

Food 2009 Anniversary Conference - Keynote Speech
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Hilde Frafjord Johnson

Food and food security - A Global Perspective

Today we stand at a crossroads. The combined impact of the food and financial crises is unprecedented. It threatens the livelihoods for millions of poor people and risks jeopardize future progress for billions. Only a global collective effort can change this situation and set a new course.

There are now one billion hungry people in the world. Of the nearly 6.7 billion people on the planet, about 2 billion are food insecure. They cannot afford a healthy diet, limiting use of their full physical and intellectual capacity. And the hungry are poor. Even before the food and the financial crises hit, 160 million people in the world lived in ultra poverty, on less than 50 cents a day.

According to FAO, the number of undernourished people in the world has now risen to more than 960 million, a significant increase from 2007. And the numbers will increase to one billion in this year¹. As a result of the soaring food and fuel prices between 3 and 4 times more people were pushed into poverty last year. For those already struggling to get their daily food, the double shock of food and fuel price rises affected their basic survival. Over the last 6-9 months we have seen a deterioration in acute malnutrition in Afghanistan, Niger, Sierra Leone and Uganda, and with high acute malnutrition rates among the urban poor of Cambodia, Congo-Brazzaville, Kenya and Tanzania. This year - another two – three times as many are expected to become extreme poor².

The sharp increase in food prices from 2007 and mid-2008 had serious implications for food and nutrition security, macro-economic stability, and political security. And it is not over. After steep declines at the end of 2008, prices have been gradually edging up again during the first quarter of this year. Maize prices today are 50% higher than the average price prevailing between 2003 and 2006, while rice prices are 100% higher³.

According to International Food Policy Research Institute (IFPRI), the current recession and the corresponding reduced investment in the global economy will lead to an increase in agricultural prices in the medium term, along with the number of hungry people. ***This is the context of today's conference on Food*** – and for the 150 year's Anniversary of this University, the University of Life Sciences.

¹ According to the CEB Communiqué of 5 April 2009.

² Those living below the international poverty line of \$1.25 a day in 2005 purchasing power parity terms

³ World Bank 2009

Why did This Happen? Why a Food Crisis and Why Now?

Agriculture reached the global headlines for the first time in decades last year. Never before had CNN reported repeatedly on food supplies and food prices. We witnessed riots in West Africa, change in government in Haiti, violent protests in Mexico and Pakistan – all sparked by rocketing food prices.

When we look back, the factors playing a role in the crisis varied in nature - some cyclical and some structural:

Due to population growth, billions of people were buying ever-greater quantities of food. In some countries, many had stopped growing their own food and now had the cash to buy a lot more of it. Global stockpiles of some basics had dwindled to their lowest point in decades. Rice — a staple for billions of Asians — soared to its highest price in 20 years, while supplies were at their lowest level since the early 1980s⁴. Meanwhile, in early 2008, the global supply of wheat was lower than it had been in about 50 years — just five weeks' worth of world consumption was on hand⁵.

The spike in oil prices, which hit a record level of almost \$150 per barrel in July 2008, pushed up fertilizer prices, as well as the cost of trucking food from farms to local markets and shipping it abroad.

Climate change has also been a key factor. Harvests had been seriously disrupted by freak weather, including prolonged droughts in Australia and southern Africa, floods in West Africa, and this past winter's deep frost in China and record-breaking warmth in northern Europe. The push to produce biofuels as an alternative to hydrocarbons further strained food supplies, especially in the U.S., where generous subsidies for ethanol had lured thousands of farmers away from growing crops for food. This put additional pressure on the market.

In any crisis, there is speculation which further pushes price rises. There is no doubt that this happened here. In Dhaka, Bangladesh, for example, soybean oil alone shot up 60% in a year.

However, these short term causes would not have had the same dramatic effect on world markets if we had not experienced a 5-10 year period of imbalance, in which the growth in demand outpaced the growth in cereal production. This imbalance has been reflected in declining global cereal stocks since 2000. Cereal demand has been growing every year, due to rising incomes in China, India, and, more recently, Sub-Saharan Africa. As incomes rise, people diversify their diet. Consumption of more meat and other animal products increase the demand for feed, particularly maize. Meanwhile, declining public investment in agricultural research further fueled the declining agricultural yield.

Ad hoc market- and trade policies such as export bans and import subsidies added further volatility to the international food market. A World Bank recent report said many countries,

⁴ According to the U.S. Department of Agriculture

⁵ According to the U.N. Food and Agricultural Organization

including 17 of the G20 members, implemented a total of 47 measures that restrict trade. There are also distribution issues. It is difficult to get food from surplus countries worldwide to food deficit countries, and in the midst of the food crisis many countries started to take defensive measures. More of such protectionism could worsen the situation for developing nations in the face of the severe economic downturn. The financial crisis has also added to the problems as global credit strains have dried up trade financing, hampering countries' ability to trade.

Demand for agricultural commodities for food, feed, and fuel is likely to continue to escalate with increasing population numbers once economic growth is picking up again. In other words, these problems will remain with us in the long term.

The Lack of Investment in Agriculture and Food Production

This may not be so dramatic if there had been significant investments in agricultural production. Unfortunately, this is not the case. They have either been kept at the same level or gone down in a number of countries. The financial crunch has also decreased the availability of capital at a time when accelerated investment in agriculture is urgently needed. Globally, this means that investment in food production has not kept pace with the combined impact of increase in population growth and increase in demand. In addition, insufficient infrastructure investment has stalled agricultural productivity growth. Without addressing infrastructure investment, food deficits are likely to occur and we can assume that food prices will continue their long-term upward trend.

If we look at development assistance (ODA) for agriculture in poor countries, the picture is the same. Aid in the agricultural sector fell from 13% in early 1980's to around 3 % in 2005-2006⁶. For a donor like the US, aid to agriculture dropped with 85 % in the same period. Last year a mere 4 percent of development aid went to food production in developing countries⁷. This is a major paradox when we know that 75 percent of the world's poor live in rural areas.

There are several reasons for this decline during the past 25 years:

- Firstly, there was a failure to address the macroeconomic and policy biases against agriculture – given less priority by all major players.
- Secondly, there was a policy void: The state controlled agricultural sector of the 70's and 80's was no longer seen as economically viable. But no other policy alternatives were provided, not for public investment nor for encouragement of the crowded out private sector.
- Thirdly, there were limited opportunities for farmers and other rural stakeholders both to access agricultural services, to influence public investment priorities or to hold the state accountable for implementation.
- Fourthly, governments and donor agencies did not invest in coordinated, sector-wide approaches to strengthening public service delivery in agriculture, ignoring linkages between research, marketing, the environment and public finance.

⁶ Source:

⁷ World Bank Development Report on Agriculture 2008

- Finally, there was little effective review of policy- and program impacts to inform what works and what doesn't, identifying constraints and bottlenecks and the way forward.

The combined impact of all these factors led to investment in agriculture being seen as less relevant, both for governments in developing countries, as well as donors. No-one paid attention, until everyone suddenly woke up - with the food crisis. Now, the assumption is that the crisis is over. But – as I will show you today, that is very far from the truth.

This also has an impact on nutrition, leading to nutrition insecurity.

Food security is necessary to achieve good nutrition, but it is not enough. For an organization focused on children like UNICEF, we underscore that nutrition and nutrition security is equally important to food security. Nutrition security is achieved if adequate food (quantity, quality, safety, socio-cultural acceptability) is available and accessible, and satisfactorily used and utilized at all times to live a healthy and active life.

According to the State of the World's Children 2009, around 150 million children under five in the developing world – or one in four – are underweight. This rate has only decreased slightly since 1990. In addition, another 20 million, or more than one in three children under five are stunted – of low height.

Nutrition is a fundamental pillar of human life across the entire life span. From the earliest stages of foetal development, at birth, through infancy, childhood, adolescence, and on into adulthood and old age, proper food and good nutrition are essential for survival, physical growth, mental development, performance and productivity, health and well-being. It is an essential foundation of human and national development. Malnutrition is not a disease that runs its course, bringing immunity. Rather it is a process, with consequences that may extend not only into later life, but also into future generations. The ability to concentrate, to focus and learn, is but one of the impacts of long term malnutrition. Poor nutrition that contributes to stunting – low height and underweight in a girl's life increases the chance that her children will be born malnourished. And so the cycle turns.

Therefore if we do not protect pregnant women and children from inadequate food security and under-nutrition we will create another 'lost generation'. It is estimated that 1.4 million additional lives of children under five could be saved annually in the developing world through optimal breast-feeding practices. When there is scarcity of food, this is even more important.

Human rights and food

But the worst is when lack of nutrition threatens life itself. 1 child dies every 6 seconds due to causes related to malnutrition. This is 14,400 a day⁸. This is a violation of every person's right to food and their right to life.

The right to food and nutrition is embodied in the Universal Declaration of Human Rights. The Convention on the Rights of the Child clearly articulates that (paraphrasing) "*States Parties shall*

⁸ Coordinator of the High Level Task Force for Global Food Security.

take appropriate measures to combat disease and malnutrition, including the provision of adequate nutritious foods and clean drinking water...”.

It is the responsibility for governments to abide with their human rights obligations, and do their utmost to ensure the right to life for every child. The so-called Right to Food Guidelines,⁹ adopted by FAO in 2004 outline concrete steps to make the right to food a reality. The Voluntary Guidelines cover the full range of actions to be considered by governments to build an enabling environment for people to feed themselves in dignity and to establish appropriate safety nets for those who are unable to do so. The guidelines do not oblige governments to guarantee the right to food, however. All too often, governments do not recognize the extent of hunger and ignore their citizens’ right to food. The governments in rich countries also have a responsibility to ensure that no child suffers from lack of food and adequate nutrition.

Getting the policies right

Hunger does not happen accidentally. It is not only a consequence of failed harvests and weather conditions. Hunger is more often a consequence of policy choices at the national and global level. With the world population at present levels, there is enough food to feed everyone. But we are not able – or willing - to realize the right to food for each person. Similarly, as I have shown - the global food crisis didn’t happen accidentally. It happened as a consequence of a series of decisions by policy makers and market actors. We have seen at least three major policy failures the last decades:

- (i) ***The first policy failure*** has been the lack of investment in agriculture both globally, nationally and in terms of development assistance to ensure food security. When previous policies were abandoned, investment stalled and no other feasible policies were presented. If investment happened the focus was on exports of cash crops rather than on food production – ensuring adequate food and nutrition for people.
- (ii) ***The second policy failure*** has been to link food availability to global policies, to the development in global food markets and global trade, to climate change and to demographics, the continuous rise in the world’s population and the number of hungry people, more and more of them in urban centers – with fewer and fewer rural producers.
- (iii) ***The third policy failure*** is the inadequate focus on - and investment in - nutrition security, turning food production into food and adequate nutrition for the world’s poorest, those marginalized and most vulnerable.

The food crisis was a wake up call to world leaders to refocus the attention on food security and agricultural production. Now it is critical that this leads to action, and that the engagement is sustained over time, even with short term fluctuations in world food prices. Some 1 billion of the world’s poorest people live in rural areas and depend on agriculture and related activities for their livelihoods. Many of them are hungry. Agriculture needs to be a central part of the

⁹ The Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security.

development agenda if we are to achieve the Millennium Development Goals, and not least MDG 1 - halving the number of people in extreme poverty and hunger.

The United Nations has realized this. Under the leadership of the Secretary General a High Level Task Force on the Global Food Security was established early in 2008. It includes 22 different bodies in the UN and the Bretton Woods Institutions. The aim is to work in unison in support of member countries in response to the food crisis. A Comprehensive Framework for Action to guide the response was published in July last year and subsequently endorsed by the General Assembly. This Framework has been the reference for international meetings on the food crisis, such as the recent January Food Summit in Madrid and the more recent G20 Meeting.

The Comprehensive Framework for Action provides a joint strategy and action plan which contributes to addressing the policy failures I have mentioned. It is based on two sets of approaches to promote a comprehensive response to the global food crisis. On the one hand, the recommended actions include boosting smallholder farmer food production, adjusting trade and tax policies and managing macro-economic implications. On the other hand, the approach focuses on the immediate needs of vulnerable populations, including enhancing and making more accessible emergency food assistance, nutrition interventions and safety nets.

The Framework is forming the basis for a UN System Joint Crisis Initiative on the global financial situation, the economic crisis and food security. This Initiative is aimed at supporting national responses to needs and demands from vulnerable countries. We are now looking at how we can work better and more systematically together with all other actors at the country level to respond to these crises.

The G20 communiqué emphasized the collective responsibility to mitigate the social impact of the crisis by *'making available resources for social protection for the poorest countries, including through investing in long-term food security.....'*. The recent G8 Agricultural Ministers' Final Declaration adopted on April 20, 2009 was titled *"Agriculture and Food Security at the core of the international agenda"*. Agriculture is certainly taking centre stage. This opportunity must not be lost.

World leaders need to correct their policies and ensure a coherent and comprehensive approach to food security and nutrition. Nutrition security is most directly linked to UNICEF's mandate for children. Nevertheless, global developments in food production and availability, as well as the impact of demographic patterns and climate change do have serious consequences for children. In fact, it is them, the most vulnerable that will be hardest hit if we fail to provide enough food for the world's poor.

Let me therefore lay out 3 key actions that should be taken to deliver food security and nutrition for all:

The first key action is –

1. Investing in Agriculture Development at Global and National Levels

For the poorest people, GDP growth originating in agriculture is about four times more effective in reducing poverty than GDP growth originating outside the sector.¹⁰ There is also proven evidence from India, China and Vietnam that this is the case. Yet, global investment in food and nutrition security of developing countries had almost dried up before the current food crisis hit. China was one of the exceptions, increasing its own investment in agricultural research by more than 80 % during the 90's, with the country now being the largest producer of food worldwide. Agricultural growth must rest on a balance of food staples, traditional bulk exports, and higher-value products, including livestock, with different groups of smallholders participating in each.

Inadequate investment in infrastructure – including markets, roads, irrigation systems - has stalled agricultural productivity in many developing countries. Without more infrastructure investment, food prices will likely continue their long-term upward trend¹¹. That is why countries and development partners must address this challenge, and ensure increase in agricultural inputs and extension services.

Malawi has taken significant steps in this direction. The country started to subsidize inputs such as seeds and fertilizers a few years ago, leading to bumper harvests. Now, Tanzania is considering the same. These are costly policies, and macroeconomists are concerned about sustainability. At the same time, this is investment in the poor majority of the population, and in the economic base of the country. It provides high returns. Also mixed cropping and indigenous techniques can provide significant sustainable and long term gains. For this to happen extension services need to be scaled up and made more responsive to the needs and constraints of farmers. And arable land must be used for food production, more than other types of cash crops for export. For such policy shifts to succeed, sustained and predictable funding and investments over time is critical.

The investment needed to enable the 960 million hungry people to realize their right to food is estimated to be between \$25-\$40 billion a year. During the June 2008 conference on food and over the following months, donors announced US\$22 billion to address the food crisis. Within the coordinated framework, every organization and agency has strengthened its activities, but the resources available have not increased sufficiently. We are very far from meeting all the priority demands. In fact, donors did the opposite – investments in agricultural research dropped by almost 64 percent from the 1980 to 2003. In contrast, OECD countries spent US\$372 billion alone to support their agriculture in their own countries (2006). In this perspective it is a major paradox that agricultural investment in the poor countries is so limited. This must change. Better coordination of financial support for food security and galvanizing additional private and public investments in the sector are other important actions. Such investments also lead to longer term resilience to crises.

Smallholder farmer food productivity

The majority of farming in developing countries is carried out by smallholder farmers, with less than 2 hectares of land. They hold the key to improving agricultural productivity. IFAD experience indicates that helping smallholder farmers contribute to a country's economic growth

¹⁰ According to the World Development Report 2008

¹¹ WESP '09.

and food security, as small farms are often efficient and have growth potential. Using this approach, Viet Nam, has gone from a food-deficit country to the second-largest rice exporter in the world. It is possible.

A number of measures need to be taken to strengthen smallholder agriculture. These include inputs for production, conservation agriculture, irrigation and water harvesting techniques to improve productivity and reduce vulnerability to drought and climate change, and increased use of mixed cropping methods. Also post-harvest storage and marketing to reduce product losses, market information, expanded rural infrastructure to improve market access and microfinance are important measures.

I have visited farmer organizations providing this kind of assistance to farmers both in Zambia and Malawi. Minor investments for example in advising adjustments in farming techniques and conservation agriculture lead in some cases to tripling the yields of individual smallholder farmers. Taking such programs to scale in the poorest countries would have a significant impact. Investing in small holder agriculture is also critical in a broader perspective, providing incentives to retain the productive work force in the rural areas. With increasing demand further urbanization will just exacerbate the challenges of food security.

60% of smallholder farmers globally are women, and over 70% in Sub-Saharan Africa. Countries seek support to improve the organization and voice of smallholder farmers, including women farmers and marginalized groups, increasing their access to land, credit and agricultural extension services, and ensuring accurate and relevant knowledge for the management of crops, livestock, fish and forests. Risk-hedging mechanisms, such as weather insurance and price protection mechanisms, will go a long way to diversify smallholder agriculture. Women are the nutritionists in the family, growing the food for home consumption. Increased incomes for women also lead to more improvements in food security, children's health and nutritional status. When combined with education and income generating activities a lot of gains can be achieved.

Let me move to the second key policy action:

2. Ensuring coherence in policies on Food Markets, Global Trade and Climate Change

Food production and availability is determined by a number of external factors. Not only large scale farming, but also smallholder agriculture is affected by international trade. The prices on international and local markets are impacted by decisions of key market actors, be it the giants in food trade or in bio fuel production. And for all of these actors, the actual and potential impact of climate change may have serious consequences.

Agricultural policies are estimated to account for about two-thirds of the costs of current distortions to all merchandise trade. And as we know – most of them are contributed by the rich countries. One of the main reasons for the **Doha Development Round** and the global trade negotiations have been to remove the most distorting policies that hurt poor countries, be it export subsidies or dumping that make it difficult for developing countries and emerging markets to compete. Cotton producers in West-Africa are among those suffering from the subsidies of EU-farmers, undermining their possibility to sell on local and global markets. U.S. cotton

subsidies have been successfully challenged under WTO rules, although the ruling has yet to be implemented.

Most of the discussion in international negotiations has been on reducing these and other negative effects that developed country trade policies impose on poor countries. With all the difficulties of getting agreement, one now needs to avoid a situation where a trade deal among the few ends with a least common denominator and where the needs of the poorer countries take the back seat. Trade reforms in agricultural commodities are vital to ensure that gains are evenly distributed among commodities—and among and within countries. No perfect trade deal exists, which is why complementary policies and programs are needed to compensate losers and facilitate rapid and equitable adjustment.

The immediate response to the food crisis of a number of countries was the imposition of food export bans and similar protectionist mechanisms. Renewed strategies to improve agricultural trade, eliminate trade and tax policies that act against the development of local and international food markets are needed. The Group of 20 leading developed and developing countries should keep promises they made in November 08 not to impose any new trade-restricting measures for the next 12 months. It will be the key players that determine the pace and extent of further reforms to level the playing field in international trade. They must have the poorest countries in mind when doing so.

For those who are able to access international markets, assistance to meet international product standards is critical. The smallholder farmers in Zambia did export vegetables to the UK through their cooperative organization. At the same time, for the majority of rural farmers in poor countries, the issue is access to local and regional markets, not the global market. What matters to them are better rural roads, access to local and national markets and predictable prices.

Another critical factor determining the future of farming and food production in developing countries is global warming. Yesterday I returned from Myanmar and the areas hit by Cyclone Nargis. The Delta-area is the “breadbasket” of the country - with the highest level of rice production, providing food to millions of people through exports to the whole region. The cyclone may not have been caused by climate change directly, but it gives a taste of what can happen with global warming. The whole area was devastated, and 135 000 people died. In many villages only between 20 and 50 % of the population survived. At the last harvest the area was producing at around one third of its capacity. We now hope it will pick up again.

Climate change will have far-reaching consequences for agriculture and food security, and we know it will disproportionately affect the poor. Water scarcity is one factor. Recent reports indicate that between 75 million to 250 million in Africa may suffer increased water stress due to climate change¹². According to a latest UNEP report, agricultural yields in Africa have already fallen - in some cases by up to 50 per cent. These are related to invasive pests, land degradation, erosion, drought, partly impacted and further exacerbated by climate change. The report highlights the need to change the economic models and management regimes of the 20th century which is inadequate to serve the needs of a growing population.

¹² Hunger Task Force: Report to the Government of Ireland Sept 2008

What changes are needed? Adaptation measures and strengthening the resilience of agricultural production will be critical. Mobilizing global financing in support of long-term adaptation plans in developing countries, are urgently needed. As a major source of greenhouse gas emissions (GHGs), agriculture also has much untapped potential to curb emissions through reduced deforestation, reforestation, changes in land use and agricultural practices. This potential should be utilized. For that to happen, we need to see additional investment in agriculture also from a climate perspective. Many highlight the opportunities the financial mechanisms under the Kyoto Protocol and the possibly emerging post 2012-regime will provide for the poorest countries. How significant these opportunities will be, for example in using carbon trading schemes to scale up investments in agriculture, remains to be seen.

Greater coherence in policies is necessary, both in relation to global trade, global markets and climate change. It is only through linking these factors also to investments in food production we will see the process moving forward. At the same time, we should focus not only on food production and food availability, we need to give due attention to nutrition security and more targeted support to the poorest.

And this is the third key action:

3. Focusing on Nutrition Security and Targeted Support to the Poorest:

Look at India, home of the Green revolution. India's malnutrition rates are the highest in the world. In India 1 in 5 children suffering from acute malnutrition (wasting), 2 in 5 from chronic malnutrition (stunting) and almost one-third of babies are born with low birth weight. Green revolutions and farming is not enough. Food and food security needs to be complemented with nutrition security. And families often need cash to buy supplementary food to retain a healthy diet.

Over a third of child deaths are due to malnutrition, or around 6 child deaths every minute. Nutrition is essential for child survival. In addition, there is a 'window of opportunity' in the growth of a child – from conception to 2 years. It is during this period that factors like chronic under-nutrition or stunting (low height) will determine brain development and future educational and productive achievements. Nutrition has a multi-generational impact. A peer-reviewed study in Guatemala has shown that boys who received a nutritious food supplement early in life are now earning \$1000 more than their peers.

Investing in nutrition security over the coming 6 years will result in positive impacts on child survival, growth and development at the household and community level, improved educational outcomes for school-aged children, increased productivity in adult life, and overall national economic development. Over the next 6 years until 2015, investments in nutrition will contribute to the Millennium Development Goals of eliminating hunger, improving health, growth and development of women and children, and the reduction of poverty.

More than 100 million more people have been pushed into poverty as a result of the food price hikes alone. According to the World Bank, an even larger number of people are now pushed into extreme poverty as a consequence of the global financial crisis. As more people fall below the

poverty line, face food insecurity, and are unable to access adequate, affordable, nutritious food, they need support.

This is not least important in times of crisis. When under stress, we have found that a poor household is likely to take several actions that affect their children. They change their diets, eat less and switch to cheaper and lower quality food, and forgo spending on health and education, removing children from school, the girls first, often to incorporate them into labour for cash. These coping mechanisms quickly lead to a situation of distress and further collapse. With the double impact of the food price hikes and the financial crisis, more households are affected. Targeted programs that reach these families are critical.

In Malawi, the poorest families receiving a monthly cash transfer use up to 70% on additional food, and 80% of them take their child to a health facility for treatment when sick, as compared to only 10% of their peers. We support these types of programs in a large number of developing countries. Social protection systems should not be a luxury for rich countries, but provided to the most vulnerable world wide. Child grants, cash transfers and other means provide a critical resource buffer for vulnerable families. And they work. They ensure food security and nutrition security. Vulnerable countries need assistance to develop such national frameworks for social protection targeting vulnerable women and children.

During times of crisis there is a need to scale up this type of support. A package of key nutrition interventions need to be incorporated into public health services, outreach activities and safety net programs to meet the nutrition needs of vulnerable groups. In addition, we need to expand food fortification and availability of therapeutic foods through global and local production to treat of severely malnourished children. Through cooperation with the World Food Programme, the most vulnerable families are provided with supplementary feeding and food assistance – and food for work-schemes.

To be able to know how to respond to crises, we need more information, and not least about the situation of vulnerable populations. We are currently developing a new tool called The Global Vulnerability Alert for this purpose. The G20-meeting called for the UN-system to lead this work. Through the use of existing information and data systems, and the development of a set of key indicators at the macro, meso and micro levels, we will be able to determine alarming signs. This includes collection of data real time. Here we will also use cell phone technology for rapid data transmission. The Vulnerability Alert will also give voice to the poor. Through better monitoring of vulnerabilities – and targeted response and assistance, we can better help those in most need.

The importance of Knowledge and Research

And this brings me to this University and the need for knowledge and research as we face these global challenges. So much of what we know is due to the systematic research carried out by academic centers and development institutions around the world. Their role in producing evidence and continually challenging practices and responses is critical in ensuring that policies and actions achieve results. Yet, total development aid to agricultural research fell by almost 65 % between 1980 and 2003. This must change.

We are now faced with incredible challenges. Among the most critical ones affecting food availability will be the demographic boom and climate change. By 2050, the world's population will stabilize at about 9 billion. Due to increasing consumption in developing countries, the equivalent of 12 billion people will be placing demands on the global food system, compared to today's consumption rates. A more urbanized population with higher consumption will contribute to this. In other words – there is a likelihood of a dramatic increase in demand. At the same time, we know that climate change will put significant stress on the natural resource base, with global warming affecting both water availability and weather volatility. This again, will impact on food supplies. This will have dramatic consequences.

Faced with these challenges research is essential. We need research in life sciences and agriculture both in developing crops that can provide larger yields and more resilient against- and adapted to changing weather patterns. We need research to help us develop better climate information and forecasting, better conservation techniques and better methods to reduce land erosion and degradation. We need research in fisheries and fish farming that will benefit developing countries and poor families. Given currently available technologies, current consumption patterns, and the negative effects of climate change, we know that food security for all cannot be achieved. In this context, many people are calling for a new green revolution, pointing to biotechnology and genetically modified crops.

It is clear that we need to utilize new technologies to be able to cater for the increasing demand in food. UNICEF has no position on GMO in agriculture. Nevertheless, – there is reason to caution against believing in quick fixes or miracle solutions in this area. We also need to be aware of the potential environmental impacts of the use of genetically modified crops – and in particular in developing countries with their limited capacity to manage risk and potential impacts of genetic pollution.

There is no quick fix in this area also because food production and delivery is complex, depending on inputs, knowledge, infrastructure, and proximity to markets, national and global policies. It also depends on human resources – retaining a rural work force. A comprehensive approach is needed. That is why we also need much more applied research and analysis to help us take the right policy decisions. We need more knowledge to provide the right incentives for farmers in the poor countries to achieve higher growth in agricultural production and fishing. We need research and analyses that can build on lessons learned and best practices and identify better policies in utilizing agricultural potential, opportunities in fisheries, and translating food production into food for a growing hungry population.

More research and analysis is also required to help us understand how to overcome challenges of infrastructure, transport and international standards in global markets. We need to invest more in research and knowledge in all these areas in developing countries, as it is among the poorest the challenges will be the greatest. And it is in the developing world the impact of continued failed policies will be most dramatic.

That is why the work conducted at this University is so important, be it at NORAGRIC or the core departments of the University. That is also why the partnerships with research institutions in

the developing world are so critical. And that is why the programs offered to students from developing countries are so essential. Your foreign students are future leaders in the agricultural field in their home countries. You should be proud of what you have achieved during the last 150 years. And – your competence and knowledge is more needed than ever.

Conclusion

Because, - the situation we face is urgent. In the short term, we must focus our actions on critical interventions the next six months. This includes agricultural inputs for smallholder farmers in coming planting seasons, and urgent responses in building social safety nets and the provision of food assistance where needed. We also need to avoid a situation where the global credit crunch, along with commodity price volatility discourages new investment in agriculture.

But the urgency is more profound than that. The combined challenges of the demographic boom and climate change are significant. More demand and potentially less supply will hit the poorest the hardest. How can we prevent this from happening? If there was any point in time we need your competence and knowledge, it is now. If there was any point in time we need to refocus our attention, our resources and our policies on food production – resilient food production and nutrition to feed the growing number of hungry people, it is now. And to ensure that the most vulnerable are not the ones paying the price. This cannot wait.

In Norway we have a rural tradition of working collectively in times of harvesting, where the whole community assists the farmer that needs a job done. The same would happen if an important collective task was to be undertaken in the village. It is called dugnad. Often – after the dugnad was over – people were provided with home brewed beer. In Tanzania, and in many other African countries, we have the same tradition. In Swahili, dugnad is called harambe. During dugnad – or harambe – everyone has to assist. Today, we are - in many ways - in a global village. We are not in times of harvesting, but we are in tough times – times of crisis that call for urgent collective action. And the job we need to get done is to ensure that there is enough food for everyone – even in the face of these challenges.

Let me therefore take this opportunity to call all of us to dugnad – to harambe. The University of Life Sciences has a critical role to play. But - we are all needed, as researchers and scientists, as policy makers and decision makers, as development practitioners and tax payers, as advocates and ambassadors for this important cause: Feeding the hungry. And - as in the old days of dugnad – of harambe – saying no is not an option. We all have to participate. So - let us roll up our sleeves and get going.

The future of millions of children will depend on us.

Thank you very much.