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HUNGER

A CLIMA^(C)TIC PERSPECTIVE

SLEEPING WITH HUNGER

I AM GUILTY. GUILTY EVERY TIME I THROW MY UNFINISHED FOOD in the trash. Guilty when I think about all the people suffering from hunger. Guilty of thinking, *You want me to package it and send it to the starving people thousands of miles away?* I am guilty of thinking that change lies outside my grasp.

Hunger is even older than Death itself, but climate change and the eating patterns of the world have strengthened Hunger's global domination. The impact of climate change is felt globally. Greenhouse gases are found at increasing levels in the atmosphere, relentlessly trapping more and more heat, causing destructive floods and droughts. The poorer areas of the globe are likely to suffer even more from the change in climate than the more developed countries in higher latitudes. FAO Director-General Jacques Diouf explained that in the lower latitudes, where people are already vulnerable to hunger, crop yield potential is likely to decline even when there are only small global temperatures rises. Farming and agriculture has changed drastically over the last decades, most importantly the birth of industrial livestock farming has put a strain on the environment and has done nothing to halt the spread of hunger. In theory, world agriculture provides enough nutrition to feed the entire population. Increased food production resulting from modern agriculture has served to provide more food to those who already had it. The high rates of production have eliminated the livelihood of local farmers and peasants who cannot compete. Intensive livestock farming also places high demands on resources, such as water and feed crops. Crops used to feed livestock use up to 33% of all arable land. And as is stated in the FAO Report, although livestock farming probably does not detract food from those that are hungry, it raises the overall demand for crops and agricultural inputs. Copious amounts of crops are used to feed the huge amounts of animals, that we intend for slaughter. Not to mention the amounts of greenhouse gases that the livestock farming industry contributes, totaling about 70-85% of the global emissions from

human activities. In theory a world without industrial livestock farming could solve a large part of the problem of hunger. That is not realistic, but careful dietary choices are a simple change to make.

According to the United Nations the basic health and nutrition needs of the world's poorest could be met for 13 billion US dollars a year. In the global scope, this is not an absurd amount. Americans spend over 40 billion US dollars a year on dieting products and services. Unfortunately, the answer is always more complicated than the simple diversion of funds. Environmental factors, economics, and politics are only part of the complex factors contributing to hunger. World hunger can be solved by our decisions much more easily that can be solved by rubbing a magic lamp. Switching the lights off when leaving the room is practical; so is thinking about what you eat.

«Hunger stole upon me so slowly that at first I was not aware of what hunger really meant. Hunger had always been more or less at my elbow when I played, but now I began to wake up at night to find hunger standing at my bedside, staring at me gauntly.» As Richard Wright wrote in *Black Boy*, so does hunger stand beside the bedside of humanity, it is up to us to decide whether we show it to the door or let it into our bed.

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WHAT IS HUNGER?

HUNGER AND MALNUTRITION ARE STILL THE NUMBER one risks to health worldwide. In the final quarter of the 20th century, humanity was winning the war on its oldest enemy. From 1970-1997, the number of hungry people dropped from 959 million to 791 million – mainly the result of dramatic progress in reducing the number of undernourished in China and India.

In the second half of the 1990s, however, the number of chronically hungry in developing countries started to increase at a rate of almost four million per year. By 2001-2003, the total number of undernourished people worldwide had risen to 854 million: 820 million in developing countries, 25 million in countries in transition and nine million in industrialised countries.

Today, one in nearly seven people do not get enough food to be healthy and lead an active life, making hunger and malnutrition the number one risk to health worldwide — greater than AIDS, malaria and tuberculosis combined.

HUMANITY'S OLDEST ENEMY

Acute hunger or starvation are often highlighted on TV screens: hungry mothers too weak to breastfeed their children in drought-hit Ethiopia, refugees in war-torn Darfur queuing for food rations, helicopters airlifting high energy biscuits to earthquake victims trapped in Pakistan or Indonesia.

Such dramatic images are the result of high profile crises like war or natural disasters, which starve a population of food. But emergencies account for less than eight percent of hunger's victims.

Daily undernourishment is a less visible form of hunger – but it affects many more people, from the shanty towns of Jakarta in Indonesia and the Cambodian capital Phnom Penh to the mountain villages of Bolivia and Nepal. In these places, hunger is much more than an empty stomach.

For weeks, even months, its victims must live on significantly less than the recommended 2,100 calories that the average person needs to lead a healthy life.

The body compensates for the lack of energy by slowing down its physical and mental activities. A hungry mind cannot concentrate, a hungry body does not take initiative, a hungry child loses all desire to play and study.

Hunger also weakens the immune system. Deprived of the right nutrition, hungry children are especially vulnerable and become too weak to fight off disease and may die from common infections like measles and diarrhoea. Each year, almost 11 million children die before reaching the age of five; malnutrition is associated with 53 percent of these deaths (source: Caulfield *et al.*, *The American Journal of Clinical Nutrition*, 2004 July), claiming one child's life every five seconds.

QUALITY NOT JUST QUANTITY

Labelled as the largest single contributor to disease by the UN's standing committee on nutrition, malnutrition is the result of inadequate dietary intake, infection, or both. It is more about quality than quantity of food. Even if people get enough to eat, they will become malnourished if the food does not provide the proper amounts of micronutrients – vitamins and minerals – to meet

daily nutritional requirements.

Each form of malnutrition depends on what nutrients are missing in the diet, for how long and at what age.

The most basic kind is called protein energy malnutrition. It results from a diet lacking in energy and protein because of a deficit in all major macronutrients, such as carbohydrates, fats and proteins.

Marasmus is caused by a lack of protein and energy with sufferers appearing skeletally thin. In extreme cases, it can lead to kwashiorkor, in which malnutrition causes swelling including a so-called 'moon face'.

Other forms of malnutrition are less visible – but no less deadly. They are usually the result of vitamin and mineral deficiencies (micronutrients), which can lead to anaemia, scurvy, pellagra, beriberi and xerophthalmia and, ultimately, death.

→ | ORVERVIEW

“ Only after the last tree has been cut down,
Only after the last river has been poisoned,
Only after the last fish has been caught,
Only then will you find that money cannot be eaten. ”

CREE INDIAN PROPHECY

Deficiencies of iron, vitamin A and zinc are ranked among the World Health Organization's (WHO) top ten leading causes of death through disease in developing countries:

~ Iron deficiency is the most prevalent form of malnutrition worldwide, affecting billions of people.

Iron forms the molecules that carry oxygen in the blood, so symptoms of a deficiency include tiredness and lethargy. Lack of iron in large segments of the population severely damages a country's productivity. Iron deficiency also impedes cognitive development, affecting 40-60 percent of children aged 6-24 months in developing countries (source: *Vitamin & Mineral Deficiency, a global damage assessment report*, Unicef).

~ Vitamin A deficiency weakens the immune systems of a large proportion of under-fives in poor countries, increasing their vulnerability to disease. A deficiency in vitamin A, for example, increases the risk of dying from diarrhoea, measles and malaria by 20-24 percent.

Affecting 140 million preschool children in 118 countries and more than seven million pregnant women, it is also a leading cause of child blindness across developing countries (source: *UN Standing Committee on Nutrition's 5th Report on the World Nutrition Situation*, 2005)

~ Iodine deficiency affects 780 million people worldwide. The clearest symptom is a swelling of the thyroid gland called a goitre. But the most serious impact is on the brain, which cannot develop properly without iodine.

According to UN research, some 20 million children (source: *Vitamin & Mineral Deficiency, a global damage assessment report*, Unicef) are born mentally impaired because their mothers did not consume enough iodine. The worst-hit suffer cretinism, associated with severe mental retardation and physical stunting.

~ Zinc deficiency contributes to growth failure and weakened immunity in young children. It is linked to a higher risk of diarrhoea and pneumonia, resulting in nearly 800,000 deaths per year.

GLOBAL COST OF HUNGER

Hunger not only weighs heavily on the individual. It imposes a crushing economic burden on the developing world.

Economists estimate that every child whose physical and mental development is stunted by hunger and malnutrition stands to lose five to 10% in lifetime earnings.

Disability-adjusted years or DALYs measure the number of years lost as a result both of premature death and of disabilities, adjusted for severity.

According to the 2004 FAO Food Insecurity Report, childhood and maternal undernutrition cost an estimated 220 million DALYs in developing countries. When other nutrition-related risk factors are taken into account, the toll rises to 340 million DALYs – equivalent to having a disaster kill or disable the entire population of a country larger than the United States.

HUNGER GLOSSARY

NUTRITION-RELATED TERMS AND DEFINITIONS

HUNGER is the body's way of signaling that it is running short of food and needs to eat something. Hunger can lead to malnutrition

UNDERNOURISHMENT: describes the status of people whose food intake does not include enough calories (energy) to meet minimum physiological needs.

The term is a measure of a country's ability to gain access to food and is normally derived from Food Balance Sheets prepared by the UN Food and Agriculture Organization (FAO).

MALNUTRITION/UNDERNUTRITION: defined as a state in which the physical function of an individual is impaired to the point where he or she can no longer maintain natural bodily capacities such as growth, pregnancy, lactation, learning abilities, physical work and resisting and recovering from disease.

The term covers a range of problems from being dangerously thin (see **UNDERWEIGHT**) or too short (see **STUNTING**) for one's age to being deficient in vitamins and minerals or being too fat (obese).

Protein energy malnutrition is measured not by how much food is eaten but by physical measurements of the body – weight or height – and age (see **STUNTING**, **WASTING**, **UNDERWEIGHT**).

STUNTING: reflects shortness-for-age; an indicator of chronic malnutrition and calculated by comparing the height-for-age of a child with a reference population of well nourished and healthy children.

According to the UN Standing Committee on Nutrition's 5th Report on the World Nutrition Situation (2005) almost one third of all children are stunted.

WASTING: reflects a recent and severe process that has led to substantial weight loss, usually associated with starvation and/or disease.

Calculated by comparing weight-for-height of a child with a reference population of well nourished and healthy children. Often used to assess the severity of emergencies because it is strongly related to mortality.

UNDERWEIGHT: measured by comparing the weight-for-age of a child with a reference population of well nourished and healthy children.

The World Health Organization (source: *Comparative Quantification of Health Risks*, 2004) estimates that the deaths of 3.7 million children aged less than five are associated with maternal or child underweight.

HUNGER: HOW MUCH FOOD FOR A HEALTHY LIFE?

The total amount of energy and protein needed by different individuals varies greatly according to age, sex, body size, the amount of physical activity and, to some extent, climate.

Extra energy is needed during pregnancy and lactation. On average, the body needs more than 2,100 kilocalories per day per person to allow a normal, healthy life ■

 **INFO** SOURCE: World Food Programme www.wfp.org/aboutwfp

GLOBAL MOBILIZATION AGAINST HUNGER

CAROLINE VERMIJ

THERE ARE OVER 856 MILLION CHRONICALLY HUNGRY people in the world today. Since its foundation in 1962, following an earthquake in Iran and a hurricane in Thailand, the World Food Programme (WFP) has fed more than 1.4 billion of the world's poorest people and invested more than USD 30 billion. WFP was set up as a 3-year experimental programme and it has never stopped. At the UN Millennium summit held in 2000 189 world leaders agreed to halve the number of undernourished people by the year 2015. The World Bank has defined poverty as living with less than 1 USD a day. In 1990 30% of the world population lived in poverty. According to the millennium goal this percentage needs to be reduced to 15% in 2015. We just passed mid-point. What has been reached and what are the challenges?

According to the Millennium Development Goals Report of 2007 the percentage of poor people fell from 30 in 1990 to 20 in 2004. If this trend continues the target of 15% will be met for the world as a whole and for most regions. However, the success is unequally shared. The decline of poverty is mainly due to rapid economic growth in Asia. In sub-Saharan Africa the number of extremely poor people has levelled off, despite rapid population growth, and the poverty rate declined by nearly 6% since 2000. Nevertheless this region is not on track to reach the goal and the poor are the most economically disadvantaged in the world.

As part of the UN millennium goals, developed countries have made the commitments embodied in the 8th Millennium Goal: increase aid to 0.7% of national Income, improve its effectiveness and ensure that the rules of international trade foster poor countries' development. Implementation on these three issues has been lagging. Official development assistance trends have been improved but still fall short of what was promised. The donors that reached or exceeded the target are Denmark, Luxembourg, the Netherlands, Norway and Sweden. In 2006 Germany spent 0.36% of its national income on aid,

France 0.47% and the UK 0.52%. In 2006 the total aid was USD 103.9B which is 0.3% of the national income of all developed countries.

Ban Ki-Moon, Secretary-General of the UN, stressed in his report that all stakeholders need to meet their commitments to be able to meet the millennium goals and he is worried that there has not been an increase in official development assistance since 2004. However, not everybody agrees that financial aid is the way to end poverty. Jeffrey Sachs¹ stresses that development is mainly a matter of money and political will. He has set up the Millennium Villages initiative, supported by Millennium Promise, UNDP, the Earth Institute at Columbia University, and the UN Millennium Project. Twelve Millennium Villages have been set up in ten African countries that work directly with the communities, NGOs and national governments to show how rural African communities can lift themselves out of poverty. According to Sachs there has been a lack of appropriate effort in the past. For development to work, rich countries need to help poor countries make certain practical investments that are often very basic. For decades we have not tried to accomplish many of these basic things, like fighting malaria, an illness that kills up to 3 million people every year. Economic development works because of circumstances like geographical isolation, burden of disease, climate or soil, some countries cannot get started. Therefore we have to help them grow more food, fight malaria or handle recurring droughts. Once they are on the first rung of the ladder of development, they will start climbing just like the rest of the world. The money is needed to break the poverty trap and save lives.

His opponent in the development debate, William Easterly², is critical about the effect of foreign aid and is of the opinion that the poor countries will help themselves to improve their situation. According to Easterly, the West has wasted 2300 billion USD on aid during the last 50 years. The Millennium Development Goals Program consists of 300

→ | ON FOCUS

“ Hunger is felt by a slave and hunger is felt by a king. ”

GHANIAN PROVERB

experts who have produced thousands of pages of documents explaining what needs to be done to attain these goals. They strengthen bureaucracy. Easterly argues that the ideas exposed by Sachs – and shared by the biggest part of aid organizations and NGOs – are nothing more than a well-intentioned, racist paternalism. He would like to see a «piecemeal reform» approach in which development efforts are carried out one step at a time with subsequent evaluation. If different strategies are implemented all at once, it will be difficult to isolate and understand which strategies work effectively and which did not. Developing countries' true saviours are the people of the countries themselves and those who would help them in their task must also be accountable to them. Aid groups need to search for achievable tasks with high potential for poor individuals to help themselves. To do so they would have to subject themselves to independent evaluation and be accountable to the intended beneficiaries for the results. Such an approach would contrast with the prevailing norm of never holding anyone individually accountable for the results of traditional government-to-government aid aimed at transforming whole societies. Aid could also be used to support the efforts of promising local social and business entrepreneurs who already have a successful track record, thereby letting locals take the lead with their superior motivation and inside knowledge.

Also Robert Calderisi³ in his book *The trouble with Africa: why foreign aid isn't working* comes to the conclusion that fifty years of foreign aid has not resulted in less poverty. His view is that too much of foreign aid gets stolen by corrupt officials and the culture of the African people is such that they will not criticise their leaders. Calderisi would like all African government officials to make their bank accounts open to public scrutiny. African leaders should take more responsibilities and donations need to stop if given to countries where the governments are corrupt.

Jeffrey Sachs has moved the issue of global poverty into the mainstream but there is clearly no consensus about whether more financial aid will reduce poverty in the world. The discussion between Sachs and Easterly has become the cornerstone of the foreign aid debate in the 21st century.

Climate change is another challenge to ending poverty and its impacts add to the many reasons why there are still so many people suffering from hunger. It is worst for the poorest countries and the poorest people. The most climate sensitive sectors are agriculture and fisheries and these sectors are very important for their economies.

Global warming and changing rainfall patterns lead to lower yields and undermine food security. Changed rain patterns will increase the drought in Africa, where only four percent of cropped land is irrigated. Extreme weather like floods and droughts will both damage crops directly and nurture species that prey on them. The poorest countries have the least human, institutional and financial capacity to anticipate and respond to the effects of climate change.

According to the Intergovernmental Panel on Climate Change (IPCC) science agrees that human activities are driving changes in the Earth's climate with subsequent risks to livelihoods and human well-being. Goal 7 of the Millennium goals is focused on the environment and climate change, as part of the broader commitment to sustainable development. According to a report released by the IPCC in April 2007 the drops in yields combined with rising populations could put close to 50 million extra people at risk of hunger by 2020, an additional 132 million by 2050 and 266 million by 2080.

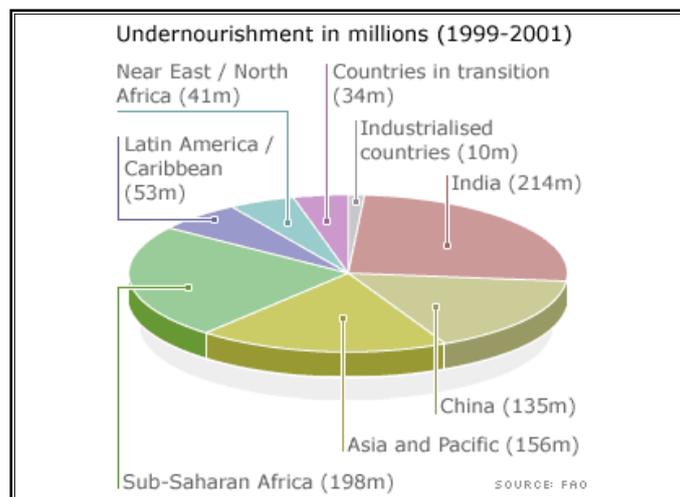
The Food and Agriculture Organisation of the United Nations (FAO) is committed to achieve food security for all. Food security is defined by the World Bank as «access by all people at all times to enough food for an active, healthy life». Its key priority is to strengthen the resilience of crop systems to climate variability. It will provide tools and information for adapting agriculture, fisheries and forestry policies and practices. Even if all CO₂

emissions would stop, the amount already emitted into the atmosphere will result in an enhanced greenhouse effect for the next 50 years. Therefore people will have to adapt to the effects of climate change.

FAO is organising a conference on world food security and the challenges of climate change and bio-energy in Rome in June 2008. The UN wants to reach political consensus on responding to climate change as soon as possible.

Risk financing is a new way at helping the poor cope with extreme weather conditions and natural disasters. In 2006 WFP awarded the French Insurance company Axa Re the world's first insurance contract for humanitarian emergencies. The insurance was to provide cash payouts to farmers in the event of a severe drought during Ethiopia's 2006 agricultural season.

Also the Swiss Insurance company Swiss Re tries to diminish the effects of climate change by providing financial protection for the effects of adverse weather in emerging countries. It has launched its Climate Adaptation Development Programme (CADP) at the Clinton Global Initiative 2007



meeting. In a first phase, it aims at providing financial protection against drought conditions for up to 400,000 people in Africa. Swiss Re started in India in 2004 and sold 280,000 policies to smallholder farmers. Now it wants to provide financial protection in the case of extreme drought to three village clusters in Kenya, Mali and Ethiopia. Swiss Re partners with Millennium Promise and the International Research Institute for Climate and Society, which has pioneered climate modeling and climate risk management approaches, and is part of The Earth Institute at Columbia University. The goal of this partnership is to develop and implement climate risk indices for all twelve clusters of Millennium Villages in Africa.

According to the UN, the challenge of climate change is to become an integral element of each country's development strategy. All development partners should collaborate intensively to come up with a shared global strategy to address this global problem.

Let us hope that the global efforts to reduce the human influence on climate change and building a world without hunger will contribute to world peace.

¹ Director of The Earth Institute, Quetelet Professor of Sustainable Development, Professor of Health Policy and Management at Columbia University, Special Advisor to United Nations Secretary-General Ban Ki-moon.



From 2002 to 2006, he was Director of the and Special Advisor to United Nations Secretary-General Kofi Annan on the Millennium Development Goals, also President and Co-Founder of a nonprofit organization aimed at ending extreme global poverty.

² Professor of Economics at New York University, joint with Africa House, and Co-Director of NYU's Development Research Institute. He is also a non-resident Fellow of the Center for Global Development in Washington DC. He spent sixteen years as a Research Economist at the World Bank.

³ Worked on Africa since 1975, mostly at the World Bank, where he held a variety of senior positions including Chief of the Bank's Regional Mission in Western Africa based in the Ivory Coast (1991-94). He also served as the Bank's international spokesman on Africa (1997-2000) and Country Director for Central Africa (2000-2002), where he was deeply involved in defending and supervising the controversial Chad-Cameroon Oil Pipeline.

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FOOD SECURITY

FOOD SECURITY IS THE CONDITION IN WHICH EVERYONE has access to sufficient and affordable food. Ten million hunger-related deaths every year, half of them children, testify to our failure to achieve global food security. Over 850 million people remain trapped in the spiral of hardship that hunger imposes, a figure which continues to rise even amidst the riches of the 21st century. As developing countries grapple with the complexities of biotechnology and the alarming impact of climate change, it is extraordinary that the major powers should choose this moment to trigger a craze for biofuels, adding pressure on world food prices.

MILLENNIUM DEVELOPMENT GOALS

The first Millennium Development Goal (MDG) sets targets for poverty and hunger. In contrast to the bewildering variety of definitions of poverty adopted in country strategies, the benchmark for hunger is consistently based on an average daily intake of 2100 kilocalories. Where groups of people are coping below this threshold, they are food insecure and will experience the symptoms of malnutrition – impaired ability to learn or to work, and reduced resistance to disease. Hunger is therefore a cause as well as a consequence of poverty.

In adopting a target to reduce by half the proportion of people experiencing hunger by 2015, governments signing the Millennium Declaration were overriding a commitment made just 4 years earlier at the World Food Summit of 1996 which applied the same target to the number of people. Rising population figures mean that 170 million fewer people will be targeted by the MDG programme than would otherwise have been the case.

The MDG progress report published in 2005 was pessimistic about the prospects for achieving the hunger-related Goal. Rapid progress over two decades to the early 1990s has ground to a halt to the extent that hunger is currently increasing by about four million people each year. The State of Food Insecurity in the World 2006 published by the Food and Agriculture Organization (FAO), identifies 32

countries of particular concern, where prevalence of hunger is 42% and average calorie intake is lower than it was 30 years ago. Amongst the success stories, Ghana has reduced the prevalence of hunger from 37% to 12% over the MDG period;

Ethiopia and Mozambique have also been commended for their relative recovery from desperate situations.

Although Sub-Saharan Africa has proportionately the greatest food insecurity with 33% of its people undernourished, many countries in South Asia appear to be moving backwards. Food security in rural India has deteriorated over the last ten years with wheat production falling and the largest number (212 million) of undernourished people in the world – this in a country trumpeted as a modern economic powerhouse. Likewise, China's economic miracle is yet to reach out to 150 million hungry citizens.

CLIMATE CHANGE AND FOOD SECURITY

Surprisingly, neither the MDG nor the FAO report makes any reference to climate change. Yet the Intergovernmental Panel on Climate Change (IPCC)

working group 2007 report paints an almost cataclysmic picture in which «for even small temperature increases of 1-2 degrees [...] access to food in many African countries is projected to be severely compromised by climate variability and change [...] in some countries yields for rain-fed agriculture could be reduced by up to 50% by 2020». As well as falling yields in hotter temperatures, agriculture will suffer from the predicted increase in drought and floods, already a serious short term cause of food insecurity. In South Asia climate change threatens to upset the stable monsoon pattern around which farming has evolved.

At global level, adaptation of agriculture to climate change will typically involve selection of alternative crops, revised planting dates, improved irrigation and modified chemical inputs. Investment on this scale however is likely to be beyond the poorest countries whose economies are predominantly dependent on agriculture. For this reason they «will be hit earliest and most severely» according to the UK Stern Review Report published in 2006.

DISCUSSION

“ There are people in the world so hungry, that God cannot appear to them except in the form of bread. ”

CHARLES DICKENS

Developing countries are instead undertaking National Adaptation Programmes of Actions (NAPAs) as directed by the UN Framework Convention on Climate Change. Recognising the urgency of the situation and the limited capacity for major adjustment programmes, NAPAs focus on community-based low-cost options for dealing with climate variability.

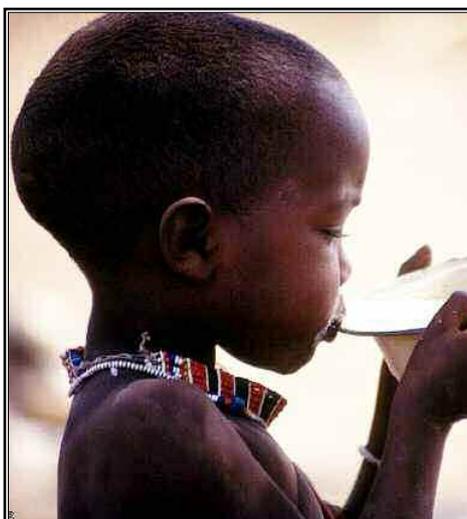
BIOTECHNOLOGY AND GM CROPS

Climate change is not the only seemingly unstoppable force assailing developing countries in their search for food security. Scientific advances in agriculture have brought great benefits, notably in the “green revolution” originating in the 1970s. However, unlike the green revolution which was largely driven by state funding, today’s biotechnology puts seed management and patents in the hands of a small number of very large international companies such as Monsanto, Dow and Syngenta.

One consequence has been a rapid decline in food crop varieties as favoured seeds are mass-marketed. Industrial crops are now limited to about 150 varieties, rendering superfluous the inherited local wisdom acquired over generations. The implications of the loss of biodiversity in both seeds and local ecosystems for resistance to disease or climate change are uncertain.

Genetically-modified (GM) crops, in which a gene of desired characteristic is transposed from one plant to another, are the most extreme and controversial output of the biotechnology companies. Offering higher yields, lower chemical inputs and higher nutritional value, GM crops sound like the panacea to food insecurity. The snag is that, under the current global regime of intellectual property rights, local farmers lose control over their own produce. There are doubts as to whether developing countries have the capacity to establish regulatory frameworks to manage inevitable conflicts of interests between the local stakeholders (farmers, consumers, and governments) and global shareholders.

Governments therefore face difficult policy decisions to achieve food security. In the event, led by Brazil, South Africa, China and India, the majority of developing countries have adopted GM crops, accounting for over 40% of world production. The African Union endorses the technology as does the Alliance for the Green Revolution in Africa, the \$150 million programme announced jointly by the Bill and Melinda Gates Foundation and the Rockefeller Foundation. Worries about contamination and the wider loss of biodiversity have enhanced the importance of local seed banks now established by many developing countries to protect their national assets.



Production of petrol additives such as ethanol and biodiesel from plant crops has surged in popularity as a means of reducing dependence on fossil fuels and cutting carbon dioxide emissions. The EU has announced that these biofuels will contribute 10% of transport fuels by 2020 and both US and China have similar targets.

The consequence is that land and crops which might otherwise contribute to global food security will be devoted to satisfying travel-rich western lifestyles. By coincidence, the number of vehicles in the world, 800 million, is almost the same as the number of undernourished people in developing countries. There the similarity ends. One tank of ethanol for a Sports Utility Vehicle consumes corn that could feed a man for a year.

As with GM crops, it is possible that biofuel production could benefit developing countries but the US holds the purse-strings to a global biofuel economy. Pork-barrel politics will underpin the payment of subsidies to US corn farmers and impose tariffs on the more efficient sugar-based

ethanol such as that produced in Brazil. The suspicion remains that the US and other governments have espoused the virtues of biofuels as a knee-jerk reaction to the spiralling climate change crisis without full impact assessment. Many observers consider that such an explicit exchange of food for fuel will trigger a public backlash against the craze for biofuels. In China already a shortage of pork has prompted the government to block approval of new ethanol plants which are indirectly forcing up prices of animal feed.

CAUSES OF FOOD INSECURITY

External pressures associated with climate change and biotechnology are acting on local structural shortcomings which already render developing countries prone to food insecurity. Foremost is the pattern of small farms (not dissimilar to the pattern in pre-industrial Europe) whose output is typically a mix of subsistence and surplus for market. There are 500 million farms of less than 2 hectares in the developing world, many of uncertain land tenure or title, and many dependent on the labour of women and marginalised groups whose low status weakens the agriculture lobby.

This profile of livelihoods rarely escapes poverty, lacks capital to invest, and is chronically vulnerable to fluctuating prices or unfavourable weather, especially drought – factors which all contribute to food insecurity. Africa has been further affected by the distortion of labour resources created by HIV/AIDS. The two countries currently prompting the highest state of food security alerts, Swaziland and Lesotho, have both experienced drought and high HIV prevalence.

Governments themselves have compounded weaknesses through prolonged lack of investment in rural economies

which account for about 75% of world hunger – African governments are yet to meet their 2003 Maputo Declaration commitment which called for 10% of national budgets to be dedicated to agriculture and rural economies by 2008. Those farmers that have been encouraged to switch to cash crops for export find themselves at the mercy of unpredictable world food prices, with competitiveness undermined by distorting subsidies for rich country farmers. The Doha round of world trade negotiations was supposed to open new markets for developing country agriculture but the protective governments of US and Europe have baulked at the compromises involved.

Whilst overall population growth creates pressure on food security, it is not an underlying cause. World production of food has outpaced population growth and is projected to reach record levels in 2008, more than sufficient to feed the 6.7 billion population if sufficient political will could be summoned. The human weakness for violent conflict does however invariably lead to extreme food insecurity – 9 of the 12 lowest ranking countries in the 2006 Global Hunger Index were conflict regions such as the Democratic Republic of Congo and Angola. Collapsed economies such as North Korea and Zimbabwe also generate food crises.

THE SEARCH FOR FOOD SECURITY SOLUTIONS

There are two longstanding and opposing philosophies for addressing the structural weaknesses that lead to food insecurity. The neo-liberal model advocates that small farms should be consolidated as has been the case in richer countries, with minimum state involvement and alternative livelihoods found for surplus labour. Farms can then afford to invest in higher technologies and compete in export markets.

Critics of this open market approach feel that it can succeed only in conditions of strong transport and storage infrastructure, of efficient local markets and high standards of governance – conditions which rarely exist in poorer countries. The alternative model of “food sovereignty” gives priority to local ownership of the full chain of resources. It accepts small farms for what they are and encourages their sustainability through pro-poor policies such as subsidies, tax breaks and protection against big business.

Neither model has yet absorbed the urgency of climate change. The open market approach fails to recognise the extreme sensitivity of tropical ecosystems and the pro-poor model may have to acknowledge the expediency of seeking help from the latest technologies in a potentially frightening environment.



Food aid alone is not a sustainable solution to hunger but compassion demands that action be taken in the most critical circumstances. The balance of food supply and demand throughout the world is monitored by the FAO's Global Information and Early Warning System. Where a situation is deemed serious, the World Food Programme (WFP) becomes involved and prepares an appeal to governments and other donors for aid – there have been 30 emergency appeals since 2000.

As the principal agency responsible for food aid, the WFP supports 100 million people and about the same number are assisted by international aid agencies. This leaves over 600 million dependent on highly variable or non-existent domestic safety net arrangements such as the Indian Public Distribution Scheme.

The US is the largest donor country but insists not only in donating surplus grain from US stocks rather than cash,

but also that the chain of delivery to the recipient country must be handled entirely by US contractors. The result is often months of delay for a service which is time critical. Agencies are pressing donors instead to purchase food direct from the beneficiary country – high prices typically being the deterrent to the poor rather than availability.

Donors also increasingly favour a twin-track approach of providing both cash and food to individuals – food as the emergency component to ensure nutrition and cash as the development component to transfer sustainability decisions to the household and ward

off a culture of dependency.

WORLD FOOD PRICES AND FOOD SECURITY

There is consensus in rich countries that retail food prices are about to increase sharply. The reasons given include rising demand from countries such as India and China whose new middle classes can afford a diet of greater meat content and the tightening of food production from the expansion of biofuels. Fluctuation of western supermarket prices would normally have little bearing on the battle for food security in developing countries. But there are ominous signs of knock-on effects; the WFP has announced that it will struggle to feed its target beneficiaries due to higher world prices and the disappearance of surpluses. A July 2007 leading article in the respected UK *Financial Times* concluded that «for those in poor countries, (the effects of higher food prices) are potentially devastating». □

✓ INFO SOURCE: OneWorld www.uk.oneworld.net/gudes/food

CAN CROPS BE CLIMATE-PROOFED?

AFRICA'S SAHEL REGION WILL PRODUCE FEWER CROPS AS A RESULT OF CLIMATE CHANGE

T.V. PADMA

CLIMATE CHANGE THREATENS FOOD CROPS ACROSS THE world. Now scientists are re-focusing their efforts on crop resilience, rather than yields.

Among the most worrying aspects of climate change is its effects on the world's food supply. The worst-case scenario is stark: Africa's Sahel region will produce fewer cereals, rice cultivation in Asia will be under threat, there will be fewer vegetables – with potatoes and beans potentially wiped out – and livestock and fisheries will be severely stressed.

Climate change is making crop scientists review their research agenda. Until now, their main focus was on improving yields. But with successive International Panel on Climate Change (IPCC) reports warning that increased droughts and floods will shift crop systems, 'climate-proofing' of crops has become crucial. The Consultative Group on International Agricultural Research (CGIAR) institutes are now investigating how to make crops' more resilient to environment stresses.

WORKING BLIND

But efforts are hampered because few climate models predict changes for individual regions, making it difficult to predict how climate change will affect growth and yields of specific crops in each region.

«A partnership between climatologists and crop scientists will be valuable in developing regional analogues,» says Martin Parry, IPCC co-chair and a scientist at the UK-based Hadley Centre for Climate Prediction and Research.

And the need is urgent. At a meeting of CGIAR institutes in Hyderabad, India, in November 2007, Parry said that the estimated window for implementing mitigation and adaptation programmes has shrunk from 30–40 years to 15.

He advised CGIAR scientists to put climate change at the heart of research programmes.

Others agree. As Kwesi Atta-Krah, deputy director-general of the Italy-based research organisation Bioversity International says, «Plant breeders now need to focus on the future as well as the present, and use the vast genetic

resources in gene banks and in the wild that hold potential for adaptation of major crops to a changing climate.»

RICE CROPS MOST VULNERABLE

Rice crops are most vulnerable to global warming. Studies worldwide show that rising carbon dioxide levels may initially increase growth, but the benefit is temporary. Rising temperatures make rice spikelets – the slender branches containing rice flowers – sterile, and grain yields will fall.

Asia and sub-Saharan Africa will be amongst the most severely affected by climate change. About 90 per cent of the world's rice is grown and consumed in Asia (where 70 per cent of the world's poor live), and sub-Saharan Africa is the world's fastest growing rice consumer. The most vulnerable agricultural systems are the rain-fed uplands and lowlands that form almost 80 per cent of total rice land in Africa.

Reiner Wassman, coordinator of the Rice and Climate Change Consortium at the International Rice Research Institute (IRRI) in the Philippines, says IRRI strategies should include breeding rice that can survive climate change. He wants to see plants that can tolerate higher temperatures and/or flooding, that flower in the mornings before

temperatures rise, and that transpire (lose water through evaporation from leaves) more efficiently to cool the air around them.

His hopes are buoyed by IRRI's latest research into the rice line 'sub1', which survived submersion for 17 days (see *Scientists create flood-resistant rice*). The line could provide genes for flood tolerance.

In Africa, the Africa Rice Centre (WARDA) is focusing on its NERICA (New Rice for Africa) varieties. These combine traits of Africa's *Oryza glaberrima* – such as drought and local disease tolerance – with the high yields of Asia's *Oryza sativa*.

LOOMING DISASTER FOR WHEAT?

Drought is also a big concern for the International Maize and Wheat Improvement Centre (CIMMYT) in El Batan,

→ | ALTERNATIVES

*“A hungry
people listens not
to reason,
not cares for
justice,
nor is bent by
any prayers.”*

SENECA

Mexico. The IPCC's predictions of increasing droughts spell disaster for half of the developing world's wheat growing areas.

The problem is particularly acute in central and west Africa, where the poor depend on wheat but get an annual rainfall of less than 350mm, says CIMMYT scientist Rodomiro Ortiz.

CIMMYT has launched a hunt for drought tolerance in wild wheats and 'landraces' — traditional crops that have adapted to local conditions over centuries. The centre is also teaming up with the Japan International Research Centre for Agricultural Sciences to map drought-tolerant genes in wheat and maize.

CIMMYT is using its findings in both traditional breeding and genetic engineering programmes. For example, researchers are working on genetically engineered wheat containing the DREB gene of *Arabidopsis thaliana* — a relative of mustard plants — that may confer tolerance to drought, saline soils and low temperatures. CIMMYT is testing yields of genetically engineered plants with the DREB gene under varying water stress.

However, Ortiz cautions that the plant is still experimental. Most published studies simulated drought conditions in greenhouses more rapidly than would occur naturally. Ortiz wants more experiments under natural water stress conditions.

SHRINKING DIVERSITY

Scientists look for useful genes in plants grown only locally, and CIMMYT already has maize breeding programmes that work with local communities.

But researchers fear many useful wild species could disappear.

«Climate change is leading to significant losses of genetic resources in several regions of the world,» says Atta-Krah. He says diversity among crop species must be effectively conserved, managed, and used to improve crops and adapt to climate change.

One striking example of shrinking diversity is Latin America's beans. Peter Jones, a scientist at the International Centre for Tropical Agriculture (CIAT) in Columbia, says that of the 17 wild species of the *Arachis* genus — the pea family that includes the peanut — 12 will be extinct by 2055 due to climate change.

We must systematically map important bean species and ensure important collections have more than five live specimens, adds Jones.

The world's livestock are also in the danger zone. A 2006 assessment of global animal genetic resources by the UN Food and Agriculture Organization estimated that 70% of the world's unique livestock are in developing countries. Many breeds already risk extinction. On average, one livestock breed is lost every month, mainly due to globalisation of livestock markets.

Climate change will strike further blows. According to the International Livestock Research Institute (ILRI) in Kenya, climate change will affect livestock by changing the yield and nutritional quality of their fodder, increasing disease and disease-spreading pests, reducing water availability, and making it difficult to survive in extreme environments.

«Climate change will have impacts at the ecosystem level that are poorly understood,» says ILRI's deputy director-general for research, John McDermott. Effects will vary between the rain-fed highlands in the Great Lakes region of eastern Africa, the coastal regions of south, east and west Africa, and the forests of central Africa. The exact consequences for each ecosystem need to be analysed in detail.

WATER HOLDS THE KEY

The common theme in all these changes is water availability. Already, one-third of the world's people live in river basins where they face water scarcity. But climate change will have other effects on agricultural irrigation.

The timing and size of river flows will change, affecting river water schemes, says Colin Chartres, director-general of the Sri-Lanka-based International Water Management Institute. He adds that receding glaciers mean less water will be available in spring, which could affect some 17% of the world's population, including

those irrigating the Indus basin. Changes in groundwater recharge could also affect irrigation in China, India, Mexico and the United States.

Chartes says scientists need to go beyond coarse global models, and develop specific river-basin and farm-scale models of how climate change will affect river water availability and lake levels. He also calls for more precise models of how climate change may affect fish productivity in oceans, seas and inland fisheries.

A TENTATIVE START

As the problems become apparent, CGIAR centres are working on better understanding their implications.

The India-based International Centre for Research in Semi-Arid Tropics (ICRISAT) research strategy for 2007–2012 targets climate change issues in the short- and medium-to-longer term.



ICRISAT director-general, William Dar, says ICRISAT is working to make millets, sorghum, pigeon pea and groundnut better adapted to major climate stresses. The organisation has already developed varieties tolerant to heat, high soil temperatures, low and variable rainfall, and diseases.

What is needed now, says Dar, is a better knowledge of the physiology behind stress tolerance, wider gene pools, and more effective screening methods for useful genes.

CIAT is developing computer software to analyse future climate scenarios. Examples include 'MarkSim' to simulate daily weather for up to 100 years anywhere in the tropics, and 'Homologue' to compare climate and soil throughout the tropics.

The International Centre for Agricultural Research in the Dry Areas (ICARDA) has studied how areas in and around Egypt, Morocco and Sudan are coping with water scarcity in rainfed and irrigated grasslands, as well as traditional watershed management systems.

But the task ahead is tough. As Jones points out, historically the average time between scientists beginning to hunt for useful traits and a new stable variety growing in farmers' fields has been 46 years. «So that is how far ahead we should be looking at the start of every project,» he says.

And as one participant at the Hyderabad conference commented, «You may put all those traits for tolerance to drought, salt and pests in a plant – and then find it has no yield!»



RELATED LINKS

The Consultative Group on International Agricultural Research (CGIAR): www.cgiar.org/
 The International Rice Research Institute (IRRI): www.irri.org/
 The Africa Rice Centre (WARDA): www.warda.org/
 The International Maize and Wheat Improvement Centre (CIMMYT): www.cimmyt.org/ 

 **INFO** SOURCE:
 SciDev.Net
www.scidev.net/content/features/eng/can-crops-be-climate-proofed.cfm



UNVEILING HUNGER

THE HUMANITARIAN SITUATION IN THE PALESTINIAN TERRITORIES

SARA HUSSEINI

THE WORD 'HUNGER' EVOKES IMAGES OF BARREN AFRICA, where an almost complete lack of food and water leads to the death of millions every year. The truth is worse; hunger is a much wider problem that occurs throughout the world and causes endless difficulties aside from illness and death. This article will explore the issue of hunger and poverty in the Palestinian Territories and the effects malnourishment has on the people there, while looking at new methods of measuring quality of life, so that the effects of hunger can be better discerned.

A report by Oxfam International in April 2007 recorded that 46% of Palestinians did not have enough food to meet their needs and those classed as living in 'deep poverty' (i.e. living on less than USD 0.50 a day) doubled over the course of 2006 to more than one million. This was mainly due to the election of Hamas (The Islamic Resistance Movement) at the beginning of that year and the subsequent suspension of foreign aid and Palestinian VAT revenues (held by Israel). As a result of these suspensions the Palestinian Authority (PA) lost 80% of its usual income. The effect on Palestinian society was devastating, with unemployment soaring to 70% and leaving thousands of PA employees unpaid for months.

Hunger is a serious problem for the Palestinians, in some ways overshadowed by the fact that the percentage of deaths from malnourishment are not as high as in other areas of the world and also by the conflict with Israel, which dominates any discussion on the Palestinians. How do we measure the effects of hunger more accurately, so that we can fully evaluate the situation and the need to take action? The initial solution might be to look at general economic prosperity as indicated by Gross Domestic Product (GDP), which has widely been regarded as the indicator of economic prosperity since its introduction in the 1930s. In recent years, however, it has been recognised that GDP is not enough to indicate quality of life (and is not concerned with sustainable development) which has

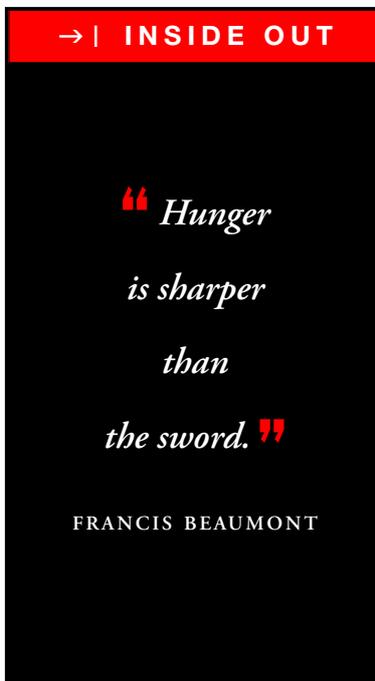
prompted a number of institutions to look for other ways to take these issues into account. In November 2007 a two day conference, hosted by the European Parliament, set out to do exactly that. The conference, entitled 'Beyond GDP', included participants from a number of worldwide organisations such as the European Parliament, the World Wildlife Fund (WWF), and the Organisation for Economic Co-operation and Development (OECD).

The opening speaker and President of the European Commission José Manuel Barroso acknowledged that GDP remains a good measure of economic prosperity in that it is objective rather than subjective, but that it needs to be adapted or complemented with other indicators as it does not always give an accurate picture. He provided the example of war that can sometimes increase GDP even though it destroys lives and damages resources. In other instances countries' GDPs depend on natural resources which can be relied upon and exported in the short term, but which will someday run out.

Joaquín Almunia, the European Commissioner for Economic and Monetary Policy, continued the discussion, explaining that the European Union has developed 150 indicators divided up over 10 themes, looking at economic development alongside issues such as climate change, natural resources, health, social inclusion, demographic change and poverty. He added that there are lots of statistics already compiled which now need to be integrated with one another.

A speaker from the World Wildlife Fund described their methods of cataloguing environmental and ecological information into a 'Living Planet Index', while also calculating the demands we make of our planet. Their latest project has been to attempt to combine this 'ecological footprint' with the UN's Human Development Index, so that quality of life can also be taken into account.

Pier Carlo Padoan of the OECD gave details of their project to produce a handbook early next year entitled 'Measuring Progress in Practice' and to develop a website



described as «a 'Wikipedia' for progress». The aim is to set up systems or institutions in each country to measure progress and make the country accountable for how much it gives and takes in a global context.

With these considerations in mind let us now reflect on the case of the Palestinian Territories. Beginning with GDP per capita, World Bank figures of 2006 put the figure for the Palestinian Territories at 1 USD 120 dollars (compared to Israel's 18 620, the UK's 37 600 and the US's 43 740). What does this figure really tell us about quality of life and sustainable development in the Palestinian territories? How does hunger really affect the Palestinian people? Without fully tried and tested empirical measures we cannot find a comprehensive answer. Nevertheless, by considering some of the issues raised by participants of the 'Beyond GDP' conference, it may help to give us some small idea as to how complicated and detrimental the problem of hunger in the Palestinian territories actually is.

In 2003 the UN News Centre reported that «the Palestinian territories are under constant pressure from water pollution, climate change, desertification and land degradation...» Since then, the problem has been exacerbated by the continuing growth in population and the construction of the Israeli 'security fence', which cuts through the West Bank, limiting the already scarce access to resources.

Meanwhile in Gaza, where the only exit is the Rafah crossing into Egypt, the Palestinian people are suffering as a result of unpredictable and frequent closures. Gaza's two main exports, fresh fruit and fish, are perishable goods which can only be exported through Rafah. Between June 2006 and March 2007 it is estimated that losses amounted to USD 500.000 for each day the crossing was shut. Gaza's closed borders and the numerous checkpoints in the West Bank also have a much deeper and more sinister impact on the Palestinian people in terms of social exclusion. Social exclusion has been shown to cause feelings of humiliation and desperation which in some cases can lead to aggression and violence, especially amongst young men who are unemployed and unable to provide for their families. Such desperate circumstances provide fertile conditions for militant movements and plunge the Palestinians into an even more hopeless situation.



Finally, the dependence of the Palestinian economy on Israel means that although wages are much lower and employment is much more difficult to find due to restrictions on movement, the Palestinians still have to buy commodities such as food, petrol and medicines at the same price as their Israeli neighbours, further crippling them financially.

The result of all of these issues is the 'deep poverty' described by Oxfam which means that aside from poor health, children are missing out on an education because they have to work to help support their families. Those lucky enough to go to school full-time have their days regularly disrupted by Israeli closures, not to mention the traumatic effects of the conflict which many witness.

It is therefore evident, from a brief consideration of the Palestinian situation, that there are many overlapping, interlinking and complicated factors which need to be considered with reference to hunger in the Palestinian territories. The humanitarian cause of the Palestinians is often overlooked because of the difficult nature of the political situation which consumes the world's attention.

Without wishing to attribute blame it is clear that there are many innocent people, mostly children, suffering on a daily basis. Measures such as those discussed at the 'Beyond GDP' conference are definitely welcomed, if only to show more accurate and complete pictures of problems

throughout the world, piercing though any veils of statistical illusion, so that we can begin to do something about them.

MAIN SOURCES

For a list of organisations introducing new methodologies and indicators to complement GDP see: www.beyond-gdp.eu/indicator-exhibition.html

- www.palestinemonitor.org/spip/spip.php?article13
- en.wikipedia.org/wiki/Demographics_of_the_Palestinian_territories
- www.commondreams.org/archive/2007/09/01/3555/
- www.education-action.org/default.asp?pageRef=30
- www.un.org/apps/news/story.asp?NewsID=5955&Cr=Palestin&Cr1 ■

SUGGESTED SOLUTIONS
TO HUNGER REDUCTION

ON 16 OCTOBER 2007 FAO HAS CELEBRATED WORLD Food Day with the theme 'The Right to Food'. This means the right of every person to have regular access to sufficient nutritionally adequate and culturally acceptable food for an active healthy life.

Many organisations are involved in finding solutions for the hunger problem. These are the solutions that FAO and the World Bank propose in their hunger reduction programmes.

FAO'S ANTI-HUNGER PROGRAMME¹

FAO recommends a twin-track approach for quick success in reducing hunger and poverty:

A - One track would create opportunities for the hungry to improve their livelihoods by promoting development, particularly agricultural and rural development, through policy reform and investments in agriculture.

About 75% of the poor and hungry live in rural areas and depend on agriculture for their livelihoods. The scope for bringing additional natural resources (notably land and water) into agricultural production is limited. The most viable option is sustainable intensification, i.e. increasing the productivity of land, water and genetic resources in ways that do not compromise the future productive capacity of those resources.

B - The other track would involve direct and immediate action to fight hunger through programmes to enhance immediate access to food by the hungry, thereby increasing their productive potential and allowing them to take advantage of the opportunities offered by development. Direct action to target the hungry is also necessary because economic growth takes time to have a significant impact on hunger. Hungry people cannot wait, so direct and immediate action is required.

Sustainable development has little meaning in the presence of large-scale hunger and poverty. Hungry people are unable to work to their full potential, are more susceptible to ill health and lack the capacity to save and invest. Eliminating

hunger is an essential ingredient of any strategy for sustainable economic development and sound environmental management. Also hunger breeds desperation, and the hungry are an easy prey to those who seek to gain power and influence through crime, force or terror, endangering national and global stability. It is therefore in everyone's self-interest - rich and poor alike - to fight hunger.

A condition for the success of investments under the twin-track approach is the creation of a policy environment, both internationally and nationally that is conducive to broad-based economic growth. At the international level this implies measures to promote peace, political and economic stability as well as a trading environment. Nationally it implies the adoption of macroeconomic policies that provide the stability required to encourage savings and investment.

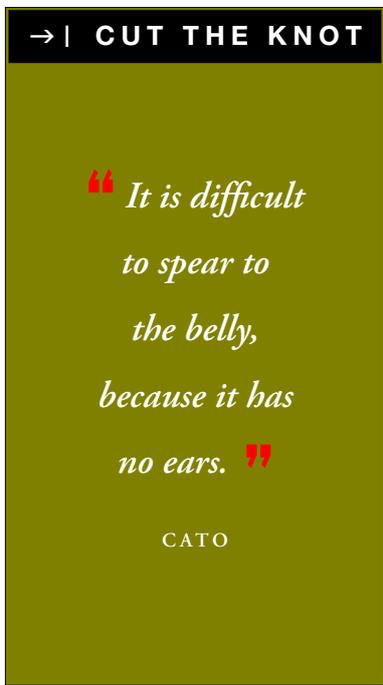
FAO advocates an additional public investment of an estimated USD 24 billion annually (in 2002 prices) to halve hunger by 2015 and expects that achieving this goal is likely to yield incremental benefits worth at least

USD 120 billion per year as a result of longer and healthier lives for all those who gain from such improvements.

The investment package includes, inter alia, an injection of start-up capital, averaging USD 500 per family, for on-farm investment to raise the productivity and production of 4 to 5 million households in poor rural communities. It also covers targeted direct food assistance programmes - at a cost of USD 30 to USD 40 per person per year - for up to 200 million hard-core hungry people, many of whom are school-aged children. Other components are for the development of irrigation systems and rural roads linking farmers with markets; the conservation and sustainable management of soils, forests, fisheries and genetic resources; and agricultural research, learning and information systems.

THE WORLD BANK'S PROPOSAL TO REDUCE MALNUTRITION²

Malnutrition undermines economic growth and perpetuates poverty through three routes: direct losses in productivity



from poor physical status; indirect losses from poor cognitive function and deficits in schooling; and losses owing to increased health costs. Improving nutrition is therefore as much of an issue of economics as one of welfare, social protection and human rights. Therefore the World Bank would like to reposition nutrition much higher on the development agenda as it is critical to achieve the Millennium Development Goals (halve poverty and hunger, maternal and child health, education).

Income growth and food production, as well as birth spacing and women's education are important but long routes to improving nutrition. Shorter routes are providing health and nutrition education and services (such as promoting exclusive breastfeeding and appropriate complementary feeding, coupled with prenatal care and basic maternal and child health services) and micronutrient supplementation and fortification (vitamin A and iron). Deficiencies of key vitamins and minerals continue to be pervasive and they overlap considerably with problems of general undernutrition (underweight and stunting). A recent global progress report states that 35% of people in the world lack adequate iodine, 40% of people in the developing world suffer from iron deficiency, and more than 40% of children are vitamin A deficient.

The window of opportunity for improving nutrition is small – from before pregnancy through the first two years of life. There is consensus that the damage to physical growth, brain development, and human capital formation that occurs during this period is extensive and

largely irreversible. Therefore interventions must focus on this window of opportunity. Any investments after this critical period are much less likely to improve nutrition.



Several large-scale programs have worked (in Bangladesh, Thailand, Madagascar, Chile, Cuba, Honduras, Mexico) and the challenge is to apply their lessons in more countries. Improving nutrition is a pro-poor strategy, disproportionately increasing the income-earning potential of the poor.

As said by Barbara Eckwall, Coordinator of the Right to Food Unit, «the right to food is not a utopia, it can be realized for all and everyone should contribute to make it happen.»

¹ *Anti-Hunger Programme*, Food and Agriculture Organisation of the United Nations, Rome November 2003.

² *Repositioning Nutrition as Central to Development, A Strategy for Large-Scale Action*, The World Bank, Washington 2006. ■

NEWSROOM

DURING 2005, THE TWO GLOBAL MOVEMENTS WHOSE hands rests the fate of sustainable development held key milestone meetings amongst intense public interest. Yet the Millennium Summit in New York to review progress of the Millennium Development Goals (MDGs) and the United Nations Climate Change Conference in Montreal were quite separate affairs. Formal declarations emerging from each made little reference to the other.

There is increasing anxiety that these two great engines of social endeavour should be shunted urgently on to the same track; that MDG programmes are being stabbed in the back by the impact of climate change and that, in turn, attempts to curb harmful emissions cannot possibly succeed if over half of humanity lives in poverty.

The interdependence is all too painfully obvious. The 2007 paper *Impacts, Adaptation and Vulnerability* published by a Working Group for the 4th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) confirms that the most basic components of human development in poor countries will bear the brunt of climate change. Glacier retreat in the Himalayas may lead to water shortages for about 1/6th of the world's population within the next two-three decades. In Africa, between 75 and 250 million people may experience water stress as early as 2020 whilst food production may be «severely compromised.»

Pressure on food security and water resources is a recipe for rural migration to cities, undermining development strategies for improving education, health services and

opportunities for women. Shifting patterns of malaria may jeopardise efforts towards its elimination. The whole pack of cards assembled by the MDGs is therefore built on shaky climate foundations.



TRADE AND POVERTY REDUCTION

Ironically the prime concerns today of most of the poorer developing countries – food security and the protection of rural communities in the face of global price volatility – are precisely those that gave rise to the unfair competition they now face. If trade is to play any role in addressing these concerns, then the elimination of the US and EU farm subsidies is a necessary condition to level the playing field – this was the most passionate plea of the Africa Commission established by the UK government to make recommendations on African development to the 2005 G8 summit. Trade rules need to be sympathetic to economic profiles which are dominated by agriculture and to replace the vision of more

trade for its own sake with a vision of countries whose people can first secure their basic needs of food, health services and education. Such needs are enshrined in international human rights law as well as the MDGs.

This is not to deny that radical reform in Africa is essential. Land reform is desperately needed in many countries where tenure is uncertain or where farm sizes have diminished to ridiculously uneconomic scale. Investment is required to improve productivity and quality control demanded by

export markets. Small-scale farmers and fisherfolk need help to compete with multinational agri-business, for example in the formation of cooperatives. Inevitably a proportion of the rural workforce will migrate to new urban livelihoods, especially from areas of poor crop yields. International trade rules could act as a valuable catalyst for such evolution in agriculture but only if framed from a genuine development perspective, with preferential treatment that works properly so that the process can amount to transition rather than turmoil.



CLIMATE CHANGE
TO LEAD TO
MORE HUNGER
IN ASIA:
A STUDY

Severe crop losses are predicted in the next two decades due to climate change in some of the poorest regions of the world, including South Asia, which could turn into a hunger hotspot.

A US study revealed South Asia and Southern Africa as the two hunger hotspots where climate impacts on agriculture look particularly dire.

«We were surprised by how much and how soon these regions could suffer if we don't adapt,» said study co-author Marshall Burke.

Potential losses in South Asia are projected 10% or more for many regional staples, including millet, maize and rice. «For poor farmers on the margin of survival, these losses could really be crushing,» Burke said.

Those crop losses could lead to food shortages and a loss of livelihood among the world's poorest people, the authors warned.

The study by researchers at Stanford University's Programme on Food Security and the Environment (FSE) focused on twelve regions where a large share of the world's malnourished populations reside, according to the United Nations Food and Agriculture Organization, including much of Asia, sub-Saharan Africa, the Caribbean and Central and South America. The findings will be published in the February issue of the journal *Science*.

The majority of the world's 1 billion poor depend on agriculture for their livelihoods,» said lead author David Lobell, a senior research scholar at FSE, which focuses on environmentally sustainable solutions to global hunger.

The study, reported by *ScienceDaily* online, also pointed to a few developing regions, such as the temperate wheat-growing areas of China, that could benefit in the short run from climate change.



UN

GENERAL ASSEMBLY PRESIDENT
CITES 'COMPELLING' NEED
FOR CHANGE WITHIN UN

While the United Nations has a leading role in advancing global issues such as development and poverty eradication, the world body must be strengthened to respond more effectively to today's challenges, the President of the General Assembly said today.

«The need for change is compelling,» Srgjan Kerim told an informal meeting of the Assembly on system-wide coherence, adding that now is the time for the 192-member body to «deliver as one.»

Mr. Kerim pointed out that despite its unique legitimacy, the UN's status as a central actor in development is undermined by «a lack of focus» on results.

«It is clear that without ambitious and far-reaching reforms the United Nations will be unable to deliver on its promises and maintain its position at the heart of the multilateral system,» he told delegates.

Change is «inevitable,» he stressed, if the UN is playing its vital role in advancing global issues, including the achievement of the Millennium Development Goals (MDGs) – the pledges made by world leaders to slash poverty, hunger, disease and illiteracy by 2015.

«The United Nations – more than any other body – is uniquely placed to take a leading role in achieving the MDGs. But in order to do so, and like any other organisation, it must renew and retool itself to respond to emerging challenges.»

Reform and continuous improvement are an intrinsic part of any successful organisation, and the UN is no exception, Mr. Kerim pointed out, adding that the world body will only continue to attract resources if it can demonstrate its effectiveness and deliver results.

Secretary-General Ban Ki-moon has endorsed a set of recommendations put forward in 2006 in the report of the High-level Panel on UN System-Wide Coherence as «an ambitious yet achievable vision of a harmonized and accountable UN system.»

The report, entitled *Delivering as One*, recommended a country-level consolidation of UN agencies, the strengthening of leadership on humanitarian and environmental

activities, and the creation of both a new funding system and a new women's organization.

So far eight pilot countries are testing the 'One UN' approach, and Mr. Kerim noted that the results of these pilots will be important for future discussions on achieving greater coherence and effectiveness across the system.



BAN KI-MOON PLEDGES TO MOBILIZE
ACTION TO REACH
MILLENNIUM DEVELOPMENT GOALS

Secretary-General Ban Ki-moon today pledged to mobilize national leaders in a drive to reach the Millennium Development Goals (MDGs) when they come to United Nations Headquarters in New York for the General Assembly's annual high-level debate in September.

«We are at the mid-point of a great campaign to end world poverty, set forth in the Millennium Development Goals. Too many nations have fallen behind. We need fresh ideas and fresh approaches,» Mr Ban told a news conference in Davos, Switzerland, where he is attending the World Economic Forum.

The Secretary-General repeated his recent calls for attention to the poorest of the world's poor, known as the 'bottom billion.'

«They are the forgotten ones, the nearly 1 billion left behind by global growth,» he said.

Mr Ban illustrated the urgent need for action with stark statistics showing that one child dies of hunger every five seconds; for two thirds of the world a glass of ordinary drinking water is a luxury; and 1 million people die from malaria every year.

«That is why I am launching, together with global leaders, a new initiative,» he said. «This September, the UN will host a high-level meeting on the MDGs, with a special focus on Africa.»

The aim, he said, is to «bring together world leaders and, together, demand action.»

Last year, Mr Ban used a similar forum to spur action on climate change. «This year, we will do the same for the bottom billion,» he pledged.

«This is a sacred cause. The fight against global poverty and human suffering is a moral imperative.»



*He stands supreme who has equal regard
for friends, companions, enemies, neutrals,
arbiters, the hateful, the relatives,
saints and sinners.*

BHAGAVAD GĪTĀ



GI COLOPHON

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EDITOR JASPER SCHELLEKENS

EDITORIAL BOARD

JASPER SCHELLEKENS
CAROLINE VERMIJ

EDITORIAL AND EXECUTIVE OFFICE

LAAN VAN MEERDERVOORT 70
NL-2517 AN THE HAGUE
THE NETHERLANDS
T. +31 (0) 70 362 6523
F. +31 (0) 70 362 9848
E. NEWSLETTER@SPANDA.ORG
W. WWW.SPANDA.ORG

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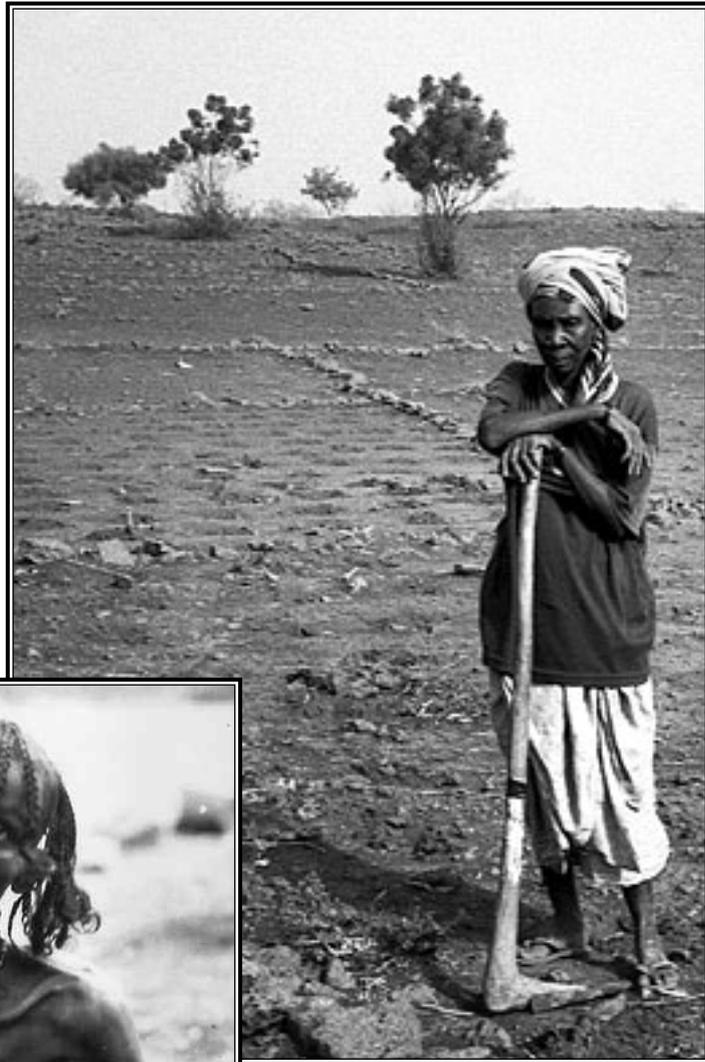
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