

## Evaluation of tailored seasonal forecasts over Indonesia and Chile: CFSv1 vs CFSv2

Andrew W. Robertson<sup>1</sup>, Koen Verbist<sup>2</sup>, and Netrananda Sahu<sup>3</sup>

<sup>1</sup>International Research Institute for Climate and Society (IRI), Columbia University, NY

<sup>2</sup>Water Centre for Arid Zones in Latin America and the Caribbean (CAZALAC), La Serena, Chile

<sup>3</sup>Disaster Prevention Research Institute (DPRI), Kyoto University, Kyoto, Japan

In order to be usable in climate risk management settings, it is often desirable to “tailor” seasonal forecasts to quantities that are of more direct relevance to stakeholders. In the case of water resource allocations, the variable of importance may be seasonal streamflow. For drought management, it may be a drought index or some statistic of daily rainfall aggregated over a season. The tailoring process for these hydroclimatic applications is typically performed empirically using regression models, in which GCM forecast precipitation fields for the target season are used as predictor variables, and observed hydroclimatic variables as the predictand.

This contribution will firstly compare tailored seasonal hindcasts of Sept–Nov streamflow in the Citarum River, Indonesia, driven by seasonal precipitation hindcasts made by the CFSv1 and CFSv2 models. A second case study will target drought indices over central Chile for the May–Sept winter rainfall season. In the Indonesian case, we report very skillful hindcasts of seasonal streamflow, especially derived from the CFSv2, with anomaly correlation skill reaching 0.77, compared with the CFSv1’s score of 0.48. In the Chile case, we find the opposite, with the CFSv1 outperforming the CFSv2. The presentation will present these findings, together with physically-based interpretations of the differences in model performance in these two settings.