

# Building drought resilience Prepare, respond, recover



A drought is an extended period of dry conditions which is a part of natural cycling between wet and dry years and a regular feature of the Australian landscape. Drought should not ordinarily be considered a natural disaster; however, drought has a dramatic and long-lasting impact on the productivity and profitability of agricultural enterprises, with significant flow-on effects to local business and the wellbeing of individuals and regional communities.

Droughts have considerable impacts on local and regional water supplies and the natural environment. This can lead to increased land degradation, and affect waterway health and function, native vegetation, and the plants and animals they support. Drought impacts ecosystems, the economy, and our natural assets.

For people, droughts can impact physical and mental health. Droughts can increase stress, cause ill health, decrease job satisfaction, self-worth and confidence, and put an enormous strain on relationships.

Sustainable land management practices improve and protect soil, biodiversity, and vegetation. **It is important to increase awareness and adoption of these practices to build drought resilience in the region.** It is also important land managers have the capacity to adapt to significant changes in climate variability and extremes and market demands.

This fact sheet outlines key strategies for land managers to **build drought resilience**, to better **prepare, respond, and recover**

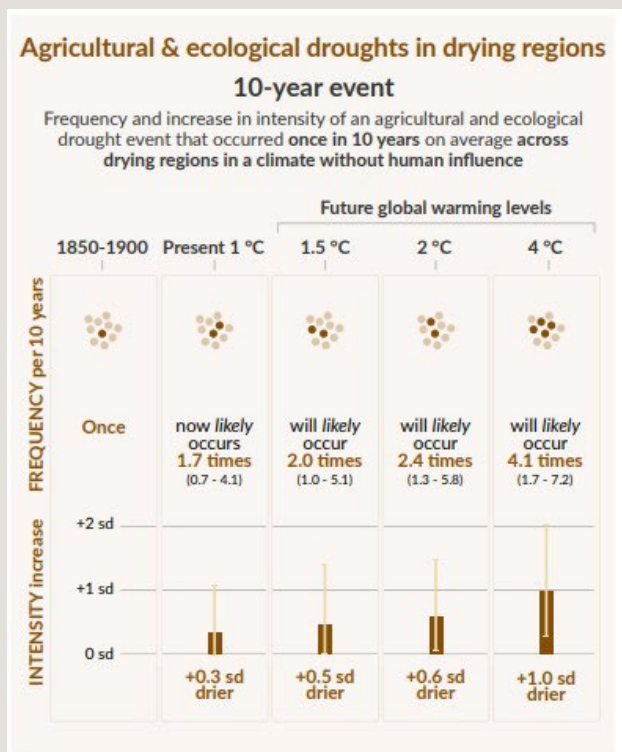
## Maintaining sustainability and resilience in a changing climate

While South East Queensland has experienced significant droughts in the past due to our highly variable climate, under various warming scenarios, the frequency and severity of these drought events is likely to increase.

It is projected that an increase in temperature of 1.5°C will see more intense droughts likely occurring two times more frequently than in the past (Figure 1).

It is critical that landholders and industries ensure their systems, management strategies and practices help mitigate and adapt to these challenges to maintain sustainability and resilience in their businesses and landscapes.

Figure 1. Projected changes in the frequency and intensity of droughts under a warming climate.



# Prepare, respond & recover

## Prepare



### Develop a farm resilience plan

This plan develops effective adaptation and management strategies and practices to better prepare for, manage, and recover from drought. Make sure it considers drought and climate risks to production systems, natural assets, and the environment.



### Implement regenerative grazing and farming practices

Regenerative grazing and farming practices including minimal tillage, cover cropping, stubble retention, pasture rotations will improve nutrient cycling, moisture retention and storage and soil health.



### Improve water security and quality

Protect key waterholes and wetlands as refuges



### Maintain relationships & learning

Maintain industry partnerships, relationships with other landholders, community networks and key advisors to improve skills and knowledge.



### Apply fertiliser and organic amendments

Ensuring fertiliser and organic amendments are applied to maintain nutrient balances and meet the needs of the crop and maintain soil health.



### Use sustainable pasture utilisation rates

Maintain utilisation rates appropriate for the land type and condition and ensure lower rates on fragile land types, degraded or at-risk areas.



### Maintain healthy soils, land and water

Maintaining healthy soils, good pasture and land condition, native vegetation, and improving water security will build the resilience of the natural assets underpinning production and enable faster recovery from the impacts of drought and climate extremes.



### Optimise your property for livestock

Provide adequate shade and shelter for livestock and select livestock with greater drought and heat tolerance and resistance against pests.



### Undertake forage budgets

Undertake forage budgets to adjust livestock numbers to seasonal forage availability and maintain good land condition.



### Ensure routine rest or spelling

Ensure routine rest or spelling in grazing system to allow adequate time for desirable pastures species to recover and set seed.



### Manage for healthy diverse pastures

Manage for healthy diverse pastures dominated by desirable 3Ps (perennial, productive and palatable) species, with high levels of effective groundcover (>90%) all year around.

## Respond



### Address erosion and weeds

Monitor and act early to address erosion and weed problems.



### Improve cover, reduce losses

Improve the proportion of native perennial pastures and crops in mixed farming systems to improve cover, maximise infiltration, and reduce moisture losses.



### Choose higher value crops

If water supplies are limited or in poor quality, choose which higher value crops will receive available irrigation water.



### Improve pasture quality

Introduce more pasture legumes to improve pasture feed quality, nutrient cycling, and diversity. Increase use of supplements and rumen modifiers to compensate for declining pasture quality.



### Control pest species

Maintain effective control of invasive weeds and pest animals.



### Maintain herd health & welfare

Prioritising animal welfare is paramount, particularly during drought so maintain treatments to prevent disease and parasites and ensure management actions prevent suffering and maintain welfare of all livestock.



### Improve irrigation efficiency

Improve security and capacity of on-farm water supplies. Improve irrigation efficiency and optimise irrigation scheduling to minimise losses.



### Increase fodder conservation

Improve property infrastructure (sheds, feeding systems) and increase fodder reserves in good seasons for use in drought.



### Maintain flexibility in herd

Maintain flexibility in your herd structure, ensuring it is appropriate to your land types and climate risks. Plan joining and calving times around critical dates.



### Prevent land degradation

Consider sacrificing areas if feeding livestock to prevent land degradation and potential weed spread from introduced feedstuffs.

## Recover



### Make informed business decisions

Use all available information (climate forecasts, green date, forage budgets, feed costs, and market prices) to make informed decisions on whether to sell, feed, or agist livestock and to make informed business decisions.



### Set critical dates

Set critical dates to make tactical decisions such as selling, early weaning, and culling older or dry cattle to preserve breeding stock. If feeding, segregate animals based on condition and need.



### Look after yourself, family and friends

Look after yourself and those close to you. Stay connected with family, friends and look out for your mates during these challenging times.



### Select appropriate species and planting times

Select more drought-tolerant crop and pasture species. Adjust planting times of summer crops, particularly so they are not flowering during hottest months.



### Maintain relationships & learning

Maintain industry partnerships, relationships with other landholders, community networks and key advisors, to improve knowledge and skills.



### Seek out advice and support

Seek advice on available drought assistance and support measures – don't rely solely on self-assessment.



### Manage bushfire risks

Ensure effective fire management plans and measures are in place to manage bushfire threats.



### Have a plan in place for recovery

Have a plan in place for when the drought breaks. This may include considering planting opportunity crops and/or continuing to feed livestock for short period to allow pastures to recover.

