



Australian Government

Department of Education, Employment and Workplace Relations

RTE5523A Develop climatic risk management strategies

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency standard describes the work function associated with developing climate risk management strategies for an agricultural, horticultural or land management enterprise. It requires the ability to research climate and enterprise data, analyse and interpret climate and enterprise data, prepare risk management strategies, and integrate climate risk and opportunities for management strategies at a business management level. Developing climate risk management strategies requires knowledge of current forecasting techniques, impact of weather and climate phenomena on rainfall, plant growth and yields, livestock production, causes of general patterns of weather and climate over Australia, climate variability and climate change, and direct and indirect impacts of climate variability on land management and sustainability.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Survey climate and enterprise data	1.1 Historical climate data is obtained and interpreted from a range of sources. 1.2 Weather and climate risk factors are identified. 1.3 Information on normal and significant climate events and their impact on natural and rural systems is collected. 1.4 Current and historical property and enterprise situation is detailed according to enterprise guidelines. 1.5 Short and long term enterprise goals are reviewed. 1.6 Climate and enterprise data is sourced, presented and updated according to enterprise requirements.
2 Climate risks and opportunities are identified and analysed.	2.1 Forecasted chances of seasonal climate are analysed. 2.2 Climate risks and opportunities are identified. 2.3 Impact on production of different weather and climate risk factors are determined according to enterprise requirements. 2.4 Qualitative and quantitative risk and opportunity factors are identified and developed. 2.5 Importance of climate variability and significant climate events is evaluated. 2.6 Tactics to address a range of different climate variability risks and opportunities are outlined according to enterprise requirements. 2.7 Contingency options for enterprises and the business are identified.
3 Prepare climate risk management strategies	3.1 Climate variability and seasonal climate forecasts are analysed. 3.2 Insurance and other options are addressed in

strategies.

- 3.3 Major climate risk factors are addressed in strategies.
- 3.4 Financial outcomes for all strategies are prepared according to enterprise guidelines.
- 3.5 Impacts on the environment, property value and equity is predicted for the preferred strategies.
- 3.6 Preferred production, enterprise or alternative strategies are reviewed, and options selected according to enterprise requirements.
- 3.7 A planned strategy to cope with variable climate and climate risk management is presented in a format according to enterprise guidelines.

Required Skills and Knowledge

Not applicable.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence to develop climate risk management strategies requires evidence that the candidate can research, collate and interpret climate data in order to develop and present rational, achievable and effective strategies. The skills and knowledge required to develop climate risk management strategies must be **transferable** to a different work environment. For example, this could include different properties, strategies and climate conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

current forecasting techniques and phenomena such as El Nino, ENSO, Southern Oscillation Index (SOI) and Pacific and Indian Ocean SST patterns

the impact of weather and climate phenomena on rainfall, plant growth and yields

causes of general patterns of weather and climate over Australia

climate variability and climate change

direct and indirect impacts of climate variability on land management and sustainability

property and enterprise management decisions affected by the variable climate

recognition of climate risks and opportunities

seasonal climate forecasting systems and related indicators

drought planning and strategies

flood planning and strategies

climate and weather issues pertaining to sustainable agriculture

potential impacts of greenhouse warming on land and natural resource management

strategic options and planning in response to climate variability for a range of seasons (normal, drier or wetter than normal), and other risks and opportunities

calculating financial returns for different strategic options

computer applications and Internet to access, record and analyse data

principles of decision-making based on the variable climate and seasonal climate forecasts.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

research climate and enterprise data

analyse and interpret climate and enterprise data

prepare risk management strategies

integrate climate risk, and opportunities and management strategies at a business management level.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

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| 1. How can communication of ideas and information (3) be applied? | Through research, collation and interpretation of climate data. |
| 2. How can information be collected, analysed and organised (3) ? | Through the sourcing, presentation and updating of data according to enterprise conventions and requirements. |
| 3. How are activities planned and organised (2) ? | Through developing scenarios and identifying trends in climate variability. |
| 4. How can team work (2) be applied? | Through working with departmental staff or other growers in developing tactics and strategies. |
| 5. How can the use of mathematical ideas and techniques (3) be applied? | Through analysing and interpreting information on weather and climate. |
| 6. How can problem-solving skills (3) be applied? | By anticipating and responding to climate change. |
| 7. How can the use of technology (3) be applied? | Through computer applications and information technology systems. |

Are there other competency standards that could be assessed with this one?

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

Range Statement

Range of Variables

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available

What may be considered under weather or climate **risk factors**?

Risk factors may include soil erosion, tree cover, flooding, drought, fire management, pests and diseases, and changing nutrient levels.

What **significant climate** events may be relevant to this standard?

Significant climate events may include floods, droughts and periods of extreme temperature.

What enterprise **situation** may be relevant to this standard?

Enterprise situation may include stock, pasture, crops, climate, vegetation, waterways, slope, aspect, and growing season.

What may be included under climate **opportunities**?

Climate opportunities may include above average production, market opportunities, refining enterprise mix decisions, and alternative enterprises.

What may be classed as contingency **options**?

Options may include marketing, cropping strategies, plant production, animal husbandry and health, removing stock, re-stocking property, provision of food supplements, changing enterprises, and other emergency planning.

What property **values** may apply to this standard?

Values may include economic, enterprise sustainability, improvement in natural resource base, and other benefits.

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

Unit Sector(s)

Not applicable.