

TCC Activity Report for 2012

In 2012, the Tokyo Climate Center (TCC) continued to support the climate services of NMHSs in Asia-Pacific countries by providing and enhancing data and products, holding training seminars, sending experts and hosting visitors.

1. Highlights of 2012

1.1 Contribution to the development of the Global Framework for Climate Services (GFCS)

WMO works on the development of the Global Framework for Climate Services (GFCS) to better serve society's needs for accurate and timely climate information. In October 2012, an extraordinary session of the World Meteorological Congress approved the governance structure and implementation plan for the GFCS. TCC participated in discussions on the development of the draft implementation plan for the GFCS as a contributor to the sections of the Climate Services Information System (CSIS) and Capacity Development in the implementation plan. Regional Climate Centres (RCCs) are expected to play a major role in the CSIS – one of five components of the framework. In its role as an RCC, TCC plans to contribute to the effective and appropriate development of the system and the framework.

For successful and efficient implementation of the GFCS, it is important for NMHSs to share related good practices, especially in regard to the development and provision of user-oriented/targeted services. At the 15th session of the WMO Regional Association II (Asia) (Doha, Qatar, December 2012), it was agreed that TCC would lead a new GFCS-related pilot project under which it will establish a portal site to collect and share climate information provided by NMHSs and good practices on the application of climate information.

1.2 Issuance of special reports on extreme events

NMHSs are expected to actively contribute to climate risk management, and are tasked with issuing appropriate and timely information when extreme events occur. Against this background, TCC is committed to assisting NMHSs in fulfilling their roles.

In February and December 2012, the Eurasian Continent was hit by a marked cold wave. In response, TCC issued special reports entitled “Cold Wave over the Eurasian Continent” on 6 February and 28 December to briefly summarize the situation. These reports were also made available on the WMO website. The Center additionally provided NMHSs in the affected areas with extra commentary on the situation as well as information on how to prepare related figures using web-based tools available on the TCC website ([TCC News Nos. 27](#) and [31](#)).

2. Enhancement of data/products/tools on the TCC website

TCC strives to continuously enhance its services in the provision of data, products and tools.

In 2012, the following data and products were made available on the TCC website:

- 13 November: Animation maps (climate system monitoring)
- 26 December: Asian monsoon monitoring indices (climate system monitoring)
Time-longitude cross sections (climate system monitoring)

The following upgrades were also made to products/services.

- 10 February: Increased number of forecast stations in line with a minor revision of the probabilistic forecast system (one-month probabilistic forecasts)
- 21 December: Addition of ensemble mean and standard deviation values for individual forecast stations (one-month probabilistic forecasts)
- 21 December: Addition of a new forecast station (Hong Kong Observatory) (one-month probabilistic forecasts)

Some of these new data/products were made available in response to requests by NMHSs, and are also expected to be useful to other parties. The Center will continue to accommodate requests from NMHSs wherever possible.

3. Capacity development

TCC holds annual training seminars as part of capacity-building activities related to its role as an RCC in the WMO RA II area. In addition to running annual training seminars, it arranges expert visits to and hosts visitors from NMHSs to support exchanges of views on climate services and the effective transfer of technology.

3.1 Training seminars

In 2012, the Training Seminar on Climate Analysis Information was held from 26 to 30 November at JMA Headquarters in Tokyo. The event was attended by 13 experts from NMHSs in Bangladesh, Hong Kong, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, Mongolia, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand and Viet Nam. Through lectures and exercises, the participants learned about climate system monitoring and how to prepare climate analysis information on extreme climate events. The presentations given by the lecturers are available on the TCC website ([TCC News No. 31](#)).

3.2 Expert visit

In March 2012, TCC sent experts to three Asian countries (Lao PDR, the Philippines and Viet Nam) for follow-up work relating to the TCC Training Seminar on One-month Forecast Products held in November 2011. The activities they led included practical exercises with the Interactive Tool for Analysis of the Climate System (ITACS) and the installation of a module for site-specific probabilistic guidance for one-month forecasting. The experts also led discussions and exchanged views with attendees on improving climate services and engaging in future collaboration ([TCC News No. 29](#)).

3.3 Visitors

In July 2012, TCC hosted four experts from Indonesia's Meteorological, Climatological and Geophysical Agency (BMKG) to assist them in developing a Climate Early Warning System. Center staff presented the details of work procedures for the operational climate warning system in Japan and JMA's Ensemble Prediction System (EPS) for seasonal forecasting, and then led exercises on the application of gridded EPS data. The visit also provided TCC staff with a good opportunity to learn about BMKG climate services, including those tailored to agriculture in Indonesia ([TCC News No. 27](#)).

4. International meetings

4.1 Regional Climate Outlook Forums

Regional Climate Centres are expected to actively contribute to discussions in Regional Climate Outlook Forums (RCOFs). In 2012, TCC experts participated in two RCOFs in Asia. These were the eighth session of the Forum on Regional Climate Monitoring, Assessment and Prediction for Regional Association II (FOCRA II) held in Beijing, China, from 5 to 7 April, and the third session of the South Asian Climate Outlook Forum (SASCOF-3) held in Pune, India, from 19 to 20 April. TCC attendees gave presentations on seasonal predictions based on JMA's numerical model and participated in discussions to produce consensus forecasts.

In addition to these RCOFs, TCC, in collaboration with the Beijing Climate Center (BCC) of the China Meteorological Administration, the Korea Meteorological Administration (KMA) and the National Agency for Meteorology, Hydrology and Environment Monitoring (NAMHEM) of Mongolia, held the Joint Meeting for the Seasonal Prediction of the East Asian Winter Monsoon. Its 13th session, hosted by KMA, took place in Seoul in the Republic of Korea from 6 to 8 November, and was attended by a TCC expert. As noted at the 15th session of the WMO Regional Association II (Asia), China, Japan, Korea and Mongolia have agreed to establish a new sub-RCOF (called the East Asia winter Climate Outlook Forum (EASCOF)) for the region dominated by the East Asian winter monsoon based on deliberations at the joint meeting, and the forum's first session will be held in autumn 2013. TCC will continue to collaborate with these countries for the effective organization of the EASCOF.

TCC was also able to contribute to RCOFs in Africa. These were the 15th RCOF for West Africa, Cameroon and Chad (PRESAO-15) (Ouagadougou, Burkina Faso, May) and the first RCOF for the South West Indian Ocean region (PRESAOI-1, Moroni, Comoros, June). In response to invitations addressed to TCC and the Global Producing Center for Long-range Forecasts (GPC) Tokyo, staff from both organizations collaboratively prepared and provided climate analysis and prediction information suitable for RCOFs, and these data were used as important input at the events.

4.2 Other meetings

Mr Ryuji Yamada, a TCC expert and a member of the WMO CCI Expert Team on Strategy for Capacity Building for Climate Services, took part in a teleconference of the team in June. Discussions mainly focused on job competency requirements for climatological personnel.

At the 15th session of the WMO Regional Association II (Asia) (Doha, Qatar, December), Mr Yamada was designated as co-coordinator of the Expert Group on Climate Services (EG-CS) within the RA II Working Group on Climate Services (WGCS). He plans to promote the GFCS and activities related to climate services, including the use of RCC products, in collaboration with the other co-coordinator, Dr Ghulam Rasul (Pakistan).

5. Publications

TCC has published its newsletter (TCC News) on a quarterly basis since 2005. The publication is intended to enhance communication and provide information to NMHSs and related communities about recent TCC developments, events and activities as well as details of the Center's reports on the state of the climate, monitoring results and outlooks. In 2012, [TCC News Nos. 27 – 30](#) were issued and made available on the TCC website.

Other English-language publications related to the climate, such as Climate Change Monitoring Report 2011 and Annual Report on the Climate System 2011, were also made available on the TCC website.

6. Plans for 2013

With the development of the GFCS, the importance of international collaboration through RCCs is growing, and TCC plans to further strengthen its activities to lead RA II's contribution to the GFCS. In light of the important roles played by NMHSs in climate-related disaster risk management (one of the key sectors in the GFCS), TCC plans to enhance regional climate watch observation by more actively providing NMHSs with relevant information as necessary. As part of an RA II pilot project, TCC will collect climate information provided by NMHSs as well as details of good practices on the application of climate information in society, and will make these resources available on a portal site.

As per the recommendation adopted at the 15th session of the WMO Commission for Basic Systems (CBS) (Jakarta, Indonesia, September), which was supported by RA II at its 15th session (December), the Russian Federation's North Eurasia Climate Centre (NEACC) will be formally designated as a new RCC in RA II at the 65th session of the WMO Executive Council (May 2013). TCC hopes to engage in efficient collaboration with the new RCC as an extension to its current work with China's BCC. A couple of RA II RCC proponents are expected to enter their demonstration phase shortly, and TCC staff look forward to assisting them in their preparations.

In autumn 2013, TCC will hold its annual training seminar with a dozen invited experts. The Center will also continue to dispatch experts to NMHSs as necessary and host visitors from NMHSs upon request.

JMA is currently conducting the Japanese 55-year reanalysis project (JRA-55), which is scheduled for completion in fiscal 2013. The Agency plans to develop a high-resolution one-month forecast model, which will become operational in fiscal 2013. Data and products based on JRA-55 and the high-resolution forecast system will be made available to NMHSs through TCC in due course.

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