

Faculty of Geo-Information Science and Earth Observation, ITC

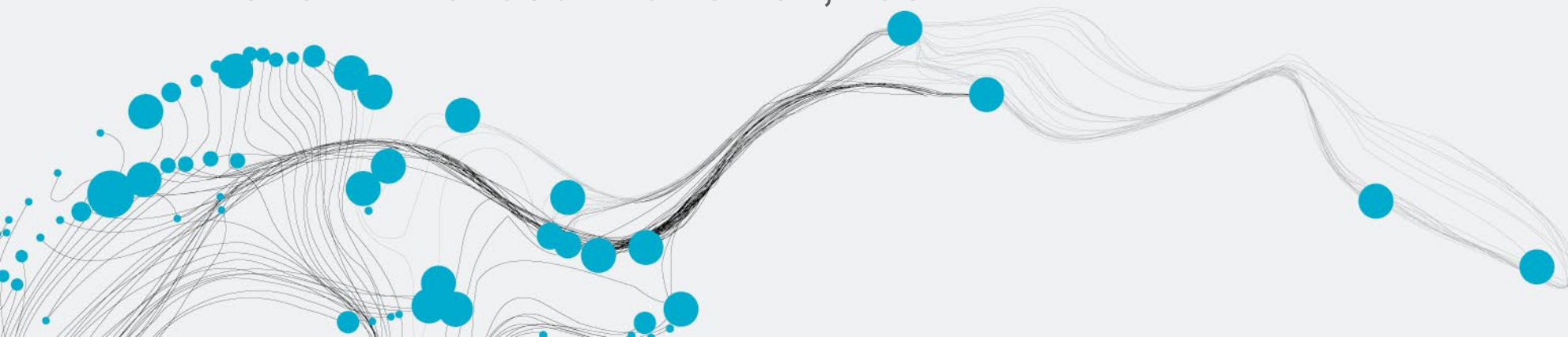
This HE Teaching Material was supported by the EGU Higher Education Teaching Material Grant 2023



UNIVERSITY
OF TWENTE.

CROP WATER PRODUCTIVITY

AN ONLINE SHORT COURSE BY
DR. EGOR PRIKAZIUK
WITH SUPPORT OF
THE EUROPEAN GEOSCIENCE UNION, EGU





Map

CONTINENTAL

NATIONAL

SUB-NATIONAL

Water Productivity
through
Open access
of Remotely sensed
derived data

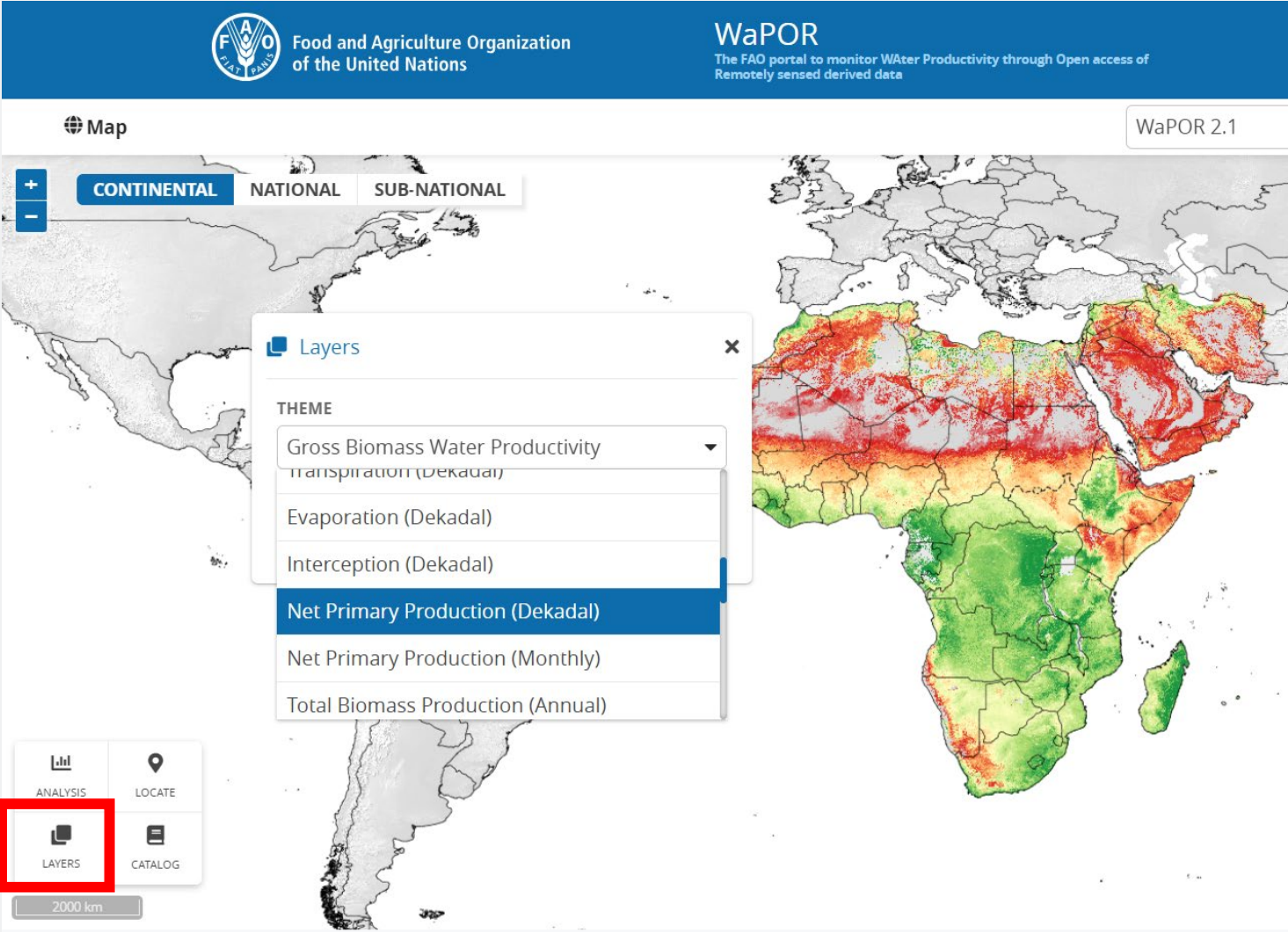
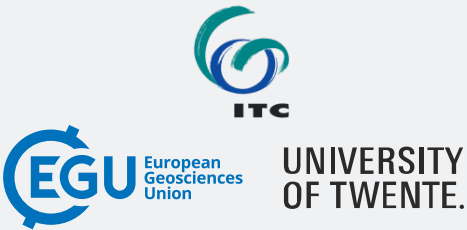
https://wapor.apps.fao.org/home/WAPOR_2/1

WAPOR DATASETS

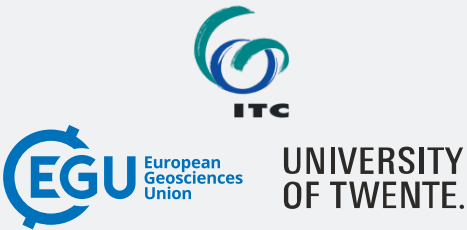
Dataset	Spatial resolution	Temporal resolution
Net primary production (NPP)	250 m (Level 1, Continental) 100 m (Level 2, National) 30 m (Level 3, Sub-National)	Dekadal Monthly Yearly
Actual evaporation, transpiration and interception (AETI)	250 m (Level 1, Continental) 100 m (Level 2, National) 30 m (Level 3, Sub-National)	Dekadal Monthly Yearly
Land cover classification	250 m (Level 1, Continental) 100 m (Level 2, National) 30 m (Level 3, Sub-National)	Yearly


Other datasets include precipitation and reference evapotranspiration (RET), we are not going to use them

1. Select a Layer



1. Select a Layer





Food and Agriculture Organization
of the United Nations

WaPOR
The FAO portal to monitor Water Productivity through Open access of
Remotely sensed derived data

Map

WaPOR 2.1

+

-

CONTINENTAL

NATIONAL

SUB-NATIONAL

Layers

THEME

Net Primary Production (Dekadal)

DEKAD (10-DAYS PERIOD)

20/09/2023

←

→

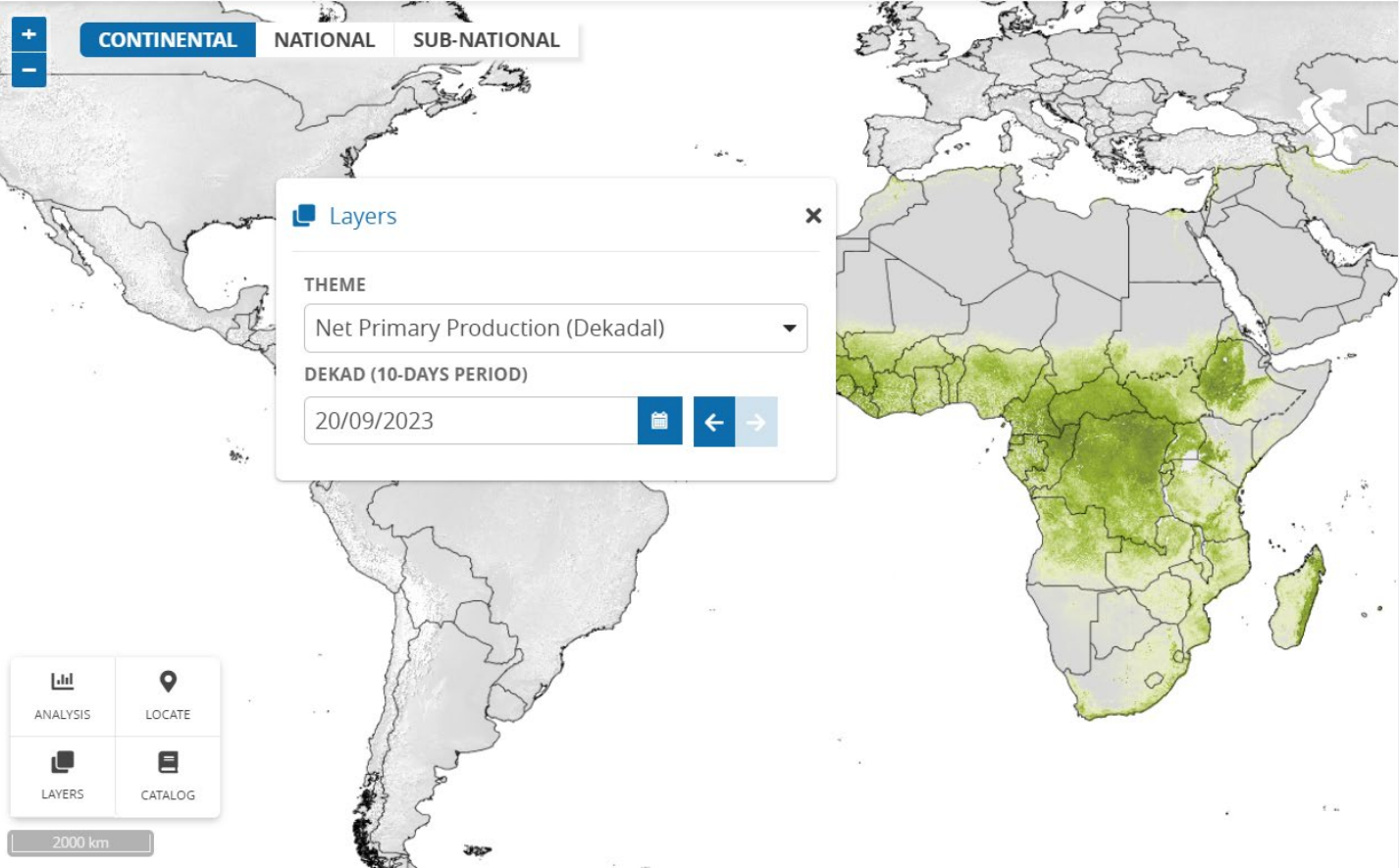
ANALYSIS

LOCATE

LAYERS

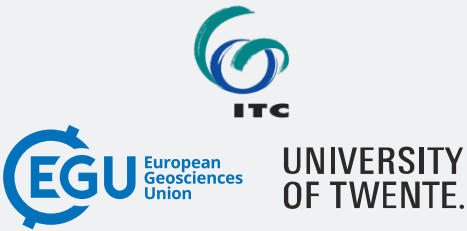
CATALOG

2000 km





2. Select Analysis -> Area Time Series



Map

WaPOR 2.1

CONTINENTAL

NATIONAL

SUB-NATIONAL

Layers

THEME

Net Primary Production (Dekad

DEKAD (10-DAYS PERIOD)

20/09/2023

ANALYSIS

LOCATE

LAYERS

CATALOG

2000 km

New Analysis

SELECT OPERATION

Point Time Series

Point Time Series

Area Time Series

Area Water Productivity

Area Raster Download

OPERATION DESCRIPTION

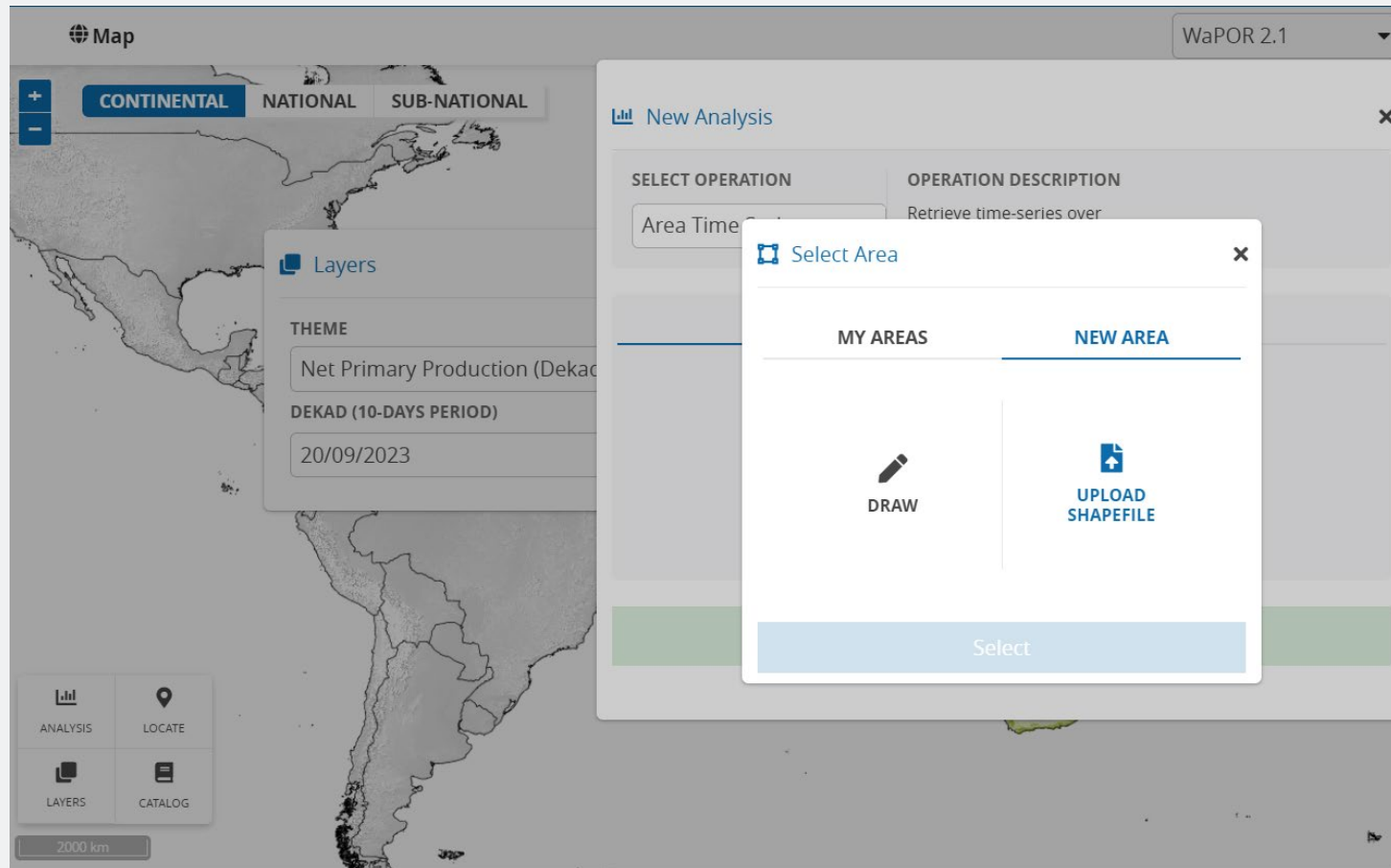
Retrieve time-series on selected point.

TIME PERIOD

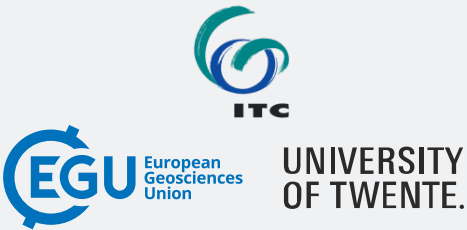
SELECT POINT


Run Operation

3. Provide a shape file with your field / irrigation scheme



4. Select the time period (of at least 3 years)





Food and Agriculture Organization
of the United Nations

WaPOR
The FAO portal to monitor WAtter Productivity through Open access of Remotely sensed derived data

Map

CONTINENTAL NATIONAL SUB-NATIONAL

Layers

THEME

Net Primary Production (Dekad)

DEKAD (10-DAYS PERIOD)

20/09/2023

ANALYSIS LOCATE

LAYERS CATALOG

2000 km

New Analysis

SELECT OPERATION

Area Time Series

OPERATION DESCRIPTION

Retrieve time-series over selected area.

PLACE

TIME PERIOD

FROM

01/01/2018

TO

21/09/2023

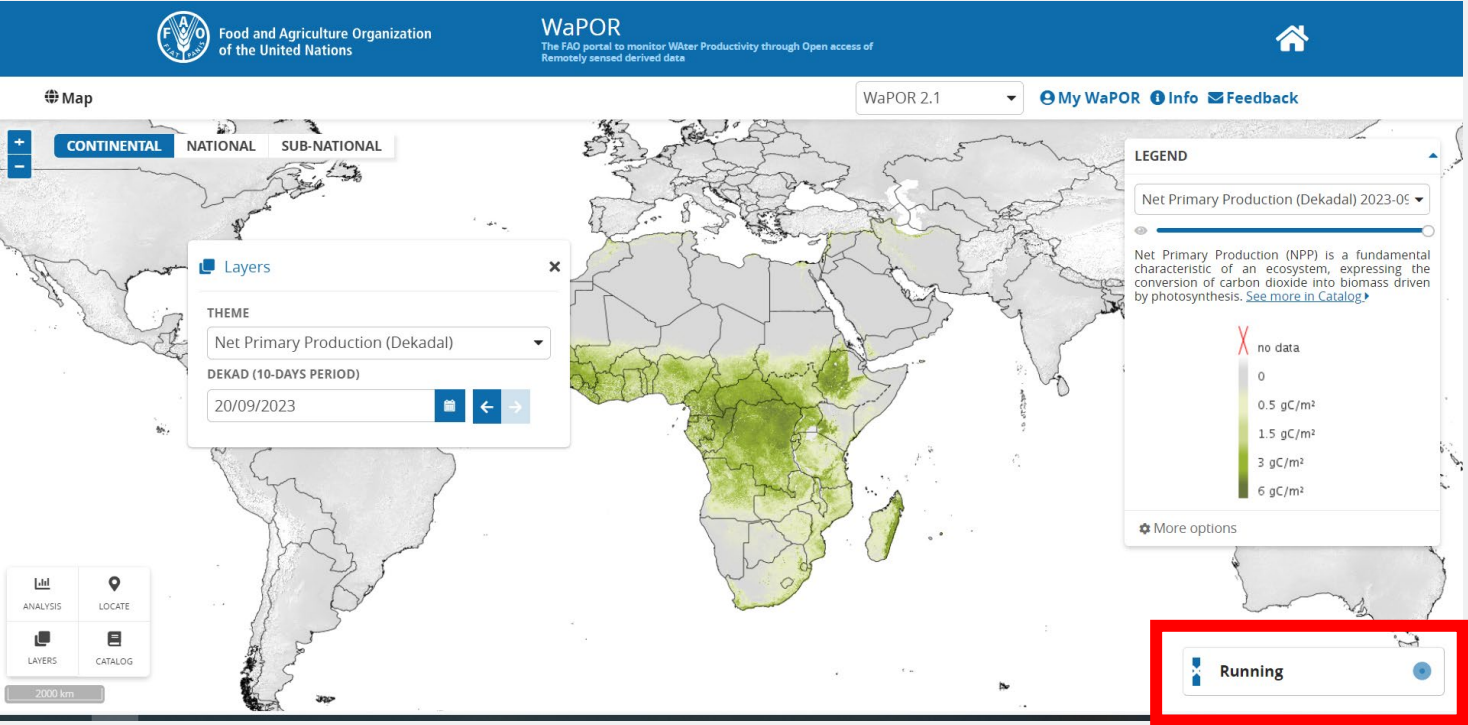
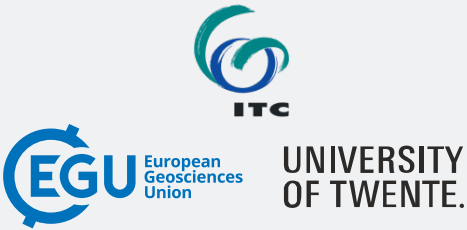
SAVED TIME SERIES

Select a saved time se

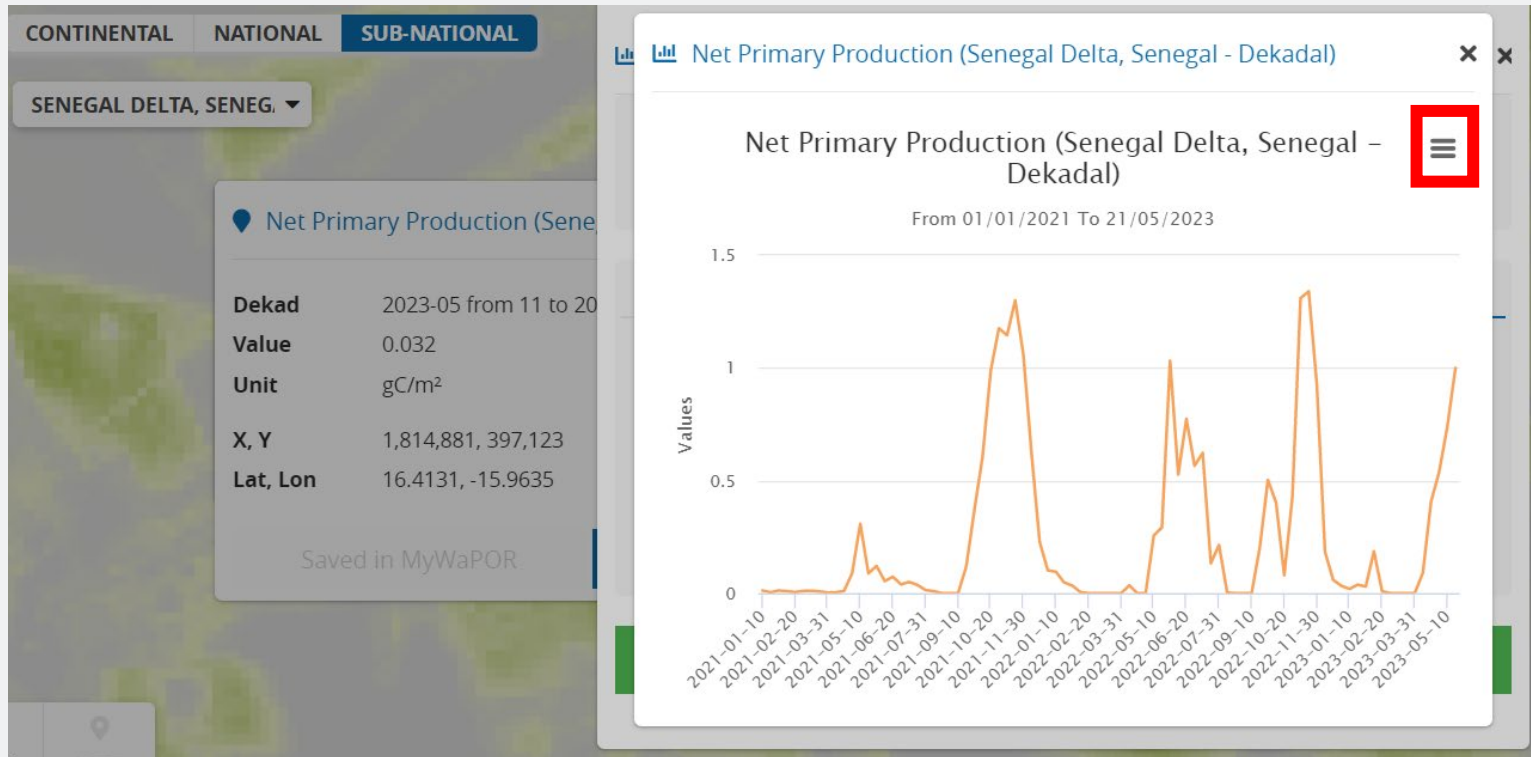
Save in MyWaPOR

Run Operation

5. Click “Run operation” and wait



6. Download the data



Repeat this procedure for AETI layer

Tired of repeating? – use Python API

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