

**T**HE term "food security" seems to be the preferred term today. Just a few decades ago, journalists were more familiar with the term "food crisis". Who authored the change in terminology? Was the currently preferred term specially coined to be "politically correct" in context or "politically motivated" to accommodate a sinister agenda of institutional structures?

The term "food security" is not a new one but has recently gained prominent use by international organisations – such as the Food and Agricultural Organisation, the United Nations, the World Food Programme and the International Food Policy Research Institute – all of which increasingly recognise that food availability (supply) is only one aspect of a broader set of issues which need to be addressed to assure food security.

The other aspects include physical and economic access to food, and also food utilisation issues such as food safety and food nutrition. "Food crises" still exists and the term is used for specific incidents commonly associated with lack of food, such as the current food crisis causing famine in the "Horn of Africa".

This food crisis in the "Horn of Africa" is an example of a "food security" situation where local supply has been totally disrupted due to drought effects on agriculture.

Experts today use this term because it is not just crisis situations which cause "food insecurity" (i.e. lack of security). Almost a billion people go to bed hungry each day, according to the World Bank. Some of these people may live in countries which have food, but they cannot afford to buy the food, meaning, they have no economic access.

And this lack of ability may lead to a situation of "chronic food insecurity", which potentially affects the growth and development of young children, and thereby their ability to learn as well. There have been many studies to show the link between under-nutrition and education performance among children. So all these are now included in the term "food security".

**What is the net impact of the further liberalisation of food and agricultural trade, considering the widely differing situations in developing countries?**

Free trade assures the continued supply of food from surplus areas to deficit areas, and is a way to address food security. Free trade also has potential to bring economic benefit to small holders in developing countries. However, it is conceded that developed country agricultural and food policies, such as subsidisation of domestic production, can have an adverse effect on developing country producers. This is a complex matter and is like a multi-factorial equation with no simple generalised solution as developing countries vary greatly in the way they react to any restriction in the trade of commodities or food.

**To what extent can domestic economic and social policies and food, agricultural and rural development policies – offset the diverse and possibly negative impacts of international policies, such as those relating to international trade?**

The interplay between domestic and international policies, as they affect food security, is very country dependent, with no generalised answer possible. For net food importing countries like Singapore and Brunei, there will need to be very close congruence between the two. For middle income countries which choose to import much food via the

# Food fears

At the recently hosted "Status, Impacts and Future Prospects of Agri-biotechnology in a Changing Climate: A Regional Workshop for Media Practitioners", in Jakarta, 35 journalists from eight Asian countries including theSun's JOSEPH MASILAMANY were skeptical that an impending "Food-Armageddon" could heavily impact world communities. But after listening to speaker, Prof Paul Teng, Senior Fellow (Food Security), Rajaratnam School of International Studies, Nanyang Technological University, Singapore – the journalists woke up to a sobering reality. On the sidelines of the workshop, theSun put these pointed questions to Teng who returned a salvo off the bat.

globalised supply chain, there will also need to be close agreement between international agreements and domestic policy and regulations.

An example is the significant global trade in GM products for food, feed and processing. Without domestic, science-based regulatory frameworks, it would not be possible to abide by the requirements of international biosafety or other agreements.

The other way to address this issue is to look at effects. One possible effect is the disruption or restriction in supply of food or agricultural raw products to the country concerned. For specific countries, local policies could be developed, and supported with adequate funding and technical support, to increase local production of a particular item. For example, a country response may be to increase local rice production in the face of a global reduction in the amount of rice traded.

**How can the overall economic gains from trade benefit those who are most likely to be suffering from food insecurity?**

I'm not qualified to comment on this.

**Is it not true that gains from such trade benefits merely trickle down to those who are most deprived of food, and that means ... the poor still remain famished?**

I'm not qualified to comment on this.

**How can food and agricultural production and trade be restrained from the over-exploitation of natural resources that may jeopardise domestic food security in the long term?**

Agriculture and food production do not necessarily have to lead to over-exploitation of natural resources. Good Agricultural Practices and Sustainable Agriculture principles both can guide the use of sound production technologies.

**How can a nation ensure that imported food products are of acceptable quality and safe to eat?**

By having sound, science-based regulatory frameworks to assure that safety standards are adhered to.

These frameworks must be backed up by well-supported and functional regulatory services, which have the latest equipment, trained personnel, and the capacity to enforce the regulations. Most countries have government agencies charged with applying food safety measures. The challenge is to ensure they are functional.

**There is enough food in the world to meet everyone's needs, but not enough to accommodate everyone's greed. Should the world be in jitters over an impending "Food-Armageddon" that might not materialise – or should the international community address the tangible problem of wealth and food distribution more emphatically?**

There is no single unilateral approach to ensuring food security! The demographics and projections issued by credible organisations show that the demand for food will increase in the coming years, accompanied by a shift in the types of food desired to more protein-based food. Hence, efforts will have to continue to assure increasing production in agriculture of the raw materials needed for food, and all thus done with acceptable environmental conservation.

Concurrently, the world population will become more urbanised, leading to fewer people farming. With urbanisation, it is also predicted that the percentage of poor people who are food insecure in the cities will also increase.

So strategies need to be found to improve urban food security, and implicitly, address any disparities which may arise from differential economic access to food.

Organisations like the World Food Programme have advocated safety nets to help the vulnerable poor who cannot afford to buy food even if food is available.

These safety nets operate in the broader context of individual country policies on wealth distribution vis-à-vis job creation, livelihood improvement and generally economic growth. It is difficult for the international community to effectively address country-specific wealth distribution issues.

Individual country governments



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need to take local action that can meet local situations of unequal wealth distribution. Assuming no disruptions in the food supply chain, whether local or global, people who are economically well off have a better chance of being food secure.

**What advantage has Malaysia to overcome the impact of food security and what will the challenges be for this nation of 27 million people?**

I interpret the question to mean how Malaysia can improve its food security. Malaysia has many advantages as a food producing country – bountiful land with no regular natural disasters such as typhoons or earthquakes, suitable climate for crop, fish and animal agriculture, resourceful people and

strong technical as well as financial resources to support farming.

So Malaysia can ramp up significantly its domestic production of agricultural products if it chose to. The challenge is whether it would be cheaper to import or go for local production. In the context of food security, most experts predict increasing prices of raw materials and increased competition for these raw materials due to population demands and the improved economic status of more people, especially in Asia.

When supply is adequate and there is surplus over domestic consumption in the producing countries, then it may not make much sense for countries to grow their own food.

However, as recent years have shown, supply may be disrupted by many factors, including unexpected adverse weather events and pests.

Many countries have developed their own food security plans to ensure there is sufficient resilience in supply to buffer any unexpected shocks to the system.

One of the dilemmas that countries like Malaysia face is whether to increase the level of self-sufficiency in key items even when other countries can produce those items cheaper or continue to depend on imports from overseas and find ways to minimise any supply disruption. There is no single solution.

**Should Malaysia return to its previous "back to basics" agricultural sector more emphatically now to ease or thwart the impact of a worldwide food security crisis?**

As noted above, the arguments are influenced by external factors and internal policy but is multi-faceted. There are also trade-off issues as cash crops like palm oil continue to yield high returns when compared to food crops like rice.

Some agricultural products will require continued importation, such as wheat; while others like soybean and corn could help lessen the impact from supply shortage if Malaysia grew more of its own. But both soybean and corn would require renewed significant investments in research to produce the right crop varieties and management technologies.

Brazil has shown that it is possible for tropical countries to become agriculture powerhouses if sufficient financial resources are devoted to R&D. Agriculture will have to be made more attractive, especially, food agriculture via appropriate incentives and supportive policies.

**NOTE:** Prof Paul Teng is also the Dean, Office of Graduate Studies & Professional Learning, Nanyang Institute of Education (since 2006) and Professor (Biological Sciences), Nanyang Technological University (since 2004). His interests are largely in agricultural microbiology, systems research, bio-business and science journalism. Teng is a microbiologist by training and has practiced as a research scientist, research manager, educator and entrepreneur. His most recent book is *Bioscience Entrepreneurship in Asia – Creating Value with Biology*. He has written 250 technical papers and eight other books. Teng has also served as Deputy Director-General (Research), WorldFish Centre, Malaysia.

The workshop was organised by Southeast Asian Regional Center for Graduate Study and Research in Agriculture in collaboration with SEAMEO Regional Center for Tropical Biology, International Service for the Acquisition of Agri-biotech Applications and Agricultural Biotechnology Support Project II.



Will a "Food Armageddon" happen in the near future? It will be tough to convince Malaysians that such a calamity could happen in a country where food is available round the clock. It is said that Malaysia is the only country in the world where food is available 24 hours a day, seven days a week.