



POLICY BRIEF

An application of resilience thinking to Asia-Pacific food systems

Key messages

- A resilience-thinking approach can help policy makers in addressing the risks confronting several critical human systems of the Asia-Pacific region.
- Application of the resilience-thinking approach reveals that food systems of the region are vulnerable to risks ranging from climate change to overdependency on limited number of suppliers.
- Policy makers should proactively identify and adopt measures to build resilience of food systems, some of which are highlighted in this policy brief.





An application of resilience thinking to Asia-Pacific food systems

Policy Brief

People in Asia and the Pacific today face increasingly diverse and interlinked risks, which are growing in severity. Processes such as climate change, increasing intensity of natural hazards, rising youth unemployment, demographic change and technological changes are reshaping the increasingly complex risk landscape of the region (see ADB, 2017; ESCAP, 2017). These processes and their interactions can increase the number and severity of risks faced by critical human systems (economic, financial, social, environmental, social, legal and regulatory systems) and often act as 'risk-multipliers'. Furthermore, challenges that were once localised can now escalate into a global crisis, due to the increasingly integrated nature of human systems (see Hendrix, C. & Brinkman, H.-J., 2013).

Combined, these trends are leading to increasingly complex and unpredictable outcomes for societies in the region, often with disproportionate impacts on marginalised groups and communities. These challenges make the central aspiration of the 2030 Agenda for Sustainable Development – “to leave no one behind” – ever more challenging.

The Asia-Pacific region's resilience – its ability to absorb and recover from shocks, and to adapt and transform people's structures and means for living in the face of long-term stresses, change and uncertainty – must be 'tapped' more effectively. A resilient society does more than bounce back from disruptions and crises by bringing human systems back to their previous state, but also tries to develop solutions that bring about a new state that is more capable of addressing present and future challenges. In other words, resilience incorporates the ability of individuals, communities and systems to survive, adapt and grow in the face of stress and shocks; to convert risks into opportunities; and to transform when conditions require it. (Rockefeller Foundation, n.d.).

While several of the SDGs make specific reference to resilience, the relevance of resilience can be understood in the context of any of these goals. Take, for example, Goal 1: to end poverty in all forms

everywhere. While economic growth can propel people above income poverty lines, shocks – such as natural hazards exacerbated by climate change, industry relocations due to technological change, or health deterioration due to exposure to pollution – can push people back into poverty. In this context, for instance, a resilient society will anticipate potential job losses from technological disruptions, and provide vulnerable populations with training in specific skills that will allow them to find better jobs in other sectors.

Strengthening resilience requires governance approaches, institutions and policies that are better geared to dealing with risk. These actions needed to strengthen resilience can be understood in terms of core resilience capacities (see Béné et al., 2012; Tanner et al., 2017), which include:

- **Anticipatory capacity:** the ability to anticipate and reduce the impact of shocks through preparedness and planning.
- **Absorptive capacity:** the ability to absorb and cope with the impacts of shocks and stresses.
- **Absorptive capacity:** draws mainly on the available resources within human systems to recover from adverse conditions.
- **Adaptive capacity:** the ability to take deliberate and planned decisions, even when conditions have changed or are about to change, to achieve a desired state.
- **Transformative capacity:** the ability to take deliberate steps to break away from the status quo or to change systems that create risks, vulnerability as well as inequality.

The Asia-Pacific region has several successful examples of strengthening resilience capacities. The remarkable resilience shown by the region during the 2008 economic crisis was partly driven by measures and policies put in place, based on learnings from the Asian financial crisis of 1997 (see Jeasakul et al., 2014).



Step 2. How do these drivers impact the food system and who is most vulnerable?



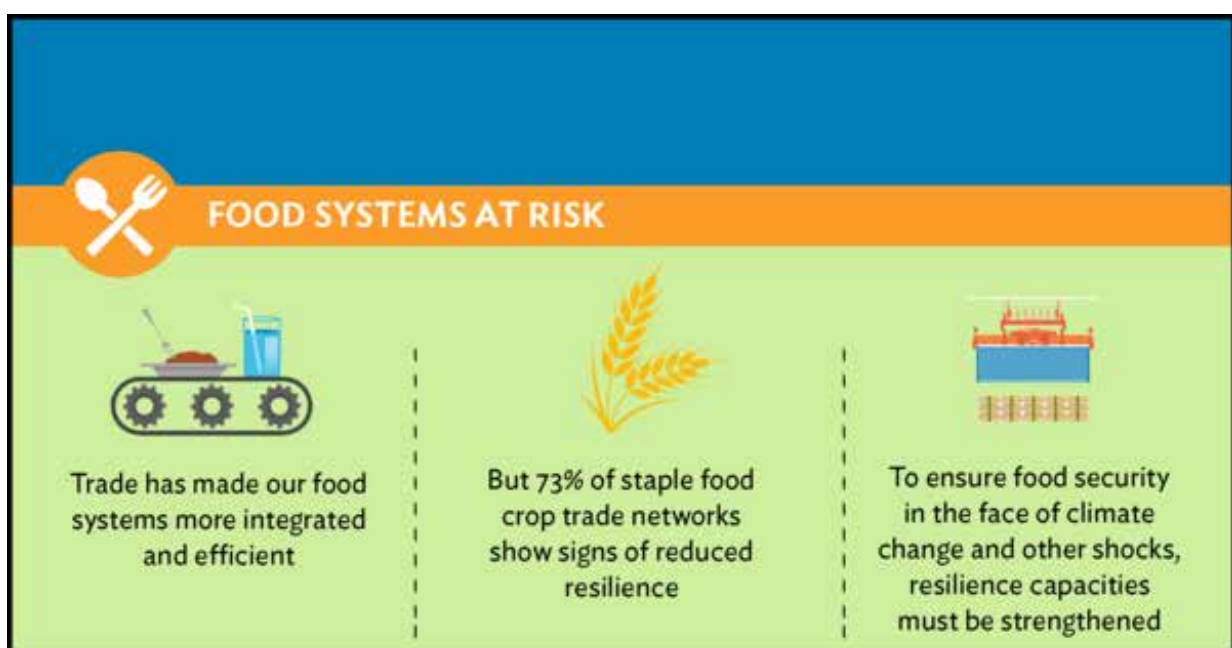
Trade systems have become integral to regional food systems. Global trade in commodities is increasingly essential for food security, helping countries to diversify the nutritional base, maintain supplies, stabilize prices and provide alternative food options at times of shortage – an increasingly urgent issue, as factors such as climate change and population growth affect local production and availability. The use of global trade networks for food sourcing is so widespread that around 80 per cent of people now live in net food-importing countries (see Porkka et al., 2013).

Analysis of the resilience of 74 staple food and agriculture commodity trade networks in the Asia-Pacific region between 1986 and 2013 revealed that 73 per cent of these networks showed signs of weakening resilience (see Kharrazi, 2018). In other words, countries are becoming more reliant on fewer countries for their food imports as these trade networks are becoming more efficient.

This presents countries in the region with a difficult tradeoff. With this growing dependency on a limited number of suppliers, countries' vulnerability to supply disruptions is increased, and they have fewer options to ensure an adequate and timely supply of food when disruptions in trade occur.

The combination of increasing vulnerability and reduced resilience within food systems points to an increasing risk of food supply disruptions, including through food price fluctuations. It highlights important potential trade-offs between policy measures that increase economic efficiency and those that safeguard resilience. This has important implications for the region. For example, the food price shocks of 2007–2008 increased the depth of poverty in rural areas and led to higher rates of malnutrition (see Compton et al., 2010).

Climate change and resulting food shortages have the potential to increase the number of malnourished children in South Asia by 7 million (ADB, 2017). Such vulnerable groups and communities should be identified early on, and it is vital that they are placed at the core of society's efforts to strengthen resilience, in order to achieve the central aspiration of the 2030 Agenda – to leave no one behind. Otherwise, a repeat of such shocks could undermine the ability of the region to meet several targets of the 2030 Agenda.





Step 3. How can we strengthen resilience capacities to address emerging risks?

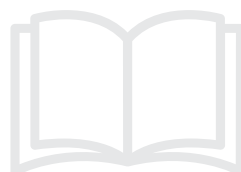


This analysis can inform the policy responses required to build the resilience capacities of food systems in the region, some of which are highlighted here.

- **Anticipatory capacity:** the region needs to closely monitor the emerging effects of climate change on its key food production areas. It is important to convey early on any climate anomalies, including variations in weather patterns, that can undermine the production potential of the main agricultural areas of the region.
- **Absorptive capacity:** community- or national-level food stocks can be created to tide over any unexpected food shortages.
- **Adaptive capacity:** plans related to national agriculture (cropping patterns) and food security, as well as climate change strategies, need to reflect these potential impacts of emerging risks,

particularly in the food production areas that are most vulnerable to climate change. Conserving biodiversity and promoting similar ecosystem-based approaches can also help strengthen adaptive capacity.

- **Transformative capacity:** one important lesson from the earlier analyses is that the trade networks that support the provision of food in the region are showing signs of weakening resilience. Countries need to deliberate jointly how to integrate strategic provisions within trade agreements, especially preferential trade agreements, to increase the resilience of trade networks for critical commodities.





Policy Conclusions

The following policy messages emerge from the above discussions

- **Resilience-thinking approaches can highlight critical issues:** The food systems example highlights how a resilience thinking approach can reveal important emerging risks to critical human systems. Identifying new sources of risk and their implications can help countries respond and strengthen resilience capacities at all levels.
- **Facilitate collective learning in societies and expand the space for engagement:** The new risks analysed through such an approach have diverse implications for different stakeholders across society. There is strong value in supporting collective efforts to understand these emerging risks, and co-create responses to strengthen resilience. Spaces for productive engagement that facilitate participatory approaches and engage civil society in constructive dialogue are needed.
- **Utilise regional and global platforms for resilience building:** The analyses of food systems demonstrate the practical reasons why countries need to work together to make resilience building a priority within trade agreements. Platforms provided by UN regional commissions, regional integration bodies, regional development banks and multi-lateral institutions should all place special emphasis on promoting resilience of critical human systems.




References

- Ali Kharrazi. (2018). *Examining the Resilience of Agricultural and Food Commodity Trade Networks in the Asia and Pacific Region*, Technical Working Paper, 2018, forthcoming, available at: <http://sdgasiapacific.net/>
- Asian Development Bank (2017). *A Region at Risk: The Human Dimensions of Climate Change in Asia and the Pacific*.
- Béné, C., Godfrey Wood, R., Newsham, A. and Davies, M. (2012) *Resilience: New Utopia or New Tyranny?*, IDS Working Paper 405, available at : <http://www.ids.ac.uk/publication/resilience-new-utopia-or-new-tyranny>
- Compton J., S. Wiggins, S. Keats. (2010) *Impact of the global food crisis on the poor: what is the evidence?* available from: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/6371.pdf>
- ESCAP (2017) *Leave No one behind, Asia Pacific Disaster Report 2017*, available at : <http://www.unescap.org/publications/asia-pacific-disaster-report-2017-leave-no-one-behind>
- Hendrix, C. & Brinkman, H.-J., (2013). *Food Insecurity and Conflict Dynamics: Causal Linkages and Complex Feedbacks*. Stability: International Journal of Security and Development. 2(2), p.Art. 26
- Jeasakul, Phakawa Cheng Hoon Lim, Erik Lundback. (2014). *Why Was Asia Resilient? Lessons from the Past and for the Future*. IMF Working Paper. WP/14/38
- M. Porkka, M. Kumm, S. Siebert, and O. Varis (2013). *From Food Insufficiency towards Trade Dependency: A Historical Analysis of Global Food Availability*, PLoS One, vol. 8, no. 12, 2013.
- Rockefeller Foundation (n.d). *100 resilient cities*. New York: Rockefeller Foundation. Available from www.rockefellerfoundation.org/our-work/initiatives/100-resilient-cities.
- Tanner, T., Bahadur, A. and Moench, M. (2017). *Challenges for resilience policy and practice*. London: Overseas Development Institute.
- University of Notre Dame. *Global Adaptation Index Dataset*. (2016). available at <https://gain.nd.edu/ourwork/country-index/>

Notes

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The Asia-Pacific SDG Partnership

This policy brief is based on the report *Transformation towards sustainable and resilient societies in Asia and the Pacific* prepared under the Asia-Pacific SDG Partnership of the Economic and Social Commission for Asia and the Pacific (ESCAP), the Asian Development Bank (ADB), and the United Nations Development Programme (UNDP). The Partnership produces a suite of knowledge products that meet the needs of different users and reflect the spirit of the SDGs. The themes of annual reports are aligned with the High-Level Political Forum cycle of themes. Find more information on the Partnership and download the full report at:



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