

NUS SIGNATURE CONFERENCE

Feeding an Asia that's wealthier

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THE past five years of soaring food and fuel prices and unusual weather patterns have shaken many in Asia out of their complacency. Despite tremendous improvements in economic well-being, Asia still remains the region with the largest number of malnourished people at 65 per cent or 578 million of the world's 925 million.

And this threatens to worsen as populations continue to grow and the food resource base is eroded by shortages of land, water, energy and other inputs to agriculture.

The Food and Agriculture Organisation (FAO) estimates a doubling of food production is needed to provide for Asia by 2050.

While doubling food production over the next 38 years seems feasible, based on the experience between 1970 and 2000 when consumption grew about 2.4 times over a 30-year period, today's resource constraints cast serious doubts over sustaining previous growth rates.

We will have to make do with less output using current resources or expand the efficiency of production by new methods. Improving irrigation, control of inputs, new genetically modified (GM)

crops, reducing losses and demand are a few ways of meeting the 2050 goals for food security.

We discuss below key policy options aimed at demand reduction and reduction in losses. If these can be successfully implemented, achieving the 2050 goals will be easier.

Rapid economic growth in Asia has sown the seeds of potential food crises because millions of Asians have gone through the "nutrition transition". Increasingly affluent Asians are not just consuming more but eating more fatty foods. China, Brazil and Mexico now consume almost as much calories and fat as advanced countries.

This "nutrition transition" is akin to the "demographic transition", where over 50 years the world's population has changed from a high birth rate and mortality rate regime to a low birth rate and mortality rate regime.

Almost all of the countries have gone through this transition leading to a much more benign population outcome.

Slowed population growth has led to moderating resource use and environmental degradation, and general improvement of well-being for the new populations.

Unfortunately, unlike the demographic transition, the nutrition transition is unlikely to have such benign effects. During this transition, a high carbohydrate and low

animal fat diet is being replaced with a high animal fat and lower carbohydrate diet.

It has health impacts such as cardiovascular diseases, and significant increases in demand for land, water and energy in producing animal products and the increased calorie consumption.

More importantly, these transitions are inexorable and very difficult to reverse once under way.

Even the vaunted French diet has seen the proportion of fats in the daily calorie intake rise to more than 40 per cent in 2000 from less than 30 per cent in 1960.

Another effect of the nutrition transition is the increase in the total calories consumed in average diets, with the developed world consuming more than 3,500 calories and the developing world consuming between 2,500 and 3,000 calories per capita per day.

Various policy tools have been suggested to curb the nutrition transition, ranging from regulating food prices, taxes on animal products, subsidies on carbohydrates to absolute bans on certain products, and major public relations campaigns to enhance certain diets.

It is unlikely that these will stop the inevitable nutrition transition. However, if developing countries are able to maintain their 3,000 calories a day consumption, total 2050 food demand can be reduced by 30 per



A farmer spreading rice grains to dry in Sai Dong village, outside Hanoi, Vietnam. Rapid economic growth in Asia has sown the seeds of potential food crises because millions have gone through the "nutrition transition" - Asians are not just consuming more but eating more fatty foods. PHOTO: REUTERS

cent.

The emphasis on food production should go beyond the traditional focus on supply-side measures such as investment in irrigation facilities and production-enhancing activities such as agricultural research and subsidies for chemical inputs.

The amount of food wasted in the chain from "field to fork" is unacceptably large.

In the early 2000s, it took an average harvest of 4,600 calories

to provide a daily supply of 2,000 calories.

While many sources of loss in this chain are unavoidable or extremely expensive to control, a sizeable portion of the losses would respond to improved transportation and marketing logistics.

For example, governments could improve the capacity and efficiency of road and bridge infrastructure, and commercial firms could greatly assist in reducing losses by refrigerated trucking,

storage and marketing facilities.

Together, as much as half of the losses can be avoided, leading to a further 20 to 25 per cent reduction in the 2050 production requirement.

By pursuing these two policies along with conventional agricultural policies, Asia can achieve the goals of feeding itself by 2050. The writers will speak at NUS' Global Asia Institute Signature Conference on pressing urbanisation issues this Thursday and Friday.