

FSN FORUM - DISCUSSION TOPIC NO. 14, 2009  
**HOW TO FEED THE WORLD IN 2050?**  
FROM 16<sup>TH</sup> SEPTEMBER TO 12<sup>TH</sup> OCTOBER 2009

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The topic raiser and facilitator is Hartwig de Haen, former Assistant Director General of FAO's Economic and Social Development Department.

Results of the debate will help prepare the High-Level Expert Forum on "**How to Feed the World in 2050**", scheduled to take place at FAO headquarters in Rome on 12-13 October 2009. Specifically, a summary of the online discussion will be presented to the attendants, while their reactions will be posted on the FSN Forum website for additional feedback.

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**"How to feed the World in 2050?"**  
by Hartwig de Haen

Experts tend to agree that it will be possible to produce enough food to meet the demand of a world population that will have increased to more than 9 billion in 2050. Global demand for food, feed and fibre is expected to grow by 70 percent. However, responses to the question of "How to feed the World in 2050?" must take a multitude of complex challenges into account.

Demand for agricultural produce will put growing pressure on already scarce agricultural resources. While agriculture will have to compete for land and water with sprawling urban settlements, it will also face other challenges: e.g. producing growing volumes of feedstock for conversion into biofuels; contributing to the mitigation of climate change; helping preserve natural habitats, and maintaining a high level of biodiversity. To respond to these demands, farmers – especially the poor – need access to new technologies, which will enable them to achieve higher output with less land and labour input.

Adequate investment in research and development needs to ensure sustained productivity growth. Equally important are good rural infrastructure, institutional reforms, environmental services and sustainable resource management. However, focussing simply on increasing food supplies will not suffice to eradicate hunger and poverty. Policies must also ensure access of the world's poor and hungry to the food they need for active and healthy lives.

I would invite Forum members, experts and practitioners to express their views on the following questions:

- **Are current investments sufficient to ensure adequate growth of agricultural production, sustainable use of natural resources, efficient market infrastructure, and technical progress?**
- **Will improvements in food availability to meet the global demand growth projected for 2050 help turn the current trend of rising hunger and malnutrition?**
- **Which additional measures might be needed to broaden access to food?**

More specifically:

- Considering that Research and Development (R&D) in agriculture have high economic returns, what needs to be done to revert the stagnation or even decline in public expenditure in R&D and promote technological breakthroughs in developing countries? Would it be a promising strategy to extend access to modern biotechnologies to smallholder farmers?

- Should competition for scarce resources be reduced between food and biofuels? If the answer is yes, through which policies?
- Should policies be implemented to provide incentives for farmers to mitigate climate change by reducing greenhouse gas emissions from agriculture, including livestock? How can the vulnerability to climate change be minimized for rural areas?
- Which specific policies to improve access to food for the poorest should be implemented at national and international levels, including social safety nets, better chances in the labour market, improved and secure access to means of production, to capital and knowledge?
- What should be done to ensure food security in sub-Saharan Africa, the continent facing the highest population growth rates, the worst impacts from climate change and the heaviest burden of HIV/AIDS?

Most experts agree that we know how to fight hunger. Most agree that higher priority must be given to public investment in agriculture and rural areas, which provide the livelihoods of the majority of the world's poor and hungry. It is also clear that good governance, including the realization of the right to food, is an essential ingredient of success. Economic studies have furthermore shown that investments in sustainable hunger reduction generate enormous economic benefits, mainly resulting from lower frequency of disease, better learning at school age and higher productivity. Examples of success can be found in all developing regions, including resource-poor countries in Africa.

The basic question then is:

- **Why are so many governments still reluctant to change priorities and invest in hunger reduction? Do they lack the political will to adopt a long-term strategy towards food security for all?**

Participants at this debate may wish to discuss ways of mobilizing political will at national and international levels. Specifically:

- What should be done to make the eradication of hunger a top priority in national and international policies and budget allocations?
- Are the “Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security” a good framework to remind governments of their obligations?
- Should developed countries agree on joint plans of action?
- Are “quid pro quo” arrangements between developed and developing countries a realistic proposal, in which additional agricultural development assistance is made dependant on the commitments of the recipient developing countries to provide their own incremental domestic resources?

## **Background**

At the Expert Meeting on “How to Feed the World in 2050” in June participants agreed that it should be possible to produce enough food to meet the demand of a world population that will have increased to more than 9 billion in 2050. The demand for food and feed will increase not only because of a larger world population. The demand will also be higher and more diversified due to changing consumer preferences, especially in the increasingly urbanized developing countries. Specifically, while the world population is expected to grow by 40 percent (from 6.5 to 9.1 billion), global demand for food, feed and fibre is expected to grow by 70 percent.

According to FAO's baseline perspective, developing countries will account for the largest increase in food demand. They should also be able to see the largest increases in agricultural production. For example, global production of cereals (excluding biofuels) is projected to grow from 2.2 billion metric tonnes today to about 3 billion tonnes in 2050. Of this increase, 70 percent

is projected to occur in developing countries. Overall, developing countries as a group would nevertheless remain dependent on food imports, namely cereals, dairy products and meat. For example, net imports of cereals are expected to rise from 135 million tonnes today to 300 million tonnes in 2050.

Due to the limited possibilities to expand land and water resources and considering the need to preserve natural resources for multiple non-food uses, the major share of the future production growth (almost 80 percent) would have to result from increases in yields. 10 to 15 percent could be achieved from higher cropping intensity and 5 to 10 percent from an expansion of land use.

If the FAO perspectives materialize, total food supplies would increase faster than population growth. Average per caput calorie availability would rise from 3500 to 3600 kcal/person/day in the industrial countries and from 2600 to 3000 kcal/person/day in developing countries. As a consequence, increases in food availability and average incomes in developing countries could bring down the prevalence of chronic hunger from 16 percent today to 5 percent in 2050. However, wide discrepancies would remain between countries, with some countries succeeding to reduce the prevalence of hunger below 5 percent and others facing rates of 20 percent and above. Additionally, a growing part of the world population would face the problem of over-nourishment.

The number of chronically undernourished in the world would thus remain at almost 400 million people. To bring it further down will require extra efforts, including targeted measures to improve access to food for the neediest.