

## **TCC's capacity-building activity and recent development**

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As part of capacity-building activities in its role as one of the Regional Climate Centers in WMO RA II, the Tokyo Climate Center (TCC) runs annual training seminars. The purpose of the seminar is to assist NMHSs in enhancing their operational seasonal forecasting services.

TCC held the Training Seminar on Application of Seasonal Forecast GPV Data to Seasonal Forecast Products at JMA Headquarters in Tokyo from 18 to 21 January 2011. The event was attended by 19 representatives from 18 NMHSs engaged in operational long-range forecasting in the Asia-Pacific region. The participants learned about the seasonal forecast GPV data available on the TCC website as well as their application to seasonal forecast products such as probabilistic seasonal forecasts.

ITACS (Interactive Tool for Analysis of the Climate System), useful web-based tool for climate diagnosis enables users not only to monitor the current climate status but also to analyze the complex systems that lie behind climatic conditions. In July 2010, an ITACS tutorial was made available on the ITACS web page (<http://jra.kishou.go.jp/itacs-info/tcc/itacsinfo.html>). The upgraded version (Version 4) is now being developed. The Version 4 will enable users to (1) use the JMA's current operational ocean analysis data, (2) set the detailed graphics setting, and (3) download data in binary format, which is compatible to GrADS.

As the first long-term global atmospheric reanalysis project conducted in Asia, JMA and Central Research Institute of Electric Power Industry jointly produced the Japanese 25-year reanalysis (JRA-25), which covered the period from 1979 to 2004. Since then we have been operating the JMA Climate Data Assimilation System using the same data assimilation system as used in JRA-25 and continuing the production in near real time.

JMA launched the second Japanese reanalysis project, JRA-55, in 2008. It extends the period back to 1958 when global radiosonde observing system was established. The data assimilation system used for JRA-55 is based on the latest JMA NWP system as of December 2009 and incorporates many improvements that have been implemented into the operational NWP system since the time of JRA-25 production. In JRA-55, we aim at producing a data set that can be used for analysis of low frequency variability in the climate system by improving on the time consistency achieved in JRA-25. The production is now in progress and the release of the product is planned in 2013.

The above-mentioned capacity-building activity and recent development will be reported in the presentation.