

Basconcillo, J., A. Lucero, A. Solis, R. Sandoval, Jr., E. Bautista, T. Koizumi, and H. Kanamaru, 2016: Statistically downscaled projected changes in Seasonal Mean Temperature and Rainfall in Cagayan Valley, Philippines. *J. Meteor. Soc. Japan*, **94A**, 151-164.  
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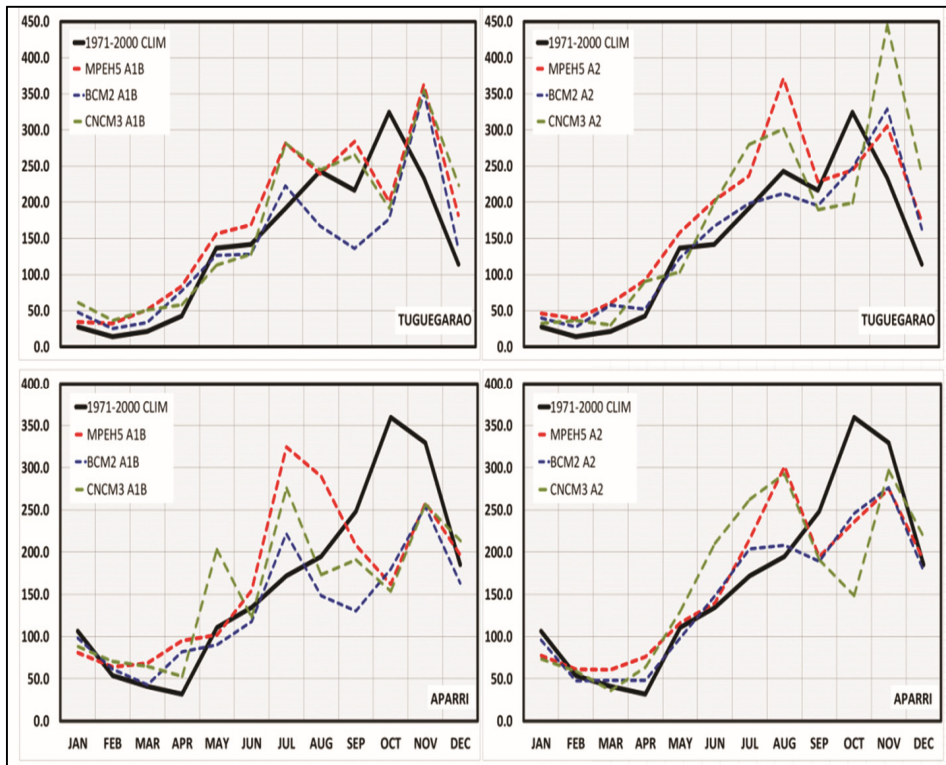


Figure 1. Projected rainfall under two scenarios (left to right, A1B, A2) and at two stations (top to bottom, Tuguegarao, Aparri) in 2011-2040 compared with 20C3M (1971-2000)

- Regarding seasonality, dry months (March-April-May) will continue to remain dry but within the rainy season, July and November are likely to become more notable wet months (Fig. 1).
- In both stations, the future projections show more pronounced double peaks in the annual cycle of rainfall compared to the 20<sup>th</sup> century – the first peak between July and September, and the second in November. In fact, July precipitation shows substantial increases (typically +50 to +100mm) in all models, scenarios, and stations, suggesting a shift of rainfall distribution to earlier in the rainy season.
- Analysis of aggregated projected annual maximum (Tmax) and minimum temperature (Tmin) (2011-2040) in Cagayan Valley reveals higher increase in Tmin compared to Tmax. The rate of increase in Tmin under A1B is 0.07°C per year and 0.05°C per year for Tmax. Under A2 scenario, the rate of temperature increase is slightly smaller: 0.05°C and 0.04°C per year (Tmin and Tmax, respectively). This differentiated projection for Tmax and Tmin suggests that diurnal temperature range will be smaller in the future.