



2023 APCC 기후정보 생산 및 활용 사용자 워크숍

APCC 기후서비스 통합 플랫폼 소개 및 활용

- 기후자료 처리서비스 (Clipping & Composite & Masking) 실습 -

예측운영과

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학습목표

APCC 기후서비스 플랫폼에서 제공하는 기후자료 처리서비스를 사용할 수 있다.

APCC 기후서비스 통합플랫폼 I

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기후자료 처리서비스(Clipping/Composite/Masking) – Overview

자료추출(Clipping) 서비스

- 기후서비스 플랫폼 - Processing – Clipping
- 사용자가 설정한 특정 연월 / 지역 / 변수 등 원하는 조건의 값을 추출
- MME 및 15개 기관 개별모델 자료 제공

자료합성(Composite) 서비스

- 기후서비스 플랫폼 - Processing – Composite
- 사용자가 설정한 특정 연월 / 변수 등 원하는 조건의 값을 합성
- 연도별 예측/관측 자료 제공 → 예측/관측 자료 합성 결과 비교

지역정보 추출(Masking) 서비스

- 기후서비스 플랫폼 – Processing - Masking
- 공간정보 기술을 이용하여 보다 정밀한 지역의 기후자료를 추출
- 국가 별 공간정보 기술을 이용하여 보다 정밀한 지역의 기후자료를 추출

Benefit

- 자료처리를 위한 전산자원이 부족한 사용자에게 처리 자원 제공 (Cloud 환경)
- 기후자료 처리에 익숙하지 않은 사용자에게 편리한 웹 인터페이스 제공
- 다양한 파일 포맷 지원을 통한 결과 데이터 활용성 제고

자료 추출(Clipping)

자료 합성(Composite)

지역정보 추출(Masking)

자료추출(Clipping) 서비스 메뉴 구성

입력 메뉴

변수 / 모델 / 기간 등
자료 추출 조건 설정

MME Individual

Clipping - APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time
 3-MON
 6-MON

Year / Month
 2023 7

Methods
 Deterministic
 Probabilistic

Period
 Monthly
 Seasonal

Variables
 prec slp sst t2m t850 z500

Clipping Area
 Coordinates
 Region
 Country

Coordinates: 90, 0, -90, 360
 Region: Global
 Country: Choose Country

Select button to clip specific area.

MME / Individual 메뉴

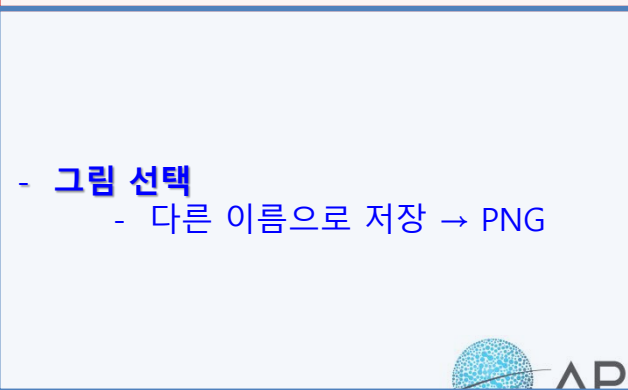
- MME
 - Lead Time
 - Year / Month
 - Method
 - Period
 - Variable
- Individual Model
 - Year / Month
 - Institute
 - Model
 - Variable

Clipping Area

- Coordinate
- Region
- Country

그림 선택

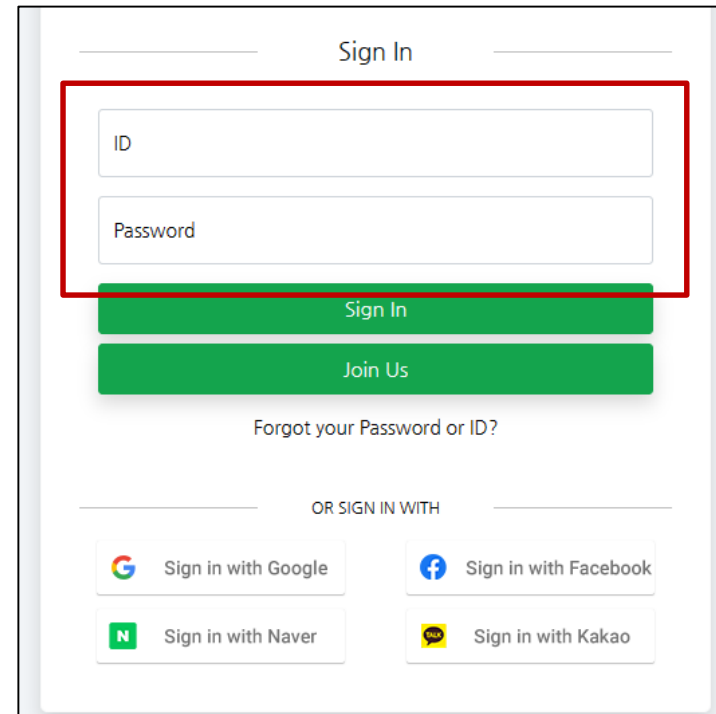
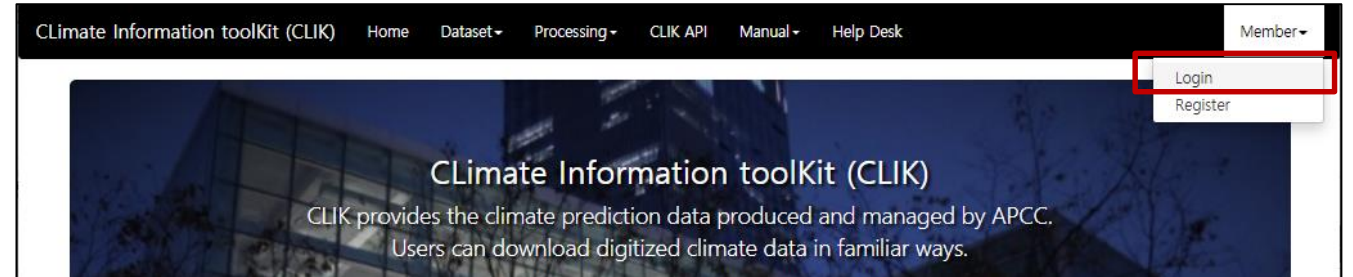
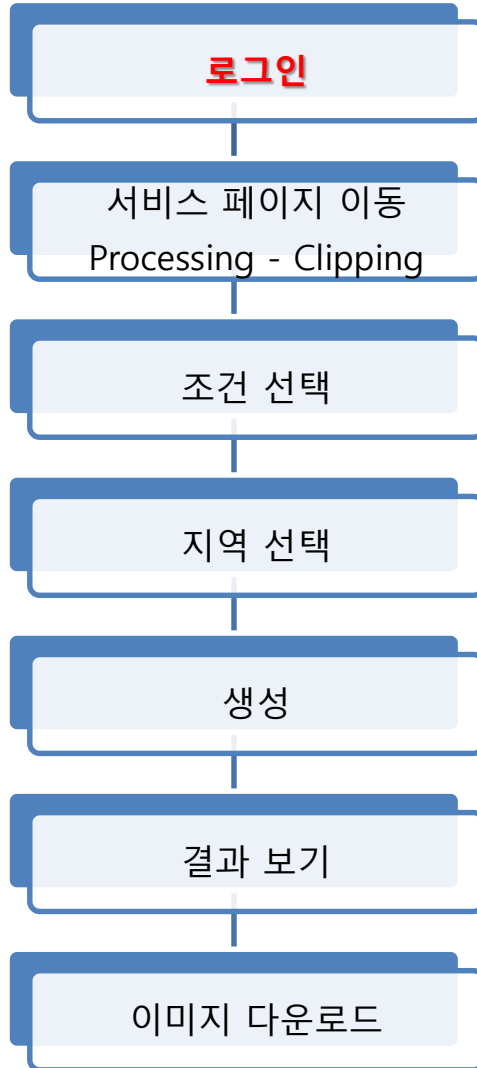
- 다른 이름으로 저장 → PNG



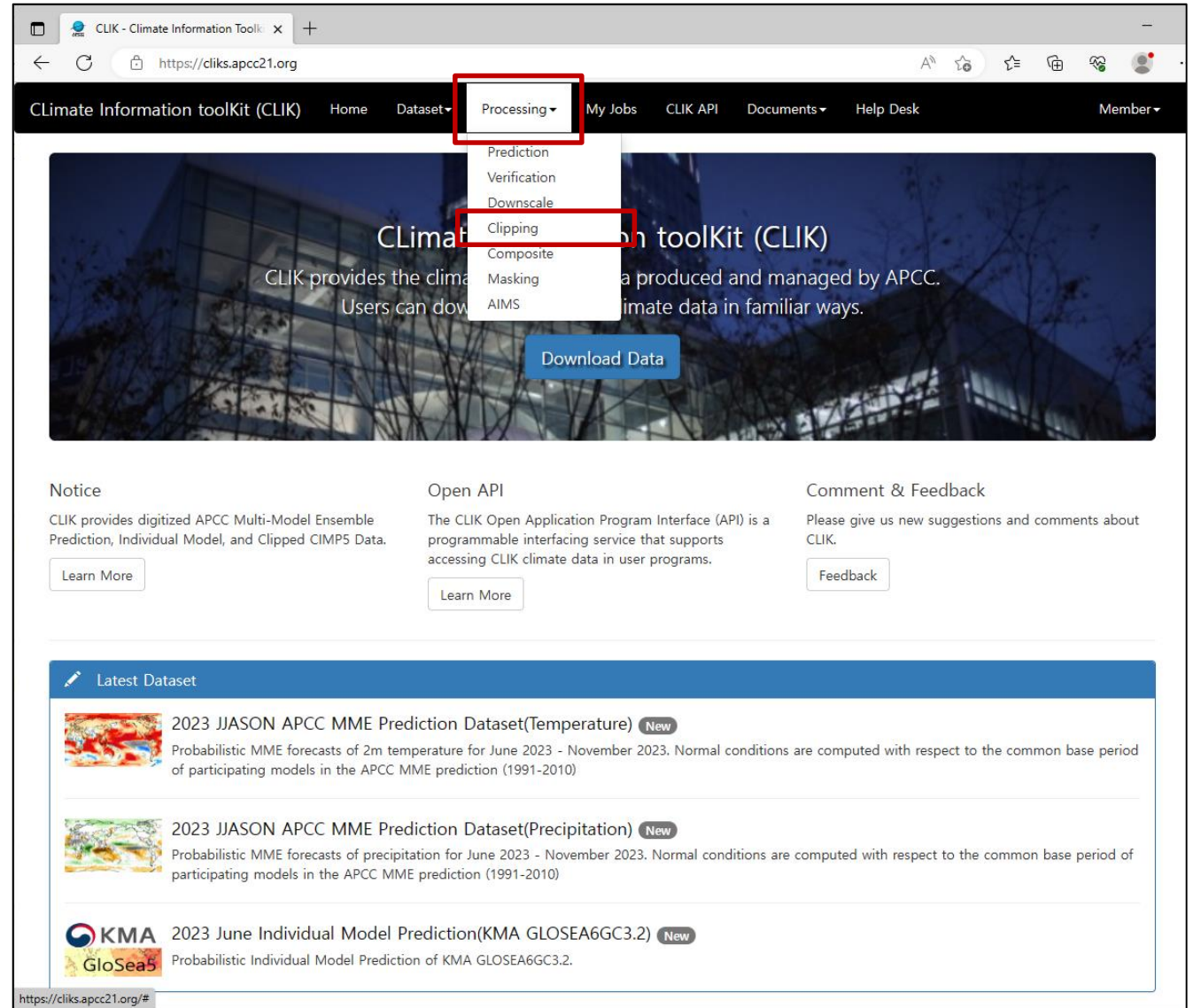
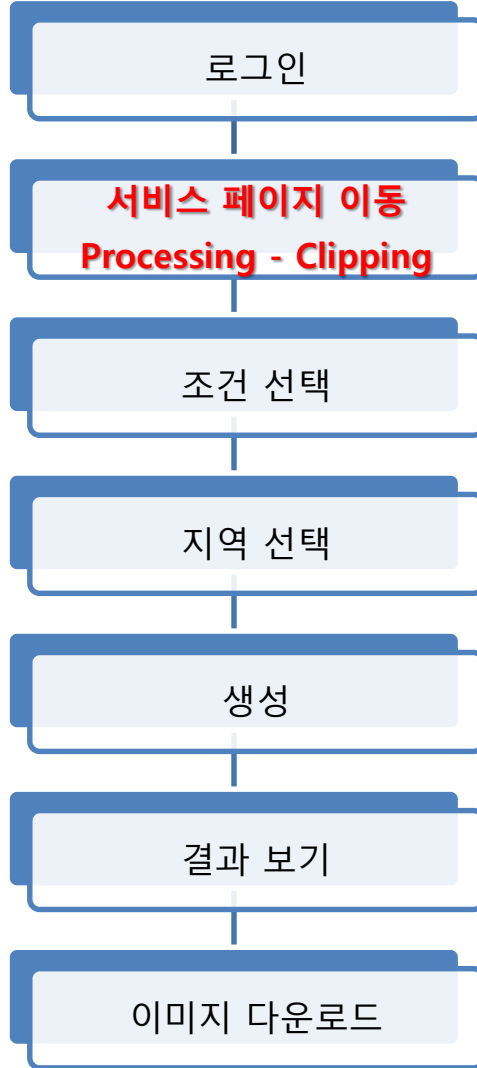
출력 메뉴

.png, .nc, .xls 등
다양한 포맷의
결과물 제공

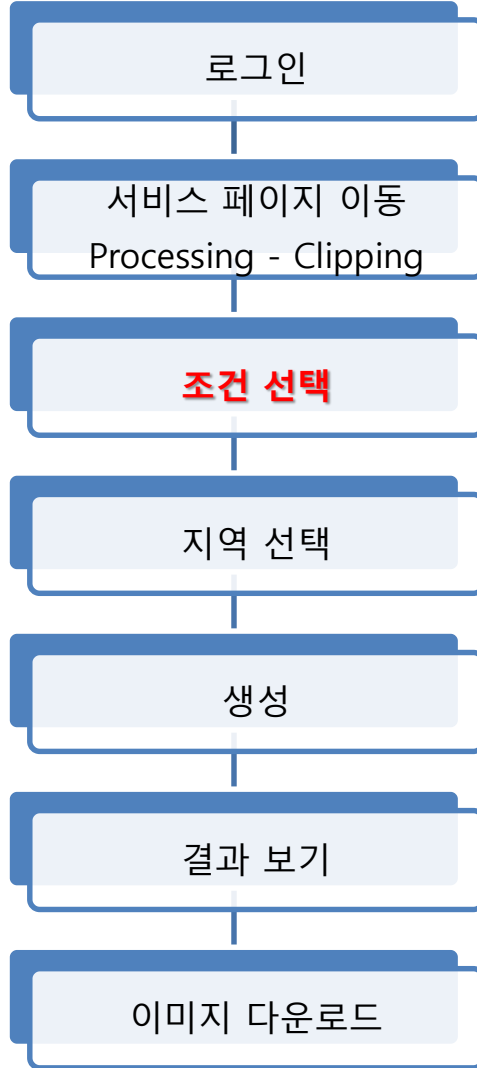
Clipping 시작하기 - 1 (로그인)



Clipping 시작하기 - 1 (서비스 페이지 이동)



Clipping 시작하기 - 3 (Clipping 조건 선택)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

MME Individual

Clipping - APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 / 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Clipping Area: Coordinates Region Country

Coordinates: 0, 90, 360, -90

Region: Global

Country: Choose Country

Select button to clip specific area.

Clip Area

Monthly Precipitation (2022/01)

Monthly Precipitation (2022/02)

Monthly Precipitation (2022/03)

Base Period: 1992-2011

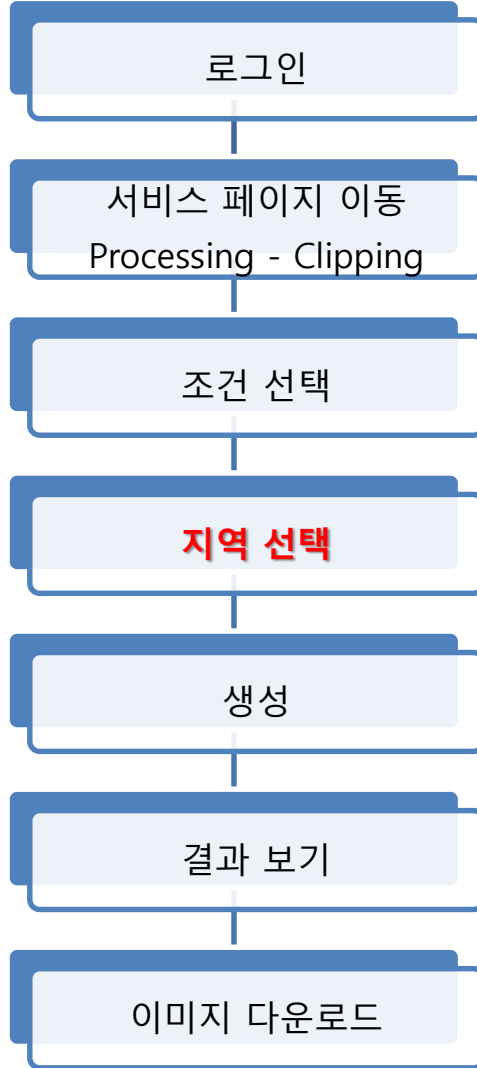
Unit: mm/day

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Clipping 시작하기 - 4 (Clipping 지역 선택)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

MME Individual

Clipping - APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Clipping Area

Coordinates Region Country

Coordinates: 0 90 -90 360

Region: Global

Country: Choose Country

원하는 추출 좌표/지역 선택 Select button to clip specific area.

Clip Area

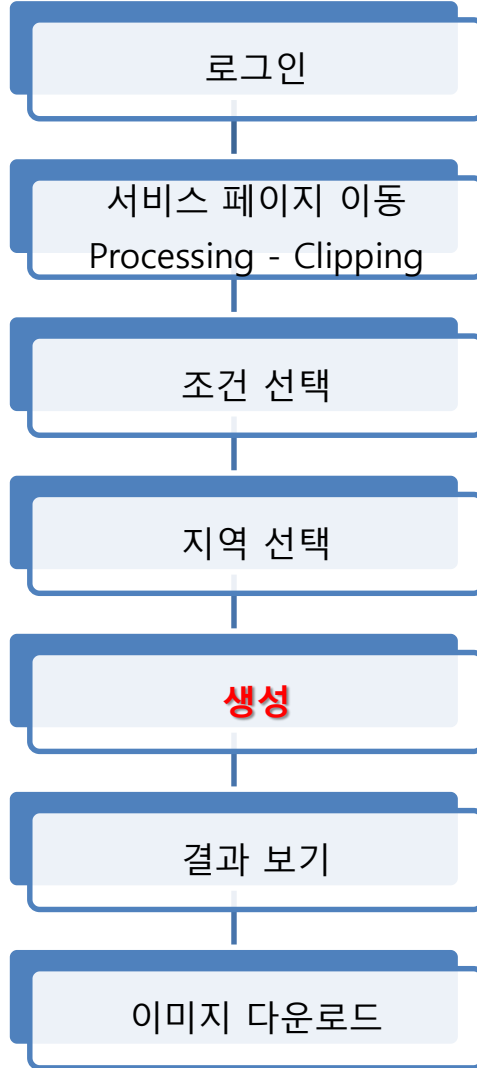
Monthly Precipitation (2022/01) Monthly Precipitation (2022/02) Monthly Precipitation (2022/03)

Base Period: 1992-2011 Anomaly Unit: mm/day

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Clipping 시작하기 - 5 (결과 파일 생성)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

MME Individual

Clipping - APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Clipping Area: Coordinates Region Country

Coordinates: 0 90 -90 360

Region: Global

Country: Choose Country

Select to obtain the specific area.

Clip Area

Monthly Precipitation (2022/01) Anomaly

Monthly Precipitation (2022/02) Anomaly

Monthly Precipitation (2022/03) Anomaly

Base Period: 1992-2011

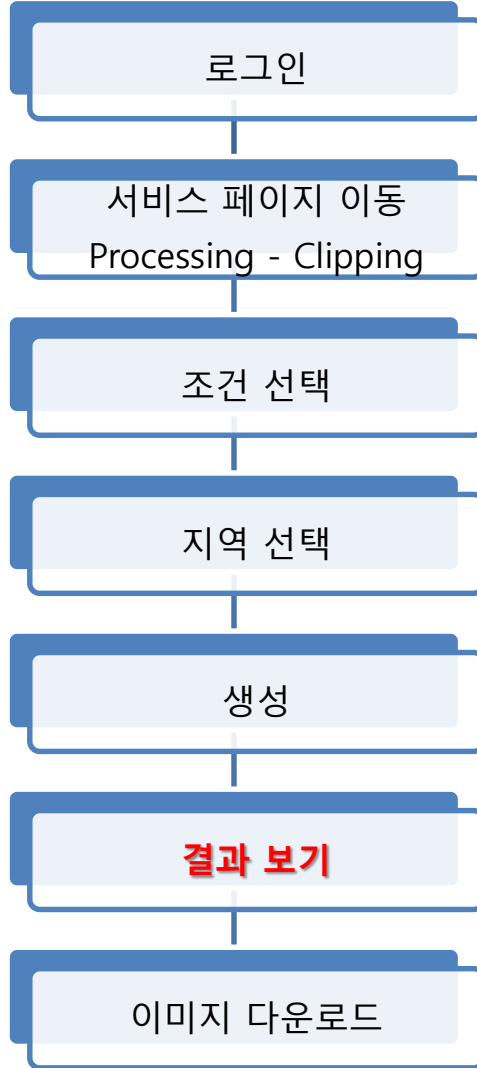
Unit: mm/day

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Clipping 시작하기 - 6 (결과 보기)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

MME Individual

Clipping - APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Clipping Area: Coordinates Region Country

Coordinates: 0 90 360 -90

Region: Global

Country: Choose Country

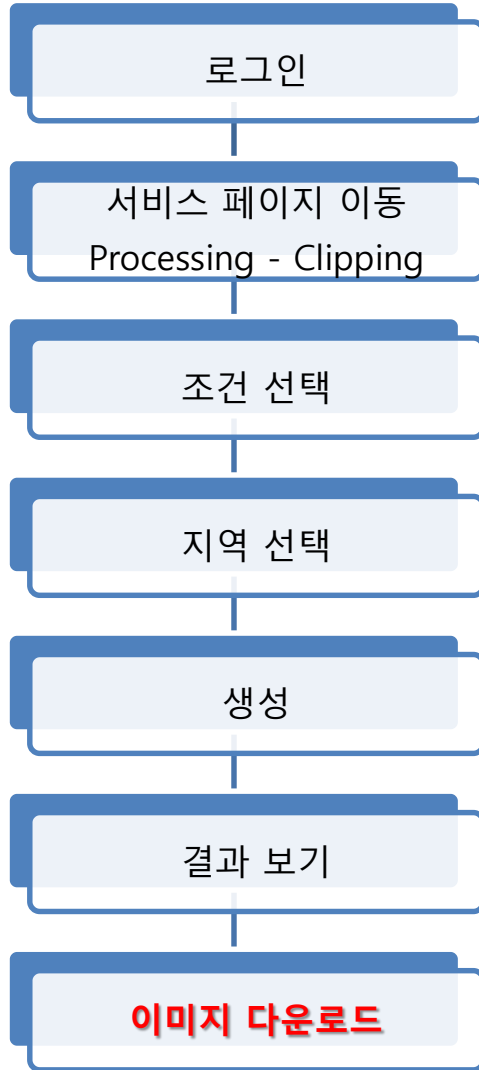
Select button to clip specific area.

Clip Area

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Clipping 시작하기 - 7 (이미지 다운로드)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

MME Individual Clipping - APCC MME

Notice : MME data is updated around

Lead Time
 3-MON
 6-MON

Variables
 prec slp sst t2m t850

Clipping Area
 Coordinates
 0 90 360
 -90

Monthly Precipitation (2022/01)
 Base Period:1992-2011
 Anomaly
 Unit: mm/day

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원본 사이즈

새 탭에서 이미지 열기
 이미지를 다른 이름으로 저장...
 이미지 복사
 이미지 주소 복사
 이 이미지의 QR 코드 생성
 Google로 이미지 검색
 Pick a color on the page
 검사

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| Clipping 실습 I, II

Clipping 실습 시나리오 1.

- 2023년 6월의 MME - 3개월 자료에서 동아시아 지역의 자료를 추출한다.

Clipping 실습 시나리오 2.

- 2023년 6월 KMA - GLOSEA6GC3.2의 Sea Surface Temperature 변수에서 미국(USA) 지역의 자료를 추출한다. (개별모델-Individual)

자료합성(Composite) 서비스 메뉴 구성

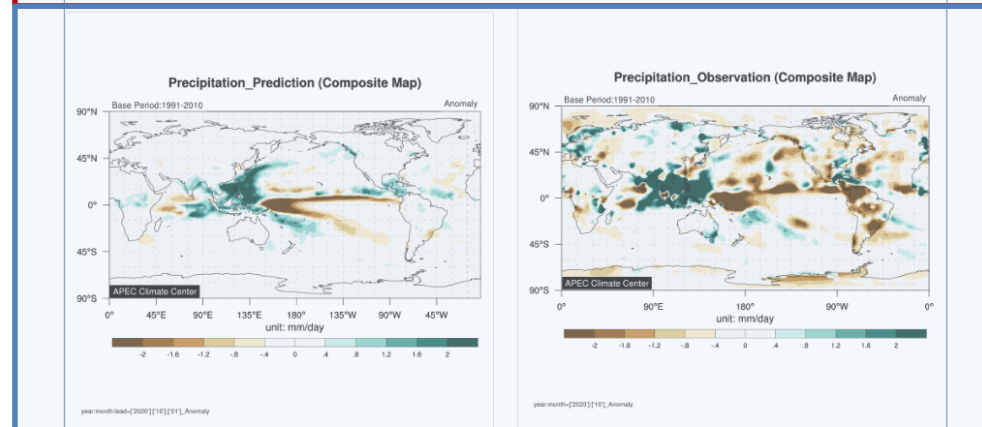
입력 메뉴

변수 / 모델 / 기간 등
자료 합성 조건 설정

The screenshot shows the 'Composite APCC MME' interface with two main sections: 'FORECAST' and 'OBSERVATION'.
FORECAST Section:
 - Variable: Radio buttons for 'prec', 'slp', 'sst', 't2m', 't850'.
 - Forecast Length: Radio buttons for '3-MON', '6-MON'.
 - Lead Time: Radio buttons for '01', '02', '03', '04', '05', '06'.
OBSERVATION Section:
 - Variable: Radio buttons for 'prec', 'slp', 'sst', 't2m', 't850'.
 - Mean / Anomaly: Radio buttons for 'Mean', 'Anomaly'.
 - Climatology Period: 'Start' (199) and 'End' (202) dropdown menus.
 - Date: Grids for selecting years (2023-2015) and months (01-12).
 - Both sections have a 'Plot' button and the text 'Select button to plot data'.

출력 메뉴

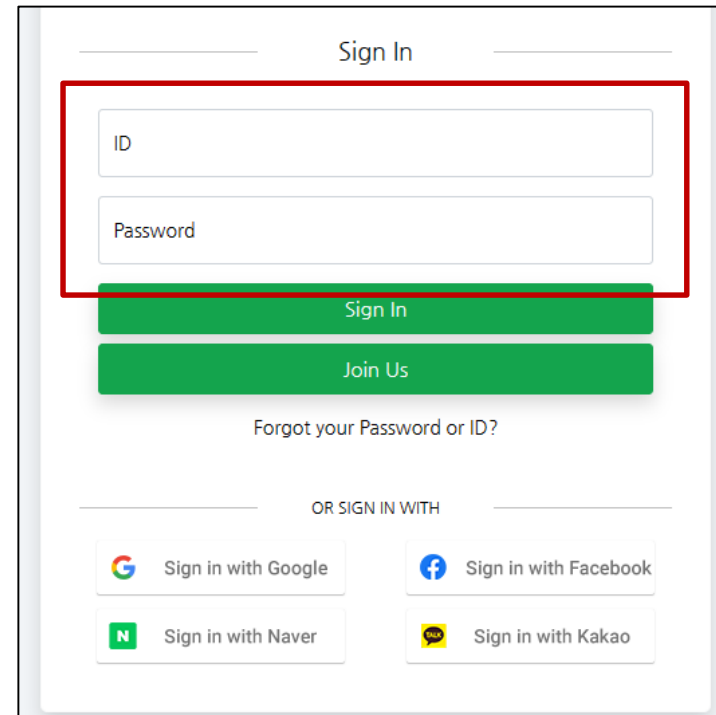
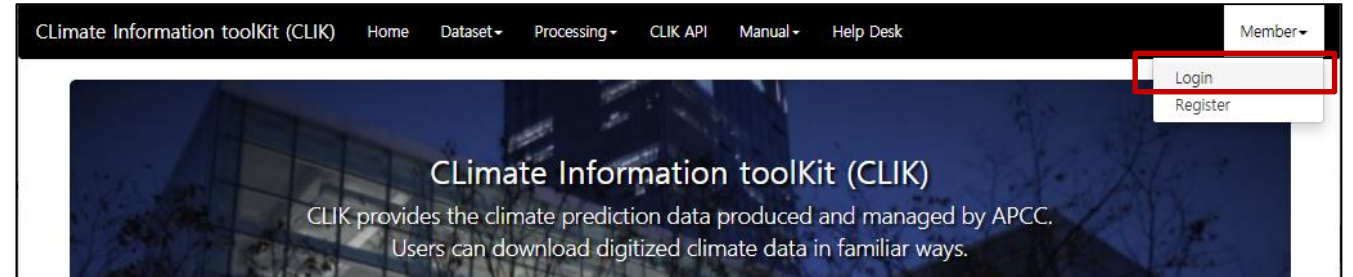
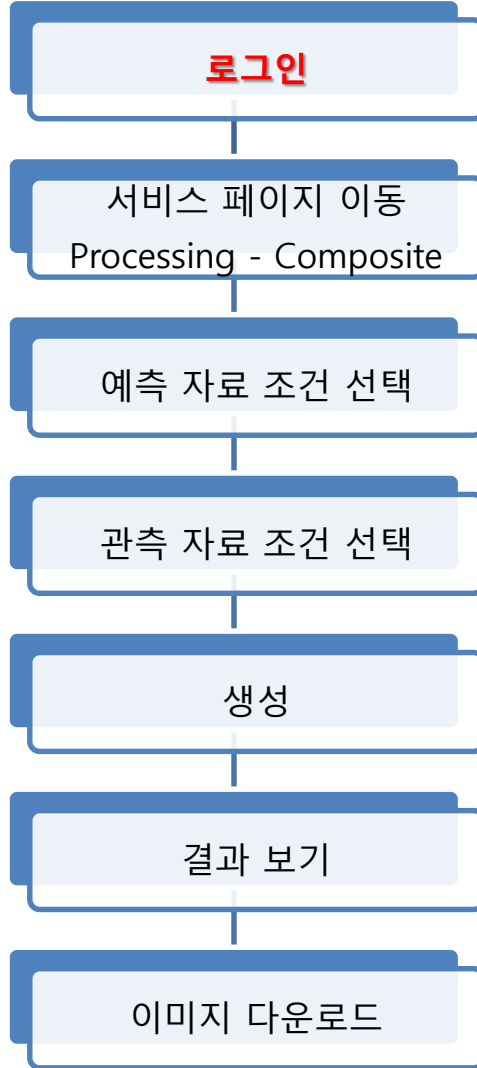
PNG 파일 출력 결과



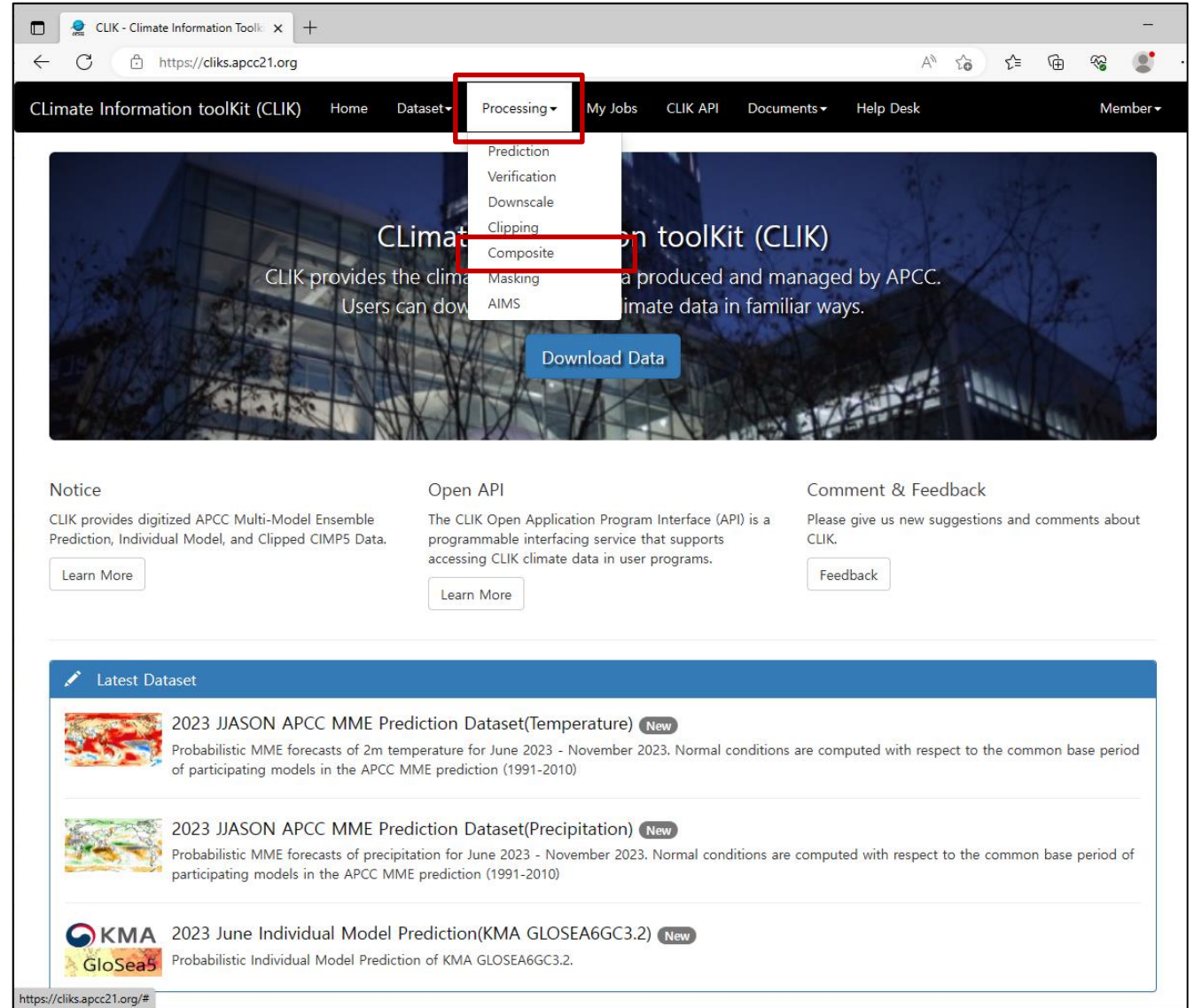
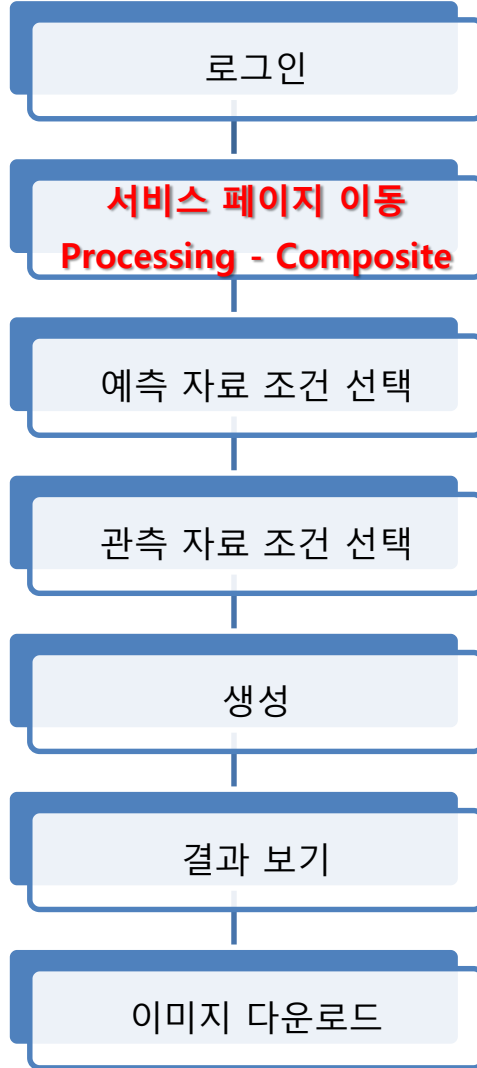
- 합성 조건 선택
 - **MME (Forecast)**
 - Variable
 - Forecast Length
 - Lead Time
 - **Observation Data**
 - Variable
 - Mean/Anomaly
 - Climatology Period

- 그림 선택 (클릭시 확대됨)
 - 다른 이름으로 저장 → PNG

Composite 시작하기 - 1 (로그인)



Composite 시작하기 - 2 (Composite 페이지 접속)



Composite 시작하기 - 3 (예측 자료 조건 선택)



Composite APCC MME

FORECAST

Variable: prec slp sst t2m t850

Forecast Length: 3-MON 6-MON

Lead Time: 01 02 03 04 05 06

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select button to plot data

OBSERVATION

Variable: prec slp sst t2m t850

Mean / Anomaly: Mean Anomaly

Climatology Period

Start: 1991 End: 2020

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select button to plot data

Precipitation_Prediction (Composite Map)

Precipitation_Observation (Composite Map)

Composite 시작하기 - 4 (관측 자료 조건 선택)



Composite APCC MME

FORECAST

Variable: prec slp sst t2m t850

Forecast Length: 3-MON 6-MON

Lead Time: 01 02 03 04 05 06

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select button to plot data

Precipitation_Prediction (Composite Map)

OBSERVATION

Variable: prec slp sst t2m t850

Mean / Anomaly: Mean Anomaly

Climatology Period

Start: 1991 End: 2020

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select button to plot data

Precipitation_Observation (Composite Map)

Composite 시작하기 - 5 (결과 파일 생성)



Composite APCC MME

FORECAST

Variable: prec slp sst t2m t850

Forecast Length: 3-MON 6-MON

Lead Time: 01 02 03 04 05 06

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plot Select button to plot data

Precipitation_Prediction (Composite Map)

Base Period:1991-2010 Anomaly

OBSERVATION

Variable: prec slp sst t2m t850

Mean / Anomaly: Mean Anomaly

Climatology Period

Start: 1991 End: 2020

Date

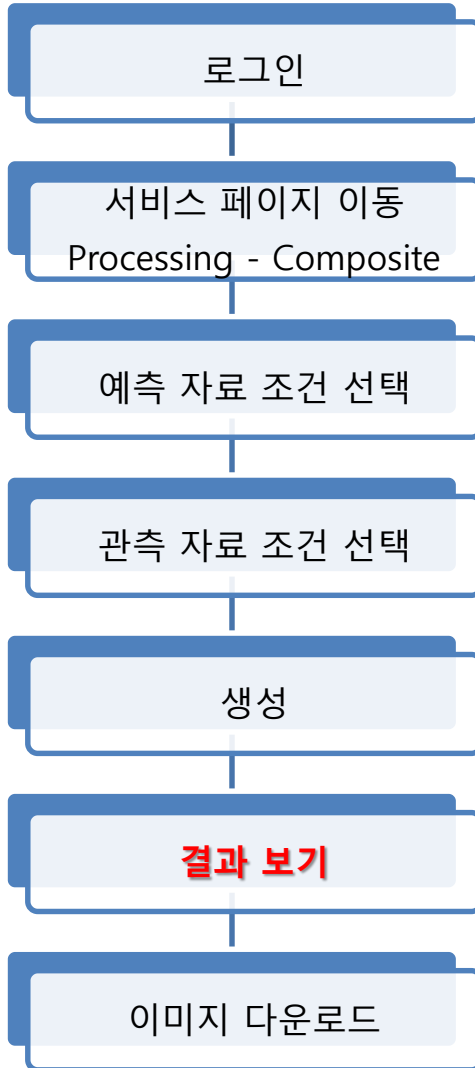
	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plot Select button to plot data

Precipitation_Observation (Composite Map)

Base Period:1991-2010 Anomaly

Composite 시작하기 - 6 (결과 보기)



Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plot Select button to plot data

Date

	01	02	03	04	05	06	07	08	09	10	11	12
2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
2022	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2021	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2020	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2017	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plot Select button to plot data

Precipitation_Prediction (Composite Map)

Base Period:1991-2010 Anomaly

unit: mm/day

year:month=[2020][10][01]_Anomaly

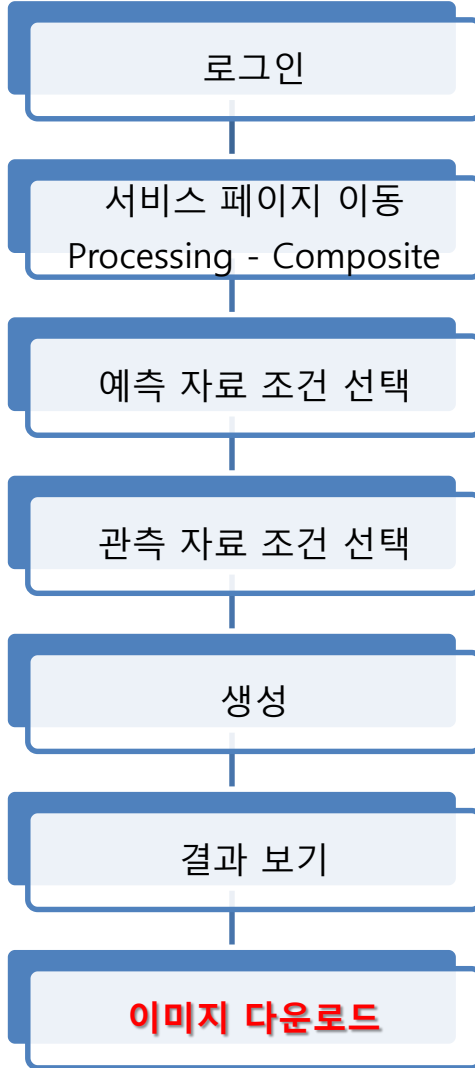
Precipitation_Observation (Composite Map)

Base Period:1991-2010 Anomaly

unit: mm/day

year:month=[2020][10]_Anomaly

Composite 시작하기 - 7 (결과 이미지 클릭)



The screenshot displays the 'Precipitation_Prediction (Composite Map)' interface. On the left, a 'Date' selection table allows users to choose a year and month. A red arrow labeled '일본 시가지' points to the '01' column for the year '2020'. Below the table are 'Plot' and 'Select' buttons. The main area shows a world map with precipitation anomalies, a color scale legend (unit: mm/day), and the APEC Climate Center logo. The legend ranges from -2 to 2 mm/day. The map shows a significant positive anomaly (brown/orange) over the Japanese archipelago.

| Composite 실습 |

Composite 실습 시나리오

- 2015 ~ 2020년 8월의 예측자료 (Precipitation – MME 6Month)를 합성하여 Observation 자료와 비교한다.

지역정보 추출(Masking) 서비스 메뉴 구성

입력 메뉴
 변수 / 기간 등
 지역 정보 추출 조건
 설정

Masking APCC MME

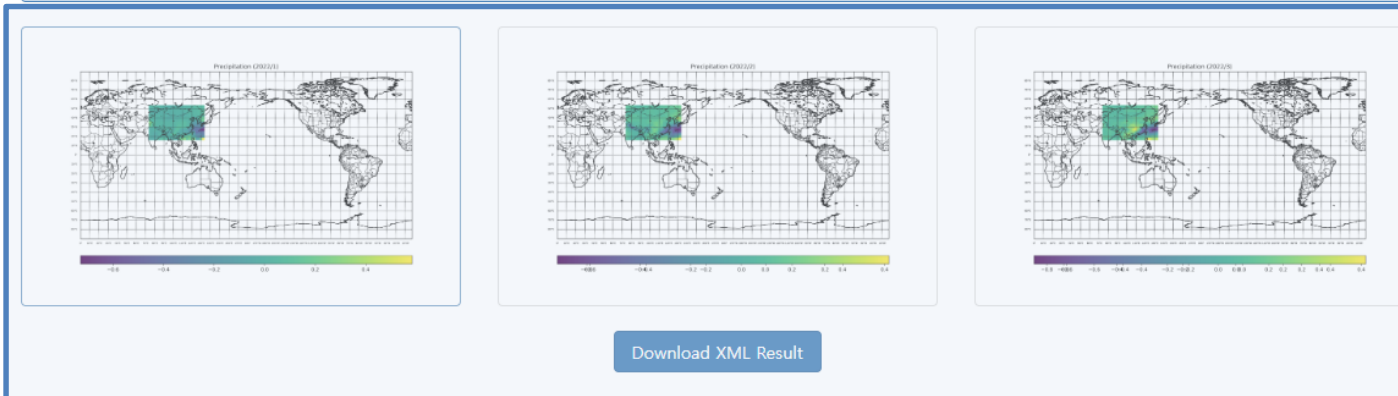
Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time <input checked="" type="radio"/> 3-MON <input type="radio"/> 6-MON	Year / Month 2023 7	Methods <input checked="" type="radio"/> Deterministic <input type="radio"/> Probabilistic	Period <input checked="" type="radio"/> Monthly <input type="radio"/> Seasonal
Variables <input checked="" type="radio"/> prec <input type="radio"/> slp <input type="radio"/> sst <input type="radio"/> t2m <input type="radio"/> t850 <input type="radio"/> z500			
Masking Option Masking Area(Country): Choose Country Masking Operator: Point in Polygon Distance(Expanded MBR): 2.5			

[Plot](#)

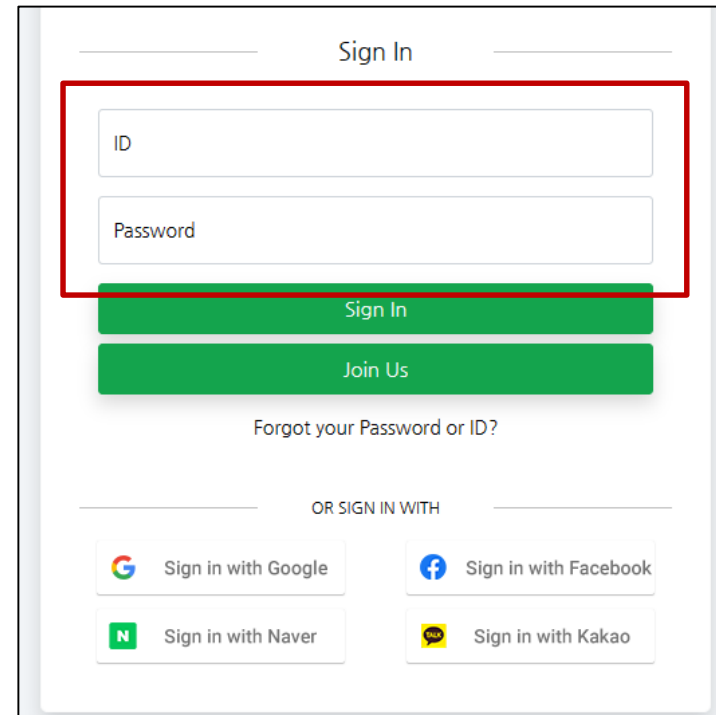
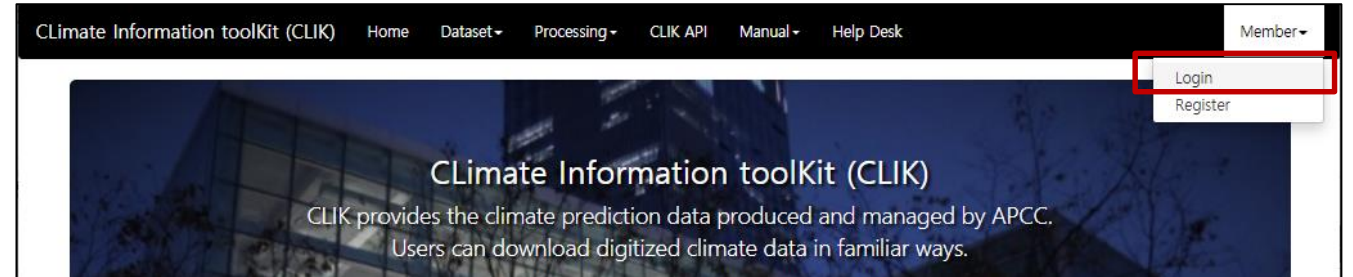
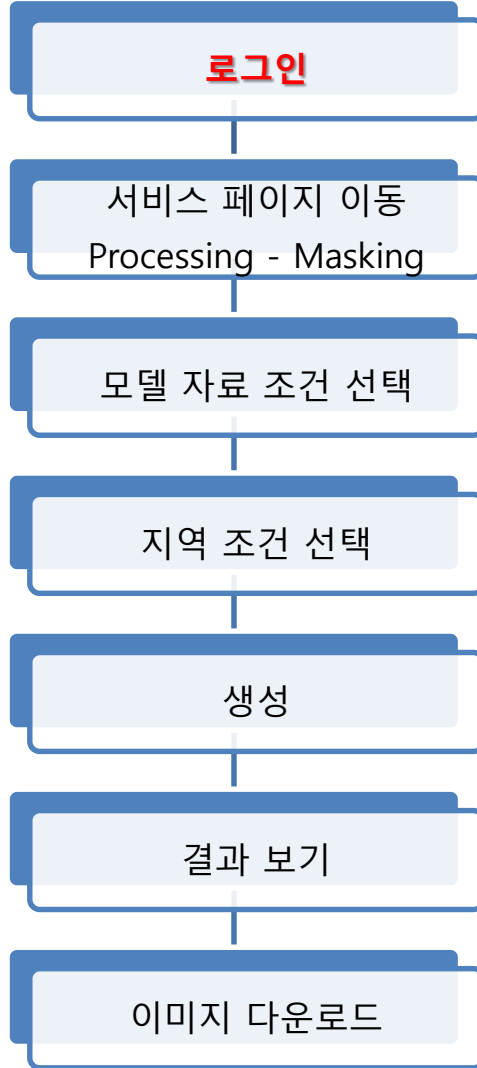
- **추출 조건 선택**
 - Lead Time
 - Year Month
 - Method
 - Period
 - Variable
- **Masking Option 선택**
 - Masking Area
 - Masking Operator
 - Distance

출력 메뉴
 PNG 파일 출력 결과

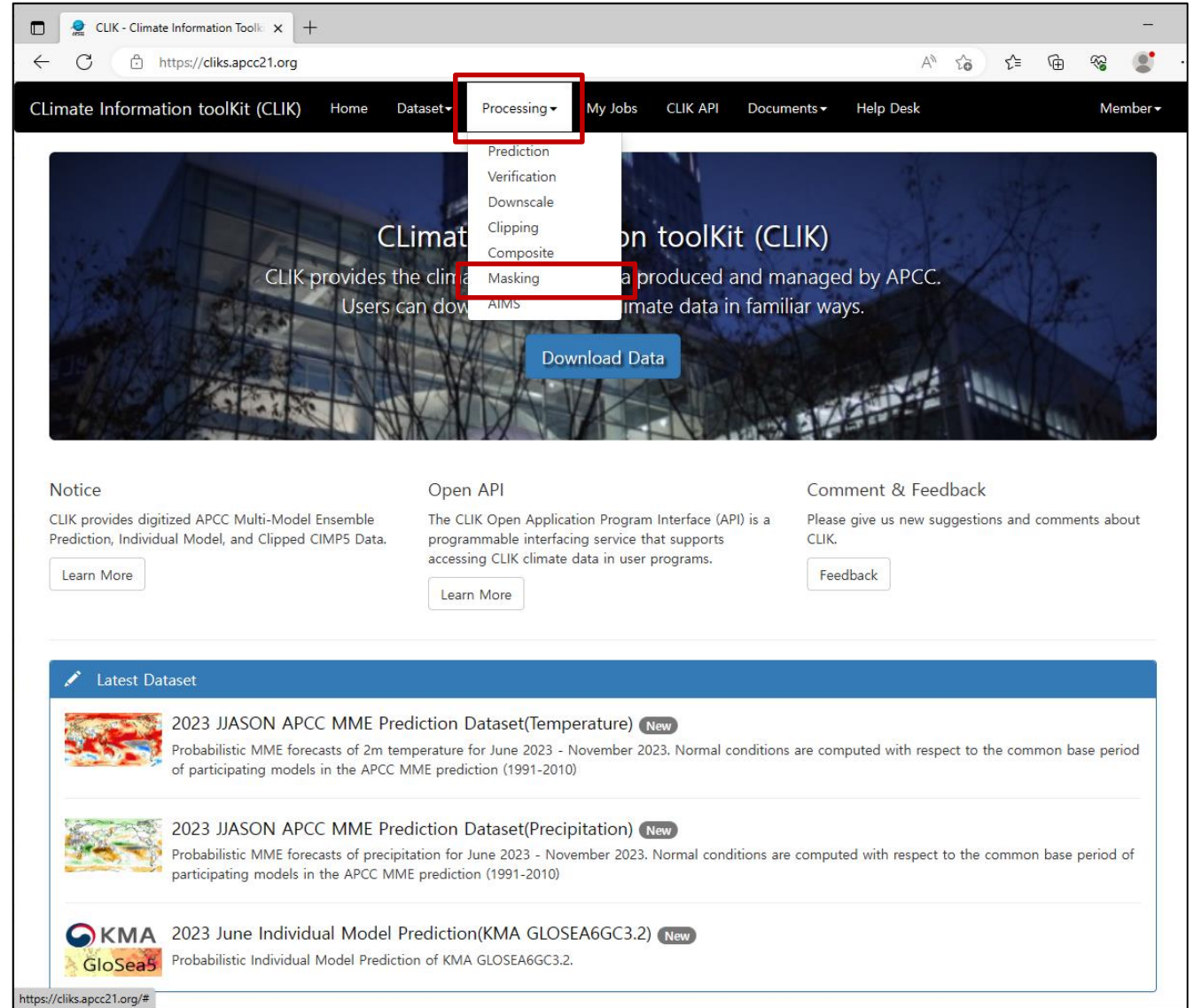
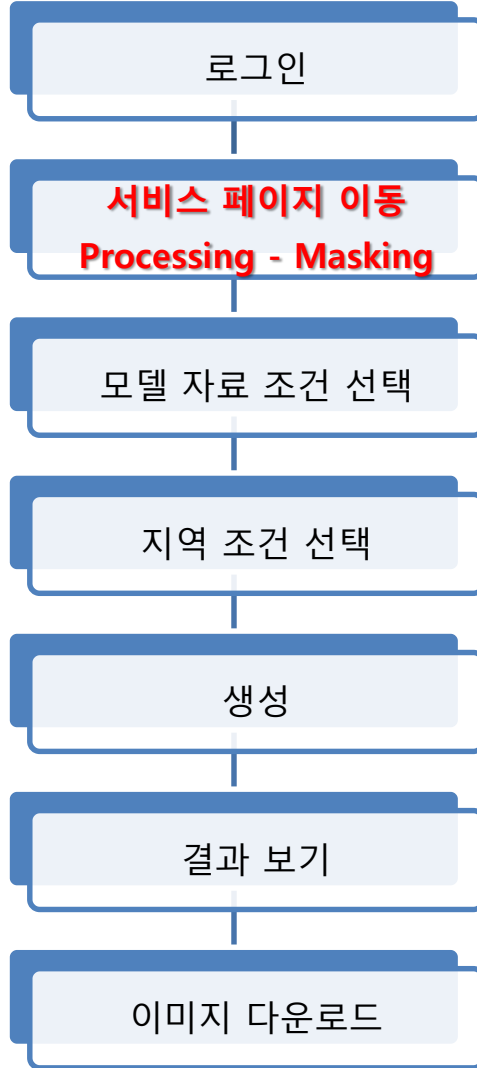


- 그림 선택 (클릭시 확대됨)
- 다른 이름으로 저장 → PNG

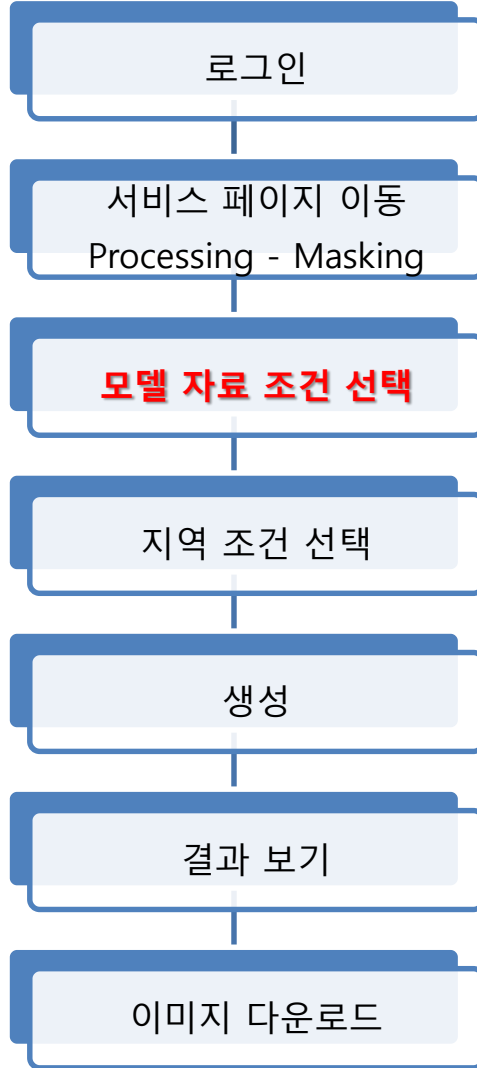
Masking 시작하기 - 1 (로그인)



| Masking 시작하기 - 2 (서비스 페이지 이동)



| Masking 시작하기 - 3 (추출할 모델 자료 조건 선택)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

Masking APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time

3-MON
 6-MON

Year / Month

2023 7

Methods

Deterministic
 Probabilistic

Period

Monthly
 Seasonal

Variables

prec slp sst t2m t850 z500

Masking Option

Masking Area(Country): Choose Country

Masking Operator: Point in Polygon

Distance(Expanded MBR): 2.5

[Plot](#)

[Download XML Result](#)

| Masking 시작하기 - 4 (추출할 지역 조건 선택-1)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

Masking APCC MME

Notice : MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Masking Option

Masking Area(Country): Choose Country

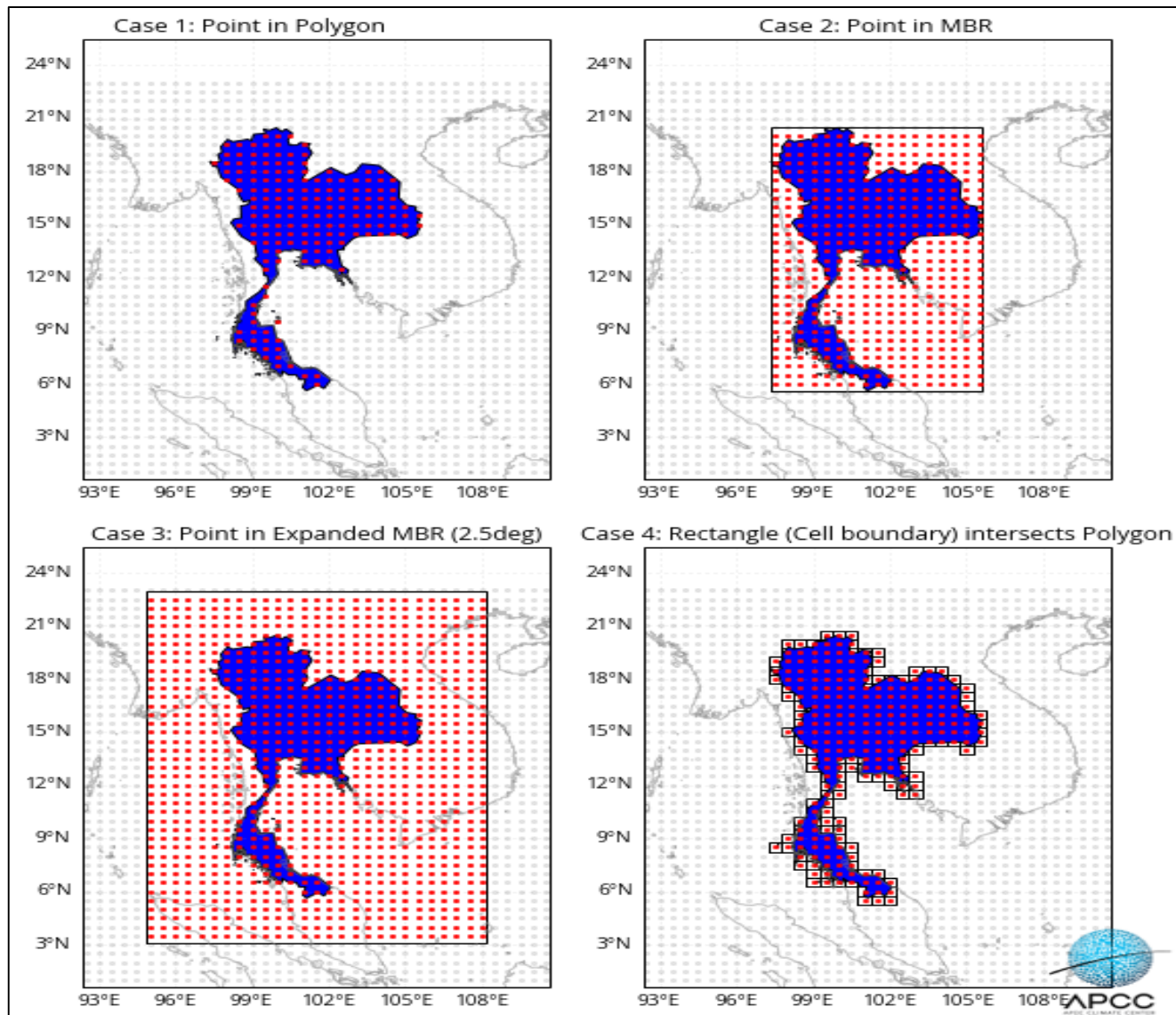
Masking Operator: Point in Polygon

Distance(Expanded MBR): 2.5

Plot

Download XML Result

| Masking 시작하기 - 4 (추출할 지역 조건 선택-2)



| Masking 시작하기 - 5 (결과 파일 생성)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

Masking APCC MME

Notice: MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Masking Option

Masking Area(Country): Choose Country

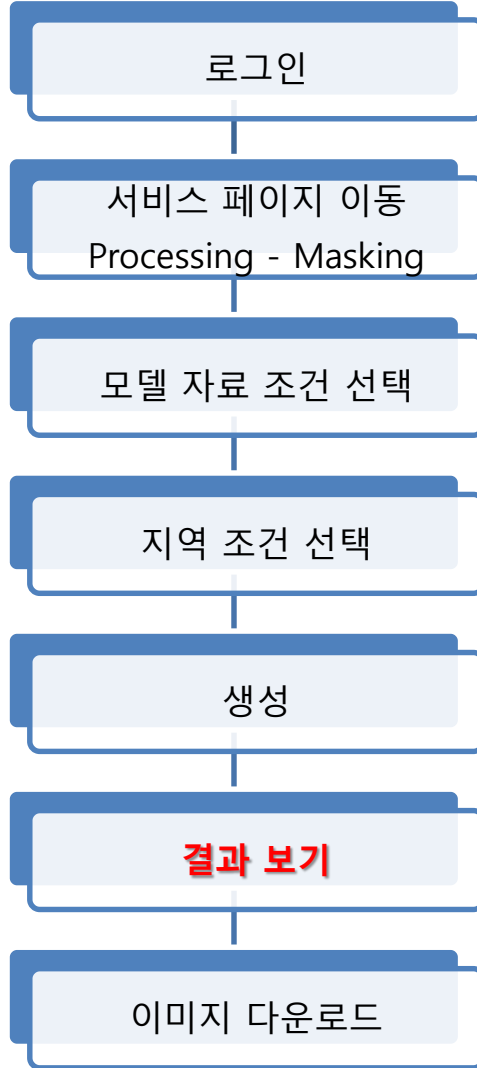
Masking Operator: Point in Polygon

Distance(Expanded MBR): 2.5

Plot

Download XML Result

Masking 시작하기 - 6 (결과 보기)



Climate Information toolkit (CLIK) Home Dataset Processing CLIK API Documents Help Desk Member

Masking APCC MME

Notice: MME data is updated around the 20th of every month and may change depending on operational situation.

Lead Time: 3-MON 6-MON

Year / Month: 2023 7

Methods: Deterministic Probabilistic

Period: Monthly Seasonal

Variables: prec slp sst t2m t850 z500

Masking Option:

Masking Area(Country): Choose Country

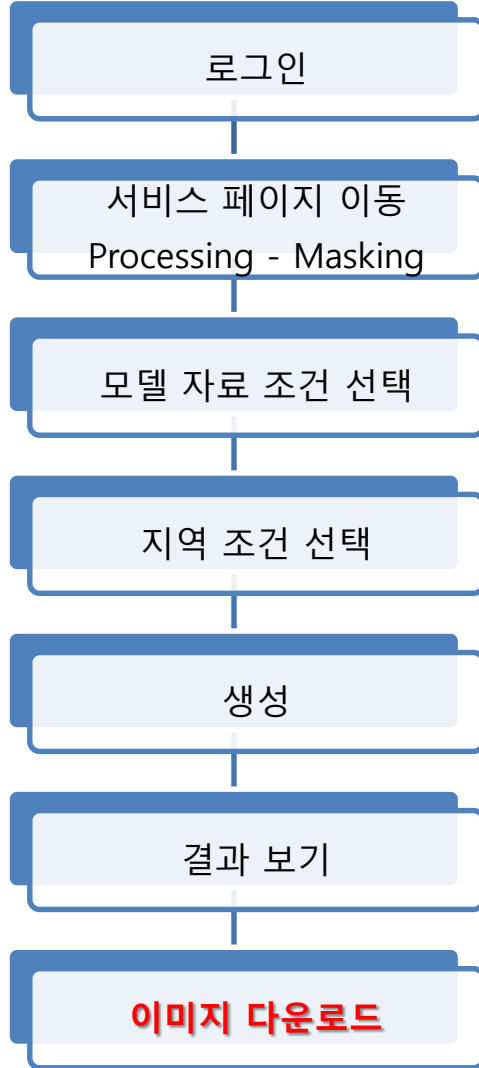
Masking Operator: Point in Polygon

Distance(Expanded MBR): 2.5

Plot

Download XML Result

Masking 시작하기 - 7 (결과 이미지 클릭)



Climate Information toolKit (CLIK)

Masking APCC MME

Notice : MME data is updated around 00:00 UTC

Lead Time

3-MON

6-MON

Variables

prec slp sst t2m t850

Masking Option

Masking Area(Country)

Choose Country

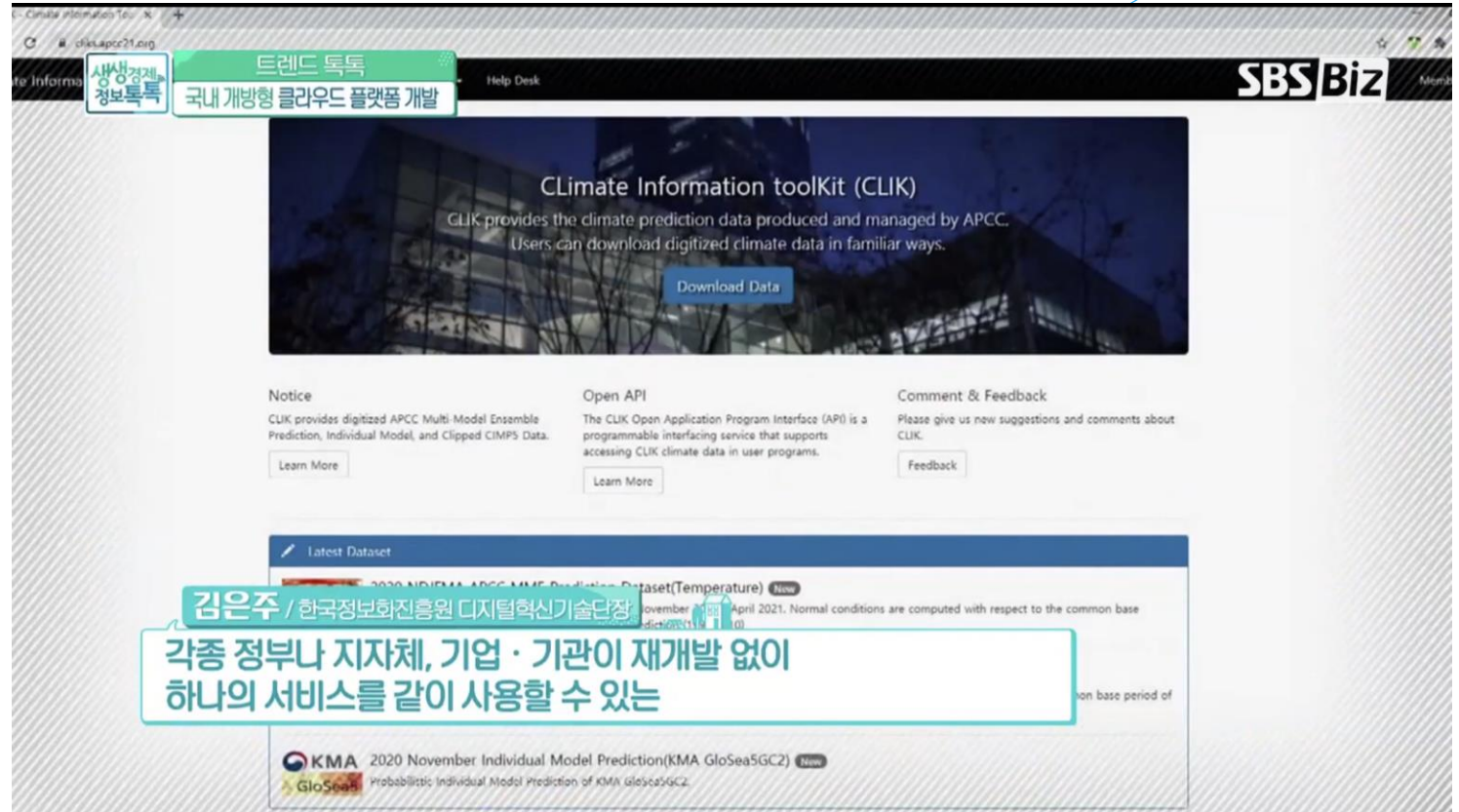
Precipitation (2022/1)

일본 사이즈

Download XML Result



Thank You !!



@ SBS 생생경제 정보특독 492회 (2020.11.18 방영) 화면
<https://programs.sbs.co.kr/sbsbiz/cnbctalktalk/clip/56554/22000397345>

| Panoply Data Viewer 설치 안내

실습용 프로그램 설치 (1)


- Panoply Data Viewer를 실행하기 위한 환경 (Java 환경) 설치
- 파일명 : [OpenJDK17U-jdk_x64_windows_hotspot_17.0.7_7.msi](#) (159MB)
- Windows 탐색기에서 해당 파일 실행 후 설치 (별도 추가 설정 없이 설치 진행)

실습용 프로그램 설치 (2)

- 파일명 : [PanoplyWin-5.2.8.zip](#) (41.5MB)
- 압축 해제 후 PanoplyWin 폴더의 Panoply.exe 실행

Panoply Data Viewer

- Panoply란?
 - NASA에서 개발한 교육 및 연구용 데이터 시각화 도구
 - NetCDF, HDF 및 GRIB 형식의 데이터 지원
 - 기후 연구 및 지구 과학에서 널리 사용
 - 데이터를 쉽게 이해하고 해석할 수 있도록 도와주는 도구
 - 데이터 형식과 기후 과학에 대한 기본적인 이해가 필요
- Panoply 주요 기능
 - 데이터를 다양한 방식으로 시각화 가능
 - 지도 투영에 데이터를 표시, Plot을 생성
 - 사용자는 데이터의 다양한 측면을 슬라이스 가능
 - 데이터의 구성 요소 확인 가능



National Aeronautics and Space Administration
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Panoply Data Viewer

Download Panoply
Panoply requires a computer with **Java 11** (or later version) installed.

The current version of Panoply is 5.2.8, released 2023-06-30.

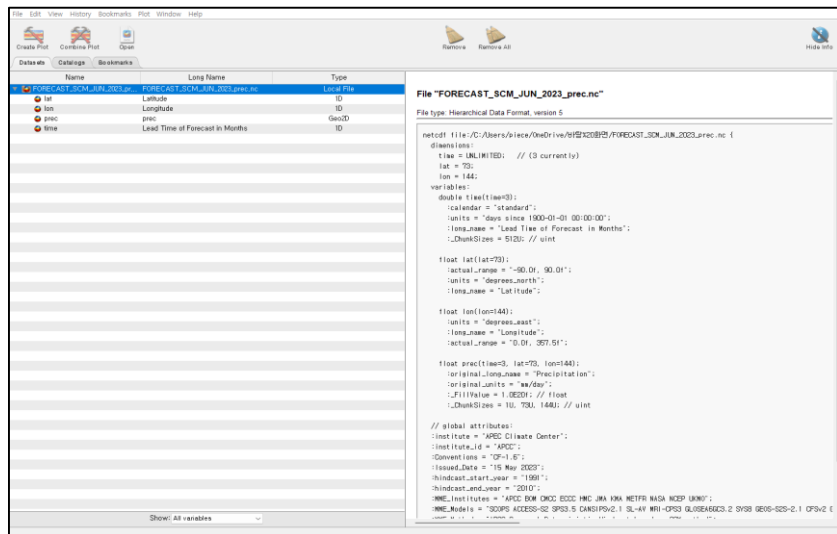
- Download Panoply 5.2.8 for **macOS**, 44 MB DMG, uses native filechooser
- Download Panoply 5.2.8 for **macOS**, 44 MB DMG, uses Java filechooser
- Download Panoply 5.2.8 for **macOS**, 44 MB DMG, requires M1/M2 Mac with ARM64 Java
- Download Panoply 5.2.8 for **Windows**, 41 MB ZIP
- Download Panoply 5.2.8 "generic" for **Linux**, etc., 41 MB ZIP
- Download Panoply 5.2.8 "generic" for **Linux**, etc., 41 MB TGZ
- View checksums: [MD5] [SHA1] [SHA256]

Install and Run Panoply
After downloading the appropriate Panoply archive linked above, uncompress the archive file on your desktop. Within is a **README** text file with an explanation of the contents of the download, instructions on how to launch the application, and some notes on possible launch bugs and/or performance tuning.

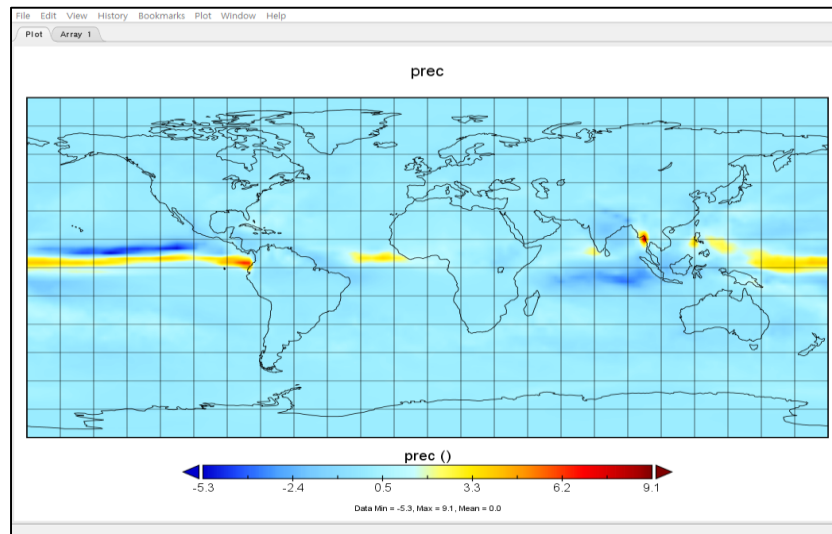
We would like to point out the following possible installation and launch issues:

If you find that after download and installation, Panoply won't start, a possible reason might be that you don't have a Java Runtime Engine (JRE) or Java Delopment Kit (JDK) installed on your computer, or that it is not a Java 11 (or later) JRE/JDK.

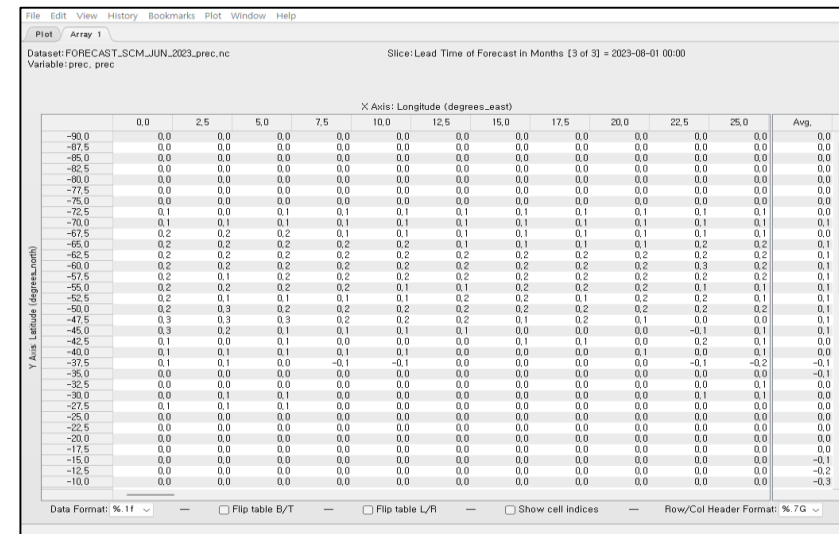
Download : <https://www.giss.nasa.gov/tools/panoply/download/>



.nc File 불러오기/정보 확인



불러온 .nc file Plot



불러온 .nc File Array 확인

| CLIPPING API 기본 구조

#Clipping API 실행을 위한 run.py 파일 구조

```
import api as clipsapi
```

```
c = clipsapi.Client()
```

```
request = {
```

```
    'lead_month': '3-MON',
    'variable': 'prec',
    'method': 'SCM',
    'period': 'Monthly mean',
    'ityear': '2017',
    'imonth': '7',
    'cosouth': '-50',
    'conorth': '70',
    'cowest': '100',
    'coeast': '210'
    'return_type': 'png'
```

사용자 선택 옵션

```
c.clip(request, target)
```

The screenshot shows the CLIPPING API web interface with the following configuration options:

- Lead Time:** `lead_month` (3-MON selected, 6-MON available)
- Year / Month:** Year: 2023, Month: 7. `ityear imonth` labels are present below the dropdowns.
- Methods:** `method` (Deterministic selected, Probabilistic available)
- Period:** `period` (Monthly selected, Seasonal available)
- Variables:** `variable` (prec selected, slp, sst, t2m, t850, z500 available)
- Clipping Area:**
 - `conorth` (Coordinates selected, Region, Country available)
 - `cowest` (0, 360)
 - `coeast` (210)
 - `cosouth` (-90)

MME-Leadtime

- 3-MON
- 6-MON

MME-Method

- Deterministic (SCM)
- Probabilistic (GAUS)

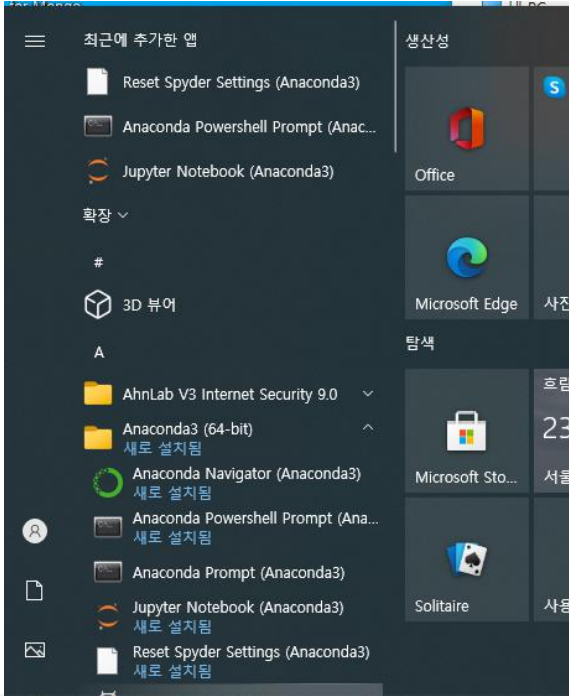
MME-Period

- Monthly
- Seasonal

MME-Variable

- Precipitation
- Sea Level Pressure
- Sea Surface Temperature
- Temperature at 2m
- Temperature at 850hPa
- Geopotential Height at 500hPa

| Spyder 실행



| 파이썬 파일 작성 & 저장

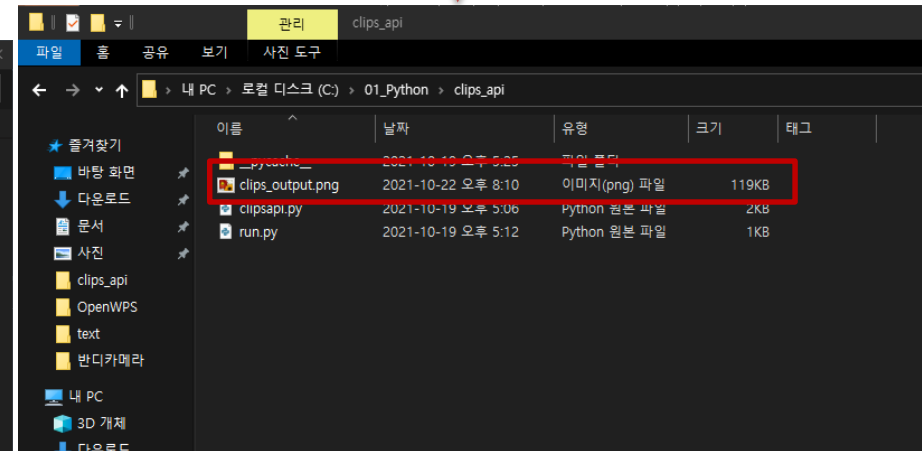
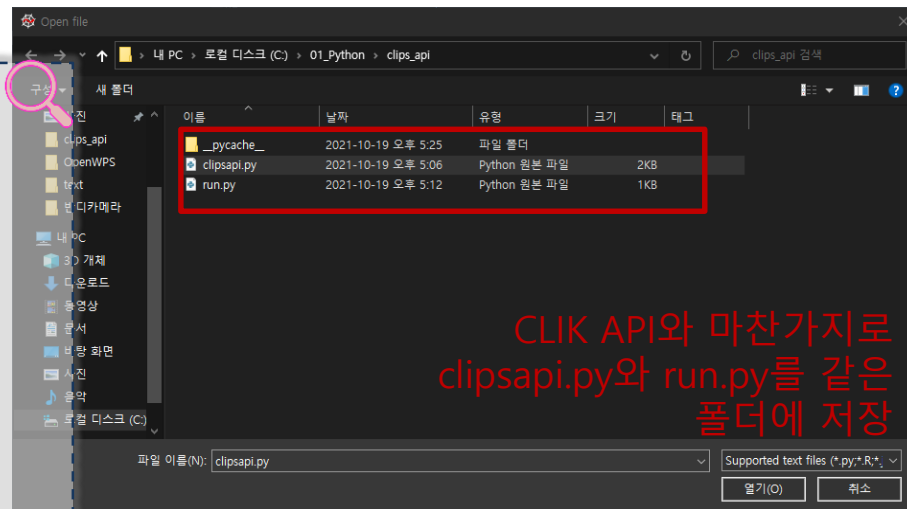
```
File Edit Search Source Run Debug Consoles Projects Tools View Help
C:\#01_Python\#clips_api\#run.py
temp.py x clipsapi.py x run.py x api.py x
1 import clipsapi
2 import json
3 import requests
4
5 c = clipsapi.Client()
6
7 request = {
8     'lead_month': '3-MON',
9     'variable': 'prec',
10    'method': 'SCM',
11    'period': 'Monthly mean',
12    'iyear': '2017',
13    'imonth': '7',
14    'cosouth': '-50',
15    'conorth': '70',
16    'cowest': '100',
17    'coeast': '210'
18 }
19 target = "clips_output.png"
20 c.clip(request, target)
```

```
Console 1/A x
In [4]: runfile('C:/01_Python/clips_api/run.py', wdir='C:/01_Python/clips_api')
Reloaded modules: clipsapi
Start to save file - clips_output.png

Model
Lead Month : 3-MON
Variable : prec
Method : SCM
Period : Monthly mean
Issued Year : 2017
Issued Month : 7

Coordinate
Min Latitude : -50
Max Latitude : 70
Min longitude : 100
Max longitude : 210

clips_output.png download compete!
In [5]:
```



- [예제]
- 예보기간: 3개월 MME
- 자료 Type : Forecast
 - MME 기법 : SCM
 - 변수 : prec
 - 자료 통계 기간: Monthly mean
 - 자료 기간: 2017년 7월
 - 추출 위/경도 : -50, 70, 100, 210

CLIK API와 마찬가지로 clipsapi.py와 run.py를 같은 폴더에 저장

