

CLIK hands-on (PART II):
Multi-Model Prediction
(<http://clik.apcc21.org>)

Daeun Jeong
8 Jun 2017



Rainfall near Bangkok in JFM 2017?

1. Deterministic MME

1-1. Customize your own prediction!

The screenshot shows the 'Prediction' tab selected in the Clik Climate Information Toolkit. The interface is divided into several sections: 'Lead Month' with a radio button for '3Month'; 'When' with dropdowns for 'Year' (2017) and 'Season' (JFM); 'Methods' with radio buttons for 'Deterministic' and 'Probabilistic'; 'Variables' with radio buttons for 'PREC' and 'T850'; and 'Model' with checkboxes for various GCM models: ALL, APCC, CMCC, COLA, CWB, HMC, IRIF, IRI_CA, MGO, MSC, NASA, NCEP, PNU, and POAMA. A 'Predict & Verify' button is located at the bottom right of the form.

① When

: 3-month lead prediction data is updated every month

② Variables

: choose the target variable

③ Methods

: 1 deterministic (SCM) and 1 probabilistic (GAUS) MME methods

④ Models

: (multiply) select GCM models for a MME prediction

1. Deterministic MME

1-1. Customize your own prediction

The screenshot shows the 'Predict' interface of the Clik Climate Information Toolkit. The interface is divided into several sections:

- Lead Month:** 3Month (selected)
- When:** Year: 2017, Season: JFM
- Methods:** Deterministic (selected), Probabilistic
- Variables:** PREC (selected), T850
- Model:** ALL, APCC, CMCC, COLA, CWB, HMC, IRIF, IRI_CA, MGO, MSC, NASA, NCEP, PNU, POAMA (all selected)

A 'Predict & Verify' button is located at the bottom right of the interface.

① **When (2017/JFM)**

: 3-month lead prediction data is updated every month

② **Variables (PREC)**

: choose the target variable

③ **Methods (Deterministic)**

: 1 deterministic (SCM) and 1 probabilistic (GAUS) MME methods

④ **Models (ALL)**

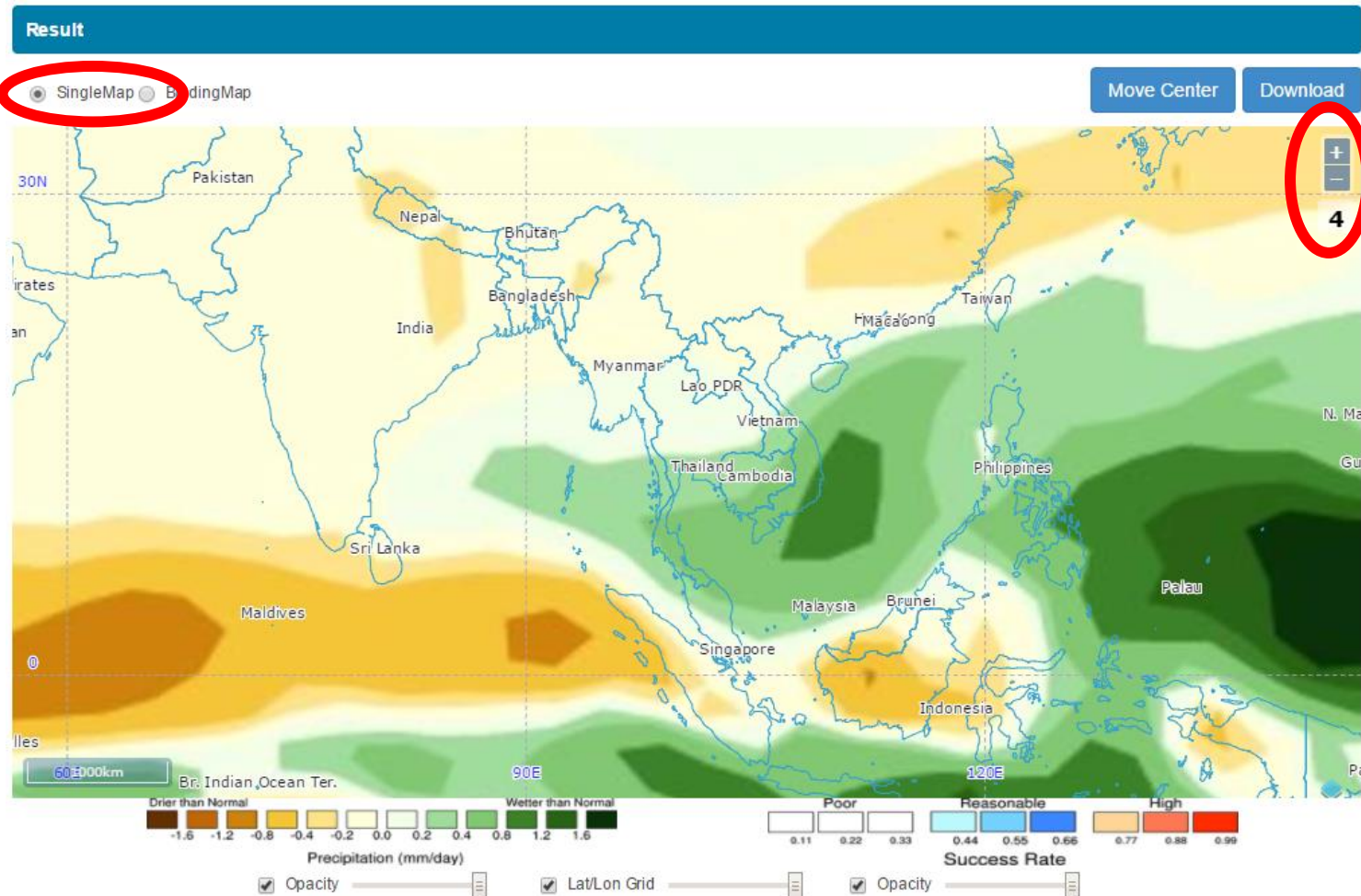
: (multiply) select GCM models for a MME prediction

⑤



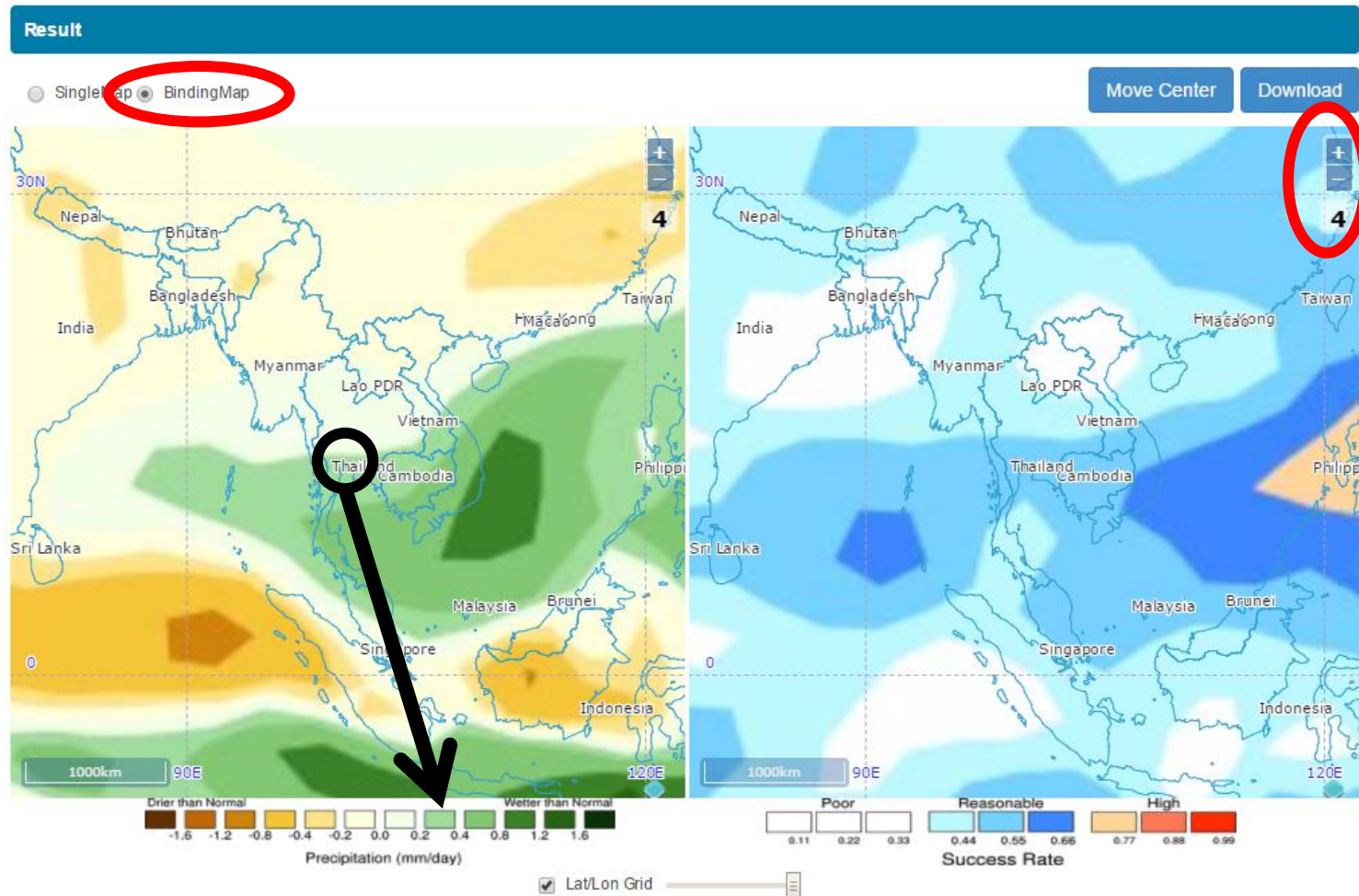
1. Deterministic MME

1-2. Read the resultant map



1. Deterministic MME

1-2. Read the resultant map



1. Deterministic MME

1-3. Download ASCII file

Result

SingleMap BindingMap Move Center **Download**

- PREDICT - PNG
- VERIFY - PNG
- NC - FILE
- ASCII - FILE**

Precipitation (mm/day)

Drier than Normal: -1.6, -1.2, -0.8, -0.4, -0.2, 0.0, 0.2, 0.4, 0.8, 1.2, 1.6

Wetter than Normal

Success Rate

Poor: 0.11, 0.22, 0.33

Reasonable: 0.44, 0.55, 0.66

High: 0.77, 0.88, 0.99

Lat/Lon Grid

1. Deterministic MME

1-4. Get quantities

« FORECAST ▶ SCM ▶ JAN ▶ JFM ▶ 2017

이름

유형

크기

수정된 날짜

prec.asc

ASC 파일

96KB

2017-05-29 오전 11:38

Microsoft EXCEL recommended!

```
[Variable=prec][MME method=SCM][Models=APCC CMCC COLA CWB HMC IRIF IRI_CA MGO MSC NASA NCEP PNU
-0.011, -0.011, -0.010, -0.010, -0.010, -0.010, -0.011, -0.010, -0.010, -0.010, -0.011
-0.006, -0.007, -0.007, -0.007, -0.008, -0.008, -0.008, -0.008, -0.009, -0.009, -0.007
-0.002, -0.002, -0.000, 0.001, 0.002, 0.003, 0.005, 0.006, 0.008, 0.009, 0.01
0.010, 0.011, 0.010, 0.010, 0.010, 0.009, 0.007, 0.006, 0.005, 0.003, 0.004,
0.005, 0.006, 0.006, 0.006, 0.006, 0.006, 0.006, 0.006, 0.006, 0.006, 0.007,
0.008, 0.007, 0.007, 0.006, 0.007, 0.007, 0.009, 0.008, 0.009, 0.010, 0.011
0.036, 0.028, 0.019, 0.010, 0.003, -0.002, -0.004, -0.006, -0.003, -0.001, 0.000,
-0.065, -0.084, -0.065, -0.022, -0.032, -0.035, -0.039, -0.035, -0.034, -0.030, -0.031
0.009, 0.006, 0.004, 0.002, 0.003, 0.004, 0.007, 0.009, 0.011, 0.014, 0.016,
0.041, 0.039, 0.038, 0.031, 0.026, 0.023, 0.022, 0.022, 0.028, 0.037, 0.044,
-0.037, -0.041, -0.032, -0.013, -0.014, -0.000, -0.007, -0.007, -0.000, 0.003, 0.014
0.020, -0.028, -0.022, -0.017, -0.022, -0.025, -0.024, -0.013, -0.005, 0.004, 0.015,
-0.014, -0.005, -0.001, 0.009, 0.020, 0.030, 0.059, 0.076, 0.086, 0.095, 0.140
0.006, 0.028, 0.038, 0.005, -0.014, -0.003, 0.022, 0.024, 0.025, 0.027, 0.011,
0.027, 0.029, 0.029, 0.037, 0.043, 0.050, 0.052, 0.048, 0.047, 0.052, 0.052
-0.037, -0.050, -0.059, -0.057, -0.066, -0.057, -0.046, -0.036, -0.025, -0.023, -0.020
0.043, 0.054, 0.061, 0.043, 0.066, 0.080, 0.090, 0.090, 0.086, 0.091, 0.077,
-0.059, -0.035, -0.015, -0.003, 0.005, -0.004, -0.014, -0.012, -0.028, -0.040, -0.043
7JFM][lat=-55], 0.018, 0.017, 0.026, 0.028, 0.024, 0.024, 0.021, 0.015, 0.010, 0.010
0.036, 0.044, 0.089, 0.097, 0.078, 0.132, 0.021, -0.010, -0.025, -0.008, 0.005
-0.012, -0.046, -0.042, -0.067, -0.082, -0.106, -0.104, -0.088, -0.081, -0.085, -0.065
0.048, 0.077, 0.085, 0.071, 0.093, 0.138, 0.166, 0.137, 0.136, 0.116, 0.127,
-0.020, -0.025, -0.036, -0.056, -0.071, -0.058, -0.060, -0.077, -0.089, -0.074, -0.059
0.025, 0.034, 0.023, 0.019, 0.023, 0.037, 0.044, 0.046, 0.045, 0.031, 0.03
0.069, 0.058, 0.055, 0.049, 0.046, 0.050, 0.071, 0.098, 0.140, 0.158, 0.147,
0.155, 0.148, 0.100, 0.080, 0.097, 0.079, 0.022, -0.034, -0.083, -0.087, -0.064,
.006, -0.015, -0.064, -0.079, -0.093, -0.145, -0.170, -0.153, -0.131, -0.123, -0.121,
-0.079, -0.041, [time=2017JFM][lat=-37.5], -0.047, -0.057, -0.077, -0.076, -0.068, -0.038,
0.188, 0.135, 0.091, 0.054, 0.043, 0.081, 0.113, 0.014, -0.123, -0.172, -0.175
0.023, 0.008, 0.032, 0.085, 0.154, 0.130, 0.123, 0.141, 0.236, 0.252, 0.225,
-0.036, -0.034, -0.021, -0.034, -0.055, 0.033, 0.069, 0.044, 0.022, 0.006, 0.017
0.154, 0.215, 0.329, 0.102, 0.034, -0.055, -0.023, 0.032, 0.000, 0.190, 0.433,
-0.189, -0.122, -0.093, -0.085, 0.095, 0.085, 0.022, -0.164, -0.378, -0.409, -0.280
-0.166, -0.217, -0.304, -0.378, -0.354, -0.222, -0.101, 0.001, 0.024, 0.088, 0.171
0.038, -0.116, -0.148, -0.165, -0.094, -0.110, -0.215, -0.255, -0.170, -0.124, -0.182,
-0.513, -0.646, -0.724, -0.654, -0.619, -0.623, -0.574, -0.520, -0.443, -0.395, -0.301
```

1. Deterministic MME

1-4. Get quantities

FORECAST > SCM > JAN > JFM > 2017

이름	유형	크기	수정한 날짜
prec.asc	ASC 파일	96KB	2017-05-29 오전 11:38

Bangkok

- Longitude = 100°28'E = 100.47°E ≅ 100°
- Latitude = 13°45'N = 13.75°N ≅ 15°

0.157

LONGITUDE →

↓ LATITUDE

	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME meth					
2	[Longitude=]	95	97.5	100	102.5	105
42	[time=2017JFM][lat=7.5]	0.057	0.22	0.468	0.623	0.755
43	[time=2017JFM][lat=10]	0.347	0.405	0.457	0.453	0.596
44	[time=2017JFM][lat=12.5]	0.254	0.29	0.297	0.285	0.326
45	[time=2017JFM][lat=15]	0.121	0.149	0.157	0.156	0.186
46	[time=2017JFM][lat=17.5]	0.069	0.097	0.083	0.057	0.035
47	[time=2017JFM][lat=20]	-0.008	0.016	0.027	0.005	-0.063
48	[time=2017JFM][lat=22.5]	-0.12	-0.108	-0.076	-0.072	-0.132
49	[time=2017JFM][lat=25]	-0.216	-0.168	-0.143	-0.08	-0.147
50	[time=2017JFM][lat=27.5]	-0.186	-0.075	-0.114	-0.067	-0.09
51	[time=2017JFM][lat=30]	-0.138	-0.054	-0.015	0.045	-0.014
52	[time=2017JFM][lat=32.5]	0.004	0.018	0.061	0.137	0.164
53	[time=2017JFM][lat=35]	-0.003	0.012	0.047	0.13	0.151
54	[time=2017JFM][lat=37.5]	0.038	0.023	0.045	0.069	0.046
55	[time=2017JFM][lat=40]	0.049	0.045	0.025	0.013	0.015
56	[time=2017JFM][lat=42.5]	0.012	0.024	0.025	0.019	0.013
57	[time=2017JFM][lat=45]	0.022	0.011	0.02	0.024	0.018

1. Deterministic MME

Practice!

When (**2017/JJA**)
Variables (**PREC**)
Methods (**Deterministic**)
Models (**ALL**)

	lon	lat	PREC
Phnom Pehn	104.85°E	11.55°N	?
Vientiane	102.57°E	17.97°N	?
Kuala Lumpur	101.68°E	3.13°N	?
Bangkok	100°E	15°N	0.718

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of forecasted PREC anomaly in the table.

1. Deterministic MME

Practice!

When (**2017/JJA**)
Variables (**PREC**)
Methods (**Deterministic**)
Models (**ALL**)

	lon	lat	PREC
Phnom Pehn	105°E	12.5°N	0.633
Vientiane	102.5°E	17.5°N	0.227
Kuala Lumpur	102.5°E	2.5°N	-0.184
Bangkok	100°E	15°N	0.718

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of forecasted PREC anomaly in the table.

2. Probabilistic MME

2-1. Customize your own prediction!

The screenshot shows the Clik Climate Information Toolkit interface. The top navigation bar includes 'Prediction', 'Downscale', and 'My Page'. The 'Predict' section is active. The 'Lead Month' is set to '3Month'. The 'When' section shows 'Year' as '2017' and 'Season' as 'JFM'. The 'Methods' section has 'Probabilistic' selected. The 'Variables' section has 'PREC' selected. The 'Model' section has 'ALL' selected, along with several other models: APCC, CMCC, COLA, CWB, HMC, IRIF, IRI_CA, MGO, MSC, NASA, NCEP, PNU, and POAMA. A 'Predict & Verify' button is located at the bottom right. Red boxes and numbers 1-4 highlight the 'When', 'Methods', 'Variables', and 'Model' sections respectively.

① **When (2017/JFM)**

: 3-month lead prediction data is updated every month

② **Variables (PREC)**

: choose the target variable

③ **Methods (Probabilistic)**

: 1 deterministic (SCM) and 1 probabilistic (GAUS) MME methods

④ **Models (ALL)**

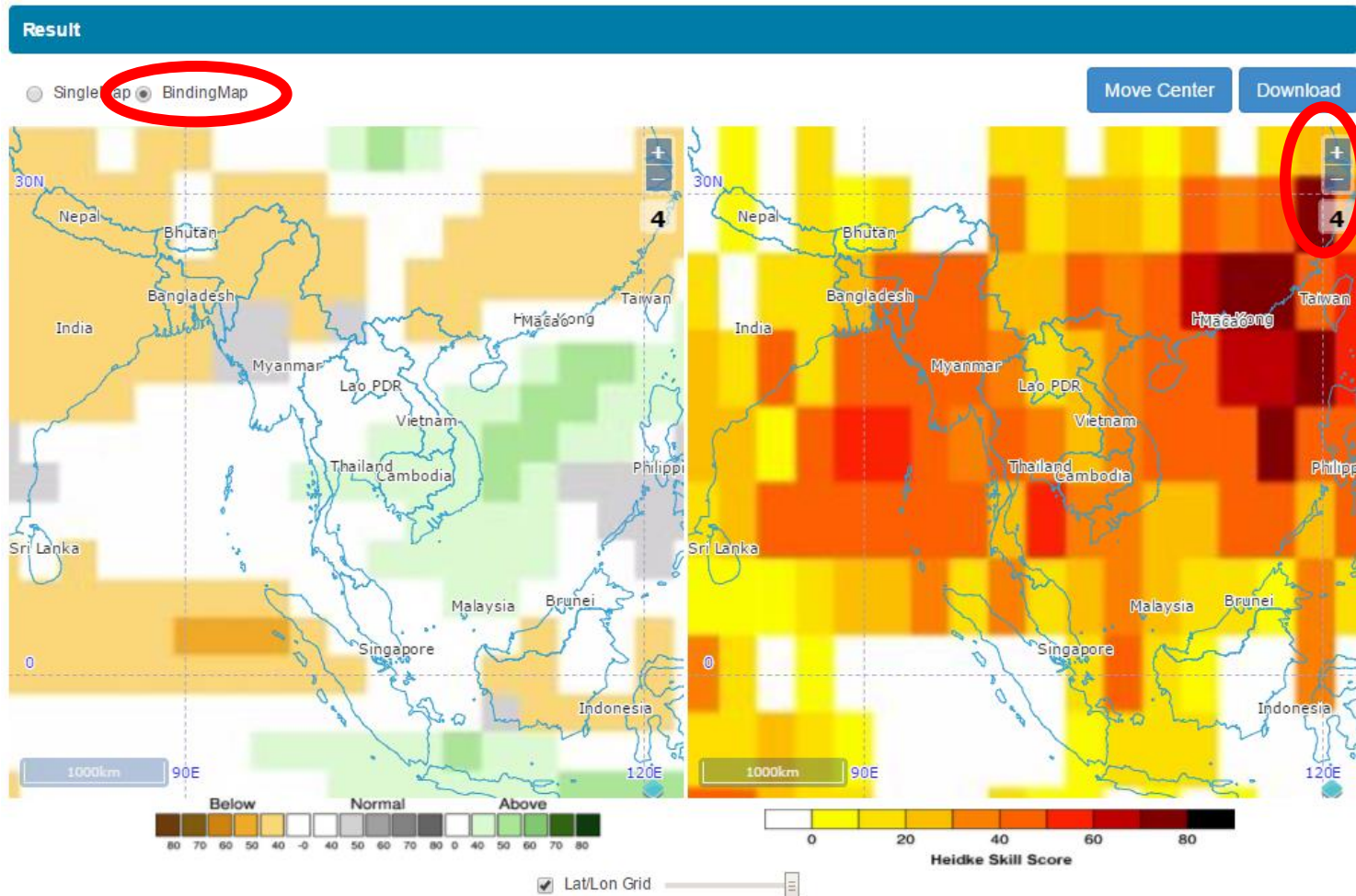
: (multiply) select GCM models for a MME prediction

⑤



2. Probabilistic MME

2-2. Read the resultant map



2. Probabilistic MME

2-3. Download ASCII file

Result

SingleMap BindingMap

Move Center **Download**

- PREDICT - PNG
- VERIFY - PNG
- NC - FILE
- ASCII - FILE**

1000km 90E 120E 30N 0

Below Normal Above
80 70 60 50 40 -40 40 50 60 70 80 0 40 50 60 70 80

1000km 90E 120E 30N 0

Heidke Skill Score
0 20 40 60 80

Lat/Lon Grid

2. Probabilistic MME

2-4. Get quantities

« FORECAST ▶ GAUS ▶ JAN ▶ JFM ▶ 2017

이름

유형

크기

수정한 날짜

prec.asc

ASC 파일

477KB 2017-05-29 오후 2:06

Bangkok

- Longitude
= $100^{\circ}28'E = 100.47^{\circ}E \doteq 100^{\circ}$
- Latitude
= $13^{\circ}45'N = 13.75^{\circ}N \doteq 15^{\circ}$

Tercile bins

- Lev 1 AN **39.158%**
- Lev 2 NN **35.618%**
- Lev 3 BN **25.223%**

LONGITUDE

↓

L
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T
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D
E

	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
42	[time=2017JFM][lev=1][lat=7.5]	32.21	35.302	38.238	40.701	46.043
43	[time=2017JFM][lev=1][lat=10]	37.569	38.447	36.585	38.216	47.355
44	[time=2017JFM][lev=1][lat=12.5]	38.778	43.447	40.801	43.181	47.04
45	[time=2017JFM][lev=1][lat=15]	37.145	38.414	39.158	42.004	43.953
46	[time=2017JFM][lev=1][lat=17.5]	30.472	34.15	36.446	32.923	30.456
	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
115	[time=2017JFM][lev=2][lat=7.5]	37.509	38.723	35.518	36.304	34.432
116	[time=2017JFM][lev=2][lat=10]	36.988	34.942	37.84	35.036	30.172
117	[time=2017JFM][lev=2][lat=12.5]	36.083	33.892	36.049	35.457	29.073
118	[time=2017JFM][lev=2][lat=15]	36.461	35.068	35.618	32.634	27.271
119	[time=2017JFM][lev=2][lat=17.5]	39.869	35.289	36.15	37.27	34.54
	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
188	[time=2017JFM][lev=3][lat=7.5]	30.281	25.976	26.245	22.995	19.525
189	[time=2017JFM][lev=3][lat=10]	25.443	26.611	25.574	26.748	22.473
190	[time=2017JFM][lev=3][lat=12.5]	25.14	22.661	23.15	21.362	23.886
191	[time=2017JFM][lev=3][lat=15]	26.394	26.518	25.223	25.363	28.776
192	[time=2017JFM][lev=3][lat=17.5]	29.659	30.561	27.404	29.807	35.004

2. Probabilistic MME

2-1. Customize your own prediction!

The screenshot shows the Clik Climate Information Toolkit interface. The top navigation bar includes 'Prediction', 'Downscale', and 'My Page'. The 'Predict' section is active. The 'Lead Month' is set to '3Month'. The 'When' section shows 'Year' as '2017' and 'Season' as 'JFM'. The 'Methods' section shows 'Deterministic' and 'Probabilistic' options, with 'Probabilistic' selected. The 'Variables' section shows 'PREC' and 'T850' options, with 'PREC' selected. The 'Model' section shows a grid of checkboxes for various GCM models, with 'ALL' and several others checked. A 'Predict & Verify' button is located at the bottom right.

① **When (2017/JFM)**

: 3-month lead prediction data is updated every month

② **Variables (PREC)**

: choose the target variable

③ **Methods (Probabilistic)**

: 1 deterministic (SCM) and 1 probabilistic (GAUS) MME methods

④ **Models (ALL)**

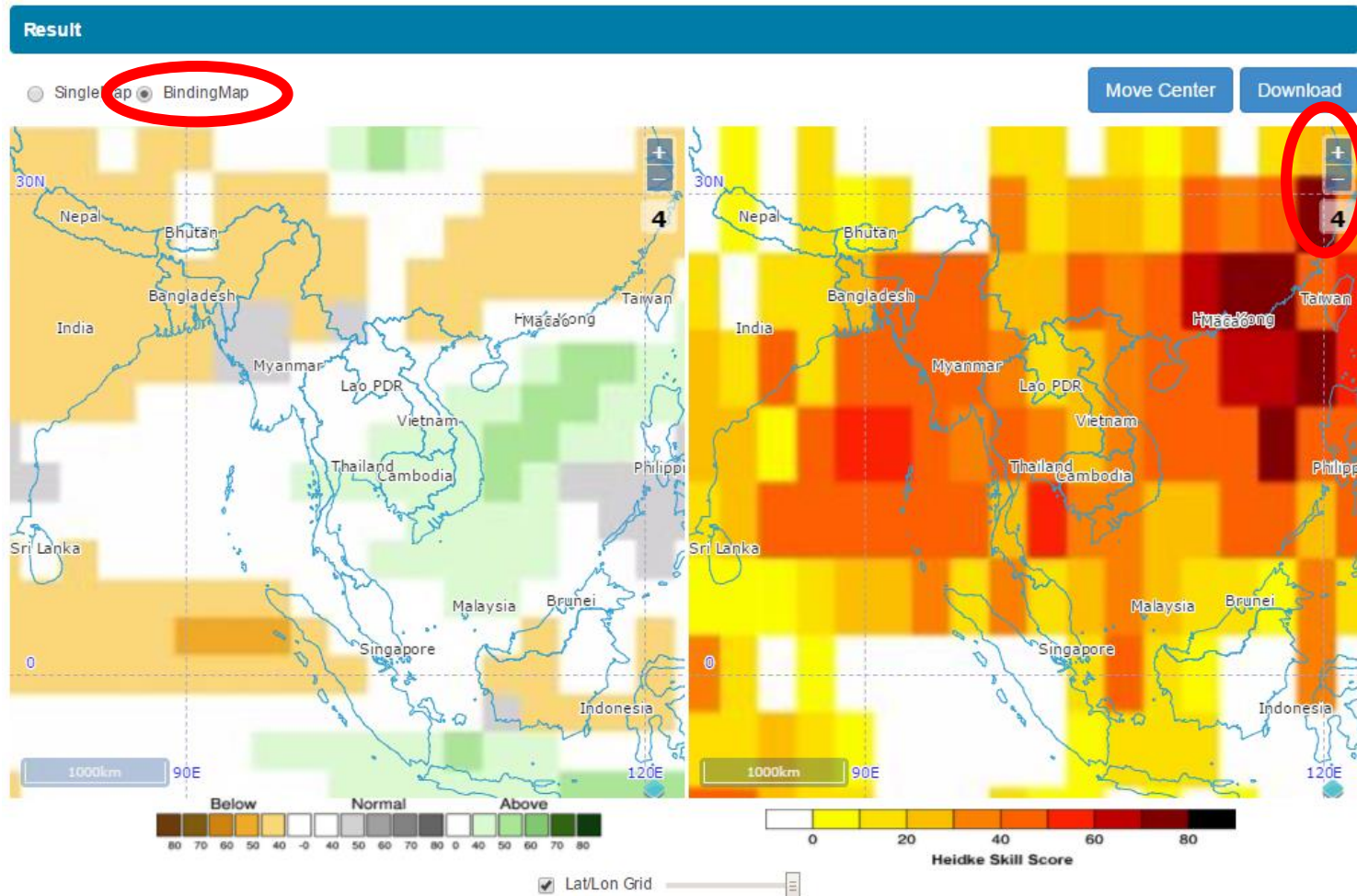
: (multiply) select GCM models for a MME prediction

⑤



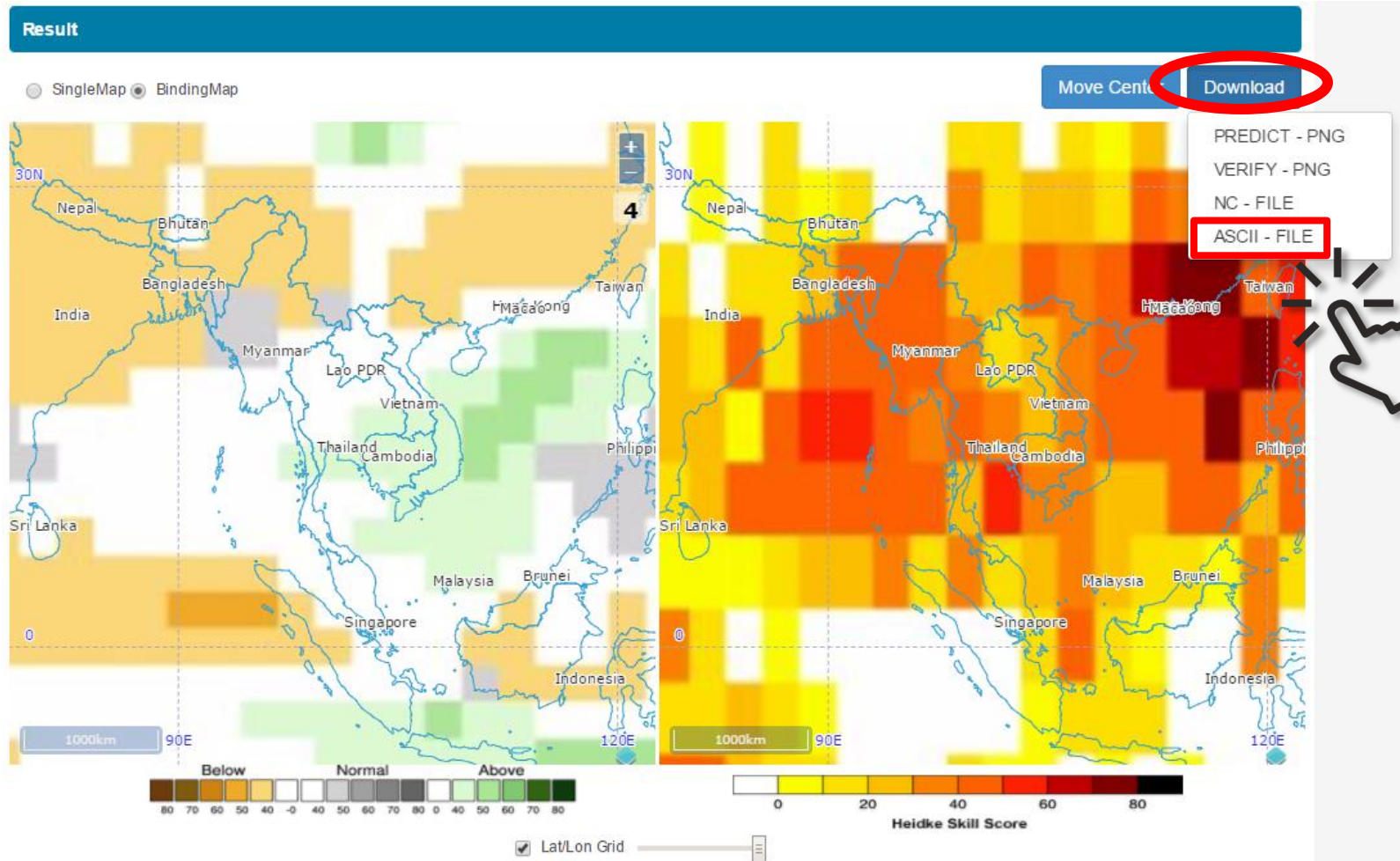
2. Probabilistic MME

2-2. Resultant Map



2. Probabilistic MME

2-2. Resultant Map



2. Probabilistic MME

2-3. Getting quantities

« FORECAST ▶ GAUS ▶ JAN ▶ JFM ▶ 2017

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크기

수정한 날짜

prec.asc

ASC 파일

477KB

2017-05-29 오후 2:06

Bangkok

- Longitude
= $100^{\circ}28' E = 100.47^{\circ} E \doteq 100^{\circ}$
- Latitude
= $13^{\circ}45' N = 13.75^{\circ} N \doteq 15^{\circ}$

Lev1 → AN: 39.158%

Lev2 → NN: 35.618%

Lev3 → BN: 25.223%

	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
42	[time=2017JFM][lev=1][lat=7.5]	32.21	35.302	38.238	40.701	46.043
43	[time=2017JFM][lev=1][lat=10]	37.569	38.447	36.585	38.216	47.355
44	[time=2017JFM][lev=1][lat=12.5]	38.778	43.447	40.801	43.181	47.04
45	[time=2017JFM][lev=1][lat=15]	37.145	38.414	39.158	42.004	43.953
46	[time=2017JFM][lev=1][lat=17.5]	30.472	34.15	36.446	32.923	30.456

	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
115	[time=2017JFM][lev=2][lat=7.5]	37.509	38.723	35.518	36.304	34.432
116	[time=2017JFM][lev=2][lat=10]	36.988	34.942	37.84	35.036	30.172
117	[time=2017JFM][lev=2][lat=12.5]	36.083	33.892	36.049	35.457	29.073
118	[time=2017JFM][lev=2][lat=15]	36.461	35.068	35.618	32.634	27.271
119	[time=2017JFM][lev=2][lat=17.5]	39.869	35.289	36.15	37.27	34.54

	A	AN	AO	AP	AQ	AR
1	[Variable=prec][MME method=GA					
2	[Longitude=]	95	97.5	100	102.5	105
188	[time=2017JFM][lev=3][lat=7.5]	30.281	25.976	26.245	22.995	19.525
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190	[time=2017JFM][lev=3][lat=12.5]	25.14	22.661	23.15	21.362	23.886
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192	[time=2017JFM][lev=3][lat=17.5]	29.659	30.561	27.404	29.807	35.004

2. Probabilistic MME

Practice!

When (**2017/JJA**)

Variables (**PREC**)

Methods (**Probabilistic**)

Models (**① ALL**

② NASA+NCEP+PNU

③ APCC+POAMA)

① ALL	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	?	?	?
Vientiane	102.5°E	17.5°N	?	?	?
Kuala Lumpur	102.5°E	2.5°N	?	?	?
Bangkok	100°E	15°N	45.211	31.235	23.554

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.

2. Probabilistic MME

Practice!

When (**2017/JJA**)

Variables (**PREC**)

Methods (**Probabilistic**)

Models (**① ALL**

② NASA+NCEP+PNU

③ APCC+POAMA)

① ALL	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	46.790	31.128	22.082
Vientiane	102.5°E	17.5°N	39.077	33.568	27.355
Kuala Lumpur	102.5°E	2.5°N	23.558	33.386	43.056
Bangkok	100°E	15°N	45.211	31.235	23.554

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.

2. Probabilistic MME

Practice!

When (2017/JJA)

Variables (PREC)

Methods (Probabilistic)

Models (① ALL

② NASA+NCEP+PNU

③ APCC+POAMA)

② NASA+NCEP+ PNU	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	?	?	?
Vientiane	102.5°E	17.5°N	?	?	?
Kuala Lumpur	102.5°E	2.5°N	?	?	?
Bangkok	100°E	15°N	53.452	28.713	17.836

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.

2. Probabilistic MME

Practice!

When (2017/JJA)

Variables (PREC)

Methods (Probabilistic)

Models (① ALL

② NASA+NCEP+PNU

③ APCC+POAMA)

② NASA+NCEP+ PNU	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	48.841	34.653	21.455
Vientiane	102.5°E	17.5°N	44.767	35.207	20.026
Kuala Lumpur	102.5°E	2.5°N	25.81	45.858	28.332
Bangkok	100°E	15°N	53.452	28.713	17.836

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.

2. Probabilistic MME

Practice!

When (2017/JJA)

Variables (PREC)

Methods (Probabilistic)

Models (① ALL

② NASA+NCEP+PNU

③ APCC+POAMA)

③ APCC+POAMA	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	?	?	?
Vientiane	102.5°E	17.5°N	?	?	?
Kuala Lumpur	102.5°E	2.5°N	?	?	?
Bangkok	100°E	15°N	50.386	28.533	21.080

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.

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Practice!

When (2017/JJA)

Variables (PREC)

Methods (Probabilistic)

Models (① ALL

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③ APCC+POAMA)

③ APCC+POAMA	lon	lat	AN lev1	NN lev2	BN lev3
Phnom Penh	105°E	12.5°N	28.153	32.714	39.132
Vientiane	102.5°E	17.5°N	28.988	30.538	40.474
Kuala Lumpur	102.5°E	2.5°N	8.766	18.519	72.715
Bangkok	100°E	15°N	50.386	28.533	21.080

1. Set options.
2. Read the resultant map.
3. Download ASCII file.
4. Open the file with EXCEL and read the value of probability in the table.



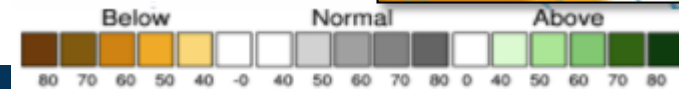
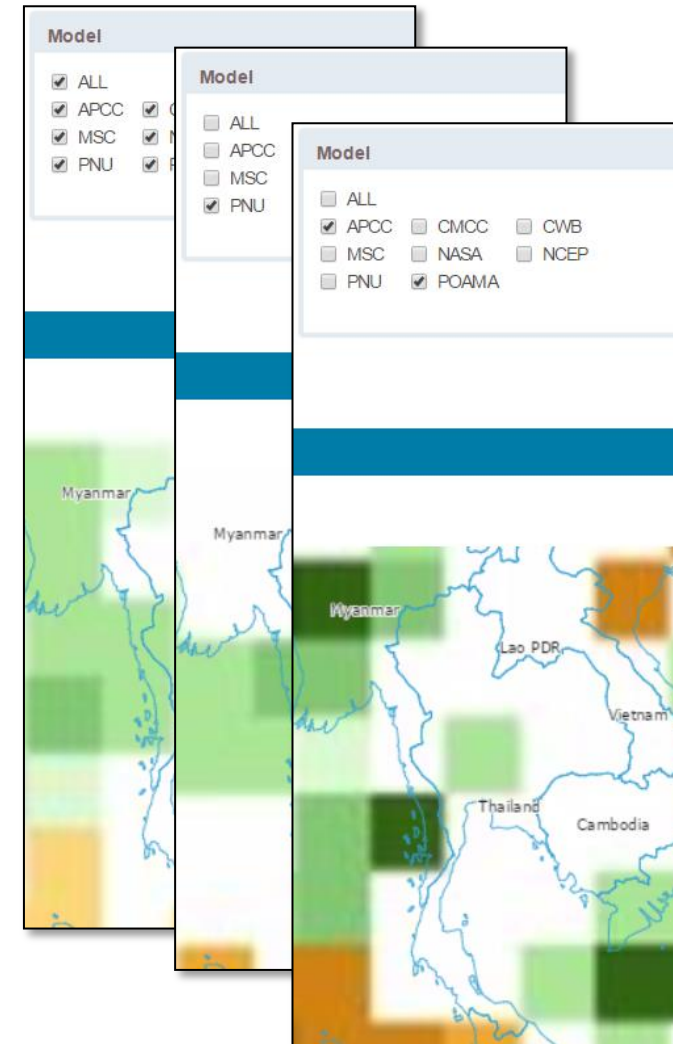
Thank you.

lev 4?

	AN (lev=1)	NN (lev=2)	BN (lev=3)	lev=4
ALL	45.211	31.235	23.554	145.211
NASA+NCEP+PNU	53.452	28.713	17.836	153.452
APCC+POAMA	50.386	28.553	21.080	150.386

lev4 → final tercile category (drawn)

- lev4 >100 : AN with (lev4-100) %
- 0 < lev4 < 100 : NN with lev4 %
- lev4 <0 : BN with (-1)*lev4%
- lev4 = 1E+20 : eq. chance (IDK)



Getting annoyed with scrolling up and down?

The image shows a Microsoft Excel spreadsheet with a long list of data rows. A hand-drawn cloud with arrows points to the 'Data' column and the 'Text to Columns' button. A callout box explains the feature.

Data

Text to Columns

Separate the contents of one Excel cell into separate columns.

For example, you can separate a column of full names into separate first and last name columns.

In Word, use this feature to convert the selected text into a table, splitting the text into columns at each comma, period, or other character you specify.

Press F1 for more help.

[Variable=prec][MME method=SCM][Models=APCC CMCC COLA CWB HMC IRIF	CA	MGO	MSC	NASA	NCEP	PNU	POAMA	[Training Period
[Longitude=], 0, 2.5, 5, 7.5, 10, 12.5, 15, 17.5, 20, 22.5, 25, 27.5, 30, 32.5, 35, 37.5, 40,								
[time=2017JFM][lat=-90], -0.012, -0.011, -0.011, -0.011, -0.011, -0.011, -0.010, -0.010, -0.010, -0.010, -0.010,								
[time=2017JFM][lat=-87.5], 0.010, 0.011, 0.011, 0.012, 0.012, 0.013, 0.013, 0.014, 0.014, 0.014, 0.014,								
[time=2017JFM][lat=-85], 0.010, 0.011, 0.011, 0.013, 0.013, 0.013, 0.013, 0.013, 0.013, 0.013, 0.013,								
[time=2017JFM][lat=-82.5], 0.010, 0.011, 0.011, 0.012, 0.012, 0.012, 0.012, 0.012, 0.012, 0.012, 0.012,								
[time=2017JFM][lat=-80], 0.013, 0.012, 0.010, 0.009, 0.008, 0.008, 0.008, 0.008, 0.008, 0.008, 0.008,								
[time=2017JFM][lat=-77.5], 0.015, 0.014, 0.015, 0.012, 0.008, 0.005, 0.005, 0.005, 0.005, 0.005, 0.005,								
[time=2017JFM][lat=-75], 0.012, 0.008, 0.007, 0.006, 0.002, -0.002, -0.002, -0.002, -0.002, -0.002, -0.002,								
[time=2017JFM][lat=-72.5], 0.046, 0.041, 0.039, 0.038, 0.031, 0.026, 0.026, 0.026, 0.026, 0.026, 0.026,								
[time=2017JFM][lat=-70], 0.038, 0.043, 0.052, 0.062, 0.064, 0.062, 0.062, 0.062, 0.062, 0.062, 0.062,								
[time=2017JFM][lat=-67.5], 0.006, -0.012, -0.035, -0.031, -0.037, -0.054, -0.061, -0.068, -0.066, -0.034, -0.019, -0.022, -0.028, -0.029, -0.029,								
[time=2017JFM][lat=-65], 0.048, 0.048, 0.041, 0.042, 0.024, 0.011, -0.006, -0.019, -0.027, -0.024, -0.025, -0.018, -0.021, -0.017, -0.015,								
[time=2017JFM][lat=-62.5], 0.035, 0.036, 0.034, 0.026, 0.017, 0.012, 0.011, 0.010, 0.012, 0.021, 0.028, 0.020, 0.014, 0.016, 0.021,								

Getting annoyed with scrolling up and down?

데이터가 구분 기호로
데이터 형식이 올바른지
선택하십시오.
외부 데이터 형식
본 데이터의 파일 유형
구분 기호로 분리
데이터를 연결합니다

데이터의 표시 옵션
선택한 데이터 미리 보기
1. [Variable=prec]
2. [Longitude=], 0, 2
3. [time=2017JFM]
4. [time=2017JFM]
5. [time=2017JFM]
6. [time=2017JFM]
7. [time=2017JFM]
8. [time=2017JFM]
9. [time=2017JFM]
10. [time=2017JFM]
11. [time=2017JFM]
12. [time=2017JFM]
13. [time=2017JFM]
14. [time=2017JFM]
15. [time=2017JFM]
16. [time=2017JFM]
17. [time=2017JFM]
18. [time=2017JFM]
19. [time=2017JFM]
20. [time=2017JFM]

데이터의 표시 옵션
구분 기호
 탭(T)
 세미콜론(;) (S)
 선택표(C)
 콤마(,) (C)
기타(Q):
데이터 미리 보기(B)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	[Variable=prec][MME method=SCM][Models=APCC CMCC COLA CWB HMC IRIF												
2	[Longitude=], 0, 2	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	27.5
3	[time=2017JFM]	-0.012	-0.011	-0.011	-0.011	-0.011	-0.011	-0.01	-0.01	-0.01	-0.01	-0.011	-0.01
4	[time=2017JFM]	0.01	0.011	0.011	0.012	0.012	0.013	0.013	0.014	0.014	0.014	0.014	0.014
5	[time=2017JFM]	0.01	0.011	0.011	0.013	0.013	0.013	0.014	0.014	0.014	0.013	0.013	0.012
6	[time=2017JFM]	0.01	0.011	0.011	0.012	0.012	0.012	0.011	0.009	0.008	0.006	0.005	0.005
7	[time=2017JFM]	0.013	0.012	0.01	0.009	0.008	0.008	0.007	0.007	0.005	0.003	0.001	0
8	[time=2017JFM]	0.015	0.014	0.015	0.012	0.008	0.005	0.002	0	-0.001	-0.001	-0.001	-0.001
9	[time=2017JFM]	0.012	0.008	0.007	0.006	0.002	-0.002	-0.005	-0.006	-0.006	-0.005	-0.003	-0.001
10	[time=2017JFM]	0.046	0.041	0.039	0.038	0.031	0.026	0.023	0.022	0.022	0.028	0.037	0.044
11	[time=2017JFM]	0.038	0.043	0.052	0.062	0.064	0.062	0.059	0.045	0.034	0.037	0.047	0.037
12	[time=2017JFM]	0.006	-0.012	-0.035	-0.031	-0.037	-0.054	-0.061	-0.068	-0.066	-0.034	-0.019	-0.022
13	[time=2017JFM]	0.048	0.048	0.041	0.042	0.024	0.011	-0.006	-0.019	-0.027	-0.024	-0.025	-0.018
14	[time=2017JFM]	0.035	0.036	0.034	0.026	0.017	0.012	0.011	0.01	0.012	0.021	0.028	0.02
15	[time=2017JFM]	0.036	0.022	0.012	0	-0.007	0.004	0.015	0.011	0.005	0.003	0.008	-0.006
16	[time=2017JFM]	0.04	0.037	0.03	0.024	0.017	0.023	0.039	0.052	0.043	0.027	0.009	-0.006
17	[time=2017JFM]	0.018	0.017	0.026	0.028	0.024	0.024	0.021	0.015	0.01	0.005	0.004	0
18	[time=2017JFM]	-0.025	-0.03	-0.024	-0.023	-0.024	-0.027	-0.03	-0.026	-0.014	0.002	-0.004	-0.025
19	[time=2017JFM]	0	-0.011	-0.017	-0.022	-0.02	-0.003	0.018	0.023	0.025	0.014	0.018	0.044
20	[time=2017JFM]	0.028	0.023	0.035	0.018	0.014	0.007	0.002	0.001	-0.01	-0.023	-0.013	-0.004

Getting annoyed with scrolling up and down?

View

Freeze Panes

	A	B	C	D	E	F	G	H	I	J	K
1	[Variable=prec][MME method=SCM][Models=APCC CMCC COLA CWB HMC										
2	[Longitude=]	0	2.5								
3	[time=2017JFM][lat=-90]	-0.012	-0.011	-0.011	-0.011	-0.011	-0.011	-0.011	-0.011	-0.011	-0.011
4	[time=2017JFM][lat=-87.5]	0.01	0.011	0.011	0.012	0.012	0.013	0.013	0.014	0.014	0.014
5	[time=2017JFM][lat=-85]	0.01	0.011	0.011	0.013	0.013	0.013	0.014	0.014	0.014	0.013
6	[time=2017JFM][lat=-82.5]	0.01	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.009	0.008
7	[time=2017JFM][lat=-80]	0.013	0.012	0.01	0.009	0.008	0.008	0.008	0.007	0.005	0.003
8	[time=2017JFM][lat=-77.5]	0.015	0.014	0.01	0.012	0.008	0.005	0.002	0	-0.001	-0.001
9	[time=2017JFM][lat=-75]	0.012	0.008	0.007	0.006	0.002	-0.002	-0.005	-0.006	-0.006	-0.005
10	[time=2017JFM][lat=-72.5]	0.046	0.041	0.039	0.038	0.031	0.026	0.023	0.022	0.022	0.028
11	[time=2017JFM][lat=-70]	0.038	0.043	0.052	0.062	0.064	0.062	0.059	0.045	0.034	0.037
12	[time=2017JFM][lat=-67.5]	0.006	-0.012	-0.035	-0.031	-0.037	-0.054	-0.061	-0.068	-0.066	-0.034
13	[time=2017JFM][lat=-65]	0.048	0.048	0.041	0.042	0.024	0.011	-0.006	-0.019	-0.027	-0.024
14	[time=2017JFM][lat=-62.5]	0.035	0.036	0.034	0.026	0.017	0.012	0.011	0.01	0.012	0.021
15	[time=2017JFM][lat=-60]	0.036	0.022	0.012	0	-0.007	0.004	0.015	0.011	0.005	0.003
16	[time=2017JFM][lat=-57.5]	0.04	0.037	0.03	0.024	0.017	0.023	0.039	0.052	0.043	0.027
17	[time=2017JFM][lat=-55]	0.018	0.017	0.026	0.028	0.024	0.024	0.021	0.015	0.01	0.005
18	[time=2017JFM][lat=-52.5]	-0.025	-0.03	-0.024	-0.023	-0.024	-0.027	-0.03	-0.026	-0.014	0.002
19	[time=2017JFM][lat=-50]	0	-0.011	-0.017	-0.022	-0.02	-0.003	0.018	0.023	0.025	0.014
20	[time=2017JFM][lat=-47.5]	0.028	0.023	0.035	0.018	0.014	0.007	0.002	0.001	-0.01	-0.023

Getting annoyed with scrolling up and down?



통합 문서1 - Microsoft Excel

파일 홈 삽입 페이지 레이아웃 수식 데이터 검토 보기 개발 도구 추가 기능

기본 페이지 레이아웃 전체 화면 통합 문서 보기

표시 확대/축소 100% 선택 영역 확대/축소

새 창 모두 정렬 틀 고정 작업 영역 저장 창 전환 매크로

AP45 fx 0.157

	A	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
1	[Variable=prec][MME method										
2	[Longitude=]	100	102.5	105	107.5	110	112.5	115	117.5	120	122.5
45	[time=2017JFM][lat=15]	0.157	0.156	0.186	0.428	0.903	0.89	0.506	0.324	0.149	0.3
46	[time=2017JFM][lat=17.5]	0.083	0.057	0.035	0.235	0.402	0.654	0.531	0.356	0.204	0.345
47	[time=2017JFM][lat=20]	0.027	0.005	-0.063	0.028	0.163	0.307	0.449	0.45	0.353	0.37
48	[time=2017JFM][lat=22.5]	-0.076	-0.072	-0.132	-0.112	-0.027	-0.005	0.049	0.158	0.167	0.276
49	[time=2017JFM][lat=25]	-0.143	-0.08	-0.147	-0.217	-0.251	-0.238	-0.247	-0.236	-0.176	0.057
50	[time=2017JFM][lat=27.5]	-0.114	-0.067	-0.09	-0.145	-0.248	-0.349	-0.36	-0.414	-0.38	-0.318
51	[time=2017JFM][lat=30]	-0.015	0.045	-0.014	-0.053	-0.107	-0.157	-0.221	-0.349	-0.422	-0.406
52	[time=2017JFM][lat=32.5]	0.061	0.137	0.164	0.118	0.105	0.112	0.058	-0.056	-0.139	-0.189
53	[time=2017JFM][lat=35]	0.047	0.13	0.151	0.12	0.125	0.149	0.182	0.127	0.029	-0.071
54	[time=2017JFM][lat=37.5]	0.045	0.069	0.046	0.054	0.071	0.081	0.082	0.064	0.034	0.001
55	[time=2017JFM][lat=40]	0.025	0.013	0.015	0.022	0.026	0.032	0.032	0.02	0.013	0.047
56	[time=2017JFM][lat=42.5]	0.025	0.019	0.013	0.011	0.014	0.021	0.02	0.017	0.025	0.036
57	[time=2017JFM][lat=45]	0.02	0.024	0.018	0.016	0.021	0.026	0.035	0.039	0.033	0.037
58	[time=2017JFM][lat=47.5]	0.029	0.03	0.026	0.029	0.031	0.036	0.039	0.038	0.034	0.027
59	[time=2017JFM][lat=50]	0.036	0.033	0.03	0.035	0.035	0.031	0.03	0.038	0.046	0.037
60	[time=2017JFM][lat=52.5]	0.043	0.033	0.034	0.05	0.05	0.037	0.035	0.035	0.039	0.037
61	[time=2017JFM][lat=55]	0.05	0.058	0.082	0.094	0.082	0.056	0.042	0.033	0.032	0.034
62	[time=2017JFM][lat=57.5]	0.089	0.083	0.09	0.102	0.101	0.08	0.06	0.048	0.041	0.042