



## **Sub-seasonal to Seasonal Prediction Project: Science Plan of Phase 2**

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This presentation gives an overview of the Sub-seasonal to Seasonal Prediction Project (S2S), jointly coordinated by the World Weather Research Programme (WWRP) and the World Climate Research Programme (WCRP). In the first phase of the S2S project, a data archive (the S2S Database) containing real-time S2S forecasts and hindcasts from 11 operational centres has been launched (Vitart et al. 2017). Two data portals hosted by ECMWF and CMA provide the international research community with data access to the whole dataset. The IRI data library also provides additional data access to a subset of the S2S data together with SubX data and online analysis tools. The S2S data has been extensively used for research, with roughly 1100 active users, 500 TB total download and more than 60 publications (as of April 2019).

The second phase (Phase 2) of the S2S project will run for the next five years (November 2018-December 2023). This presentation introduces the Phase 2 science plan and planned activity in six sub-projects: (1) MJO prediction and teleconnections, (2) Land initialization and configuration, (3) Ocean and sea ice initialization and configuration, (4) Ensemble generation, (5) Atmospheric composition, (6) Stratosphere. These sub-projects are conducted with a close collaboration with other WWRP/WCRP research communities and groups. The S2S project also aims to enhance Research to Operations (R2O) activity and operational infrastructure and user applications. Real-time pilot research of S2S applications and demonstrations is also planned with the WWRP Societal and Economic Research Application (SERA) working group.