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(Virtual Talk)

Precipitation forecast in La Plata basin, where its two main rivers are used for energy generation, is valuable for resource management. The National Meteorological Service has co-designed with water management users operational products in the subseasonal time range. This study describes the validation of these products as well as the approaches taken by a multi- disciplinary team to promote users into employing forecasts in their daily work.

Weekly accumulated precipitation forecasts from the Global Ensemble Forecast System (GEFS) are verified against Climate Hazards Group InfraRed Precipitation with Station (CHIRPS) database. Both operational and hindcast forecasts are studied employing dichotomous/continuous metrics. It was obtained that GEFS overestimates small scale precipitation in all seasons in a large part of the basin, especially in the wet period. During the dry period, the forecast variability is three times higher than the observed. On the other hand, intense precipitation associated with deep convection is underestimated.

Finally, subseasonal forecasts of a long-lasting event of heavy precipitation that caused flooding and infrastructure damage are studied. It was found that two-week forecasts were able to predict weekly accumulated precipitation above 50mm, with probabilities of more than 50%. This event was further explored with data from the Subseasonal Consortium (SubC). It was observed that 4 of 5 models predicted precipitation anomalies of 30mm even four weeks in advance in the basin. Despite the magnitude differences of observed precipitation, the anticipated outlook of this event helped one of the main users of these predictions take concrete actions for risk reduction.

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