

Introduction

This report is for the location indicated by the red crosshair symbol on the map below. The report presents information based on SILO historical climate data and Consistent Climate Scenarios (CCS) projections data (developed by the Department of Science, Information Technology and Innovation, DSITI). Annual and monthly climate projections data for 2030, 2050 and 2070 have been generated using 28 AR5 global climate models (GCMs), three model sensitivities to CO₂ rise (low, medium and high warming rates) and four Representative Concentration Pathways (RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5) which specify CO₂ levels from 435 to 449 ppm for 2030 and from 478 to 677 ppm for 2070. The baseline climate is the period between 1960 and 2015.

The monthly median values for the historical climate (1960 -2015) and climate projections for 2030, 2050 and 2070 are presented in the bar-dot graphs (below) which indicate the seasonal patterns of historical climate and projected climate under the different global warming rates and scenarios in 2030, 2050 and 2070.

The results for annual projections as shown by the projected annual climate range plots (next page) indicate a range of possibilities of projected temperature, rainfall and other parameters under the different global warming rates and scenarios. For more information, see <https://www.longpaddock.qld.gov.au/climateprojections/guide.html>.

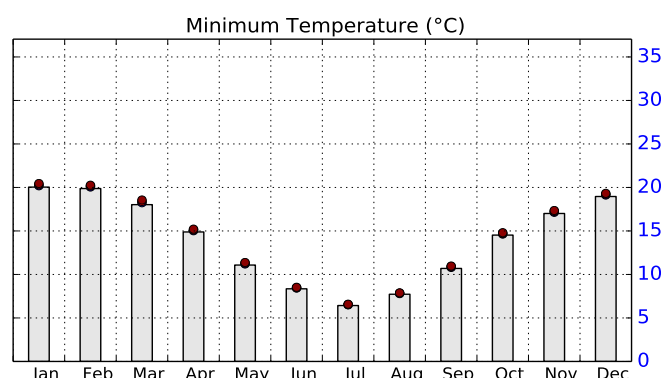
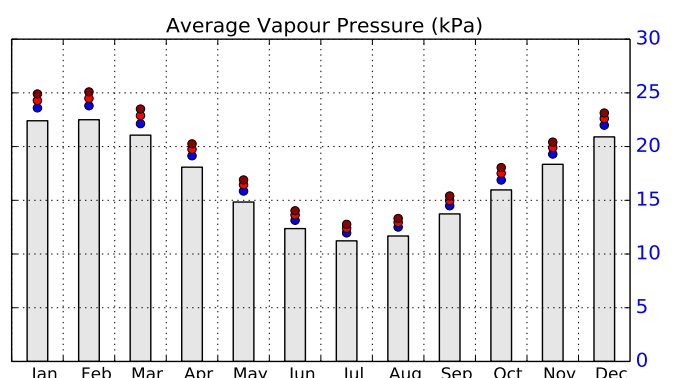
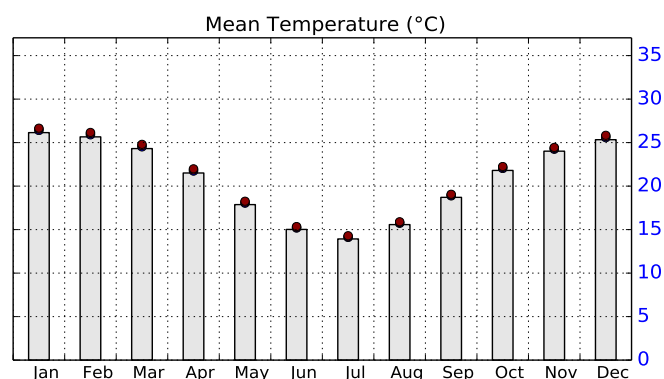
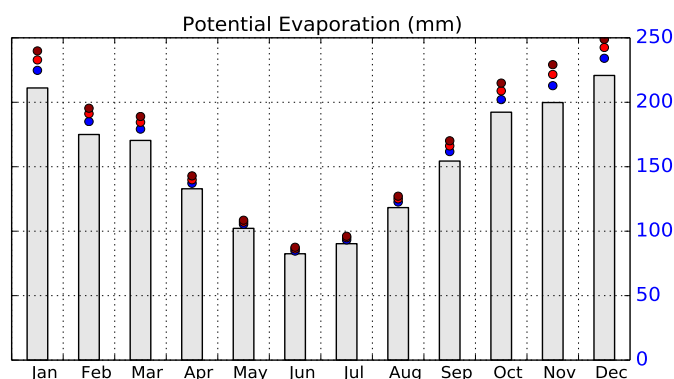
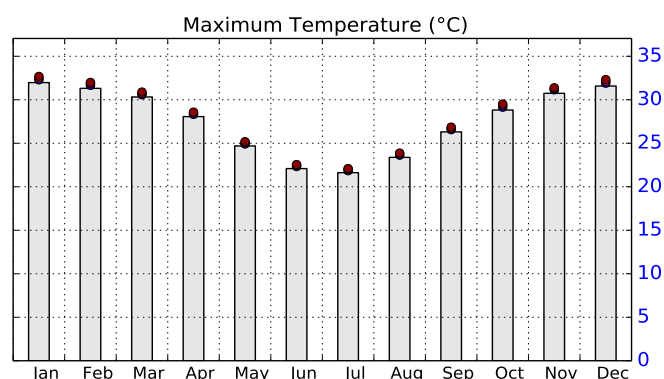
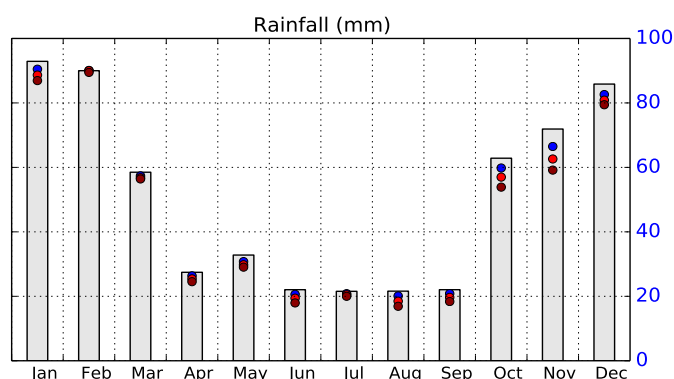
Historical and projected annual climate summary

Climate Variable (Median Annual)	Historical 1960-2010	Projection 2030	Projection 2050	Projection 2070
Rainfall (mm)	665.8	657.8	652.3	645.0
Evaporation (mm)	1854.0	1943.0	1996.1	2039.9
Mean Temperature (°C)	20.9	21.8	22.3	22.8
Maximum Temperature (°C)	27.6	28.5	29.1	29.6
Minimum Temperature (°C)	14.0	14.9	15.5	16.0
Average Vapour Pressure (kPa)	16.9	17.9	18.5	19.0

Location map



Historical and projected monthly median climate



Historical median
 2030 median
 2050 median
 2070 median

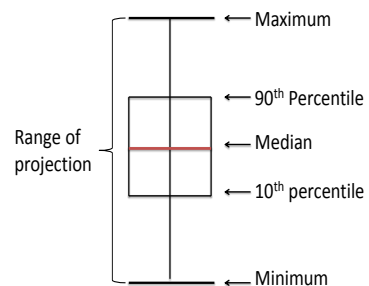
Interpretation of annual climate summary plot

In each plot (example graph on the right) used to display annual climate outputs, the top horizontal bar represents the highest projection (or observation for historical data) and the bottom horizontal bar represents the lowest projection. The box represents the data range between the 10th and 90th percentile* values. The red line in the box represents the median value of the data range which could be interpreted as the best estimate for the projections.

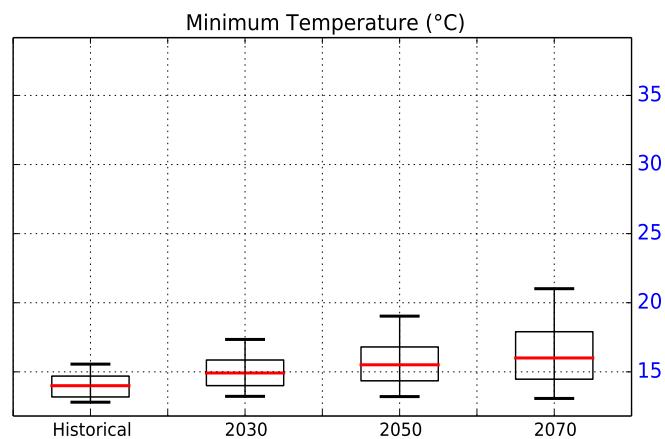
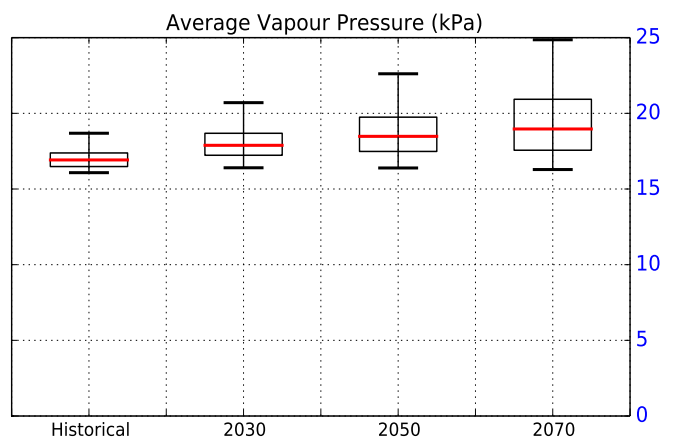
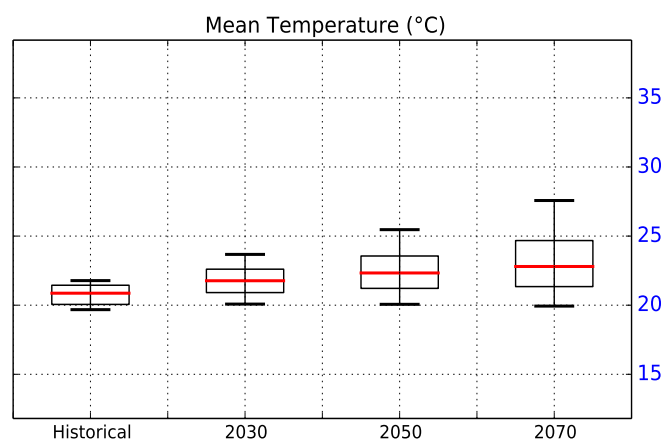
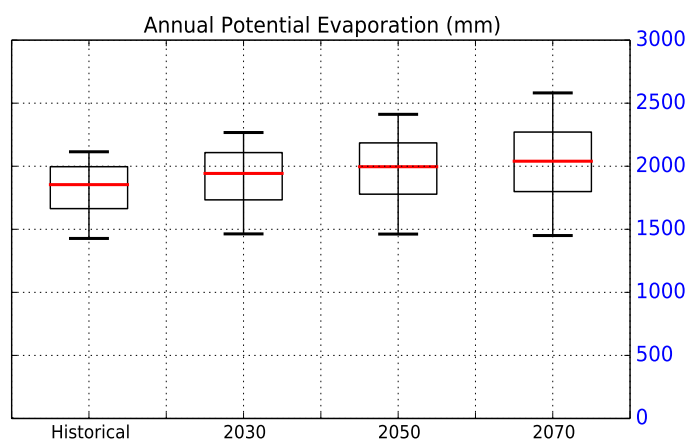
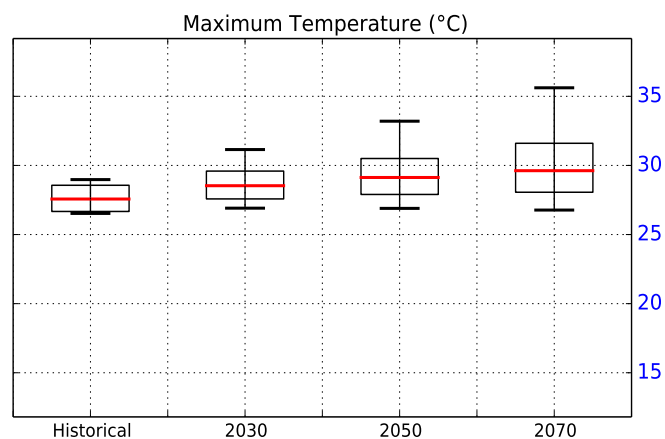
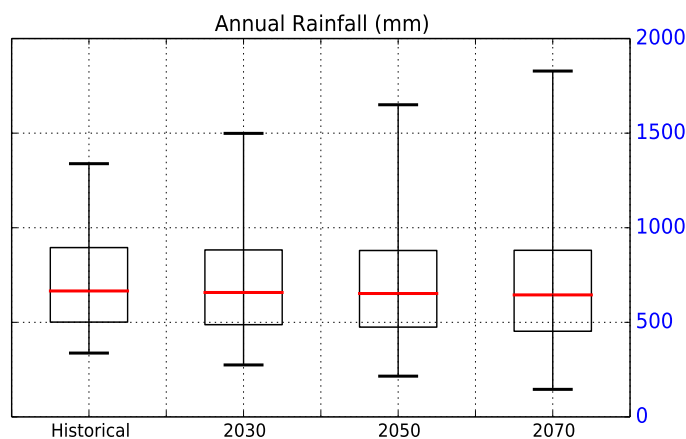
For the 2030, 2050 and 2070 climate projections, the projection outputs are from 336 model datasets which are projected from 28 AR5 global climate models (GCMs) based on three model sensitivities to CO₂ rise (low, medium and high warming rates) and four Representative Concentration Pathways (RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5), defining a range of possible future climates.

*A percentile is used to indicate where a value lies within the range of historically measured or simulated records. For example, if last year's rainfall was ranked in the 30th percentile, then last year's rainfall was higher than the lowest 30% of annual rainfall totals on record, but lower than the remaining 70% of records.

The maximum and minimum represent the background variability plus mean projected changes



Historical and projected annual climate range



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