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# RSIS COMMENTARIES

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## **Resolving Asia's Food Conundrum: Dual Strategy Needed**

By J. Jackson Ewing, Paul Teng and Marga Escalar

### **Synopsis**

*The pursuit of food security in Asia requires transcending either-or arguments on production and distribution, and requires strategies that address both tracks in tandem.*

### **Commentary**

A RECENT RSIS commentary entitled "Asia's Food Security Conundrum: More Apparent than Real?" (13 June 2011) implied that advanced agricultural methods driven by technology are not the primary way forward for the Asia-Pacific. It argued that the most important food security issues today are the inequitable distribution of available food and the marginalisation of small and medium-sized farmers in modern food systems. It was further suggested that these problems may be magnified if food production advances receive policy prioritisation.

It is true that food distribution remains a formidable challenge and that the fate of small-scale farmers is fundamentally important for Asia's food fate. The conclusion, however, that these realities somehow serve to caution against technologically-advanced agricultural strategies is problematic for a number of reasons.

### **Technology – More Benefit than Bane**

Advances in agrotechnology have played a paramount role in helping countless individuals throughout the world secure more stable access to more nutritious food. These technologies include new seeds (both from conventional breeding and biotechnology), low impact fertilisers, efficient irrigation strategies and multiple pest control techniques.

In Asia, ambitious investments in new seed varieties and accompanying technologies during the 1960s and 1970s led to impressive gains in productivity and total production. India, for example, began planting new wheat varieties in 1964. By 1970 production per-hectare had nearly doubled. Throughout the greater Asian region, meanwhile, annual rice output growth rates increased by roughly 50 per cent after the introduction of new varieties in the mid-1960s.

Today, emerging technologies provide environmentally prudent tools for reducing water usage through targeted low-volume irrigation systems, and for combating soil erosion through less invasive tilling practices. These technologies also help to increase yields per hectare so that the need for conversion of land to agricultural use could be reduced.

Modern farming techniques may also sequester higher levels of atmospheric carbon, emit lower volumes of powerful greenhouse gases such as methane, and have the second-order effect of cutting transportation emissions through creating food production possibilities in new locations. Modern farming also takes advantage of more robust crop varieties with greater resilience to predicted changes in surface temperature, precipitation patterns and growing seasons.

Such advances in agricultural technology do not just impact large-scale farming operations. Progress in seed development, water and soil management systems, waste reduction technologies, basic farm mechanisation and pest and disease resistance are equally useful on both the family farm and the large plantation. Rather than being marginalised, Asia's small and medium-scale farmers will benefit mightily from access to new best-practice farming techniques and appropriate technologies.

### **Enough Food for All?**

Beyond production, challenges of food distribution, access and ultimately social justice continue to plague modern food systems. Hunger pervades many developing countries and bears witness to continuing shortcomings in the many local, national and global food systems. The Green Revolution, for all its successes, has also been criticised for exacerbating food access inequalities (particularly in Latin America). Vulnerable citizens in Asian countries such as Indonesia, the Philippines, Vietnam, Myanmar, Cambodia and Laos continue to face unacceptable impediments to food access.

Such maldistribution issues can be compounded, as has been pointed out, by the monopolistic controls exercised by some international food corporations. These controls are defined by intellectual property problems relating to genetically modified foods, ambiguous public-private relationships, powerful lobby groups and at times dubious government subsidy strategies.

Such impediments to food access can also be exacerbated by economic forces, particularly when factors coalesce to lead to rapid food price increases. In 2007–2008, for example, price volatilities led to a cycle of export controls, stockpiling and panic buying that pushed the prices of some staple foods beyond the reach of millions of Asia's citizens. In 2011, in another sign of how vulnerable the global food system can be, rising prices have further pushed access to food beyond the reach of ever increasing numbers of people.

Claims that there is actually enough food to go around, provided it is justly and efficiently distributed, underemphasise existing food trends and underestimate projected food requirements. For example, a joint study by the World Resources Institute (WRI) and the International Food Policy Research Institute (IFPRI) noted that, globally, arable land per person decreased from 0.45 hectares in the mid-20th century to 0.25 hectares in 1997. This figure is projected to drop to 0.15 hectares per person by 2050. At the same time, the UN's Food and Agriculture Organization and the World Bank both predict that by 2050 we will have to produce somewhere between 50 to 70 per cent more food than we currently do. In other words, more food will be needed from less land. This necessitates that food production become more knowledge-intensive and efficient at both large and small scales.

### **Production and (not or) Access**

Distribution and other off-farm food challenges do not negate the value of agricultural technologies or the importance of further enhancing the role of advanced farming methods in Asia today. Rather, they point to some core issues: firstly, the need for more effective approaches to growing appropriate food with minimal inputs; secondly, ensuring government oversight that promotes transparent public-private partnerships; and thirdly, securing consistently affordable and nutritious food. Such a vision, moreover, can and should be pursued alongside environmental stewardship and efficient food production, storage and transportation.

Calls for Asia to embrace advanced food production should not be seen as denying or ignoring galling inequalities in food access. Addressing these inequalities is vitally important to the region's food future; this is why access to food is recognised as being integral to 'food security'.

However, it is equally clear that meeting the food security challenges facing Asia in the 21st century requires that the two systems -- production and distribution -- mature along parallel tracks. It is a symbiotic relationship that requires judiciously employing the effective tools that we currently have at our disposal. It would be a mistake to abandon such tools in favour of a 'traditional farming' renaissance.

*J. Jackson Ewing and Paul Teng are respectively, Post-Doctoral Fellow and Professor & Senior Fellow at the Centre for Non-Traditional Security Studies, S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University. Marga Escaler is a Research Fellow of the National Institute of Education, Singapore.*