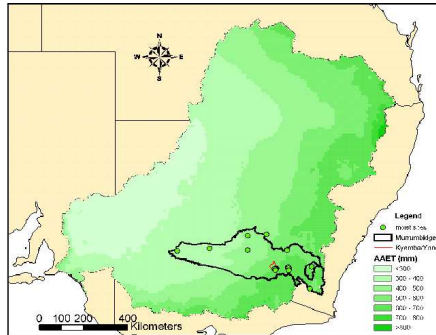


CEOP HYDROLOGY REFERENCE SITES: Kyeamba Creek, NSW Australia (drainage area ~500 km²)

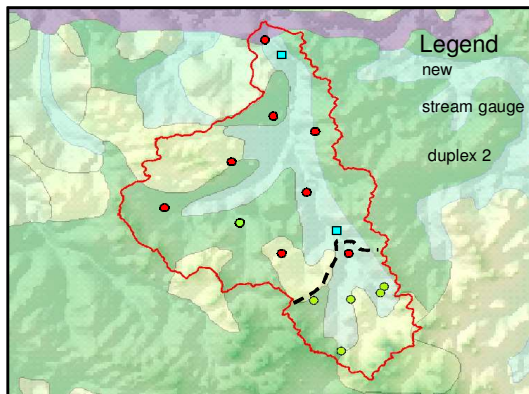
Site summary: The Murrumbidgee watershed (drainage area about 100,000 km²) lies in the eastern headwaters of the Murray-Darling Basin (drainage area about 1,000,000 km²). Although the basin lies within about 100 km of Australia's east coast, it lies to the west of the coastal divide and drains generally westward. Most of the catchment is mixed rangeland and forest, with mean annual precipitation ranging from over 1000 mm/yr in the east, reducing to 200 mm/yr in the far west. Management of dryland agriculture, and particularly soil salinity problems, are major issues in the basin, as elsewhere in the MDB. There are also irrigation areas at several

Murray-Darling Basin
Showing the Murrumbidgee watershed



points along the river. Kyeamba Creek (approx. 500km², 700mm/yr rainfall) is a research catchment within the Murrumbidgee at which relatively long-term data exist. Kyeamba Creek is gauged at two locations, hence providing the opportunity for nested catchment studies. Various University of Melbourne (UofM) research

Kyeamba Creek



projects have installed, in addition to stream gages and a precipitation gage network, a transect of 9 soil moisture monitoring sites across the whole Murrumbidgee, as well as 14 sites within Kyeamba Creek. Microgravity sensors and piezometers are also installed at these sites. In addition to the UofM instrumentation, some research sites run by other groups have collected various data for shorter periods across the Murrumbidgee. At present there

is a flux tower at Tumbarumba, approximately 100 km east of Kyeamba and in a much wetter climate. There are plans to install a flux tower within Kyeamba Creek however funding is yet to be secured.

Data Summary:

Drainage area to outlet: ~530 km² (Ladysmith); 145 km² (Book Book)

Basin outlet latitude-longitude: 35.19S, 147.51E (Ladysmith); 35.35S, 147.55E (Book Book)

Stream gauge period of record: 1975 to 1986 and 2001-ongoing (Ladysmith); 1985 to present (Book Book)

Precipitation gauges 5 within Kyeamba (2001-ongoing); BoM station at Wagga Wagga 15km from Kyeamba Creek (an AMS and AMO site with 30 min data – i.e. highest level of BoM sites)

30 min. data since late 1990s and daily data from ~1900. There are many other daily rain stations in the area.

Micrometeorological data: from Wagga Wagga – incoming shortwave, screen temp., specific humidity, wind speed and direction, sunshine hours, cloud cover. From these data 30 min forcing data for rainfall, incoming shortwave, incoming longwave, temp, specific humidity and wind speed have been derived from Jan 2001-present (see report below).

Turbulent flux measurements: None at present, flux tower planned for 2004, subject to funding

Other measurements: In situ TDR at 9 sites along transect across the whole Murrumbidgee; 14 sites within the Kyeamba Ck., mobile TDR measurements for various dates over parts of the Kyeamba catchment and ~10km transects at 3 of the other locations within the broader Murrumbidgee network.

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