2016. 09.07- 09.09, Lima, Peru

CLIK hands-on (PART III):

Data Processing for CLIK

(http://clik.apcc21.org)

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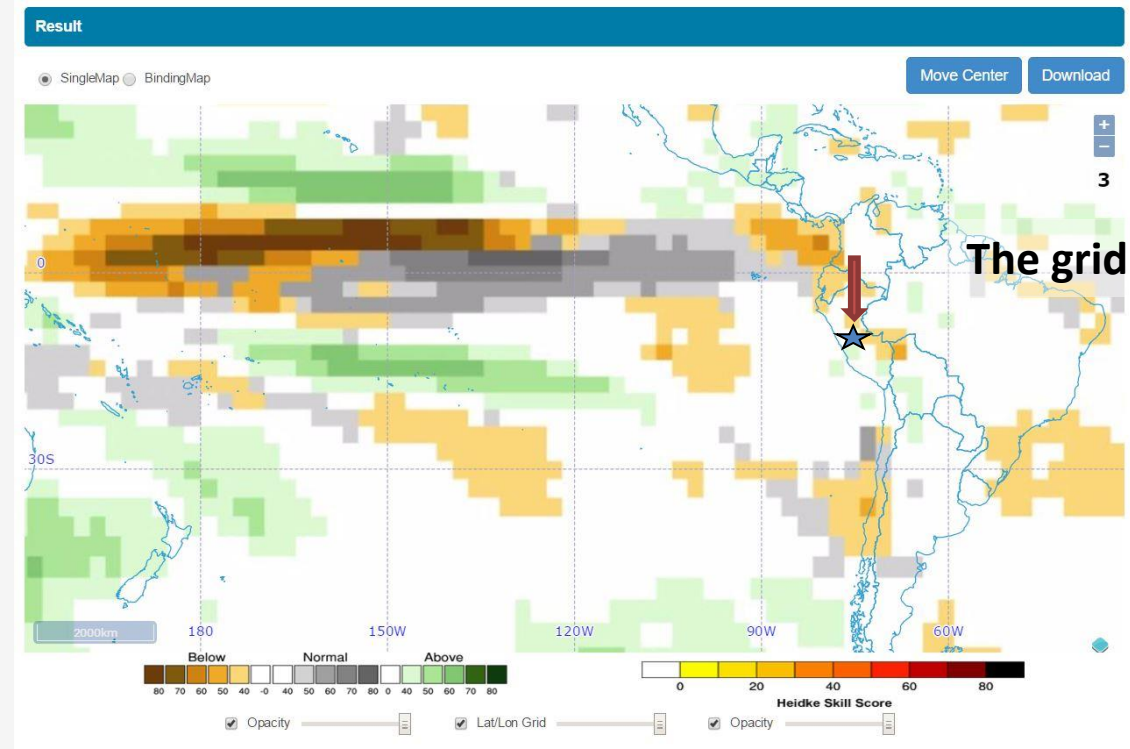
Dynamical Forecast

- seasonal prediction graphic by dynamical MME forecast system (CLIK)



The grid size of the MME is 2.5° by 2.5°.

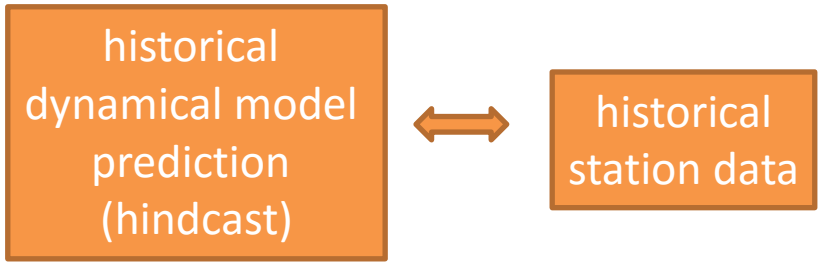
- What if you want to know a forecast information at a specific point?

Post Processing, Downscaling

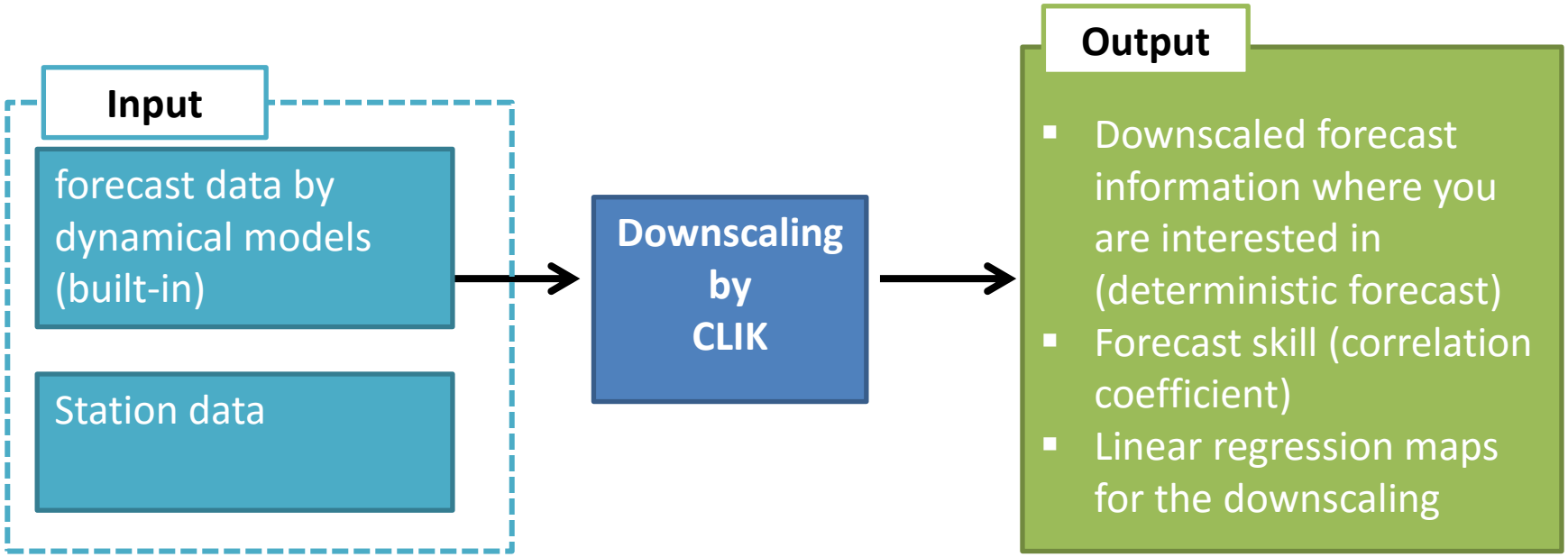
"Post-Processing of forecast data"

CLIK provides "downscaling"

- Many approaches in downscaling (similar)
- CLIK uses the relationships between forecast (by dynamical models) and station data



Downscaling by CLIK



- **CLIK needs the information of the station for the downscale process.**
- **Data processing: Entering station data into the CLIK for customization**

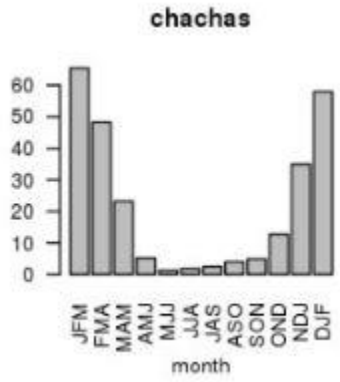
Data Processing

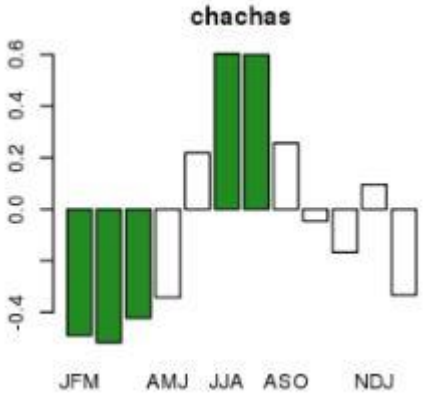
- **In the part 3, Data processing:**

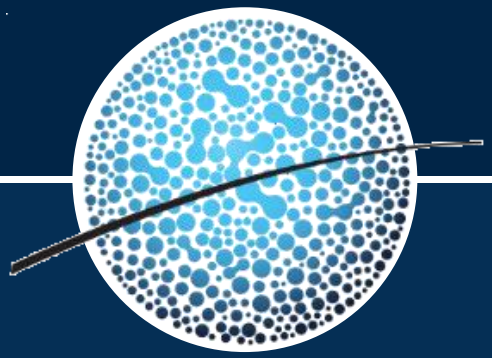
  Making and uploading your station data into the CLIK system.

- **In the part 4, Downscaling**

✓ **Target: Chachas JFM precipitation**







A. Preparing the station data

- Use the example files (Chachas)

- ✓ After uploading, we'll try other station.
- ✓ In case the network is not good,

Entering station data into CLIK

A. Preparing Input data

1. Input two files: **metadata**, **observation** data
   a. metadata file contains information about station.
   b. observation data file is the station data itself.
2. You can input data only for one country at a time.
3. Only input monthly mean data (currently)
4. Use Notepad!
5. Format: delimited by comma, space, tab, or colon
6. File naming : '*.txt'
   - 'Chachas_meta.txt' & 'Chachas_prcp.txt'

Entering station data into CLIK

A. Preparing Input data

1. Metadata file

The first line of this file should contain the following headers:

Name, Station_id, WMO_id, Latitude, Longitude, Undefined, Public

- **Name:** name of the station
- **Station_id:** unique id for the station (integer)
- **WMO_id:** WMO_id for station (integer, any number)
- **Latitude:** latitude for this station (float, for mapping)
- **Longitude:** longitude for this station (float, for mapping)
- **Undefined:** missing data (numeric)
- **Public:** true, if your data can be used by others
  false, if your data can not be used by others

Entering station data into CLIK

A. Preparing Input data

1. Metadata file

The first line of this file should contain the following headers:

Name, Station_id, WMO_id, Latitude, Longitude, Undefined, Public

Let's make a metadata file.

Example: Chachas metadata

- Use Notepad.
- The filename is 'chachas_meta.txt'.

```
name    station_id      wmo_id  latitude        longitude       undefined       public
chachas 157312  0014    -15.499 -72.267 -999.9  TRUE
```

Entering station data into CLIK

A. Preparing Input data

2. Station data file

The first line of this file should contain the following headers:

Station_id, year, jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec

Let's make a station data file.

Example:

- Use Notepad. Copy and past data from Exel to notepad in the specified format. (one year per row)
- The filename is 'chachas_prcp.txt'.

station_id	year	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
157312	1964	175.8	117.1	53.6	8.6	0	0	0	0	0	9	2.4	73.1
157312	1965	4.5	93.2	17.7	7.8	0	0	0.8	0	13.3	3.4	0	3.8
157312	1966	10.4	61.1	23.4	0	15	0	0	0	0	13.3	8.8	9.6
157312	1967	109.8	91.6	132.5	21.3	3	0.9	1.3	0	7	5.1	3.2	12.8
157312	1968	112	55.5	93.7	0	0.9	0.8	0	0	0	4.5	27.3	0
157312	1969	66.1	57.2	60.6	6.7	0	0	0	0	0	0	10.6	30.9
157312	1970	70.4	62.1	26	0	7.7	0	0	0.1	0.1	1	0	13

Entering station data into CLIK

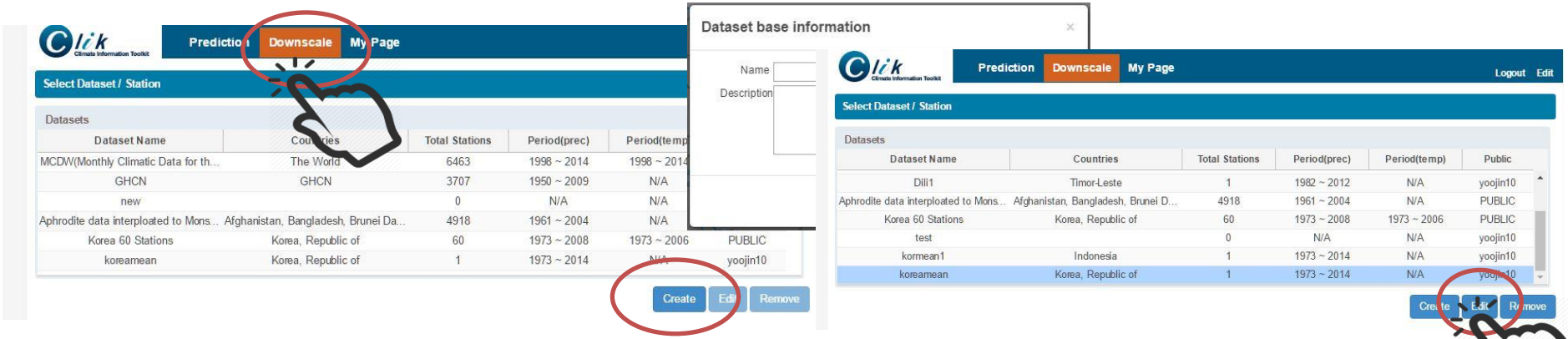
B. Station data upload module

A brief preview then explaining the detail

Entering station data into CLIK

B. Station data upload module

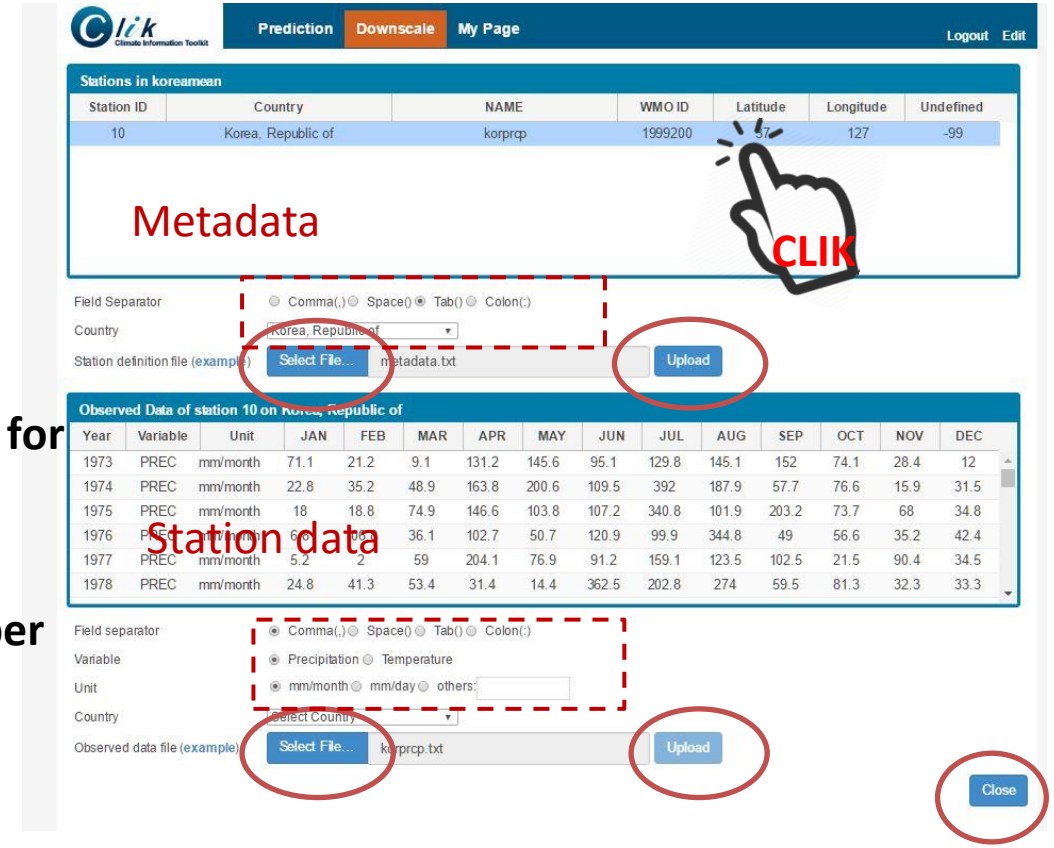
1. Click “Downscale”. This brings a page list currently available data sets.
2. Click “Create” to create a new data set.
3. Fill up two fields in the new entry page.
   - Name: a identifying name of the dataset
   - Description: describe your dataset
   - Click “Create Dataset”
   - You’ll see the new data set in the list.
4. Choose the new data set and click “Edit” button.



Entering station data into CLIK

B. Station data upload module

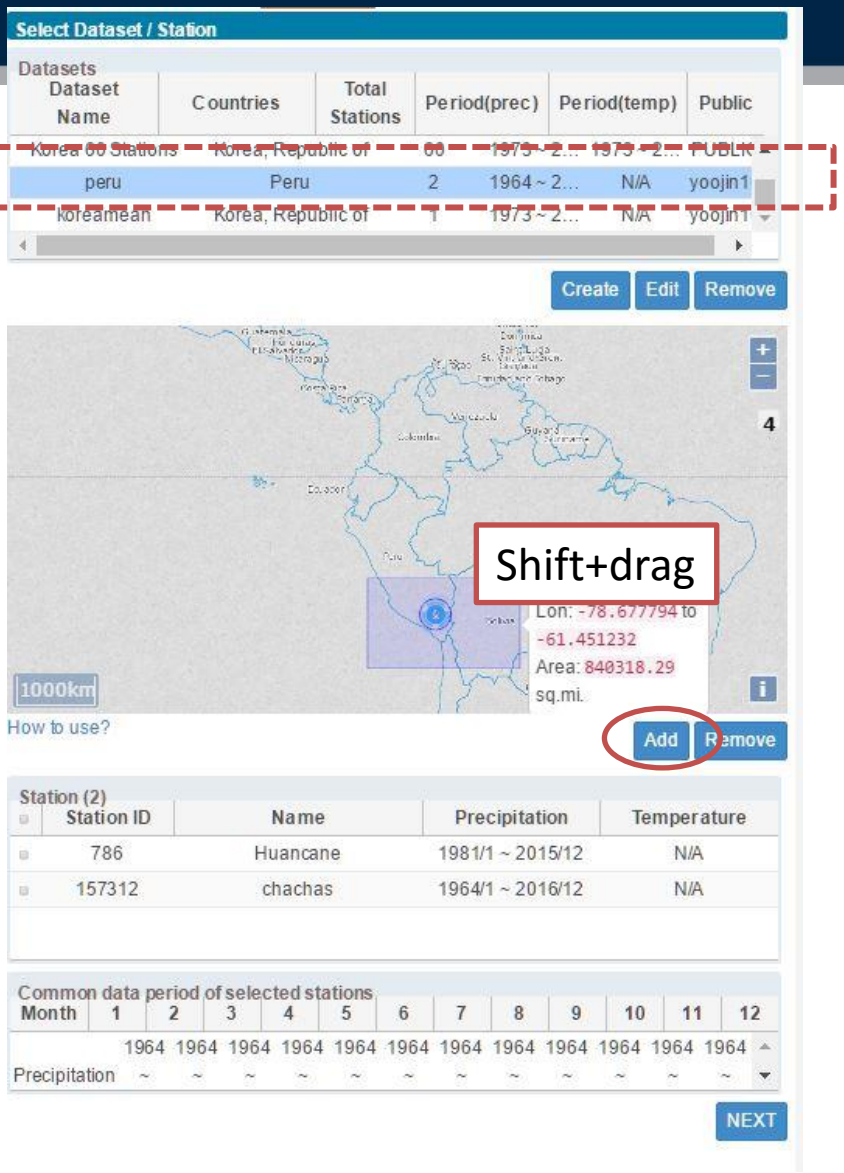
5. Check the 'Field Separator' and 'Country' for the metadata.
6. Upload the metadata file.
7. Check the 'Field Separator', 'Variable', 'Unit', and 'Country' for the station data.
8. Upload the station data file.
9. Click the Station line at the upper panel to see station data.
10. Click "Close".



Entering station data into CLIK

B. Station data upload module

11. After finish the data uploading, you can choose new station data set in the upper panel.
12. Check the map and select the area for downscaling (shift + drag).
13. Click “ADD” below the map. And check the station data.



Entering station data into CLIK

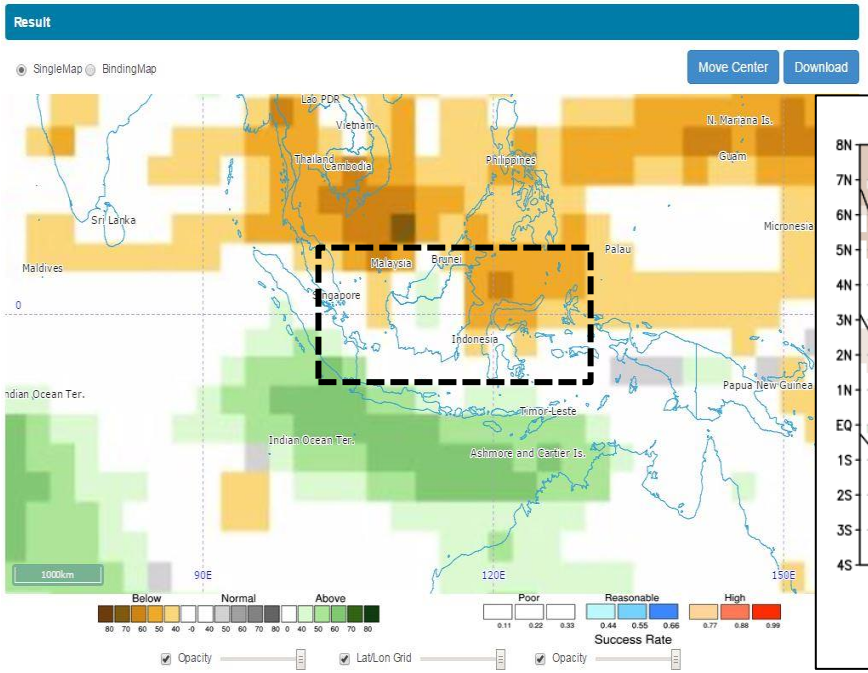
- ✓ You can add more station data.
- ✓ Let’s upload one more station.

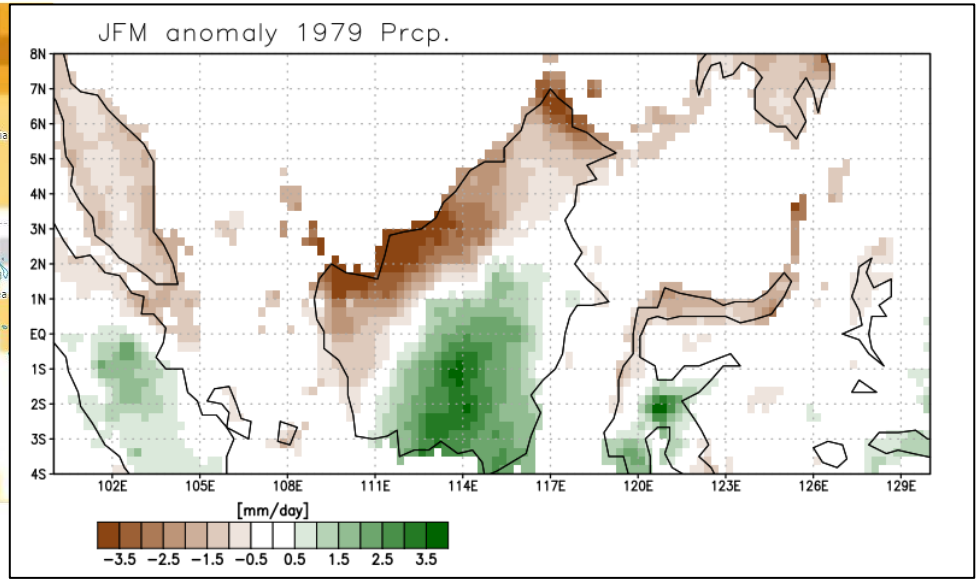

Thank you.

Post Processing

- **Real observation precipitation:**

APHRODITE gridded station precipitation (0.25 by 0.25)





Compare the grid size!