Women: reducing poverty and malnutrition

Poverty is associated with inadequate food and poor sanitation. Empowering women can help to improve children's diets and, thus, development

By Kanayo F. Nwanze, president, International Fund for Agriculture and Development

When it comes to health and nutrition, all roads lead to agriculture. Last year, food security was the theme of the G8 and G20 meetings, leading to the historic L'Aquila Food Security Initiative in July 2009 where leaders pledged around $20 billion to strengthen global food production and security. The focus may have changed this year, but the solutions remain the same: ensuring good health for women and children means ensuring access to nutritious food.

The link between poverty, health and nutrition cannot be overstated. According to *The Lancet*, poverty is associated with inadequate food and poor sanitation that lead to increased infections and stunted growth in children. Poverty is associated with low levels of maternal education, increased maternal stress and depression, and inadequate stimulation for children at home. Diets that do not provide sufficient nutrients and high rates of infectious disease can lead to stunting (indicated by low height for age) and wasting (indicated by low weight for height). About 178 million children under the age of five are stunted. Children who suffer from malnutrition early in life are forever deprived of their full physical, mental and social development potential.

Hunger is often a rural issue. Some 75 per cent of the world's poorest people – more than 1 billion men, women and children – live in the rural areas of developing countries and depend on agriculture. Often they do not produce enough food to feed themselves and their families, let alone feed their neighbours or generate a profit. Indeed, many poor farmers are net buyers of food, but with incomes often below one dollar a day, they cannot afford much.

Many of these poor farmers are women. In sub-Saharan Africa women provide most of the labour required to produce basic food crops. Not only are women farming, but they are still carrying out their traditional chores of managing the home while caring for children and collecting fuel and water that can take hours every day. In developing countries in Africa, Asia and the Pacific, women typically work 12 to 13 more hours per week than men.

So women are the key to ensuring food and nutritional security in the home. Studies indicate that when women earn money, they are more likely than men to spend it on food for the family. In Cote d'Ivoire, for example, a $10 increase in women's income was found to bring about the same level of improvement in child health and nutrition as a $110 increase in men's income, as documented in the *Sourcebook on Gender in Agriculture* produced by the World Bank, the International Fund for Agriculture and Development (IFAD) and the Food and Agriculture Organization. And when female farmers have access to resources such as land, credit, technologies and markets, they are often more productive than male farmers.

Unfortunately, women rarely get this access. They are often the most disadvantaged members of rural societies, without rights to the land they work or the power to hold onto the profits of their labour. All too often, when women's activities become profitable, the male members of the household take over.

IFAD has long recognised that there will be no substantial progress in poverty reduction and food security unless there is a greater investment in women. For this reason, IFAD works to empower women economically, to

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strengthen their voice and role in their communities, and to fortify their roles in decision making by helping them organise for collective action.

Experience has shown that carefully designed agricultural development projects have huge benefits for child and maternal health. For example, an IFAD-funded biogas project in China, which turns animal waste into energy, has transformed the lives of women and children. Children are healthier because their homes are no longer filled with the smoke from burning wood indoors, and household sanitation has also improved. Women are not only healthier, but they also have more time to generate income now that they no longer have to spend three hours a day collecting wood f or cooking.

Other IFAD-financed projects allow farmers to diversify their production away from basic staple crops and toward vegetables and fruits, as well as livestock and animal-based foods. These provide health benefits for children, women and men. They also command a higher price than staple crops, allowing families to increase their incomes. Vegetable and fruits provide micronutrients such as vitamin A and iron, essential for good health. Livestock products are an excellent source of high-quality protein and essential micronutrients such as vitamin B, iron and zinc.

The only way to make a permanent dent in poverty and hunger is for all countries, rich and poor, to work together to keep agriculture at the top of national and international agendas. In recognition of agriculture's power to improve developing country economies, and in recognition of the need to grow enough food to feed the 9.1 billion people who will be living on our planet by 2050, agriculture has been on the G8 agenda since 2008, when leaders at the Hokkaido-Toyako Summit pledged to reverse the decline in aid to agriculture, which had fallen from 20 per cent of all aid in the 1980s to below 5 per cent in 2007. Despite this commitment, aid to agriculture continues to decline. In 2008, the most recent year for which figures are available, it was just 4.3 per cent, a continued decline from the previous year.

This year, I hope that G8 leaders will take the opportunity of their meetings in Canada to review their progress and accelerate their efforts to meet the commitments they made at Hokkaido Toyako and L'Aquila. And as they implement change, I hope they will take care to include measures to create opportunities and protect the needs of women farmers.

By doing this, they will be able to help the world take a giant step toward the prize everyone seeks: to create a world free from poverty, hunger and desperation. ◆

Food Security: Not (Just) a Development Issue

In recognition of the need to raise food production by 70% to cope with rapid growth, the G8 committed US$20 billion to a sustainable agricultural development fund in 2009. CropLife International, the European Crop Protection Association (ECPA) and CropLife Canada wholeheartedly support this initiative to tackle one of the world's most intractable problems: **food security**.

One year later, we call on the G8 to ensure that this important issue does not become yesterday's news. We call on the G8 to focus on ensuring that the funds committed are channeled for maximum impact, efficiently and based on local needs. Food security is fully achievable. But in addition to investment, its achievement requires significant political will, and coordinated, targeted policies.

Agriculture must produce more food while preserving threatened natural resources, and mitigating and adapting to climate change. That's an enormous undertaking – not just for farmers, but for legislators who must balance these concerns in a way that feeds the world.

We can't simply put more land under the plough. Arable land is severely limited and we can't afford to keep cutting down forests to expand agricultural lands. Deforestation for food production is the single largest contributing factor to the rise in greenhouse gases and the destruction of biodiversity. We must grow more food on the existing land base.

Our industry recognizes the crucial role that technologies such as crop protection and quality seed – including biotech seed – play in helping to achieve food security. Without crop protection products, crop losses around the world would be approximately 40-80%. Beyond existing yield benefits, biotech crops have the potential to further increase yields globally by up to 25%.[1]

However, plant science is not a silver bullet. There are six key issues that need to be addressed through coordinated, effective policies before food security can become a reality: agricultural productivity, global and local trade, sustainable resource management, improved infrastructure, rural poverty and fostering innovation. These priority areas are aligned with the **Farming First** policy platform, which we actively support.

Agricultural productivity

- We must sustainably increase productivity on existing lands.
- This requires more investment in agriculture. The L'Aquila Fund will help, but a corresponding commitment to agricultural investment from the recipient countries will be critical to success.
- Increasing productivity in food insecure countries is not enough. In an interdependent age, falls in productivity in one region impact food security in another. For example, reducing productivity in Europe due to restrictive legislation is predicted to lead to expansion of land to meet Europe's food needs in the developing world.[2] We call on the G8 to remember the importance of sustaining and supporting productivity in all regions.
- This presupposes facilitative, science-based policies. Recent regulatory developments in Europe that restrict the availability of technology to farmers without scientific basis are of great concern. It is hoped that such regulation will be reconsidered in Europe and certainly not replicated elsewhere.
- The private sector currently accounts for one-third of all agricultural R&D[3], which it invests in the lengthy process of researching and developing new, improved solutions for growing more food sustainably. It takes almost 10 years from discovery to market approval of a new crop protection product, costing over US$250 million.[4]
- By broadening application of existing technologies and knowledge, agricultural productivity can be increased – currently, yields in parts of the developing world reach only 20% of those achieved in the developed world.
- Public-private partnerships are an effective way of sharing knowledge, enabling market access and facilitating access to inputs. More such cross-sector collaborations are needed.

Global and local trade

- Efficient food production requires open, fair, and well-functioning global markets.
- This presupposes removal of trade barriers, such as export restrictions.
- Many countries depend on international trade for food security. Developing countries' net cereal imports are expected to more than double by 2050. To address this vulnerability, investment is needed in rural infrastructure, services, R&D and access to technology.
- Risk reduction policies and joint measures among countries that are food import-dependent are needed to better equip them to withstand future shocks.

Sustainable resource management

- Biodiversity and natural resources, such as land and water, are under unprecedented pressure.
- Agriculture impacts these natural resources. To ensure that agriculture helps preserve natural resources, policies should inform and incentivise farmers to adopt more sustainable farming practices.
- A key step to preserving biodiversity is to prevent encroachment on wild habitat by using the most productive agricultural methods on existing farm lands and thereby minimizing the expansion of farmland.[5]
- Agriculture currently consumes 70% of all blue water.[6] Infrastructure and technology are key to improving water use efficiency. Better irrigation and water transportation systems can make a big difference. Advances in plant sciences can enable plants to more efficiently utilize water – biotech-derived drought tolerant crops will be able to maintain crop yields with less water, and preserve crop productivity in times of drought.
- Climate change will render vast swathes of land uncultivable, threatening millions of rural livelihoods. Concerted, decisive international action on climate change is critical.

Improved infrastructure

- Improved infrastructure is needed to improve crop production and quality, reduce post-harvest losses and to secure farmers' access to inputs and markets.
- Poor infrastructure in developing markets means that often inputs such as crop protection, seed and fertiliser cannot reach the farmer.
- In areas where there is no road or transportation, taking goods to market becomes almost impossible, preventing many smallholder farmers from ever entering the marketplace.
- Post-harvest losses are highest among smallholders, largely due to lack of storage infrastructure, leaving produce susceptible to attacks by pests and disease.

Rural poverty

- With rising urbanisation, there is a real risk that rural and agricultural communities will be neglected further by government policies. This must be avoided.
- 75% of the poor in developing countries live in rural areas. Often, they cannot feed themselves and as net food buyers, are very sensitive to food price increases.
- They need purchasing power to avoid hunger – food availability alone is not enough.
- Economic growth in the rural and agricultural sectors – particularly among smallholders – is twice as effective at benefiting the poor as growth in other sectors.[7]

Fostering innovation

- Increasing agricultural productivity sustainably requires continued innovation for new, improved technologies and knowledge.
- To do this, we need more investment in research, by both public and private sectors.
- Innovation in plant science holds vast potential. More targeted and impactful crop protection technologies and improved plant varieties, including biotech varieties, already help farmers grow more food with a smaller environmental footprint.
- Policies should foster and incentivize such innovation. Clearly defined, robust intellectual property protection systems are indispensible.
- Farmer-centric and locally-relevant research must be prioritized to ensure impactful and relevant outcomes.
- Improved, broader extension services are a must to ensure appropriate knowledge and technology reaches the farmer. Public-private partnerships have a key role here.

We believe that with a commitment among policymakers to addressing the above issue areas, food security is fully achievable. We call on the G8 to ensure that the L'Aquila Food Security Initiative is targeted, impactful, and builds on existing international processes, to make food security a reality for this generation, and for our future generations.

CropLife INTERNATIONAL
www.croplife.org

European Crop Protection Association
member of CropLife International
www.ecpa.be

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[1] Consultative Group on International Agricultural Research [2] Humboldt Institute, 2010 [3] Consultative Group on International Agricultural Research
[4] Phillips McDougall, 2010 [5] University of Leeds, 2010 [6] Blue water is defined as stored rainwater [7] World Bank, World Development Report 2009

The right food at the right time: prioritising nutrition in food security

Globally, 200 million children are affected by malnutrition. For those who survive, mental and physical issues will follow them into adulthood. The World Food Programme is working to provide food and nutrition interventions and education

By Josette Sheeren, executive director, United Nations World Food Programme

No issue is more urgent, or more foundational to other development goals, than getting maternal and child nutrition right. Each year, more than 3.5 million children die as a result of poor nutrition. This is nearly 10,000 lives lost each day. Canada is providing critical leadership on this issue as it hosts the G8 and G20 summits.

These children are among the record 1 billion hungry – or one out of every six people on earth – who wake up every morning not knowing whether they will have enough food to eat.

The science is now clear on what is at stake. We know that children never recover from the mental and physical stunting that occurs if undernourished in their first two years of life. By allowing under-twos to remain malnourished, we are robbing an entire generation of their very future. The focus on under-twos is critical – this is the window of opportunity where a global investment can pay dividends for decades to come.

Globally, malnutrition affects almost 200 million children. This means that 200 million children right now are being dealt lasting damage to their young minds and bodies. These are children affected by the earthquake in Haiti, the drought in Kenya, violence in Somalia and high prices in the Central Asian republics.

Malnutrition is an economic issue as well. Studies, including those by the World Food Programme (WFP) and the Economic Commission of Latin America and the Caribbean, show that the cost of malnutrition to developing countries is as high as 11 per cent of gross domestic product. Research from Guatemala shows that children who receive adequate nutrition earn wages as adults that are nearly 50 per cent higher.

Although there are many causes of child malnutrition, there is one goal: getting the right food and nutrition interventions to vulnerable children at the right time. Unfortunately, achieving that goal is not simple and requires a historic collaboration among experts in many fields – from science and food technology to heath, global logistics and medicine.

Nutrition cuts across different tribes – the medical profession, experts in public health, food security and development. People are also divided into government, international organisation, private sector, non-governmental organisations and civil society tribes. But a global nutrition revolution is starting, united by a common goal – to ensure that every child has sufficient nutrition to reach his or her full potential and live a healthy and productive life.

The WFP provides 100 million people a year with food and nutrition interventions, including school meals and nutritional supplements. Last year 80 per cent of its interventions went to women and children because they are often most at risk. Filling empty bellies is no longer enough. Armed with nutritional knowledge, we know that we need to ensure that the food provided is the right nutritional match for the most vulnerable people – pregnant and lactating women, children under two and those with HIV/AIDS and other life-threatening illnesses.

Canada has been a leader in fighting malnutrition. Canada's support and focus on malnutrition helped WFP to provide critical supplementary feeding to children under five and pregnant and nursing mothers in the aftermath of the earthquake in Haiti, and so many other places around the world. In addition, Canada is a leading supporter of the Micronutrient Initiative, which works to ensure that vulnerable people in developing countries get the vitamins and minerals they need to survive and thrive.

We know that we have much more to do. In *Scaling Up Nutrition: A Framework for Action*, the World Bank estimates that about $10 billion per year would provide 13 proven interventions in the most vulnerable countries, from food fortification to targeted supplements for the most vulnerable people.

We must advocate together for new funding dedicated to nutrition. There is money on the table. Last year at the G8 summit in L'Aquila, leaders pledged $22 billion for comprehensive food security. Comprehensive means everything, from growing more food, to ensuring people can access it, to ensuring that the right food reaches the right people to have the best nutritional impact. If this money just goes to growing more food, there is a risk that nutrition will take a back seat.

Bangladesh is a perfect example of this. Bangladesh nowadays is substantially self-sufficient in rice production, yet there is what the WFP's team in Dhaka calls a "nutritional emergency". Some of the worst nutritional indicators in the world include wasting rates at more than 17 per cent and 41 per cent of children under five being

> "Studies show that the cost of malnutrition to developing countries is as high as 11 per cent of GDP"

A mother and her malnourished child in the Nutritional Rehabilitation Centre of Sheopur district in the central Indian state of Madhya Pradesh

underweight. At the Food Security Investment Forum in Dhaka, earlier this year, Bangladeshi prime minister Sheikh Hasina said: "producing more food does not guarantee access to food … A comprehensive approach is necessary. Only this shall ensure that all our people have access at all times to the safe and nutritious food necessary to lead a healthy and active life."

Countries have tackled and solved this problem, including China, Brazil, Thailand and Chile. Lasting, sustainable nutrition solutions must be country-led. Donor countries and private sector partnerships can then help catalyse home-grown solutions with critical financial backing and scientific know-how.

I recently visited Brazil, where nutrition has been championed by the government of President Luiz Inácio Lula da Silva as part of the Zero Hunger campaign. Rates of under-nutrition in children dropped by 50 per cent over a single decade, from 14 per cent in 1996 to 6.8 per cent in 2007. Their success was due, in part to their ability to build systems that promote nutrition in a variety of settings. From school meals, to cash transfers, to interventions in health clinics, the result is simple – better nutrition for young people.

Taking Brazil's knowledge and helping other countries with their own solutions to hunger is what is behind a new centre for excellence that the WFP is launching in Brazil, a centre that will support South-South solutions to hunger and malnutrition.

The G8 and G20 have a unique opportunity to make combating child malnutrition a pillar of the 2010 summits. Now is the time. The burden of knowledge compels us to act together. All that is needed is focus, our combined knowledge, political will and resources from around the world. These summits can become a tipping point where the world can rally to make child malnutrition history. ◆

Technology Research and Development: Helping Feed the World

IFDC is launching the Virtual Fertilizer Research Center (VFRC), a global research initiative to create the next generation of fertilizers and production technologies. New and improved fertilizers are critical components in the effort to help grow nutritious crops to feed the world's population, create sustainable global food security and protect the environment.

In 2008, the world struggled with food, fertilizer and fuel price crises that included dramatic price swings and shortages. The crises have temporarily abated – due largely to the global recession. However, the underlying causes remain, and it is likely that these problems will re-emerge with economic recovery.

New and innovative research is needed to develop technologies that improve the use of land and labor resources, reduce emissions into the air and water and conserve natural resources. These are global issues and they require global solutions. Therefore, IFDC began the VFRC as the most rapid, economical venue to tap the world's intellectual capacity to generate critically needed research. The Center will partner with universities, public and private research laboratories and the global fertilizer and agri-business industries. The VFRC will bring together the best scientific, business and government minds to create a research system to produce more (and more nutritious) staple food crops with fewer wasted resources and a reduced environmental impact.

The global population is more than 6.8 billion and could reach 9.2 billion by 2050. More than 90 percent of population growth is occurring in Asia, Africa and Latin America, which already account for more than 75 percent of the global population. According to the Food and Agriculture Organization of the United Nations (FAO) the number of hungry people exceeds one billion – more than one-seventh of the world's population (U.S. Bureau of the Census International Database). The FAO estimates the Asia/Pacific region has the largest number of hungry people (642 million), followed by Sub-Saharan Africa with 265 million.

There is a finite amount of arable land. The world food supply has only stayed ahead of rising population because of increasing productivity and a modest expansion of cultivated area. However, limited resource reserves, increasing energy costs and the growing environmental cost to bring new land under cultivation pose ever larger challenges.

Facing these critical population, economic and environmental issues, the world cannot afford the current inefficiency in fertilizer production and use. It is not merely a matter of applying more fertilizer, but one of balance and effective application. Beyond that, it is time for new thinking about the way we use our resources to produce nutritious food.

It is estimated that 50 percent of the food consumed worldwide results directly from the use of (or benefits of) fertilizers. The production of one ton of urea, the predominant nitrogen fertilizer product, requires the energy equivalent of four barrels of oil. Yet, only about one-third of the nitrogen fertilizer applied to cereal crops in developing countries is utilized due to application and product inefficiencies. Farmers are burdened by this financial cost and waste, often paying for three times as much nutrient as their crops absorb. But that is not the complete cost; the "wasted" fertilizer does not disappear but often becomes an environmental pollutant, either in the form of potent greenhouse gas or runoff that fouls streams, rivers and lakes.

There are issues with other types of fertilizer as well. Inefficiencies in production and use result in less than 30 percent of the phosphate mined to produce phosphorus fertilizer ever becoming a part of the food chain. Yet, over the past 25 years, no "new" efficient fertilizer product has been developed – particularly no product affordable for use on food crops by farmers in less developed countries.

Recent advances in nanotechnology and biotechnology open new opportunities for collaborative research between the public and private sectors. With a billion hungry people, it is unacceptable to condone widespread crop nutrient waste. With global climate change and declining biodiversity, it is also unacceptable to continue the unnecessary pollution of our environment. The VFRC will produce a "new generation" of fertilizer products and processes that make more efficient use of available resources and are more effective when used.

"A move toward reducing hunger on the continent must begin by addressing its severely depleted soils."

AfricaFertilizer.org

AfricaFertilizer.org, a global forum to disseminate and exchange information about fertilizers, soil fertility and related agricultural issues that face Africa, has been developed and launched by IFDC. The website features: interactive maps and a database of fertilizer and nutrient production, trade, use and depletion in Africa; numerous publications available for download; directories of major fertilizer producers, importers and traders; and news and market information crucial to agricultural intensification. AfricaFertilizer.org serves stakeholders in the movement to make Africa self-sufficient in food production. These stakeholders include farm organizations, researchers, policymakers, extension specialists, the agro-input industry, the private sector, donors and funding agencies and the media.

African Union (AU) Commissioner for Rural Economy and Agriculture, The Honorable Rhoda Peace Tumusiime, stated, "As an IFDC board member, I am pleased that the organization is providing much-needed agricultural information to the citizens of Africa and the world. As an African Union commissioner, I believe that the use of AfricaFertilizer.org can help pull smallholder farmers out of poverty. The AU's objectives include eradicating poverty and placing Africa on a path to sustainable growth and development. Food security cannot be achieved without a collective effort to increase the agricultural productivity and technological knowledge of smallholder farmers."

According to IFDC President and Chief Executive Officer Amit H. Roy, "the concept of the website grew out of the Africa Fertilizer Summit. By providing such information, AfricaFertilizer.org will help fuel the African Green Revolution that smallholder farmers need and deserve."

The Africa Fertilizer Summit was convened by the African Union's New Partnership for Africa's Development (NEPAD) and implemented by IFDC. It was held in Abuja, Nigeria in 2006 and generated *the Abuja Declaration on Fertilizer for the African Green Revolution*. It states, "Africa's farmers face a variety of constraints including low productivity, limited access to new agricultural technologies and weak markets. Without adequate inputs, farmers often cannot meet the food needs of their own families, much less those of a rapidly growing population. To feed themselves and their countries, farmers will need to shift from low-yielding, extensive land practices to more intensive, higher-yielding practices, with increased use of improved seeds, fertilizers and irrigation."

The Abuja Declaration continued, "A move toward reducing hunger on the continent must begin by addressing its severely depleted soils. Due to decades of soil nutrient mining, Africa's soils have become the poorest in the world. Yet farmers have neither access to nor can they afford the fertilizers needed to add life to their soils. And no region of the world has been able to expand agricultural growth rates, and thus tackle hunger, without increasing fertilizer use."

Semi-annual reports relating the progress that has been made in the implementation of the provisions of the *Abuja Declaration* are available through a dedicated blog on the website. AfricaFertilizer.org will contribute to the African Green Revolution and help break the cycle of hunger and poverty that afflicts so many inhabitants of the African continent.

Web site: www.africafertilizer.org
Contact: info@africafertilizer.org

Projects Across the Developing World

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The contributions and challenges of African agriculture

With its abundant arable land and the people to work it, Africa is the breadbasket of the world. But there are many challenges in the agriculture sector that must be realised if Africa is to develop

Farming sweet potatoes in Brits, near Pretoria, South Africa

By Diéry Seck, director, Centre for Research on Political Economy, Dakar

The year 2010 marks the 50th anniversary of the independence of many African countries. While the event will be celebrated in country after country in the coming months, it also offers an opportunity to pause and look back at the economic and social record of Africa's development strategy of the last half century. With a few exceptions, most African countries have not only failed to develop, but have also struggled to keep pace with developing countries in other regions. Indeed, countries of the continent did not reap the benefit of a green revolution; they linger at the bottom of the rankings of the Human Development Index produced by the United Nations Development Programme and will mostly fail to achieve the Millennium Development Goals (MDGs). In recent years, this unfavourable record has insidiously turned the agenda for Africa from development to a damage-mitigating consensus that takes the form of a fight against disease, poverty, illiteracy, hunger, civil unrest and poor governance. This new unspoken approach is aimed at preventing Africa from becoming worse off, not at converging toward rich countries' performance or even locking steps with other developing regions. Paradoxically, at the heart of Africa's failed development lies the area that once held the best promise for improving its welfare over time: agriculture.

The agricultural sector holds a combination of some of Africa's biggest challenges: extreme poverty in rural areas, stark gender disparity, antiquated production techniques and violent confrontations over land. Conversely, Africa also benefits from ample and arable land, a sizable supply of fresh water, a large and young population, and wide biological diversity that can help feed and cure the world in all seasons. If the battle for agriculture is won, all the battles for development will be won – and Africa will have the triple distinction of being the breadbasket of the world, the biofuel production plant of the world and the food price stabiliser of the world.

A few considerations must be kept in mind to achieve development through agriculture, however. First is the need to abandon the idea of food self-sufficiency that confines

> "The agricultural sector holds a combination of some of Africa's biggest challenges"

efforts to feeding mouths only. A more positive notion of agriculture-based economic expansion must be embraced. Second, Africa's rural landscape is populated by low-skilled peasantry that cannot be displaced in large numbers to cities that do not have jobs to offer them and cannot provide them with adequate social services. In the same vein, increasing land pressure makes it difficult to pursue the policy of leasing large tracts of arable land to agribusiness firms notable for their high degree of mechanisation and who thus have limited need for unskilled peasants. Third, as rational economic agents, African farmers would produce more if they were paid more, but may be unable to achieve higher levels of output unless they acquire higher skills.

One way of facilitating this new enabling economic environment is to stop treating agriculture and industry as separate sectors in Africa with distinct, sometimes conflicting, policies, and to combine them into one powerful engine of growth. The hub-and-spoke agricultural strategy that is proposed here aims at developing and formalising value chains that link agriculture and industry under the entire control of the private sector. The main goal of the strategy is to significantly increase the added value, and thus wealth, that is created by local economic agents. One or more agro-industrial plants could be settled in a geo-climatic area, perhaps transcending national borders, and could train peasants in modern cultivation techniques, lend or sell them high-quality seeds, provide extension services and enter into crop purchasing contracts with them to process the entire harvest of the region. Smallholder peasants would be part of large-scale agribusiness schemes and benefit from wider market access, enhanced skills, lower income variability and perhaps partial ownership of the industrial firm that processes the harvest. They would be the spokes and the processing plant would serve as the hub.

The competitiveness of African agriculture would increase through gradual diffusion of technical know-how among rural populations. The resulting size of production units and more intense integration of agriculture and industry would enhance Africa's global market power and strengthen its trade negotiation position. The strategy would also help mitigate urban migration by increasing rural household income and creating more rural employment

through agro-industry. Success of the whole scheme would depend on a programme of massive financing, most likely from both private and public sources, the details of which would need to be worked out in consideration of the country or sub-region, the level of development of the financial system and the initial conditions of related agricultural sub-sectors. One of the intended consequences of this strategy is that African peasants would have the opportunity to own shares of industry, thereby diversifying their sources of income and controlling the entire length of the value chains in which they work.

The proposed strategy would also possibly mean the end of agricultural marketing boards as they exist today. It would usher in an era of public-private agribusiness export promotion efforts. While the strategy would be mainly spearheaded by the private sector, government could facilitate its implementation by undertaking stronger policies in several areas. To help improve the volume and quality of output, more agricultural colleges and similar training institutions could be created and adequately funded. Furthermore, steps could be taken to enhance research on yields and innovation on local varieties and industrial processing techniques, all supported by wide dissemination programmes. Production activities could benefit from dedicated funding schemes, with a contribution from the private sector, through a variety of facilities ranging from micro-credit for smallholders to large-scale financing of industrial processing of major crops. The sector would also gain from liberalising its input markets in order to avoid distortions, although government could provide subsidies for selected target groups. To help gain market share at home and abroad, government could expand construction of feeder roads, build more export-supporting infrastructure and, with the help of the private sector, undertake vigorous campaigns to promote agribusiness exports.

Such an agriculture-based hub-and-spoke economic expansion strategy would not require foreign aid to be successful. Indeed, in itself it would be an empowering and sustainable development. And it can be fully implemented by African people themselves. ◆

Herding cattle on the high plateau in central Madagascar, Africa. This area has rich, fertile soil


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- African Ministers' Council on Water
- Americas Water Forum
- Asian Development Bank
- AusAID
- Bill and Melinda Gates Foundation
- Black & Veatch Corporation
- European Commission
- European Investment Bank
- Federal Ministry for Economic Cooperation and Development, Germany
- FAO
- Global Partnership on Output-Based Aid
- Google
- IKEA
- Inter-American Development Bank
- International Finance Corporation
- KfW Entwicklungsbank
- Lake Victoria Basin Commission
- McKinsey and Company
- Slumdwellers International
- Stockholm International Water Institute
- Swedish International Development Cooperation Agency
- UN Independent Expert on the Human Right to Water
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TO THE WORLD

Genetically modified food against hunger

The demand for food is on the rise and agricultural production must increase to meet the quota. How can genetically modified food and biotechnology contribute to solving world hunger?

Genetically modified (GM) canola: GM foods are less costly and continue to be grown, despite some market resistance

By David Sparling, chair, Agri-Food Innovation and Regulation, Richard Ivey School of Business, University of Western Ontario, and Janet Beauvais, Professor of Practice, McGill University

Fifteen years after its introduction, agricultural biotechnology remains controversial. With resistance to genetically modified (GM) foods in many parts of the world, what role will such foods play in reducing hunger in the coming decades? Some ask whether the global need for food can be met without the use of biotechnology.

It is obvious that the world is going to need more food. More than 1 billion people in the world currently suffer from serious malnutrition and the global population is projected to increase by another third by 2050. Changing consumption patterns mean that the actual increase in demand for calories will be even greater – as much as 70 per cent more by 2050 – and that does not account for the rising demand for crops for biofuels.

Although improved distribution must be part of the solution, agricultural production will have to increase dramatically at a time when the land devoted to agriculture is expanding at only 0.2 per cent per year. Can the world produce enough to feed everyone and meet global biofuel demand as well? What role will biotechnology and GM food play?

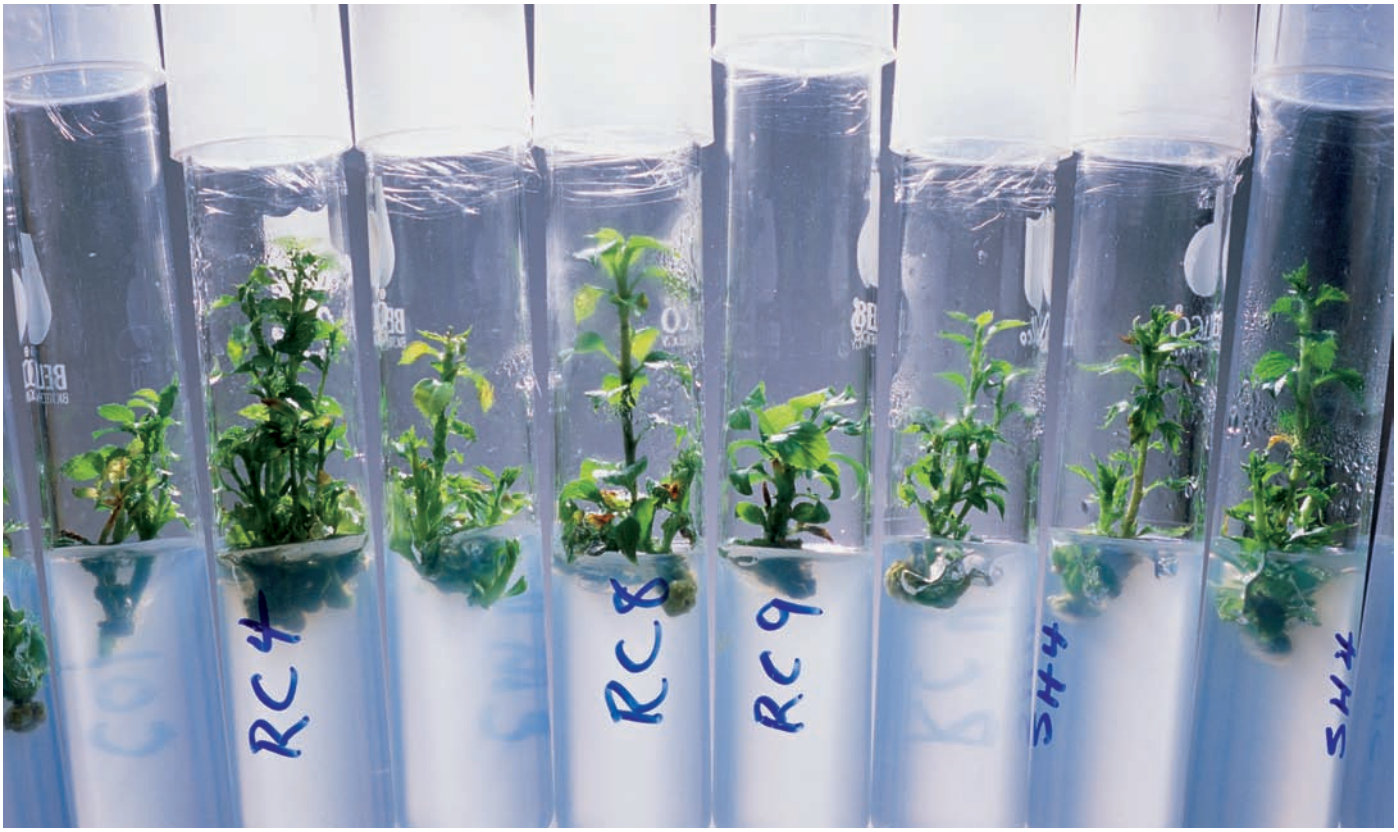
It is important to start by recognising several facts about biotechnology and the future of food.

First, the markets that do not accept GM foods, such as the European Union and Japan, are economically important. Consumers and non-governmental organisations (NGOs) are particularly concerned with trans-species gene transfer and potential health and environmental impacts. That stance is unlikely to change in the foreseeable future.

Second, resistance to GM foods has reduced the scope of research and development, limiting the vast majority of the research to a small number of global crops. This is evident in the inability to commercialise vitamin A-enriched golden rice in spite of its obvious health benefits to the world's poorest. It is also evident in decisions not to commercialise varieties of GM wheat.

Third, adoption in food-insecure regions, particularly Africa, was slowed by concerns over market acceptance, especially in the EU, but adoption in Africa is now picking up.

And fourth, the biotechnology tools used to create GM foods are becoming more powerful, flexible and less costly. Other tools such as genomics are coming into play and it will soon be possible to achieve many GM-type results by manipulating plant genomes, without trans-species gene transfers.



Genetically modified plants grow from tissue culture: such technology can be used to improve food security

In spite of the resistance in some markets, GM crop production continues to increase – in area planted, in crops modified and in overall production. The advantages of agricultural biotechnology over non-GM crops are significant – higher yields and resilience, lower costs, reduced pesticide use and new management techniques that are not only easier but that can also support carbon sequestration. In 2009, 14 million farmers planted GM crops; more than 90 per cent were small and resource-poor farmers from developing countries. Developing countries now account for almost half of the area of GM crops planted and will soon exceed 50 per cent.

But solving hunger is about more than just producing more food. It is also about creating the economic security to be able to afford proper nutrition. That is why half of the world's cotton is Bt (insect resistant) and hectares of Bt cotton in Burkina Faso grew 1,353 per cent in 2009, with 115,000 hectares planted. Hunger can be fought at three levels: by increasing available calories, by increasing the nutrition value of those calories and by creating economic opportunities from agricultural products. These are not mutually exclusive. New strategies to address hunger should understand their potential implications at each level.

Biotechnology capabilities are increasing rapidly, moving beyond single traits added to enhance production and yield into new traits to improve nutrition and function and also to stacking multiple traits into a single plant. There are also numerous initiatives underway in animal biotechnology, although these are moving cautiously due to concerns over consumer willingness to accept GM animals. Biotechnology has the potential to improve food security at all three levels, but using it to help defeat global hunger will require a significant redistribution of resources in research, knowledge and systems.

In terms of research, it is no longer affordable to concentrate the world's extensive public and private biotechnology research capabilities on a limited number of global crops. More must be devoted to solving hunger, focusing on the smaller crops that can make a difference to the world's hungry. The goals are higher yields, better nutrition profiles and greater production resilience, and also crops that can improve the economies of food-insecure regions. These can include industrial and biofuel crops. Strategies to increase domestic research capabilities in developing countries will also be vital.

> "The goals are higher yields, better nutrition profiles and greater production resilience"

In terms of knowledge and systems, the research will only make an impact if local knowledge and capabilities are also expanded and effective systems are developed to manage GM crops. This includes support to help farmers use the seeds appropriately, control environmental risks and protect biodiversity, as well as better systems to manage GM and non-GM supply chains to ensure efficient and segregated delivery to both markets.

Can hunger be reduced in the world without GM crops? Possibly, but not as effectively. It also will not happen: agricultural biotechnology is here to stay. The benefits are too clear. The truly relevant questions are: How can biotechnology be used best to reduce hunger and to ensure that the benefits are shared with the world's poorest populations? Can this be done without adding new risks? We have to start now. Change of this magnitude takes time and for many, that time is running out. ◆

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Tariffs, standards and agricultural trade: what's the right agenda?

Do governments have the right policies in place to achieve fair, agricultural trade wihtout penalising developing countries?

By Sophia Murphy, Institute for Agriculture and Trade Policy

For 50 years, negotiating tariff reductions has formed the core of the multilateral trade system under the rubric of the General Agreement on Tariffs and Trade (GATT). Market access remains the central focus of trade negotiations at the World Trade Organization (WTO), and tariffs are central to that agenda. It took almost 50 years to get agriculture included. Now, 15 years after the passage of the Uruguay Round Agreement on Agriculture (AoA), the model is running out of steam.

The WTO negotiations are in crisis. In March 2010, the WTO membership again failed to muster the political leadership to bring the Doha Round closer to conclusion. In effect, the membership accepted that there would be no progress in negotiations in 2010. The talks are in part paralysed by domestic politics in the United States. At the

India is the world's biggest producer of tea. Developing countries, such as India, would benefit from lower tarrif cuts

same time, many developing countries are embittered by the failure of developed countries to address their specific trade-related development concerns.

The AoA squeezed agricultural trade into a framework that was too simple. It allowed rich countries to continue to distort trade using domestic support programmes, turned a blind eye to the highly consolidated market power of the dominant commodity traders and ignored most development priorities. However, it established relatively straightforward criteria for assessing agricultural policies from a trade perspective.

True to the GATT's legacy, the central issue in the agriculture negotiations is tariff reductions. The proposals that make up the draft Doha agreement would impose bigger tariff cuts on rich countries than on developing countries (developing countries would be cut by about two-thirds as much as the developed countries), and would exempt the least developed countries (most of which apply very low tariffs on agricultural imports in any case) from further tariff cuts. Both developed and developing countries would be required to divide their agricultural tariffs into bands and commit to bigger cuts in their highest tariffs.

So far these proposals reflect the Uruguay Round framework. But that apparent simplicity has been overwhelmed by politics. Agriculture is not just about commerce. It is about food security, livelihoods, rural development and even national security. The 2007-08 food crisis highlighted how even some of the most determined exporting countries will restrict trade if they think their food security might be compromised. The politically unpalatable reality of applying the AoA framework is reflected in the long list of complicated exceptions now proposed by a range of WTO negotiators in the agriculture talks.

First, the G10 (a group of developed countries plus Mauritius) wants to protect higher tariffs on a range of 'sensitive' goods, exemptions the European Union is also pushing for and that the United States will clearly use for the few products that it protects with tariffs. Then the G33 (a group of developing countries) has its own demands. The G33 wants a list of 'special products' for developing countries, on which lower tariff cuts would be imposed. They also want a special safeguard mechanism (SSM) to protect against import surges (a measure that echoes a safeguard put in place for mostly developed country use under the existing AoA). Many developing countries have found trade liberalisation is accompanied by significant import surges that undermine domestic producers and destabilise local food markets. These goods are too frequently dumped at prices below their cost of production.

The demands for exceptions and exemptions have provoked bitter struggles. The G10 by and large protects an uncompetitive but relatively small number of agricultural sectors. The G33 is looking for 'policy space'. It views tariffs as an important tool in a relatively limited economic toolbox. Its members do not agree that tariffs can only come down. Indeed, this issue of whether tariffs can go up as well as down caused the round of intensive Doha talks to collapse in July 2009. The G33 wants the right to apply an SSM even if it raises tariffs over levels agreed under

> "Agriculture is not just about commerce. It is about food security, livelihoods, rural development"

> "Developing countries are embittered by the failure of developed countries to address their trade-related development concerns"

the Uruguay Round. That idea is anathema to some WTO members, although, in practice, most developed countries have found other ways to protect their policy space, while reducing their reliance on tariff barriers.

Whatever the outcome of this debate on market access and the allowed flexibility on tariffs, governments are finding that the market access debate is more complicated than the AoA framework suggests. Market barriers take many forms – tariffs are just one of the most obvious. One of these barriers comes in the form of standards, including sanitary and phytosanitary standards (SPS). No one wants to inadvertently (or otherwise) import goods that put human health at risk, or that risk the survival of domestic flora and fauna. Understandably, local growers fight hard to protect their crops from pests, and health officials rightly fret about pesticide and other chemical residues, as well as bacterial contamination, in imports as much as in domestic production. But, inevitably, SPS becomes a safe way to justify economic protection for domestic producers as well. Some of the most committed free-trade countries are also assiduous users of SPS barriers. Australia rejects everyone else's bananas as unsafe, as they do New Zealand's apples (a now 89-year-old fight that the WTO is expected to rule on any time).

The WTO can do little about this form of market access barrier. There are some useful rules about using internationally recognised procedures and agreed standards where they exist. Yet the most stringent standards come from the private sector in the form of voluntary certification schemes such as GLOBALGAP (Good Agricultural Practice). For exporters of agricultural commodities, these private standards are the ones that matter. Sure, high tariffs are a cost for would-be exporters. Sometimes they are prohibitive. But even if tariffs are set to zero, standards are every bit as effective as a barrier. High tariffs can block imports but low tariffs cannot guarantee them access.

These standards are likely to grow increasingly complicated in the years ahead. Governments and industry (particularly agriculture) have hardly come to terms with the implications of climate change. Clearly the way food is grown, stored and transported is going to need to change, given what climate scientists have shown about the effects of fossil fuel. More pressingly, soil quality and the relative scarcity of fresh water in some regions are imposing their own non-trade concerns. The WTO prohibition on discrimination based on production and processing methods cannot stand up to the clear economic logic imposed by environmental costs on the public (and increasingly the private) purse. Trade regulation will have to start to conform to the growing domestic pressure to legislate changes to reduce these costs.

Governments should give serious thought as to whether they have the right framework for negotiating multilateral agricultural trade rules. Market access is obviously central, but focusing on tariffs is not going to take agricultural trade into the 21st century. ◆

Seeking healthy trade environments

How can we improve population health and feed a growing world? Start by establishing predictable, open trade in agriculture

Canadians have become proudly familiar with the summer landscape of yellow canola fields stretching to the horizon. But as extraordinary as canola looks, what it represents to Canada means so much more. Canada is the number one supplier of canola to the world, and we take heart in knowing we are supplying products that promote good health and environmental sustainability.

In order for consumers around the world to benefit from canola, we must have open trade in export markets and fight protectionism.

Trade plays a vital role in economic growth and development, job creation, and poverty reduction without a significant cost on governments. Trade is also fundamental in addressing food security and in supporting environmentally sustainable agricultural production.

This is why we must resist protectionism and why efforts to strengthen the rules-based multilateral trading system must continue. For world leaders, the conclusion of the Doha round of multilateral trade negotiations on agricultural trade should be a top priority.

A comprehensive multilateral trade agreement is critical to ensure farmers around the world can rely on predictable markets and consumers can benefit from accessing healthy products without threat of interruption from protectionist trade actions. A conclusion to the current Doha round would mean the elimination of export subsidies, limits on trade distorting domestic support programs, and sizeable reductions to high tariffs which stifle trade and make agricultural goods more expensive to consumers the world over.

For Canada, predictable access to markets for agricultural products is critically important. Canada is a world trader. In 2008, Canada's agriculture and food product exports totalled $39 billion – close to eight percent of the country's total merchandise exports. Canada is the fourth-largest exporter of agriculture

and food products. Canola is one of Canada's most sought after agricultural exports. Up to 90 percent of Canada's canola production goes to export markets. In fact, Canada is responsible for 85 percent of world trade in canola.

Canola oil's health benefits are driving its ever-growing demand. It is the healthiest, most versatile and cost-effective cooking oil available. With its beneficial fat profile, neutral taste and high heat tolerance, canola oil is ideal for kitchens around the world. Canola oil has the least saturated fat of any culinary oil – half that of olive oil – and is free of trans fat and cholesterol.

Canola meal is increasingly valued in the livestock industry as a feed additive. In fact, recent research shows that canola meal in a dairy cow's diet can increase milk production by one litre per day on average!

Traditionally, tariffs have been the major barrier to open trade. Increasingly, non-tariff barriers are springing up as the newest challenge and this is likely to continue in the future. Increasingly, trade disputes revolve around issues of plant diseases, weed seeds, the utilization of biotechnology and new regulations on sustainable agricultural production. These issues are numerous and complex. If they are used to protect markets they pose a very significant challenge to predictable, reliable trade.

The priority of Canada's canola sector is to ensure that these issues do not lead to trade disruptions. Canada's canola industry is working with government trade officials to refocus our efforts in support of fair, predictable market access.

Canola adds almost $14 billion annually to Canada's economy and in 2009, delivered more than $5 billion in farm cash receipts to Canada's 50,000 canola growers. The industry creates over 216,000 Canadian jobs in production, transportation, crushing, refining and food development, manufacturing and service. But canola also creates wealth and jobs in the countries to which we export. For example, the economic spin-off of using Canadian canola as an ingredient in the United States (U.S.) food and feed chain is $1.79 billion.

Canada's canola industry has set a target of sustainably producing 15 million tonnes of canola by 2015. In 2009, we produced 11.8 million tonnes. To reach our target will require a comprehensive approach involving research, ever-improving agronomy practices, and promotion. But critical to success will be our efforts in market access.

Canada's canola industry was negatively impacted in 2009 with restrictions on access in major export markets. China was Canada's biggest seed market in 2008-09. Sales of canola seed to China – worth $1.3 billion in 2008-09 – have been all but completely shut down due to the country's concern about the disease, blackleg, which is common in canola. Canadian officials are working closely with the Chinese to find workable solutions to this issue. The European Union (EU) and Canada agreed to close the file on Canada's long standing World Trade Organization challenge regarding GMO approvals, but actually moving canola into the EU will take more discussion around the approval process when new traits come forward. We continue to work through market access issues with our other customers, including Korea, Mexico, India and several Asian markets. And we continue to value and nuture our long-standing relationship with Japan.

Canada's canola industry is working constructively with government officials and export customers to address market access issues. This includes phytosanitary issues, biotechnology issues, sustainability requirements by importing countries, food safety regulations, trade policies that limit the adoption of new technologies, renewable fuel standards, and tariffs. This also includes legislative, regulatory and administrative barriers. This work is being coordinated through the Canola Council of Canada (CCC), whose mission is to enhance the Canadian canola industry's ability to profitably produce and supply seed, oil and meal products that offer superior value to customers throughout the world. The CCC is the only fully vertically integrated industry association in Canada where seed and input companies, growers, exporters, and crushers all sit at the same table to develop a common platform for growth.

Canada's canola industry is committed to reducing tariffs and regulatory-based differences, and technical barriers to trade. We move forward with the knowledge that Canada has an excellent reputation as a reliable supplier of quality canola seed, oil and meal.

We are confident that in the years to come, those remarkable fields of yellow will continue to supply the world.

By JoAnne Buth, President Canola Council of Canada

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Nutrition: the forgotten Millennium Development Goal?

For billions of children in Africa and South Asia, malnutrition is a fact of life. What must be done to ensure that mothers and babies get the nutrition they need for a longer, healthy and more productive life?

By Meera Shekar, lead health and nutrition specialist, Human Development Network, World Bank

More than a third of children across the world are too short for their age. About the same number are underweight. Nearly 2 billion suffer from some form of vitamin and mineral deficiencies. And 90 per cent of these malnourished children live in just 36 countries. Many are in Africa, but a surprisingly large number live in South Asia – especially India, Bangladesh, Pakistan and Nepal. These South Asian giants have seen rapid economic growth over the last decade or more, yet the malnutrition rates in these countries are nearly double those in many sub-Saharan African countries. Yet, across the world action on malnutrition has been minimal. The unrelenting economic crises continue to squeeze the poor, particularly women and children. This makes case for investing in child nutrition more urgent than ever, to protect and strengthen future human capital in the most vulnerable developing countries.

Malnutrition remains the single largest cause of child mortality. More than one-third of all child deaths in developing countries are due to malnutrition. Malnourished women give birth to malnourished babies. Many of these children die in the first few years of life – because they are weak and they fall sick more often. If they survive, they tend to start school late, are more likely to drop out and, as adults, earn less. The result is that malnutrition robs many developing countries of at least 3 per cent of economic growth.

Investments targeted at the critical window of opportunity between pregnancy and two years of age are most effective because they target the most vulnerable, and because they prevent irreparable damage to human capital. Without these investments, developing economies are doomed to a vicious cycle of poverty and malnutrition. Guatemalan boys who benefited from an early childhood nutrition programme nearly 30 years ago grew up to earn 46 per cent more today than their peers.

Economic growth alone does not solve malnutrition. Predictably, poor countries have more malnutrition. But in many high-burden countries, malnutrition rates are surprisingly higher than in other countries with similar national incomes. Examples of such countries that have much higher malnutrition rates than expected given their per capita gross domestic product (GDP) include India, Guatemala, Peru, Turkey, Rwanda and Burundi. In fact, almost all the high-burden countries are fairing worse than would be expected given their level of GDP. India, in particular, has had sustained economic growth for more than a decade, yet has shown little improvement in nutrition. Senegal, however, is an example of a 'positive deviant' country with modest economic growth but rapid declines in malnutrition. It is set to achieve the Millennium Development Goal (MDG) of reducing malnutrition by half between 1990 and 2015.

Furthermore, in many countries, malnutrition rates are surprisingly high even among the wealthiest households. These facts indicate that income growth does not automatically solve the nutrition problem. Concerted efforts must be taken to reduce malnutrition. With carefully designed strategies, malnutrition rates can be reduced even in countries where economic growth lags.

Investing in nutrition is cost-effective. However, despite the availability of relatively simple and extremely effective interventions to address malnutrition, very few countries implement these proven interventions at scale. Two kinds of investments are needed. The first kind is direct nutrition intervention, also referred to as short routes to improving nutrition or nutrition-specific interventions. These include breastfeeding promotion, vitamin and mineral supplements, and deworming. The second is a series of longer routes to improving nutrition, also referred to as nutrition-sensitive investments across many sectors, such as economic growth, women's education, water and sanitation, and agriculture and food policy. These are necessary to ensure that gains from investments in the short route are sustained, and that development agendas fully utilise their potential to contribute to reductions in malnutrition.

> More than one-third of all child deaths in developing countries are due to malnutrition

What can be done?

The new Framework for Action for Scaling Up Nutrition (SUN) has already been endorsed by more than 80 partners, including bilateral governments, United Nations agencies, the World Bank, the Bill and Melinda Gates Foundation, academia and civil society organisations. It represents a collective vision and call for action, and the beginnings of a movement to scale up nutrition.

Health and nutrition examiners carry out nutrition surveys on children in Monrovia. Nearly 2 billion children across the world suffer from vitamin and mineral deficiencies

The four main elements of the SUN framework for action are:

1. Start from the principle that what ultimately matters is what happens at the country level. Individual country nutrition strategies and programmes, while drawing on international evidence of good practice, must be country-owned and built on the country's specific needs and capacities.
2. Sharply scale up evidence-based cost-effective interventions to prevent and treat undernutrition, with highest priority given to the period between pre-pregnancy until two years of age, as it produces the highest return on the investment. A conservative global estimate for these interventions is about $10 billion or more per year from national and global sources.
3. Take a multi-sectoral approach that includes integrating nutrition issues in related sectors and using nutrition indicators to measure overall progress. The closest actionable links are to food security (including agriculture), social protection (including emergency relief) and health (including maternal and child healthcare, immunisation and family planning). There are also important links to education, water supply and sanitation, as well as to cross-cutting issues such as gender equality, governance (including accountability and corruption) and state fragility.
4. Provide substantially scaled-up domestic and external assistance for country-owned nutrition programmes and capacity. Ensure that nutrition is explicitly supported in global as well as national initiatives for food security, social protection and health, and that external assistance follows the principles of aid effectiveness agreed to in the Paris Declaration and the Accra Agenda for Action. Support major efforts for advocacy of what already works and for strengthening the evidence base – through better data, monitoring and evaluation, and research.

Evidenced-based direct interventions to prevent and treat undernutrition

Promoting good nutritional practices ($2.9 billion)

- Breastfeeding
- Complementary feeding for infants after the age of six months
- Improved hygiene practices including handwashing

Increasing intake of vitamins and minerals ($1.5 billion)

Provision of micronutrients for young children and their mothers:

- Periodic vitamin A supplements
- Therapeutic zinc supplements for diarrhoea management
- Multiple micronutrient powders
- Deworming drugs for children (to reduce loss of nutrients)
- Iron-folic acid supplements for pregnant women to prevent and treat anaemia
- Iodized oil capsules where iodized salt is unavailable

Provision of micronutrients through food fortification for all

- Salt iodization
- Iron fortification of staple foods

Therapeutic feeding for malnourished children with special foods ($6.2 billion)

- Prevention or treatment for moderate undernutrition
- Treatment of severe undernutrition ('severe acute malnutrition') with ready-to-use therapeutic foods

Source: Scaling Up Nutrition: What Will It Cost? *World Bank 2009*

The vast majority of direct nutrition interventions can be delivered using the primary healthcare system, supplemented by outreach, community nutrition programmes and child health days (see table). It is critical to build strong links with ongoing efforts for health systems strengthening. Other interventions such as food fortification use market-based mechanisms for delivery, but need some investment through the public sector for regulation and policy changes. Furthermore, nutrition-sensitive food security programmes and policies are also needed to reduce child malnutrition. The agriculture sector needs not just to produce more food, but also to produce more diverse and nutritious foods to meet nutritional needs. Efforts should also focus on women as key managers of food security and nutrition in households.

While in theory, nutrition can 'fish from two buckets' of food security and health – and possibly a third, of social protection – in reality it almost always slips between those buckets. To date, none of the global initiatives on food security or health have invested adequately in improving nutrition – and nutrition remains the forgotten MDG. The G8-led maternal and child health and nutrition initiative is the first serious effort to correct this neglect of nutrition.

The financing needs to expand the delivery of proven nutrition interventions from current levels to full coverage in the 36 countries with the highest burden of undernutrition is about $10.6 billion a year. This will cover 356 million children, prevent at least 2.2 million children's deaths and protect future human capital in these countries. If we value our children, and our economies, this is affordable and cost-effective. In addition to the millions of lives it would save, such an investment would bring returns reaching as much as 30 times the costs.

Since early childhood offers a special window of opportunity to improve nutrition, the bulk of the investments needs to target this critical window between pre-pregnancy until two years of age. These investments have a multiplier effect – better nourished mothers produce better nourished children, fewer children die, they learn better in school and they grow up to be more productive adults who contribute to economic growth and national prosperity. Without this dedicated investment, it is impossible to achieve the nutrition MDG, or to achieve the MDGs to reduce child mortality, improve maternal health or educate children. Most importantly, without this investment future human capital will continue to be compromised in developing countries, stymieing their growth and making them progressively more vulnerable to future shocks.

The time to act is now. The human and financial costs of not acting are very high. ◆

"At PepsiCo, Performance with Purpose means delivering sustainable growth by investing in a healthier future for people and our planet. We know that our financial success goes hand-in-hand with sustainability and therefore our product portfolio is increasingly aimed at delivering foods and beverages for the diverse nutrition needs of consumers around the world."

—**Indra K. Nooyi**, Chairman and Chief Executive Officer

"We believe good nutrition is the foundation for good health and we're establishing partnerships with academia, scientists, nongovernmental organizations (NGOs) and others because we know it's the best way to make a positive impact."

—**Mehmood Khan**, Chief Scientific Officer

PepsiCo Supports Eight Key Steps That Food Companies Can Take to Help Reduce Undernutrition Worldwide

Invest in Agriculture, Especially Local Smallholders

In cooperation with the Inter-American Development Bank, PepsiCo supports sunflower farmers in rural Mexican communities by providing access to agricultural innovations that increase crop yields to raise income and reduce hunger.

Expand Use of Corporate Distribution and Quality Control Capabilities

The PepsiCo Foundation initiated a program that draws upon retired PepsiCo distribution experts to share expertise with the World Food Programme.

Support Fortification of Staples and Commonly Consumed Nutritious Foods and Beverages

PepsiCo is a member of the Global Alliance for Improved Nutrition (GAIN), the leading global private-public partnership devoted to improving nutrition, and supports their efforts to fortify essential foods consumed by the world's poorest communities.

Innovate and Expand Foods for Complementary Feeding of Acute and Chronic Undernutrition

In Nigeria, PepsiCo is providing funding for Valid International's technical support to UNICEF to improve access to nutritious foods for children suffering from severe acute malnutrition.

Develop Innovative Social Business Models to Combat Undernutrition

Companies are developing unique partnerships with organizations such as Muhammed Yunus' Grameen Bank that match investments with innovative new products and social business models.

Sustain and Increase Investment in Development of Nutrition Science Capacity in Developing Nations

PepsiCo has signed over two dozen agreements in the last two years with leading academic, development, and scientific groups to improve our R&D capabilities around the world.

Reformulate Low-Cost Nutritious Foods for All Markets

PepsiCo has created a pilot program in India to explore business and product innovations that deliver affordable, fortified product offerings to malnourished populations.

Advocate for Nutrition Friendly Trade Policies

PepsiCo's U.S. Farm Subsidy Policy supports reform of current agricultural policies that would improve the availability and quality of commodities critical to the needs of the world's poor.

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While you're thinking about it, here are a few things we've been working on lately:

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Leading the biotechnology revolution

Promoting health and combating disease

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What do you see?

Each day, policy makers and investors make decisions affecting the access to, and use of, land, water, and other natural resources.

Some will see only empty, under-developed, and ownerless territories, or places to produce food and fuel.

Others see more. They see rural women and men ready to invest in their lands and their futures, while protecting natural resources for future generations. They see that reducing poverty, improving food security, and keeping our planet healthy benefits us all.

The experience of ILC members working across the globe has clearly shown that:

- People must have a say in the decisions that affect them. Civil society and farmers' organizations should be openly consulted on land-related decisions.
- Rural people are at the heart of sustainable development. Enabling environments should be created to foster their entrepreneurial potential and allow them to choose how they use and develop their lands.
- Where public or private, domestic or foreign investments are necessary, transparent, participatory, and appropriate mechanisms must be established to ensure that investments benefit landless and land-poor farmers.

Learn more at **www.landcoalition.org**

The International Land Coalition is a global alliance of organizations working together to overcome poverty through secure and equitable access to and control over land and other natural resources.

INTERNATIONAL LAND COALITION

Wheat harvesting in Kansas, US. The rise in wheat harvests in the US has caused some complacency

Supporting the new green revolution: are politics properly targeted?

The North-South divide persists – while rich farmers of the North are still subsidised, the poorer South lacks the technology needed for the agricultural sector to flourish

By C. Ford Runge, Distinguished McKnight University Professor of Applied Economics and Law, University of Minnesota

As the global economy slowly recovers from the 2008-10 recession, what strains are in store for the world's food and energy supplies, especially in rapidly growing developing countries? In rich countries, fiscal austerity puts large subsidies to agriculture in stark relief. The fact that many of these subsidies are supplemented by new payments to biofuels, drawing down food and feed to produce fuel, raises further questions over the future direction of the food and energy system. A key question is whether the right balance has been achieved between subsidies for the production and biofuels in the rich countries of the North and the needy and technologically lagging agricultural sectors of the South, for which development assistance has steadily fallen. Despite the impressive record of productivity improvement, especially in the United States, Northern Europe and parts of Latin America and Asia, there are ominous clouds on the horizon.

Wheat yields in the United States rose from roughly 26 bushels per acre in 1965 to roughly 43 bushels per acre in 1998 and then to roughly 45 bushels per acres in 2008. Over the same periods, corn yields rose from about 74 bushels per acre to about 134 bushels per acre and then to 154 bushels per acre. This progress, however, has bred what Nobel Prize–winning economist Amartya Sen calls "Malthusian optimism" and a sort of complacency about those still in need.

International development efforts to spread the green revolution have flagged. In real 2008 dollars, US investment in agricultural development abroad fell to $60 million in 2006, down from an average of $400 million a year in the 1980s. In rich countries, public investment in research, which had grown annually by more than 2 per cent in the 1980s, shrank by 0.5 per cent annually between 1991 and 2000. Global official aid to developing countries for agricultural research fell by 64 per cent between 1980 and 2003. The decline was most marked in poor countries, especially in Africa.

Meanwhile, the world's poor farmers are still unable to take advantage of the technological advances that have brought food security and economic development to others. Some scientists, philanthropists and governments of developed countries seem to have lost sight of what had once been the green revolution's central goal: food security for all. More recently, rising food prices have intensified the risks of large-scale hunger. The reasons for these increases are complex, but one of them is that demand for food is increasing as populations and incomes grow, especially in China and South Asia, even as the

A farmer uses a wooden shovel to winnow newly harvested wheat, China. Modern technology needs to be made available to poorer countries

supply of food is increasingly diverted to other uses, such as the production of biofuels. As a result, the spectre of Malthus is again stalking the world's poor.

Prices for food and feed staples appeared to peak in 2008-09. Record harvests have helped restore some grain stocks. But these prices have not returned to 2005-06 levels, and are unlikely to do so, especially as biofuels demand an increasing share of grain and oilseed crops. The International Monetary Fund's index of primary commodity prices, which measures the average price variation in a group of critical food grains and oilseeds, rose from a base of 100 in 2005 to a high averaging 157 in 2008, fell to 126 in March 2009 as global demand collapsed with the economic crisis, but then rose back up to 143 in May 2009, despite weakened demand. By August 2009, at the beginning of the fall harvest season in the northern hemisphere, the index still stood at more than 135.

A July 2009 report by the Food and Agriculture Organization (FAO) warned that "domestic prices in developing countries remain generally very high and in some cases are still at record levels". Speaking at the United Nations Conference on Trade and Development in 2009, Akinwumi Adesina, an agricultural economist with the Alliance for a Green Revolution in Africa, noted that the global recession's dampening of prices on commodity markets was masking "the next storm". Jacques Diouf, director general of the FAO, has stressed that the world's poor, mostly landless labourers and the residents of urban slums – both groups that are largely beyond the reach of global media – are suffering a "silent hunger crisis".

This year, despite record US harvests, roughly 30 per cent of the US corn crop will be used to produce ethanol. In light of the environmental catastrophe emerging from the BP oil platform explosion off the coast of Louisiana, biofuels are once again touted as a green alternative to petroleum. Yet, even before the spill, much of the Gulf of Mexico had been despoiled by an hypoxic dead zone resulting from billions of tonnes of agrichemicals washed into the Mississippi, mainly crop fertilisers derived from hydrocarbons and used on US corn.

A closer look at the impact of biofuels on the environment suggests profound effects on water, the eutrophication of coastal zones from fertilisers, land use and greenhouse gas emissions. These suggest that biofuels are anything but green. A pair of 2008 studies, published in *Science*, focused on the question of greenhouse gas emissions due to land-use shifts resulting from biofuels. One study noted that if land is converted from rainforests, peatlands, savannas or grasslands to produce biofuels, it causes a large net increase in greenhouse gas emissions for decades. A second study stated that growing corn for ethanol in the US leads to the clearing of forests and other wild lands in the developing world in replacement, which also causes a surge in greenhouse gas emissions. A third study, by another Nobel Prize laureate, chemist Paul Crutzen, emphasised in 2007 the impact from the heavy applications of nitrogen needed to grow expanded feedstocks of corn and rapeseed. The nitrogen necessary to grow these crops releases nitrous oxide into the atmosphere – a greenhouse gas 296 times more damaging than carbon dioxide – and contributes more to global warming than biofuels save through fossil fuel reductions. Biofuels have made the slow fade from green to brown. It is a sad irony of the biofuels experience that resource alternatives that seemed farmer-friendly and green have turned out so badly. In short, global agricultural priorities should shift away from subsidising rich farmers and biofuels production in the North, and toward improved productivity and agricultural technology in the South. ◆

"It is a sad irony of the biofuels experience that resource alternatives that seemed farmer-friendly and green have turned out so badly"

Environment agency – Abu Dhabi

Abu Dhabi is the largest of the seven emirates that make up the United Arab Emirates.

The Emirate of Abu Dhabi, which has a Coastline stretching approximately 350 km, or about 76 per cent of the Arabian Gulf coastline of UAE, is located approximately between latitudes 22o 40' and 25o 38' north and longitudes 51o 30, and 55o 55' east. It is bounded on the north by the Arabian Gulf, on the north-east by the Emirate of Dubai, on the south and west by the Kingdom of Saudi Arabia and on the east by the Sultanate of Oman.

The Environment Agency-Abu Dhabi (EAD) was established in 1996 by Law No. (4) under the name "Environment Research and Wildlife Development Agency" as the first environmental agency at Emirate level. It aimed at protecting the environment, wildlife and biodiversity. The real change in the agency work began in 1999 with the issuance of Federal Law No. (24) of 1999 concerning protection and development of the environment, in addition to other relevant environmental laws. In November 2000, the agency was officially announced as the "Competent Authority" for environment at Abu Dhabi Emirate level. In 2005 Law No. (16) restructured the Agency and the Agency changed its name to "Environment Agency-Abu Dhabi" (EAD).

Water Resources Program

The water resources responsibilities were fragmented between various agencies and institutions. In 2005, EAD was appoint the sole agency to undertake the water resources management in Abu Dhabi. In 2006 EAD developed a water resources management strategy and the first ever law No. (6) for 2006 was issued by HH Siekh Khalifa bin Zaied Al Nahian, the ruler of Abu Dhbai, to regulate the groundwater resources in the Emirate.
EAD also started many initiatives to manage its scarce water resources including:

Abu Dhabi Emirate Sustainable Water Resources Management Policy

In May 2008, EAD launched an initiative to develop the Abu Dhabi Emirate Sustainable Water Resources Management Policy (SWRMP), including the development of the Water Resources Master Plan to address:

- Conservation of water resources.
- Segregation of Grey water and Black water systems.
- Development and implementation of the Abu Dhabi Uniform Plumbing Code.
- Using new water-saving technologies in urban areas.

Abu Dhabi Water Master Plan

In April 2008, EAD started to develop the Abu Dhabi Water Master Plan which aims to analyze the statues of present and future water use, conserve the water resources and allocate the available water resources to various development sectors. The master plan was completed in December 2008. The main results were:

- Reform and support of existing water institutions/agencies.
- Updating the existing laws, regulations and standards.
- Capacity building.
- Water public awareness and education.
- Analysis of present and future supply/demand.
- Increasing the existing IT and develop the central Water Resources Data Management System.

Strategic Water Reserves in Abu Dhabi Emirate

Since 2002, EAD has been working closely with all stakeholders and partners (ADWEA, TRANSC, ADWEC, ADDC and AADC) to operate and mange two pilot projects for strategic water reserves for emergency conditions. In January 2008, after the success of a pilot project in a western region (Liwa), a new project was commenced to develop a full aquifer storage and recovery project to inject 5 MIGD and pumping rate of about 90 MIGD. In an eastern region (Al Shweib), EAD is operating the existing pilot project to inject a daily 500,000 gallons to complete the evaluation and analysis of this project.

Pilot Project of Groundwater Wells Inventory

In January 2007, EAD signed a contract with GTZ/DCO consortium to start a pilot project for groundwater wells inventory for a period of 17 months. The project was completed by the end of May 2008. During this project about 15,000 wells were inventoried. All available information about these wells and the farms including pumping rate, depth, diameter, crop pattern, farm area, etc., were collected. This information was stored in the central Water Resources Data Management System. The data collected was analyzed and the water balance and aquifer potentiality were calculated. The results were also used to update the groundwater levels and salinity maps.

Groundwater Monitoring Program

In 2005, all monitoring wells that were drilled during the groundwater assessment program by GTZ/DCO consortium were handed over to EAD for operation and maintenance. The total number of wells is 675. Some 240 of those wells are equipped with automatic loggers. These wells are considered as the Abu Dhabi national groundwater quality/quantity monitoring network. Since 2005, EAD has operated, maintained and collected the information. The information is stored in the central Water Resources Data Management System. An annual report is produced every December.

Groundwater Wells Permitting Program

In March 2006, the law no. (6/2006) was issued by H.H. Sheikh Khalifa bin Zaied Al Nahian as a Ruler of Abu Dhabi Emirate to regulate and control the drilling and rehabilitation of groundwater wells. The bi-law was issued in 2007. Since that time EAD has been enforcing the law and issuing permissions for drilling new wells or the rehabilitation of existing wells. In 2008 about 7,000 license were issued.

Subsurface Irrigation Project in Western Region

As part of its effort to save and conserve the water use in agriculture and forestry sectors, EAD launched a project to apply a new subsurface irrigation system using leaky pipes. Subsurface irrigation systems will save as much as a 40% reduction in water use compared to conventional irrigation systems, while still achieving the same plant growth. When using subsurface irrigation, evaporation is virtually eliminated because water is contained in the soil profile under the surface. With an efficient

method of delivering irrigation water, researchers anticipated that it would be possible to establish seeds using subsurface irrigation system. A well-designed irrigation system will save time, money and, most importantly, water. Subsurface irrigation systems minimizes evaporation and overspray by putting water at the site of action, the trees and vegetations root zone.

Root Hydration Irrigation Project

In March 2007, EAD signed an agreement with an English Company to test and develop a new system for irrigation using the root hydration. The Root Hydration System is a new method of delivering brackish/saline water to the roots of each plant without the need to use fresh water in the system. The pipes are made from a polymer (DT486) that retains contaminants such as salt, chemicals, viruses & microbes, whilst allowing water to pass through. Water is pumped through the pipes to the root system. The amount of water passing through the membrane is determined by the hydration level of the soil surrounding the pipes. As the soil dries out more water passes through the membrane. If the soil is damp, perhaps after rain, water will stop passing through the membrane until the plants require additional water. The membrane is a barrier to water borne contaminants such as salts, chemicals, viruses and microbes. Due to the contaminant barrier, brackish water may be pumped through the pipes whilst still delivering high quality clean water to the plants.

Arab Water Academy

In July 2008, EAD launch a new initiative to host the Arab Water Academy. The launch of the first Arab Water Academy brings everyone from academics to policy makers to implement new training initiatives for better water management. The Abu Dhabi Government and The World Bank are backing the Academy with the required fund grant over the next three years. Although the academy is the brainchild of the Arab Water Council in Cairo, it will be based in Abu Dhabi. The Academy will offer an opportunity for the development of policies and strategies. The academy will demonstrate how to effectively communicate and negotiate with decision makers and incorporate decision-support tools in order to prioritize water into the national agenda and to balance competition for the resource (agriculture, urban expansion, industry etc) among sectors in the short and long term.

Using Solar Energy for Water Production and Desalination

To minimize the environmental impact of using fossil energy, EAD launched an initiative in January 2008 to develop a solar thermal desalination unit for brackish water desalination in the Umm Alzamoul remote area. EAD is evaluating and assessing the results of this pilot project. This project is Kyoto Protocol compliant and generates clean energy and significantly fewer greenhouse gas emissions and carbon dioxide.

هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI

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Time's running out

Forty seven per cent of the world's population will be living in areas of high water stress by 2030, unless action is taken now to avert a global water crisis.

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Let's give water a chance

Humankind and nature cannot exist without water. It is essential that we manage this resource efficiently and effectively, throughout the world

By Loïc Fauchon, president, World Water Council

There is crisis after crisis for the climate, food, sanitation and energy today. Natural disasters are soon forgotten to make room for the new ones that erupt.

As a result, people are lost. They no longer understand where the real threats or solutions lie. Political and economic leaders work daily, victims of the pressure of the evening news or the fluctuations of the stock exchanges. The world has lost its landmarks and no longer knows how to prepare for the future – our future and that of our children. What decisions, what policies, what rules are needed? Postures can be taken easily, but commitments are more difficult to hold.

Contradictions are constantly exacerbated precisely where efforts should ease them. The environment is a perfect example. Opposing the development of humankind to protect biodiversity is nonsense fuelled by glorifying contradictions rather than seeking consensus.

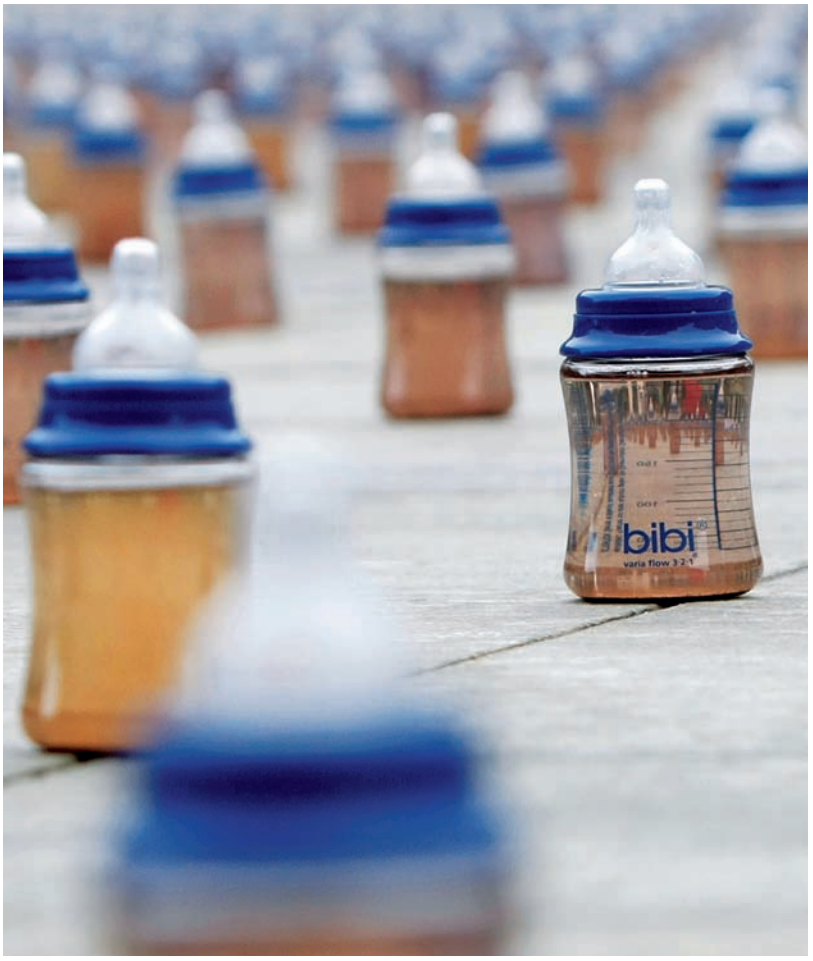
The topic of water should thus be approached by privileging solutions. The question is not to know when and where the war on water will break out, but rather to know how to provide future generations with the water so essential to survival.

Severe threats

Severe threats already exist. Demographic growth is galloping and could gain more momentum in the coming years, with progress made in sanitation and the liberalisation of some birth control policies. The urban and coastal concentration of populations sometimes requires securing districts – often shanty towns – that supply water and prevent mass pollution. The overuse of fertilisers and chemicals, detrimental to water quality, is another reality that is hard to circumvent.

Last but not least, there is the climate and its long- or short-term cycles, which can lead to more floods and droughts.

These threats are real. They should be neither exaggerated nor ignored. They will aggravate certain tensions to which governments and the international



An installation by relief organisation Helvetas displays 4,000 baby bottles on the Swiss Federal Square, Bern, to mark World Water Day, on 22 March 2010

> “Access to safe drinking water is an integral element of the right to a decent standard of living closely tied to human dignity”

community should pay attention. Vigilance must not be limited to trans-border issues. No state can afford to ignore the difficulties tied to preparing the future of its water.

A needed new awareness

The last decade has been encouraging: water and sanitation issues have moved up international and local agendas. But words and intentions still prevail over action and decisions. That is where citizens and the World Water Council have a role, by being the voice of water and tomorrow's conscience.

The first step is to reduce consumption and improve the management of this scarce and precious liquid so essential to life. Whether in agriculture, with its considerable economic opportunities, or in industry or in the home, individual behaviour as well as collective policies are beginning to change. This change will be amplified if it is carved in bold writing on the pediment of humankind's commandments.

In many places, nature will force this change. Water depletion often appears without warning after decades of aberration. The case of California is particularly enlightening: the government had no choice but to require all citizens to reduce their consumption of freshwater by between 10 per cent and 20 per cent in a year. The success of this forced endeavour will inspire several national or local water-demand policies in the coming years.

Another kind of management for water now

Consuming less today means spending less – or better – in the long term by adapting solutions to the needs in the field, the requirements of industrial growth, the increase in the standard of living and the changes in consumer behaviour.

The way ahead is to make the management of the resource more responsible, moving from unacceptable waste to a fairer distribution.

Slowly but surely, increased awareness of the moral as well as economic value of water will lead to the balanced distribution of water to satisfy the needs of both humankind and nature. The impending growth pattern may result in duly returning to nature what nature has given. More respect is thus needed when water is returned to nature. Some will say that this economy is green; others that it is blue.

Whatever the colour, the objective remains the same: guaranteed access to water and sanitation for the largest number while ensuring hydric and ecological security.

Legislation, money, energy: the conditions for success

What conditions will bring success? First, a legal framework is needed that states that each individual and each community will have access, at all times and in all places, to a resource responding to their personal as well as collective needs. On 22 March 2010, the Council of the European Union helped that process by declaring that access to safe drinking water is a human right and indeed an integral element of the “right to a decent standard of living closely tied to human dignity”. One can only hope that the G8 and G20 members as well as the rest of the international community will follow suit, as this right still needs to be guaranteed, clearly defined and implemented for the benefit of the daily lives of billions of individuals.

Next comes money, because access to water can only improve if financial resources are significantly increased. Obviously, the very large infrastructure required cannot continue without a stronger commitment by bilateral cooperation and international banks. Yet this is neither sufficient nor desirable. Local saving capacities must be increased because local authorities and citizens must be encouraged to implement innovative financing schemes. The World Water Council will soon launch an initiative to gather such ideas and projects.

And then comes energy, because this precious resource cannot be dissociated from water. The need for fuel and electricity to pump, transfer, desalinate and recycle water will exist for a long time. And the production of hydroelectricity and the cooling of nuclear plants will continue to require enormous quantities of water.

The destinies of water and energy are intertwined. This is why, at the opening of the Copenhagen climate change conference, the World Water Council was the first to claim that a ‘water-energy-climate’ package is required. The ‘scarce resources fund’ yet to be set up should support the production of energy dedicated to water.

Under the sole condition of guaranteed access to water humankind can secure its future: water to provide food and food security for the poor, water to reduce the death toll from the lack or bad quality of water.

The G8 along with the entire international community cannot miss out on this opportunity for humankind. ◆

Time for a new conversation

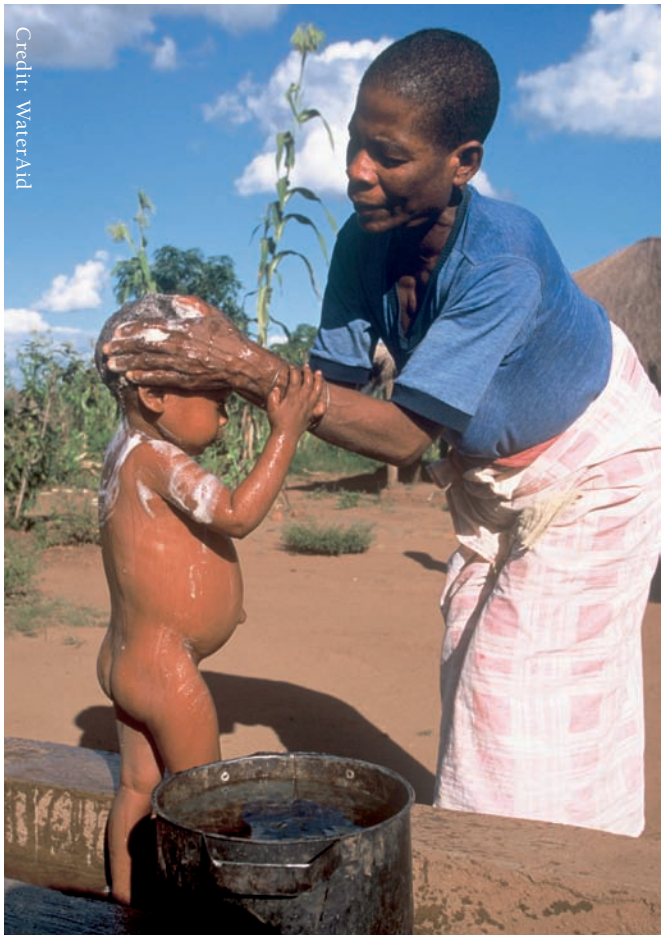
In the developing world, dirty water and inadequate sanitation services have a disastrous impact on poor people's lives, from maternal health and child well-being, to education and livelihoods. At least 1.4 million children die every year from diarrhoea caused by unclean water and poor sanitation – that's one child every 20 seconds.[1] We must overcome the overwhelming lack of political will to take decisions that actually benefit the poor. The bigger-is-better approach and throwing money at the problem does not work. Technological advances will only take us so far.

Having worked for over 10 years with multi-stakeholder and multi-disciplinary approaches, Building Partnerships for Development in Water and Sanitation (BPD) has confirmed the simple conclusion that **relationships matter**. Quick investments may help hit the targets of the Millennium Development Goals (MDGs). But if the failed international water decade taught us anything, it is that efforts at sustainable service delivery must recognise and seek to overcome the political and social obstacles that marginalise poor people. No other approach will ensure that access continues into the future and that the other half of the population not addressed by the MDGs will get access. This approach requires a different conversation.

With increased urbanisation and industrialisation, the environmental considerations for sustainable service delivery are integral to these discussions. *Some* institutions have roles to play in fulfilling people's right to access water and sanitation services. *All* institutions, though, must ensure that degraded water sources and poor sanitation do not jeopardise people's health and livelihoods.

Customised approaches must include the smaller providers, community management structures, household strategies, and the health and land planning sectors. Admittedly some of these integrated conversations will result in deadlock. Many more though, will result in more systemic, systematic and localised approaches that actually meet people's water and sanitation needs.

Supported by several G8 member initiatives, BPD provides demand-led, tailored support to relationships in the water and sanitation sector at all levels. As a multi-stakeholder organisation led by an international board of key water and sanitation professionals (from large multinationals to small-scale providers, from utility managers to regulators, international NGOs to water associations), we urge you to join us in these conversations.



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BPD is a non-profit organisation that works with strategic partnerships involving government, business, civil society and donors to improve access to safe water and effective sanitation in poor communities. Through the development of a set of analytical and facilitation tools, BPD aims to influence the way organisations work together in partnership.

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Building Partnerships for Development in Water & Sanitation

[1] Prüss-Üstün A, Bos R, Gore F, Bartram J. *Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health*. World Health Organization, Geneva, 2008

> In the 21st century, no woman should have to give her life to give life.
>
> **Ban Ki-Moon**
> Secretary General
> of the United Nations

A Call for Resolve: Global Leadership Needed to Make Universal Reproductive Health a Reality by 2015

The World Health Organization has stated it clearly. The United Nations has adopted it as a goal. Access to reproductive health is the right of all individuals. Reaffirming a decision made at the 1994 United Nations International Conference on Population and Development (ICPD) in Cairo, the Millennium Development Goals (MDG) included the target "universal access to reproductive health by 2015" as part of MDG 5.

But behind statements and affirmations lies a stark reality. Despite recent improvements in maternal mortality, progress on MDG 5 is not on track to be achieved by 2015. Guaranteeing universal access to reproductive health remains uncertain in many parts of the world. U.N. Secretary General Ban Ki-Moon has declared this as the "slowest moving target of all the Millennium Development Goals." Lack of progress on this one target could prove to be the weak link that imperils the other vital goals we seek to achieve by that date.

More than 350,000 women die each year due to complications related to pregnancy and child birth. 99 percent of these deaths occur in the poorest, most disadvantaged populations of the developing world.

At present, girls as young as 11 are married and the pressure to bear children starts immediately. They are not given a chance to plan their families, space their children or consider their health.

200 million women wish to delay a pregnancy or have no more children but are not using modern contraception, not because they don't want to but because they have little or no information or access to it.

Poor reproductive health and limited or no access to family planning has quality of life consequences for families – greater risk for disease, disability and death, lower education rates and lower household incomes. Between proclamations and reality lies a gap that not only threatens the health and economic stability of families but also threatens the Millennium

Development Goals (MDG) in which reproductive health plays a vital, if often overlooked, role. Lack of access to reproductive health throughout the developing world will make it nearly impossible to make meaningful progress on MDGs that seek to reduce poverty and increase prosperity. For poverty rates to go down, for a country's systems to meet the needs of its people, and for health rates to go up, a nation's people must have access to reproductive health care and family planning services.

a host of benefits. When more condoms are used, transmission rates for HIV and other STIs go down. When women prevent unintended pregnancies, they are better able to pursue educational and economic opportunities. This economic power increases women's status in society. Family savings and investments improve. Ensuring reproductive health around the world is one of the best ways to combat poverty and improve a nation's economic outlook.

> Assuring universal access to reproductive health services for all women is a fundamental human right. We have to create a world where women, children and girls have access to the education, services and supplies they need to grow healthy and live strong.
>
> **Mary Robinson,** Former President of Ireland and President of Realizing Rights

Advocates around the world have done their job. They have proven that reproductive health is central to the global development results we all want to see. They have developed and successfully implemented programs that make reproductive health possible in the most remote regions among the most vulnerable. What is needed now is leadership. In particular, we need political leaders to make the connection between reproductive health and important global development results.

To that end, the Global Leaders Council for Reproductive Health will launch this fall to engage world renowned leaders to use their voice to make universal access to reproductive health a top priority and one that we can achieve by 2015.

Mary Robinson is calling on fellow global leaders to step forward and use their voice to make a compelling case that reproductive health is central to global development and prosperity.

The leaders will argue for investments in reproductive health and family planning that pay off. Report after report has shown that better reproductive health and widely available and used family planning has

Reproductive health needs champions and that is what the Council aims to provide – global leaders who embrace the idea that reproductive health is central to global development and prosperity. The Council spokespeople will use their voice, leverage their networks and create an echo around the world that helps build political will to get this done.

In the words of U.N. Secretary General Ban Ki-Moon, "In the 21st century, no woman should have to give her life to give life." Access to reproductive health is the right of all. But saying it and believing it are not enough. By 2015, we are obligated to make universal access to reproductive health a reality.

For more information go to http://www.aspeninstitute.org/policy-work/global-health-development

GLOBAL LEADERS COUNCIL
FOR REPRODUCTIVE HEALTH

A Call for Resolve:
Universal Reproductive Health By 2015

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