12b Cape York model

12b.1 Great Artesian Basin groundwater flow model scenario outputs: Cape York model: Climate change

Abstract	Modelled groundwater levels from 2010 to 2070 used to estimate the impact of climate change and future groundwater resource development on groundwater levels in the Cape York area of the GAB. Data is available in ASCII grid format. The modelling considered different scenarios of climate and groundwater development: Scenario A (historical climate and current development); Scenario C (future climate and current development) and Scenario D (future climate and future development). The future climate scenarios included the wet extreme (wet), the median (mid) and the dry extreme (dry). This data set contains spatial data that were created from the outputs from climate change scenario models using on the Cape York groundwater flow model. The subfolder "heads" contains various raster grid representations of spatial distributions of hydraulic head for the year 2070 that were output by the respective climate change scenario model, based on projections of future climate. For each climate change scenario there are three outputs: one for each modelled aquifer thickness (100, 150 and 200metres). The folder "differences" contains various raster grid representations of differences between the spatial distributions of hydraulic head that were output by climate change scenario models and by either (a) the respective "A scenario" model or (b) the respective "Base scenario" model (the modelled hydraulic head for the year 2010.) 'No data' value is 1e30 for heads rasters, -9999 for differences rasters Cell size is 5000 m x 5000 m Projection is Albers equal area conic, with central meridian 143 degrees longitude, standard parallels at -21 and -29 degrees latitude and latitude of projection's origin at -25. This data and metadata were produced by CSIRO for the Great Artesian Basin Water Resource Assessment. For more information, please refer to Welsh WD, Moore CR, Turnadge CJ, Smith AJ and Barr TM (2012), "Modelling of climate and groundwater development. A technical report to the Australian Government from the CSIRO Great Artesian Basin Water Resource Assessment ". CSIRO Water for a Healthy Country Flagship, Australia. This dataset and associated metadata can be obtained from www.ga.gov.au, using catalogue number 76117.
Lineage	This data set is derived from outputs from 'climate change' scenario models based upon the Cape York groundwater flow model. These scenarios were developed based upon recharge scaling factors described by Crosbie et al. (2011; "Diffuse recharge across Australia under a 2050 climate: Modelling results", CSIRO report to the National Water Commission). These factors were used to scale modern (i.e. 2010) recharge on the Cape York Peninsula over the period 2011-2070 in accordance with three climate change scenarios (i.e. dry, median, wet).

	For more information, please refer to Welsh WD, Moore CR, Turnadge CJ, Smith AJ and Barr TM (2012) "Modelling of climate and groundwater development. A technical report to the Australian Government from the CSIRO Great Artesian Basin Water Resource Assessment ". CSIRO Water for a Healthy Country Flagship, Australia.
Extent	N: -10.68753; S: -33.02301; W: 132.1544; E: 152.7543 / AU-NSW/QLD/SA
Scale	Scale: 1:6M.

Cdry-Base_b100

Cdry-sceA_b100

Cmid-Base_b100

Cmid-sceA_b100

Cwet-Base b100

Cwet-sceA_b100

heads 2070 Cdry b100

heads_2070_Cmid_b100

heads 2070 Cwet b100