



Key findings

Managing risks to food security

Australia's food security is vulnerable to many of the potential impacts of climate change. Applying best practice risk management across all aspects of the food supply chain can reduce this vulnerability. Doing so will help ensure food security across Australia with benefits for the community, commercial firms, policy makers, regulatory enforcers and non-profit organisations involved.

What are the challenges?

Food supply may be restricted by a combination of a hotter, drier and more variable climate, subsidised competition from biofuel crops and shifts in land use from agriculture to urban development. This means that food availability and prices could become less predictable in Australia and offshore.

Why does Australia need to identify and manage risks to its food supply?

Australia enjoyed an unprecedented level of food security for more than half a century. But in coming decades it may be more challenging to protect resources and ensure sustainability of the supply chain.

Protecting food security is now urgent both globally and within Australia. With just 0.3% of the world's population but 3.4% of global arable land, Australia has an important and growing responsibility to support food security in other countries, especially in less developed nations, which are highly vulnerable to both climate change and its impacts on national food security.

The research project: Food Security, Risk Management and Climate Change

NCCARF funded a study to look at the impact of climate change on food security and managing the risk. The project examines whether food industry leaders are ready for riskier operating scenarios, and the implications of climate change for risk management in the industry. Using data from more than 36 foreign and local organisations operating in the Australian food supply chain, the team developed a set of principles that can guide organizations towards climate change risk management practices that create value and can be mainstreamed to be an integral part of operations and organisational processes. To achieve consistency and comprehensive treatment of risk, these principles were developed under the risk management International Standard ISO 31000:2009 Principles and Guidelines on Implementation.

Three major issues were identified as constraints to food organisations adapting to climate change in Australia:

- Risk management practices
- An uncertain regulatory environment
- Uncertainty around future climate change

Research findings

Committing to risk management at every level is fundamental to businesses adapting to climate change successfully and ensuring our future food security.

Companies and businesses successful in dealing with climate variability have effective risk management processes. Approximately 30% of the 36 case studies examined in the Food Security, Risk Management and Climate Change project indicated that their senior levels of management were highly committed to risk management. Each identified risk had a person responsible for that risk who ensured risk management plans were implemented effectively in their area.

The principal findings of the project are:

- Respondents want stable and predictable regulations from government.
- Some food organisations are not fully using the existing bank of information on climate change and variability, and the impacts.
- Lack of good quality information about the impacts is limiting thinking and planning about climate variability and change.
- Most organisations want better information about climate change and variability.

'Food security is when all people, at all times have access to sufficient, safe and nutritious food to maintain a healthy and active life.'

United Nations Food and Agriculture Organization (1996)

The project identified six risk management principles to ensure food security in a changing climate.

Embody risk management in operational and organisational processes

Continuously improve your risk management processes and practices to encourage, if not ensure, effective management of risk. Few decisions should be made without risk being considered, including both the upside opportunities and downside safeguards. Recognise and monitor closely any residual risk after mitigation activities are implemented.

Comply with legal and regulatory requirements

While the regulatory burden is rated as a significant obstacle to effective risk management, leading food organisations have found ways to minimise compliance costs including cash outlays and time spent on compliance.

Create value out of uncertainty and embrace risk as opportunity

Recognise that risk typically has two tails or consequences, positive and negative. Climate change impact studies tend to over-emphasise the negative consequences but, as demonstrated in the case studies of this research, more than 75% of food organisations believe they can protect and create value out of uncertainty.

Harmonise your business objectives and risk management processes

Risk is now defined as the impact of uncertainty on objectives. Sometimes this can call into question the scope and meaning of objectives especially with the mix of social, environmental, economic and financial objectives now common across food organisations, small and large.

Communicate risk-related information and conduct training sessions regularly

The leading implementers of effective risk management communicate information regularly to all risk management decision makers. They have training sessions to ensure they have the correct risks identified and listed on their risk registers, and effective mitigation activities in place.

Consult with stakeholders

This action can draw all members of the food supply chain into the risk management framework, including commercial operators and regulators. The impact of regulatory risk is rated among the most severe constraints facing food organisations. Leading businesses consult with all stakeholders as standard practice. This means they are better prepared for and resilient to unforeseen events.



The future of our food security

To ensure national food security, policy makers need to address high impact and low probability risks to the supply chain from climate change, and the diversity of risks that now exist across regions, functions and products. Commercial organisations need to practice better risk management to enable adaptation to climate change. Ensuring food security ultimately provides benefits for consumers by reducing their vulnerability to adverse changes in access to quality food.

This document summarises key findings from the NCCARF report *Food Security, Risk Management and Climate Change*. The project was funded by NCCARF and led by David Michael of Wondu Business & Technology Services. Download the full report at: www.nccarf.edu.au/publications/food-security-risk-management-and-climate-change

This work was supported financially by the Australian Government and the partners in the NCCARF consortium. The views expressed are not necessarily those of the Commonwealth and the Commonwealth does not accept responsibility for information or advice contained within.

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