11th April 2018 (Wednesday)
PRESS RELEASE

Today, the University of Maryland’s Laboratory for Experimental Hydroclimate Prediction released its preliminary forecast for the 2018 summer monsoon rainfall. The forecast for the departures from normal rainfall (Figure 1) was produced on 8th April.

The forecast was developed from the recent state of influential climate variables (ones with large thermal inertia), such as sea surface temperature (SST). A distinctive feature of the University of Maryland’s prediction strategy is its statistical approach – rooted in innovative analyses of the 20th-century SST and rainfall observations – which leads to efficient extraction of the influence of SST on regional and faraway climate. The forecast strategy is complementary to dynamical predictions where similar influences are mined from the initialized integrations of the atmospheric and oceanic general circulation models.

The University of Maryland forecasts both the amount and geographical distribution of monsoon rainfall, and not just the customary but less informative all-India averaged rainfall amount. Its experimental forecast of the South Asian summer monsoon rainfall was first issued in April 2016, with the financial support of the United States National Science Foundation and Government of India’s National Monsoon Mission. Each year, University of Maryland issues a 3-stage forecast for the monsoon – Initial (early April), Interim (early May), and Final (early June) – contributing directly to the staged forecasts issued by the India Meteorological Department.

The University of Maryland’s Laboratory for Experimental Hydroclimate Prediction launched its website in April 2016 to disseminate its forecasts to the national and international climate monitoring and prediction centers. The Laboratory’s 2016 and 2017 forecasts, and more importantly, their verification are both documented at this website, as are the technical details on the enabling SST analysis and the statistical forecasting technique.

Commentary on the 2018 Summer Monsoon Rainfall Forecast (Initial)
Our initial forecast for the departures from normal rainfall (i.e., anomalies) calls for

- heavier than normal rainfall in Odisha and West Bengal, and in Myanmar’s coastal regions
- suppressed rainfall over the Brahmaputra basin in the northeastern states (Meghalaya, Assam, and Arunachal Pradesh) and eastern Bangladesh
- near-normal rainfall over the expansive Gangetic Plain

For India as a whole (in an area-averaged sense), the 2018 June-September rainfall is forecast to be near-normal (approximately 99.6% of the 1951-2000 period average) at this time.

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Figure 1: SST-based experimental forecast of the 2018 Summer Monsoon (June-September) rainfall anomalies (departures from normal), with respect to the 1951-2000 climatology. The forecast is generated from the SST regressions of the GPCCv7 (Global Precipitation Climatology Center) rainfall data. Solid (green) contours represent above-average rainfall while dashed (brown) ones denote below-average rainfall; the zero contour is suppressed. The contour interval and shading threshold is 0.5 mm/day. The Initial (ver. 1a) forecast for the summer monsoon rainfall is based on antecedent SST anomalies extending up to March.