stunting is based on height-for-age index or when the height of a child is below the standard for the child's age. Stunting reflects chronic undernutrition. It's a manifestation of past nutritional status wherein there is a prolonged inadequate intake, recurrence of illness or improper feeding practices. Stunting prevalence generally has increased except for Tawi-Tawi.

Eight out of a hundred children, less than five years of age, are considered wasting or thin. Wasting or thinness is based on weight-for-height index or it is a condition when a child's weight is below the standard for the child's height. Wasting generally has decreased except for Sulu and Tawi-Tawi.



BigMo is among the technology-based products of DOST-FNRI which produces rice-mongo food supplement, both instant blend and ready-to-cook for 6-35 months old children and curls and crunchies snacks for children aged 12-35 months old. (Photo credits to DOST-FNRI zoom webinar)

On the other hand, four out of one hundred are overweight for their height among the less than five years old.

DOST-FNRI implements the Malnutrition Reduction Program (MRP) which addresses the undernutrition problem among young children in the country. MRP includes the DOST PINOY strategy, a package of interventions involving direct feeding of rice-mongo based complementary foods for six months to below three years old children, and nutrition education among mothers and caregivers. This program has been on the roll-out in the countryside.

Alexis M. Ortiz, a research specialist from the DOST-FNRI Technology Transfer and Commercialization Section said that Institute has activities and projects focusing on sharing the nutrition status with the end-users, so that they will be encouraged to take action.

"Yung Malnutrition Reduction Program, kung saan po nagkakaroon kami ng advocacy meetings or forum tungkol sa mga issues para

po ang ating mga local executives at ang mga members po ng councils ay ma-inform kung ano ang nutritional status ng kanilang area po, nang sa gayon po, makagawa po ng aksyon kung saan doon natin i-introduce yung mga complementary food tulad po ng rice-mongo blend," Ortiz explained.

Among these food technologies are complementary food, such as rice-mongo blend crunchies and curls for snacks and ready-to-eat food for infants and young children, and micronutrient growth mix. The ready-to-cook blend of rice, mungbean and sesame seeds contains 130 Kcal (energy) and four grams protein per 30 grams serving portion—enough to meet the 18% of recommended energy and 28.6% of recommended protein intake of 6-month to less than 10-month-old children.

DOST-FNRI has also developed squash supplemented products, such as pancit canton and bakery products with squash, and also the fast-becoming popular enhanced nutribun.



DOST-SEI Director Josette T. Biyo (top row, second from left) presides over the online ceremonial signing of a memorandum of agreement on 14 April 2021 between the Institute and its various STEM education partners, ensuring the continuity of various joint programs for kids including mathematics Olympiads, robotics competitions, and weather forecasting. Others in photo, from left to right, are DOST-SEI Deputy Director Albert G. Mariño, AMSLI Philippines President Ms. Rechilda P. Villame; MSP President Dr. Emmanuel A. Cabral; MTG Philippines Chief Operating Officer Dr. Simon L. Chua; NOI.PH President Mr. Marte Y. Soliza; PFST Executive Director May M. Pagsinohin; PMS President Dr. Marcelino Q. Villafuerte II; PhilAAST President Dr. Jaime C. Montoya; PSYSC Chairman Dr. Manolo Mena; and FELTA President and CEO Mylene S. Abiva.

## 2021 VIRTUAL MOA SIGNING WITH PARTNERS

# DOST-SEI, partners vow more int'l victories for Pinoy STEM students

**F**rom math olympiads to robotics competitions, Filipino students have been consistently making their mark in the international arena thanks to the tireless efforts of the Department of Science and Technology - Science Education Institute (DOST-SEI) and its educational partners—some of whom have been the agency's allies for well over two decades.

The Institute and its partners recently reaffirmed their shared commitment in promoting Science, Technology, Engineering, and Mathematics (STEM) through a Memorandum of Agreement signing ceremony on 14 April 2021. The entire event was held online, a poignant reminder of the unusual circumstances brought about by the COVID-19 pandemic, as well as of the determination and creativity of the various agencies to overcome these challenges.

"While Filipinos will always be known for our resiliency, it's time that we thrived beyond that," said DOST-SEI Director Josette T. Biyo.

"We are thankful to our partners for helping us and our Filipino youth to grow into something bigger and brighter through STEM."

Dir. Biyo presided over the ceremony, with long-time partners in attendance including National Olympiad in Informatics, Philippines; the Asian MathSci League, Inc.; FELTA Multi-Media, Inc.; the Mathematics Trainers' Guild, Philippines; the Philippine Foundation for Science and Technology; the Philippine Association for the Advancement of Science and Technology; the Philippine Meteorological Society, Inc.; the Philippine Society of Youth Science Clubs, Inc.; and the Mathematical Society of the Philippines.

"Though the COVID-19 pandemic has changed the educational landscape around the world, we look forward to continue to inspire our youth to pursue STEM careers by showing them that they have the capability to win against all odds in international competitions," Dir. Biyo concluded.

### ABOUT US

The DOST Digest is published by the Department of Science and Technology- Science and Technology Information Institute. For comments, suggestions or queries, contact: (02) 8837-2071 to 82 loc. 2148/8839-2193 local 107 or email: [dost.digest@gmail.com](mailto:dost.digest@gmail.com)

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# E-Nutribun to roll out in Antique to help curb malnutrition

By JJ Moleño, DOST VI-KMU

**A**ccording to the Antique Provincial Planning and Development Office (PDDO), Antique is already identified as the province in Western Visayas with the highest malnutrition incidence at 26% in 2015. This has worsened due to the pandemic as strict implementation of border restriction and travel ban has limited the access to healthy food.

To address the call of the Department of Social Welfare and Development (DSWD) Memorandum Circular No. 12 Series of 2020, the Department of Science and Technology-Food and Nutrition Research Institute (DOST-FNRI) re-developed the Nutribun – a healthy bread introduced in the 1970s which was given to children from Grades 1 to 6 in different public elementary schools as part of the government’s feeding program initiatives to fight malnutrition.

Dubbed as Enhanced Nutribun (E-Nutribun), the production and distribution will be implemented through the University of Antique Sibalom Technohub, a beneficiary of one of the DOST’s flagship projects, the Community Empowerment Through Science and Technology.

This undertaking will include the production and distribution of E-Nutribuns to malnourished elementary level children (6-9 years old) from 17 municipalities in Antique to help alleviate malnutrition. Currently, there is an agreement between the University of Antique and the Department of Education (DepEd) Division of Antique for the school-based feeding program amounting to P28,332,720.

On the other hand, the DOST Regional Office VI (DOST VI) project funds amounting to P250,000 will cover the 120-day feeding activity, targeting 30 children-beneficiaries

per municipality. The DepEd will identify the children-beneficiaries, conduct of the actual feeding, and provide updates through virtual channels or platforms.

A pre-weighing of children-beneficiaries will be conducted before the start of the feeding activities.

To reach the 510 malnourished children-beneficiaries, the production of E-Nutribun will be done twice a week specifically on Mondays and Tuesdays for seven and a half months with deliveries on Tuesdays and Thursdays, in consideration of the three-day shelf life of the E-Nutribun.

The production and distribution of E-Nutribuns in Antique is being implemented through the collaboration of the following: University of Antique - Sibalom Campus, DepEd, DOST VI, and the Antique Local Government Unit.



Enhanced Nutribun (E-Nutribun)

# ‘Sol Searching’: DOST’s treat to cap off Women’s Month

By: Allan Mauro V. Marfal, DOST-STII

A free virtual movie screening for the independent film “Sol Searching” was held from 14-16 April 2021, via Zoom by the Department of Science and Technology-Science and Technology Information Institute (DOST-STII) in celebration of the Women’s Month.

The three-day virtual activity is one of the advocacies of DOST-STII to promote and recognize the heroism, dedication, sacrifices, and contributions of Filipino women in their respective communities and there is no better way to present them that through a movie.

Sol Searching revolves around a strict grade school teacher named Sol Dolores portrayed by Gilbeth Sandicho, the only person in the community who had the guts and patience to educate the farmers living in a town where farming is the main source of livelihood.

In the movie, Sol saw what others had left unnoticed; the village’s farmers lack of knowledge and resources to produce crops for a living.

Ironically, when Sol died, her husband, Django Dolores played by veteran actor Joey Marquez, did not have enough money for her burial. Because of this, Lorelei Baloloy, played by veteran comedienne Pokwang, and Bugoy, played by child actor JM Salvado had to carry her coffin and paraded it to the neighboring communities so they could get enough money or find someone to help them lay her to rest.

Sol Searching was written by Mark Norman Boquiren and directed by Roman Perez Jr.

“This is the second time that the DOST-STII conducted a movie screening like this, primarily for DOST employees as our target audience,” conveyed Alan C. Taule, chief of the Information Resources and Analysis Division of DOST-STII. “We would like to

increase the consciousness and appreciation of the entire science department regarding the significant contributions of Filipinas in terms of building a better place to live for their respective communities. In this movie, Teacher Sol, despite her struggles, was able to make an impact on her students and the farmers wherein she shared her knowledge on how to grow their crops properly and efficiently.” He added that DOST-STII, for the longest time, has been actively promoting the gender-fairness principle in its various products and services such as publications, content of social media pages, digital broadcasting, websites, mobile apps, and library resources.

More than 400 employees participated in the movie screening and shared key takeaways and learning insights from the character Teacher Sol.

“This film made me laugh, cry, be amazed, and it led me to many realizations and worthwhile reflections in life. It is relatable, entertaining, and very informative. Salute

to the character of Sol of being a teacher promoting a much appreciation to all our farmers,” said Irish Kate R. Cerdon of DOST-Philippine Council for Industry, Energy and Emerging Technology Research and Development.

“Congratulations on this initiative. It is such a comic, witty, and heart-wrenching film; I enjoyed it. Educators, as well as farmers (and fisher folks), are almost always underappreciated but indispensable,” shared Danikko John, V. Rivera from DOST--Philippine Institute of Volcanology and Seismology.

“The story portrays the realistic picture of what real life is. I was able to see the frustrating side of trying to help our farmers learn and grow in their way of farming, the life of frustration and betrayal. It is the reality of life that there are people who are using others for their gain. It is a very good movie to watch with lessons to learn. Thank you very much DOST-STII,” explained Evelyn B. Seranado from DOST-PHIVOLCS.

POKWANG | JOEY MARQUEZ

## SOL SEARCHING

GILBETH SANDICHO  
 JM SALVADO | KENKEN NUAY  
 RAFFY TEJADA | RAUL MORIT | LOTLOT BUSTAMANTE  
 MAYEN ESTANERO | PABLO RODRIGUEZ | CHOKOLET  
 FRANCIS MAGUNDAWAY | LEE O'BRIAN | SUE PRADO | JELSON BAY  
 TROY SALINANA AQUINO

**FREE**

**MOVIE SCREENING**

**PRESENTED BY:**

DEPARTMENT OF SCIENCE AND TECHNOLOGY  
 SCIENCE AND TECHNOLOGY INFORMATION INSTITUTE

**14-16 APRIL 2021**  
**EVERY 2:00 PM**  
**VIA ZOOM**