

Ex.2

Explanation about exercise

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Subject of the exercise

- ◆ One-month forecast using the model and the guidance
(Creation of tercile probabilistic forecast)
- Element: Mean temperature and total precipitation

Setting of the target period for forecast

- Initial time of the model: 11 Nov 2015 (Wed.)
- Forecast target period: 14 Nov to 11 Dec (4 weeks mean)

Assuming the issue date of 12 or 13 Nov

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Nov 2015	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
Dec 2015	30	1	2	3	4	5	6
	7	8	9	10	11	12	13

(Ref.)

Period of hindcast for creation of the guidance

	Hindcast	-1day	Real-time forecast
Initial time	10 Nov	←	11 Nov 2015
Target period	13 Nov to 10 Dec	←	14 Nov to 11 Dec 2015

- Reference grid of the model: **Represent in unit of 2.5°**
✓ Example; Tokyo/JAPAN (35.7N, 139.8E) → **(35N, 140E)**

In units of 2.5°

Data 1

Dataset	Element	Data type	Area	Level	Initial time	Time unit	Forecast time
1MONTH_HIND	Pressure Levels Temperature [C.Deg]	HIST	ALL Lat: 35 - 35 Lon: 140 - 140	1000hPa	1031	DAILY <input type="checkbox"/> Ave <input checked="" type="checkbox"/> Year-to-year <input type="checkbox"/> Time filter	1981 11 2 2010 11 30

Analysis method: -Analysis Method-

Initial time

Target period

Target point		Actual		Model	
		lat	lon	lat	lon
Bangladesh	DHAKA	23.8	90.4	25	90
Cambodia	POCHENTONG	11.6	104.8	12.5	105
Hong Kong	HONGKONG	22.3	114.17	22.5	115
Indonesia	Pondok Betung	6.27 -6.27	106.67	7.5 -7.5	107.5
Lao PDR	VIENTIANE	17.35	102.34	17.5	102.5
Malaysia	SUBANG	3.1306	101.5525	2.5	102.5
Mongolia	ULAANBAATAR	47.91861	106.8481	47.5	107.5
Myanmar	MANDALAY	21.59	96.06	22.5	95
Nepal	KATHMANDU	27.7	85.4	27.5	85
Pakistan	MULTAN	30.2	71.52	30	72.5
Philippines	Science_Garden_Quezon_City	14.645	121.042	15	120
Singapore	Changi Meteorological Station	1.36667	103.9833	2.5	105
Sri lanka	COLOMBO	6.9	79.9	7.5	80
Thailand	PHUKET	8.15	98.31	7.5	97.5
Vietnam	HaNoi	21	105.8	20	105

Correction; latitude 6.27 -> -6.27, 7.5-> -7.5

Tercile probabilities

In this exercise, probabilities for each category are represented by **ten percent**.

Example

Below	Normal	Above
20%	40%	40%

10:10:80		
10:20:70		
10:30:60	10:40:50	Above normal
20:30:50		Above normal tendency
20:40:40		
30:30:40	20:50:30	Near normal
30:40:30		
40:30:30		30:50:20
40:40:20		Below normal tendency
50:30:20		Below normal
...		

Note

- ✓ Not considered a **dipole pattern** (ex. 40:20:40), because of the assumption of normal distribution.
- In such case, probabilities should be close to no signal (i.e. 33:33:33), regarding with large uncertainty.

Contents of the presentation file

- **Setting of the guidance** (selection of predictors) and its prediction skill (i.e. correlation, BSS)
- Prediction
 - NWP model
 - Illustrate the characteristics of the predicted fields by the NWP model using the forecast map (or the other materials)
 - From large to local scale
 - Focus attention on the influence on the target point
 - **Guidance**
- **Discussion** (Interpretations using the above results)
- **Conclusions; show the probabilities**

Materials of NWP model

Tokyo Climate Center
WMO Regional Climate Center

NWP Model Prediction

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

HOME > Ensemble Model Prediction

JMA's Ensemble Prediction System (Products of GPC Tokyo)

JMA operates the ensemble prediction system of an atmospheric global circulation model (AGCM) for one-month prediction and atmosphere-ocean coupled global circulation model (CGCM) for three-month and warm/cold season prediction. Ensemble prediction products, verification charts and description of the ensemble prediction system are available on this page.

Notice

- 17 June 2015
The SST index time-series forecast product of Three-month Model Prediction is available.
- 29 May 2015
JMA's Seasonal Ensemble Prediction System will be upgraded next month. The new model description about JMA/MRI-CPS2 and hindcast gridded data are available. Please refer to the "TCC News No. 40" for details.
- 28 August 2014
The provision of "Forecast Products in Support of Early Warnings for Extreme Weather Events" started.
- 25 March 2014
The provision of "Monthly Discussion on Seasonal Climate Outlooks" started as a trial.

Main Products

- One-month Prediction**
 - One-month Prediction (05 Nov 2015)
 - Z500, T850 & SLP (Northern Hemisphere) (05 Nov 2015)
 - Stream Function, Velocity Potential & Surface Air Temperature (60N-60S) (05 Nov 2015)
 - Verification (18 Oct 2015)
 - Hindcast
 - One-month Probabilistic Forecasts at station points
- Monthly Discussion on Seasonal Climate Outlooks** last updated : 23 Oct 2015
This product is intended to assist NMHSs in the Asia-Pacific region in interpreting GPC Tokyo's three-month prediction and warm/cold season prediction products.
- Three-month Prediction**
 - Three-month Prediction (15 Oct 2015)
 - Z500, T850 & SLP (Northern Hemisphere) (15 Oct 2015)
 - Stream Function, Velocity Potential & Surface Air Temperature (60N-60S) (15 Oct 2015)
 - Verification (05 Nov 2015)
- Forecast Products in Support of Early Warnings for Extreme Weather Events** NEW last updated : 05 Nov 2015
Early warning products for extreme weather events covering the period up to two weeks ahead. (Only registered NMHSs can access this page.)
Application
 - If you have any questions about ID and/or password, please e-mail to

One-month Prediction

- ▶ One-month Prediction (05 Nov 2015)
- ▶ Z500, T850 & SLP (Northern Hemisphere) (05 Nov 2015)
- ▶ Stream Function, Velocity Potential & Surface Air Temperature (60N-60S) (05 Nov 2015)
- ▶ Verification (18 Oct 2015)
- ▶ Hindcast
- ▶ One-month Probabilistic Forecasts at station points