Let's Talk About Drought

"Australia has experienced significant drought events over the last decade in several regions which has led to widespread impacts on the agricultural sector and rural and regional communities. "
(DPIRD 2022, Drought Vulnerability Assessment)

Drought has significant economic, social, and environmental impacts, and forecasts indicate it will likely be more regular, longer in duration, and broader in area.

As such, it's important that agribusinesses and farms address drought as a real business risk and incorporate it into their business plan.

(DPIRD, 2022. Drought Vulnerability Assessment)

All agri-businesses in Western Australia should be planning for what they can do before, during, and after a drought, based on the following key messages:

(Australian Government 2019, Drought in Australia)

Drought is an enduring, regular feature of the Australian landscape. It is not a natural disaster.

While droughts are normal for Australia, drought conditions are likely to become more frequent, severe and longer due to climate change.

Farming is a business and drought is one of many business risks that should be managed. Drought preparations must continue during times of no drought

This Program is supported by the Western Australian Department of Primary Industries and Regional Development, through funding from the Australian Government's Future Drought Fund.

Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

Research Insights

What is Drought?

Defining drought is an ongoing challenge globally.

Although droughts are experienced in countries around the world, an agreed universal definition hasn't been established.

This is because of the complexities around measurement, its relatively slow onset, the different types of droughts, and variabilities in geographical contexts.
[DPIRD 2022, Drought Vulnerability Assessment]

The Australian Bureau of Meteorology provides a general definition of drought (below).

Drivers of drought

The drivers of drought are multifaceted but largely human and nature related.

Understanding the factors that contribute to drought is key to preparing for and responding to future droughts. Factors include:

- Natural causes (cyclical weather patterns)
- Fluctuating ocean and land temperatures
- Altered weather patterns
- Reduced soil moisture
- Man-made causes (water use, greenhouse gases)
- Climate change
- Excess water demand
- Land clearing and soil degradation

(DPIRD 2022, Drought Vulnerability Assessment)

> **...a prolonged abnormally dry period when the amount of available water is insufficient to meet our normal use (Australian Bureau of Meteorology).**

Drought Impacts

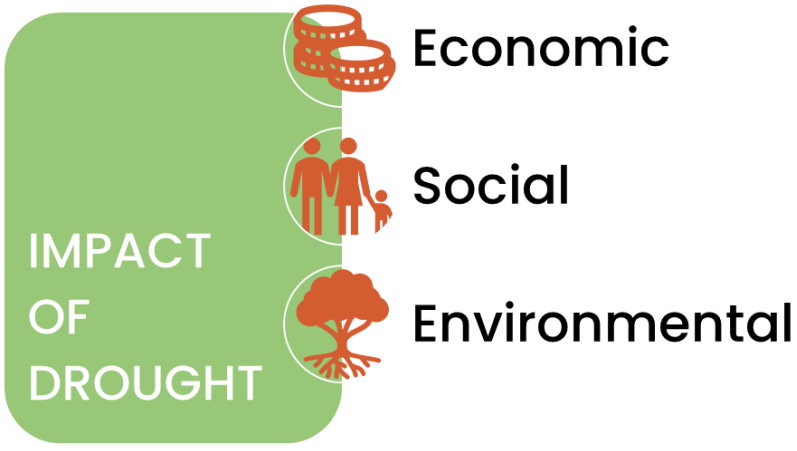
"Various studies rank [drought] first among all natural hazards by the seriousness of impacts such as the loss of life and livelihoods, economic losses and the adverse social and ecosystem effects."
(DPIRD, 2022. Drought Vulnerability Assessment)

Impacts of drought can be significant and widespread - affecting the economic, social and environmental health and sustainability of our regions.

Drought impacts the productivity and profitability of farms, individuals, families, regional businesses, and communities.

Poor land management practices can eventually lead to a reduction in the quality and quantity of natural capital and ensure that recovery is harder and lengthier.

The general recommended approach is to prepare for drought rather than respond to it.



CASE STUDY

The widespread impacts of drought can be found in WA's North-Eastern Agricultural Region which experienced its driest and third driest years on record in 2006 and 2007.

This resulted in devastating economic, environmental and social impacts including:

- Wind erosion and dust storms;
- Loss of valuable topsoil;
- Loss of native vegetation;
- Farmers having to sell stock or euthanise them;
- Increased depression;
- Farmers having to leave their properties to look for work elsewhere - leaving families behind;
- Farmers having to sell their farms.

(DPIRD, 2022. Drought Vulnerability Assessment)

Looking Ahead

RESILIENCE AND ADAPTATION

"On-farm adaptation strategies are critical and constantly advancing"
(DPIRD 2022, Drought Vulnerability Assessment)

SELF ASSESSMENT

What are your on-farm adaptations?

- Soil health/fertility
- Crop varieties
- Time of sowing
- Planting seasons
- Using perennials
- Crop management practices
- Water management systems & monitoring
- Livestock management practices
- Biodiversity protection and improvement
- On-farm storage
- Other infrastructure
- Genetic improvement
- Agtech adoption
- Management of pests and diseases
- Changing enterprise mix
- Data management
- Forecasting

ACTION AND FUTURE DIRECTION

Key areas for action and future direction identified in DPIRD's 2002 Drought Vulnerability Assessments include:

- Adaptation and Risk Management
- Management of Landscapes
- Data Management

Building Resilience

Improving water management efficiencies (eg. irrigation systems, sewage systems for rainwater wastewater usage, and cultivating crops with low water), demand new tools and programs.

Drought Resilience Self-Assessment Tool (DR SAT)

- Self-assessment tool for farmers;
- Self-identifies drought risks based on a range of social, economic, and environmental indicators;
- Supports action to build drought resilience of farm businesses;
- Free and completely private;
- Complete control over your own information;
- Provides tailored options and resources to support resilience building.

HELPFUL RESOURCES

www.awe.gov.au/agriculture-land/farm-food-drought/drought/future-drought-fund/drought-resilience-self-assessment-tool

www.drsat.com.au

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This Program is supported by the Western Australian Department of Primary Industries and Regional Development, through funding from the Australian Government's Future Drought Fund.