

WORLD FOOD DAY



Innovations to
Accelerate Zero Hunger



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Southeast Asian Ministers of Education Organization
Regional Centre for Food and Nutrition (SEAMEO REC FON)
Pusat Kajian Gizi Regional - Universitas Indonesia
Kementerian Pendidikan dan Kebudayaan Republik Indonesia

2018

World Food Day: Innovations to Accelerate Zero Hunger



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Preface

After some initial improvements, the number of people who are going hungry in the world has once again increased. The Food and Agriculture Organization (FAO) has recently reported that more than 815 million people across the world are suffering from chronic malnutrition. This issue is only being exacerbated by conflict, climate change, economic slowdown and the increment of obesity occurrence.

Hunger eradication requires intersectoral partnership and the active participation of all related stakeholders. The government's role is to create opportunities for the private sector to invest more in agriculture, as well as providing better social protection for groups who are vulnerable to food insecurity. Farmers should adopt a new, sustainable farming method which would not only improve their productivity but their income as well. Academics should be conducting research which will have the most impactful outcome, and which would rapidly help solve the problem of hunger. Furthermore, society's awareness and participation need to increase.

As part of our contribution of raising awareness in relation to the importance of combating world hunger, throughout 2018, SEAMEO RECFON organized a series of events called: "Celebrating World Food Day 2018: Innovations to Accelerate Zero Hunger."

The celebration consisted of four main events, namely: (1) 2nd Youth CREATION (Creativity for Health and Nutrition); (2) SEAMEO RECFON Award for Community Health Workers; (3) SEAMEO RECFON Award on Partnership in Nutrition Program and (4) World Food Day Seminar.


The 2nd Youth CREATION competition was an innovation competition aimed at teams of students and teachers. In this competition, participants created models or products that could possibly be used to overcome food and nutrition problems in schools and/or community settings.

Whilst the SEAMEO RECFON Award for Community Health Workers focused on recognizing the efforts of health cadres by implementing their knowledge and practices on growth monitoring and local food-based complementary feeding at a Health Post (Posyandu) setting. The SEAMEO RECFON Award on Partnership in Nutrition Program was introduced to


improve the communities and academics awareness regarding their role in achieving SDGs 2030 target of "Zero Hunger," as well as acknowledging SEAMEO RECFON's partners who have implemented their partnership in nutrition program on optimized food-based dietary guidelines, which has been developed using a linear programming approach. This event was also expected to serve as a platform for a collaboration amongst partners.

The series of events culminated in a one day seminar for the general public, held on World Food Day, October 16, 2018. The seminar discussed the innovations and partnerships that have been conducted in Southeast Asia in an attempt to accelerate zero hunger.

This book documents, in detail, the series of events that SEAMEO RECFON conducted leading up to the celebration of World Food Day, as being one of our more modest contributions to disseminating the importance of achieving zero hunger for public awareness. The book has been organized by themes, so as to enhance the understanding of the key messages regarding the importance of the innovations and collaborations in combating world hunger.



Jakarta, October 16, 2018.



Director of SEAMEO RECFON
Dr. Muchtaruddin Mansyur, Ph.D

Keynote speech from Secretary General Ministry of Education

This speech was given during SEAMEO RECFON World Food Day seminar, October 16, 2018.

Indonesia has been adopting the Millennium Development Goals (MDGs) as its development target since 2000 and has also committed to pursuing the seventeen Sustainable Development Goals (SDGs) as a continuation of the MDGs. The SDGs aim to go a lot further in ending all forms of poverty by addressing the root causes of poverty and the universal need for the population’s development. Furthermore, the first two SDG goals, i.e., to end poverty and to end hunger, achieve food security and improve nutrition and promote sustainable agriculture, are in accordance with Nawa Cita, which is a development agenda carried out by Mr. Joko Widodo, the current President of Indonesia.

It can clearly be seen that poverty and hunger have made children one of the most vulnerable population groups to suffer from both problems. Numerous researchers have found that nutrition inadequacy in children can significantly affect their growth and development. Furthermore, impaired development in school age children can also affect their learning ability and school performance. Accordingly, the Ministry of Education and Culture is responsible for making sure that school age children get the best support they can in relation to nutrition, which will in turn help them achieve their full potential in education.

In 2010, the Ministry of Education and Culture of Indonesia initiated a food supplementation program in schools, particularly schools that were located in rural areas. This program, known as PMT-AS (Pemberian Makanan Tambahan Anak Sekolah-Supplementary feeding for School Children), was introduced with the aim of improving the nutritional intake of students in kindergarten and elementary schools. The food which these children received was designed to fulfill the daily 10–20 percent of calories and protein needed by school children, the food was also guaranteed to be safe for consumption and would be in accordance with local tastes. Consequently, this program also aimed to improve the local economy by utilizing local products for food. An evaluation of this program highlights that anemia prevalence amongst children in schools that have adopted PMT-AS based upon local food sources was significantly lower than children whose schools have not implemented the PMT-AS program. However, improvement is still needed regarding the types of snacks that are given to children, especially those that are considered to be too high in carbohydrates, but also low in fiber and micronutrients.

In relation to the findings mentioned above, the program was significantly improved in 2016 and was consequently relabeled the Program Gizi Anak Sekolah (School-Based Nutritional Program), or more commonly known as PROGAS, which involves a collaboration between the Ministry of Education and Culture with the Ministry of Health. ProGAS has three aims: (1) increase students' nutritional intake through the provision of school meals; (2) improve students' knowledge of nutrition; (3) improve the health-hygiene practices of students, while also increasing students' preferences for local food and (4) increase community participation in utilizing and providing local food. During its initial stage in 2017, the program started providing breakfast for school children at least three school-days per week: that being a total of one hundred and twenty school-days per year. The breakfasts provided were prepared by teachers and parents, with help from local farmers and vendors in the community.

In 2018 this program was further improved when nutritional education for teachers was included, who were expected to be able to deliver a balanced nutritional education to their students. In collaboration with SEAMEO RECFON, we conducted an array of studies to determine what nutrient(s) are inadequate in a student's diet, with this information we would then be able to develop food-based recommendations using locally available foods that could help meet these nutrient deficiencies.

Indonesia, as well as some other Southeast Asian countries, is prone to natural disasters. Therefore, we should also be building a resilience against the negative consequences of these natural disasters when it comes to school children's school performance, as well as the growth development of young children. Hence, HIMPAUDI, in collaboration with SEAMEO RECFON, initiated the concept of utilizing Early Child Education Centers (PAUD), including PAUD teachers, to extend the message to parents to optimize the nutritional and psychosocial care of their children, so as to prevent the deterioration of growth and development of young children during post disaster periods. This requires the participation of all sectors of the community, including the integration into other existing resources at both central and local government levels.

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WORLD FOOD DAY

The Young Who Innovate

INNOVATION TO ACCELERATE ZERO HUNGER





The young who innovate

Nowadays, younger generations, also called millennials, are famous for their wittiness and creativity. They have the ability to think outside the box and are able to find solutions to complex problems such as malnutrition.

Through our event, we managed to collect the best innovation practices from individuals who are from the younger generation in Southeast Asia that are considered to be truly inspirational. The most inspirational stories came from our winners of the 2nd Youth CREATION Competition, and also from our invited speakers during the World Food Day seminars.

Innovations from the school bench

Since 2017, SEAMEO RECFON has organized the Youth CREATION Competition as a platform which gives the younger generation the opportunity to contribute to better nutritional conditions in the community and/or school settings through their innovative and creative ideas. The competition was designed not only as a platform to innovate but also as a platform for nutritional education amongst secondary and senior high school students. In 2017, the event was held as a video competition for Indonesian students to capture their understanding of health and nutrition. We received thirty videos from thirty teams (consists of twenty-three senior high schools from twelve provinces in Indonesia).

In 2018, we expanded this event to include Southeast Asian (SEA) countries. At this event, we invited senior high school students to pitch their best ideas on resolving zero hunger in their school environment.

During the preliminary phase, we received seventy-nine conceptual notes from six SEA countries. Submissions came from Indonesia (sixty-two submissions), one submission came from Thailand, one from Brunei Darussalam, two submissions from Malaysia, one submission from Myanmar and thirteen submissions from the Philippines. Based upon the chosen theme, 36% of the participants were working on "Reducing Food Loss and Waste in Community or School Setting," 31% looked at "Combating All Forms of Malnutrition in Community or School Setting," 24% focused on "Access of Safe, Healthy, and Adequate Food in Community or School Setting," whilst 9% looked at "Sustainable Food System in Community or School Setting: From Farm to Fork."

Out of the seventy-nine submissions received, thirty semi-finalists were selected, after being rated by the committee. The submitted concepts were screened for validity of content, potential impact derived for the community, creativity and innovation, feasibility, and replication

and sustainability of the idea. Afterwards, the thirty semi-finalists were asked to make a five minutes video describing the concept of their idea and were asked to upload it to YouTube. Ten submissions were chosen as finalists of the 2nd Youth CREATION "Innovations to Accelerate Zero Hunger." The World Food Day Symposium was held over two days; on the first day, on October 15, 2018, all ten finalist representatives were asked to pitch their ideas in front of the judges.

The top three ideas were announced the next day. The first winner was SMA Negeri 1 Sumbawa Besar (Indonesia), with their idea "My Breakfast Mate"; the second was Sura Nari Witthaya School (Thailand), with their idea "School Renewable Nutrition (SRN)," and the third was SMA Taruna Nusantara (Indonesia) with the idea "Kirtara Catfish Bioflok System." Apart from the top three winners, the most popular idea was also chosen, based on having the most likes on their YouTube Channel.

Ideas of youth creation finalists and Youtube video links

No	Idea	Youtube Link	
	My Breakfast Mate SMAN 1 Sumbawa Besar (Indonesia)	https://youtu.be/H26h2Gft7CE	1 st Winner
	My Breakfast Mate is a program designed to increase student's awareness of breakfast and nutritional knowledge. It also aims to build a sense of solidarity between students. The activities include breakfast menu planning and having breakfast together.		
	School Renewable Nutrition (SRN) Sura Nari Witthaya School (Thailand)	https://youtu.be/jXs3EU6umtl	2 nd Winner
	The aim of the School Renewable Nutrition (SRN) program is to overcome the issue of hunger through school farming. This project tried to provide opportunities for students and the local community to become engaged with agricultural practices, especially school farming and backyard farming, in order to address food insecurity in schools and in the surrounding areas.		
	Kirtara Catfish Bioflok System SMA Taruna Nusantara (Indonesia)	https://youtu.be/8X1zHQHNFE8	3 rd Winner
	Kirtara Catfish Bioflok is a proposed method to cultivate catfish, which could increase catfish cultivation productivity. Currently, bioflok is established in the SMA Taruna Nusantara land, Magelang. Furthermore, catfish tend to be given fermentation food. They also taste less fishy and could be harvested in three months. Besides, the waste from this bioflok could be used to grow aquaponic plants.		
	A Plate of Life SMK Sanzac KK (Malaysia)	https://youtu.be/b4pSrc0vIBM	Most Popular Idea
	Plate of Life could potentially help students, or anyone, manage their food in a balanced nutritional way. Plate of Life involves a partition that separates several types of food such as vegetables, rice, fruit, chicken, meat or fish. The plate also contains information about healthy nutrition and the dangers of unhealthy food.		

Below are the list of the finalists*:

1	The use of Fish Waste as a Nutritious Food Product SMKN 3 Sumbawa Besar (Indonesia)	https://youtu.be/QwP7Ny8ny4
	If processed further, fish bone waste could become a nutritious ingredient. Furthermore, in an effort to reduce fish waste, processing fishbone waste could also produce delicious high calcium snacks.	
2	Food Banks-A Technology Based Approach to Handling World Hunger and Utilizing Food Surpluses at Home and in Restaurants Chung Ching Middle School (Brunei)	https://youtu.be/vwMvWETQzaQ
	In this program, schools and students organize the collection of leftovers. The process is monitored through an online application. The leftovers are then taken by program volunteers for distribution.	
3	The Availability of Nutrient Sufficient Food to Fulfill Students' Nutritional Needs SMKN 1 Purwosari (Indonesia)	https://youtu.be/5urUHZv7yc
	The idea to reduce the lack of nutrients is a product development that is done by processing innovative food products, namely "Tempe Burger for Students." To ensure the sustainability of this program the product will also be sold in school canteens and the profits will be used to ensure the sustainability of the program.	
4	School Farm for Mutual Profiting Triangle SMAN 2 Kendari (Indonesia)	https://youtu.be/cQDNd9WgYJE
	School farm for Mutual Profiting Triangle is a school farm program that will establish schools as a food producer. This program will involve three parties: schools as management, students' parents as consumers and retail businesses as distributors. The cooperation of all three parties is essential to ensuring the sustainability of the program.	
5	Motee (Moringa Tempe) Meal Programme as Iron Deficiency Solution SMAN 1 Kendal Ngawi (Indonesia)	https://youtu.be/0B6fWTuVNZM
	MOTEE (Moringa Tempe) is a tempe product made from moringa seed. The product will be given to students to increase their intake of iron sourced food, which may help them overcome anemia problems in the future.	
6	3K (Kangkong-Kamote Tops-Kalunay) Healthy Dietary Program Regional Science High School III (Phillippines)	https://youtu.be/21vBdV9cXWI
	3K (Kangkong- Kamote Tops-Kalunay) Healthy Dietary Program is a student-economic and environmentally friendly program that targets people who have a low intake of nutritious food. This program will establish schools as the food (Kangkong- Kamote Tops-Kalunay) producers. The aim of this program is to increase the intake of students of kangkong, kamote tops and kalumay.	

*order does not represent the rankings of the finalists

Young innovators for communities

By 2050 the world population will hit 9.1 billion; this means that we have to increase world food production by at least threefold, or else we will not be able to feed the whole world population. In the future, people will be living in mainly urban areas, while most of the food produced will come from small holder farmers in rural areas. If most people reside in the city and are willing to work in the agriculture sector, then we may not be able to produce a sufficient amount of food to feed the whole population in 2050.

Based on a government survey, currently, around 30% of the Indonesian population are recorded as being a farmer. However, the actual number of Indonesian farmers might be higher due to the fact that most Indonesian farmer do not have ID cards. As a result of this, they might not be recorded by the government. The majority of Indonesian farmers live in a lower economic status, something which has become a major problem for farmers. Children whose families are farmers, are normally forced into helping their family with farm duties, therefore, they are prevented from achieving their own dreams, something which might also risk their nutritional status and which will harm their future. Additionally, farmers usually face difficulties in accessing farm land, market and capital. These difficulties are ultimately preventing them from developing their farm.

Tanijoy is an online investment platform that connects small farmers to capital aids for agricultural cultivation. This platform aims to prevent farmers from ending up in poverty by helping small farmers improve the quality of their products, as well as their productivity, something that will solidify their economic status. This platform also trains farmers to utilize technology in farming, so as to maximize their activity, as well as training them in the basics of financial management. Tanijoy's vision aims to bring about happiness through agriculture, with certain missions: applying technology for better agriculture; empowering the local community; increasing economic livelihood; creating agripreneur's in rural areas and collaborating with people to build a better agriculture. Tanijoy uses a digital approach through the internet, which provides them with easy access to what they need; through the internet we are able to connect the farmer with the land owner, market and capital owner. We also provide them with help in managing their resources; instead of receiving money, the farmer will receive things required for the plantation process, such as seeds, fertilizer, pesticides, etc. Money will only be given as a worker fee on a daily basis. Field managers from Tanijoy will regularly guide and monitor the farmer's activity. Many farmers have joined Tanijoy, currently we have one thousand, nine hundred and twenty farmer partners in Sumatera and Java Island.

Tanijoy, which was established in 2017, was originally initiated by three young men, Muhammad Nanda Putra (CEO), Kukuh Budi Santoso (COO) and Febrian Imanda Effendy (CTO), who have managed to help many farmers in Indonesia thanks to the creation of Tanijoy. Muhammad Nanda Putra, the co-founder and CEO of Tanijoy, is an experienced Chief Executive Officer with a notable history of working in the food and beverages industry. He is also highly skilled in management, strategic planning, business strategy, leadership and marketing. In addition, he is a strong entrepreneurial professional with a Bachelor in Agroecology and Sustainable Agriculture from Universitas Brawijaya.

"You don't have to be a farmer to help farmers, whoever you are you can help whoever you want as long as you are willing to do it."

Muhammad Nanda Putra (Tanijoy)

Nanda believes that farmers are the key to ending hunger, therefore, he promoted the use of Tanijoy to help facilitate farmers. They believe that farmers are the key person, because they are the ones who produce the food. The problem we are now facing is the wrong kind of mindset when it comes to farming, therefore, true farming education is needed. One key element when speaking to audiences is how to convince them that being a farmer is not only about planting and seeding. Nanda believes that to change their mind about how they feel about farmers, is for them to have greater contact with farmers as early as possible in a school setting.

Not only was their little interest in the next generation becoming farmers, Nanda also discovered that it was quite difficult to convince people to invest in farming. Nanda realized that farming is a high risk investment. Connecting the farmer with the capital holder is very important, while the farmer guiding and building the capital owners trust through information is also key.

Not only does tanijoy provide access and an increasing amount of capital for the farmer, but they also ensure the farmers work environment is safe to work in. Tanijoy are currently developing SOP for work safety and providing them with insurance.





WORLD FOOD DAY

Community Contributions in Accelerating Zero Hunger

INNOVATION TO ACCELERATE ZERO HUNGER





Community contributions in accelerating zero hunger

Health post empowerment

A child's health development depends upon their mother's health, the socioeconomic status of their family, peer interaction and their nutritional environment. The nutritional environment of the fetus and their early life can not only affect the health status of the children, but it can also affect their brain development, learning, analytical thinking and socializing ability. The first one thousand days of life begin from when the mother is pregnant to the child's second birthday. This period is crucial for the early development of optimum health, growth and neurodevelopment. The adequate intake of nutrition is also important in avoiding and surviving childhood diseases (UNICEF, 2016).

Anthropometric measurement, biochemical, clinical and dietary assessments are common indicators for nutritional assessments. Measuring weight and height are mostly done to assess the malnutrition status of infants and children under five years old, which may be the result of improper nutritional intake and/or infection (Shetty, 2003).

Therefore, children's growth needs to be monitored regularly. One of the main efforts initiated by the government for child development and care was the 'Pos Pelayanan Terpadu (Posyandu)' program. Posyandu is a community-based effort, which provides health service for mothers and children under five years old. There are five main services provided in Posyandu: mother and child health services, family planning, immunization, nutrition and diarrhea control (Kemenkes RI, 2012).

Posyandu is held once every month, with the schedule being agreed by the community and synchronized with health workers. It is run by volunteer community health workers called 'cadre', who are assigned by the village and mostly consist of women. Posyandu generally has 'five tables', with table one to five in every session. Ideally, there are five cadres who are responsible for tables one to four. The first table is registration, while the second table is for anthropometric measurement (weight and height). After which the measurement results are brought to the third table to be recorded in the monitoring card named Kartu Menuju Sehat (KMS). The fourth table is for counselling and education. The fifth table is operated by health workers, for those who need a medical examination, immunization or family planning (Dewi, 2011).

With the emergence of malnutrition cases, especially in children under five years old, Posyandu plays a vital role in the community. Cadres are at the cutting edge of Posyandu implementation, as they need to have the correct knowledge and skills to be able to support

the health practitioners when monitoring the nutritional status of children. Therefore, the caliber of the cadres is paramount for the success of Posyandu.

One approach to capacity building is competition. Some of the competitions that are commonly held for Posyandu cadres involves the implementation of four tables and the creation of complementary food using local nutrient-dense foods. By participating in this competition, it is expected that the skills and knowledge of the Posyandu cadres will improve when monitoring the growth and development of the children, as well as increasing their creativity in utilizing local nutrient-dense foods for making complementary foods in Posyandu. The Posyandu Cadres Skill Competition consists of two types of competitions: the implementation of four tables and the creation of complementary food using local nutrient-dense foods.

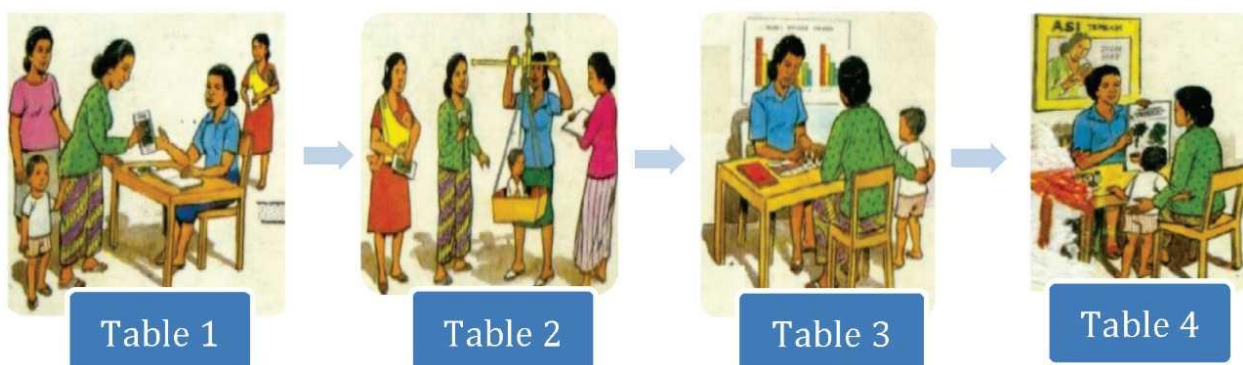
In 2018, the competition involved cadres from thirteen villages in the Ciampea Sub district, Bogor and West Java. Every village sent four cadres as representatives: two cadres for each competition.

Implementation of four tables

This competition was introduced to portray the real practice of cadres when conducting services at Posyandu. The representative teams from each village alternately did a series of the four tables Posyandu activity.

- Table 1: registration.
- Table 2: weight measurement.
- Table 3: recording weight measurement and determining growth status.
- Table 4: counselling.

The subject of the competition revolved around children who were previously measured by SEAMEO RECFON using the gold standard method, therefore, the accuracy of the weight measurement could be determined by the competitors.



The judges included some of our academic and governmental partners, namely experts from Bogor Agricultural Institute (IPB), Bogor District Health Office and our own experts. The winners of this competition were chosen based upon their performance in implementing the four table services at Posyandu: accuracy in weight measurement, nutritional status assessment and information given; counselling method and media used, with duration not exceeding fifteen minutes. The teams were scored based upon those indicators and five teams with the highest rankings were selected: the first winner was the team from the Ciampea Udik village, the second was the Cibadak village, the third was Tegal Waru village, the fourth was Ciampea village and the fifth was Cibanteng village.



After the competition, flaws in the four tables' implementation and knowledge on nutrition were noticed. Therefore, based upon the evaluation of the competition results, a discussion regarding the most appropriate method for the determination of the patient's nutritional status was conducted and led by an expert from SEAMEO RECFON. The participants were also given the opportunity to ask questions, share their own experiences and practice weight and height measurement using the SECA 876 and ShorrBoard. In order to enrich the knowledge of the cadres about nutrition, Magister students of Nutrition from the Faculty of Medicine at the Universitas Indonesia, conducted a nutrition education session. The information was delivered through video playback, games and a discussion, which engaged the participation of the cadres.

Creation of complementary food using local nutrient-dense foods

During this competition the cadres were asked to make two types of complementary foods for infants aged nine to eleven months old and snacks for toddler aged eleven to twenty-four months old. They had to create main meals and snacks using locally sourced food, which

includes chicken liver and/or fish as the protein source and spinach and/or pumpkin as the vitamin and mineral source. They were then asked to present and explain their food to the judges.



When making the food, the participants should always consider cleanliness throughout the process, along with the appropriate texture and portion size for the specific age group, nutritional content and food diversity, taste, food presentation and the ability to explain their foods. Apart from the quality of the food, the cadres' knowledge regarding nutrition is also important. Therefore, it is expected that they will be able to provide nutritious supplementary feeding to the children of Posyandu. They could also share their knowledge with the mothers or caregivers, so it could be applied when making complementary foods for the children at home.





Judges included those from our academic and governmental partners, namely experts from Bogor Agricultural Institute (IPB), Head of Working Group 4 of Pembinaan Kesejahteraan Keluarga (PKK) and our own experts. Five best villages selected: the first winner was the team from Ciampea village, the second was Cibanteng village, third was Ciampea Udik village, the fourth was Tegal Waru village and the fifth was Cicadas village.



All of the related stakeholders, like the Head of Sub district, PKK, nutritionists, village midwives and cadres, determined that this competition was highly beneficial since it gave everyone an opportunity to update and upgrade their skills and knowledge. The winners were awarded money as their prize, which could be used for further Posyandu development. Other teams also benefited as they received a digital scale, which would hopefully increase the accuracy of determining the nutritional status of children. Moreover, this competition made the academia and Bogor District Health Office realize that the real condition began at a grassroots level. As a result of this, they would like to put more effort into guiding the Posyandu implementation.

Social entrepreneurship



In the eastern part of Indonesia, another form of community contribution to combat hunger and malnutrition has come about in the form of social entrepreneurship. Social entrepreneurship involves the use of businesses to solve social problems.

Du'Anyam is a social enterprise that produces and distributes wicker crafts, with the aim of empowering women, promoting culture and improving health and livelihood. Du'Anyam is a combination of two local words, Du'a and Anyam. Du'a in Flores, NTT language, means mother while Anyam means weaving. So, Du'Anyam means mother's weaving.

Du'Anyam was founded by a group of young women who, after finishing their education abroad, decided to go back to Indonesia and contribute to the Indonesian health sector. They started the project in the East Nusa Tenggara Province, one of the poorest provinces in Indonesia. In 2013, 20.24% of people in NTT lived below the poverty line, with this number having increased in 2018 (21.38%) (BPS, 2013; BPS, 2018).

In the same year, NTT became the province which had the highest prevalence of children under the age of five who were suffering from being underweight (33%) and stunted growth (52%), as well as having the highest prevalence of women of reproductive age who suffered with chronic energy deficiency (46.5%) in Indonesia (Risikesdas, 2013).

In 2014, Du'Anyam started conducting research in the Sikka District, East Nusa Tenggara. Here, they had discussion with local governments, local health workers and health cadres, to find out the local health problems. After several discussions, they realized that this district was not been ready to be reformed. Therefore, they moved their research to the East Flores District in the early part of 2015 in which they used the same approach as they had used with the Sikka District to enter the community. At first, they proposed that woven fabric should be developed as their chosen product instead of wicker craft. Since then, woven fabric has been widely produced and distributed, while wicker crafting is becoming rarer, as a result of this, they decided to try an alternative idea.

In East Flores, they conducted research in order to decipher the problems there. The main health problems in East Flores were maternal and child health. After which, more extensive research was undertaken to determine the reason behind the problem; this is where they discovered that women were:

1. Lacking year-round cash, where they only received \$16.5 or approximately Rp 250.000 every month.
2. Minimal income options. Their income came solely from agriculture and most of the women were farmers.
3. There was a lack of market access, even though they had wicker weaving skills. They could not sell their products to other cities.

Therefore, Du'Anyam tried to connect existing skills and resources to the market, empower these women through financial security and provide them with a platform to create a greater impact by working together with other stakeholders. Du'Anyam saw a novel opportunity to tackle the health and nutrition issues by penetrating through the prevailing wicker weaving traditions and providing alternative employment to subsidize their agricultural income.

Health and nutrition problems were not only caused by the scarcity of food, but also by the socioeconomic climate of the community. Between May 2012 and April 2014, the World Food Program undertook a study to help solve Bangladesh's health problems. The study involved four thousand ultra-poor women in Bangladesh. There were five different intervention combinations: 1) cash only; 2) food only; 3) cash and food; 4) food and nutrition education and 5) cash and nutrition education. From this study, it was outlined that the best way to solve these problems was by providing mothers with both cash and nutrition education. The same study was conducted in Djibouti. The best results came from mothers who were given cash-for-work and nutrition education.

Du'Anyam tried to adopt this program. However, they wanted to make it sustainable, not merely for one or two years, by using a business approach. Firstly, they taught mothers what marketable products to create. Most of them already had a basic weaving skill set, but in order to sell more products they would have to be more innovative and creative. Hence, Du'Anyam trained them to create more creative and innovative products to sell. After that, Du'Anyam gave the mothers a cash payment periodically, while conducting production monitoring once a week or once a month. Du'Anyam also provided these mothers with market

access for these products by having them join exhibitions in Indonesia, as well as in other countries. The products were also sold through B to B approaches or via the retail market.

Since the program has been implemented, there have been some significant social impacts. In East Flores, NTT, Du'Anyam has twenty-two foster villages with five hundred weavers working with them. They increase the women's income by 40% and these women's savings by 55%.

Basically, Du'Anyam has two product categories: for living and for style. Living products are intended for the B to B customers, while the style products, such as wallets, luggage tags and hard cases, are for the retail market. 80% of their customers are from the B to B Market; for instance, hotels, resorts, corporations and restaurants. These products are also exported to the USA, Japan and South Korea.

Du'Anyam realizes that they cannot implement this program on their own and they must collaborate with other stakeholders so as to have a greater impact. Therefore, they collaborate with a South Korean telecommunication company which supports the program by providing solar lamps. So, whenever the electricity is off, the mothers are still able to weave. Du'Anyam also works together with Tanoto Foundation (an Indonesian Philanthropy Organization) in which two programs were established: creating a small chicken farm and vegetable garden, even though they failed. Lacking the right sort of knowledge and understanding of the field and situation, such as the soil, water and weather conditions, contributed to this projects failure. This experience shows the importance of engaging with local governments and experts when proposing a program. That is why Du'Anyam has been working with local governments, including health workers, to provide nutrition education, not only the theoretical elements but also the practical elements, for example a cooking demonstration. In 2018, Du'Anyam provided a scholarship to the children of working mothers from elementary school until they reached senior high school.

The local and national government showed their support for the program. The Creative Economy Agency, Ministry of Trade and Women Empowerment and Child Protection Ministry often invite Du'Anyam to their events. In October 2017, Du'Anyam was invited by the Indonesian Creative Economy Agency (Badan Ekonomi Kreatif Indonesia) to showcase their products in the National Palace, Jakarta.

By implementing the program, Du'Anyam faces some challenges. As they are strangers coming into a community, it is sometimes hard for Du'Anyam to be initially accepted. In their attempt to tackle this issue, Du'Anyam try to involve the local government, tradition

leaders and religious leaders. After a while, they are able to engage around nine to ten mothers in the pilot project village, who are extremely loyal. These mothers become ambassadors who tell mothers in other villages about Du'Anyam, informing them what they do and the benefits they can get when they join.

Another challenge is access to these villages. There are a lot of bumpy roads and some villages hardly have a signal for SMS or making a phone call. So, Du'Anyam and the mothers set up an appointment time every two weeks, which means that the mothers have the opportunity to go to a specified place which has a signal to talk.

Changing these women’s mindset and behavior is not an easy task either. These mothers do not have a very good work ethic and tend to work as and when they want. Du'Anyam tries to change their mindset so they are able to meet the consumers' preference. After a continuous effort, the mothers soon realize that if they do not make a good product, no one will want to buy it and they will not get any payment.

The gender issue has been quite a prominent issue. At first, the husbands forbid their wives from joining Du'Anyam. One husband even tried to bury the wicker crafts his wife had made. This happened because the husband was unable to benefit from joining Du'Anyam as a weaver. In order to tackle this issue, Du'Anyam tried to communicate with the husbands, to give them more time and space in order for their wives to acquire a profit. Du'Anyam also recruited the husbands to work for them as raw material collectors. After this, the husbands drastically changed their opinion and began to support the program. The mothers were now able to weave in their own homes, with them still being able to manage their households with chores such as cooking and taking care of their children.

In the past, women were not allowed to get married if they were able to cook, weave wicker crafts and cloth. Nowadays, only a few young women are able to weave. This activity is not deemed as being sexy, with a majority of old women still doing this task. This makes the job of trying to make this program sustainable that much harder since it is hard to include a regeneration strategy. In order to engage young women, Du'Anyam works together with local health workers and community health workers, asking them to join the weaving training program. After which, they are free to choose whether they want to join Du'Anyam or not.

At present, Du'Anyam has expanded their program in three different provinces. Each province has different raw materials available. Therefore, they utilize the natural resources available in each province to create unique products, for instance tree bark in Nabire, rattan in Berau and Palmyra leaves in Lembata and East Flores.

By 2020 Du'Anyam hopes to become the top supplier of quality, ethical and unique wicker crafts. To achieve this they want to empower two thousand women and increase these women's income by 30%. Whatever they do, wherever they go and whoever they meet, they will stick to their goal: empowering women, promote local culture and improving health and livelihood.



WORLD FOOD DAY

Academic and Partnership Efforts to Accelerate Zero Hunger

INNOVATION TO ACCELERATE ZERO HUNGER



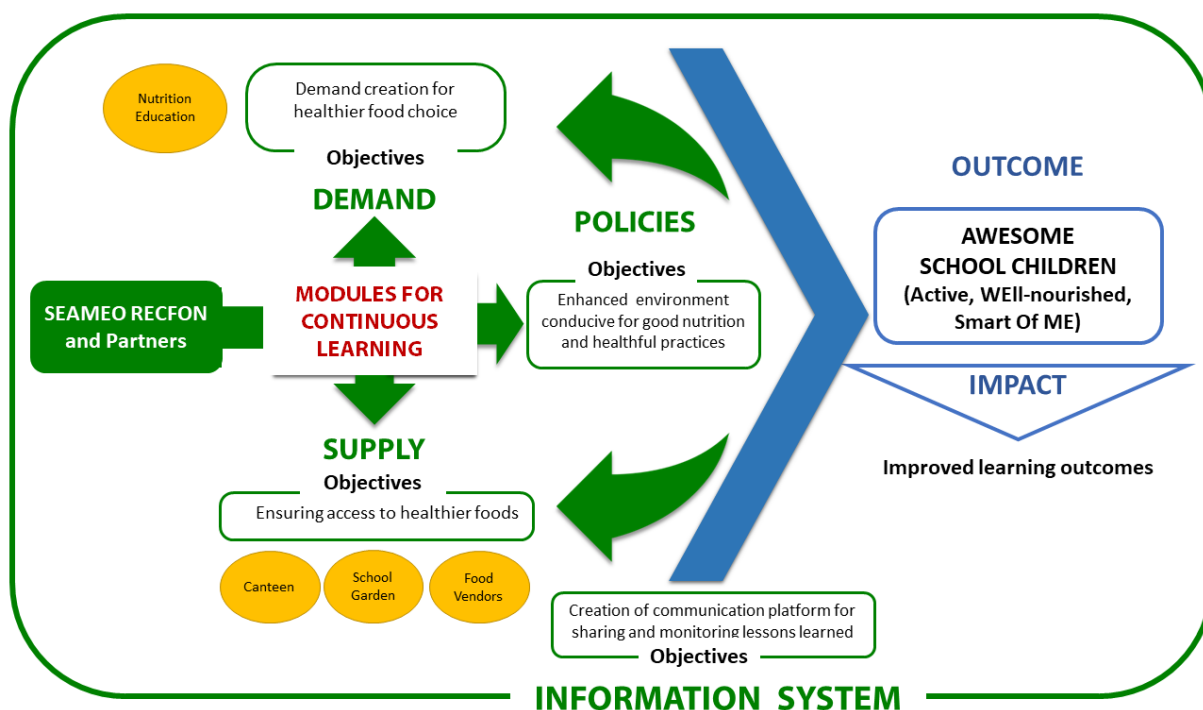


Academic and partnership efforts to accelerate zero hunger

The first one thousand days of a human’s life is known as a critical period for a healthy life. Therefore, there have been numerous efforts to avert the massive effects caused by longer nutritional problems (Ruel & Alderman, 2013; Wrottesley, et al., 2016). However, when it comes to stunted growth, the outcome remains high, especially based on the recent national health survey in 2013. Thus, this approach requires further complimentary action to accelerate solving these nutritional problems. As a result, current interventions are beginning to shift into the earlier stage of life, before the first one thousand days of life have even started. Nutrition intervention aimed at teenagers could prepare someone much more adequately to start the first one thousand days of life well, because teenagers are merely future mothers-to-be.

Furthermore, this concept could be adapted into a nutritional program in schools. Schools are considered to be an effective channel to build character in children. Accordingly, this program is aimed to deliver messages in nutrition knowledge and practices. Many studies have found that school children in Indonesia are prone to nutritional problems, such as not having breakfast, consumption of poor nutritious food and the high consumption of sweet beverages. This can lead to an unhealthy adult, who will then start the first one thousand days of life cycle.

Since 2015, SEAMEO RECFON has initiated a priority program called Nutrition Goes to School (NGTS). The program is targeted at students and schools from kindergarten to high school. It is hope that this program will create **AWESOME (Active, WEll-nourished, and Smart Of ME)** school children. This objective is achieved through different approaches, called DEPPIS, which are:



1. **DE**mand: creating the perception that children need healthy food by providing training and capacity building to students by nutrition academies (*Poltekkes*), who are one of our partners who train school teachers and education personnel.
2. **Su**Pply: providing supplies of safer, varied and nutritious food and water (by ensuring the quality of canteens, food vendors, school gardens and partnering with food companies on fortified foods).
3. **Policy**: developing school policies to implement good nutritional practices (by giving simultaneous support to school decision makers and stakeholders).
4. **Information System**: developing functioned information system (by strengthening technology-based communication and monitoring/evaluation).

As part of the ever increasing demand, we have made several programs for school teachers and principals, as well as for partners (Poltekkes-Nutrition Academy).

For school teachers and principals, we have created face-to face training for primary and secondary school teachers and principals from the STAR Village project in Cihideung Ilir, Bogor, and online training for primary and junior high school teachers in the Java region.

For partners, we provide capacity building, as outlined in the DEPPIS framework of NGTS program. To begin with, the SEAMEO REC FON initiated workshop included twenty alumni of local nutrition academies, recruited as moderators for facilitating the online training.

These moderators were divided into groups and would cater to around eighty to one hundred participating teachers. During the workshop, the moderators were trained on the main points of nutrition updates, written communication skills as well as the technical aspects about the platform used for the online training coordinated by SEAMEO SEAMOLEC.

Not only is this for school children, SEAMEO RECFON also has a program for the wider community. In an attempt to combat malnutrition, especially in children and women of a reproductive age, the World Health Organization (WHO) and UNICEF Global Strategy for Infant and Young Child Feeding, have emphasized the need for local food consumption. Therefore, WHO has developed a linear programming (LP) based tool, called "Optifood," which focuses on affordable, locally contextual food-based recommendations (FBRs). This tool aims to identify optimal but realistic, available and affordable food-based recommendations which meet the Recommended Nutrient Intakes (RNIs) of energy and other nutrients. One of the great aspects of this program is that it takes into account cultural diversity and local food availability, therefore, we expect it to result in long-term improvements compared with the general recommendations.

As a regional center for food and nutrition in South-East Asia, SEAMEO RECFON has conducted studies on development and the use of LP to develop Complementary Feeding Recommendations (CFRs) in various sites and settings in Indonesia. In order to succeed, SEAMEO RECFON has conducted partnerships and has collaborated with academics, program implementers and other relevant stakeholders at regional, district and province levels. In the last three years, SEAMEO RECFON has actively provided capacity building and technical advice for academics and program implementers on dietary data collection and the use of Optifood software to develop locally specific CFRs and FBRs.

Currently, in the spirit of sharing the best practices and lessons learnt in promoting optimized CFRs/FBRs, as well as appreciating our partners in the implementation of "Model of partnership to translate guidelines into practices for optimal diet of SEA community," SEAMEO RECFON holds the Award on Partnership in Nutrition Program in Southeast Asia, in conjunction with the celebration of World Food Day in October 2018.

On this occasion, we invited our partners to share their experiences in translating guidelines into practices for the optimal diet in the SEA region. Of all the invited partners, there were eight institutions who submitted their conceptual notes.

The submitted conceptual notes are listed in the table below.

Institutions	Project title	Award received	Note
National Nutrition Centre, Department of Public Health, Ministry of Health and Sports, MYANMAR http://www.mohs.gov.mm/	Optimized Complementary Feeding improves the effect of iron supplementation on the micronutrient status, growth and gut microbiota of twelve to twenty-third month old Myanmar children.	Best Integration into National Survey	The program will be expanded from one district into other districts in the Ayeyarwady region; it will then be expanded to the whole country accordingly as a nation-wide nutrition program. Dietary data from the National Micronutrient Survey will be used to develop locally specific FBRs in each region.
Health Polytechnic Malang (POLKESMA), East Java, INDONESIA http://www.poltekkes-malang.ac.id/	"Remaja ASIK" (Active, Healthy, Smart and Creative adolescent girls) Nutrition Education for anemia prevention amongst adolescent girls in Malang, East Java.	Best Academic Engagement	The Remaja ASIK program has become well integrated into the community service activities of lecturers and students of POLKESMA, in accordance with the District Health Office and District Education Office.
Nutrition Academy of Surabaya (AKZI Surabaya), East Java, INDONESIA http://www.akademigizisurabaya.ac.id/	Promotion of a Locally Specific Balanced Diet Recommendation (BDR) for Stunted Children (two to five years) in Surabaya.	Best Monitoring Evaluation	BDR is part of the intervention under UCPP (Under-five Children Partnership Program) with the local governments of Surabaya City. UCPP was established in 2010 and will continue every year with MoA between the Surabaya Health Office and AKZI Surabaya.

Institutions	Project title	Award received	Note
Institute of Human Nutrition and Food, College of Human Ecology, University of the Philippines Los Banos, THE PHILIPPINES http://uplb.edu.ph/	Linear programming approach towards strengthening partnership to improve nutrition (LPA-SPIN).	Best Policy Commitment	Integrated into two nation-wide programs of the Department of Education (DepEd), namely the Gulayan sa Paaralan Program (GPP) or School Garden, and the School-based Feeding Program (SBFP). Supported by DepEd at central, regional and district levels.
Udayana University, Bali, INDONESIA https://fk.unud.ac.id/ikm/	Implementation of complementary feeding Recommendations (CFRs) using a linear programming approach amongst under-five children.	Finalist	In 2018, an intervention was conducted for three months, through group-based activities with an EmoDemo approach, home visit counselling and a cooking class. After three months, a follow-up was conducted to assess the compliance of the home visit.
Lao Tropical and Public Health Institute, LAO PDR https://www.nioph.gov.la/	Food-based recommendations for vulnerable Laotian people (adolescent girls, children and their mothers) in rural and urban communities in Lao PDR: development of new tools using Linear Programming.	Finalist	This study performed qualitative and quantitative methods by performing data collection for the development of CFRs/FBRs and the evaluation of their effectiveness.

Institutions	Project title	Award received	Note
National Institute of Public Health (NIPH), CAMBODIA https://niph.org.kh/niph/niph-school/	Development and testing the effect of optimized local food-based Complementary Feeding Recommendation (CFR) for children six to twenty-three months old and Food-Based Recommendation (FBR) to combat Anemia amongst Women of Reproductive Age in Cambodia.	Finalist	The first study focused on CFRs among children who were under the age of two. Then, it was continued by FBRs among women of reproductive age.
Health Polytechnic Makasar, South Sulawesi, INDONESIA http://www.poltekkes-mks.ac.id/	Food-Based Recommendations Developed using Optifood for pregnant mothers in the Moncongloe Subdistrict, Maros District, South Sulawesi Provinces.	Finalist	This study was conducted twice a month in four Posyandu’s through pregnant mother classes.

Best practices from global partnership

As an example of global partnership, we take a look at examples from the World Food Program (WFP). The organization is part of the United Nations, which is mandated on emergency response and also as a supporting system for food security and nutrition. They have eighty offices worldwide, while in ASEAN countries WFP is present in Indonesia, Lao, Myanmar, the Philippines and Cambodia. They also have regional offices in Thailand and the humanitarian depot in Malaysia. WFP has quite a long partnership with the government of Indonesia, since they established their Indonesian office in 1998.

WFP focuses on delivering food to people in need by air, land, sea or by whatever means they can. They provide cash or vouchers for people, so they can buy food at their local market. They also work on nutrition by providing interventions for children, mothers and pregnant women. However, since Indonesia and other middle income countries have the ability to provide these services, the WFP provides them with more technical support and capacity building for the government.

Nowadays, the number of people who suffer with food insecurity and hunger has been increasing in the past three years, and has reached 821 million people suffering globally. In the Sustainable Development Goals (SDGs), the second goal is zero hunger, in which it is expected that no one will be left behind in suffering any form of hunger and malnutrition by 2030. Governments worldwide have made an effort to tackle food insecurity, however, there are some challenges that they still face:

1. *Natural disasters*, the government has programs on agriculture and food resilience. However, once natural disaster strikes, food security will automatically be impacted. In this situation, WFP provides a solution to increase resilience and emergency preparedness, which means that countries can be prepared if something happens in the future. WFP can also provide help to the government, if necessary.
2. *Conflict* is not a main problem in ASEAN countries, but it happens worldwide. Most of the man-made-conflict countries suffer from hunger. For instance, in the Rohingya refugees' case, WFP provides food systems for refugees, which means they can still eat in the refugee camp.
3. *Double burden of malnutrition*, since income has risen, education levels have improved and the means of communication and information have developed, at the same time stunting and obesity problems still occur. The latest publication showed that ASEAN regions have an increasing number of obesity problems, in which the highest number is in Indonesia, with 30% of the population being obese. Even though the number is still below the world's average, this is still a major concern since the number is arising. Indonesian people consume twice as much rice and less than half the number of fruit and vegetables recommended. Thus, the main concern is to make people have a balanced diet.

In order to achieve zero hunger, an increased investment of up to US\$ 267 billion per year will be needed, especially for social protection and agriculture. It is also important to acknowledge that no single country can act alone. There should be partnerships amongst governments, NGOs, academics, institutions and countries. Moreover, each country has

different characteristics, therefore, it is impossible to use the same approach with every country when it comes to tackling these issues. On top of that, innovation, scaling up and implementation is important to achieving zero hunger.

Basically, as one of the UN agencies who works with the government to build their countries land in food security and nutrition, WFP promotes public-private partnerships, not only partnerships amongst governments, through the "Scaling Up Nutrition (SUN)" movement. This is a platform which consists of business networks, UN agencies, NGOs and government officials who all have concerns about nutrition. They cooperate so as to strengthen the political commitments and accountability for those commitments through voluntary membership of SUN Countries and to SUN Networks in improving the nutrition of children across the globe. WFP will focus their advocacy on 1) emergency preparedness, so that all of the development achievement cannot be washed away due to an unforeseen disaster. As a consequence, the government would be ready for any type of disaster; 2) governmental social protection, therefore, the cash transfers to poor people can be utilized to buy nutritious foods instead of instant food and 3) promoting a balanced diet, especially in Indonesia, to tackle the burden of malnutrition.

Once hunger occurs, it no longer merely involves the health sector. Ensuring that cross sectoral approaches can be used when addressing these issue becomes challenging challenge. The challenge is not only about coordination, but also about access. In man-made-conflict countries, like Yemen or Syria, they have limited access to the people who they are trying to deliver food to. Another challenge is picking commodities, since some countries, especially where there is man-made-conflict, have implemented restrictions on importing certain types of.

In case of a natural disaster, WFP provides support for the country if the government asks for their assistance. They highly respect the government sovereignty. During the Palu earthquake, WFP assisted the government of Indonesia with the logistics. In this disaster, WFP did not provide food, since food had already been supplied by an array of governments, charities, NGOs, private sector businesses, etc. However, there was a logistic issue in which some supplies were stuck at the airport or port. So, the WFP provided support to transport these supplies to the warehouses and distribute them to the people who needed them. In case of a large crisis, just like the tsunami in Aceh or the Yogyakarta earthquake, WFP is always ready to provide assistance, so long as the government accepts their assistance in term of foods, cash and vouchers, for those affected.

When it comes to reporting a countries' condition, WFP has a committee of food security (CFS), where the leaders from FAO and WFP country members gather and report on their latest situations, the number of people who are suffering from hunger, food insecurity and nutritional problems.

About SEAMEO RECFON

SEAMEO RECFON is a regional organization which was constructed by the Southeast Asian Ministers of Education Organization, having education, research and community development mandates, in the field of food and nutrition in the Southeast Asian Region.

SEAMEO RECFON was established in 1967 as SEAMEO TROPMED Regional Centre for Community Nutrition and was transformed into the Regional Centre for Food and Nutrition in 2011. It is one of twenty-four SEAMEO Centers located throughout the SEA region. It is a unit hosted by the Ministry of Education and Culture RI and is located in Universitas Indonesia, Jakarta, with a mission to conduct education, capacity building, research and information dissemination in food and nutrition, through partnership for sustainable human resource development.

As of today, over three thousand alumni working in nutrition, health, agriculture, education and other related disciplines from SEA countries and beyond, have been exposed to and are benefiting from the Center's program and activities.

Four years ago, the Centre's strategic focus shifted to school students from pre-elementary to high school. SEAMEO RECFON's main program in this five year development plan is "Nutrition Goes To School" and "Early Childhood Care, Nutrition, and Education."

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