

# POLICY BRIEF

By Sally Trethewie

## Feeding Southeast Asia in the 21st Century



Southeast Asia's food security challenges are multifaceted and complex, with an estimated 14 per cent of the population suffering undernourishment. The recent International Conference on Asian Food Security (ICAFS), held in Singapore in August 2011, addressed the challenge of feeding the region in the coming decades in the context of significant anticipated environmental, economic and demographic changes. This policy brief highlights three key issues that emerged from the ICAFS 2011 discussions, namely, the impact of volatile food prices, the challenges facing small-holder farmers and securing food for urban populations.

The food security challenges facing Southeast Asia are considerable and growing. The most recent data from the Food and Agriculture Organization of the United Nations (FAO) show that 77 million of Southeast Asia's population suffer from undernourishment. The challenge of meeting the region's food needs will only be exacerbated in future decades by supply pressures resulting from population growth, income growth, food price volatility and rapid urbanisation. Southeast Asia also faces mounting environmental challenges in the face of climate change as well as ongoing land degradation, land conversion and water management issues. It is increasingly evident that the key factors shaping the region's food security are interrelated, cross multiple issue areas, and are subject to myriad externalities.

In spite of these challenges, the region is witnessing significant progress as the food economy modernises. Decades-long underinvestment in agriculture had dampened productivity growth, but sustained high food prices coupled with increasing awareness of food security issues are resulting in growing private and public sector commitment to the sector. As supply chains modernise and streamline, Southeast Asia is witnessing an unprecedented rise in corporate grocers, and large-scale commercial ventures in storage, processing and transport. Transformation is also taking hold at the point of cultivation and production due to improved agricultural practices and technologies, but growers' access to and utilisation of such innovations remain uneven.

These opportunities and challenges were addressed under the four pillars of food security – namely, availability, physical access, economic access and utilisation – at the inaugural International Conference on Asian Food Security (ICAFS) in Singapore in August 2011, which had the theme 'Feeding Asia in the 21st Century: Building Urban-Rural Alliances'. Several key issues emerged from the ICAFS 2011 as being at the forefront of current food security

concerns. This brief will outline recommendations for three issue areas: the widespread impact of volatile food prices on food security, the myriad challenges facing the region's small-holder farmers, and the need to secure food for the region's rapidly growing urban populations.

## Impacts of Food Price Volatility

Along with much of the world, Southeast Asia has recently experienced extremes in food pricing, first with the volatility of the food price crises in 2007–2008, then with record-high food prices in 2010–2011. The rapid fluctuations in the price of staple foods and the recent sustained high food prices have pushed millions into poverty and caused devastation for the chronic poor in Asia. Although there are similar factors contributing to the price of food in the two instances – and the poorest segments of the population have suffered under both sets of conditions – there are distinct differences in the effects on the agricultural sector more broadly. For example, while price volatility generally leads to and exacerbates conditions of food insecurity, high food prices may encourage supply responses and crucial investment in the sector that will go far towards ensuring the region's long-term food security.

Food prices are influenced by a range of complex supply and demand factors, including speculation in agricultural commodity markets, environmental challenges and natural disasters, state protectionism, demand for biofuel, as well as the price of fuel and other inputs. Food price volatility in recent years has had disastrous consequences for the vulnerable segments of the Asian population, pushing tens of millions into poverty and causing increased hunger for the chronic poor in urban and rural areas. Among the rural poor, food price volatility has exacerbated the challenges facing the region's small-holder farmers, the poorest of whom are net buyers of food and thus face the double dilemma of lower income and higher prices for the food they purchase.

Sustained high food prices make it difficult for poor net buyers and low-income urban residents who spend a large percentage of their income on food to meet their basic household food needs. The Asian Development Bank (ADB) estimated in April 2011 that even a further 10 per cent rise in food prices would result in an additional 60 million people entering poverty in Asia this year. Small-holder farmers have responded to the greater income opportunities arising from high food prices by increasing their productivity through farm-level investment and the utilisation of high-quality inputs, despite the rising cost of such inputs. The long-term consequences of sustained high food prices remain to be seen. If, however, immediate and comprehensive measures could be implemented to improve the poor's economic access to food, a high-food-price scenario could be highly positive for the region's future food supply. Volatile food prices, however, provide no such prospect.

The most visible and immediate effect of fluctuating food prices is the uncertainty and hardship faced by poor consumers, but price volatility also presents broad and deep threats to Southeast Asia's medium- to long-term food security. For example, speculative investment increases during periods of price volatility, but crucial long-term private sector investment in the agricultural sector does not. Price volatility also has a significant macroeconomic effect on developing countries with strong reliance on food production and whose populations spend proportionately more on food. Furthermore, food crises resulting from volatility increase the risk of political responses which prioritise national interest, impacting not only the trade of food but broader regional relations. Rapidly fluctuating prices also have a long-term impact on food supply. Given the length of time from seed planting to retail, food price volatility does not allow small-holder farmers the opportunity to provide suitable supply responses. Moreover, small-holder farmers and agricultural producers are less likely to invest in measures to improve production or use high-quality inputs during periods of uncertainty.

### **Vulnerability of Small-holder Farmers**

Globally, an estimated 2 billion people depend on the world's 500 million small-holder farms for their livelihoods and food. In Southeast Asia, the small-scale production of food provides on- and off-farm livelihoods in rural areas for millions of people and is crucial to the region's supply of staple foods. Volatility in food prices is just one of the many challenges for the region's small-holder farmers and rural poor.

In comparison to large-scale producers, small-holder farmers often have less access to resources such as market information, finance, agricultural inputs and technology. Small-holders are also less resilient to weather events and have limited access to insurance. In many instances, women are marginalised within small-holder farming concerns, with typically even less access to resources than their male counterparts. As a result, the FAO estimates that yields of women-headed households in developing countries are 20–30 per cent less than male small-holder farmers. Finally, the greatest emerging challenge facing small-holders is the rapid modernisation of supply chains, with corporatisation and globalisation of agricultural production threatening to exclude them from emerging and changing markets.

These challenges have brought about several key adaptation trends among small-holder farmers, some resulting in increased output and productivity. For example, under conditions of sufficient access to market information, many farmers are diversifying and adapting their production in line with demand trends and price increases. Other adaptation strategies are likely to exacerbate food security challenges, such as the tendency for members of small-holder families to seek employment in urban hubs, often leaving the women to tend to farms.

### **Threats to Urban Food Security**

The movement of farm workers in Southeast Asia to urban areas is reflective of global urbanisation trends and patterns. The UN predicts that the world's population will reach over 9 billion by 2050 and it is estimated that over two thirds of these people will be living in urban areas, with the developing countries of Asia expected to house a number of the world's most populous cities. In order to meet the food needs that will accompany population growth, it is projected that global food production will need to increase by 70 per cent. The growing prevalence of urban diets will also result in increased demand for production-intensive foods such as meat, dairy products, fruit, vegetables and processed food.

Urban hubs and net-importing areas are reliant on the import of food to feed inhabitants; and the challenges involved in securing adequate and affordable supply, particularly for the urban poor, are complex. Rural areas will face growing demands to supply food to urban areas even as they face a decrease in farm labour, the conversion of farmland into roads and buildings, and increasingly volatile environmental conditions resulting from climate change.

Weak political and economic relationships between producing and importing hubs have the potential to undermine food security needs and negate potential mutual gains, and the efficient and open movement of food from rural to urban areas will become increasingly important as urbanisation takes hold. Varying grades of transportation, storage and electrification have an impact on supply to urban areas, and inadequate infrastructure along the supply chain continues to result in high incidences of spoilage.

Importing hubs are also vulnerable to the effects of price volatility and food scarcity on trade, particularly the nationalist and protectionist measures by exporting countries to secure their own food supply. Such actions have previously triggered moves by net-importing countries to secure land in net-exporting countries for agricultural production, raising controversies in some cases regarding the rightful ownership of land and just compensation. Internal and bilateral tensions over land acquisition have the potential to escalate as demand for food surges, rendering it essential that countries in receipt of deals take domestic food security needs and livelihoods into consideration at the time of agreement.

## Recommendations

- ***Produce effective government policies and enhance regional cooperation to prevent food price volatility and build resilience to fluctuating prices.***

The supply and demand factors contributing to food price volatility are complex, unpredictable, interdependent, involve myriad markets and actors, and are driven by fundamental free market characteristics. Addressing these factors without restricting free trade is a definite challenge, but one which is surmountable through well-crafted government policies and strong cooperative efforts at the regional level in preventing food price volatility and developing resilience to its impacts.

The ongoing use of key food crops for biofuel production must be reconsidered given the pressure this places on food prices and supply, and measures to encourage the use of alternative inputs for biofuels such as food waste and grass should be further explored.

In order to protect those most vulnerable to rapid price fluctuations, effective social safety nets to protect poor households and small-holder farmers should be firmly in place. During periods of sustained high

food prices, developing countries should prioritise the poor's economic and physical access to food, and should encourage agricultural investment and increased production in response to farmers' strong supply responses.

Current approaches to promoting price stability such as measures to stimulate production during periods of volatility are essential and should be extended. Increased transparency and open trade, particularly in rice, could decrease food price volatility in the region. Protectionist and market-distorting national policies should continue to be avoided in order to prevent hoarding and price spirals. Continued bilateral and multilateral efforts to strengthen trade relations with key agricultural trading partners, including the US, China and Australia, remain crucial.

Market information networks should be strengthened to improve early warning systems and strategic grain stockpiles at the state and regional level. Ideally, this would be done by building on ASEAN's existing mechanisms, including the ASEAN Integrated Food Security (AIFS) Framework, the ASEAN Food Security Information System (AFSIS) project and the Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS).

- ***Protect and build the capacity of small-holder farmers to alleviate poverty and enhance productivity.***

While the growth of large-scale commercial farms is becoming increasingly important in meeting the region's changing food demands, small-holder farming will remain crucial in providing food and livelihoods for millions in Southeast Asia. Therefore, policies and interventions by governments and international organisations that facilitate the inclusion of small-holders in modern supply chains and markets supplying to urban areas are essential.

Such measures must be complemented by actions driven by the private sector, researchers and civil society to improve small-holders' access to agricultural resources such as market information, technology, improved seed varieties, insurance and microfinance. The issue of women's unequal access to small-holder farming resources must be integrated and mainstreamed into these strategies given the potential social and productivity gains.

Finally, measures to build the resilience of smallholder farmers to intensified weather events should remain a priority for climate change policy stakeholders.

- ***Improve urban-rural alliances to provide stable food supplies to urban areas.***

In order to meet growing urban food demands, there is a need for innovative and complementary agricultural strategies aimed at facilitating improved yields in the face of challenges such as reduced available farmland and labour, and increasingly challenging environmental threats. Measures to intensify agricultural production must, however, be sustainable; they should not exacerbate current environmental challenges and deplete precious renewable and non-renewable land, forest and ocean resources.

Investment in agricultural R&D is key to such innovative strategies, as is investment in infrastructure, storage, farm technology and improved inputs. As a region, there is scope for Southeast Asia to further consider the utilisation of genetically modified (GM) organisms to heighten productivity and produce more resilient crops, particularly given the increased demand and competition for key crops for animal feed and biofuels.

Urban and net-importing areas must play a key role in the development of agricultural production in rural areas through investment in R&D and infrastructure, and through agribusiness partnerships. Urban consumer markets should also play a role in ensuring the stability of rural livelihoods. Strong and transparent political relationships between rural and net-importing areas remain essential for promoting open and transparent trade, and efforts should be made to ensure that land acquisition arrangements will not result in immediate or future tension. Finally, innovations in urban and peri-urban agriculture should continue to be developed and utilised by net-importing areas to improve, even if marginally, their self-sufficiency.

## **Conclusion**

In the context of anticipated rapid environmental, economic and demographic changes, Southeast Asia faces considerable food security challenges in the coming decades. Key challenges include food price volatility, threats to small-holder farming and the need to meet growing urban food needs. Given the complexity and multifaceted nature of the factors influencing the region's food security, addressing these challenges will require comprehensive, cooperative and considered measures at all levels of decision-making.

## **About the Author**

Sally Trethewie is Senior Analyst at the Centre for Non-Traditional Security (NTS) Studies at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University, where she researches for the Centre's Food Security Programme as well as its Climate Change, Environmental Security and Natural Disasters Programme. Sally holds a Master in International Politics from the University of Melbourne and recently co-authored a chapter for a handbook on International Political Economy.

## **Terms of Use**

You are free to publish this material in its entirety or only in part in your newspapers, wire services, internet-based information networks and newsletters and you may use the information in your radio-TV discussions or as a basis for discussion in different fora, provided full credit is given to the author(s) and the Centre for Non-Traditional Security (NTS) Studies, S. Rajaratnam School of International Studies (RSIS). Kindly inform the publisher (NTS\_Centre@ntu.edu.sg) and provide details of when and where the publication was used.

## **About the Centre**

The RSIS Centre for NTS Studies, NTU, was inaugurated by the ASEAN Secretary-General, Dr Surin Pitsuwan, in May 2008. The Centre maintains research in the fields of Food Security, Climate Change, Energy Security, Health Security as well as Internal and Cross-Border Conflict. It produces policy-relevant analyses aimed at furthering awareness and building capacity to address NTS issues and challenges in the Asia-Pacific region and beyond. The Centre also provides a platform for scholars and policymakers within and outside Asia to discuss and analyse NTS issues in the region.

In 2009, the Centre was chosen by the MacArthur Foundation as a lead institution for the MacArthur Asia Security Initiative, to develop policy research capacity and recommend policies on the critical security challenges facing the Asia-Pacific.

The Centre is also a founding member of and the Secretariat for the Consortium of Non-Traditional Security (NTS) Studies in Asia (NTS-Asia). More information on the Centre can be found at [www.rsis.edu.sg/nts](http://www.rsis.edu.sg/nts).