



Achieving
FOOD SECURITY
in times of crisis



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Achieving food security in times of crisis

At a time when the global economic crisis dominates the news, the world needs to be reminded that not everyone works in offices and factories. The crisis is stalking the small-scale farms and rural areas of the world, where 70 percent of the world's hungry live and work.

The situation in rural areas in developing countries is dire, coming in the wake of the surge in food and fuel prices in 2007-2008. This second crisis is hitting the poor while they are down. Money sent home from relatives working in the city or abroad has declined as unemployment bites. In small agricultural villages, the poor have already exhausted their savings to buy food.

The global economic crisis dominates the news and dominates government agendas. Trillions of dollars are being spent to resuscitate wealthy economies, but who will bail out the poor?

This paper explores how the economic crisis is affecting developing countries, how they can protect the most vulnerable from hunger and how investment could shockproof the agriculture sector against future crises and even enable poor farmers to profit from higher food prices. This is not the world's first recession. There are lessons to be learned from how countries defended food security during past shocks in order to be better prepared for tomorrow.

Food crisis and financial crisis

The FAO food price index rose, on average, by 52 percent from mid-2007 to mid-2008. The number of hungry in the world increased by 75 million in 2007. Then, in July 2008, food prices began to decline. The downward trend should not be interpreted as the end of the food crisis. Global cereal prices are still more than 63 percent higher than they were in 2005, according to the International Monetary Fund. The same factors that caused the food crisis in the first place are still present:

- * Agricultural productivity is low.
- * The population growth rate is still high in many of the most food insecure countries.
- * Water availability and land tenure are significant problems.
- * The frequency of floods and droughts is above long-term averages.
- * Investments in agricultural research and development are much lower than what is

World Food Day/TeleFood 2009 theme

recommended by experts and are not directed toward the most important crops for the poor.

After the food price crisis came the global economic slump. Because the slump led to reduced wages and employment, the poor are now facing two simultaneous crises.

To make matters worse, many of the coping mechanisms used by the poor to deal with the food crisis have already reached their limits. For example, selling assets to moderate a fall in consumption is now difficult because many assets have already been sold. Migration is more difficult because the developed countries are facing their own slump. Borrowing to finance consumption is hampered by tighter credit markets.

A slowdown in foreign direct investment and declining exports of primary commodities are expected to increase unemployment in poor countries. The economic outlook of the rich countries is such that development support and humanitarian assistance are expected to decline.

In 2008, officially recorded remittances accounted for around US\$300 billion, or two percent of the Gross Domestic Product of developing countries as a group, according to the World Bank. The economic slowdown, particularly in the construction and manufacturing sectors - traditionally major employers of immigrant workers - means a sharp decline in remittances sent home to poor families in both rural and urban settings.

Protecting the most vulnerable

Apart from longer-term development assistance to agriculture, which will be examined below, it is clear that the most vulnerable members of society need help now. The following review of public policy interventions illustrates that even in times of crisis, people can be saved from the worst effects of hunger and malnutrition.

- * The first step in reaching the hungry is to know their identity, location and situation. Food

price monitoring helps governments to keep tabs on hunger hotspots both within countries and communities. Safety nets can then catch the most vulnerable. Options include food distribution programmes, cash transfer schemes, various feeding programmes and employment schemes.

- * Social programmes for the hungry must be designed carefully to suit the circumstances. For example, cash transfers or food stamps improve access to food where food markets work and where improved ability to purchase food is the objective. If food markets are not working well, as in remote or war-torn areas, direct food aid or "food for work" might be appropriate.

- * "Productive safety nets" can also play an important role. For example, in Malawi and Ethiopia, subsidies for seeds and fertilizer and innovative approaches to crop insurance have become part of social protection.

- * A country that experiences a growth slow-down of 4 percent due to the crisis can expect up to a 2 percent increase in child malnutrition. In order to fight micronutrient deficiencies in children and other vulnerable groups like pregnant or lactating women, food programmes should try to maintain or improve dietary diversity, or even distribute micronutrient supplements or fortified foods. Older children may need school feeding programmes. Longer-term measures include supporting small-scale food industries to produce quality weaning food; supporting and promoting breastfeeding; providing adequate nutrition education and monitoring children's growth.

Investing in agriculture

Global cereal production in 2008 reached a record high of an estimated 2 245 million tonnes, enough to cover annual projected needs and to allow a modest replenishment of world stocks. However, the increase was accomplished by the developed countries. In response to more attractive prices, they increased their cereal output by 11 percent. The developing countries, by contrast, only recorded an increase of 1.1 percent. In fact, if we exclude China, India and Brazil from the group, production in the rest of the developing world actually fell by 0.8 percent.

The poorest and most food-insecure farmers, who most needed to profit from higher cereal prices, could not respond to the opportunity and expand production because of lack of access to

inputs or marketing opportunities.

FAO calculates that agriculture in developing countries needs US\$30 billion a year in investment to help farmers. Such a level of investment is needed to achieve the 1996 World Food Summit goal of reducing the number of hungry people by half by 2015. That amount is low when contrasted with US\$365 billion spent in 2007 to support agriculture in the rich countries, US\$1 340 billion spent by the world each year on armaments and trillions of dollars found in short order in 2008-2009 to prop up the financial sector.

Investments of US\$30 billion a year would generate an overall annual benefit of US\$120 billion. This would:

- * improve agricultural productivity and enhance livelihoods and food security in poor rural communities;
- * develop and conserve natural resources;
- * expand and improve rural infrastructure and broaden market access;
- * strengthen capacity for knowledge generation and dissemination;
- * ensure access to food for the most needy through safety nets and other direct assistance.

Both public and private investments are needed, more specifically through targeted public investment to encourage and facilitate private investment, especially by farmers themselves. For example, a new public road in a fertile region makes private investments profitable in that same region.

With an estimated increase of 105 million hungry people in 2009, there are now 1.02 billion malnourished people in the world, meaning that almost one sixth of all humanity is suffering from hunger.

On the occasion of World Food Week and World Food Day 2009, let us reflect on those numbers and the human suffering behind them. Crisis or no crisis, we have the know-how to do something about hunger. We also have the ability to find money to solve problems when we consider them important. Let us work together to make sure hunger is recognized as a critical problem, and solve it. The World Food Summit proposed by FAO for November 2009 could be fundamental for eradicating hunger.

Address

By HRH Princess Maha Chakri Sirindhorn

It is my great pleasure to join you all once again in the observance of World Food Day at the FAO Regional Office for Asia and the Pacific. The theme "Achieving food security at times of crisis" could not have been timelier. At this very moment, there are over 1 billion people who are suffering from hunger and malnutrition. Around 60 percent of them live in this region.

The world endured a series of crisis since 2005. Fuel prices increased to levels not seen before and, since 2007, food prices soared rapidly causing hardship to low income consumers. While the world was reeling under fuel and food crises, large financial corporations went bankrupt, sending shock waves across global financial markets.

Achieving food security is difficult even when economic conditions are not as bad as under the current crisis. We also know that poverty persists due to systemic factors. Crises magnify that impact, making the lives of the poor much harder. However, it appears that the link between crises and food security and their impact on different categories of the poor are less understood and thus also not properly addressed up to present. Indeed, an irony of our system is that food producers, especially the small-scale farmers, are among the most food insecure and rural poverty is endemic, and among those who suffer, children and women are often the worst hit.

There is an apparently greater crisis: the impact of climate change on food and agricultural production systems. Ferocity of natural disasters such as cyclones, tsunamis, floods and droughts have the direct impact on our food security.

In addition, the recently held FAO High-Level Expert Forum on "How to feed the world in 2050" concluded that world agriculture faces many challenges: producing 70 percent more food for an additional 203 billion people by 2050 while at the same time combating poverty and hunger, using scarce natural resources more efficiently and adopting to climate change.

I join FAO's call for making faster progress towards reducing and finally eliminating hunger and poverty. I also agree that this will not be achieved 'automatically' and that several challenges have to be met, in particular by making investment in agriculture a top priority; promoting a new global order for agricultural trade as well as a proper socio-economic framework to address imbalances and inequalities within and among countries.

In Thailand, His Majesty King Bhumibol works to find science-based solutions to problems facing people and communities. He turned Chitralada Palace into living laboratories where projects were undertaken to improve the standard of living of rural communities in areas such as livestock improvement, milk production, hybridization of grains, bee keeping, fish breeding, reforestation, and various food processing techniques, as well as experimenting and promoting various irrigation and water harvesting techniques. His Majesty also established Royal Development Centres in all regions of the country, centres that function as one great workshop and school for teaching and learning - all for the good of national development.

The projects initiated by His Majesty have been recognized worldwide as seen from numerous awards presented to Him. On this World Food Day celebration, I would like to mention that His Majesty King Bhumibol was awarded the first ever Dr. Norman E. Borlaug Medallion by the World Food Prize Foundation. Dr. Borlaug recently passed away, and I share in the grief of the family members and his close associates such as Prof. Swaminathan in the loss of this great man.

I know that FAO experts and representatives from academic and research institutes gathered here today ponder on many questions related to food security and work on those issues. Your dedication to understand these issues and offer solutions will serve humanity in the years to come. I am indeed happy to note that FAO is making every effort to mobilize the international community to face the emerging critical challenges through many initiatives such as the Initiative on Soaring Food Prices, launched in December 2007, the High Level Conference on World Food Security organized in June 2008 and the World Food Summit scheduled to be held next month.

Let us resolve ourselves to work harder to achieve the noble vision of the Food and Agriculture Organization that is a world free from hunger and malnutrition. Helping the poor to stabilize their sources of income and to improve resilience would be possible only through our joint efforts in forging comprehensive strategies and undertaking concrete actions to implement them. I join you all in conveying the solidarity and support of the Thai people to FAO in its efforts towards addressing the challenges of ensuring food security for all.

Thank you.

Achieving food security in times of crisis

By Jacques Diouf

FAO Director-General

The events of the last three years have been particularly tragic as they have demonstrated the fragility of our global food system. For the first time in history, more than one billion people are undernourished worldwide. This is about 100 million more than last year and it means that one in every six persons suffers from hunger every day. This recent increase in hunger has not been the consequence of a poor global harvest, far from it, but was caused by the world economic crisis, which has reduced incomes and employment opportunities of the poor and significantly reduced their access to food.

It is for this reason that the theme chosen for World Food Day and TeleFood this year is: *Achieving food security in times of crisis*. At a time when the fallout from the global economic crisis still dominates the news, it is important to remind the international community that the crisis is stalking the small-scale farms and rural areas of the world, where 70 percent of the world's hungry live and work.

The current crisis is historically unprecedented in several ways. First, it follows a global rapid and sharp increase in staple food prices, during 2006-2008. The recent downward adjustment should not be interpreted as the end of the food crisis. In sub-Saharan Africa, 80 to 90 percent of all cereal prices monitored by FAO in 27 countries remain more than 25 percent higher than before the food price crisis began two years ago. In Asia and Latin America and the Caribbean, prices are monitored in a total of 31 countries, and between 40 and 80 percent of cereal prices remain more than 25 percent higher than in the pre-food-crisis period. And at a local level, in certain countries, prices for basic food products have not decreased at all. Furthermore, production is still hampered by the increase in the cost of inputs - 176 percent for fertilizers, 70 percent for seeds, 75 percent for animal feed, making agricultural investment extremely difficult. Such increases put these vital inputs far beyond the reach of millions of farmers.

Second, from a financial and commercial point of view, developing countries are now more financially and commercially integrated in the world economy, which implies that a drop in global demand or supply and in credit availability has immediate repercussions on developing countries.

Third, because of the global nature of the crisis, the normal mechanisms used by households to cope with economic shocks are stretched thin. Foreign Direct Investment, including in agriculture, is forecast to decline by more than 30 per cent in 2009. Reduced employment in urban areas may force job-seekers to return to rural areas. Migrants' remittances, which had previously seen annual growth rates up to 20 per cent, totalling

US\$ 300 billion in 2008, might experience a decline of around 5 to 8 percent in 2009. Foreign Aid to the poorest 71 countries is expected by the International Monetary Fund to decline by about 25 percent. Credit on financial markets might not be available due to tighter risk assessment and it will carry increased risk premium.

The stark fact is that unless substantial and sustained remedial actions are taken immediately, the World Food Summit target of reducing the number of hungry people by half to no more than 420 million by 2015 will not be reached.

Fortunately, there are encouraging signals of a shift in policy. The Joint Statement on Global Food Security at the L'Aquila meeting of the G8 in July this year approved a radical change in strategy with the priority of increasing the production of smallholder farmers in food-deficient developing countries. For this reason, the mobilization of US\$ 20 billion over three years is foreseen for the financing of such a programme. Now this pledge needs to be translated into concrete action. It is a step encouraging the international donor community to devote an increased percentage of Official Development Assistance to agriculture, and hopefully to reach the 1980 level of 17 percent. It is important to recall that this was the level of investment which saved Asia and Latin America from looming famine in the 1970s. A similar level of resources is now needed to feed the more than one billion people suffering from hunger and to ensure that the world's population, set to grow to more than nine billion in 2050, will have enough to eat then.

It is not only financial resources that are needed. Beyond the factors that exacerbate the current crisis, there is a whole series of fundamental problems that need to be resolved, in particular how aid is channeled and how to make it reach smallholder farmers effectively, as well as reform of the world food security governance system for more coherence in the action of governments and development partners, the share of national budgets dedicated to agriculture and private sector investment.

It is vital, particularly in times of crisis, that support to agriculture not be reduced. Only a healthy agricultural sector, combined with a growing non-farm economy and effective safety nets and social protection programmes will be sufficient to face the global recession as well as eradicate food insecurity and poverty. The World Summit on Food Security to be held in Rome from 16 to 18 November aims to keep the challenge of food insecurity on top of the international agenda so that the right to food, the most basic of human rights, be respected.

On this World Food Day, let us resolve once and for all that achieving food security, in times of crisis or not, is indeed a global priority.

Statement

By He Changchui

Assistant Director-General and
Regional Representative for Asia and the Pacific

On behalf of the Director-General of FAO, Jacques Diouf, my colleagues and on my own behalf, I have great pleasure in welcoming you all to the FAO Regional Office for Asia and the Pacific for this year's World Food Day Observance.

It is an honour and privilege for us to have the presence of Her Royal Highness, Princess Maha Chakri Sirindhorn. We are grateful to you, Your Royal Highness, for your gracious acceptance of our invitation to preside over the World Food Day Observance here at the regional office. We are also exceptionally fortunate to have with us today the scientific leader of the green revolution Professor M.S. Swaminathan as the keynote speaker.

We are observing this world food day in the midst of a still unfolding global economic crisis that has threatened the food security of millions of people across the globe. For the first time in history, the number of undernourished in the world has surpassed one billion. The sharp increase of the undernourished population within the last four years is the most unsettling aspect. This is over and above an already deteriorating trend witnessed during the past ten years. These crises demonstrate in no uncertain terms the weaknesses and the fragility of the global food system and underline the urgency of tackling the root causes of hunger effectively without further delay.

The series of crises the world has experienced in the last few years constitute the crux of the current levels of global hunger and food insecurity. In the first half of 2008, international cereal prices reached their highest levels in almost 30 years. The crisis pushed an estimated 115 million people globally into chronic hunger in 2007 and 2008. While the world was recovering slowly as witnessed by falling food prices in the second half of 2008, the global financial meltdown in the developed countries precipitated yet another crisis threatening the livelihoods of millions in the world, and the number of undernourished is expected to increase by 9 percent in 2009 alone.

The Asia-Pacific economies suffered not because of their own default under the financial crisis, but owing to reduced

export earnings, loss of employment and other sources of income linked to the markets of developed countries. Falling fuel prices and the financial crisis dampened global food prices in the second half of 2008. However, the global food crisis is far from over: food prices remain at unprecedentedly high levels in many countries and this seems more likely to continue in the years ahead.

The poor cannot afford to buy food at the current high prices prevailing in the markets with their meager incomes. Ironically, the very farmers who produce the food cannot afford to buy it. While higher food prices paid by consumers did not transfer to farmers significantly, the cost of fertilizer and other inputs they critically depend upon increased at higher rates. As a result, neither the farmers nor the corporate private sector in developing countries seized the opportunity to invest in and raise the production and productivity of their agricultural sectors.

Creating a food system that is capable of ensuring food security for all across the world even under crisis situations without further undermining the sustainability of natural resources is obviously a difficult task but one that we must achieve. The good news is that there are encouraging signals coming from global leaders that a shift in policy has taken place as can be seen from the L'Aquila Joint Statement on Global Food Security, by the G8 Summit in July, as well as other statements issued by regional inter-governmental organizations such as, in this region, ASEAN and SAARC. For this reason, the theme of this year's World Food Day 'achieving food security in times of crisis' is of critical significance.

Let me briefly address the way forward. FAO firmly believes that a twin track approach is needed to fight against hunger. It involves measures for immediate relief as well as for more fundamental structural changes. Despite the difficulties that all governments encounter in designing effective safety nets and social protection programmes, they are needed to protect the most vulnerable groups in any society. As FAO has done under the Initiative on Soaring Food Prices project, this also includes the provision of

indispensable tools and inputs such as high-quality seeds and fertilizer to allow them to raise food production in the short to immediate period, so that they continue to engage in food production even under difficult local and global economic conditions. This has proven beyond doubt to be a useful instrument.

This is not adequate, however, to solve the problem of endemic hunger and poverty caused by fundamental structural problems. We also need to bear in mind that it is not just the current set of problems that we need to address. FAO projections show that by 2050 the world's population will reach 9.1 billion, 34 percent higher than today. To feed this population, the world will need to produce 70 percent more food than the current level of production. To take an example, it is estimated that the world must produce an additional one billion tonnes of cereal and 200 million tonnes of meat annually to feed this population. The situation within developing countries in Asia-Pacific is dire and structural weaknesses are ever present, particularly low agricultural productivity, significantly low availability of water and land, increased frequency of floods and droughts, and the low level of investments in agricultural research and development.

Addressing these structural deficiencies will require us to put in place a stable and effective set of policies and regulatory and institutional mechanisms so as to create functional markets and infrastructure that promote investment in the agricultural sector. A fundamental prerequisite is a substantial increase in investment in agriculture. Estimates suggest that a net investment of US\$83 billion a year must be made in agriculture in developing countries to feed the world in 2050. The two largest countries in Asia - China and India - will require as much as US\$29 billion of investment, US\$20 billion in South Asia and US\$24 billion in East Asia.

We in Asia and the Pacific region have enormous challenges ahead of us, but also many opportunities. Your continued support and dedication in this area of work will lead us towards a world free from hunger and malnutrition. We therefore, reiterate our call for united action.

Achieving food security in times of crisis

Keynote address

By Professor M. S. Swaminathan
Member of Parliament (Rajya Sabha) and
Chairman, M S Swaminathan Research
Foundation

Food security involves physical, economic, social and environmental access to balanced diet, and clean drinking water to every child, woman and man. Physical access is a function of the availability of food in the market and is related to both in-country production and imports, when needed. Economic access is related to purchasing power and employment opportunities. Social access is conditioned by gender equity and justice. Environmental access is determined by sanitation, hygiene, primary healthcare and clean drinking water. Thus, both food and non-food factors determine food security.

The Hunger Crisis

In spite of the highest priority accorded to hunger elimination among the UN Millennium Development Goals (UN-MDG), FAO estimates that the number of people going to bed hungry is increasing. When UN MDGs were adopted in 2000, about 820 million were estimated to be under-nourished. Now, it is over a billion. Why are we in this condition? The hunger crisis facing us has the following principal short term dimensions :

- * Environment
- * Economics
- * Equity
- * Employment
- * Energy

The long term dimension relates to global warming and climate change.

Dealing with Crisis:

Environment - Among the key areas needing attention are :

- * Conservation of prime farm land for agriculture, soil healthcare and enhancement
- * Irrigation water availability and quality and rain water harvesting
- * Biodiversity loss
- * Damage to ecosystem services
- * Ecological footprint (related to life styles) and population supporting capacity of ecosystems

Aristotle said long ago that the soil is the stomach of the plant. Exploitative agricultural practices lead to soil mining and damage to the physical, chemical and microbiological properties of the soil. Every farm family should have a soil health card giving integrated information on all aspects of soil health, like organic matter status, macro- and micro- nutrient availability and the hydraulic conductivity of the soil. Mobile Soil Health Vans should be organized. A national land care movement should deal with both the conservation of prime farm land for agricultural purposes and the prevention of soil erosion and degradation. The fertility of waste or wasted land should be restored. Building a sustainable water security system involves concurrent attention to supply augmentation and demand management. Supply augmentation involves harnessing all the major sources of irrigation water, namely rain, ground, surface, effluents and waste water and seawater. Rain water harvesting through a pond in every farm must become a way of life. Sea water constitutes over 97% of the water resources available in our planet. There is vast scope for sea water farming through aqua farms. Conjunctive use of water like fresh water and treated industrial effluents should become institutionalized. Industry should give back the water it consumes in a good condition.

Demand management in agriculture should come from the adoption of "more crop and income per drop of water" techniques. Agronomists should indicate in their publications not only yield per hectare, but also yield per unit of water. Micro-irrigation methods need to become universal.

Biodiversity loss and damage to ecosystem services is taking place at an alarming rate. This has serious implications in relation to our capacity to deal with the new challenges arising from climate change and transboundary pests. The loss of every gene and species limits our options for the future, particularly when recombinant DNA technology affords an opportunity to create novel genetic combinations capable of conferring resistance to abiotic and biotic stresses.

An institutional method to address environmental threats to food security in the organization of community managed food and water security systems at the village level. This will comprise of field **gene bank** through in-situ on farm conservation of local land races, **seed bank** for ensuring the availability of seeds during times of drought and flood, **grain bank** involving storage of local food crops (often belonging to the category of orphan crops) and **water bank** in the form of ponds and reservoirs capturing rain water. Thus, conservation, cultivation, consumption, and commerce can be linked into a **food security continuum**. A reason why malnutrition is increasing in the world is the centralized approach to both analysis and action. A decentralized, community centered approach to food security will help us to reach our nutrition goals speedily and surely.

Economics in relation to Food Security

The cost, risk, return structure of farming determines the decisions of farmers with reference to the choice of crops and investment on inputs. Input costs are going up partly due to the escalation in the price of petroleum products. Output prices are not increasing in tandem with a rise in the cost of production. Due to inadequate availability of institutional credit and effective insurance, small farmers get caught in a debt trap, with much of the borrowing coming from private money lenders at very high interest rates. **If farm ecology and economics go wrong, nothing else will have a chance to go right.** Public policies in the field of agriculture should give over-riding priority to safeguarding and improving the ecological foundations essential for sustainable agriculture, on the one hand and assured and remunerative marketing opportunities, on the other.

Equity - The social, economic, environmental and gender dimensions of equity must receive integrated attention. An area in intra-generational equity which needs urgent attention is the elimination of maternal and foetal undernutrition resulting in the birth of children with Low Birth Weight (LBW). Such LBW children suffer from several handicaps including impaired cognitive abilities. At the other

end, is the growing damage to our life support systems of land, water, biodiversity and climate, leading to reduced opportunities for a healthy and productive life to the children yet to be born.

A method of overcoming problems in the areas of environmental, social and gender inequity is to subject all the development programmes to a matrix analysis designed to ascertain whether the programme is pro-nature, pro-poor and pro-woman. A pro-nature, pro-poor and pro-woman orientation is also essential in the area of technology development and dissemination.

Employment - The famine of jobs or purchasing power is often the cause of famine of food at the household level. Modern industry often leads to jobless economic growth. Agriculture including crop and animal husbandry, fisheries, forestry, agro-forestry, agro-processing and agri-business promotes job-led growth. Crop-livestock integrated farming systems enhance both income and nutrition security. In the developing countries of the Asia-Pacific region, what we need is job-led economic growth, so that the goal of food for all coupled with human dignity can be achieved. The economics of human dignity demands that everyone should have an opportunity to earn his/ her daily bread.

There are several successful models of promoting job-led economic growth in this region. One model relates to the successful experience in China of promoting higher small farm productivity and profitability on the one hand, and opportunities for skilled and remunerative non-farm employment through Township-Village-Enterprises (TVE) on the other. This two pronged strategy has helped China to achieve both high farm productivity and impressive manufacturing capacity. "Jobs for All" then becomes a reality.

The other model, developed at MSSRF, is known as the "Biovillage" model of human-centered development. The Biovillage model involves the following three concurrent steps.

- Conservation and enhancement of the ecological foundation for sustainable agriculture, with particular attention to soil health care, rain water harvesting and

efficient water use, biodiversity conservation and sustainable and equitable use, climate risk management, and the protection and development of village common property resources.

- Improving on-farm productivity based on ever-green revolution principles, which help to enhance farm productivity in perpetuity without associated ecological harm. This calls for mainstreaming ecological principles in technology development and dissemination.

- Generation of skilled and market driven non-farm employment opportunities through improved post harvest technology and value addition to primary products.

- Processing, storage and marketing require greater investment of technology and finance.

The Biovillage Council, which manages the biovillage activities through group cooperation ensures that every adult in the village has an opportunity for a healthy and productive life

Energy – Each Biovillage Council develops a strategy for energy security involving a feasible and affordable blend of renewable and non-renewable sources of energy. Among the renewable sources solar, wind, biogas and biomass are particularly important.

Bridging the Technology Divide

Starting from the industrial revolution in Europe nearly 4 centuries ago, technology has been a major factor in North-South, rich-poor, rural-urban and gender divides.

If technology has been the primary cause of such divides, we should now enlist technology as an aid to bridging the divides. An important requirement for promoting the "Bridging the Divides Movement" is knowledge and skill empowerment. Harnessing modern Information and Communication Technologies (ICT) is a powerful method of empowerment of rural communities. The Village Knowledge Centre movement launched in India by MSSRF in partnership with a multi-stakeholder National Alliance for Village Knowledge Revolution, is based on the principles of community ownership, demand driven and dynamic information, use of local language and capacity building. Capacity building and content creation are two key elements of this programme.

Biotechnology is becoming an important tool in creating novel genetic combinations. Action is needed at two ends of the spectrum for harnessing novel genetic combinations to meet current and future challenges arising from global warming and climate change. First, in village schools DNA Clubs should be organized to spread genetic literacy. Second, each Nation should have a statutory, professionally led National Biotechnology Authority. The bottom line of a Nation's Biotechnology Regulatory Policy should be:

"the economic well being of farm families, food security of the nation, health security of the consumer, protection of the environment, biosecurity of the country and the security of national and international trade in farm commodities". (Report of the M S Swaminathan Committee, 2004)

Developing countries should develop regulatory procedures which ensure the safe and responsible use of biotechnology, particularly recombinant DNA technology. In India, a National Biotechnology Regulatory Authority is being created through an Act of Parliament.

From Green to an Ever-green Revolution : Indian Experience

In India, the 20th century was a period of agony and ecstasy on the farm front. The colonial period (1900-47) was characterized by insignificant growth in food production and frequent famines. The last part of the colonial period witnessed the Bengal Famine of 1942-43, when over 2 million children, women and men died from hunger. This led to Jawaharlal Nehru's famous statement soon after independence in 1947, **"everything else can wait, but not agriculture"**.

The Nehru period (1947-1964) was marked by emphasis on irrigation, power generation, production of mineral fertilizers, chemical pesticides, community development, national extension service, and above all strengthening of agricultural research and education through the establishment of agricultural universities. A post-graduate school was set up at the Indian Agricultural Research Institute, New Delhi, which was conferred in 1958 the status of a deemed university under the UGC Act of 1956. The first Agricul-

tural University based on the Land Grant University system of the United States of America started functioning in 1960 at Pant Nagar in Uttar Pradesh (now in Uttarakhand).

In spite of all the measures taken to strengthen agricultural research, education, extension and development, the gap between food production and food requirement continued to grow between 1950 and 1960. Consequently, food imports, largely under the PL-480 programme of the United States, grew year after year, reaching a peak level of 10 million tonnes in 1966. Globally and nationally, there was skepticism about India's capacity to feed its growing population.

To meet this challenge, an Intensive Agriculture District Programme (IADP) was started in the early sixties to maximize the output of cereals like rice and wheat in districts where irrigation water was available. The strategy was to provide seeds, fertilizer and other inputs to improve productivity. During the first 15 years after independence, production increase was largely associated with area expansion and not due to higher yield. Consequently, the average yield of rice and wheat continued to stagnate at less than 1 tonne per hectare. It is under such circumstances, that I pointed out that the IADP, also referred to as the package programme, had one important missing ingredient, namely a genetic strain which can respond to the rest of the package, particularly soil nutrients and irrigation water.

The search for high yielding varieties which can convert sunlight, water and nutrients into grains in an efficient manner first began in rice with the initiation of the *indica-japonica* hybridization programme at the Central Rice Research Institute, Cuttack, in the early nineteen fifties. Similar work was started in wheat in the mid-fifties, using mutation breeding techniques as well as hybridization between *Triticum aestivum* varieties and sub-species *compactum* and *sphaerococum*. The *indica-japonica* hybridization programme resulted in varieties like ADT-27 in Tamil Nadu and Mashuri in Malaysia. The programme did not make much headway due to sterility problems. In the case of wheat also, the expected improvement in yield potential

did not take place, since a short plant stature was also associated with short panicles and reduced yield potential. Fortunately, Japanese scientists led by Dr Gonziro Inazouka identified the Norin 10 and other genes which helped to break the negative correlation between plant height and panicle length. The Norin dwarfing gene was used by Dr Orville Vogel in Washington State University, Pullman, to breed high yielding winter wheats like Gaines. The same genes were used by Dr Norman Borlaug in Mexico to develop semi-dwarf spring wheats. By adopting a shuttle breeding technique, Dr Borlaug also made the wheat plant insensitive to photo-period and temperature. This gave birth to high-yielding spring wheat varieties Lerma Rojo-64A, Sonora 63, Sonora 64, Mayo 64 and other strains in Mexico. We obtained seeds of these varieties, as well as a wide range of segregating material from Dr Borlaug in September 1963. The details of the semi-dwarf wheat programme initiated with the Norin dwarfing genes are contained in the publication "Wheat Revolution - a Dialogue" (Macmillan India, 1993). Production advances were rapid resulting in the green revolution in 1968, due to the growth of a **Green Revolution Symphony**, consisting of mutually reinforcing packages of technology, services, public policy in input and out pricing and marketing, and above all farmers' enthusiasm.

In the area of technology, some of the significant steps taken included a) the organization of multi-location trials with 4 Mexican Semi-dwarf varieties during 1963-64; b) the organization of National Demonstrations in the fields of resource poor farmers with small holdings from 1964-65 onwards; c) the import of 200 tonnes of seeds of Lerma Rojo-64A and Sonora 64 during 1965-66 to expand the National Demonstration Programme throughout the wheat growing areas; d) import of 18000 tonnes of seeds from Mexico, mainly of the variety Lerma Rojo-64A for increasing the area under semi-dwarf wheat varieties; e) selection of amber grain wheat varieties from the segregating populations sent by Dr Borlaug and development of high-yielding amber wheats like Kalyan Sona and Sonalika, and initiation of a dynamic programme of cross-breeding both in *aestivum* and *durum* wheats in order to

incorporate the Norin dwarfing genes into high quality Indian Wheat varieties like C306, bred by Chaudhury Ram Dhan Singh in the Punjab.

In the area of services, the important measures taken included a) the setting up of a National Seed Corporation; b) rural electrification, c) rural communication, and d) enlarged credit supply. The public policy measures led to establishment of an Agricultural Prices Commission, enforcement of a minimum support price through the Food Corporation of India, and the building up of grain reserves to feed the public distribution system. Since the new technologies are scale neutral but not resource neutral, special programmes like the small and marginal farmer support programmes were initiated. The aim was to ensure social inclusion in access to high-yield technologies.

The integrated packages of technology, services and public policies ignited farmers' enthusiasm and a small government programme became a mass movement. Writing in the Illustrated Weekly of India (May 11, 1969), I made the following remarks on the Punjab Wheat Miracle.

"Brimming with enthusiasm, hard-working, skilled and determined, the Punjab farmer has been the backbone of the revolution. Revolutions are usually associated with the young, but in this revolution, age has been no obstacle to participation. Farmers, young and old, educated and uneducated, have easily taken to the new agronomy. It has been heart-warming to see young college graduates, retired officials, ex-army men, illiterate peasants and small farmers queuing up to get the new seeds. At least in the Punjab, the divorce between intellect and labour, which has been the bane of our agriculture is vanishing"

To bring this significant development in India's agricultural evolution to public attention, the then Prime Minister Smt Indira Gandhi released a special stamp titled "The Wheat Revolution" in July 1968.

Similar opportunities for enhancing production through productivity improvement soon became available in rice, maize, sorghum and pearl millet. Hence,

the US scientist, Dr William Gaud coined the term "Green Revolution" to indicate productivity triggered production increase. In order to ensure that a productivity based agriculture does not result in ecological harm due to the unsustainable exploitation of land and water, adoption of mono-culture and excessive use of mineral fertilizers and chemical pesticides, I appealed to farmers in the following words, not to harm the long term production potential for short term gains in my address to the Indian Science Congress held on Varanasi in January 1968.

"Exploitative agriculture offers great dangers if carried out with only an immediate profit or production motive. The emerging exploitative farming community in India should become aware of this. Intensive cultivation of land without conservation of soil fertility and soil structure would lead, ultimately, to the springing up of deserts. Irrigation without arrangements for drainage would result in soils getting alkaline or saline. Indiscriminate use of pesticides, fungicides and herbicides could cause adverse changes in biological balance as well as lead to an increase in the incidence of cancer and other diseases, through the toxic residues present in the grains or other edible parts. Unscientific tapping of underground water will lead to the rapid exhaustion of this wonderful capital resource left to us through ages of natural farming. The rapid replacement of numerous locally adapted varieties with one or two high-yielding strains in large contiguous areas would result in the spread of serious diseases capable of wiping out entire crops, as happened prior to the Irish potato famine of 1854 and the Bengal rice famine in 1942. Therefore the initiation of exploitative agriculture without a proper understanding of the various consequences of every one of the changes introduced into traditional agriculture, and without first building up a proper scientific and training base to sustain it, may only lead us, in the long run, into an era of agricultural disaster rather than one of agricultural prosperity."

I pleaded for converting the *green revolution* into an *ever-green revolution* by mainstreaming the principles of ecology in technology development and dissemination. I defined ever-green revolution as increasing productivity in

perpetuity without associated ecological harm. I pleaded for avoiding the temptation to convert the green revolution into a greed revolution. Unfortunately, ecologically unsound public policies, like the supply of free electricity, have led to the over-exploitation of the aquifer in the Punjab, Haryana and Western UP region. The heartland of the green revolution is in deep ecological distress (Science VOL 325 31 JULY 2009). The need for adopting the methods of an ever-green revolution has therefore become very urgent.

There are two major pathways to fostering an ever-green revolution. **The first is organic farming.** Productive organic farming needs considerable research support, particularly in the areas of soil fertility replenishment, and plant protection. Soils in most parts of India lack organic matter and are also deficient both in macro- and micro-nutrients. A majority of farmers cultivate one hectare or less. Crop-livestock integrated farming will help to build soil fertility but most small farm families have only 1 or 2 farm animals like cows, buffaloes and bullocks. Green manure crops and fertilizer trees can help to build soil fertility. Also, commercially viable organic farming methods will spread only if there is a premium price for organic products. Organic farming should be promoted in the case of vegetable and fruit crops and medicinal plants, where the danger of pesticide residues should be avoided.

The other pathway to an ever-green revolution is **green agriculture.** In this case, ecologically sound practices like conservation farming, integrated pest management, integrated nutrient supply and natural resources conservation and enhancement, are promoted. Green agriculture techniques could include the cultivation of crop varieties bred through the use of recombinant DNA technology, in case such varieties have advantages like resistance to biotic or abiotic stresses, or other attributes like better nutritive quality. In organic farming, the cultivation of genetically modified crops is prohibited. The cultivation of varieties bred with the help of molecular marker assisted selection is however allowed.

For resource poor farmers, green agriculture is the method of choice for producing more in an environmentally benign manner. The smaller the farm, the

greater is the need for marketable surplus. Research on efficient micro-organisms which can help to build soil fertility, as well as fertilizer trees like *Faidherbia albida* will help both organic farming and green agriculture. The National Commission on Farmers (NCF) (2006) recommended the initiation of a conservation farming movement in the heartland of the green revolution, in order to halt the damage now occurring to the ecological foundations essential for sustainable agriculture. NCF suggested the allocation of Rs. 1000 crores (US\$ 200 million) to start with, for achieving a paradigm shift from exploitative to conservation farming in the Punjab-Haryana-Western UP region.

Sustainable Food Security

Despite the large number of nutrition safety net programmes introduced by the Central and State Governments from time to time, India still remains the home for the largest number of malnourished children and adults in the world. We should ask why we are in this regrettable and unacceptable situation. The answer lies in the basic structure of our consumption pattern.

Nearly two thirds of our population lives in rural areas. A majority of them are small and marginal farmers and landless labour. They fall under the category **producer-consumer**. We have thus two categories, i.e. about 700 million **producer-consumers** and about 400 million **consumers**. In industrial countries, consumers will be about 97% and producer-consumer will be about 3%. Therefore widespread malnutrition and endemic hunger will persist unless the producer-consumer can consume balanced diet. This situation also prevails in most countries in the Asia-Pacific region. This will call for higher small farm productivity and profitability, on an environmentally sustainable manner. **An ever-green revolution accompanied by a small farm management revolution are hence vital components of a freedom from hunger movement.** How can we develop a sustainable and equitable food security system?

As pointed out earlier, food security at the level of each individual child, woman and man involves physical, economic and social access to balanced diet, including the needed macro- and micro-nutrients,

safe drinking water, primary health care, sanitation, and environmental hygiene. Thus, concurrent attention is needed to both food and non-food factors. Any national legislation relation to food security should deal with production, access and absorption in a holistic manner. The following three steps are urgently needed for ensuring adequate availability of home grown food.

First, we must take steps to **defend the gains** already made. This will involve integrating ecological principles in technology development. At the same time, public policies should promote the sustainable use of land, water, biodiversity and common property resources through conservation farming. If the regions, which now provide most of the grains for the public distribution system, do not shift to an ever-green revolution pathway of productivity improvement, the nation's food security system will be jeopardy.

Second, we must **extend productivity gains** to the "green but no green revolution" areas like the entire eastern India, where there is adequate water availability. These areas constitute the "sleeping giant" of Indian agriculture and should be enabled to take to green agriculture in a big way through appropriate packages of technology, services and public policies.

Third, we should **make new gains**, particularly in rainfed areas, which constitute 60% of the farm area in the country. Available data show that the yield gap (i.e. gap between potential and actual yields) in such rainfed semi-arid areas is as high as 200 to 300% in the case of pulses, oilseeds, millets, semi-arid horticulture, etc. Work on "more crop and income per drop of water" and on planting a billion fertilizer trees like *Faidherbia albida* should be promoted. Water harvesting and efficient water use should become a way of life in such areas. A *Pond in Every Farm* should become a habit and where appropriate, labour from the National Rural Employment Guarantee Act (NREGA) programme should be utilized for constructing farm ponds in the fields of small and marginal farmers in drought prone areas.

India has nearly a billion farm animals including poultry. Livestock and livelihoods

are intimately inter-related in all major agro-ecosystems, but more particularly in arid and semi-arid areas. Also, the ownership of livestock in more egalitarian than that of land. Therefore, crop-livestock integrated farming systems should be promoted, since this confers multiple benefits, like income and nutrition security.

There are several other areas involving a blend of technology and social engineering which need immediate attention. The first area relates to giving the power and economy of scale to small and marginal farmers, who constitute the large majority of the farming population of this region. The average size of holding is declining year after year. Yet, Green Agriculture, involving IPM, INS, rain water harvesting and watershed management, requires cooperative efforts among the farm women and men living in a watershed or the command area of an irrigation project. Hence, efforts to promote either cooperative or group farming or the formation of Small Farmers' Self-help Groups, should be intensified with the help of Agricultural and Animal Sciences Universities. Contract farming can be promoted if it represents a win-win situation to both producers and purchasers.

Second, there is increasing feminization of agriculture. All agricultural research and development programmes must be gender sensitive. Taking into consideration the multiple burdens on a woman's time, every effort should be made to reduce the number of hours of work of rural women and increase their earning per hour of work. Also, support services for women in agriculture like crèches and day care centres, as recommended by NCF, should be provided. The gender dimensions of the impact of climate change should be studied, since women generally tend to be in charge of water, fodder, fuel wood and livestock.

Third, 70% of populations in rural India are young women and men below the age of 35. A survey of the NSSO has revealed that over 45% of farmers would like to quit farming, if there is any other livelihood option. Attracting and retaining youth in farming are hence major challenges. This is where a technological upgrading of agriculture and multiple livelihood occupations become important.

We must make agriculture economically rewarding and intellectually satisfying. This will call for blending traditional wisdom and ecological prudence with frontier technologies like biotechnology and information and communication technologies.

Finally, we should enhance the coping capacity of farm families to the adverse impact of climate change. For this purpose, atleast one woman and one male member of every local self-governing bodies should be trained as **Climate Risk Managers**. They should become well versed in the art and science of monsoon and climate management. "**Weather information for all**" should become a reality through the establishment of a national grid of mini- agro-meteorological stations.

To sum up, Indian agriculture is at the crossroads. Our population may reach 1750 million by 2050. Per capita crop land will then be 0.089 ha and per capita fresh water supply will be 1190 m³ / year. Food grain production must be doubled and the area under irrigation should go up from the current 60 million ha to 114 million ha by 2050. Degraded soils should be restored through increase in Carbon pools in soils. How are we going to achieve a match between human numbers and human capacity to produce adequate food for all? To quote Edward O Wilson (2002) in *The Future of Life*:

"The problem before us is how to feed billions of new mouths over the next several decades and save the rest of life at the same time without being trapped in a Faustian bargain that threatens freedom from security. The benefits must come from an evergreen revolution (as proposed by Swaminathan). The aim of this new thrust is to lift production well above the levels attained by the Green Revolution of the 1960s, using technology and regulatory policy more advanced and even safer than now in existence".

Making Hunger History in the Asia-Pacific Region

With the spread of democratic systems of governance in most parts of the world, a world without hunger is an idea whose time has come. Access to balanced diet and clean drinking water must be a fundamental right of every human being. **This will call for a shift from a**

charity based approach to hunger elimination to a right based one. The Government of India is currently developing legislation to ensure food security for all. Such a National Food Security Act, to be effective, should deal with food availability, access and absorption in an integrated manner. Food availability can be ensured by launching a "bridge the yield gap" movement, which is designed to help in narrowing or eliminating the gap between potential and actual yields through packages of technology, services and public policies.

Food access can be ensured through making food available at affordable cost and by generating sustainable livelihood opportunities in the farm and off-farm sectors. **A rights based approach to access can provide for common and differentiated entitlements.** The common entitlement should aim to ensure adequate availability of food in the market coupled with an effective public distribution system from which will enable all citizens to access essential quantities of staple grains at a reasonable price. Differentiated entitlement will refer to providing food at low price to the socially and economically underprivileged sections of the society. Thus, there will be universal access to the needed calories and proteins, making the goal of food for all a reality.

A National Food Security Act should in addition to aiming to end poverty induced protein - energy malnutrition, should also provide for the following:

- * Elimination of hidden hunger caused by the deficiency of micro-nutrients like iron, iodine, zinc, vitamin A and vitamin B12 through a food cum fortification approach. In particular, emphasis should be placed on providing horticultural remedies for the nutritional maladies prevailing in an area, based on local foods.
- * Provision of clean drinking water to ensure food assimilation in the body
- * Attention to non-food factors like primary health care, environmental hygiene and sanitation
- * Launching of a nutrition literacy movement and training one woman and one man in every village as "Hunger Fighters"

In the ultimate analysis we will succeed in achieving food security in an era of global change, only through a well planned and concerted endeavour at the global, national and local levels. Centralized goals and resource allocation should be coupled with decentralized planning and action. Community food and water security systems involving the establishment of local level gene, seed, grain and water banks will facilitate both as ever-green farm revolution and sustainable food and nutrition security. Such local level Food Security systems will also help to enlarge the shrinking food basket by including a wide range of millets, legumes and tubers in the diet.

FAO is the flagship of the global resolve to end hunger. The Asia-Pacific Region is the home of the largest number of under-nourished children, women and men. Hunger can be overcome if there is the requisite fusion of professional skill, political will and action, farmers' enthusiasm and above all, people's participation. The FAO Regional office for the Asia Pacific Region has the unique opportunity for promoting a Food Security Symphony to generate the needed degree of convergence and synergy among the numerous nutrition safety net programmes in operation in our region.

Mahatma Gandhi said in 1948 "God is bread to the hungry". On this World Food Day, let us resolve to work together to ensure that every home in our region is blessed by the God of Bread.





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Model farmers

Awards for outstanding achievements

Imam Ali A model poultry farmer from the Republic of the Fiji Islands

Fifteen years ago, Imam Ali was faced with a crisis. At the time, he was a 40-year-old carpenter working for a construction company in the capital city of Suva on the island nation of Fiji. But, meeting the daily demands of his job had become impossible. Imam was ill - suffering from Chronic Trigeminal Neuralgia, a nerve condition that can cause excruciating pain. It is not uncommon for those who suffer from this condition to fall into deep depression and withdraw from the world.

That was not an option for Imam Ali. He had a family of seven to support. And so with his wife and children, he moved to the community of Wainadoi where they staked out a plot of land and intended to start a new life working together as a family of vegetable farmers. The land, however, was low lying. Floods came frequently and washed their crops away. Imam Ali needed a new plan.

Surveying his community, he decided to give raising ducks a try. He started with five ducks, and when they matured with no problems, he increased his flock to 500. Others in his area were also raising ducks, but one of Mr Ali's sons, Imtiaz, who had become an accountant and was working for a supermarket chain in Suva, gave him a better idea. He told his father that if he dressed his ducks he could sell them directly to the supermarkets at higher prices. "Since I was the only farmer providing this service, the demand was incredible," he said.

With his profits, Imam bought a truck and began home deliveries. Soon he was supplying dressed ducks to restaurants. Business was so good that demand had outstripped what he and his family could supply from their small farm. So he started buying ducks from the other farmers in the village.

Mr Ali's operation caught the attention of the Ministry of Agriculture, which advised him to increase production. The needed investment, however, was beyond his means, and so the FAO offered assistance in the form of \$10 000 worth of building materials. He constructed a new slaughterhouse, and began employing local people. All this earned him the 2006 award from

Five model farmers – from Fiji, India, Indonesia, Mongolia and Thailand – were honoured by FAO's regional office for Asia and the Pacific for outstanding achievements

the Fiji Development Bank as the Best Small Business in the livestock category.

Today, Mr Ali's farm is a model farm for the region. His success has been a boon to his community, as he buys up all of his neighbor's ducks at higher prices than they were getting before, gives them free fertilizer and also provides jobs. Furthermore, he offers a helping hand to others. "Whenever anyone wants to learn about duck farming I teach them what I know," he says. "I want my business to grow, but I want my community to grow also."

Once faced with a crisis that might have defeated others, through perseverance and ingenuity, this former carpenter has become an architect of a better future for his family, his community and his country.

Jayanti Pradhan A model farmer and agro-processor from India

If you mention the words "India" and "farmer", for many people the words "poor and uneducated" will also come to mind. Those people have never met Ms Jayanti Pradhan.

Education has always been highly valued in Ms Jayanti's family. Her father Gopal, also a farmer, actually studied economics at a local university but was unable to finish when her mother died. He was determined that his daughter, Jayanti, have a chance to learn. "He had a dream for me, that I should become something," she says. "And he taught me that I should care about society." She excelled in her studies, obtaining undergraduate and graduate degrees in botany, which she chose because she says she loves plants.

Botany may not seem as glamorous a field to India's young when compared with the high-tech industries that have spawned great fortunes for



a few. But, in an era when food shortages are increasing and climate change is threatening fertile regions, India's future will ultimately hinge on its ability to provide food security for its population of more than a billion.

To meet that challenge, India and its farmers will not only have to work harder, they will have to work smarter. That's where people such as Jayanti Pradhan are providing hope for all.

Armed with her knowledge, Ms Jayanti was determined to see her family's farming business grow. But like many farming families, they could not afford more land, and so she experimented with breeding mushrooms, which require little space and are a strong source of protein and other nutrients. She developed four varieties of mushrooms that can withstand the dry climate of Orissa state where she lives. Then she spread her knowledge and her seedlings to her neighbors, and now mushroom farming has become their main source of income. "Mushrooms are landless cultivation and a health food. This is a good way to help the poor," she says.

Jayanti dubbed her new mushroom venture Gopal Biotech Agro Farms, after her father, and is now setting up a lab to breed seedlings to sell to other farmers across India.

Her farm has also expanded to breed goats and honeybees, as well as developing organic fertilizer from goat waste and the earth worms that populate her mushroom farm, and which she distributes free to poor farmers.

Technological know-how comes easy for Jayanti. "The biggest challenge in what I do is social, the fact that I am a woman," she says, once again recalling her father who broke with tradition and sent his daughter to university.

Following his desires, she has done her best to help society, helping to establish 120 self-help groups for women and teaching them what she knows about mushroom farming, bee keeping and whatever else they need to raise their income and stand on their own.

"Most of all I'm proud to help the poor," she says. And Ms Jayanti is a woman about whom her father, and all of India, can certainly be proud.

Jazimah

A model farmer in rice intercropping from the Republic of Indonesia

The province of Yogyakarta is known as the great center of arts and learning in Indonesia - a place of universities where the latest developments are studied, but tradition is still prized and guarded. Born in 1964 in the district of Bantu, Jazimah is a woman who embodies the best of Yogyakarta.

Jazimah is neither a professor nor an artist. She is a farmer. She never attended one of Yogyakarta's great colleges, although she did complete 12 years of schooling. Nonetheless, she is a woman driven by a thirst for knowledge.

In a quest to make a better life for her family, Jazimah has attended numerous courses to learn how to be a better farmer - and much more. She has studied development and people forest management; nutrients and integrated pest management, family-oriented management, micro-finance and micro-enterprises for farm group management. She has signed up for field trainings on edible mushrooms, soy beans and maize production. She has also taken seminars on ecology, agricultural technology and public consulting.

With this trove of knowledge, Jazimah has transformed her simple family farm into an integrated farm where she grows rice, estate crops as well as raising livestock and fish. This balanced approach has increased her family's security, as well as the farm's productivity: a year's harvest consists of 7 800 kilograms of paddy, 300 kilograms of peanuts, 800 kilograms of indigovera leaf. She also has 3 000 fish, 3 cows and four goats.

Indonesia is the largest Muslim country in the world. Central to Islam is the concept of "Ummah" or community. That sense of community is what makes Jazimah truly special. She freely shares the knowledge she has acquired with her neighbors in what has become a mission to improve the lives of those around her.

As a volunteer agricultural extension worker she has shown farmers in the surrounding villages how to integrate their farms, increase productivity, grow medicinal crops and perennials. To protect the forest, she has worked with them to manage livestock in a sustainable way and educate them about the benefits of guarding the environment. More than anyone, it is now the villagers who value and defend the rainforests in their area.



Furthermore, Jazimah has organized the farmers in her area to develop micro-finance schemes with Bank Raykat Indonesia; market their crops to food processing companies, as well as providing guidance on health issues and teaching children and illiterate adults to read and write. "Knowledge is the key to making our communities stronger," Jazimah says.

Indonesia, with its young and vibrant democracy, is a nation that has weathered economic and political storms along with natural disasters. In the villages of Yogyakarta, however, the people are proving to be more resilient than ever. Farmers and villagers have seen their food security strengthened, and their knowledge and opportunities increased. That could not have happened without the work and the generous spirit of a woman named Jazimah.

**Deleg Tsendsuren
A model community forester from Mongolia**

Few people have done more to turn Mongolia green, and give people jobs in the process, than Tsendsuren Deleg. Mongolia is known for its broad expanse of steppes, where herdsmen roam in a struggle for survival. Fifty seven years ago, Tsendsuren Deleg was born to one such herdsman. She knows how hard life can be on the great plains, where the harsh dry climate can make finding food, especially fruits and vegetables, a challenge.

Tsendsuren's father was a popular man in his community, and so he was selected to represent them in parliament. As a representative he had the means to provide his daughter with an education. Tsendsuren chose to attend the Agricultural University and study forest engineering because, she says, "I wanted to be close to nature. I feel peaceful and serene when I am in the forest."

Only about 10 percent of Mongolia, however, was forested. Without forests to serve as watersheds, the land was not fertile enough for people to grow the fruits and vegetables they needed for a healthy diet. So, Tsendsuren Deleg, now working as a government Forestry official, established the first angiosperm (leaf) tree nurseries in Mongolia. Each year, her nurseries are responsible for planting 300 000 aspen and 250 000 elm trees, along with 30 000 sea buckthorn and blueberry plants.

Before she founded her nurseries, people would have to journey to the forests and cut saplings to

bring back if they wanted to plant trees on their land. That could be difficult or impossible for many people.

Not only did her nurseries contribute to the greening of Mongolia, which led to people improving their diets and becoming healthier, they provided jobs for the unemployed. About ten years ago, Mongolia shifted to a market economy. Government cut backs meant Tsendsuren Deleg had to enter the private sector. She started a successful fruit and vegetable plantation, once again hiring unemployed people as workers. And as a private citizen she still contributed to regenerating the country's forests.

She and her workers volunteered to participate in the government's "Green Belt" program, planting nearly 30 000 sea buckthorn, elm and aspen trees in Khovd province. More than 22 tons of vegetables have been harvested from that green zone.

"We have a saying in Mongolia," says Tsendsuren Deleg, "that planting a single tree is the same as lighting a thousand candles for the Buddha. I'm proud to be leaving something for the next generation."

Undoubtedly, Mongolia's next generation will be thankful for, and proud of, the vision, the efforts and the dedication of Tsendsuren Deleg.

**Thamnon Sae Li
A model farmer in organic fertilizers from the Kingdom of Thailand**

Thailand is a nation of farmers, but life is not easy for farmers in Thailand. Thamnon Sae Li, a farmer from Chonburi province on Thailand's eastern seaboard, knows something about that.

When he finished his military service in the late 1980s, Thamnon rented some land and grew cassava and sugarcane. Thamnon worked the land as hard as he could, but he did not earn enough to support his young family. So he also drove a truck. He labored this way for seven years until he saved enough to buy his own 28 rai of land in 1983.

As is common practice, Thamnon bought chemical fertilizers. But before long his yields were decreasing. The land, despite the chemicals, was losing its fertility. Thamnon was in danger of falling into a trap.

During Thailand's export boom, many farmers turned to mono-cropping, raising one crop such as rice, cassava or sugarcane that was fetching high prices. Mono-cropping, however, depletes the soil. Farmers then borrow money to invest in chemical fertilizers, but they only provide a temporary solution. The soil continues to lose its fertility, yields drop further, profits don't materialize and farmers find themselves burdened by debt. Debt was something Thamnon believed should be avoided at all cost, but he wasn't sure what to do.

Then, in 1999, he heard a speech by His Majesty King Bhumibol Adulyadej in which he talked about his New Theory of Agriculture. His Majesty urged farmers to diversify their crops, and devote part of their land to raising fish and poultry so as to be more self sufficient. If one crop failed, or if some poultry died, they could still survive on the others. Furthermore, the waste from the poultry and other materials could be used for organic fertilizer.

"His Majesty's ideas were good, but as His Majesty said, it requires hard work and perseverance. I was willing to work hard and try," Thamnon said.

Thamnon diversified his farm. Then, with advice from government officers, he mixed his first batch of organic fertilizer with waste from his chickens, fish and some cows.

His harvests began to increase. He continued experimenting with organic fertilizers, adding plants such as sadao to the mix. Natural substances in these plants repel insects, removing any need to invest in chemical pesticides - another source of potential debt, and a health risk.

Now, aside from cassava, he grows morning glories, cucumbers, baby corn, pomelo, jackfruit, coconuts and others, aside from raising chickens and fish. When his neighbors saw his harvests, they asked how he had done it. He not only taught them how, he formed an organic fertilizer association to produce more fertilizer and spread the gospel of organic farming. Now his farm serves as a learning center for others, and farmers from far away provinces come to see how to achieve the same kind of success.

"I want to see all farmers using this method so that all farmers can be free of debt be self sufficient, and provide good lives for their families and children. Yes, it's hard work, but the rewards are greater," Thamnon says. "I want to

thank the government officers from the Land Development Department for their help, but most of all, I want to thank His Majesty the King for his royal advice which enabled me and my family to have a better life through the sufficiency theory."

Annexes

Media coverage

Annex 1

16 October

Announcement of WFD observance on Radio Thailand 07:00 o'clock news (Thai)

Radio Thailand World Service interview with He Changchui on WFD celebration (07:30 hrs)

Today the Food and Agriculture Organization of the United Nations - in short FAO - is celebrating the 64th anniversary of its establishment in 1945. This event is called the World Food Day, and Radio Thailand spoke to Dr He Changchui, assistant director-general and FAO regional representative for Asia and the Pacific.

1. Dr He, today the Food and Agriculture Organization celebrates its 64th anniversary under the theme Achieving food security in times of crisis. What is the essence of this theme?

At a time when the global economic crisis dominates the news and the government agendas, the world needs to be reminded that not everyone works in offices and factories; and that the crisis is stalking the small-scale farms of the world too, where 70 percent of the world's hungry live and work

The situation in rural areas in Asia-Pacific developing countries is dire, coming in the wake of the surge in fuel and food prices in 2007 and 2008. This last crisis is hitting the poor while they are down. Money sent home from relatives working in the cities or abroad has declined as unemployment bites.

Trillions of dollars are being spent to breathe new life into wealthy economies, but who will bail out the poor? And how can we protect the most vulnerable from hunger, shockproof the agricultural sector against future crises and even enable poor farmers to profit from higher food prices? This is the real meaning of FAO's message on this World Food Day.

2. The FAO office in Bangkok reaches out to 43 members, including 37 developing countries in the Asia-Pacific region - a region with significant socio-economic gains over the last decades. Has FAO already seen any impact of the crisis on agriculture in this region?

While we continue to study and monitor the situation, we can already see in our region that each developing country is affected; in 2009 alone the region has an increase of 9 percent in the number of food-insecure (reaching to a total of 642 million in 2009). We also are aware that food prices remain high on national markets even though international food commodity prices have declined from their earlier peaks.

In addition, structural factors that were behind the food crisis in the first place are still present, such as low agricultural productivity; significant problems with water availability and land tenure; the above long-term average frequency of floods and droughts; and the low level of investments in agricultural research and development - much lower than what is recommended by experts - and not directed towards the most important crops for the poor.

To make matters worse, many of the coping mechanisms used by the poor to deal with crisis have already reached their limits. For example, selling assets is now more difficult; migration is more difficult; and borrowing to finance farming investment or family consumption is hampered by tighter credit markets.

Besides the waves of unemployment of migrant workers, mainly in construction and services sectors, a slowdown in foreign direct investment and declining exports of primary commodities have increased unemployment in poor countries.

Finally, the economic outlook of the rich countries is such that there are obvious delays or difficulties to honor their commitments to development support and humanitarian assistance. This last perspective seems not to stand well in view of pledges made over the last years during a series of summits.

3. Dr He, you saying that the poor are now facing many crises at the same time. What are the possible immediate solutions which you are advocating?

It is true and clear that the most vulnerable members of society need help now, more than ever.

FAO thus stresses that the first step in reaching out to the hungry is to know their identity, location and situation. Food price monitoring by governments keeps tabs on hunger hotspots, and safety nets can then catch the most vulnerable. Options include food distribution programmes, cash transfer schemes, various feeding programmes and employment schemes.

Most importantly, a country that experiences a slowdown in growth can expect an increase in child malnutrition. Fighting micronutrient deficiencies in children, pregnant and lactating women is thus a high priority, and longer term measures should include promoting breastfeeding, school feeding programmes and industries for quality weaning food, as well as monitoring children's growth.

In addition, social programmes for the hungry and poor must suit the circumstances and improve access to food where food markets work and - if food markets are not working - provide food aid or food for work.

In short, governments should mainstream agricultural and food security into economic stimulus or rescue packages, giving high priority to increase production and productivity.

4. Looking at solutions to the problems you mention, how can Thailand and other countries in Asia hope that find more lasting solutions for poverty in rural and agricultural areas?

Despite substantial progress achieved over the last 3 decades in Asia, and in particular in Thailand, the poorest farmers in this region could not sufficiently profit from the higher rice prices over the last two years. Why? Because they could not respond to the opportunity, and they could not expand production due to lack of access to inputs or marketing opportunities.

Net investments of \$83 billion a year must be made in agriculture in developing countries if there is to be enough food to feed 9.1 billion people in 2050. Of this figure, as much as \$29 billion would need to be spent in the two countries with the largest populations - India and China; \$20 billion in South Asia and \$24 billion in East Asia.

These amounts are low when contrasted to the trillions of dollars found in short order in 2008 and 2009 to prop up the financial sector. Investments of \$83 billions a year would generate an overall annual benefit of \$120 billion, and would improve agricultural productivity, enhance livelihoods and food security of more than the 1.02 billion hungry people in today's world. It would enable the development and conservation of natural resources, expand and improve infrastructure, broaden market access, and much more.

On the occasion of World Food Day, let us reflect and act on the unjust human suffering behind the hunger figures. Crisis or no crisis, we have the knowhow to do something about hunger. We also have the ability to find money to solve problems. Let us work together that hunger is recognized as a critical problem, and solve it.

Thank you, Dr He, and wishing FAO a successful continuation of its important mission for achieving food for all.



**Live broadcast of the function on Radio Thailand World Service
from 15:00 to 16:45 hours.**



20:00 hrs. news report on WFD celebration at FAO Regional Office on all Thai TV channels – 3, 5, 7, 9 and NBT



ABC Radio Australia
UN warns of continuing food crisis for world's poor
 Updated October 16, 2009 12:10:41
 Two UN agencies say the global economic crisis has hit poor nations hardest, revealing a fragile world food system which is in urgent need of reform.

Today is World Food Day, and the World Food Programme and the Food and Agriculture Organisation have warned in a joint report that food and economic crises have resulted in one sixth of the world's population going hungry and being under-nourished.

Presenter: Sen Lam
 Speaker: Peter Cornish, East India plateau project leader, University of Western Sydney

FBD: India today celebrates World Food Day

By Sabyasachi Samajdar, FoodBizDaily.com Bureau Chief - New Delhi
 October 16, 2009 - The Ministry of Food Processing Industries, Government of India, in association with Delhi State Government and Confederation of Indian Industry (CII) today celebrates World Food Day in New Delhi and across the country. The Chief Minister of Delhi Mrs. Sheila Dikshit flagged off a Run and Walkathon today. More than 2000 people from various walks of life - school children, NCC cadets, Army, senior citizens etc., participated in the Walkathon at India Gate in the morning. To create awareness on Food Safety and Quality, various food companies distributed health food and energy drinks at the Walkathon. Food Nutritionists were present in the program to provide guidance on and safe & healthy food.

World Food Day is celebrated every year around the world on 16 October on the date of the founding of the Food and Agriculture Organization of the United Nations in 1945.
 The aim of the India's event was to position Delhi as a Safe Food destination before the upcoming Commonwealth Games 2010, enhance customer consciousness and understand Consumer Rights. It also provided know-how to Education Institutes, Consumers and Industry to maintain high standards of hygiene.

Offering hygienic and quality food was one of the key constituents in making India a perfect host for CWG 2010. In order to further this endeavor, India intends to educate food vendors and consumers alike on the need for the same and is actively looking at setting quality, health and hygiene standards for eateries and restaurants.

Bhutan Observer

16 October 2009
 Bhutan observes the World Food Day today at Tendu Middle Secondary School in Samtse with a theme, 'Achieving Food Security in Times of Crisis'. 2009 has seen an estimated increase of 105 million hungry people.



Thairath
17 October 2009

บราซิลอันดับ 1 ชาติต่อสู้ความหิวโหย

สำรวจจาก 50 ประเทศทั่วโลก เนื่องในวันอาหารโลก ระบุว่าบราซิล ครองอันดับ 1 ช่วยคนในชาติต่อสู้ความหิวโหย แต่ชาติอื่นๆ ไม่จริงจังแก้ปัญหา...

เกษตรฯ หนุนเอฟเอโอขึ้นถึงความอดอยากหิวโหยแก่ประชากรโลก เร่งปลูกกระแสสร้างความมั่นคงปลอดภัยทางอาหาร
 เดินสายจัดงานวันอาหารโลกที่ จ.น่านคืนพโย.นี้

วันที่ลง: 19/10/2552 แหล่งที่มา: กระทรวงเกษตรและสหกรณ์

เกษตรฯ หนุนเอฟเอโอขึ้นถึงความอดอยากหิวโหยแก่ประชากรโลก เร่งปลูกกระแสสร้างความมั่นคงปลอดภัยทางอาหาร

เดินสายจัดงานวันอาหารโลกที่ จ.น่านคืนพโย.นี้ นายธีระ วงศ์สมุทร รัฐมนตรีว่าการกระทรวงเกษตรและสหกรณ์

เปิดเผยในโอกาสเป็นประธานแถลงข่าว “การจัดงานวันอาหารโลก (World Food Day)” ว่า

ประเทศไทยในฐานะเป็นสมาชิกขององค์การอาหารและเกษตรแห่งสหประชาชาติ

และเป็นสถานที่ตั้งของสำนักงานองค์การอาหารและเกษตรแห่งสหประชาชาติประจำภูมิภาคเอเชียและแปซิฟิก

และยังเป็นประเทศเกษตรกรรมที่ผลิตและส่งออกอาหารรายใหญ่อันดับต้น ๆ ของโลก แต่ปรากฏว่ายังมีผู้หิวโหย อดอยาก

และขาดโภชนาการเป็นจำนวนมาก ซึ่งปัจจุบันมีประชากรโลกที่อดอยากหิวโหยประมาณ 1,000 ล้านคน ดังนั้น กระทรวงเกษตรฯ

ในฐานะหน่วยงานกลางประสานงานกับ เอฟ เอ โอ จึงได้ร่วมกับ สำนักงาน เอฟ เอ โอ กรุงเทพฯ จัดงานวันอาหารโลกขึ้นทุกปี

เพื่อรณรงค์และสร้างจิตสำนึกให้คนไทยทุกภาคส่วนของสังคมทั้งภาครัฐและเอกชน สถาบันการเงิน และประชาชน

ตลอดจนเกษตรกรได้ทราบถึงความสำคัญของวันอาหารโลก ตระหนักถึงความสำคัญของอาหารและความมั่นคงทางอาหาร

ซึ่งจะเป็นการส่งเสริมการผลิตอาหารที่มีคุณภาพปลอดภัย และเพียงพอต่อความต้องการบริโภค ทั้งยังแสดงให้เห็นถึงความร่วมมือ

และนโยบายของประเทศไทยที่สอดคล้องกับองค์การอาหารและเกษตรแห่งสหประชาชาติ ในการแก้ปัญหาความยากจน

การสร้างความมั่นคงด้านอาหาร และส่งเสริมให้ประชาชนมีวิถีชีวิตความเป็นอยู่ที่ดีขึ้น โดยเฉพาะประชาชนที่อยู่ในชนบทและด้อยโอกาส

“การจัดงานวันอาหารโลกในประเทศไทยในแต่ละปี จัดขึ้น 2 ครั้ง ได้แก่ ระดับโลก (Global Celebration)

ซึ่งจัดพร้อมกับประเทศสมาชิกทั่วโลกในวันที่ 16 ตุลาคม 2552 โดย เอฟ เอ โอ เป็นผู้จัดขึ้นที่สำนักงาน เอฟ เอ โอ

ประจำภูมิภาคเอเชียและแปซิฟิก กรุงเทพฯ ถนนพระอาทิตย์ ส่วนการจัดงานระดับประเทศ (National Celebration)

กระทรวงเกษตรและสหกรณ์ โดยสำนักงานเกษตรต่างประเทศ และ เอฟ เอ โอ เป็นผู้จัดขึ้นและเพื่อให้ส่วนภูมิภาคมีส่วนร่วมอย่างทั่วถึง

โดยในปี 2552 กำหนดจัดขึ้นที่จังหวัดน่าน ในระหว่างวันที่ 3 – 4 พฤศจิกายน นี้ ณ มหาวิทยาลัยเทคโนโลยีราชมงคลล้านน่าน

จังหวัดน่าน” นายธีระ กล่าว สำหรับการจัดงานวันอาหารโลกในปี 2552 เอฟ เอ โอ ได้กำหนดหัวข้อ Achieving food security

in time of crisis หรือ การสร้างความมั่นคงทางอาหารในยามวิกฤต ซึ่งเป็นหัวข้อที่ทั่วโลกให้ความสำคัญอยู่ในขณะนี้

โดยกิจกรรมต่างๆ ภายในงานครั้งนี้ อาทิ การสัมมนาเพื่อแลกเปลี่ยนความคิดเห็นร่วมกัน การเผยแพร่ และประชาสัมพันธ์วันอาหารโลก เอกสาร

สิ่งพิมพ์เกี่ยวกับวันอาหารโลก โดยสำนักงานเกษตรและสหกรณ์ทุกจังหวัด นิทรรศการ

การออกร้านแสดงและจำหน่ายผลิตภัณฑ์อาหารและเกษตร เป็นต้น

วันที่ : 16/October/2009

The News

Pakistan ranked 4th from the bottom

Saturday, October 17, 2009

By Myra ImranĀ Islamabad

Pakistan scored fourth from the bottom, below Bangladesh and Nepal, in a global scorecard on the state of hunger released by ActionAid on the World Food Day.

The report card for 51 nations looks at not just the prevalence of hunger, but also at what the governments are doing by way of policy to fight hunger. Pakistan scores 24 points and is ranked 26th on the list of 29 developing countries.

The scorecard report shows that China, ranked second out of the developing countries, cut hunger numbers by 58 million in 10 years through strong state support for smallholder farmers.

Ranked fifth in the scorecard, even Malawi, one of the poorest countries in the world, and burdened with a devastating HIV epidemic - has reaped rich results within three short years. Through a massive boost of investment to small-scale farmers, it has trebled production to halt a famine that threatened to leave nearly a third of its population hungry.

Out of 29 developing nations, Brazil ranks top, China second, Ghana third, Vietnam fourth and Malawi fifth. Democratic Republic of Congo is at the bottom. Out of 22 developed countries, the UK ranks eighth, Denmark fifth, Netherlands seventh, France ninth, Italy 14th, Greece 16th, Australia 17th and the US 21st. Luxembourg is top and New Zealand is at the bottom.

The report says that while the Pakistani Constitution explicitly mentions the right to food, this is not yet backed up by effective legislation. Rising food prices, especially of sugar, stagnant incomes and growing unemployment have worsened the food security situation.

It mentions that the proportion of hungry in the country has swelled and child malnutrition remains very high at 31 per cent.

"Even Punjab, the breadbasket of Pakistan, has struggled to protect its population against high food prices and low household incomes.

"The government needs to invest more in agriculture so that small farmers and agricultural workers that produce food also have it on their plates.

"Women's ownership and control of land is also necessary as according to FAO, 60 per cent of the world's hungry are

women and girls," says Javeria Malik, ActionAid Pakistan 's spokesperson.

She said that safety net programmes like the Benazir Income Support Programme were important initiatives but more social protection programmes must be brought to the forefront of the battle against hunger.

The Philippine Star

World Food Day is 'no food day' for more than one billion of world's hungry Updated October 17, 2009 12:00 AM
 . BOY SANTOS]

MANILA, Philippines - Marking World Food Day yesterday, the United Nations World Food Program (WFP) called on the world to remember the more than one billion urgently hungry people with inadequate access to food. "World Food Day is actually 'No Food Day' for almost one out of every six people around the world this year," WFP executive director Josette Sheeran said yesterday in Rome. "Our challenge is to turn 'No Food Day' back into 'World Food Day' for the hundreds of millions without food on their table tonight."

In the Philippines, 17.5 percent or an estimated 3.2 million families have experienced involuntary hunger at least once in the past three months, according to the most recent Social Weather Stations survey. Since its return to the Philippines in 2006, WFP has been supporting the national efforts to address hunger by assisting vulnerable people in the conflict-affected areas of Mindanao where people are particularly food insecure. The organization has established a number of programs, including school meals, food-for-work and food-for training activities, maternal and child nutrition and food assistance to internally displaced people (IDPs). At the same time, WFP supports national disaster response efforts, as demonstrated by ongoing emergency operations to assist the victims of tropical storms in Metro Manila and Luzon.

Marking World Food Day, WFP has launched a series of activities aimed at highlighting the critical importance of its partnerships with government and the private sector in the battle against hunger in conflict-affected areas of Mindanao. In keeping with the theme of this year's World Food Day - Achieving Food Security in Times of Crisis - WFP's ceremonies focused on the communal garden that the organization has developed in Lanao del Norte to assist returning families originally displaced by the Mindanao conflict in August 2008.

A youth forum on hunger mitigation and food insecurity was conducted by Mindanao State University-Iligan Institute of Technology (MSU-IIT), with some 200 students from Iligan City participating.

"WFP needs more partners to meet our commitment to fight hunger at these critical times," said WFP Philippine country director Stephen Anderson. "The needs are rising as the available funding is falling, so we have to reach out to as many people as possible."

"In Mindanao," he continued, "we are working closely with the government and our private sector partners to ensure that the food and nutrition needs of beneficiaries in the conflict-affected areas are fully supported. We don't want anyone to go hungry, neither the victims of conflict in Mindanao, nor the victims of nature's fury in Metro Manila and Luzon."

WFP is the world's largest humanitarian agency fighting hunger worldwide. In 2009, WFP aims to feed 108 million people in 74 countries.

Last year, governments responded with record donations to WFP, contributing more than \$5 at a time when high global food prices were spreading misery and threatening instability as hungry communities took to the streets in protest. This year, as the number of hungry people passes one billion for the first time in human history, support from key donors is vital. WFP reported that many of its traditional donors are striving to maintain the levels of funding they have committed to in the past, with some even exceeding the amounts they had given in previous years.

Sheeran added that for decades, WFP has been able to feed around ten percent of the world's hungriest people, but this year, for the first time, the agency is unlikely to reach that target. As an agency that responds to emergency needs, WFP has also had to meet many unforeseen demands in 2009, such as the response to the recent floods in the Philippines.

BangkokBizNews
17 October 2009

Thansettakij

เอฟเอโอเตือนวิกฤติอาหารโลก

โดย : กรุงเทพธุรกิจออนไลน์

เอฟเอโอแนะทุ่มงบ 3 หมื่นล้านดอลลาร์ พัฒนาการเกษตรโลก หลังพบแนวโน้มอาหารในโลกลดลงใช้จังหวัดนำต้นแบบการผลิตสร้างความมั่นคงอาหารโลก

นายธีระ วงศ์สมุทร รัฐมนตรีว่าการกระทรวงเกษตรและสหกรณ์ เปิดเผยว่า ปีนี้องค์การอาหารและเกษตรแห่งสหประชาชาติ หรือเอฟเอโอ ได้เลือกจังหวัดน่าน เป็นสถานที่จัดงานอาหารโลก เห็นว่าจังหวัดน่านสามารถบริหารจัดการระบบการผลิตอาหารได้อย่างพอเพียง เอฟเอโอได้ศึกษากระบวนการผลิตเห็นว่าเหมาะสมที่จะนำมาใช้เป็นต้นแบบในการพัฒนาการผลิตอาหารในชุมชนอื่นๆ ได้

นายอิโรยูกิ โคโนะ ผู้แทนจากเอฟเอโอ ประจำภูมิภาคเอเชียแปซิฟิก กล่าวว่า การจัดงานวันอาหารโลกปีนี้ จะมีขึ้นระหว่างวันที่ 3-4 พ.ย.นี้ เพื่อสร้างจิตสำนึกให้คนไทยตระหนักถึงปัญหาความอดอยาก ที่ไทยและร่วมมือกันแก้ปัญหาอย่างจริงจัง โดยเฉพาะช่วงที่โลกเกิดวิกฤติเศรษฐกิจ ออกลามาไปถึงการจ้างงาน ภาคเกษตร ส่งผลให้ปัจจุบันมีคนอดอยากในโลกมากขึ้นเป็น 1,020 ล้านคน เพิ่มขึ้นจากปีที่ผ่านอยู่ที่ 105 ล้านคน คิดเป็น 1 ใน 6 ของประชากรโลก

โดยดัชนีราคาอาหารช่วงกลางปี 2550- 2551 เพิ่มขึ้นเฉลี่ยถึง 52% แม้ราคาจะลดลงช่วงเดือน.ก.ค.2551

แต่วิกฤติอาหารไม่ได้ลดลงโดยกองทุนการเงินระหว่างประเทศ หรือไอเอ็มเอฟ ได้รายงานราคาธัญพืชในตลาดโลกสูงกว่าปีฐาน 2548 ถึง 63%

เนื่องจากผลผลิตด้านการเกษตรเป็นปัจจัยสำคัญด้านอาหารยังอยู่ในระดับต่ำ อัตราการเพิ่มขึ้นของประชากรของหลายประเทศยังมีอัตราสูง เกิดการขาดแคลนน้ำ ที่ดินทำกิน รวมทั้งยังเกิดภาวะภัยแล้ง น้ำท่วม ส่งผลให้การลงทุนด้านการเกษตรมีน้อย

"วิกฤติอาหารดูเหมือนจะเกิดขึ้นก่อนวิกฤติเศรษฐกิจ มีการเลิกจ้างงาน ส่งผลให้คนจนต้องเผชิญวิกฤติสองด้านพร้อมๆ กัน ประเทศที่พัฒนาแล้วต่างมีปัญหารวมถึงเช่นกัน บ่งชี้ว่าอาจมีการลดความช่วยเหลือด้านการพัฒนาและด้านมนุษยธรรมลง" นายอิโรยูกิ กล่าว

นายอิโรยูกิ กล่าวว่า การผลิตอาหารของโลกมีแนวโน้มลดลงจากปัญหาภัยธรรมชาติ เห็นได้จากการผลิตข้าวของปากีสถานลดลง 4.5% ปีที่แล้วปีลดลง 4% ส่งผลให้สต็อกข้าวของโลกลดลง ราคาและภาวะต้องการเพิ่มขึ้น

ทั้งนี้เอฟเอโอได้ประเมินการลงทุนในกลุ่มประเทศกำลังพัฒนา เพื่อช่วยเหลือเกษตรกรต้องใช้เงินอีกปีละ 30,000 ล้านดอลลาร์

ส่งผลให้จำนวนผู้อดอยากทั่วโลกลดลงได้ 50% ในปี 2558

เงินดังกล่าวเทียบกับวงเงินที่ประเทศพัฒนาแล้วใช้ซื้ออาวุธยุทโธปกรณ์แต่ละปีสูงถึง 1,340,000 ล้านดอลลาร์ การลงทุนเพียง 30,000 ล้านดอลลาร์ ส่งผลให้เกิดผลตอบแทนรายปีสูงถึง 120,000 ดอลลาร์

List of guests

Annex 2

WORLD FOOD DAY 16 October 2009

The following is a list of selected guests who attended the regional observance of the 29th World Food Day at the FAO Regional Office for Asia and the Pacific on 16 October 2009.

Guest of Honor

Her Royal Highness Princess Maha Chakri Sirindhorn

Guest speaker

Prof M.S. Swaminathan, Member of Parliament (Rajya Sabha) and Chairman of MS Swaminathan Research Foundation

Model Farmers

Imam Ali, model poultry farmer, Fiji
Jayanti Pradhan, model farmer and agro-processor, India
Jazimah, model farmer in rice intercropping, Indonesia
Deleg Tsendsuren, model community forester, Mongolia
Thamnon Sae Li, model farmer in organic fertilizers, Thailand

Office of the Privy Councillors

H.E. General Pichit Kullavanijaya, Privy Councillor
H.E. Mr. Ampol Senanarong, Privy Councillor for Royal Agricultural Project
H.E. Mr. Sawad Wattanayagorn, Privy Councillor

Royal Thai Government

Ministry of Agriculture and Cooperatives

H.E. Theera Wongsamut, Minister for Agriculture and Cooperatives
Yukol Limlamthong, Deputy Permanent Secretary, Office of Permanent Secretary
Supatra Thanaseniat, Deputy Permanent Secretary, Office of Permanent Secretary
Tipwon Parinyasiri, Director, The Food and Drug Administration
Suttipan Brohmsubha, Director, Bureau of Agricultural Product Quality Development, Department of Agriculture Extension
Orasa Dissataporn, Director, Vegetable, Flower and Herb Promotion Division, Bureau of Agricultural Commodities Promotion and Management
Lawan Jeerapong, Director, Pest Management Control Division
Doughatai Danvivathana, Director, FARD and Assistant Secretary-General National FAO Committee
Trisadee Chaosuanchaen, Deputy Director-General, Department of Livestock Development
Somkiat Prajamwong, Assistant Director-General, Royal Irrigation Department
Sunisa Boonyapatipark, Chief, Foreign Relation Sub-Division, Planning Division, Dept of Agriculture Extension
Boppha Mongolsilp, Senior Subject Matter Specialist, Agricultural Clinic, Dept of Agriculture Extension
Srisuda Techasan, Senior Subject Matter Specialist, Department of Agriculture Extension
Yupadee Hemarat, Chief Protocol Sub-division
Magaret C. Yoovatna, Policy and Plan analyst, Department of Agriculture
Chawee Lom Lek, Policy and Plan analyst, Department of Agriculture
Kasem Prasutsaengchan, Senior Policy and Plan analyst
Siriporn Thanarachataphum, Policy and Plan Analyst
Piyawat Naigowit, Policy and Plan Analyst
Krit Harnsawas, Policy and Plan Analyst
Nantawan Ganma, Policy and Plan Analyst
Poonlarp Ulaingam, Policy and Plan Analyst
Chaiya Phuengphosop, Policy and Plan Analyst
Prasert Kosonwit, Department of Rice
Theeraporn Plienkratoke, Department of Rice
Kate, Department of Rice
Kingkaew, Department of Rice
Tasane Pradyabumrung, Senior Officer, ACFS, National Bureau of Agricultural Commodity and Food Standards
Harnpol Tippayamonta, Economist, Bureau of International Agricultural Economics, Office of Agriculture Economic
Charnwit Ruksarsook, Foreign Relation Officer, Cooperative Auditing Department
Chanyaikornd Detchwitayaporn, Cooperative Auditor, Cooperative Auditing Department

Ministry of Foreign Affairs

Krisana Chandraprabha, Director-General, Department of International Economic Affairs

Ministry of Natural Resources and Environment

Pornthip Pucharoen, Inspector General, Ministry of Natural Resources and Environment
Cholwipa Anujak, Ministry of Natural Resources and Environment

Universities and Research Institutions

Visith Chavasit, Director, Institute of Nutrition, Mahidol University
Rosarin Smitabhindu, The Royal Chitralada Projects
Hathairat Sakolwittayanon, Kasetsart University

Other Ministries, Organizations, Non-Governmental Organizations and Associations

Somkid Kochanud, Consultant to the Governor, Governor Office, Nan Provincial Hall
Veravit Vivatthanavanich, Governor of Nan Province, Nan Provincial Hall
Jittisak Sripanya, Agriculture-Cooperative Provincial Officer, Nan Provincial Hall
Busba Vrakornvorawut, Committee on Human Rights, Rights and Liberties and Consumer Protection, The Senate of Thailand
Khunying Ambhorn Meesook, President, Foundation for Life-long Education
Wilas Techo, Director of Rural Development Bureau 1, Population and Community Development Association
Tsubata Hideki, Deputy Secretary General, Southeast Asian Fisheries Development Centre
Vichai Sriprasert, President, Riceland International Limited

Embassies

AUSTRALIA	Bridie Rushton, Regional Manager, AusAIDS
BELGIUM	Linda Spies, Intern
BHUTAN	Kuenzanj Dechen, Counsellor
CANADA	H.E. Mr. Ron HOFFMANN, Ambassador Extraordinary and Plenipotentiary
CHINA	Diao Mingsheng, Permanent Representative
EU	Mikael Sami, First Secretary
FRANCE	Maurice Siveton, Regional Consellor and Cooperation and Deputy Permanent Representative to UNESCAP
GERMANY	André Vollmehaus, Political and Protocol
INDIA	H.E. Miss Vijaya Latha Reddy, Ambassador Extraordinary and Plenipotentiary
INDONESIA	H.E. Mr. Mohammad Hatta, Ambassador Extraordinary and Plenipotentiary and Permanent Representative to UNESCAP Haris Saragish, Secretary
IRAN	Mahmoud Khani Jooyabad, Counsellor and Deputy Permanent Representative to the UNESCAP
JAPAN	Yuji Kumamaru, Envoy Extraordinary and Minister Plenipotentiary Masahide Hirokawa, First Secretary
KOREA, DPR	Mr. Jong, Representative
MALAYSIA	Boniface Besin, First Secretary and Counsellor of Agriculture
MONGOLIA	H.E. Mr. Luvsandoo Dashpurev, Ambassador Extraordinary and Plenipotentiary Amar Amarjargal, Third Secretary
MYANMAR	Aye Aye Mu, Deputy Chief of Mission
NEPAL	H.E. Mr. Naveen Prakash Jung Shah, Ambassador Extraordinary and Plenipotentiary
PAKISTAN	Ahmed Amjad Ali, Counsellor

United Nations

ILO	Jiyuan Wang, Deputy Director
IUCN	Tejpal Singh, Regional Group Head
UNDP	Yuxue Xue, Deputy
UNEP	Serena Fortuna, Associate Programme Officer
UNESCAP	Ayaul Hasan, Chief Deputy Policy Section, MPD
UNESCAP	Shigeru Mochida, Deputy Executive Secretary
UNESCO	A.H.A. Hakeem, Director a.i.
UNIDO	Gloria Adapon, Industrial Development Officer
UNIFEM	Mark Wallem, Deputy Regional Programme Director
UNIS	Hak-Fan Lau, Chief
UNOPS	Wang Yue, Regional Director
WFP	Kenro Oshidari, Regional Director
WHO	Dr. Maureen Birmingham, Representative
World Bank	Annette Dixon, Country Director

Government Officer accompanying the model farmer

Pramote Wijitjaroonroj, Land Development Department, Chonburi, Thailand

Former FAO Staff

P.A. Hicks, Praphas Weerapat, Ramesh Bhat, J. Poirson

Organizing secretariat

Annex 3

WORLD FOOD DAY 16 October 2009

Steering committee

He Changchui, Assistant Director-General and Regional Representative (Chairperson)
Hiroyuki Konuma, Deputy Regional Representative
Adnan Quereshi, Senior Administrative Officer
Upali Wickramasinghe, Policy/Programme Development Consultant
Tarina Ayazi, Meetings and Publications Officer
Diderik de Vleeschauwer, Information Officer (Secretary)

Organizing committees

Invitations, reception and protocol

Hiroyuki Konuma (Chairperson)
Diderik de Vleeschauwer
Kanokporn Chansomritkul
Siriporn Charoenkijgasat (Master of Ceremony)
Malcolm Hazelman (Reading citations of model farmers)
Kanjerat Boonyamanop
Monpilai Youyen
Panida Jongkol
Truchai Sodsoon
Umpaiwan Pipatanavilai
Kallaya Meechantra
Supajit Tienpati
Thapanee Tayanuwattana
Suvinita Malakul Na Ayudhaya
Atchareeya Pongput
Swadipat Na Pattalung
Bongkoch Prasannakarn
Sansiri Visarutwongse
Thanomkwan Rachtachart
Geerarat Pongpanarat
Sucharat Tong-On
Kachen Wongsathapornchai
Jintana Anunacha
Duangporn Sritulanondh
Sunee Hormjunya
Navaporn Liangchevasuntorn
Chaturat Damrongrisakul
Jaruan Singhaphanthu

Liaison with model farmers

Diderik de Vleeschauwer (Chairperson)
David Kahan - Fiji
Vinot Kumar Ahuja - India
David Baugh - Indonesia
Marija Spirovska/Josefine Munoz - Mongolia
Don Triumphavong - Thailand

Liaison with Thai government

Hiroyuki Konuma (Chairperson)
Tarina Ayazi
Somchai Udomsriunguang
Panida Jongkol
Surawishaya Paralokanon

Logistics and catering

Adnan Quereshi (Chairperson)
Sri Limpichati, consultant
Tetsuji Nakata
Wichai Nomkhumtode
Cristina Sriratana
Chainarong Palaprasert
Suthep Charoenbutr
Pensri Yujang
Prasert Huatsawat

Media, publications and photographs

Diderik de Vleeschauwer (Chairperson)
Apinya Petcharat
Kanokporn Chansomritkul
Apirada Sirigaya
Sasikant Sathiensotorn, secretary
Chanarthip Chiangtong, photographer
Thanyapong Hayanuwat, photographer
Robert Horn, journalist consultant

Publications distributed

- * 2009 WFD information note
- * 2009 WFD issues paper
- * 2009 WFD poster
- * Address by the guest of honour
- * Message of the FAO Director-General
- * Welcome and introductory statement by ADG/RR
- * Keynote speech on Achieving food security in times of crisis, by Professor M S Swaminathan, Member of Parliament (Rajya Sabha) and Chairman, M S Swaminathan Research Foundation
- * Citations of outstanding farmers
- * FAO at work 2007-2008 Food security, climate change and bioenergy -- the new equation
- * RAP publication Selected indicators of food and agricultural development in the Asia-Pacific region, 1998-2008
- * CD-ROM of RAP publications 1999 to 2008
- * Flyer of Professor M S Swaminathan's book on "Science and Sustainable Food Security"

