

East Coast North Island – climate risk, vulnerabilities and impacts 2025

2050 climate outlook

- **Rainfall/flooding:** At least a doubling (2–3x) in the frequency of extreme rainfall events by 2050.
- **Rainfall/flooding:** Additional 10–15% rain falling for events of the same frequency in the future.
- **Drought:** Baseline risk of drought is already high, often coinciding with El Niño events. Best-guess estimate of a doubling in the frequency of impactful soil moisture drought events by 2050.
- **Heat stress:** Risks of extreme heat stress for livestock are high for this region and will continue to worsen over the coming decade.



Vulnerability to climate change

- Severely erodible land in part, mitigated in part by land retirement.
- Severe soil moisture deficits seem uncommon but some severe meteorological droughts in 2015/16 and 2019/20.
- Extreme rainfall intensities can occur, especially towards North-East.
- Area vulnerable to cyclone impacts, affecting transport access etc.
- Farms often surrounded by native and exotic forest, and extensive patches of native bush, raising wildfire risks.
- Increasing vulnerabilities to drought, extreme rainfall and erosion will develop through 2030.



Improving climate resilience

- Animals and technology**
 - Utilise livestock with heat tolerance, feed efficiency and low-methane genetics.
 - Use wearable technologies (e.g. e-collars).
- Infrastructure**
 - Improve energy resilience through localised generation.
 - Maintain and progressively upgrade drainage capacity.
 - Expand water storage and reticulation infrastructure.
- Trees, shade and shelter**
 - Increase tree cover for shade, shelter and erosion control.
 - Enhance riparian margins and restore natural wetlands.
- People and operations**
 - Increase adverse weather event training and capability.



Climate change risk



Extreme cold



Extreme wind



Fire



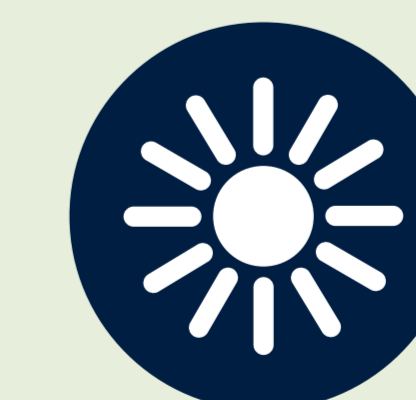
Pests and disease



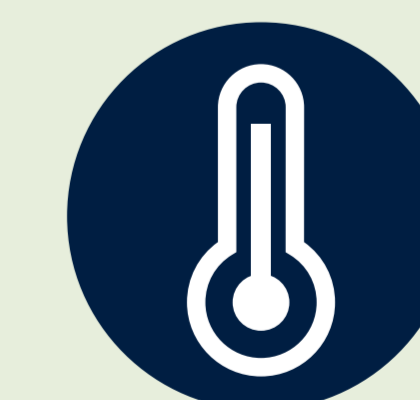
Heavy rainfall / flood



Erosion



Extreme heat



Drought



Pasture production

