



# Climate and rangeland grazing systems

Rangeland grazing systems are expected to have no significant change in climate suitability by 2050.

Climate change risks to rangeland grazing systems include:



**Increased temperatures and increased rainfall variability** are likely to impact some areas of Western NSW.

## Climate impacts: what to expect

**Ability to meet animal requirements** are likely to remain similar to what has been historically experienced in the rangeland grazing system across all seasons (*moderate confidence*). However, a small region along the north-western boundary of the Western Division may slightly decline in climate suitability from very high to high suitability (*moderate confidence*).

## Methodology and data

The ability of this grazing system to meet the feed intake requirements of livestock was analysed using a winter lambing system with a 0.5 DSE/ha stocking rate, considered representative of livestock enterprises employing rangeland grazing.

Climate projections were sourced from Climate Change in Australia's 'Application Ready Data'. This dataset is comprised of projections from an ensemble of 8 global climate models, each presenting a plausible future climate. The models differ in their projections, giving rise to uncertainty in our modelling which is reflected in the confidence statements given in brackets. Care should be taken when interpreting these results.

The Vulnerability Assessment Project is intended to highlight potential industry- or regional-level changes. Intermediate and high emissions scenarios were used in the assessments (RCP4.5 and RCP8.5), but these are not the only future scenarios possible. The inclusion of climate variables important to the commodities production was based on published research, expert knowledge and data quality and availability.

## Adapting to Climate Change

### Adapting to changes in temperature and rainfall

Controlling total grazing pressure (including unmanaged herbivores) has been identified as a key adaptation for rangeland grazing systems, especially where grazing pressure is high and resource condition is low. Providing supplementary feed, changing stocking rates, and increasing groundcover are adaptation strategies that can help prepare for any future reduction in feed. There is also an opportunity to change business structures to have more of a focus on trading livestock to take advantage of seasonal conditions.



### FOR MORE INFORMATION

Please get in touch with [vulnerability.assessment@dpi.nsw.gov.au](mailto:vulnerability.assessment@dpi.nsw.gov.au)

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