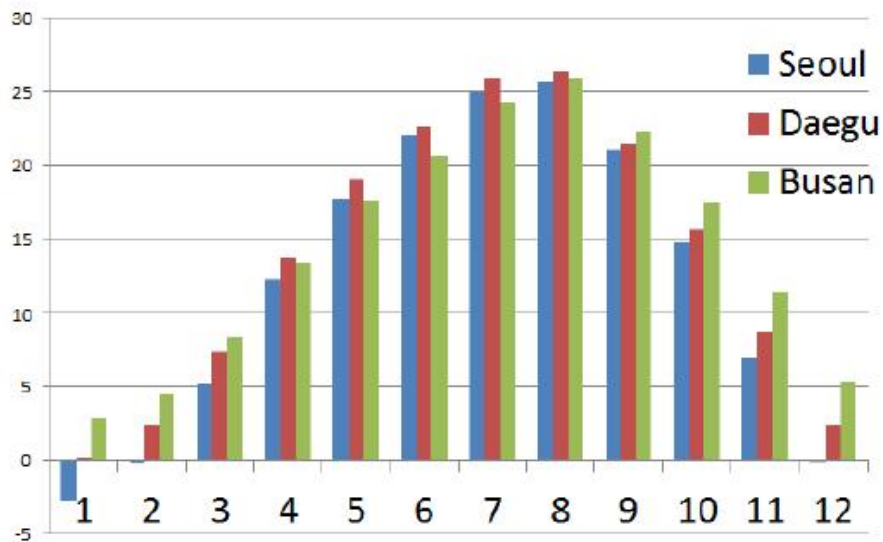


2022년 10월 27-28일  
APEC기후센터 기후정보서비스 사용자워크숍

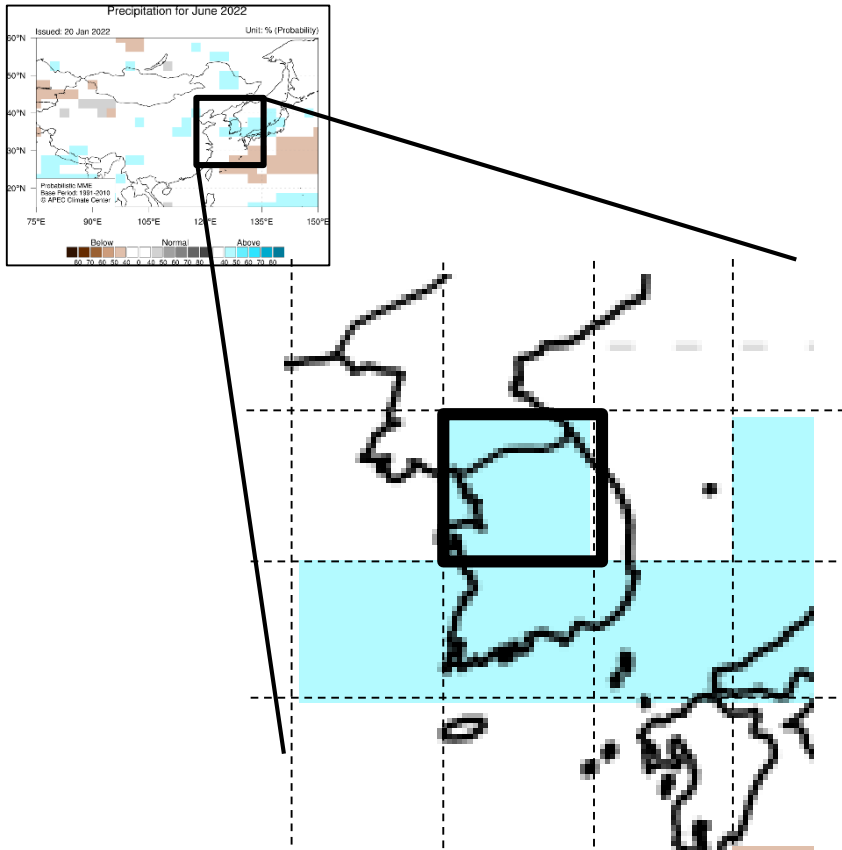
# APCC 기후서비스 통합플랫폼 II 상세화 예측 실습

# Why downscaled forecast?

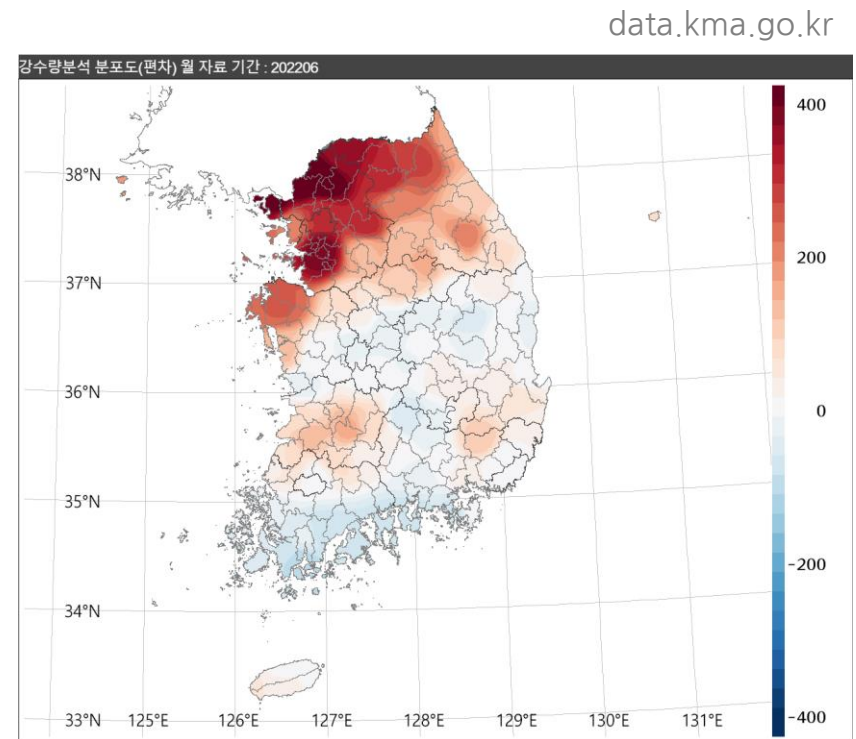
1960-2017, temperature



# Why downscaled forecast?



**2022 JUN PREC  
APCC PMME FORECAST**



**2020 JUN PREC  
관측**

# Data Processing

✓ **Target station: Daegu**



# Step 1. Prepare input data

기상자료개방포털 ([data.kam.go.kr](http://data.kam.go.kr))

Metadata

DAEGU\_META.txt

Station  
information

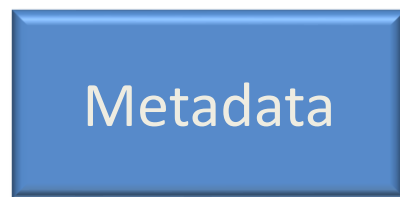
Observation  
data

DAEGU\_PREC.txt  
DAEGU\_TEMP.txt

Station data itself

## Step 1. Prepare input data

기상자료개방포털 ([data.kam.go.kr](http://data.kam.go.kr))



DAEGU\_META.txt



DAEGU\_PREC.txt  
DAEGU\_TEMP.txt

```
1 name,station_id,wmo_id,latitude,longitude,undefined
2 Daegu,143,-,35.878,128.653,-999
```

**comma**

- Use notepad.
- Data should be delimited by comma (,), space ( ), tab ( ), or colon (:).

# Data Processing

## Step 1. Prepare input data

기상자료개방포털 ([data.kam.go.kr](http://data.kam.go.kr))



DAEGU\_META.txt



DAEGU\_PREC.txt  
DAEGU\_TEMP.txt

```

1 station_id,year,jan,feb,mar,apr,may,jun,jul,aug,sep,oct,nov,dec
2 143,1973,65.8,16.7,6.6,135.1,98.2,51.5,119.5,120.6,135.3,99.3,13.3,2.5
3 143,1974,11.1,17.2,29.6,130.7,137.1,123,390.3,218.9,15,92.5,9.6,39.6
4 143,1975,17.1,13.7,49.4,99.2,75.8,117.6,303.8,74,119.2,62.9,81.4,29.5
5 143,1976,0.7,79.1,56.3,97.6,35.2,93.4,44.4,217,24.8,43,21.3,20.7
6 143,1977,2.3,0,51.4,159.4,48.2,78.1,73.7,95.7,123,20.2,97.5,20.2
7 143,1978,9.5,27.6,27.6,37.2,14.6,419.4,164.5,131,56.6,79.5,31.3,13.9
8 143,1979,17.5,60.4,50.9,68,137.1,132.6,132.5,218.2,174.9,3.6,7.4,24.5
9 143,1980,26.3,4.7,44.4,110.4,87.2,91,258.1,258.2,119.5,82.9,44.3,13.1
10 143,1981,18.9,29.9,13.5,38.5,36,148.1,102.8,314.7,230.9,29.2,23.7,8.8
11 143,1982,9.6,17.6,50.4,52.8,28.7,28.5,143,394.6,15.4,19.3,63.5,11.3
12 143,1983,15.3,22.3,76.6,88.6,32.2,140.6,267.5,88.8,214,52.3,3.4,1.5
13 143,1984,0,8,12.2,136.5,41.3,165.9,341.8,206,205.8,14.9,52.6,3.5
14 143,1985,0,21.3,72.1,70.2,105.7,167.3,186.8,338.4,262,124,37,11.8
15 143,1986,0.9,20.4,51.6,34.8,97.4,226.9,136,178.4,123.4,78.6,10.6,34.8
16 143,1987,44.4,43.9,51.4,42.7,62.3,138.7,275.7,327.2,11,44.6,51.8,0.4
17 143,1988,12.6,2.9,45.2,49.6,64.1,85.9,215.1,74.5,52.7,3.9,3.4,7.1
18 143,1989,110.7,90.5,100.4,34.1,46.3,103.3,306.6,149.8,196.4,18.8,61.9,2
19 143,1990,22.3,85.5,45.3,90.5,143.1,208.5,251.3,136.7,197,13.9,43.5,2.1
20 143,1991,20.6,44.4,79.3,93.2,21.9,104.7,425.3,282.5,154.1,1.3,13.4,55.5

```

comma

- Use notepad.
- Copy and paste the data from EXCEL to Notepad.
- One year per row.
- Data should be delimited by comma (,), space ( ), tab ( ), or colon (:).

# Data Processing

## Step 2. Upload data to CLIK

Dataset Processing My Jobs CLIK API Documents Help Desk

Downscale Prediction  
**Downscale**  
Composite  
AIMS

Select of  
Show

Search:


Dataset Name	Countries	Total Stations	Period(prec)	Period(temp)	Public
Korea 101 Stations	Republic of Korea	101	1973 ~ 2019	1973 ~ 2019	PUBLIC
GHCN	GHCN	3697	1950 ~ 2009		PUBLIC
Asia Region (prec)	Asia	4918	1961 ~ 2004		PUBLIC
Iran stations	Islamic Republic of Iran	31	1951 ~ 2017	1951 ~ 2017	PUBLIC
Kurdistan stations	Islamic Republic of Iran	7	1960 ~ 2021	1960 ~ 2021	PUBLIC

Showing 1 to 5 of 5 entries

Previous 1 Next

Create Edit View Remove

Select station



# Data Processing

## Step 2. Upload data to CLIK

The screenshot displays the CLIK web interface. A modal window titled "New dataset" is open, allowing for the creation of a new dataset. The "Name" field contains "Daegu" and the "Description" field also contains "Daegu". A red circle highlights the "Create" button, and a hand cursor is pointing at it. The background shows a table of datasets and a map.

Dataset Name	Period(temp)	Public
Korea 101 Stations	1973 ~ 2019	PUBLIC
GHCN	1950 ~ 2009	PUBLIC
Asia Region (prec)	1961 ~ 2004	PUBLIC
Iran stations	1951 ~ 2017	PUBLIC
Kurdistan stations	1960 ~ 2021	PUBLIC

# Data Processing

## Step 2. Upload data to CLIK

### Downscale

Select observation dataset

Show 10 entries Search:

Dataset Name	Countries	Total Stations	Period(prec)	Period(temp)	Public
Korea 101 Stations	Republic of Korea	101	1973 ~ 2019	1973 ~ 2019	PUBLIC
GHCN	GHCN	3697	1950 ~ 2009		PUBLIC
Asia Region (prec)	Asia	4918	1961 ~ 2004		PUBLIC
Iran stations	Islamic Republic of Iran	31	1951 ~ 2017	1951 ~ 2017	PUBLIC
Kurdistan stations	Islamic Republic of Iran	7	1960 ~ 2021	1960 ~ 2021	PUBLIC
Daegu		0			

Showing 1 to 6 of 6 entries

Previous 1 Next

Create Edit View Remove

### Select station



2

## Step 2. Upload data to CLIK

### Metadata

Dataset

PUBLIC

1

Stations [Dataset : Daegu]

Show 10 entries

Search:

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
------------	---------	------	--------	----------	-----------	-----------

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

### Observation data

2

Data

Show 10 entries

Search:

Year	Variable	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
------	----------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

Insert Modify Remove Remove All

## Step 2. Upload data to CLIK

### Metadata

Dataset

PUBLIC

Stations [Dataset : Daegu]

Show 10 entries

Search:

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
------------	---------	------	--------	----------	-----------	-----------

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

Import Export Insert Modify Remove Remove All

Country Republic of Korea

Station information file(example) Browse file

Upload

Data

Show 10 entries

Search:

Year	Variable	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
------	----------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

No data available in table

1

# Data Processing

## Step 2. Upload data to CLIK

Dataset Processing My Jobs CLIK API Documents Help Desk

### Metadata

Dataset

PUBLIC

Stations [Dataset : Daegu]

Show 10 entries

Search:

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
------------	---------	------	--------	----------	-----------	-----------

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

Import Export Insert Modify Remove Remove All

```
DAEGU_META.txt DAEGU_PREC.txt  
1 name, station_id, wmo_id, latitude, longitude, undefined  
2 Daegu, 143, -, 35.878, 128.653, -999
```

- ✓ Country
- ✓ Station information file(example)

Browse file DAEGU\_META.txt

Upload

Data

Show 10 entries

Search:

Year	Variable	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
------	----------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

No data available in table

## Data Processing

## Step 2. Upload data to CLIK

Dataset Processing My Jobs CLIK API Documents Help Desk

## Metadata

Dataset

PUBLIC

Stations [Dataset : Daegu]

Show 10 entries

Search: 

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
143	Republic of Korea	Daegu	-	35.878	128.653	-999

Showing 1 to 1 of 1 entries

Previous 1 Next







Country

Republic of Korea

Station information file(example)

Browse file

Upload

Data

Show 10 entries

Search: 

Year	Variable	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
------	----------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

No data available in table

## Step 2. Upload data to CLIK

### Metadata

Dataset

PUBLIC

1

Stations [Dataset : Daegu]

Show 10 entries

Search:

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
143	Republic of Korea	Daegu	-	35.878	128.653	-999

of 1 entries

Previous 1 Next

### Observation data

2

Data [Station : 143]

Show 10 entries

Search:

Year Variable Unit JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

No data available in table

Showing 0 to 0 of 0 entries

Previous Next

Insert Modify Remove Remove All

Import observed data Export observed data

# Data Processing

## Step 2. Upload data to CLIK

Observation data

2

Dataset [Station : 143] PUBLIC

Data [Station : 143]

Show 10 entries Search: [ ]

Year Variable Unit JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Showing 0 to 0 of 0 entries

Import observed data Export observed data

Variable  Unit  Observed data file(example)

Precipitation

mm/month

No data available in table

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
station_id	year	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec						
143	1973	65.8	16.7	6.6	135.1	98.2	51.5	119.5	120.6	135.3	99.3	13.3	2.5						
143	1974	11.1	17.2	29.6	130.7	137.1	123	390.3	218.9	15	92.5	9.6	39.6						
143	1975	17.1	13.7	49.4	99.2	75.8	117.6	303.8	74	119.2	62.9	81.4	29.5						
143	1976	0.7	79.1	56.3	97.6	35.2	93.4	44.4	217	24.8	43	21.3	20.7						
143	1977	2.3	0	51.4	159.4	48.2	78.1	73.7	95.7	123	20.2	97.5	20.2						
143	1978	9.5	27.6	27.6	37.2	14.6	419.4	164.5	131	56.6	79.5	31.3	13.9						
143	1979	17.5	60.4	50.9	68	127.1	132.6	132.5	218.2	174.9	3.6	7.4	24.5						
143	1980	26.3	4.7	44.4	131.4	87.2	90	294.1	258.2	119.5	82.9	44.3	13.1						
143	1981	18.9	29.9	13.5	38.5	36	148.1	102.8	314.7	230.9	29.2	23.7	8.8						
143	1982	9.6	17.6	50.4	52.8	28.7	28.5	143	394.6	15.4	19.3	63.5	11.3						
143	1983	15.3	22.3	76.6	88.6	32.2	140.6	267.5	88.8	214	52.3	3.4	1.5						
143	1984	0	8	12.2	136.5	41.3	165.9	341.8	206	205.8	14.9	52.6	3.5						
143	1985	0	21.3	72.1	70.2	105.7	167.3	186.8	338.4	262	124	37	11.8						
143	1986	0.9	20.4	51.6	34.8	97.4	226.9	136	178.4	123.4	78.6	10.6	34.8						
143	1987	44.4	43.9	51.4	42.7	62.3	138.7	275.7	327.2	11	44.6	51.8	0.4						
143	1988	12.6	2.9	45.2	49.6	64.1	85.9	215.1	74.5	52.7	3.9	3.4	7.1						
143	1989	110.7	90.5	100.4	34.1	46.3	103.3	306.6	149.8	196.4	18.8	61.9	2						
143	1990	22.3	85.5	45.3	90.5	143.1	208.5	251.3	136.7	197	13.9	43.5	2.1						
143	1991	20.6	44.4	79.3	93.2	21.9	104.7	425.3	282.5	154.1	1.3	13.4	55.5						

# Data Processing

## Step 2. Upload data to CLIK

### Metadata

1

Station ID	Country	Name	WMO ID	Latitude	Longitude	Undefined
3	Republic of Korea	Daegu	-	35.878	128.653	-999

Showing 1 to 1 of 1 entries

Previous **1** Next

Import Export Insert Modify Remove Remove All

Country: Republic of Korea

Station information file(example):  Browse file

### Observation data

2

143] entries

Search:

Year	Variable	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1973	Precipitation	mm/month	65.8	16.7	6.6	135.1	98.2	51.5	119.5	120.6	135.3	99.3	13.3	2.5
1974	Precipitation	mm/month	11.1	17.2	29.6	130.7	137.1	123	390.3	218.9	15	92.5	9.6	39.6
1975	Precipitation	mm/month	17.1	13.7	49.4	99.2	75.8	117.6	303.8	74	119.2	62.9	81.4	29.5
1976	Precipitation	mm/month	0.7	79.1	56.3	97.6	35.2	93.4	44.4	217	24.8	43	21.3	20.7
1977	Precipitation	mm/month	2.3	0	51.4	159.4	48.2	78.1	73.7	95.7	123	20.2	97.5	20.2
1978	Precipitation	mm/month	9.5	27.6	27.6	37.2	14.6	419.4	164.5	131	56.6	79.5	31.3	13.9
1979	Precipitation	mm/month	17.5	60.4	50.9	68	127.1	132.6	132.5	218.2	174.9	3.6	7.4	24.5
1980	Precipitation	mm/month	26.3	4.7	44.4	131.4	87.2	90	294.1	258.2	119.5	82.9	44.3	13.1

## Data Processing

## Step 2. Upload data to CLIK

Dataset ▾ Processing ▾ My Jobs CLIK API Documents ▾ Help Desk

## Downscale

Select observation dataset

Show 10 ▾ entries

Search: 

Dataset Name	Countries	Total Stations	Period(prec)	Period(temp)	Public
Korea 101 Stations	Republic of Korea	101	1973 ~ 2019	1973 ~ 2019	PUBLIC
GHCN	GHCN	3697	1950 ~ 2009		PUBLIC
Asia Region (prec)	Asia	4918	1961 ~ 2004		PUBLIC
Iran stations	Islamic Republic of Iran	31	1951 ~ 2017	1951 ~ 2017	PUBLIC
Kurdistan stations	Islamic Republic of Iran	7	1960 ~ 2021	1960 ~ 2021	PUBLIC
Daegu	Republic of Korea	1	1973 ~ 2019	1973 ~ 2018	

Showing 1 to 6 of 6 entries

Previous 1 Next


[Create](#)
[Edit](#)
[View](#)
[Remove](#)

Select station



# Data Processing

## Step 2. Upload data to CLIK

The screenshot shows the CLIK interface with the following steps highlighted:

- 1. Select dataset:** A red box highlights the 'Daegu' row in the 'Select observation dataset' table. A hand icon points to the row.
- 2. Select a station on the map:** A map shows a location in Korea. A hand icon is shown dragging a station marker. A tooltip displays coordinates: Lat: 21.156238 to 48.363549, Lon: 113.378906 to 152.850781, Area: 6244729.89 sq.mi.
- 3. Add the station:** A red circle highlights the 'Add Selected' button in the 'Select station' section.
- 4. Select the station by clicking a radio button:** A red circle highlights the radio button next to the 'Daegu' station in the 'Select station' table.
- 5. Get started downscaling job:** A red circle highlights the 'Input Downscale Job' button at the bottom of the interface.

Dataset Name	Countries	Total Stations	Period(prec)	Period(temp)	Public
Korea 101 Stations	Republic of Korea	101	1973 ~ 2019	1973 ~ 2019	PUBLIC
GHCN	GHCN	3697	1950 ~ 2009		PUBLIC
Asia Region (prec)	Asia	4918	1961 ~ 2004		PUBLIC
Iran stations	Islamic Republic of Iran	31	1951 ~ 2017	1951 ~ 2017	PUBLIC
Kurdistan stations	Islamic Republic of Iran	7	1960 ~ 2021	1960 ~ 2021	PUBLIC
Daegu	Republic of Korea	1	1973 ~ 2019	1973 ~ 2018	

Station	Country	Name	Precipitation	Temperature
<input checked="" type="radio"/>	Republic of Korea	Daegu	1973~2019	1973~2018

1. Select dataset

2. Select a station on the map

3. Add the station

4. Select the station by clicking a radio button

5. Get started downscaling job



# Precipitation over Daegu for OND 2020?

# Downscaling procedure in CLIK: Precipitation over Daegu for OND 2020

## 지점자료

- Point (uploaded)

1973								2019
------	--	--	--	--	--	--	--	------

## 전지구 재분석 자료

- Grid (built-in)
- Reanalysis, CAMS OPI, and OISST

1979								2019
------	--	--	--	--	--	--	--	------

**CORRELATION**

**&**

**REGRESSION**

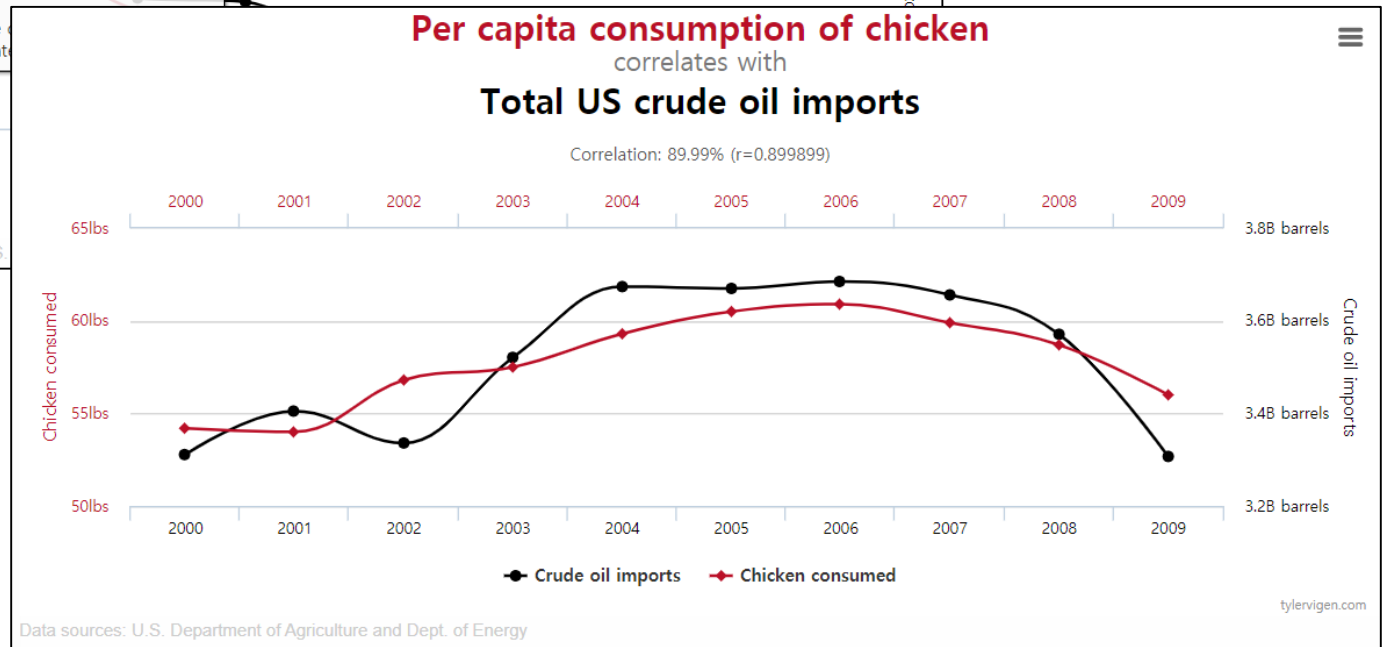
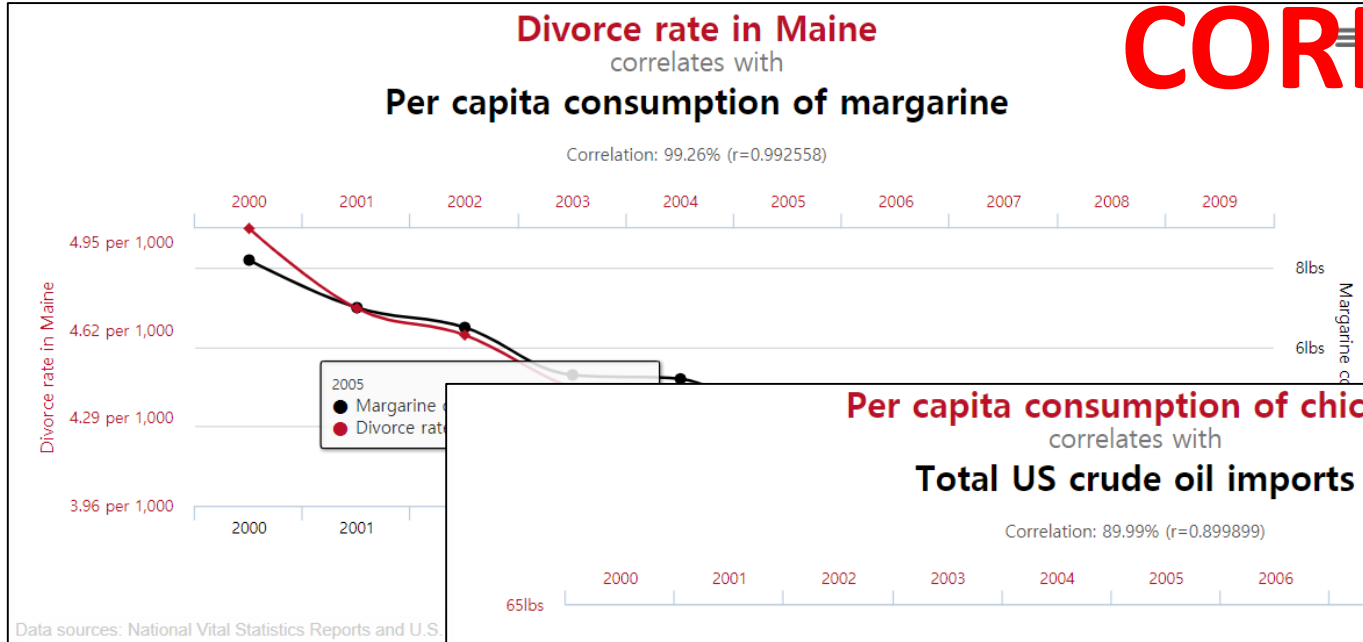
## 모델 예측 자료

- Grid (built-in)
- Hindcast of dynamical models

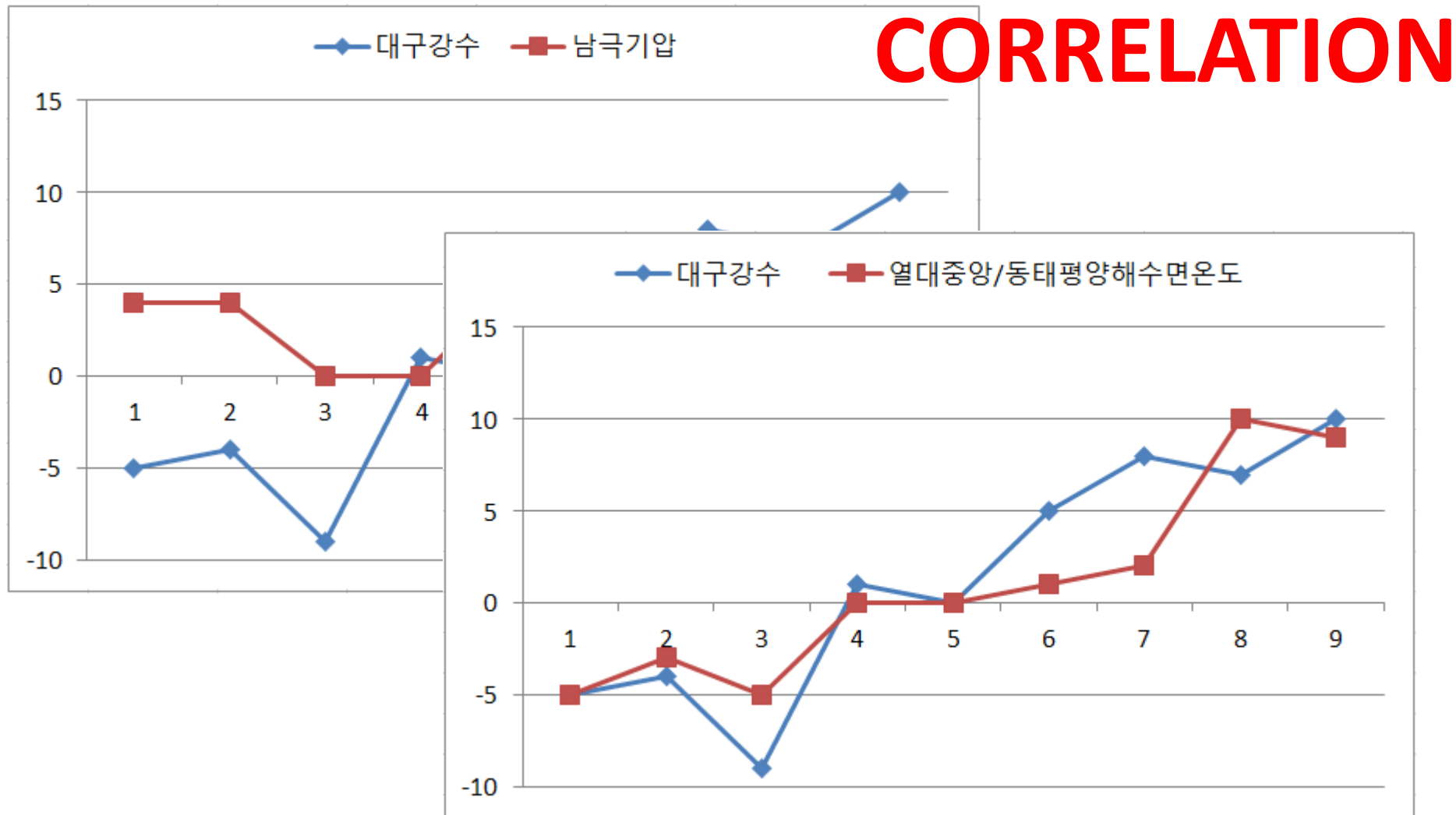
	1983					2014
	1983					2011
1982					2006	

# Correlation does not imply causation!

## CORRELATION

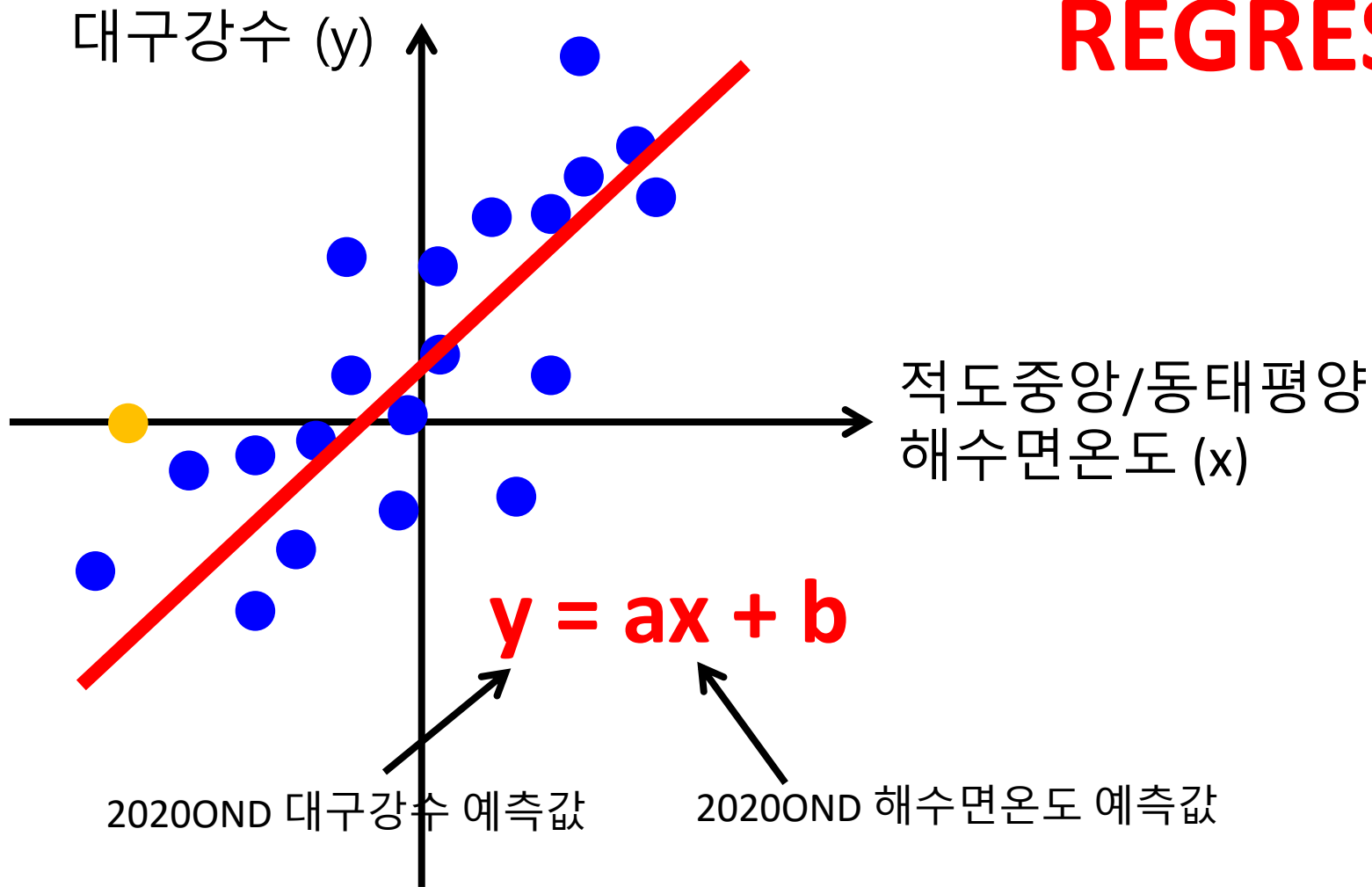


# Correlation does not imply causation!



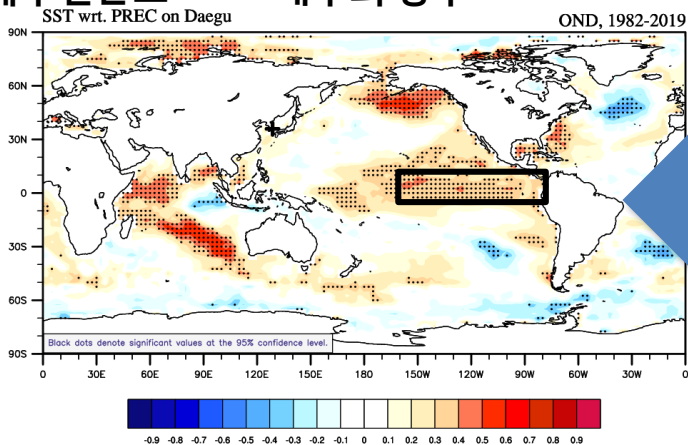
# Correlation does not imply causation!

## REGRESSION

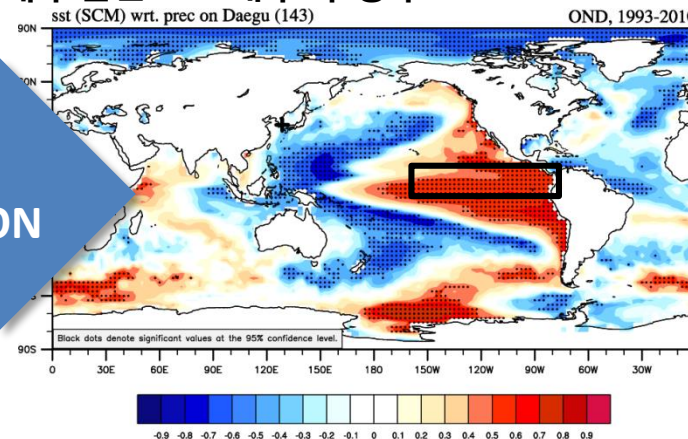


# Downscaling procedure in CLIK: Precipitation over Daegu for OND 2020

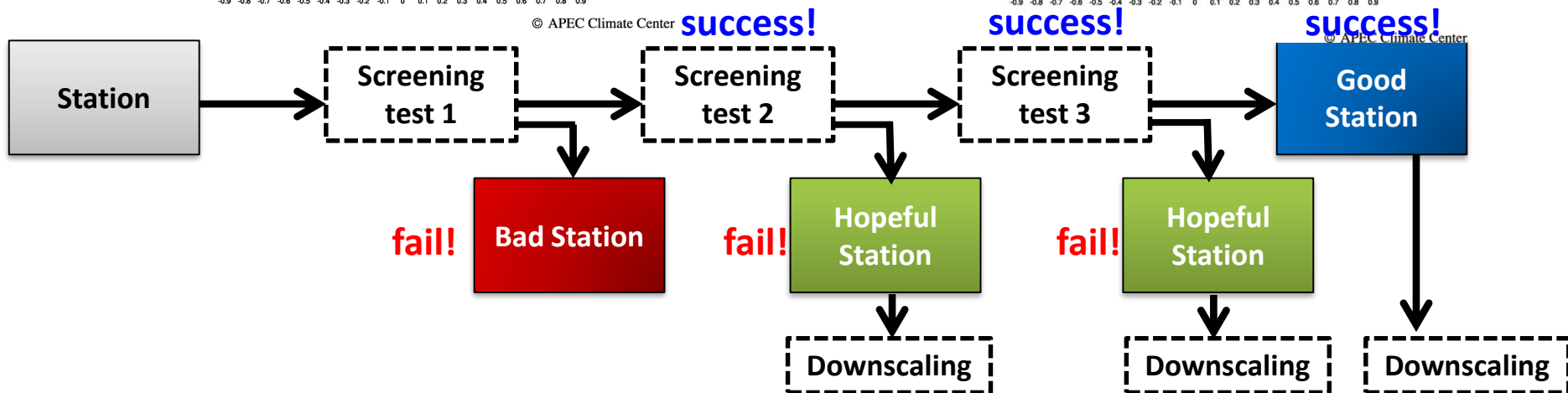
**1** 재분석자료와 지점자료의 상관관계  
해수면온도 대구의 강수



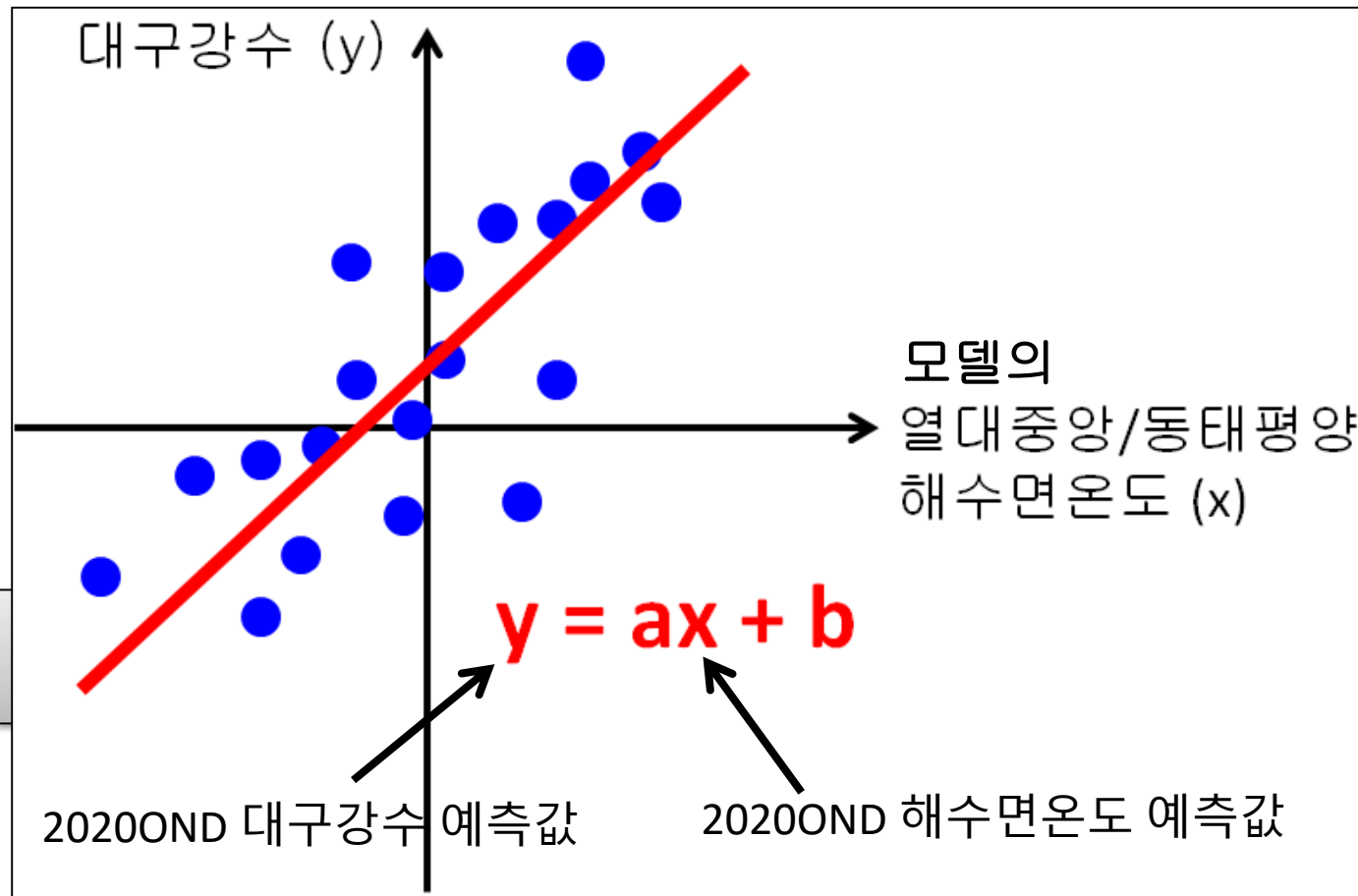
**2** 모델자료와 지점자료의 상관관계 계산  
해수면온도 대구의 강수



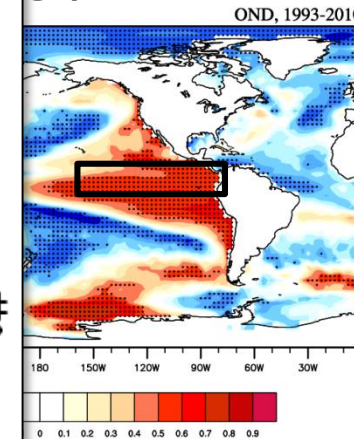
**3**  
PATTERN  
CORRELATION



# Downscaling procedure in CLIK: Precipitation over Daegu for OND 2020



자료의 상관관계 계산  
강수



success!  
© APCC Climate Center

Good Station

Hopeful station

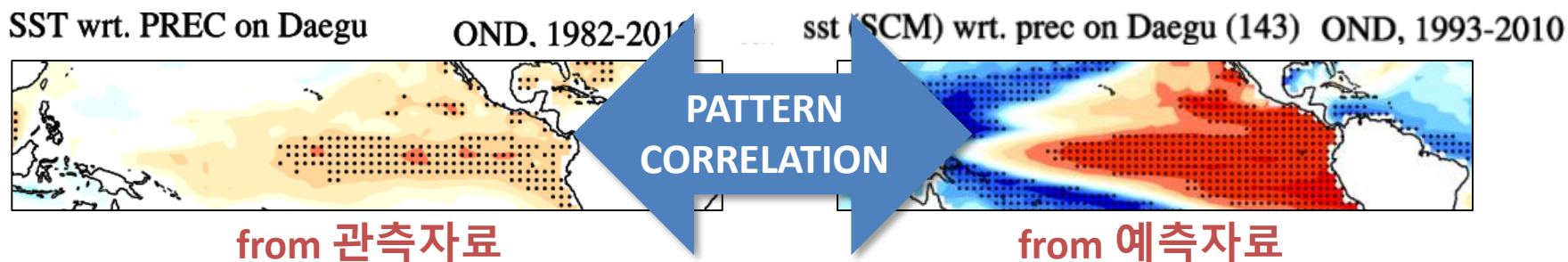
Downscaling

Downscaling

Downscaling

# Downscaling procedure in CLIK: Precipitation over Daegu for OND 2020

## Relationship between 대구강수 & 열대중양/동태평양해수면온도



- (test1) 과거 대구강수가 과거 열대중양/동태평양해수면온도와 상관관계가 있고,
- (test2) 과거 대구강수가 모델이 예측했던 과거 열대중양/동태평양해수면온도와 상관관계가 있으며,
- (test3) 그 상관관계의 모습이 유사하다면,

Successful downscaling...?



# **Precipitation over Daegu for OND 2020?**

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020



Dataset Processing My Jobs CLIQ API Documents Help Desk

### Downscale

Select observation dataset

Show 10 entries

Dataset Name	Countries	Total Stations	Period(prec)
Korea 101 Stations	Republic of Korea	101	1973 ~ 2019
GHCN	GHCN	3697	1950 ~ 2009
Asia Region (prec)	Asia	4918	1961 ~ 2004
Iran stations	Islamic Republic of Iran	31	1951 ~ 2017
Kurdistan stations	Islamic Republic of Iran	7	1960 ~ 2021
Daegu	Republic of Korea	1	1973 ~ 2019

Showing 1 to 10 entries

### Select station

Lat: 21.156238 to 48.363549  
Lon: 113.378906 to 152.050781  
Area: 6244729.89 sq.mi.

Shift + drag

How to use?

Add Selected Remove All

Show 10 entries

Station ID	Country	Name	Precipitation	Temperature
<input checked="" type="checkbox"/> 143	Republic of Korea	Daegu	1973~2019	1973~2019

Showing 1 to 1 of 1 entries

Previous 1 Next

**4** Input Downscale Job

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

**Station information**

Dataset : Daegu  
 Station ID : 143  
 Country : Republic of Korea  
 Station name : Daegu  
 Precipitation(1973~2019) , Temperature(1973~2018)

**Predictand**

Season: Year 2020 Season 10

Variable:  Precipitation  Temperature

**Predictor**

Variable:  prec  slp  sst  t850  u200  u850  v200  v850  z500

Models:

- APCC\_SCOPS  BOM\_ACCESS-S1  CMCC\_SPS3  CWB\_GFST119  HMC\_SL-AV
- KMA\_GLOSEA5GC2  MSC\_CANSIPV2  NASA\_GEOS-S2S-2.1  NCEP\_CFSV2
- PNU\_CGCMV2.0  UKMO\_GLOSEA5

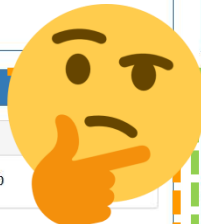
Training Period: From 1993 To 2010 18 years

Advanced Options:

Method:  Linear Regression

Significance Level: 5 %

Minimum Pattern Score: 0.3



**Domain**

Latitude: -10 ~ 10 Longitude: 200 ~ 280

Apply

2000 km

Check pattern

Download

**Predictand: 2020 OND / Precipitation**  
**Predictor: sst / all models (except for CWB, HMC) / 열대중양동태평양**

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

**Station information**

Dataset : Daegu  
 Station ID : 143  
 Country : Republic of Korea  
 Station name : Daegu  
 Precipitation(1973~2019) , Temperature(1973~2018)

**Predictand**

Season: Year 2020, Season 10  
 Variable:  Precipitation,  Temperature

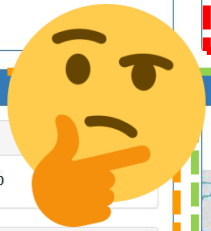
**Predictor**

Variable:  prec  sst  t850  u200  u850  v200  v850  z500

Models:  
 APCC\_SCOPS  BOM\_ACCESS-S1  CMCC\_SPS3  CWB\_GFST119  HMC\_SL-AV  
 KMA\_GLOSEA5GC2  MSC\_CANSIPV2  NASA\_GEOS-S2S-2.1  NCEP\_CFSV2  
 PNU\_CGCMV2.0  UKMO\_GLOSEA5

Training Period:  
 From 1993 To 2010 (18 years)

Advanced Options:  
 Method:  Linear Regression  
 Significance Level: 5 %  
 Minimum Pattern Score: 0.3



**Domain**

Latitude: -10 ~ 10 Longitude: 200 ~ 280

Check pattern Apply

Lat: -10.00000 to 10.00000  
 Lon: 200.00000 to 280.00000  
 Area: 7694507.12 sq.mi.

Downloads

**Predictand: 2020 OND / Precipitation**

**Predictor: sst / all models (except for CWB, HMC) / 열대중양동태평양**

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

### Acknowledgement for APCC MME / Individual model

When you use the APCC MME and/or individual model data in any documents or publications, please acknowledge us by including the following text, *“The authors acknowledge the APCC MME Producing Centers for making their hindcast/forecast data available for analysis, the APEC Climate Center for collecting and archiving the data, as well as for producing APCC MME predictions.”*

### Acknowledgement for Clipped CMIP5

When you use other APCC data products in any documents or publications, please acknowledge us by including following text, *“The authors acknowledge the APEC Climate Center for providing the Clipped CMIP5”*. Note that you may have to insert citations or references for these datasets, following the original 'how to cite this datasets' directions posted on the original website for these datasets.

Auto Refresh

All Queued Running Failed Complete

Job type	Submission date	End date	Status
Prediction	2022-10-24 18:13:57	2022-10-24 18:38:04	<a href="#">Download</a> <a href="#">View</a>
Verification	2022-10-24 18:08:59	2022-10-24 18:44:24	<a href="#">Download</a> <a href="#">View</a>
Downscaling	2022-10-24 18:07:14	2022-10-24 18:08:15	<a href="#">Download</a> <a href="#">Edit</a> <a href="#">Result</a>
Downscaling	2022-10-24 18:01:54	2022-10-24 18:05:11	<a href="#">Download</a> <a href="#">Edit</a> <a href="#">Result</a>

Request ID: 63565482d8075e00066910ef

Dataset: Korea 101 Stations  
Station ID: 143  
Country: Republic of Korea  
Station name: Daegu

Season: 2022-10  
Predictand variable: prec

Predictor variable: slp  
Models: APCC\_SCOPS\_BOM\_ACCESS-S2,CMCC\_SPS3.5,CWB\_TCWB1TV1.1,ECCC\_CANSIPSv2.1,HMC\_SL-AV,KMA\_GLOSEA6GC3.2,METFR\_SYS8,NASA\_GEOS-S2S-2.1,NCEP\_CFSv2,UKMO\_GLOSEA6  
Training period: 1993 ~ 2010  
Latitude: 15 ~ 40  
Longitude: 120 ~ 165



# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

Details of Downscale: 63523e7bd8075e0006691003

Predictand		Predictor	
Year-Season	2020-10	Training period	1993-2010
Variable	prec	Variable	sst
Dataset	Korea 101 Stations	Models	<input checked="" type="radio"/> SCM <input type="radio"/> APCC_SCOPS <input type="radio"/> BOM_ACCESS-S1 <input type="radio"/> CMCC_SP3 <input type="radio"/> KMA_GLOSEA5G2 <input type="radio"/> MSC_CANSIPsv2 <input type="radio"/> NASA_GEOS-5Z5-2.1 <input type="radio"/> NCEP_CFSv2 <input type="radio"/> FNU_CGCMv2.0 <input type="radio"/> UKMO_GLOSEA5
Region	143 Daegu	Region	Latitude: -10~10, Longitude: 200~280

**1**

---

Advanced Options

Significance level	5%
Minimum pattern score	0.3

---

Results

Station ID	Country	Station name	Result	Correlation
143	Republic of Korea	Daegu	Good	0.304612

Downscaled forecast on the selected station

**2**

Location

**3**

Regression field (observation)

**4**

Regression field (model)

**5**

1. Job summary
2. Historical time series of downscaled prediction/observation data, correlation coefficient between them, deterministic forecast, and tercile category of the forecast
3. Location of station
4. Regressed predictor (SST; observation) field onto the predictand (precipitation) over the selected domain
5. Regressed predictor (SST; model) field onto the predictand (precipitation) over the selected domain

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

Details of Downscale: 63523e7bd8075e0006691003

Predictand		Predictor	
Year-Season	2020-10	Training period	1993-2010
Variable	prec	Variable	sst
Dataset	Korea 101 Stations	Models	<input checked="" type="radio"/> SCM <input type="radio"/> APCC_SCOPS <input type="radio"/> BOM_ACCESS-S1 <input type="radio"/> CMCC_SP3 <input type="radio"/> KMA_GLOSEASG2 <input type="radio"/> MSC_CANSIPsv2 <input type="radio"/> NASA_GEOS-52S-2.1 <input type="radio"/> NCEP_CFSv2 <input type="radio"/> PNU_CGCMv2.0 <input type="radio"/> UKMO_GLOSEAS
Region	143 Daegu	Region	Latitude: -10~10, Longitude: 200~280

Advanced Options

Significance level	5%
Minimum pattern score	0.3

Results

Station ID	Country	Station name	Result	Correlation
143	Republic of Korea	Daegu	Good	0.304612

Downscaled forecast on the selected station

Correlation = 0.3, PREC\_forecasted = -6.57 mm/month

Location

Regression field (observation)

Regression field (model)

- SCM
- Below-normal prec
- Good
- Cor. Coeff: 0.30

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

Details of Downscale: 63523e7bd8075e0006691003

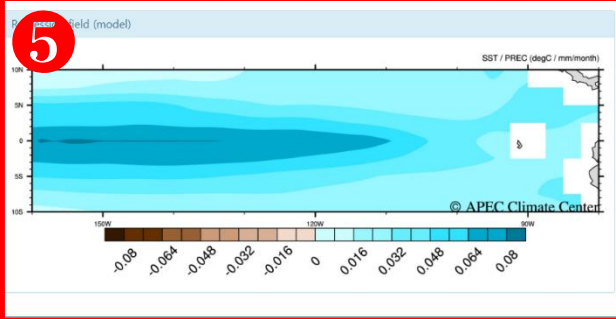
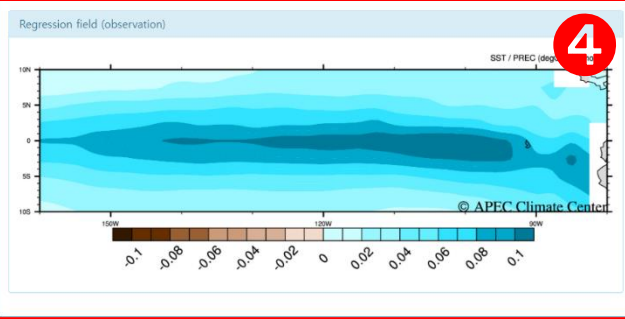
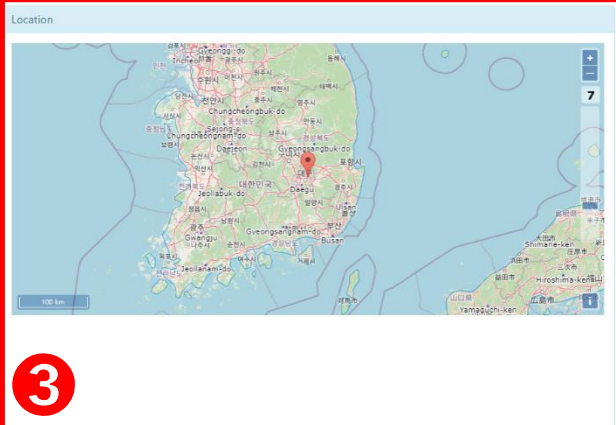
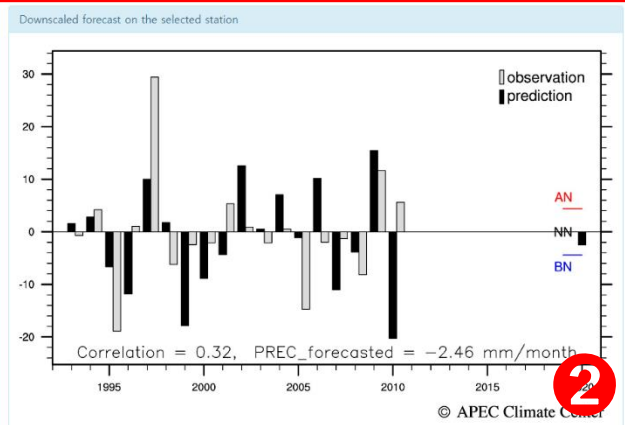
Predictand		Predictor	
Year-Season	2020-10	Training period	1993-2010
Variable	prec	Variable	sst
Dataset	Korea 101 Stations	Models	<input type="radio"/> SCM <input checked="" type="radio"/> APCC_SCOPS <input type="radio"/> BOM_ACCESS-S1 <input type="radio"/> CMCC_SP3 <input type="radio"/> KMA_GLOSEASG2 <input type="radio"/> MSC_CANSIPsv2 <input type="radio"/> NASA_GEOS-525-2.1 <input type="radio"/> NCEP_CFSv2 <input type="radio"/> PNU_CGMv2.0 <input type="radio"/> UKMO_GLOSEAS
Region	143 Daegu	Region	Latitude: -10~10, Longitude: 200~280

Advanced Options	
Significance level	5%
Minimum pattern score	0.3

1

Station ID	Country	Station name	Result	Correlation
143	Republic of Korea	Daegu	Good	0.319241



- APCC
- Below-normal prec
- Good
- Cor. Coeff: 0.32

# Produce a downscaled forecast : Precipitation over Daegu for OND 2020

Details of Downscale: 63523e7bd8075e0006691003

Predictand		Predictor	
Year-Season	2020-10	Training period	1993-2010
Variable	prec	Variable	sst
Dataset	Korea 101 Stations	Models	<input type="radio"/> SCM <input type="radio"/> APCC_SCOPS <input type="radio"/> BOM_ACCESS-S1 <input type="radio"/> CMCC_SP53 <input type="radio"/> KMA_GLOSEASG2 <input type="radio"/> MSC_CANSIP5v2 <input type="radio"/> NASA_GEOS-S25-2.1 <input checked="" type="radio"/> NCEP_CFSv2 <input type="radio"/> PNU_GCMv2.0 <input type="radio"/> UKMO_GLOSEAS
Region	143 Daegu	Region	Latitude: -10-10, Longitude: 200-280

Advanced Options

Significance level	5%
Minimum pattern score	0.3

Results

Station ID	Country	Station name	Result	Correlation
143	Republic of Korea	Daegu	Good	0.384827

Downscaled forecast on the selected station

Correlation = 0.38, PREC\_forecasted = -3.49 mm/month

Location

Regression field (observation)

Regression field (model)

- NCEP
- Below-normal prec
- Good
- Cor. Coeff: 0.38

Exercise

# Make your own seasonal climate outlook for NDJ 2022!

## 2022 NDJ

### Station information

Dataset : Daegu  
Station ID : 143  
Country : Republic of Korea  
Station name : Daegu  
Precipitation(1973~2019) , Temperature(1973~2018)

### Predictand

Season: Year 2022 Season 11  
Variable:  Precipitation  Temperature

### Predictor

Variable:  prec  slp  sst  t850  u200  u850  v200  v850  z500

Models: Please select variable.

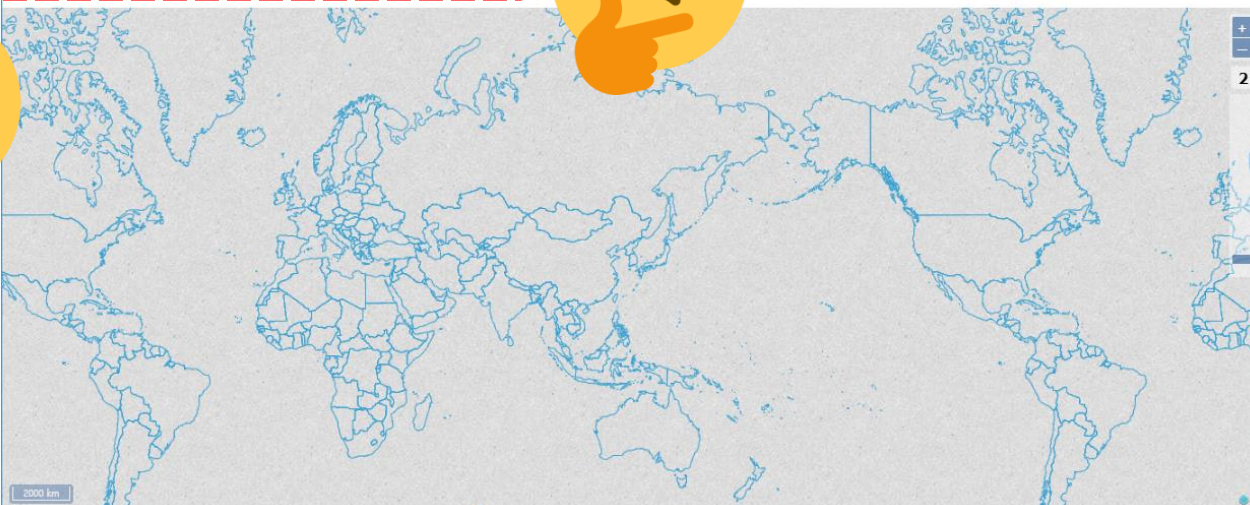
Training Period: From To

Advanced Options: Method  Linear Regression  
Significance Level: 5 %  
Minimum Pattern Score: 0.3

### Domain

Latitude ~ Longitude

Apply

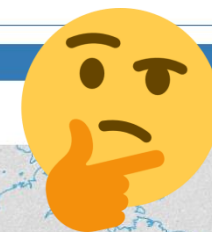
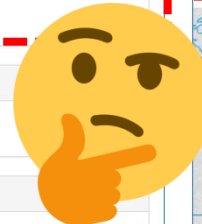


Check pattern

2

2000 km

Downscale





Thank you!