

Background

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2.1 >>> The framework for adverse events

The Government aims to make New Zealand and its communities resilient to hazards and disasters. The strategy for achieving this is underpinned by the “Four Rs” risk management approach:

- **Risk reduction** – identifying and analysing long-term risks from hazards; taking steps to eliminate these risks where practicable; and, where not, reducing the likelihood and magnitude of their impact.
- **Readiness** – developing operational systems and capabilities before an emergency happens.
- **Response** – taking action immediately before, during or directly after an emergency to save lives and property, as well as help communities to recover.
- **Recovery** – the co-ordinated efforts and processes to affect the immediate, medium and long-term recovery of a community following a disaster.

The Civil Defence and Emergency Management Act 2002 reinforces the Four Rs approach. It also recognises that local hazards are best managed by local communities. Civil Defence Emergency Management (CDEM) groups – statutory bodies made up of local authorities working in partnership with emergency services – are responsible for planning and responding to emergencies in their areas. For more detail about Civil Defence Emergency Management, see Appendix I.

The Government’s initial concern is always focused on the health and safety of people, and ensuring their immediate welfare needs are met. The Government also targets recovery assistance towards areas of public good such as restoring essential infrastructure such as roads, water supply systems and bridges. In recent years, roading costs have regularly been the largest element of government expenditure after an adverse event. The Government may reimburse local authorities for some categories of response and recovery costs.

2.2 >>> Climate change

Looking ahead, adverse events should be seen within the bigger picture of **climate change**.

Over time we can expect larger, more frequent and more intense events. The effects of climate change are likely to be uneven, with some regions and primary production activities being more susceptible to adverse events in the future.

Projections for the agricultural sector include:

- drought risk is expected to increase in already drought prone areas such as inland and north Otago, eastern Canterbury and Marlborough, parts of the Wairarapa, Hawke's Bay, Bay of Plenty, Coromandel and Northland;
- in the driest areas, non-irrigated land may become less viable;
- droughts are expected to expand further into the spring and autumn months;
- very heavy rainfall may increase in many parts of New Zealand, even in those areas where the annual rainfall decreases on average;
- higher temperatures are expected, with greater increases in the winter season and in the north of New Zealand;
- an increased risk of very high temperatures is expected;
- decreased frost risk is expected; and
- increased risk of forest fire is expected.

2.3 >>> The role of primary producers

Even where an adverse event is not a civil defence emergency, it may still have a significant impact on the production capability of primary producers.

Most of the on-farm risk of adverse events is borne by primary producers, as it is their assets and cash flows that suffer from an event.

Primary producers have a range of tools that help them adapt to climatic variability and prepare for adverse events. These include:

- production diversification (e.g. different combinations of crops);
- sustainable land management practices (e.g. riparian plantings, retirement of land and planting of heavily erodible land);
- flood protection schemes;
- drought resistant pasture;
- additional feed reserves;
- feed budgets;
- frost protection;
- wind breaks;
- systems for water harvesting;
- irrigation;
- insurance;
- financial reserves/buffers; and
- contingency plans.

These and other risk management tools are an important part of primary production. They contribute to moderating the effects of climatic variability and adverse events on yearly income.