

Online forecasts throughout Australia of the Canadian Forest Fire Weather Index System

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Two-day forecasts are now available online of an Australian adaptation of the Canadian Forest Fire Weather Index (FWI) System: <http://www.cawcr.gov.au/projects/fwi/index.php>

The forecasts are available throughout Australia at a grid resolution of 0.25 degrees in latitude and longitude. The forecasts are produced using temperature, relative humidity and wind speed fields from numerical weather prediction data, as well as rainfall observations.

The FWI System includes a number of features that are not used by the McArthur Forest Fire Danger Index (FFDI):

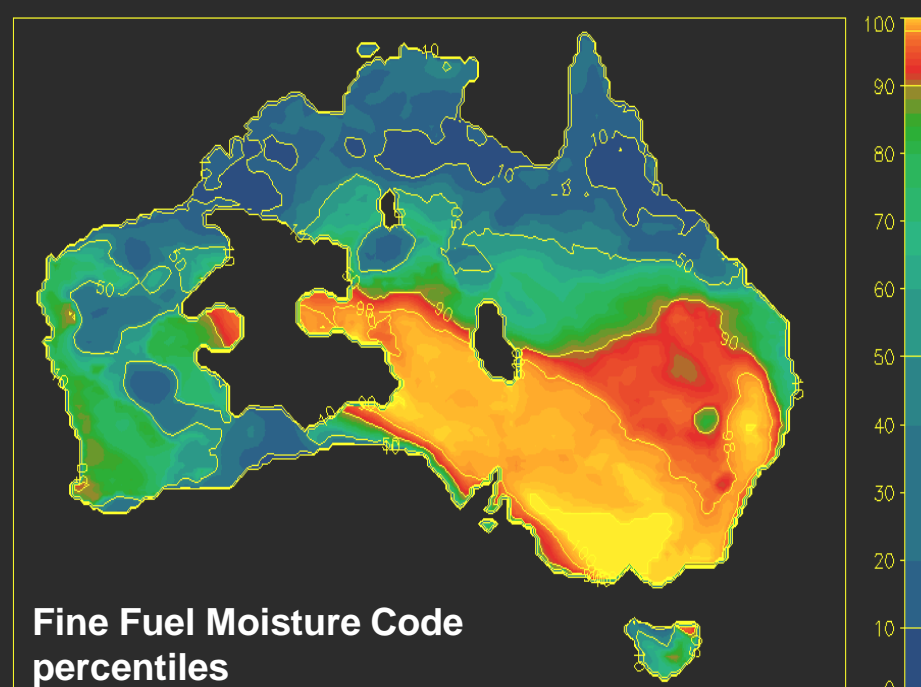
- the influence of wind speed and humidity on fuel drying,
- the increase in fuel moisture through the absorption of atmospheric moisture (humidity),
- the influence of latitude on the drying rate (through the use of a variable day length),
- three separate fuel moisture codes, as well as three fire behaviour codes.

Forecasts are provided online for all of the sub-components of the FWI System. Percentiles of their values (as shown in Fig. 1) are also displayed, indicating the severity of the conditions relative to the local climate.

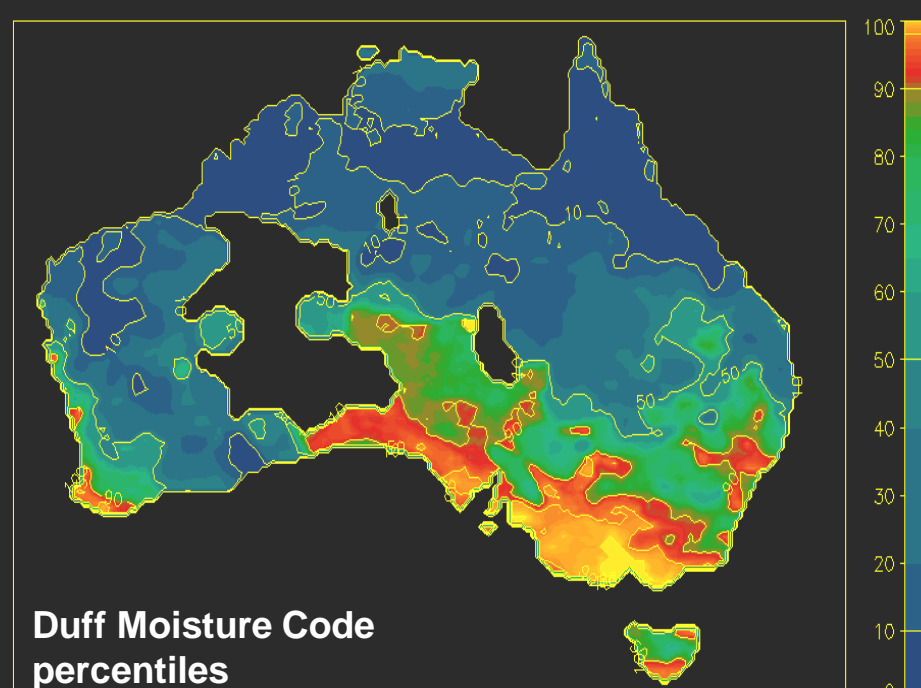
Classification thresholds of the FWI have been calculated based on those of the FFDI (as shown in Table 1), by matching percentiles of the FWI to percentiles of the FFDI throughout Australia.

Table 1. FWI classification thresholds.

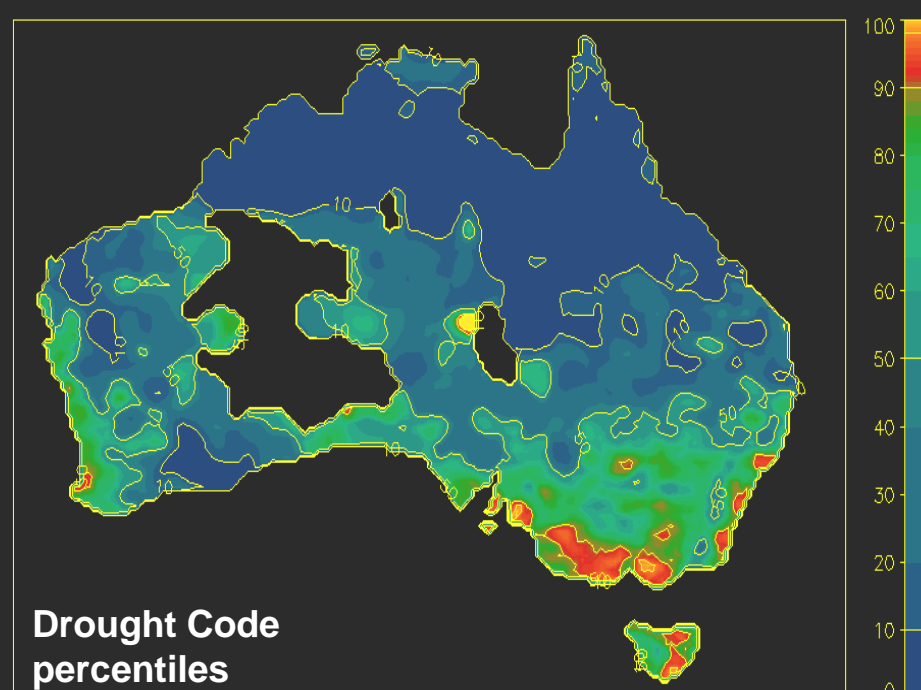
Fire Danger Rating	FFDI range	FWI range
Low	0-5	0-14
Moderate	5-12	14-35
High	12-24	35-64
Very High	24-50	64-122
Extreme	50+	122+



Fine Fuel Moisture Code percentiles



Duff Moisture Code percentiles



Drought Code percentiles

Fig. 1. Percentiles of the three fuel moisture codes of the FWI System for 7 February 2009.