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Facing Food Shortages: Urban Food Security in an Age of Constraints

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Seventy per cent of the world's population are expected to live in urban areas by 2050. Food production to feed this larger, more urban and richer population will have to be done in the face of changing consumption patterns, the impacts of climate change and the growing scarcity of land and water. It is time that urban centres take charge to usher in a new era of "urban green revolution".

THE WORLD is bracing for a food crunch. Amidst the growing food shortages, in part due to climate change, there is an urban green revolution emerging. As cities burgeon in size, they are growing food to feed themselves. To understand this emerging phenomenon, a Food Security Expert Group Meeting was convened in Singapore from 4-5 August 2010 by the Centre for Non-Traditional Security Studies of the S. Rajaratnam School of International Studies (RSIS). It was attended by representatives from the academia, the policy and think-tank communities, private agribusiness firms, urban planners, and humanitarian organisations. Aside from drawing attention to the issue of urban food security, the two-day meeting also discussed Singapore's role in the global food system.

"Urban Green Revolution": Food Security's Next Wave

Food security and agriculture is largely considered a rural phenomenon and discussed primarily in the context of rural poverty. The Green Revolution which occurred between the mid-1950s and the mid-1990s for example was largely a rural phenomenon. Encompassing changes to crop varieties, agricultural practices and broader social, economic, and political change, the Green Revolution led to a substantial increase in gross world food production also with rapid economic development in a number of developing countries. Even more remarkable was the fact that despite an increase in the number of people from 3 billion in 1960 to 6.7 billion in 2009, per capita agricultural production still outpaced population growth. Ironically, these successes contributed to public complacency about food and agriculture. This complacency manifested itself in decades of faltering public commitment to investing in agriculture in developing countries.

The share of Official Development Assistance (ODA) to agriculture, for example, dropped significantly, falling from a peak of 17 per cent in 1979 to a low of 3.5 per cent in 2004. The combined effects of public complacency, low stockpile of staples, declining agricultural yield, declining investment, population growth, rising income levels, dietary change, climate change and the global financial crisis was a food crisis in 2008 when food prices climbed to their highest levels since the 1970s.

This crisis triggered riots across the globe - particularly in the teeming, impoverished cities of the developing world, where many people spend a major portion of their incomes on food. Whereas in the past issues of food security, livelihood, and agriculture resulted in peasant revolts in rural areas, it has now become an urban phenomenon manifested in unrest among the urban poor, the urban working class, and the urban under-class.

New Challenges, New Complexities

Challenges to urban food security have become even more acute as (urban) population continues to rise. For the first time in history, urban population equalled rural population in 2008. By 2050, about 70 per cent of the world's population are expected to live in urban areas. At the same time, world population was projected to reach 9.1 billion in 2050 (34 per cent higher than today) with a large proportion of this increase expected to come from urban areas. How does the world feed this teeming mass of urban population?

Feeding a larger, more urban and richer population requires food production to increase by over 70 per cent. This must be done in the face of changing consumption patterns, the impacts of climate change and the growing scarcity of water and land. Rural agriculture alone will be insufficient to meet the future needs of food in urban areas. Only an "urban green revolution" will help countries secure food for their population. To do this, urban agriculture must be stepped up to supplement food supplied from the hinterland and rural areas.

Urban agriculture is the growing of food crops and the raising of farm animals within and around cities. It plays an important role in enhancing urban food security since the cost of supplying and distributing food to urban areas based on rural production and imports continue to increase and do not satisfy the demand especially of the urban poor. Urban agriculture also contributes to economic development, poverty alleviation, and social inclusion of the poor. It also contributes to the overall greening of the city and the productive reuse of urban wastes.

A Role for Singapore

Urban food security has already been a major concern for small, highly urbanised city-states like Singapore. Due to size limitations, Singapore relies primarily on imports, buying more than 90 per cent of its food requirements from 31 countries in 2008. Conscious of the pitfalls of over reliance on imports, Singapore adopted an approach which aims at ensuring food supply resilience by maximising local farm productivity through the upgrading of local farm production capability. It is also aiming at investing in overseas food zones, overseas contract farming, and sourcing from non-traditional sources or existing sources that are not major exporters to Singapore.

Singapore can be an important player in regional food security. Given its role as a stable regional financial centre, it can serve as a catalyst for venture investment funds. It can also facilitate and inspire technology transfers, best practices, processes, and business models and standards. Singapore is also home to a number of research-oriented local and foreign agribusiness firms. By harnessing the knowledge and expertise of these firms, it can take the lead in developing high yielding seeds variety, fertilisers,

pesticides etc. Singapore's efficient port and logistics can also help the country establish itself as a regional food processing and distribution hub.

Food processing has already been pursued vigorously in the country with export totalling USD 3.4 billion in 2009 - an increase of nearly USD 1 billion since 2005. The Singapore Food Manufacturers' Association (SFMA) predicted food exports by Singaporean firms to reach USD 4 billion this year. The growth of exports from Singapore can be attributed to the increasing number of local manufacturers which now stands at 781 compared to 677 in 2005. This in turn is a result of the rise in demand overseas for food products made and processed in Singapore.

Feeding People, Keeping Countries Stable

The Food Security Expert Group Meeting raised important questions about the state of urban food security. There was a consensus among participants that urban food security has now become one of this century's key global challenges requiring urgent attention.

Although urban agriculture has been around for a long time it has not been thought of seriously. It is time to give it serious consideration in order to feed the ever increasing urban mouths. In the end, it is not just about feeding people but also about keeping countries stable.

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