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Securitising Food Futures in the Asia-Pacific: Human Securitising Regional Frameworks

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Abstract

The global food crisis of 2007 to 2008 – which was characterised by both volatility in food prices and shortages of food – and the uneven but almost certainly largely negative impacts of climate change have drawn attention to the importance of food security as a regional challenge for the Asia-Pacific. Food insecurity in the region results from the convergence of uncertainties about inputs to food production and economic conditions that facilitate or restrict access to food. Regional strategies to achieve food security need to recognise the need to provide immediate remedial support to alleviate hunger and restore livelihoods, to enhance capacity to anticipate food uncertainties and to strengthen resilience to the impacts of future food disasters. A human security approach seeks to ensure that people are at the centre of regional food security frameworks – not just in terms of concerns over who the food insecure or food vulnerable are, but also in terms of ensuring that policies and programmes respond to local needs and community rights and that food security governance is participatory and transparent.

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Biography

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Introduction

The global food crisis of 2007 to 2008 and the uneven but almost certainly largely negative impacts of climate change have drawn attention to the importance of food security as a regional challenge for the Asia-Pacific. *The Millennium Development Goals Report 2010* shows that progress towards the target of halving the *proportion* of people in Asia and the Pacific who suffer from hunger by 2015 (against a 1990 baseline) has slowed (UN, 2010). The number of undernourished increased by more than 40 million between 2005 and 2007 after a fall in numbers between 1990 and 2005 (UN ESCAP, 2010:4). Further, 'new groups vulnerable to food security are emerging' as natural resources are degraded and as land, forest and fishing rights are taken out of the hands of local communities through privatisation (Schoenberger et al., 2010:4).

The food crisis was characterised by both volatility in food prices and shortages of food. The United States Agency for International Development (USAID, 2009:1), reports that in the 12-month period from March 2007 to March 2008, global food prices increased by an average of 43 per cent, with some food staples – such as wheat and soybean – increasing by significantly more. World stocks of rice (the staple food for almost half the world's population) were reported to be at their lowest since the mid-1970s (see Crimmins and Francisco, 2008). While food prices have decreased from their 2008 high, concern remains that markets and supply – and therefore people and their communities – remain vulnerable.

Several countries in the region fall within the category of 'low-income food-deficit' countries defined by the Food and Agriculture Organization of the United Nations (FAO) to describe countries that are poor in terms of net income per person, that are unable to produce sufficient food domestically to feed their populations and that also have insufficient foreign exchange to purchase food supplies on the international market. In the Asia-Pacific, these include Bangladesh, Bhutan, Cambodia, China, North Korea (Democratic People's Republic of Korea, DPRK), India, Indonesia, Lao PDR, Mongolia, Nepal, Pakistan, the Philippines, Sri Lanka and Timor-Leste (see FAO, 2011). Despite rapid economic transformation in some parts of the region, Asia still accounts for nearly two-thirds of the world's poor and the greatest proportion of those who are food insecure. Yet the region is also home to the world's six major rice producing countries – China, India, Indonesia, Bangladesh, Vietnam and Thailand – which together account for more than 75 per cent of world output.[1] It is in this region, therefore, that 'the war on food insecurity will be won or lost' (UN ESCAP, 2009b:11).

This paper has two purposes. It delves into the human security dimensions of regional food (in)security and it sketches out the institutional and normative imperatives of regional food security frameworks that take human security seriously.

[1] Based on figures cited in Remo (2008), the contribution to world rice production is: China, 30 per cent; India, 22 per cent; Indonesia, 8 per cent; Bangladesh, 7 per cent; Vietnam, 6 per cent; Thailand, 4 per cent. While their contribution to overall global production is comparatively small, Thailand and Vietnam are the world's largest exporters of rice.

Causes of Food Insecurity

The causes of food insecurity are complex. Food production in the region – from agriculture and fisheries – has always been vulnerable to the impact of weather and natural disasters, to conflict and the remnants of conflict, and to diseases that affect plants and animals.[2] However, food insecurity in the region is more than just a function of unpredictable crop yields. It results from the convergence of a number of factors that create uncertainties about inputs to food production and the economic conditions that facilitate or restrict access to food. These factors include:

- Increasingly unpredictable growing conditions as a result of the impact of climate change, drought and changes in rainfall.
- Over-exploitation of fish stocks as a result of industry over-capitalisation, new technologies and illegal fishing.
- Reduction in the quality of river ecosystems as a result of pollution, agricultural run-off and dam construction to the extent that many of the region's rivers are close to becoming biologically dead.
- Redirection of agricultural production away from food crops and into biomass energy (biofuel) production as a response to increases in the cost of energy amid concerns over the security of more traditional energy sources.
- A general reduction in investment in agriculture.
- Corruption and the 'over-enthusiastic' importing and hoarding of food supplies which are later left to rot (see Mathur, 2010a).
- Household income contraction as a result of a slowing of the global economy and loss of jobs.
- Increased demand for food products from a growing middle class (in some developing countries at least).
- Volatility of global markets in food commodities.
- Increased prices for agricultural inputs such as fertiliser and diesel fuel.

Liverman et al. (2009) demonstrate the ways in which the causes and impacts of food insecurity are also inextricably linked with global environmental change (including climate change) and global trade. These are not simple relationships but rather ones that can involve complicated ecological feedbacks as well as policy incoherence. Policy efforts to address aspects of environmental degradation could have negative consequences for food security if, for example, they place limits on how much land can be cleared for agricultural purposes as a way of enhancing carbon sequestration or if they encourage conversion of agricultural land to biofuel plantations to provide sources of energy to replace fossil fuels. The growth in global supply chains – sometimes referred to as 'food miles' – not only distorts the geography of food production but can lead to local and global environmental consequences through increased demand for water, pollution through overuse of agro-chemicals, coastal degradation as a result of aquaculture, and trade-related carbon emissions that can actually undermine the food and income security of local communities.

[2] This paper adopts the Food and Agriculture Organization of the United Nations (FAO) approach that includes crops, livestock and fisheries in the term 'agriculture' except when the term otherwise clearly refers to crop production.

Security and the Food Insecure

The use of the term 'security' to describe the reliability of food systems – food production, accessibility, distribution and utilisation – dates to the 1996 World Food Summit. Food security was defined there as existing when 'all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' (FAO, 1996).

In contemporary policy debates, however, the security dimensions of food crises have become more complex, multi-scale and interconnected. For some, the focus is on the human security of those who are poor, marginalised and most likely to be food vulnerable and food insecure. Others take a political-economy model of human/economic security, focusing on the farmers and fisher people for whom food production is a crucial livelihood issue, or on the economic consequences for countries that are increasingly required to be net food importers and for whom structures of supply and distribution are crucial. In a series of recent reports on climate change, security analysts have raised the spectre that food scarcity will cause higher levels of regional instability; that a decline in food production in already fragile areas could exacerbate the conditions for social destabilisation and distributional conflicts, along with the problems of weak and failing states; and that food scarcity could result in increased migration and mounting pressures on regional governments to accept refugee populations given the increase in the millions (noted above) of the number of food insecure in Asia.

Assessing the level and degree of food insecurity is itself a complex issue. As Michael Sheinkman notes, different measures – such as the food balance sheet (FBS) and the household budget survey (HBS) – will provide different evaluations of who is (or is likely to be) food insecure (see Schoenberger et al., 2010:11).[3] Measures that rely on hunger alone can be restrictive in shedding light on food insecurity in part because the idea of 'hunger' is a subjective one for which there is no universally agreed definition (Mukherjee, 2008:1). The Global Hunger Index seeks to overcome some of these measurement problems by including undernourishment. The idea of undernourishment rather than just hunger captures not only a reduction in access to food (whether because of availability or price) but also a reduction in the *quality* of food. Other efforts to measure hunger or food insecurity include the numbers of underweight children as a proxy for undernourishment and hunger. However, as the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP, 2009a:27–8), notes, many of these measures rely on data that can be difficult to gather at sub-national and local levels. Efforts to establish a minimum level of caloric (or energy) requirements as the benchmark for food insecurity or for undernourishment face similar problems (see Bassett and Winter-Nelson, 2010:19–25). As the FAO (2010:8) recognises, the minimum dietary energy requirement (MDER) 'varies by country and from year to year depending on the gender and age structure of the population'.

Food insecurity has other flow-on consequences for people and for economies. It exacerbates poverty and increases the health and disease burden (including child mortality and malnutrition). The UN ESCAP (2009b:3) suggests that each year 'between 1.8 and 2.4 million deaths in the Asia Pacific region could be attributed to food insecurity'. Economic

[3] The food balance sheet (FBS) calculates the amount of food in a country that is available for distribution. The household budget survey (HBS) provides a potentially more accurate measure as it accounts for purchasing power and therefore access to food.

capacity and sustainability are undermined when the ability of poorly nourished people to work effectively, either for themselves as farmers or fishers in subsistence economies or in a labour market, is compromised. The demand for food imports to compensate for lower levels of production has consequences for a country's exchange earnings (see, for example, Akhir et al. (2009) on Malaysia) which can further impair poverty alleviation efforts.

Food (In)security in the Region

The Intergovernmental Panel on Climate Change (IPCC) reports a litany of climate change impacts in Asia and the Pacific, among them a decline in crop yield, unpredictable rainfall, an increased risk of hunger and water resource scarcity (Cruz et al., 2007). The Asia-Pacific already has the lowest per capita availability of land in the world (see UN ESCAP, 2010:10). In some countries, agriculture still constitutes a major component of the labour force and national economies.[4] In others, where industrialisation has been a central factor in economic transformation, the contribution of the agricultural sector to national gross domestic product (GDP) is in decline. Nevertheless, agriculture remains an important economic sector across the Asia-Pacific and, as Timmer (2009) points out, the region is 'about five times more dependent on agriculture than the rest of the world'.[5] This increases vulnerability to the ways in which environmental and economic factors are likely to affect food production.

Various projections have been made with respect to a likely decrease in cereal and rice production in the region as a result of climate change. While the extent and nature of this depends on the particular climate scenario used, most (but not all) project some decline at the same time as population continues to increase. Changing patterns of agricultural production, a reduction in the amount of land available for food crops and the impacts of climate change have been major factors contributing to actual and projected shortfalls in food production and to increased prices.

Considerable effort has been expended on estimating rice production in particular as it is a key staple for regional food security. Officials in Indonesia have warned that climate change and the impact of droughts and flooding could result in losses of up to 1.6 million tons of rice a year, undermining government targets for a 5 per cent annual increase in national rice production (see Rulistia, 2008). The China Meteorological Administration has calculated that global warming could cause China's grain harvest to fall by 5 to 10 per cent, with a food shortfall of 100 million metric tons by 2030, a serious problem in a country which is already losing farmland to deserts and which has little capacity to increase arable land (Climate Change, 2007).

Data from the ASEAN Food Security Information System (AFSIS) suggest that 'total ASEAN production of paddy … increased steadily from 120.7 million metric tons in 1993 to 178.8 million metric tons in 2006' (ASEAN, 2008). Nevertheless, the actual *rate* of growth is in decline with some figures showing a drop in growth from 2.2 per cent a year between 1970 and 1990 to only 0.8 per cent a year between 1991 and 2007 (see Remo, 2008; Timmer, 2009). The various findings reported by the IPCC anticipate an overall decline in rice production in Asia of almost 4 per cent by 2100 (Cruz et al., 2007). Overall crop yields in Asia are also expected to decrease by up to 10 per cent by 2020 and 30 per cent by 2050 in

[4] In Southeast Asia, the proportion of the labour force engaged in agriculture ranges from 16 per cent in Malaysia to 69 per cent in Cambodia and 81 per cent in Timor-Leste (Prachason, 2009:1).
[5] This is based on calculations of the share of agricultural value added in gross domestic product (GDP).

some parts of the region. Timmer (2009) reports that, in East Asia, rice now constitutes less than 10 per cent of agricultural output (down from 20 per cent, although he does not report the baseline), and in Southeast Asia 32 per cent (down from 40 per cent in 1961). This may well be a result of agricultural diversification but it is nevertheless significant in a region in which rice remains a staple food, particularly for the poor for whom the cost of other food crops can be beyond reach.

Small-scale farmers still produce much of the region's food. However the agricultural sector is increasingly characterised by changes in the balance between smallholder and subsistence agriculture on the one hand, and plantation/estate crop agriculture on the other.[6] The former produces mainly for family/household consumption and local domestic markets while the latter is frequently given over to production of export crops. While crop yields are often higher in the case of the latter, this form of industrialised agriculture is also characterised by higher input costs in the form of labour, chemical use and technology. It also undermines the social benefits of agriculture (which includes artisanal fisheries production), such as 'income, self-employment and social safety net[s]' (Prachason, 2009:2).

Agricultural land is also being diverted from food production to the production of non-food crops. The UN ESCAP (2010:5) reports, for example, that 'as much as 70 per cent of the increase in global maize production between 2004 and 2007 … was for the production of ethanol to produce biofuels'. The ownership of agricultural production is also being taken out of the hands of local people as governments encourage overseas investment. Prachason (2009:2) reports, for example, that investors from Kuwait, Saudi Arabia and Qatar have been exploring options for purchasing or leasing agricultural land in Southeast Asia to ensure their own supplies of food.

The production and availability of food, and access to food, can also be disrupted by disasters of nature such as floods, cyclones, landslides, earthquakes, droughts and insect infestations. Disasters such as these can have multiple effects on food security in the region, destroying crops, taking arable land out of production, damaging agricultural infrastructure such as irrigation and disrupting food supply chains if roads, bridges, rail and other forms of distribution are destroyed. Demand for food assistance and food aid could intensify if people are displaced, if their income choices are narrowed or lost, and if disasters result in disease and an increased health burden.

Policy Responses

The Rome Principles for Sustainable Global Food Security, adopted at the 2009 World Food Summit in Rome called for a 'twin-track' approach that would 'tackle hunger for the most vulnerable' in the short term and develop medium- and longer-term programmes to 'eliminate the root causes of hunger and poverty, including through the progressive realisation of the right to adequate food' (FAO, 2009a:3; see also De Schutter, 2009:3). Governments can move to 'restrict the transmission of the increase in international prices' or they can compensate those who are most directly affected by those increased prices (see TKN, 2009:1). In other words, achieving food security is about providing immediate remedial support to alleviate hunger and restore livelihoods, increasing capacity to anticipate food uncertainties and strengthening resilience to the impacts of future food disasters. It is also

[6] Akhir et al. (2009) explore these changes in the Malaysian context.

about restructuring and improving local, regional and global economic practices that influence production and distribution in order to minimise the likelihood of food insecurities.

The complex of food security concerns explored above has generated demand for a range of short-, medium- and long-term strategic policy responses to address the following: (1) increase the resilience and sustainability of agriculture and fisheries productivity; (2) improve disaster risk management; (3) enhance social protection schemes; and (4) strengthen community-based development. The spectrum of modalities and instruments available to governments to achieve these food security policy aims include the following:

Agricultural market systems

- Guaranteed minimum prices for local production.
- Import and export controls.

Human capacity

- Extension programmes and training.
- Farmer empowerment programmes which recognise the role of women and indigenous peoples.

Agricultural management

- Rehabilitation of agricultural infrastructure and improvements to post-harvest food and seed storage (USAID, 2009).[7]
- Efficient irrigation and double-cropping techniques.
- Pest management.
- Expansion of the amount of land under cultivation through strategies such as reclamation.
- Agricultural research.
- Development of alternative food sources through various means, including aquaculture.
- Private sector participation, which could include public-private partnerships.

Income and finance

- Employment opportunities for those who are landless and those who are unemployed or underemployed (which take into account employment discrimination against already disadvantaged groups).
- Income guarantees for farmers and incentives for 'agricultural entrepreneurs' (Akhir et al., 2009).
- Land reform and promotion of off-farm employment (see UN ESCAP, 2009b:5).

[7] Civil society groups have called for research to emphasise low-input and organic agriculture and to recognise the benefits of local and traditional knowledge (see Agribusiness Action Initiative et al., 2009:3).

Safety nets

- Food assistance for the poor in both urban and rural contexts could include, where necessary, 'conditional cash transfers' and programmes to ensure the physical delivery of food (Asia Society and IRRI, 2010:6).

In the face of the 2008 'price hikes', individual countries in the region took various steps to protect food sources, particularly rice. Governments moved to reduce domestic taxes on food staples, establish price controls and target food subsidies towards those most in need. China, for example, instituted controls on the price of cooking oil, grain and other staples including meat, milk and eggs (see Bradsher, 2008). In the face of domestic demand, fears of shortages, and in some cases, efforts by price gougers to hold onto grain in anticipation of further price rises, some governments imposed export controls despite concerns that 'export restraints [could] have an adverse impact on domestic producers' (UN ESCAP, 2009b:5). The government of Vietnam announced plans to reduce rice exports by almost 25 per cent. Cambodia banned all exports of rice (government agencies were exempt from these restrictions) and the Indian government placed a ban on all rice exports except for the most expensive grades (see Bradsher, 2008). Thailand also imposed export restrictions. At the same time, the government of the Philippines, one of the world's largest importers of rice, sought supply guarantees from its neighbours, in a bid to overcome rising prices and shortages in government rice stocks which by February 2008 were reported to be down to about eight days of consumption (Vietnam Asked, 2008). The irony is that, in some cases, these various efforts to protect national food security seem to have reduced availability for local consumers. They also seem to have driven global prices even higher, often without local farmers seeing any benefits from such increases (for more, see Arnst, 2009).

Regional Responses

It is clear from the regional impacts of the 2008 food crisis that the challenge for the Asia-Pacific is how to 'make progress in guaranteeing food security in a context where the production of food will be increasingly stressed in the face of decreasing resources pitched against continually expanding demand' (Mukherjee, 2009:1). Because food insecurities are no longer just local problems, food security requires that effective policy responses are supported by regional governance arrangements. The 2009 Rome Principles adopted at the World Food Summit called for strategic coordination at a *regional* level in a way that would 'promote better allocation of resources, avoid duplication of efforts and identify response-gaps' (FAO, 2009a:3). Such coordination efforts are nested within global food security governance arrangements such as the Comprehensive Framework for Action of the UN High Level Task Force on the Global Food Crisis.

The rationale for regional action on food security, as on many other issues, is in part driven by the assumption that regions are a logical and natural location for policy responses and government actions on issues that cannot be addressed easily by individual countries. Collective regional responses that can facilitate knowledge transfer, build expertise, enhance opportunities for innovation and reduce transaction costs are also perceived to confer efficiency advantages.

There is, however, also a kind of institutional path dependency – existing regional organisations feel compelled to take up new issues and be seen to be responding to new challenges. In the Asia-Pacific, this has generated a labyrinth of food security authorities and arrangements, established through a variety of declarations, programmes, frameworks and plans, including the following:

- The ASEAN Food Security Information System (AFSIS) – *October 2002*.
- The Second Joint Statement on East Asian Cooperation – *November 2007*.
- The ASEAN Plus Three Cooperation Work Plan 2007–2017 – *November 2007*.
- The upgraded East Asia Emergency Rice Reserve (EAERR), which was originally established as part of the implementation of the 1974 agreement on an ASEAN Food Security Reserve (AFSR) – *August 2008*.[8]
- The Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS) – *February 2009*.
- The ASEAN-FAO Regional Conference on Food Security – *May 2009*.
- The Network of East Asian Think-tanks (NEAT) Working Group on East Asian Food Security – *July 2009*.
- The ASEAN Multi-sectoral Framework on Climate Change and Food Security – *September 2009*.
- The Cha-am Hua Hin Statement on ASEAN Plus Three Cooperation on Food Security and Bio-energy Development – *October 2009*.
- The ASEAN Plus Three Roundtable on Food Security Cooperation Strategy – *October 2009*.
- The 31st Meeting of the ASEAN Ministers on Agriculture and Forestry – *November 2009*.
- The Asia and the Pacific Regional Food Security Partnership Framework by the Asian Development Bank (ADB), FAO, International Fund for Agricultural Development (IFAD) – *July 2010*.
- The Asia-Pacific Economic Cooperation (APEC) Food System and the 2010 APEC Action Plan on Food Security – *October 2010*.

Many of these are the product of protracted meetings and negotiations among governments and regional agencies. ASEAN's efforts, in fact, date at least to 1993 and the Ministerial Understanding on ASEAN Cooperation in Food, Agriculture and Forestry which included strengthening food security in the region as one of its main priority areas. The more recent SPA-FS was prepared by an Ad Hoc Task Force and endorsed, along with the ASEAN Integrated Food Security (AIFS) Framework, by the ASEAN Ministers of Agriculture and Forestry in October 2008. The 2008 ASEAN Senior Officials Meeting and ASEAN-UN Meeting on Food Security (which also agreed to an ASEAN-UN Convergence Matrix of Programmes and Activities on Food Security) the same year gave it further support. The SPA-FS was then formally adopted at the 14th ASEAN Summit in February 2009.[9]

[8] The provisions of the agreement have never actually been invoked; see Akhir et al. (2009:6).
[9] The Summit also adopted the ASEAN Integrated Food Security (AIFS) Framework and a Statement on Food Security in the ASEAN Region.

These frameworks and proposals have a range of objectives – to improve and guarantee food supply through both production and trade measures, to tackle food prices, to establish effective emergency measures (particularly for staples such as rice), to support livelihoods in the agricultural sector (particularly those of small-scale farmers) and to provide food safety nets for those who are most vulnerable. The AIFS Framework, for example, is intended to improve the livelihoods of farmers and support the long-term achievement of food security. The APEC Food System, on the other hand, focuses on commitments to an open market in order to improve efficiency in agricultural production, food trade and the take-up of advances in agricultural technology including biotechnology products.[10] The EAERR is a mutual assistance programme to provide food assistance and strengthen food security in emergencies through sharing rice stocks and contributing to price stability in the region.

At issue is whether the multiple regional arrangements outlined above are able to function as partnerships in innovation, or whether they remain disaggregated and disconnected from each other with the consequence that regional efforts are characterised by duplication and overlap, increasing rather than decreasing transaction costs. This complex of frameworks can serve to demonstrate the importance that governments and regional institutions ascribe to the challenges of food security. However, it also runs the risk of policy incoherence and conflictive fragmentation, a situation which arises when 'an issue area is marked by different institutions that are hardly connected and/or have different, unrelated decision-making procedures' (Biermann et al., 2010).

There has, in fact, been no paucity of proposals for additional organisational and programme arrangements that might serve to strengthen the coordination of regional food security responses. Mukherjee (2008:6–7) calls for the establishment of an 'Asia Pacific International Grain Bank (APIGB) to which surplus countries would sell grain and from which deficit countries would have access in "times of distress"'. The Asia Society and International Rice Research Institute (IRRI) Task Force recommend that there should be a Center for the Coordination of Food Security Activities in Asia, perhaps based in an existing institution such as the FAO Regional Office or the ADB (Asia Society and IRRI, 2010). In April 2008, Thailand's then Prime Minister called for the development of an Organisation of Rice Exporting Countries (OREC) which would include Cambodia, Lao PDR, Burma, Vietnam and Thailand. The proposal was dropped amid fears of cartel practices that would also contradict the objectives of the ASEAN Free Trade Agreement (FTA).

Along with a growing concern about regional food security, governments have acknowledged that continued efforts will be required to exchange and evaluate information on best practice, and to identify and address emerging issues related to food security. Indeed, these are specifically addressed in the AFSIS. At the regional level, these efforts take on extra importance in the face of charges that 'the food price rise exposed the weaknesses of Asian regional mechanisms in handling and finding a remedy for such crises' (Mathur, 2010b:6) and calls for governments to 'improve and expand the existing food security mechanisms in the region' (Chandra and Lontoh, 2010:v).

There is a substantial body of sector-specific literature on food security, but there has been little systematic research that assesses the extent of coherence or fragmentation of regional responses and evaluates the impact of those responses. Little is known, therefore, about the

[10] These issues have been the focus of the APEC High Level Policy Dialogue on Agricultural Biotechnology (HLPDAB).

potential of regional initiatives such as those listed above to meet simultaneously the human and national security dimensions of food insecurity, to guarantee a resilient and secure food system and to protect those who are most vulnerable to food scarcity. One of the challenges in undertaking such an evaluation exercise is that there is no agreement on the key indicators of success, form or function. However the human security approach introduced earlier in this paper offers an indication of the necessary (although not necessarily sufficient) components of regional food security frameworks if they are to take food vulnerability and insecurity seriously.

Human Securitising Regional Food Security Frameworks

The kinds of food security responses described above usually fall into one of three categories – those that focus on food aid, those that focus on increasing food production and, citing the US Secretary of Agriculture, those that focus on 'advancing a food market that allows agricultural products and food production technologies to circle the globe freely and efficiently' (Arnst, 2009:17–9). The human security approach to food security rests on the question 'where are the people' in all of this? From this perspective, regional food security frameworks should be people-centred rather than just people-oriented. As the FAO puts it, 'to work towards a lasting solution, you must understand the context, and to understand the context, you must understand the people' (FAO, n.d.).

- *Regional food security frameworks should start not with questions about how to define food security or insecurity but with questions about who the food insecure are and what food insecurity actually means to them.*

As Mathur (2010b:7) points out, 'food security can only be achieved if food becomes available and accessible to the most vulnerable sections of society'. Food security frameworks should therefore be able not only to identify the most vulnerable but also to recognise that vulnerability can take multiple forms. Equating food vulnerability solely with poverty is frequently too simplistic, even though it is often those who are most poor who have the least opportunity to overcome food vulnerability without assistance and for whom food security is equated with food self-sufficiency rather than food self-reliance (see Chandra and Lontoh, 2010:3). Evidence suggests that even in those countries where the amount of land given to agricultural production has increased, under-nourishment has not reduced. The explanations for this are likely to be complicated but they rest in part on whether those who are most vulnerable to food insecurity are able to afford food staples and whether agricultural production is for domestic or international markets.

- *Regional food security frameworks should recognise and facilitate community-based responses to the challenges associated with food insecurities*.[11]

One of the challenges in dealing with food security arises from the intersection of questions of scale and patterns of risk and vulnerability as they articulate at the sub-national level. The UN ESCAP (2009b) suggests that at the local level, most food insecurities are experienced 'idiosyncratically' – that is, each individual's or household's experience is only remotely connected to or related to those of neighbouring individuals or households. Yet policy responses and food security frameworks are generally unable to deal with this degree of

[11] The UN ESCAP (2009b:6) acknowledges that even at the level of the community, some groups can be more disadvantaged though exclusion from the benefits of food security programmes and management.

individuality. Rather they are based on 'covariance', the idea that 'households in the same locality suffer similar [food security] shocks' (UN ESCAP, 2009b:6).

An approach which focuses on community rights and responses is somewhat akin to the livelihoods model adopted by the FAO (n.d.:1) which, in echoing the key themes of a human security approach, calls for a 'realistic analysis of [people's] livelihood strategies [to] provide an adequate understanding of how they live and make a living' at the local, household and individual level.

- *Regional food security frameworks and policies should be sensitive to equity concerns at national and local levels.*

Food insecurity is compounded by inequities that create a distinction between 'food-deficit' countries (those that do not produce enough food to feed the population) and food-inequality countries (in which there is sufficient food but it is inequitably distributed) (see, for example, World Vision, n.d.). Food security disparities between urban and rural populations within countries are also pronounced (UN ESCAP, 2009b:4). At the same time, the purchasing power of poorer households in both urban and rural environments has diminished in the face of the global financial crisis (or economic downturn as some prefer to call it) through a combination of unemployment, income contraction and high prices. While regional and global food prices have on average declined from the highs of 2008, they remain higher than before the food crisis. As a result, even when food availability has improved, the poor frequently have reduced access to that food. In Southeast Asia alone, over 300 million people, or over 40 per cent of the region's population, live on incomes that fall below USD2 per day.[12] These are the households that also spend a significant proportion of income on food staples – as much as 50 to 60 per cent according to the International Food Policy Research Institute (IFPRI, cited in USAID, 2009:1).

In the absence of formal and informal social safety nets, other groups such as the elderly, the ill, the disabled and the displaced, for example, are more vulnerable to food insecurities and to related health and economic consequences. This is further complicated by gender inequity. Women are more likely to suffer higher levels of malnutrition, because of income differentials which mean that women have less disposable income for food even in a formal income-based economy, or because women feed men and then children before themselves and therefore eat less well in terms of quantity and quality of food. As the World Bank et al. (2009:11) point out, 'gender-based inequalities all along the food production chain "from farm to plate" impede the attainment of food and nutritional security'.

For many, the emphasis on equity changes the debate from one about food security to one about food sovereignty. The concept of food sovereignty was developed by what is now a global movement of peasants and farmers' organisations as a bottom-up challenge to more conventional approaches to food security that rely on material indicators such as the quantity, quality and distribution of food. Food sovereignty advocates a rights-based approach in which access to adequate, nutritious and safe food is only one part of a broader framework that includes 'access to land, water, genetic resources, as well as the people's right to know and to decide about their food policies' (FSPI, 2006:6).

[12] According to 2005 figures, about 93 million (18.8 per cent) people in Southeast Asia live below the USD1.25-a-day poverty line, and 221 million (44 per cent) below the USD2-a-day poverty line (ADB, 2009b:53).

- *Regional food security frameworks should recognise the environmental dimensions of food security*.

Concerns about the impact of global environmental change, and climate change in particular, on agriculture and fisheries have been prominent in debates about food security. Climate change threatens 'food production systems and … the livelihoods and food security of billions of people who depend on agriculture in the Asia and Pacific region' (ADB, 2009:1). The environmental dimensions of food security also involve efforts to ensure the sustainability of natural resource and ecosystem inputs to food production and to diminish the environmental externalities including those which create negative feedback loops.

Efforts to increase agricultural productivity and food yield need to take account of environmental impacts in ways that 'conserve water, land and energy-intensive inputs while also building resilience to the expected impacts of climate change' (Asia Society and IRRI, 2010:3). Indeed, the FAO and the World Bank have calculated that only a limited component of growing food demands – about 10 per cent – can be met in an environmentally responsible way from new cropland (see Johnson et al., n.d.:3). The increasing use of agri-chemicals and fertilisers to generate or sustain high food yields on existing cropland can, however, actually undermine local food security through pollution of rivers and coastal fisheries, through soil depletion and through a reduction in crop diversity. Such environmental degradation further exacerbates the food security problems of those who rely on artisanal fisheries, subsistence crops or forest foods.

- *Regional food security frameworks must institute governance arrangements that are transparent and accountable*.

The successful implementation of food security strategies requires 'responsive and accountable government institutions' that are able to overcome the problems of 'poor institutional set-ups and poor governance' (UN ESCAP, 2009b:10). This is not just a question of institutional design or the policies and strategies adopted or implemented under the auspices of regional organisations. This is equally an issue of input legitimacy and the processes by which those frameworks and policies are developed, contested and implemented. This requires that those who are most affected by food insecurities – but who are frequently excluded from having a voice on the structures and decisions that affect them and the way they live their lives – have the right to information and access to policy processes. This is about ensuring genuine participation and dialogue. As the FAO (2009b:45) argues, food security governance based on a human security or right-to-food approach demands 'participation, non-discrimination, transparency and empowerment'.

- *Regional food security frameworks need to address trade, markets and investment in a way that recognises social responsibility and equity.*

The 2009 Rome Declaration adopted at the World Summit on Food Security called for 'open markets as they are an essential element of a global food security response' (FAO, 2009a:2). It also required that 'international measures to mitigate the impact of food market volatility on the poor' should be 'non-market-distorting' (FAO, 2009a:4). As Koyama (2009:53) notes, an open market can encourage technological innovation and dispersal and free(r) trade can function to 'increase options for food supply'. He also recognises that markets cannot account for values such as sustainability, diversity and equity unless they are regulated 'as fairly as possible' (Koyama, 2009:53). Prachason (2009:3) points out that

under a market-oriented structure of supply and trade, most small farmers are price-takers with little bargaining power or control over returns and no direct access to the market. In this context, the move towards further trade liberalisation through FTAs, which are characterised by tariff reductions among other things, can have a negative impact on smallholders and landless farmers unless they include safeguards such as those found in the Australia-Thailand FTA.[13]

At the global level, this raises questions about the kinds of food systems that are built upon, and give support to, industrialised and export-oriented agriculture, and stresses, among other things, the need to protect internal markets from low-priced dumped imports as a way to ensure fair prices for farmers (see Haugen, 2009:264). This emphasis on social responsibility extends to structures of investment in agriculture and food production. At the July 2010 Investment Forum for Food Security in Asia and the Pacific coordinated by the ADB, FAO and IFAD, for example, civil society organisations called for private sector investment in agriculture to be socially responsible, benign, equitable and 'work for the betterment of small scale farmers' (Agribusiness Action Initiative et al., 2010:1). Clapp (2009:1193–4) suggests that the policy emphasis on food supply and demand diverts attention from a macro-level analysis and therefore under-estimates the importance of 'strict regulation on commodity markets to limit speculation' and to reduce corporate concentration in the agricultural sector.

Conclusion

From a human security perspective, the burgeoning number of regional frameworks will not be able to guarantee food security if they rely on top-down decision-making and technical responses that overlook the concerns of the most vulnerable people. Food security frameworks, and the policies and strategies that they establish, need to be people-centred, not just people-oriented. They need to be engaged with, and responsive to, the vulnerabilities and security needs of local communities. The frameworks require strategies and institutions that are inclusive and transparent. They will need to manage questions of scale, to provide enabling environments for improving food security and food sovereignty at the community, national and regional level. It is these conditions that will ensure that food security frameworks have the potential to increase individual adaptive capacity, build resilience and save lives.

[13] Agricultural safeguards are intended to protect farmers from import surges and price depressions. The kinds of safeguards that might be negotiated in FTAs include volume triggers (tariffs or customs duties are invoked or increased once a particular volume of import trade is reached) and price triggers (tariffs and duties are invoked if prices fall below a certain level); see Kruger et al. (2009). Even so, as Prachason (2009) points out, those measures are often complicated and the triggers of 'serious injury' in terms of price or import surges defined in those safeguards are difficult to demonstrate in practice.

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