TCC/JMA Activities and Seasonal Prediction for Summer 2019

Takuya Komori

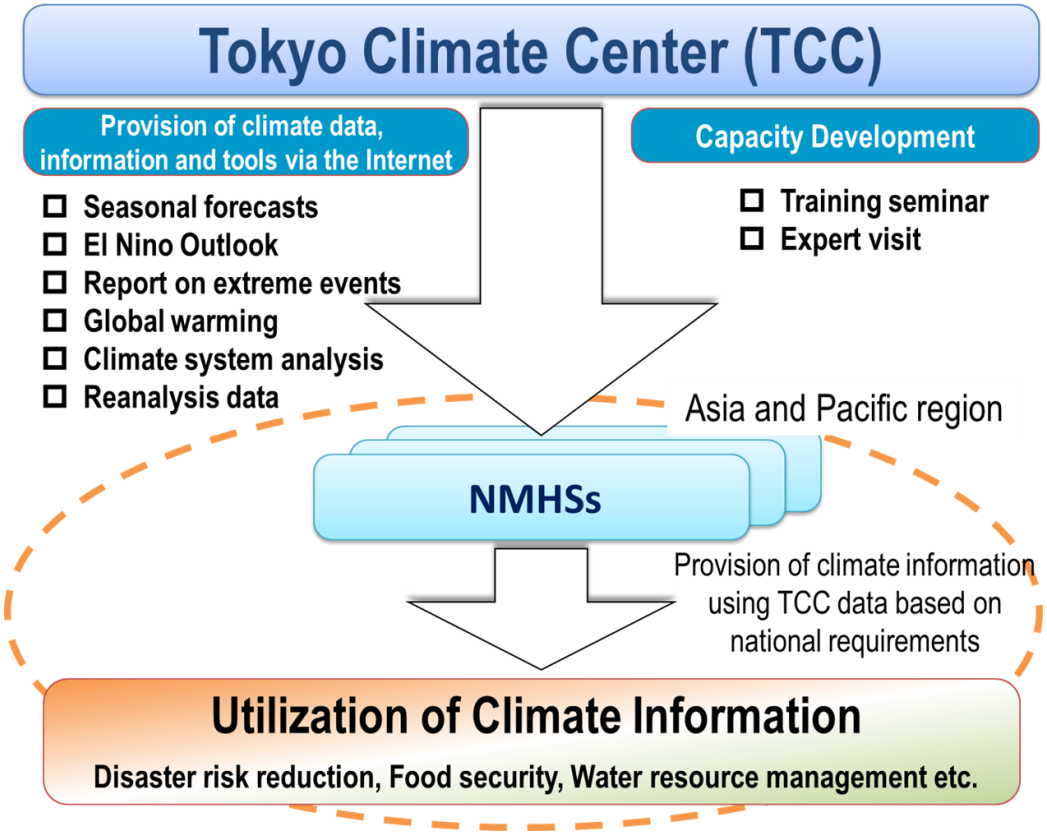
Tokyo Climate Center (TCC)
Japan Meteorological Agency (JMA)

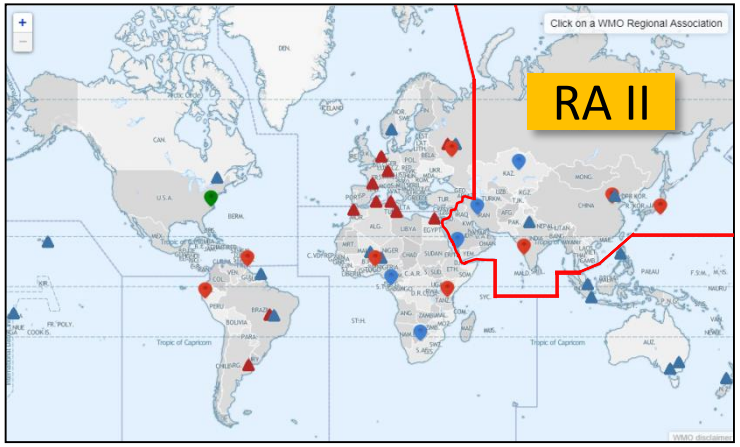
気象庁 Japan Meteorological Agency

Introduction of TCC

Tokyo Climate Center of the Japan Meteorological Agency (TCC/JMA)

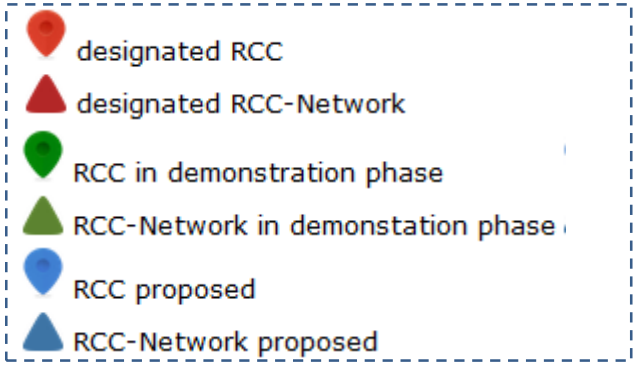
- TCC serves as a WMO Regional Climate Center in the RA II.
- TCC supports NMHSs through data/information provision and capacity development activities.





Current status of establishment of RCC

TCC was designated as RCCs in RA II in 2009.



TCC Website https://ds.data.jma.go.jp/tcc/tcc/index.html

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WMO Regional Climate Center in RA II (Asia)

WMO

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Home | World Climate | Climate System Monitoring | El Niño Monitoring | NWP Model Prediction | Global Warming | Climate in Japan | Training Module | Press release | Links

HOME

What are WMO RCCs

WMO RCCs are centres of excellence...

RCC Functions

Operational Activities for Long-range Forecasting

Operational Activities for Climate Monitoring

Operational Data Services, to support operational LRF and climate monitoring

Training in the use of operational RCC products and services

Latest Updates

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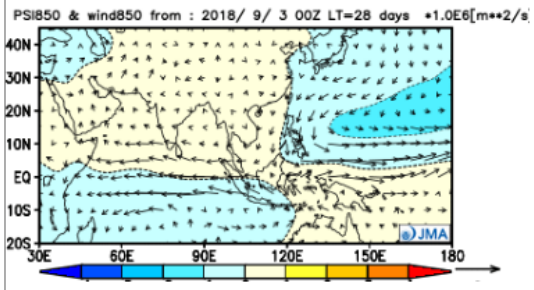
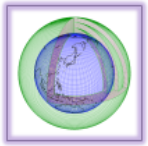


Ensemble forecast for stream function and wind vector at

Main Products

iTacs

iTacs, Interactive Tool for Analysis of the Climate System, is a web-based application to assist NMHSs to analyses extreme climate events and to monitor climate status.



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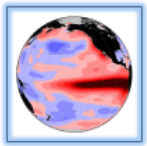

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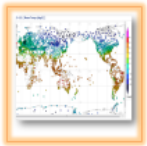

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TCC News, a quarterly newsletter from Tokyo Climate Center, acquaints with significant climate disasters and

What's New

RSS

30 August 2018 NEW

- TCC News No. 53 (Summer 2018: PDF)
  - Upgrade of JMA's Supercomputer System
  - Primary Factors behind the Heavy Rain Event of July 2018 and the Subsequent Heatwave in Japan from Mid-July Onward
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HOME

World Climate

El Niño Monitoring

Global Warming

Training Materials

Climate System Monitoring

NWP Model Prediction

Climate in Japan

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WMO ... centres of excellence...

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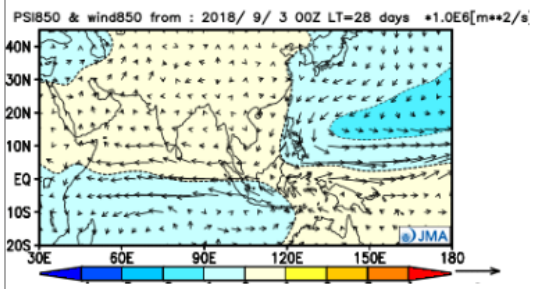

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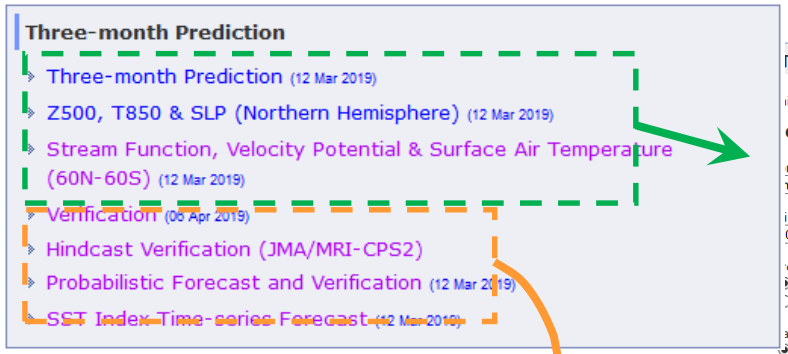
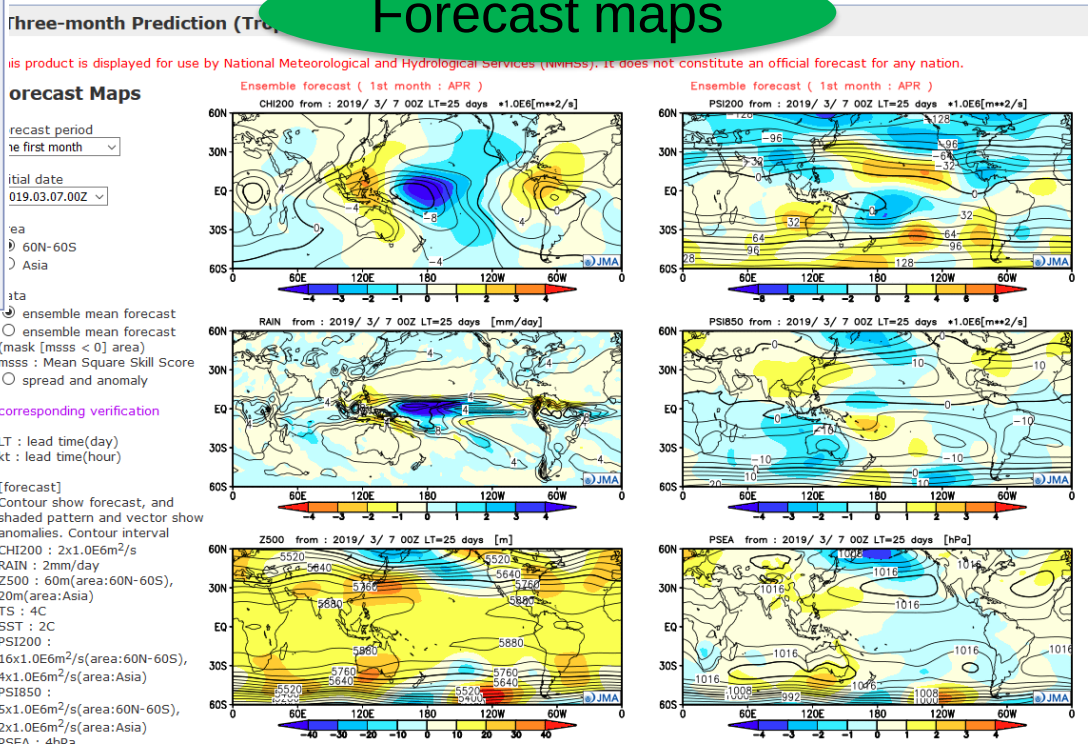
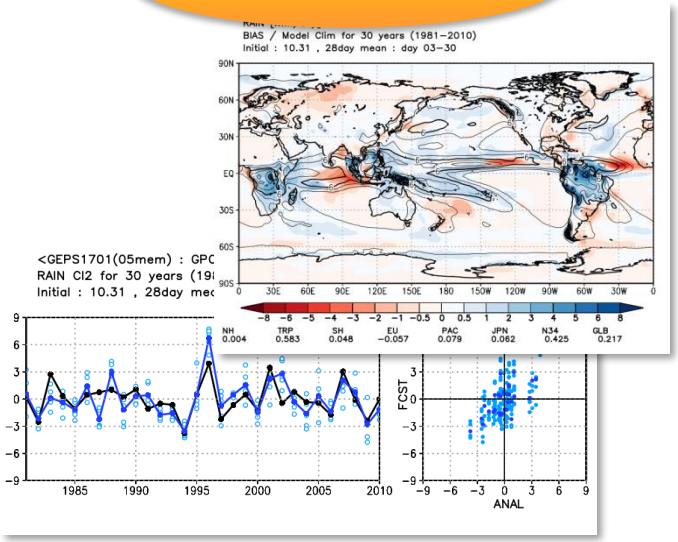


Forecast maps



Verification



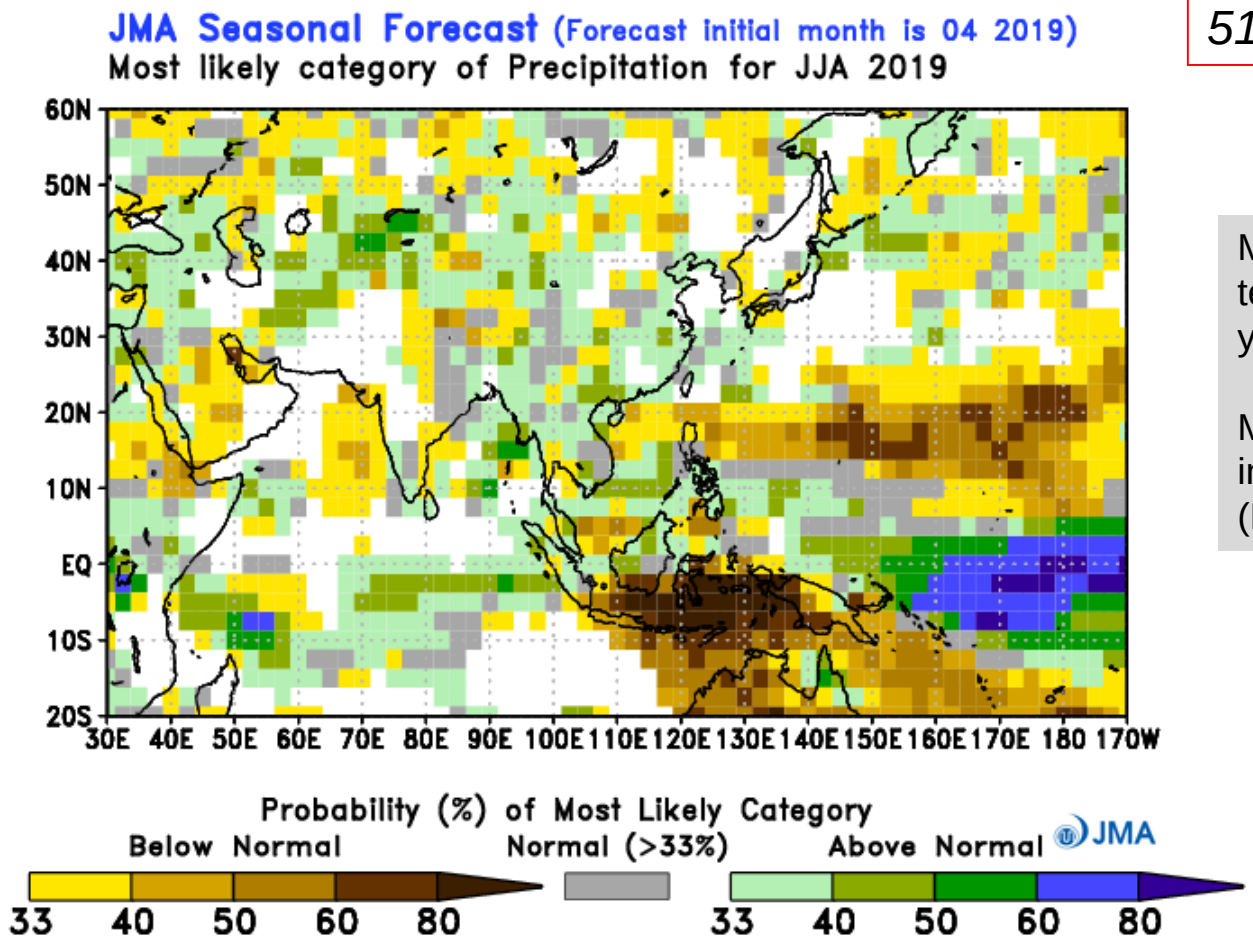
- Various results based on hindcast experiment are also available on this page.

https://ds.data.jma.go.jp/tcc/tcc/products/model/index.html

Probabilistic Forecast for JJA 2019

Initial Month: Apr 2019

51 ensemble members



Model Output Statistics (MOS) technique based on the 30 years hindcast is used.

Masked grids denote insufficient prediction skill (ROC area score < 0.5).

- Most likely category is **below normal** in north countries of South Asia, and **above normal** in Sri Lanka and South India.

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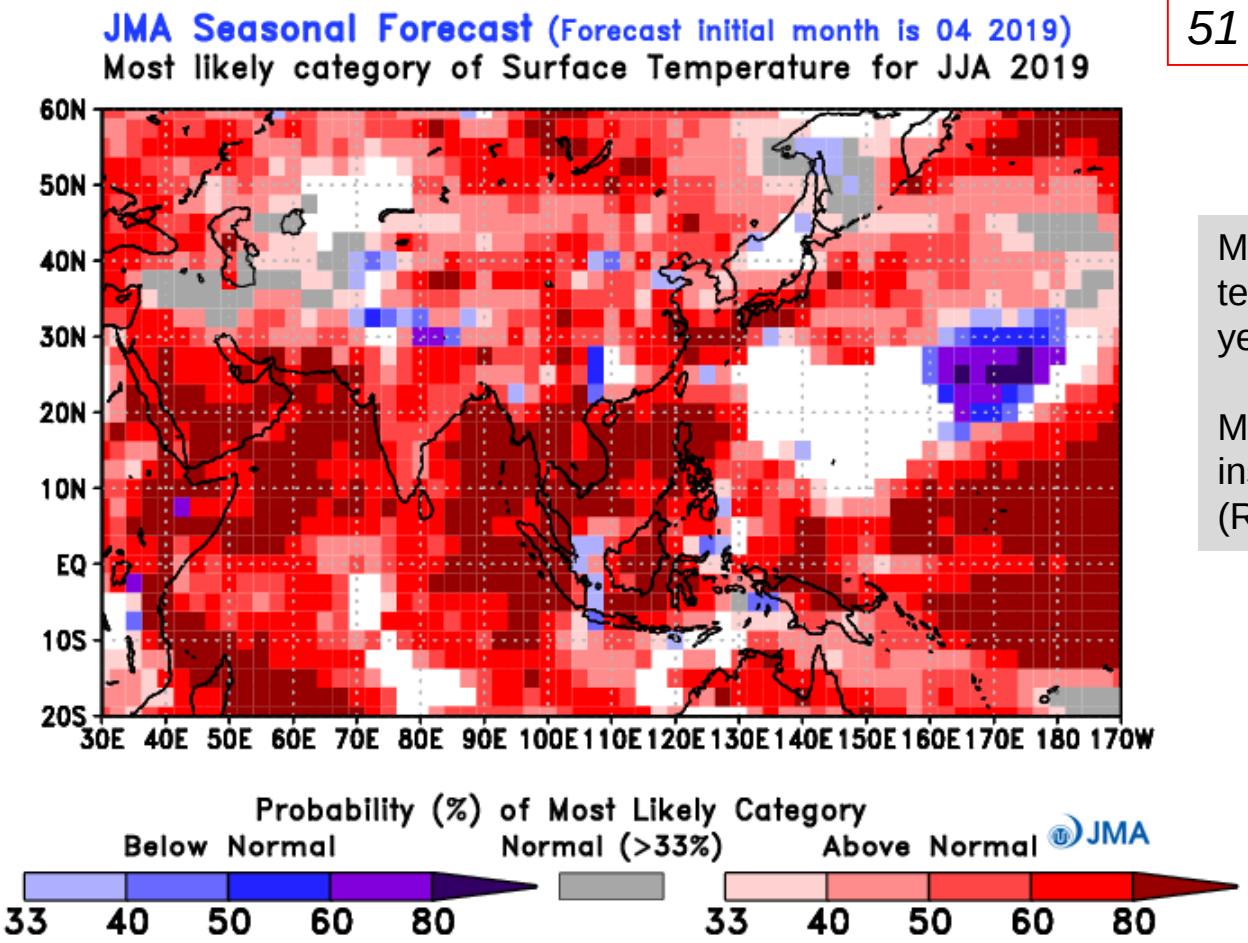

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- Temperature is expected to be above normal in the most part of South Asia.

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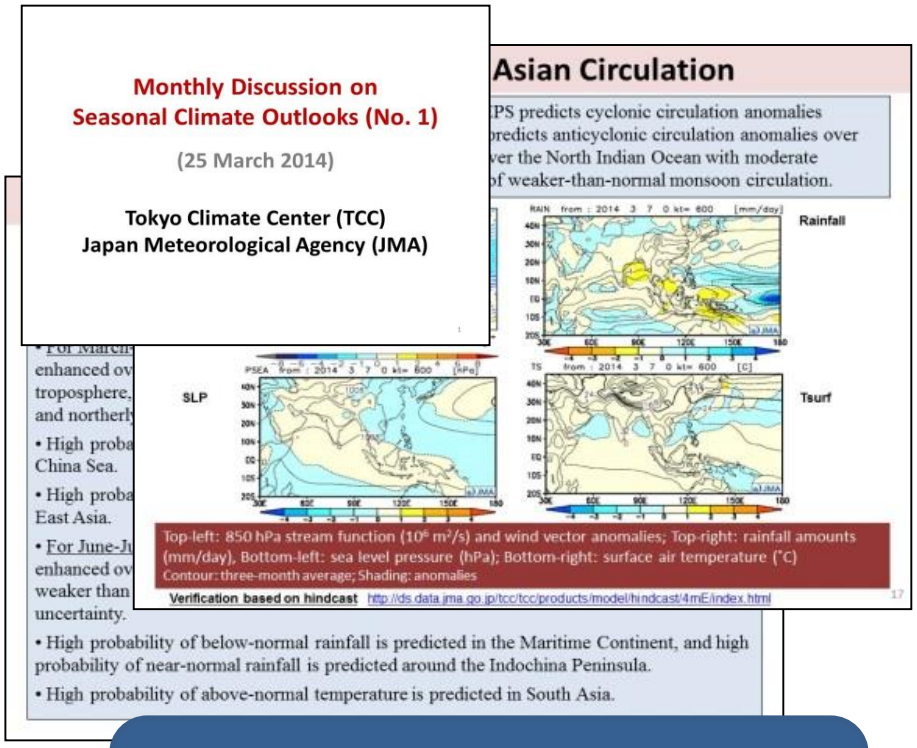

Provision

Feedback

TCC
producing materials

NMHSs
making seasonal outlooks

https://ds.data.jma.go.jp/tcc/tcc/products/model/monthly_discussion/latest.pdf

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Main products

Latest news of TCC's activities

Update information on TCC products

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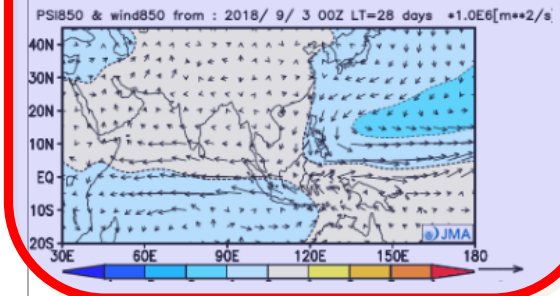

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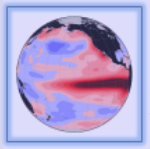

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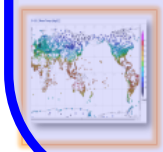

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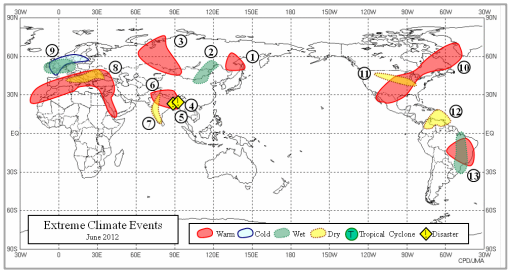
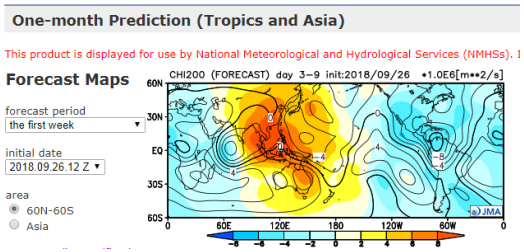
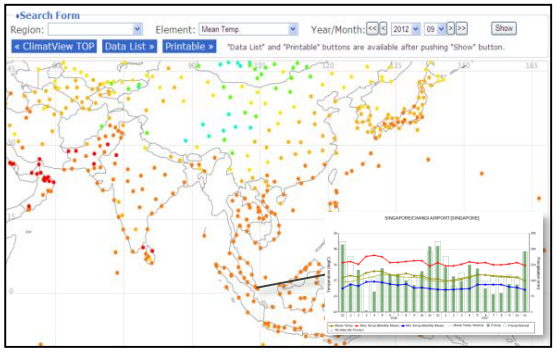
Examples of climate information, data, tool and products



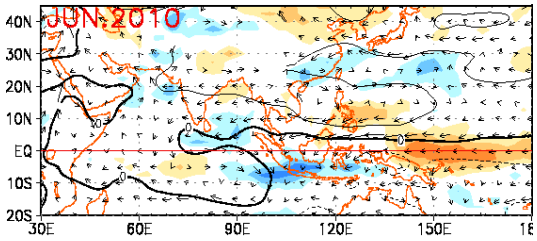
[Monitoring of Extreme Climate Events]



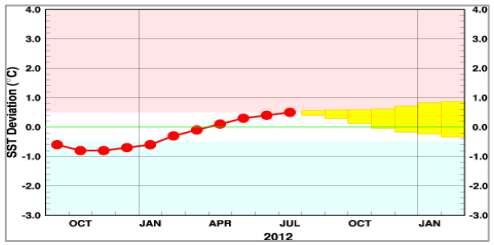
[One-month Forecast maps]



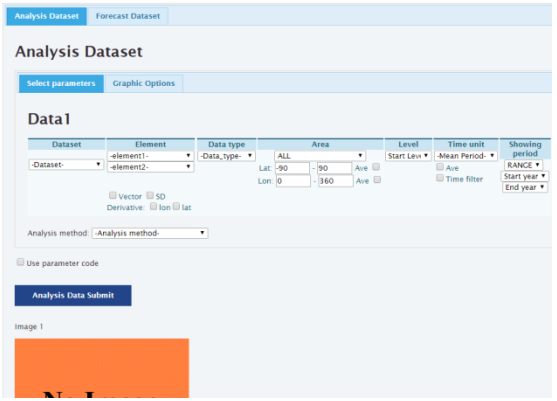
[Climate database]



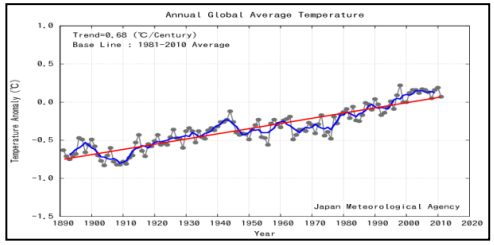
[Asian Monsoon Monitoring]



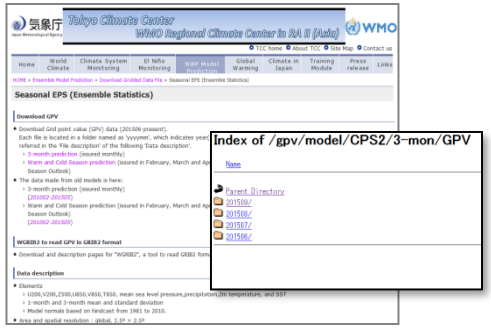
[El Niño outlook]



[Interactive Tool for Analysis of the Climate System (iTacs)]



[Global Average Surface Temperature Anomalies]

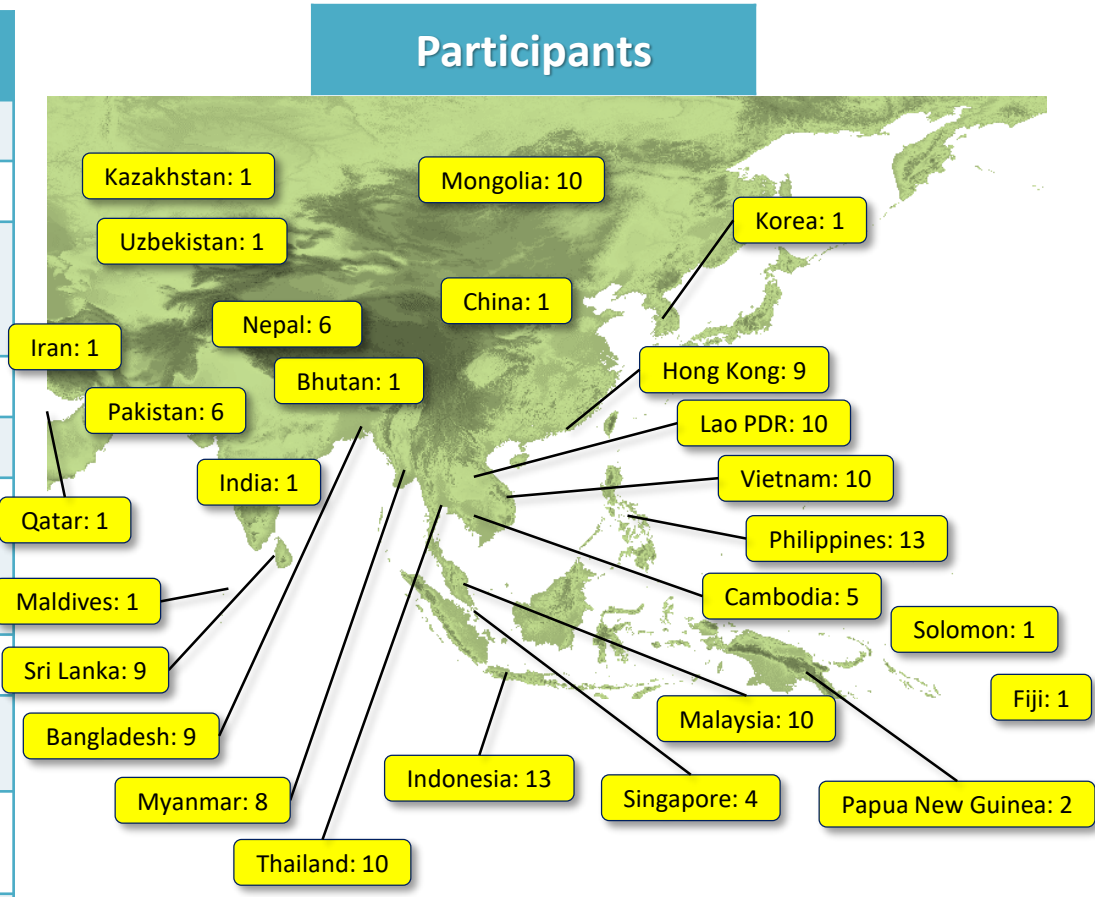


[Gridded Data(1-month, 3-month, Seasonal forecast)]

TCC training seminar

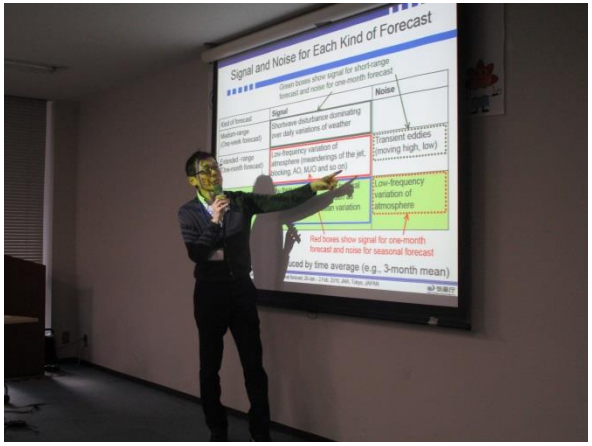
- TCC has organized an annual one-week training seminar since 2008 attended by a dozen of invited experts from NMHSs in Asia-Pacific region.
- Each seminar deals with a different theme from climate analysis, long-range forecast and global warming projection.

		Theme
1	Nov. 2008	Climate Information and Forecasting
2	Dec. 2009	Climate Analysis using Reanalysis Data
3	Jan. 2011	Application of Seasonal Forecast Gridded Data to Seasonal Forecast Products
4	Nov. 2011	One month Forecast Products
5	Nov. 2012	Climate Analysis Information
6	Nov. 2013	Seasonal Forecast Products
7	Jan. 2015	Global Warming Projection Information
8	Nov. 2015	One-month Forecast
9	Nov. 2016	Primary Modes of Global Climate Variability and Regional Climate
10	Jan. – Feb. 2018	Seasonal Forecast
11	**Nov. 2018**	**One-month Forecast**

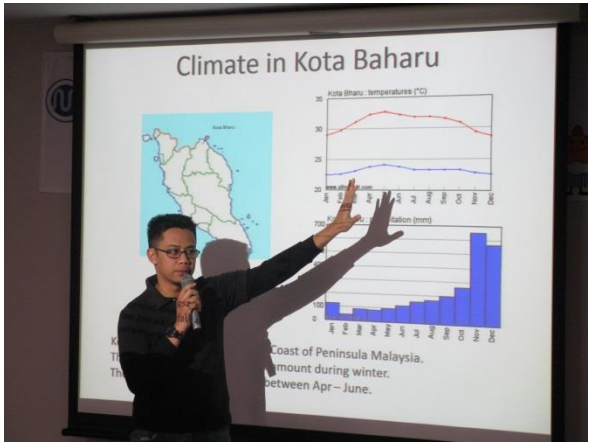


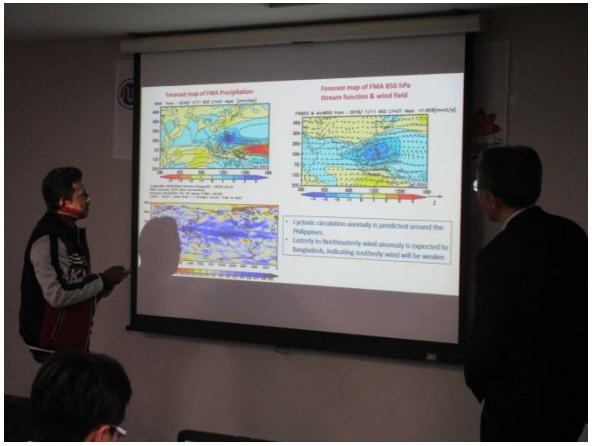
TCC training seminar

Lecture and Exercise session



Presentation on results of the exercise





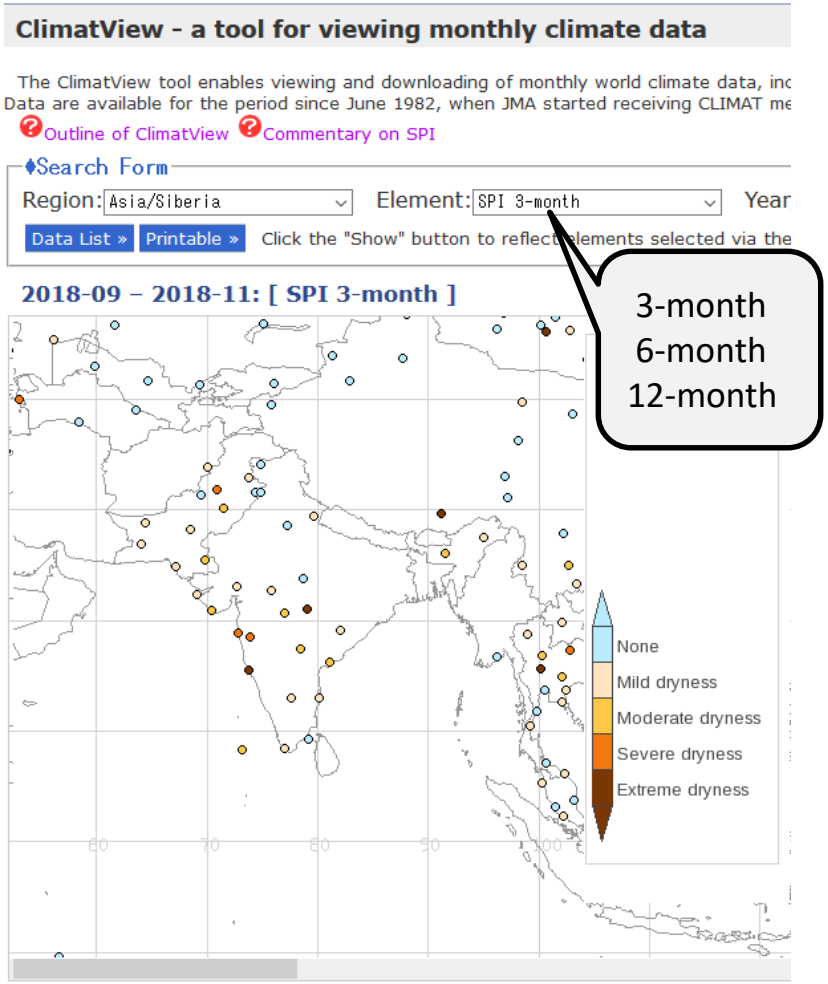
TCC Training Seminar on Seasonal Forecast (29 January to 2 February 2018)

Thank you for your kind attention.

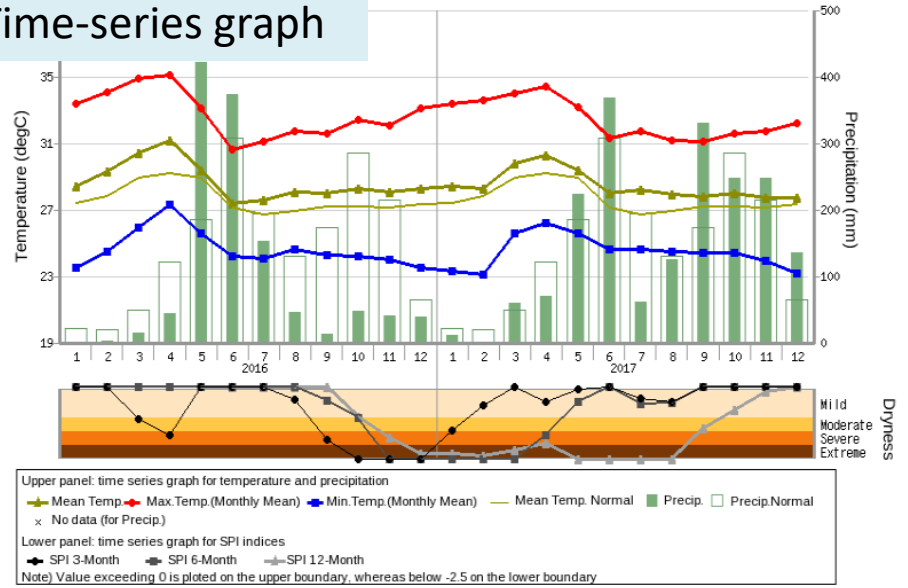
New product for drought monitoring by SPI

TCC has started providing drought monitoring information via the TCC's ClimatView tool from 19 March 2019. On the webpage, TCC provides SPI value from June 1982 to present with the following formats;

Geographical distribution map



Time-series graph



THIRUVANANTHAPURAM -INDIA (STATIONS SOUTH OF LATITUDE 20~N)
Lat.: 8.48 °N / Lon.: 76.95°E Height: 59(m)

download ----download in csv file

Digitarized data and its download

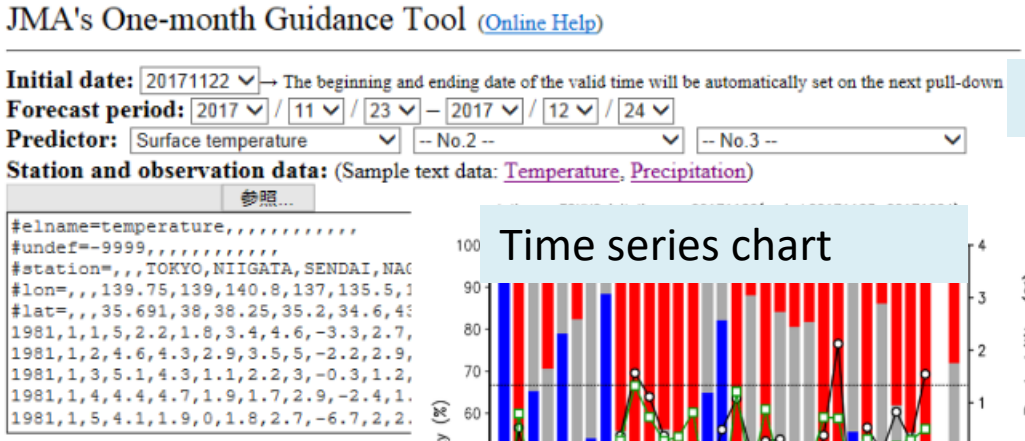
		SPI		
	[	3-Month	6-Month	12-Month
2016-08		-0.39	0.10	0.94
2016-09		-1.85	-0.42	0.17
2016-10		-4.10	-1.08	-1.04
2016-11		-4.07	-2.88	-1.77
2016-12		-3.05	-3.70	-2.34

https://ds.data.jma.go.jp/tcc/tcc/products/climate/climatview/frame.php

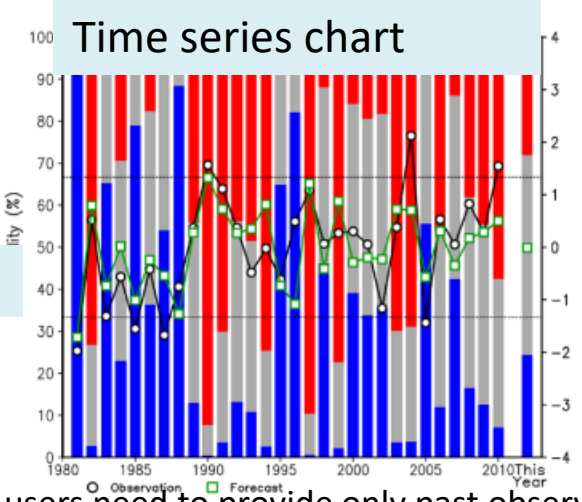
New tool for statistical guidance at station points (one-month forecast)

TCC has started providing new interactive tool for generating statistical guidance at station points in support of operational seasonal forecast for one-month or less.

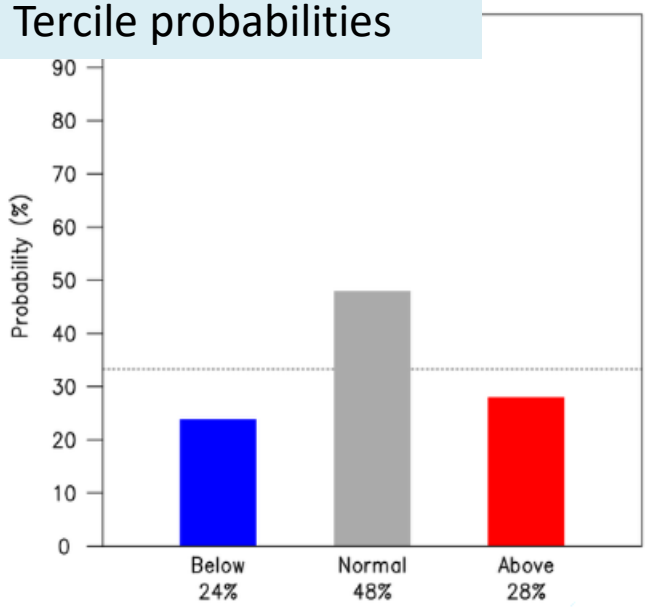
Input observation data



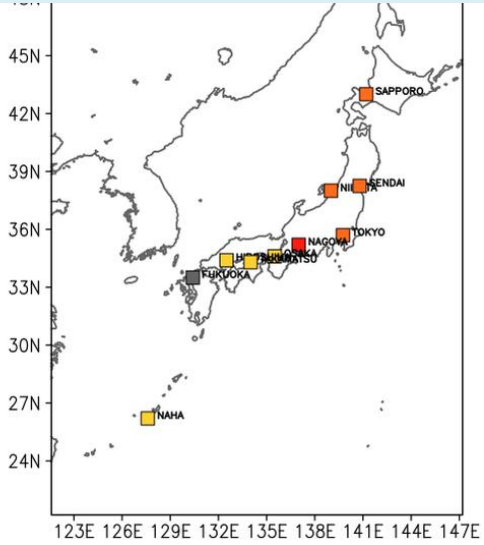
Time series chart



Tercile probabilities



Geographical forecast map



users need to provide only past observation data to create guidance forecasts.
Following figures and data are automatically calculated and appear;

- Figure on a tercile probability map
- Figure(s) on tercile probability (color bars) at station(s)
- Figure on an inter-annual time-series representation of tercile probability for the verification period
- Figure(s) on a reliability diagram with reliability and forecast frequency(ies)
- CSV-format data file used to create said figures

https://extreme.kishou.go.jp/tool/simple_guidance/help/