Using the Operational Configurations

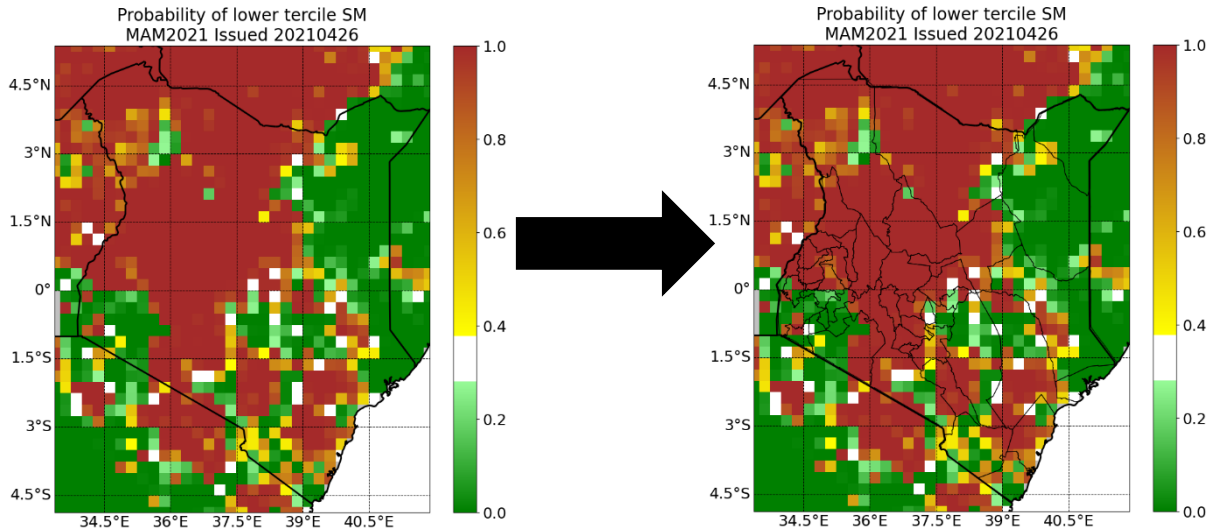
Alongside the main Python script to generate TAMSAT-ALERT forecasts are a series of operational configurations. These are 'add-ons' increasing the functionality of the TAMSAT-ALERT Python Tool to complete commonly requested tasks, such as adding local geographic boundaries. Further operational configurations will be added over time as required.

Below is a list of currently developed OCs and instructions on how to use them. This document will be updated as OCs are developed and updated.

Before you begin this activity, you should ensure you have completed the activities outlines in 'Reproduce_Testcases.pdf'.

1) OC_overlay_shape

This OC allows the user to add a user-defined shapefile to the maps automatically generated by the TAMSAT-ALERT Python Tool. This may be desirable if wishing to consider spatial variation sub-nationally.



You will interact with the OC through 'Anaconda Prompt'. At no point will you be required to directly edit the code.

You should run this OC only <u>after</u> running the TAMSAT-ALERT Python Tool and will need to remember the values you used to generate your forecast.

To run the OC, you need only type a single line of code into the 'Anaconda Prompt' window. The format of that line of code is as follows:

python filepath forecast_date poi_start poi_end weight_up weight_mid weight_low roi lon_min lon_max lat_min lat_max

The table below gives information on each of the variables.

Argument	Description	Format	Example
filepath	The file path where the OC is stored and the file name of the OC. The file name will always be the same ("OC_overlay_shape.py")	String	**F:/ TAMSAT-ALERT_Python_Tool/ OC_overlay_shape.py**
forecast_date	The date of the forecast. This is the forecast date label added to the files output by the TAMSAT-ALERT Python Tool.	YYYYMMDD	**20210120** (e.g. 20th January 2021)
poi_start	The start date of the period of interest.	YYYYMMDD	**20210301** (e.g. 1st March 2021)
poi_end	The end date of the period of interest.	YYYYMMDD	**20210531** (e.g. 31st May 2021)
shape_path	The file path and file name of the shapefile which you wish to overlay on the maps.	String	**F:/ GIS/ kenya_counties.shp**
lon_min	If roi = 'region', this is the minimum longitude of the bounding box. If roi = 'point', this is the longitude of that point.	Numeric float	**33.5**
lon_max	If roi = 'region', this is the maximum longitude of the bounding box. If roi = 'point', this should be 'NA'.	Numeric float	**42.0** or **NA**
lat_min	If roi = 'region', this is the minimum latitude of the bounding box. If roi = 'point', this is the latitude of that point.	Numeric float	**-4.8**
lat_max	If roi = 'region', this is the maximum latitude of the bounding box. If roi = 'point', this should be 'NA'.	Numeric float	**5.5** or **NA**

* Weightings should add up to 1.00

† Point functionality not yet fully tested

If successful, the OC should return two .png files:

- prob_map_plotMAM2021_20210426_33.5_42.0_-4.8_5.5_shape
- map_plotMAM2021_20210426_33.5_42.0_-4.8_5.5_shape

The addition of the '_shape' label at the end of the file name indicates that the shapefile has been added.