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# HEALTHY PEOPLE DEPEND ON HEALTHY FOOD SYSTEMS

Sustainable Food Systems for Food Security and Nutrition World Food Day • 16 October 2013



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## HEALTHY PEOPLE DEPEND ON HEALTHY FOOD SYSTEMS WORLD FOOD DAY 16 OCTOBER 2013

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
REGIONAL OFFICE FOR ASIA AND THE PACIFIC
BANGKOK, 2014



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### SUSTAINABLE FOOD SYSTEMS FOR FOOD SECURITY AND NUTRITION WORLD FOOD DAY 2013 THEME



#### Healthy people depend on healthy food systems

Malnourished women are more likely to give birth to smaller babies, who start life with a higher risk of physical and cognitive impairment. In fact, maternal malnutrition is one of the main ways that poverty is transmitted from generation to generation.

At the same time, obese parents may suffer from vitamin deficiencies themselves and their children may be stunted because of low birth weight and poor care and feeding practices. Stunted children may even have a greater risk of developing obesity and related diseases in adulthood. Most countries in the world face many types of malnutrition.

The cost to the global economy caused by malnutrition – as a result of lost productivity and direct health care costs – could account for as much as 5 percent of global income. That is equivalent to US\$3.5 trillion per year or US\$500 per person.

Wiping out malnutrition worldwide is a daunting challenge, but the return on investment would be high. If the global community invested US\$1.2 billion per year for five years on

reducing micronutrient deficiencies, for example, the results would be better health, fewer child deaths and increased future earnings. It would generate annual gains worth US\$15.3 billion – a benefit-to-cost ratio of almost 13 to 1.

#### The importance of 'food systems'

A food system is made up of the environment, people, institutions and processes by which agricultural products are produced, processed and brought to consumers. Every aspect of the food system has an effect on the final availability and accessibility of diverse, nutritious foods – and therefore on consumers' ability to choose healthy diets.



Of course, there are other factors, too: household income, prices, and consumer knowledge, for example.

What is more, policies and interventions on food systems are rarely designed with nutrition as their primary objective. Even when they are, impacts are difficult to attribute and researchers sometimes conclude that food system interventions are ineffective in reducing malnutrition. In contrast, the effectiveness of medical actions – such as giving vitamin supplements, which address specific nutrient deficiencies – is more easily observed.

But medical interventions cannot substitute in the long term for the broader nutritional benefits offered by healthy, balanced diets from a well-functioning food system.

#### Impact of environmental degradation

Agriculture depends heavily on natural resources. It can cause environmental harm, but it can also provide environmental benefits.

Agriculture is a dominant force behind many environmental threats, including climate change, land scarcity and degradation, freshwater scarcity, biodiversity loss, degradation of forest and fishery resources, and contamination from agricultural chemicals. The crop and livestock sectors use 70 percent of freshwater resources and, together with forestry, occupy 60 percent of the Earth's land surface. Livestock alone uses 80 percent of global crop and pasture area.

Oceans cover 70 percent of the planet's surface and sustain fisheries and aquaculture, and aquaculture accounts for a growing share of land and freshwater use.

Approximately 60 percent of the world's ecosystems are degraded or used unsustainably, which poses serious threats to food security and nutrition.

#### Addressing malnutrition takes integrated action

The immediate causes of malnutrition are complex. They include:

- inadequate availability of (and access to) safe, diverse, nutritious food;
- lack of access to clean water, sanitation and health care; and
- inappropriate child feeding and adult dietary choices.

The root causes of malnutrition are even more complex and encompass the broader economic, social, political, cultural and physical environment. Addressing malnutrition, therefore, requires integrated action and complementary interventions in agriculture and the food system, in natural resource management, in public health and education, and in broader policy domains. Because the necessary actions typically involve several government institutions, high-level political support is needed to motivate a coordinated effort.

#### Producing more food: good, but not enough

Higher productivity in agriculture contributes to better nutrition by raising incomes – especially in countries where agriculture accounts for a large share of the economy and employment – and by reducing the cost of food for all consumers. It is important to realize, though, that the impact of agricultural growth is slow and may not be enough to bring about a rapid reduction in malnutrition.

Steady increases in agricultural productivity will continue to be crucial in the coming decades: production of basic staple foods will need to increase by 60 percent to meet the expected growth in demand.

But healthy diets are more than staple foods. They are diverse, containing a balanced and adequate combination of energy and nutrients.

For these reasons, the priorities for agricultural research and development must become more nutrition-sensitive, with a stronger focus on nutrient-dense foods such as fruits, vegetables, legumes and animal-source foods. Greater efforts must be directed towards interventions that diversify what small-scale farmers produce – with integrated farming systems, for example.

Another promising area of work involves raising the micronutrient content of staple foods – either through "biofortification", or by encouraging the use of varieties with higher nutrient content, or by taking a second look at underutilized, nutrient-rich staple crop species.

Interventions involving agriculture are generally more effective when combined with nutrition education and implemented with sensitivity to the different gender roles.



#### Consumer choice and behaviour change

Making systems more nutrition-enhancing so that food is available, accessible, diverse and nutritious is key, but so is the need to help consumers make healthy dietary choices.

Promoting behaviour change through nutrition education and information campaigns – while also addressing household sanitation and ensuring appropriate foods for all ages and life stages, particularly the first 1 000 days – has proved effective. Even in locations where undernutrition and micronutrient deficiencies persist as the primary problems, it is important to also act to prevent a rise in overweight and obesity, especially in the long run. Behaviour change can also reduce waste and contribute to the sustainable use of resources.

#### Supply chain pros and cons

Traditional and modern food systems coexist and evolve as economies grow and urbanization increases.

Modern supply chains integrate storage, distribution and retailing – and offer efficiency gains that can lead to lower prices for consumers and higher incomes for farmers.

Processing and packaging of nutrient-dense but highly perishable foods like milk, vegetables and fruit can make a variety of nutritious foods more available and affordable to consumers yearround. On the other hand, highly processed, energy-dense foods may contribute to overweight and obesity when consumed in excess.

Modern food processing and distribution also offer opportunities for the use of fortified foods, which can make important contributions to nutrition.

Although supermarkets are spreading rapidly in low-income countries, most poor consumers in rural and urban areas still buy most of their food through traditional food distribution networks. These traditional outlets are the primary channel for nutrient-rich foods such as fresh fruits and vegetables and livestock products, although they increasingly carry processed and packaged foods, too. The use of traditional retail outlets for distributing fortified foods such as iodized salt is another proven strategy for improving nutritional outcomes.





Improved sanitation, food handling, and storage technologies in traditional food systems could boost efficiency and improve the safety and nutritional quality of foods. Reducing food and nutrient losses and waste throughout food systems could make important contributions to better nutrition and relieve pressure on productive resources.

#### International nutrition conference

The "International Conference on Nutrition 2" will take place in Rome from 19 to 21 November 2014. The Conference will review progress made since the previous nutrition conference in 1992, and tackle the challenges and opportunities for improving nutrition in a new global environment. ICN2 will explore how governments and others can better work together to address the multiple burdens of malnutrition, and offer a forum for sharing practical tools, guidelines and experiences in improving nutritional outcomes. Organized by FAO and WHO, this high-level ministerial conference will seek to propose a flexible policy framework to meet the major nutrition challenges of the next decades.

#### Institutional and policy environment for nutrition

Some countries have achieved significant reductions in malnutrition in recent decades. But progress has been uneven and there is a pressing need to make better use of the food system for improved nutrition.

Malnutrition and its underlying causes are complex. This means that the most effective approaches will involve multiple sectors and a range of different actors. Such an approach – with effective planning, coordination and collaboration – requires better governance, based on sound data, a common vision and, above all, political leadership.



I am pleased to address this 2013 Asia-Pacific World Food Day celebration. This year's theme – Sustainable Food Systems for Food Security and Nutrition – is well chosen as sustainable food systems play an important role in contributing to the health and nutrition of populations. A food system is made up of the environment, people, institution and processes by which agriculture products are produced, processed and brought to consumers. Every aspect of the food system has an effect on the final availability and accessibility of diverse, nutritious foods – and therefore on consumers' ability to choose healthy diets.

The proportion of people suffering from chronic malnutrition or lack of sufficient calorie intake has declined in the last sixty or so years from a figure of about 50 percent in 1947 to about 12.5 percent according to FAO's latest estimates. Though this is a remarkable achievement, it is not nearly enough. Today, 868 million people in the world still do not have enough to eat. Moreover, this figure represents only a fraction of the global burden of malnutrition. An estimated 26 percent of the world's children are stunted, 2 billion people suffer from one or more micronutrient deficiencies and 1.4 billion people are overweight. Malnutrition in all its forms imposes unacceptably high costs on society in human and economic terms.

The immediate causes of hunger and malnutrition are complex and multidimensional. They include inadequate availability and access to safe, diverse and nutritious food; lack of access

to clean water, sanitation and health care; inappropriate child feeding; and poor adult dietary choices. The root causes of malnutrition are even more complex and encompass the broader economic, social, political, cultural and physical environment. Addressing hunger and malnutrition, therefore, requires a multi-sectoral approach with integrated action and complementary interventions in various sectors such as agriculture and food systems in general, public health and education and in broader policy domains. As interventions need to cut across ministries, government institutions and agencies, high level political support is crucial to facilitate coordination for enabling results.

While the nature and causes of malnutrition are complex, the common causes of all types of malnutrition are inappropriate food and diet – the base of which is the food system. At the most basic level, food systems determine or impact the quantity, quality, safety, diversity and nutritional content of food available for consumption.



It is well recognized that there is no single food system, but a multiplicity of food systems which are dynamic and in a state of constant change. The systems are becoming increasingly larger and more complex – from a simple system of subsistence-based agriculture to an entirely commercialized food chain. Increased urbanization has led to the emergence of a growing retail sector including fast food restaurants, street foods, hawker centres and organized retail outlets such as super and hyper-markets with a high concentration of ready-to-eat foods, which along with an unhealthy lifestyle may contribute to overweight or obesity.

Various opportunities for interventions are possible within the traditional as well as modern food systems. At the production level, such interventions include appropriate selection of high nutrient cultivars such as beta-carotene rich sweet potatoes or rice rich in iron content. At the post-harvest level, interventions may include nutrient-preserving processing and storage methods. Food fortification is another possible intervention. For example, iodine fortification of common salt for preventing goitre is being done in Thailand. At the consumer level, nutritional labelling on packed foods, consumer education on the importance and role of various nutrients, food selection to maintain dietary diversity, and cooking methods that preserve nutrients are some possible interventions. Then, at every stage interventions are needed to ensure food safety aspects. All possible interventions need to be understood and carefully selected for better nutrition.



Consumer choices ultimately influence what we eat and therefore what the food system produces. Governments can influence policies, regulations, programmes, governance and even availability, but ultimately it is education and awareness which plays an important role in helping consumers make healthier choices. Thailand, in its National Food Policy and Strategy, places high priority on consumer awareness and education and will continue to do so.

Decisions about food and nutrition are often made by women and are based on culture and traditional diets. National strategies and action plans should therefore be sensitive to the role of women in the entire food chain from production to consumption.

On this important day, I would also like to highlight concerns relating to environmental sustainability in terms of the health of the ecosystem for the well-being of current and future generations. Some important aspects worth mentioning include conservation of water, appropriate waste disposal, suitable handling of chemicals as well as appropriate disposal of chemicals and packaging wastes.



On the occasion of this World Food Day 2013, I join you all in conveying the solidarity and support of the Thai people to FAO in its efforts towards ensuring food and nutrition security for all.

#### FAO Regional Representative for Asia and the Pacific

On behalf of the Director-General of FAO, José Graziano da Silva, and on my own behalf, I have the honour to welcome you all to the World Food Day Regional Observance for Asia and the Pacific 2013.



Your Royal Highness, we are especially honoured by your presence to preside over today's World Food Day celebration. On behalf of all present here, I wish to express our heartfelt gratitude.

We are also privileged by the presence of Dr Noeleen Heyzer, UN Under-Secretary-General and Executive Secretary, Economics and Social Commission for Asia and the Pacific (ESCAP) who has kindly agreed to be a keynote speaker and share with us her insights on the theme of "Sustainable Food Systems for Food Security and Nutrition". I wish to thank you Dr Heyzer for your participation, despite your busy schedule and physical difficulties.

Today we celebrate World Food Day at a time when Southeast Asia has achieved both the World Food Summit target and the MDG No.1 Hunger Goal, and reduced by half both the number and the proportion of undernourished people in 2013, two years ahead of the target date. Thailand has received an Achievement Award from the Director-General of FAO for its contribution to the remarkable progress made in improving the nutritional status of its people.



According to the latest statistics released jointly by FAO, the WFP and IFAD last month, the proportion of undernourished in Asia in 2013 declined from 14.7 percent to 13.5 percent in the past three years, and came very close to the MDG Target of 12 percent. Yes, we are on good track towards achieving the MDG Hunger Goal by 2015, which is within our reach.

However, contrary to this good news, one person in eight in the world is undernourished. One out of four children in the world under the age of five is stunted. This means 165 million children are so undernourished they will never reach their physical and intellectual potential. The situation poses even more serious concern as nearly 2 billion people or 30 percent of the world's population lack vitamins and minerals that are essential for growth and good health,

and around 1.4 billion people are overweight, of which 500 million are obese and facing risks of non-communicable diseases such as diabetes. High food prices, which remain nearly 50 percent higher in real terms than a decade ago, make poor people even more vulnerable.

While the world, at present, produces more than sufficient food to meet the needs of everyone, food systems are not sustainable nor fully functioning. For example, approximately 60 percent of the world's ecosystems are degraded or used unsustainably, and our food production depends heavily on these resource bases. Arable land area and water resources, which are essential for future expansion of food production, are stagnating or declining. Productivity growth of major staple foods such as rice and wheat have been stagnating in the past decade, which was slower than the pace of population growth. Almost one-third of food produced for human consumption is lost or wasted globally, which amounts to about 1.3 billion tonnes per year. Nearly 45 percent of vegetables and fruits, and 30 percent of cereals were lost during the supply chain after harvest. About 20–25 percent of foods are

wasted in developed countries after they are cooked and served on dining tables. Only four major staple foods – rice, wheat, maize and potato – dominate 60 percent of our total calorie intake and they are often affected by price volatility and targeted for price speculation. Loss of indigenous food resources, food diversity and biodiversity is another alarming factor which negatively affects the future sustainability of food systems.



Let's look at our future, for example the year 2050. The world's population is expected to exceed 9 billion by that time, and FAO estimates that the world has to increase food production by 60 percent by 2050 to meet the demand. FAO estimates that the world would be able to achieve this production target by 2050, on the understanding that over 90 percent of the production increases should come from existing arable land through agricultural research and yield increases. However, there are huge challenges. Declining water resources, degradation of ecosystems, stagnation of productivity growth and so on. The most critical uncertainties are the impact of climate change and biofuel development.

In the worst case scenario, it is estimated that production areas might be reduced by 29–39 percent by 2080 due to surface temperature increases. Biofuel crop production might heavily compete with food production for the use of land and water if there is no policy

to harmonize bioenergy development and protect consumers from food insecurity. In the worst case, there would be a risk of food export bans by exporting countries to protect their own consumers, food price hikes and volatility, food shortages, food riots, social instability, terrorism, etc., which would eventually affect everyone. There is a need to build mutual trust among food exporting and importing countries, and maximise the existing cooperation framework, such as ASEAN, to ensure sustainable food and nutrition security.

In conclusion, Asia and the Pacific region made good progress in achieving the MDG hunger goal and beyond, and moving towards eradicating hunger by 2025 through the implementation of the zero hunger challenge. However, malnutrition remains a serious short-term challenge and threat which requires integrated actions including biofortification, behavioural changes, advocacy, nutrition education, school gardening, sanitation, child and maternal nutrition and health care, etc. On the other hand, potential risks to food insecurity in the next 20–30 years need to be assessed and carefully analysed.

Finally, on the occasion of World Food Day, I wish to convey my gratitude to you all for your presence this morning. I wish to convey four key important messages:

- i) Good nutrition depends on healthy diets:
- ii) Sustainable diets require healthy food systems along with education, health, sanitation and other factors;
- iii) Sustainable food systems are made possible by appropriate policies, incentives and governance; and lastly
- iv) Let's work together and double our efforts towards eradicating hunger.

Thank you for your kind attention.



#### KEYNOTE ADDRESS BY THE GUEST SPEAKER

#### Noeleen Heyzer

Under-Secretary-General of the United Nations, Executive Secretary of the Economic and Social Commission for Asia and the Pacific, and Special Advisor of the United Nations Secretary-General for Timor-Leste

#### Making hunger history in Asia and the Pacific

#### Introduction

I would like to take this opportunity to express my sincere appreciation to Her Royal Highness and the FAO for this honor today, and for the chance to share with you some thoughts about food and development.





Hunger has plagued humanity since the dawn of recorded history. It has featured in every era and every civilization. It has brought empires to ruin, and societies to their knees.

In this second decade of the 21st century, we have the expertise, the technology, and the resources to feed every person, in every country. Yet there are still more than 840 million people whose lives are wracked by hunger.

This is an unforgivable development failure – and the single greatest obstacle to creating the inclusive, sustainable, and resilient future we want.

We are barely two years from the 2015 deadline to achieve the Millennium Development Goals (MDGs) – and despite all of the good progress made in reducing extreme poverty – there are still more than 535 million undernourished people in Asia and the Pacific alone.

Beating the scourge of hunger is the most basic prerequisite for development success, because inclusive growth, social equity, and sustainable development will not happen on empty stomachs.

#### A systemic approach to ending hunger

For large numbers of people in Asia and the Pacific, food security depends as much on income as it does on food availability – this is the issue of access to food, and it is especially critical for our poorest and most vulnerable groups.



Although the theme for this year's World Food Day is about improving food systems, and this will be the focus of my address, we must ensure that action to promote long-term food sustainability is complemented by measures to ensure economic, social, and physical access to food, particularly for these groups. Ensuring some protection against shocks, for example through better financial security and food provisioning to support poor households, can ensure that they avoid the worst impacts of a hand-to-mouth existence.

Longer term food insecurity and malnutrition, however, are also the results of a failure to consider food production and consumption as part of a holistic food system, which is economically, socially, and environmentally integrated.

As we look towards the need, by 2050, to feed nine billion people, we already see rising tensions between competing demands for food, water, and energy – tensions which cannot be solved by a fragmented approach.

The theme this year, "Sustainable Food Systems for Food Security and Nutrition" is a powerful reminder of the need to think and plan across all stages of food systems – from production and accessibility, to fair trade, reducing waste, social safety nets for farming populations, and even nutrition education.

Sound food systems are made up of people, the environment, institutions, and processes. My focus today is on these four areas for action, and the urgent transformative shifts they will need, in Asia and the Pacific, to ensure sustainable food systems.

#### People: Shifting to people-centred agriculture

The first shift is about making agriculture people-centred. We have already heard today about the excellent achievements of our four model farmers, and we know that smallholder agriculture accounts for up to 80 per cent of all food consumed worldwide. Yet almost every farmer I have ever met in Asia and the Pacific believes that being a farmer means being poor.



From central Asia to the Pacific, the farmers I have met share stories of marginalization and deprivation. Many have no regular access to land, water, or seeds. They lack influence over policies, and despite producing most of the food in the world, they are themselves the poorest and hungriest segment of our population.



It is morally indefensible and socially unsustainable that up to 70 percent of the hungry and malnourished are either small-scale farmers or agricultural laborers. Little wonder then that the children of farmers choose to abandon their farms in search of better opportunities.

We need to transform investment priorities and policies to make agriculture a profitable livelihood. This means investing in small farmers, empowering farmer entrepreneurs, and providing buffers against price volatility and disaster-related shocks. It means creating opportunities for income diversification, and making agricultural insurance work.

Indigenous farming methods which build adaptation to climate change must be supported, and fair access to cleaner renewable energy, technology, research, and markets must be ensured. We have ample evidence from East and Southeast Asia to show that investing in inclusive agriculture pays economic, social, and environmental dividends. Let's put people back at the heart of our food systems.

#### Environment: Shifting to eco-efficient food systems

The second critical transformation is to shift to more eco-efficient food systems and more sustainable agriculture. For too long we have pushed our planetary boundaries to increase agricultural yields — borrowing against our future to feed our present. Climate change, deforestation, biodiversity loss, and soil degradation are the price we are already paying.

One of our ESCAP regional institutes, the Centre for the Alleviation of Poverty Through Sustainable Agriculture (CAPSA), is focused on this transformation. We are helping member States to develop and apply innovations in production and processing, tapping indigenous knowledge, and promoting biodiversity in farming systems to reduce negative impacts on the environment and improve agricultural resilience.

In December this year, the FAO and CAPSA will host an expert consultation to strengthen the linkages between research and rural extension systems to foster eco-efficient practices at farm-level. At the country level, approaches adopted under green economy strategies – such as taxing environmentally harmful practices and removing subsidies on food system activities which damage the environment, are also powerful tools to achieve this transformation.

#### Processes: Addressing root causes of food losses and waste

The third important shift is to address the processes which produce staggering amounts of food loss and waste: about one third of all food produced for human consumption.

Not only is this a chance to eradicate global hunger, it is also a significant opportunity to ease the environmental pressures of food production and processing: with its massive carbon footprint, food wastage is the third largest emitter of  $CO_2$  in the world and makes immensely negative impacts on climate change, soil, water resources, and biodiversity.

In poorer countries, food losses result mainly from an absence of proper storage facilities. Significant losses are also incurred due to inadequate farm-to-market roads and transportation. In richer societies, food waste is to a large extent, a byproduct of consumption habits. Solutions therefore have to recognize these nuances.

Reducing food loss and waste should be seriously considered as one of the targets for inclusion in the Sustainable Development Goals (SDGs), but countries should also be supported to implement the strategies which best address the specific causes of these problems in their areas.

The most appropriate interventions are those which address losses and waste as symptoms of weaknesses in infrastructure, transport, and logistics, as well as through changing perceptions, mindsets, and lifestyles.



#### Institutions: Shifting to more inclusive food system institutions

The fourth and final transformation I would like to address today centres on the shifts we need in the institutions which govern our food systems.

We need transparent multi-stakeholder institutional arrangements that recognize, as equal partners in more sustainable agriculture, our governments, smallholder farmers, fishers, and rural laborers, as well as investors, consumers, civil society, and the scientific community.

It is also important to address the gender disparities which exist in our farming sectors – recognizing the expertise and empowering the voices of women farmers whose labour is often exploited without regard for equal pay, social protection, or skills development.

There is also urgent need to reform the institutions governing the international trade of agricultural products. This is especially important for our region because 25 countries in Asia and the Pacific are net importers of food. I am not arguing for protectionism but rather for fair trade and for the need to address trade distortions. The 2008 food crisis reinforced the need to strengthen regional institutional mechanisms to support each other in the event of price shocks in the international trade of agricultural products.

#### Conclusion

In conclusion, as policy-makers, political leaders, captains of industry, development champions, and even just as human beings, we share the responsibility to end hunger in our lifetime.

We are the only generation which has ever had the means to do so – and we are now presented with a window of opportunity to shape the post-2015 development agenda. But we have to act urgently to mobilize investment, science, policies, institutions, and communities.

Our legacy will be defined by how we rise to this challenge, and whether we succeed in finally making hunger history.

I thank you.





#### SITHAR DENDUP

A model farm organizer, teacher and environmentalist from Bhutan

The village of Thangbuang Tsamang in the Mongar district of mountainous Bhutan is about as remote a farming community as exists in Asia. But it is home to Sithar Dendup, a young farmer and teacher.

Sithar, who grows vegetables and teaches non-formal education, loves his village and cares about its future. He was naturally alarmed when he learned that a school-feeding programme in his area run by the World Food Programme would be phased

out in 2018. Nutrition and food security for the children of Thanguang Tsamang would surely deteriorate. Something needed to be done.

Fortunately, FAO came to his village with the idea of establishing one of its Farm to School projects. As a farmer and a teacher, Sithar was all for the idea. And the idea was to sustain the school-feeding programme by involving the community in producing enough food for the children.

That sounds easier than it was. Most of the village's farmers, working on their own, toiled long and hard and were rewarded with low yields and poor quality vegetables. Most farmers produced just enough for themselves and their families. There was no surplus to sell at markets or for the schools

Sithar saw a better way. If they worked together, he reasoned, they could pool their labour and improve quantity and quality.

With constant encouragement and coordination from Sithar, the villagers formed a Farmers Group and began working communally on 25-acres of soil, growing a wider variety of vegetables than ever before. They also cultivated rice and planted fruit trees for better diet, nutrition and food security.

Water is scarce in Tsamang village, so Sithar led an effort to lay irrigation pipes to the communal farm. Yields and quality immediately began to improve.

The farmers began selling some of the surplus at markets. But they made sure to also supply vegetables at far lower cost to the Tsamang Primary School and its 130 students.

Sithar says the key to maintaining their cooperation is the children. They are the future. And it is a future looking increasingly bright and sustainable thanks to the hard work and leadership of Sithar Dendup.





#### MYRNA CONMIGO ASOR

A model organic farmer, entrepreneur and trainer from the Philippines

Farmers depend upon the cycle of the seasons to sow their fields, harvest their crops and replenish the soil. But there is another cycle – a vicious cycle – which farmers are all too familiar with: the cycle of debt.

For 35 years, Myrna Conmigo Asor of Goa district in the Philippines was a typical tenant farmer. She worked hard, she was honest, she put food on the table for her six children and sent them to school. And she was always in debt. But Myrna

Asor was not a typical woman.

In 2002, members of a non-governmental organization came to her small village of Digdigon in the foothills of Mount Isarog on the island of Luzon. They came to promote organic farming. Some of her neighbours were reluctant to take the risk. What if it doesn't work, they asked. Myrna Asor asked a different question. What if we had no debt?

With help from an NGO, extension workers of a local government unit and technical staff from the Department of Agriculture, Myrna learned how to make her own natural fertilizer, create a seed bank and apply integrated pest management. She abandoned mono cropping in favour of diversifying her farm so she could be self-sufficient.

At first, it wasn't easy. Initially, yields were low. But Myrna did not give up. Before long, her 5-hectare farm was producing a bounty of organic rice, vegetables and fruits. She also processes other farm products into pili pulp oil fermented juices. She tends cattle, goats and fish. All without borrowing even one Philippine peso. Today, she and her family are debt free.

"She is a model for every farmer and the pride of our district," says Goa Mayor Engineer Antero S. Lim.

No business can survive for long – whether it is a corporation or a farm – under the crushing weight of debt. Sustainable farming means profitable farming that nurtures as well as takes from the land. Any fertilizer or pesticide salesperson will tell you that organic farming simply cannot compete with quote-unquote modern farming. It can. Myrna Asor is living proof of that.





#### JARUN JAROENSAB

A model farmer in developing good agricultural and environmental practices from Thailand

Successful farmers are often those are who are industrious, committed and clever. Jarun Jaroensap of Thailand is exactly that type of person.

From the time he was a child in western Ratchaburi province, Jarun wanted to be a farmer. But, as a teenager, he decided a career as a civil servant would be more financially stable. There was just one problem: his parents could not afford to send him to university because their five-rai farm had

saddled them with debt.

Turning back to his childhood dream, Jarun was determined to succeed. His instinct told him there had to be a way to farm free from debt. He did some research and found a book by Thailand's King Bhumibol Adjulyadej on his Sufficiency Theory of farming.

Jarun thought these were great ideas. But he did not know how to put them into practice. So, he turned to Kasetsart University and the Department of Agriculture.

At first, using organic methods, yields were low. "It was hard," Jarun says, "and many of my neighbours gave up."

But not Jarun. Jarun needed to make wiser choices about what to grow and sell.

So, Jarun went to work for one of Thailand's largest agro-industrial companies. With no degree, however, he could only get a job as a janitor. But Jarun, industrious and clever, made the most of it. He watched. He listened. He learned. After three months he quit his janitor job, went back to his farm and started growing organic asparagus and baby corn. Then he took his produce to sell at a market just north of Bangkok.

It wasn't long before buyers discovered Jarun's high-quality organic vegetables. His problem now is growing enough to meet demand, even though his farm has expanded to 30 rai.

Now Jarun trains other farmers. And, he finally put himself through university, earning a degree in political administration. Jarun says he has no desire to be a politician. "I just want to understand how to make government work better for farmers," he says.

That's not a bad goal, or list of achievements, for a former janitor.





#### MALIA SOSEFO GUTTENBEIL

A model agricultural entrepreneur and leader of women's handicraft groups from Tonga

Mrs Malia Guttenbeil was more than a bit surprised when she was named one of FAO's model farmers. That's because Malia is not one to boast of her accomplishments. She has achieved much and is a strong advocate for women, but she is an extremely modest farmer.

Known as Tae to her neighbours on the Pacific Island nation of Tonga, Malia was not born into a farming family and did not work on a farm early in life. She was employed in

a general store doing a variety of jobs including keeping the books. "I'm not that clever," she insists. But she learned a lot about business, and that would help her later on.

It was while working in a shop that she met her husband. The couple thought they would remain shopkeepers. But in the mid 1980s, a relative alerted them to an opportunity and urged Malia and her husband to invest in a vanilla farm and start buying and processing vanilla from other farmers for export.

They rented a small farm near the village of Vava'u and grew vanilla. Soon, through Malia's entrepreneurial skills, they made the right connections and were exporting tonnes of vanilla to New Zealand and Australia.

Having found success with vanilla processing and export, the Guttenbeils expanded into kava, which is used for medicinal purposes in many countries. The results were similar.

Malia's role in her family's business was somewhat unusual. Malia wanted to find a way to give more women, particularly housewives, opportunities for making income. Through her business connections, she realized that Tongans living overseas wanted to buy the handwoven Tongan mats used as garments in traditional ceremonies such as weddings and funerals.

Malia organized groups of housewives to weave the mats for sale and export. She encourages the women and shows them how to keep the quality of what they weave high. Through the sale of these mats, a significant number of women in Vava'u and other villages have seen their incomes and family food security improve.

"Vava'u is a paradise," Malia says. And through the opportunities she is providing for women, she is working to see that it stays that way.

## ANNEXES



The following is a list of selected guests who attended the regional observance of the 33<sup>rd</sup> World Food Day at the FAO Regional Office for Asia and the Pacific on 16 October 2013.

#### Guest of Honour

Her Royal Highness Princess Maha Chakri Sirindhorn

#### Guest speaker

Dr Noeleen Heyzer, UN Under-Secretary-General and Executive Secretary of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

#### Model farmers

Sithar Dendup, model farm organizer, teacher and environmentalist, Bhutan

Myrna Conmigo Asor, model organic farmer, entrepreneur and trainer, Philippines

Jarun Jaroensab, model farmer in developing good agricultural and environmental practices,
Thailand

Malia Sosefo Guttenbeil, model agricultural entrepreneur and leader of women's handicraft groups, Tonga

#### Office of the Privy Councillors

H.E. Ampol Senanarong, Privy Councillor (for Royal Agricultural Project)

#### **E**mbassies

Bhutan H.E. Kesang Wangdi, Ambassador Extraordinary and

Plenipotentiary

Sonam Phuntsho, Counsellor

Brazil H.E. Paulo Cesar Meira de Vasconcellos, Ambassador

Extraordinary and Plenipotentiary

Germany Ingo Winkelmann, Minister and Deputy Head of Mission

Holy See Rev. Fr. Carlo Velardo, Local Attaché India Prashant Agrawal, Chargé d'Affaires Japan Tetsuya Murakami, First Secretary

Uichiro Nakano, Second Secretary

Chanyapach Unhajata, Political Assistant

Korea, DPR Kim Jae Hon, Counsellor and Permanent Representative to

**UNESCAP** 

Jong Song Gap, Counsellor and Deputy Permanent

Representative to UNESCAP

Lao PDR Thipphavong Vongphosy, Second Secretary

Mongolia H.E. Battumur Chimeddorj, Ambassador Extraordinary and

Plenipotentiary

Philippines Edgar Barrairo Badajos, Minister, Consul General and Deputy

Permanent Representative to UNESCAP

Russian Federation Sergey Nesyaev, Deputy Trade Representative

Sri Lanka H.E. General Suwanda H. Shantha Kottegoda, Ambassador

Extraordinary and Plenipotentiary

Switzerland H.E. Christine Schraner Burgener, Ambassador Extraordinary and

Plenipotentiary

Timor-Leste Francisco Dionisio Fernandes, Chargé d'Affaires

United States of America Rey S. Santella, Attaché (Foreign Agricultural Affairs)

#### Royal Thai Government

#### Ministry of Agriculture and Cooperatives

H.E. Yukol Limlamthong, Minister for Agriculture and Cooperatives

Chalit Damrongsak, Deputy Permanent Secretary, and Secretary-General, National FAO Committee

Lersak Rewtarkulpaiboon, Deputy Permanent Secretary

Narumol Sanguanvong, Director, Bureau of Foreign Agricultural Affairs and Assistant Secretary-General, National FAO Committee, Office of the Permanent Secretary

Siriporn Thanarachataphum, Policy and Plan Analyst, Bureau of Foreign Agricultural Affairs, Office of the Permanent Secretary

Teeraporn Wongchokprasit, Policy and Plan Analyst, Bureau of Foreign Agricultural Affairs, Office of the Permanent Secretary

Sumalee Wittanayun, Senior Administration Officer, Bureau of Foreign Agricultural Affairs, Office of the Permanent Secretary

Peeraphan Korthong, Director, Agricultural Information Division, Office of the Permanent Secretary

Dumrong Jirasutas, Director-General, Department of Agriculture

Thammarat Thongmee, Researcher, Department of Agriculture

Orasa Dissataporn, Expert, Vegetable, Flower and Herbal Crop Promotion and Management, Department of Agricultural Extension

Sunisa Boonyapatipark, Foreign Relation Sub-Division, Planning Division, Department of Agricultural Extension

Lawan Jeerapong, Department of Agricultural Extension

Somchai Charnnarongkul, Director-General, Cooperative Promotion Department

Arpaphan Pattanapant, Director, International Cooperation Sub-Bureau, Agricultural Land Reform Office

Surutwadee Pak-Uthai, Land Reform Technical Officer, Agricultural Land Reform Office

Samorn Soseepa, Foreign Relations Officer, Agricultural Land Reform Office

Pranee Kamlungcharoen, Senior Foreign Relations Officer, Department of Fisheries

Wimolporn Thitisak, Deputy Director-General, Department of Livestock Development

Nachai Sarataphan, Senior Veterinary Officer, Bureau of Biotechnology and Animal Production, Department of Livestock Development

Chanpithya Shimphalee, Director-General, Department of Rice

Sudarat Vajragupta Laovichaya, Deputy Director-General, Department of Sericulture

Ampawan Khamhomkul, Administration Officer, Department of Sericulture

Sakchai Sriboonsue, Secretary-General, National Bureau of Agricultural Commodity and Food Standards

Chatchai Prathummal, Human Resources Officer, National Bureau of Agricultural Commodity and Food Standards

Thitipong Srisombat, Economist, Office of Agricultural Economics

Winda Liamsombat, Office of Agricultural Economics

#### Universities and research institutions

Rome Chiranukrom, Vice President for International Relations and Alumni Affairs, Chiang Mai University

Warunee Thanapase, Director, Kasetsart Agricultural and Agro-Industrial Product Improvement Institute, Kasetsart University

Pilanee Vaithanaomsat, Deputy Director, Kasetsart Agricultural and Agro-Industrial Product Improvement Institute, Kasetsart University

Siriporn Tanjor, Researcher, Institute of Food Research and Product Development (IFRPD), Kasetsart University

Sakarindr Bhumiratana, President, King Mongkut's University of Technology Thonburi

Kampanad Bhaktikul, Dean, Faculty of Environment and Resources Studies, Mahidol University

Kraisid Tontisirin, Senior Adviser, Institute of Nutrition, Mahidol University

Rosarin Smitabhindu, The Royal Chitralada Projects

Boonsom Siribumrungsukha, Advisor to the President for Budget, Prince of Songkhla University

#### Other ministries, organizations, non-governmental organizations and associations

Chutintorn Gongsakdi, Director-General, Department of International Economic Affairs, Ministry of Foreign Affairs

Vongsak Swasdipanich, Vice Minister for Interior, Ministry of Interior

Thalearngsak Noodprahan, Secretary to Vice Minister for Interior, Ministry of Interior

Sithichai Jindaluang, Department of Local Administration, Ministry of Interior

Surapol Pattanee, Deputy Permanent Secretary, Ministry of Natural Resources and Environment

Supot Jemsawatdipong, Director-General, Department of Groundwater Resources, Ministry of Natural Resources and Environment

Aranya Fuangswasdi, Director, Bureau of Groundwater Investigation and Assessment, Department of Groundwater Resources, Ministry of Natural Resources and Environment

Surat Kanjanakunchon, Director, Planning and Information Technology Bureau, Royal Forestry Department, Ministry of Natural Resources and Environment

Chitra Settaudom, Senior Advisor in Standards of Health Products, Food and Drug Administration, Ministry of Public Health

Anusorn Kraiwatnussorn, Vice Minister for Social Development and Human Security, Ministry of Social Development and Human Security

Arkapong Srisubat, Chief, Foreign Affairs Coordination Group, Department of Social Development and Welfare, Ministry of Social Development and Human Security

Alisara Krungchit, Social Worker, Foreign Affairs Coordination Group, Department of Social Development and Welfare, Ministry of Social Development and Human Security

Pathompong Pongburanakit, Social Development Worker, Foreign Affairs Co-ordination Group, Department of Social Development and Welfare, Ministry of Social Development and Human Security

Laksamee Chatputtiphong, Secretary to Vice Minister for Social Development and Human Security, Ministry of Social Development and Human Security

Busba Vrakornvorawut, Committee on Human Rights, Rights and Liberties and Consumer Protection, The Senate of Thailand

Pattama Vongratanavichit, Development Officer, Canadian International Development Agency (CIDA)

Rebeca Andong, Regional Programme Coordinator, CORIN-Asia Foundation

Anshuman Saikia, Regional Programme Support Coordinator, International Union for Conservation of Nature (IUCN) Asia Regional Office

Vina Churdboonchart, Vice President, The National Council of Women of Thailand

Tuangrat Siriyong, Board Member, The National Council of Women of Thailand

Eduardo M. Leano, Coordinator of Aquatic Animal Health Programme, Network of Aquaculture Centres in Asia-Pacific (NACA)

Simon Wilkinson, Coordinator, Communication of NACA, Network of Aquaculture Centres in Asia-Pacific (NACA)

Yuan Derun, Education and Training Programme Manager, Network of Aquaculture Centres in Asia-Pacific (NACA)

Suntaree Rangkusone, Country Director, Oxfam

Wolfgang Frank, Senior Advisor, Population and Community Development Association (PDA)

Caroline Liou, Communication Manager, Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC)

Phinyada Atchatavivan, Partnership Officer, Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC)

Chumnarn Pongsri, Secretary-General, Southeast Asian Fisheries Development Center (SEAFDEC)

Michael Yates, Regional Mission Director, U.S. Agency for International Development (USAID), Regional Development Mission in Asia

#### **UN** and affiliated agencies

ADB Georges Heinen, Senior Advisor, ADB Thailand Resident Mission

IOM/RO Andrew R. Bruce, Regional Director for Asia and the Pacific

UNCCD Yang Youlin, Officer-in-Charge
UNESCO Wang Libing, Chief APEID Unit

UN-HABITAT Mariko Sato, Head, Subregional Office in Bangkok

UNHCR François Marrillet, Senior Programme Officer

UNIDO Chin-Pen Chua, Representative and Director of Regional Office in Thailand

UNISDR Tomoko Takeda

WFP Kenro Oshidari, Regional Director

WHO Yonas Tegegn, WHO Representative to Thailand

#### Officers accompanying the model farmers

Aloha Gigi Bañaria, Philippines
Antero S. Lim, Philippines
Seree Akathimakool, Thailand
Prasoot Hombanterng, Thailand
Chairat Maneechan, Thailand
Somsak Maneechan, Thailand
Hamman James Guttenbeil, Tonga





#### Steering committee

Hiroyuki Konuma, Assistant Director-General and Regional Representative (Chairperson)

Vili Fuavao, Deputy Regional Representative Adnan Quereshi, Senior Administrative Officer Shashi Sareen, Senior Food Safety and Nutrition Officer

Tarina Ayazi, Meetings and Publications Officer/Secretary Ad Interim

#### Organizing committees

#### Invitations, reception and protocol

Vili Fuavao (Chairperson)

Tarina Ayazi Supajit Tienpati

Kanokporn Chansomritkul

Alisa Wacharasetkul (Master of Ceremony)

Robert Lee (Citations of farmers)

#### Monpilai Youyen

Ornusa Petchkul

#### Vishnu Songkitti

Kallaya Meechantra Yupaporn Simuang-ngam Thapanee Tayanuwattana Suvinita Malakul Na Ayudhaya Thumrongsakd Phonbumrung Chanrit Uawongkun

#### Chutarat Damrongsrisakul

Sunee Hormjunya
Thansita Thanaphatrujira
Sarinna Sunkphayung
Waraporn Onnom
Natthawit Wongkheeree
Sakhanan Rattanarungsun

#### Thanomkwan Rachtachart

Bongkoch Prasanakarn Kanyarat Singhaphan Chatchai Intachai Sucharat Tong-On Khwanchanok Rueangkham Nataporn Theppitak

#### Liaison with model farmers

Jhongsathit Aungvitayatorn

Tarina Ayazi (Chairperson Ad Interim)

Bhutan: Andrew Sobey

Philippines: Cristina Sriratana Thailand: Parijat Chuntaketta

Tonga: Daniele Salvini

#### Liaison with Thai government

Vili Fuavao (Chairperson) Kasem Prasutsangchan Parijat Chuntaketta Surawishaya Paralokanon

#### Logistics and catering

Adnan Quereshi (Chairperson)
Kevin McKeen
Phavinee Tithipan
Kasarin Sirisoondhornpaibul
Suthep Charoenbutra
Pensri Yujang
Jaruwan Singhapanthu
Prasert Huatsawat
Kasem Prasutsangchan

#### Media, publications and photographs

John Riddle (Chairperson Ad Interim)
Kanokporn Chansomritkul
Pornsiri Kosiri-aksorn (consultant)
Robert Horn (journalist consultant)
Apisak Thuleewan (photographer)
Somchai Umnuaywerojn (photographer)

## ANNEX 4 Publications distributed

- WFD issues paper
- Address by guest of honour
- Keynote address by the guest speaker
- Welcome and introductory statement by the ADG/RR
- Citations of outstanding farmers
- Harvesting Results Asia-Pacific
- CD-ROM of RAP publications from 2011 to 2012 and selected publications from 2002 to 2012

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