Updated WebGIS integrated in the Global Geo-informatics Options by Contexts (GeOC) Tool

Final Workshop "Sustainable Land Management to Achieve Land Degradation Neutrality: Options-by-Context Approach and Tools"

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Tunis, Tunisia

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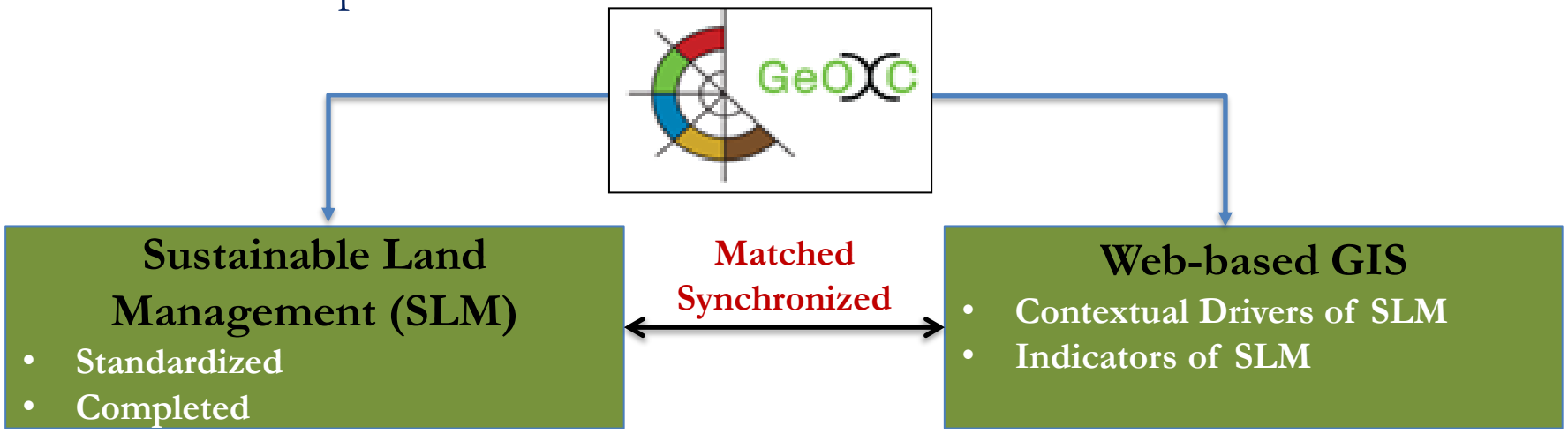
OVERVIEW

- Global Geo-informatics Option by Context (GeOC) tool, a system-based analysis of options by context for better investment in sustainable agriculture development, has two main components:



- GeOC components are currently under enhancement process in order to provide more robust and stable tool for better contextualised analysis of SLM options

- In this context, the WebGIS component has been enhanced since the first workshop (14-17 March 2017). The major outcomes from these enhancements are the following:

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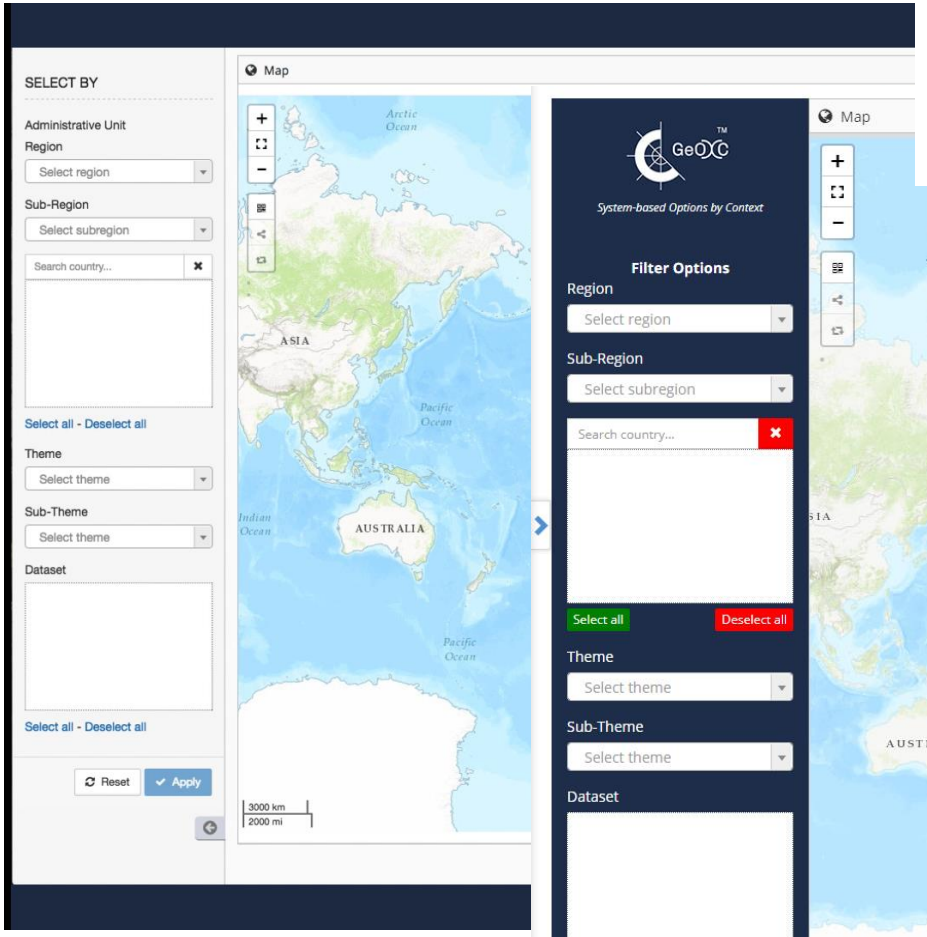
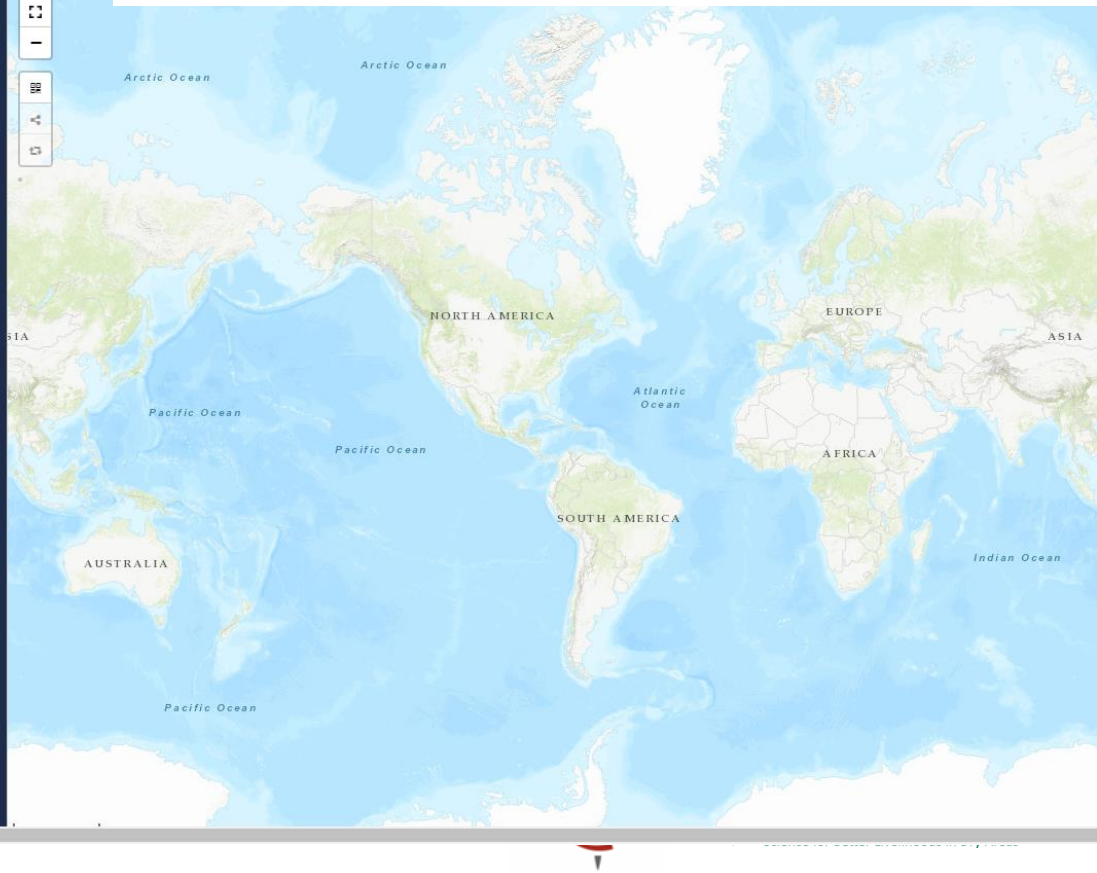
1. Updates in the system appearance

Old interface of GeoC WebGIS

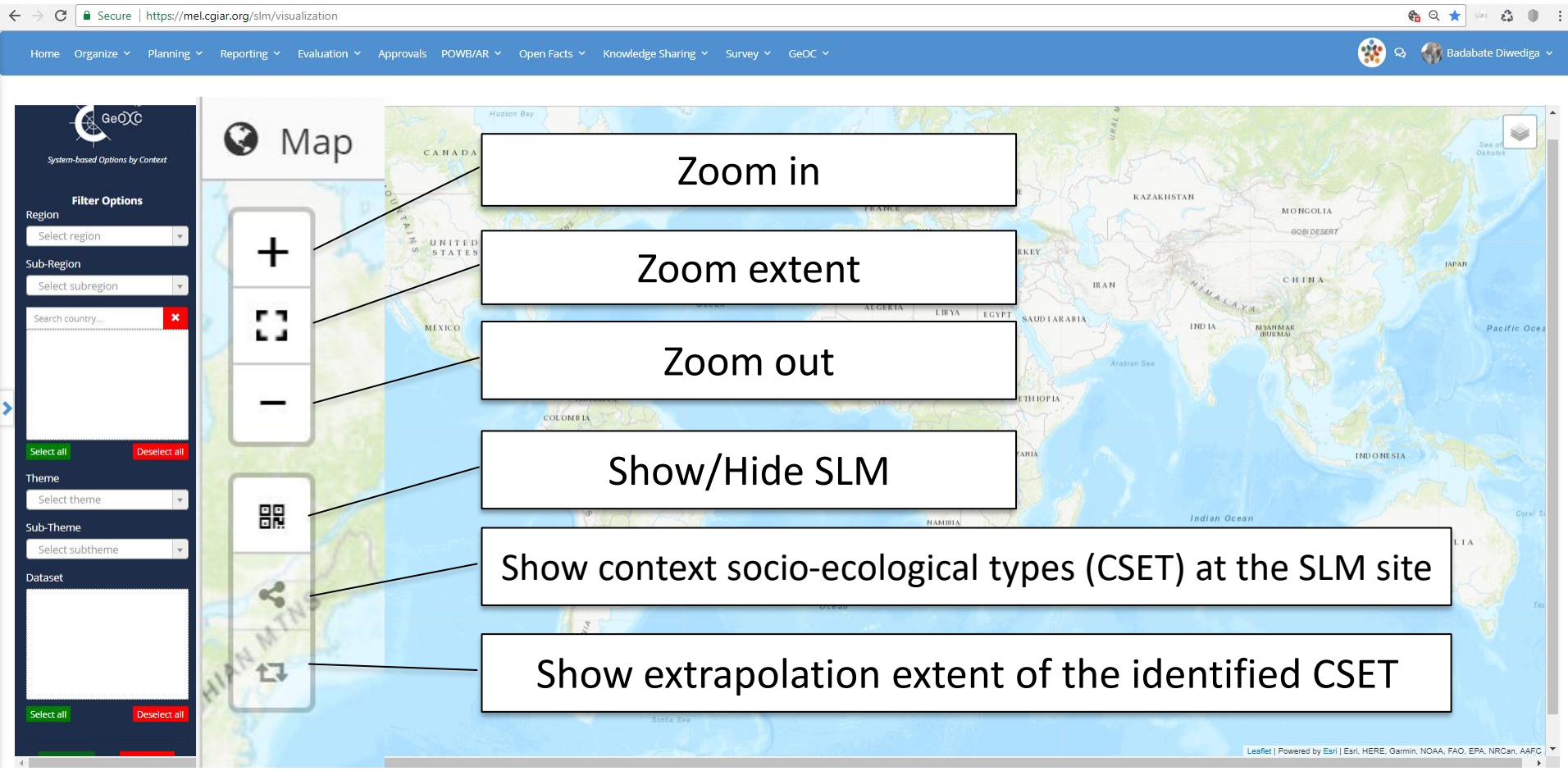


New interface of GeoC WebGIS

- Addition of GeOC logo
- Text and guidance modifications
- Changes in features and function appearance
- More attractive with blue background



2. Map tools and functions



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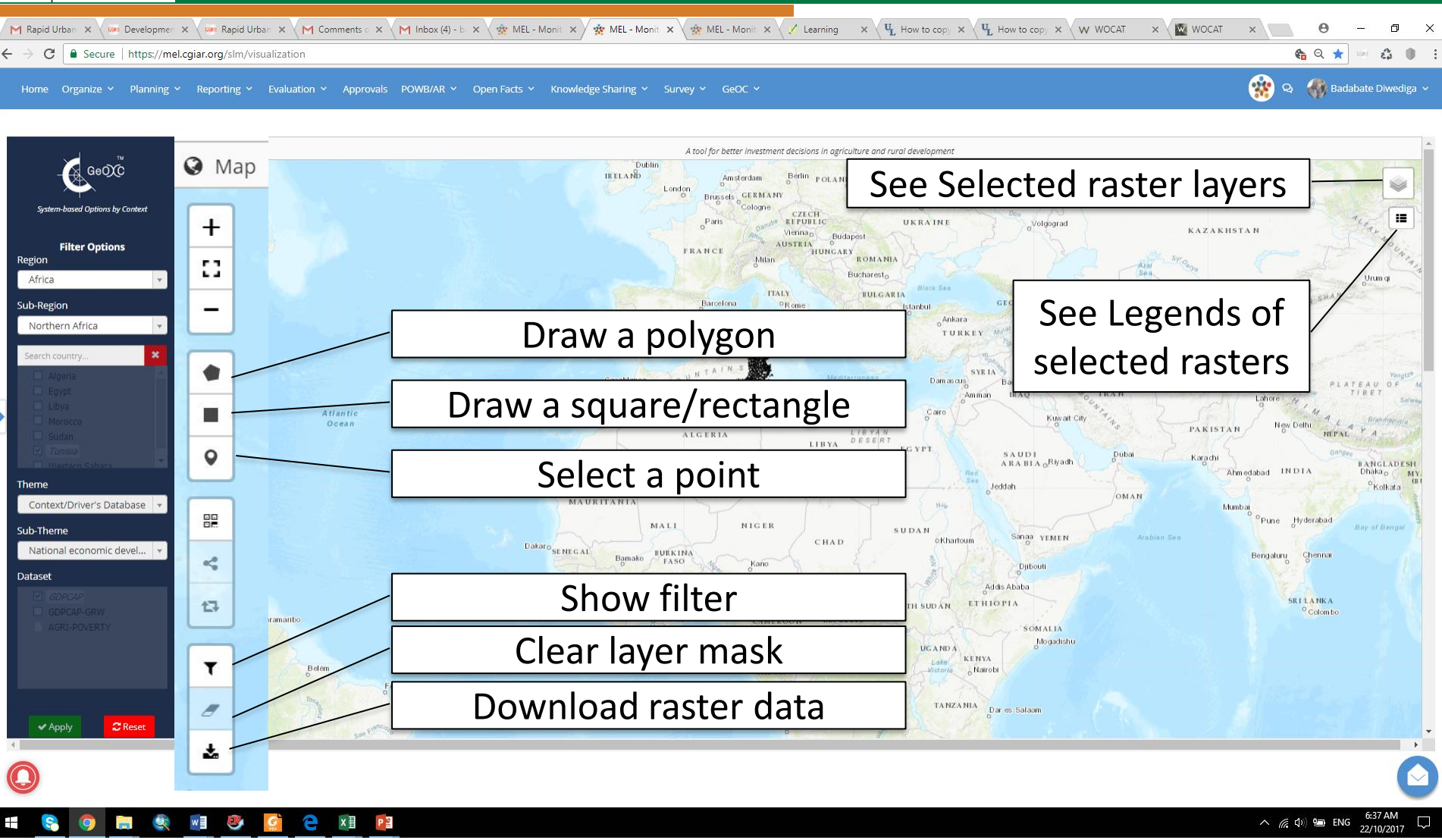

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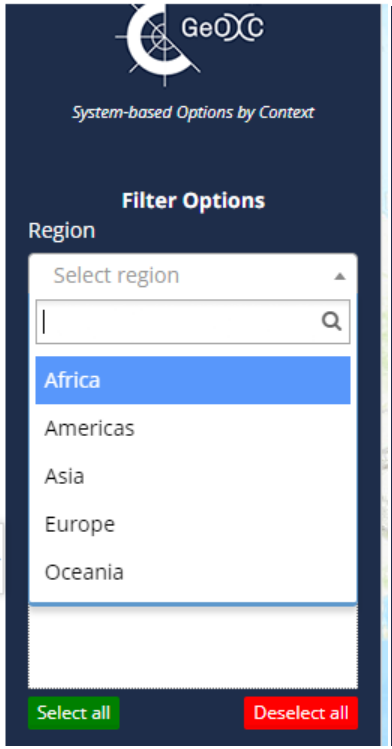
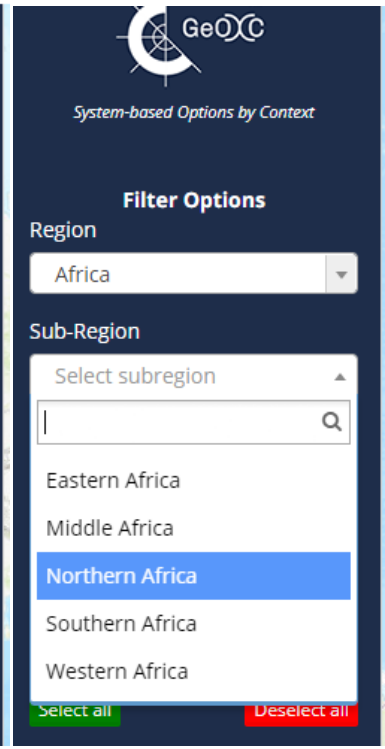
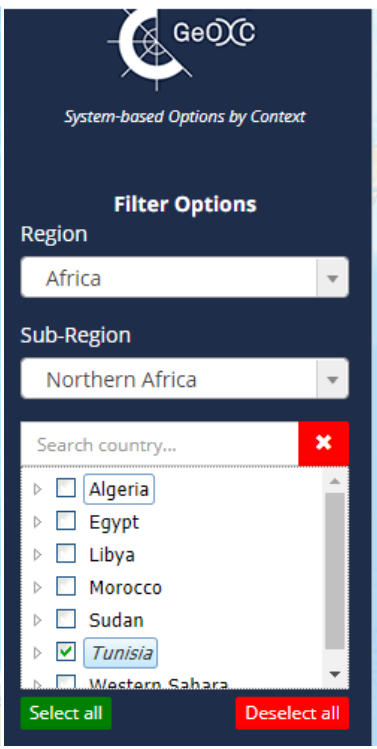
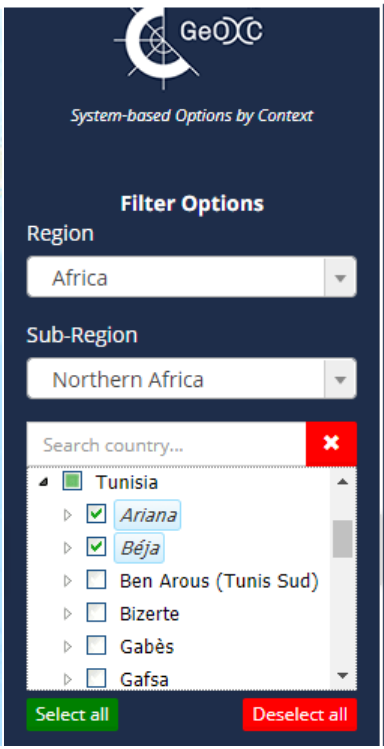
Defining an area of interest: based on administrative units

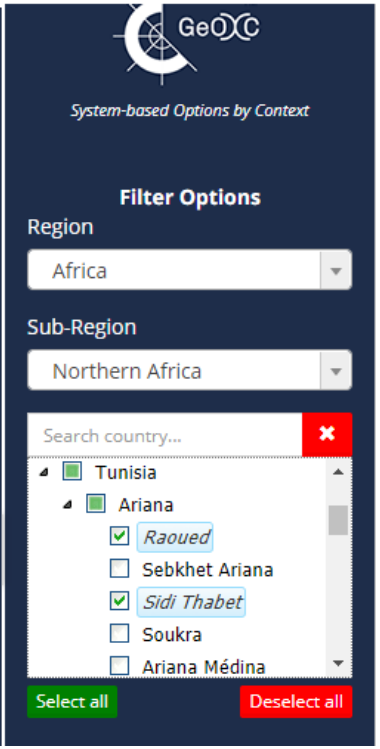
Region	Sub-region	Country	Province or Governorate	District (if any)











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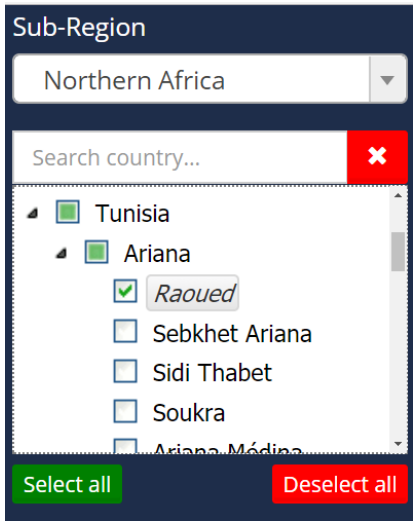
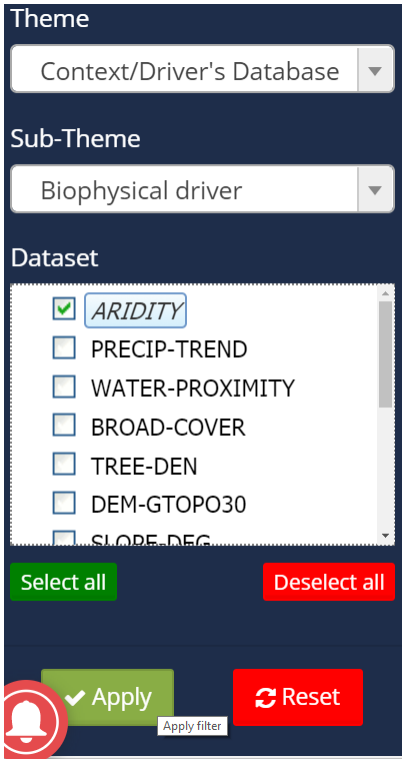
Defining an area of interest: based on administrative units and variables of interest

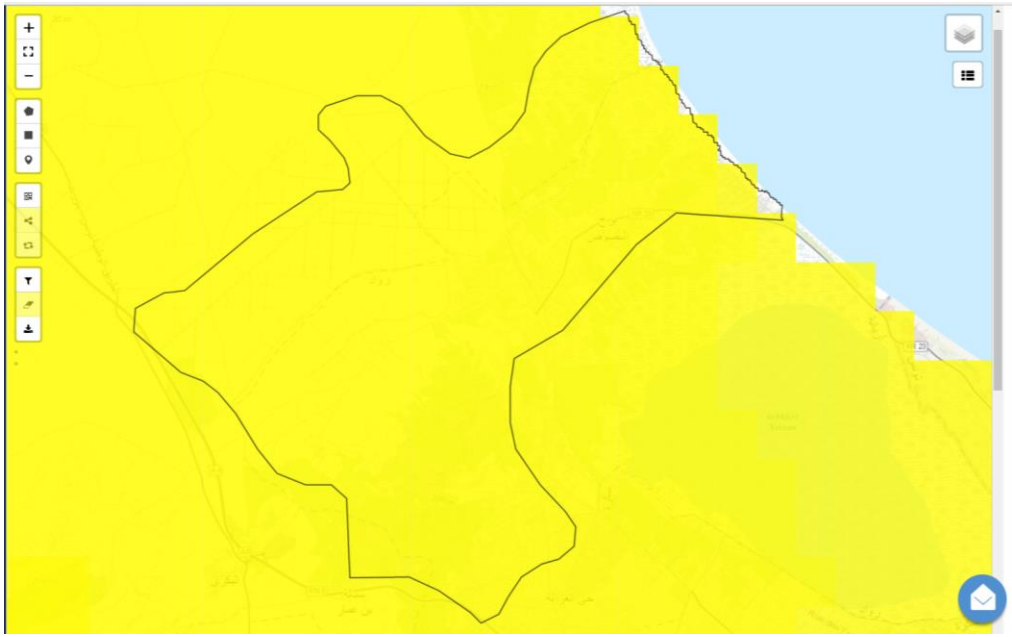
Step 1: Select area of interest



Step 2: Select raster variable of interest



Step 3: Apply filter and zoom in to the area of interest



Step 4: Use the filtering buttons for defining area of interest (see next slide)

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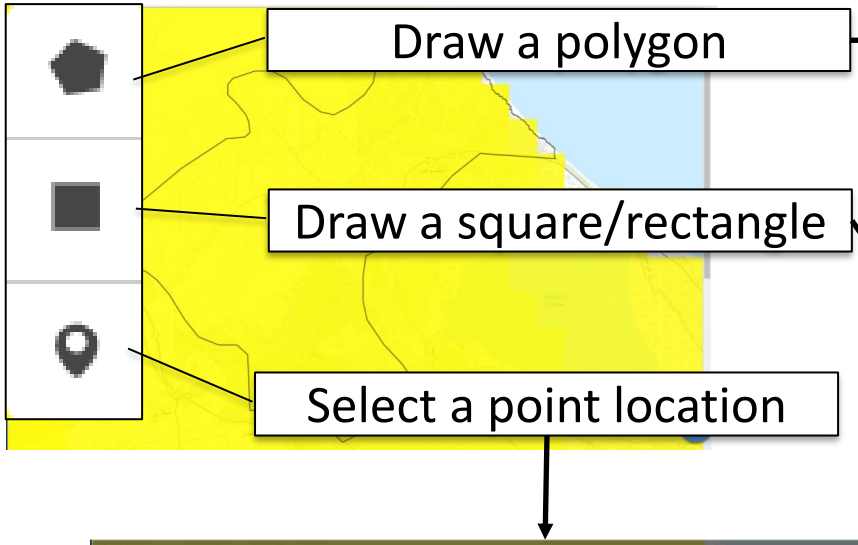
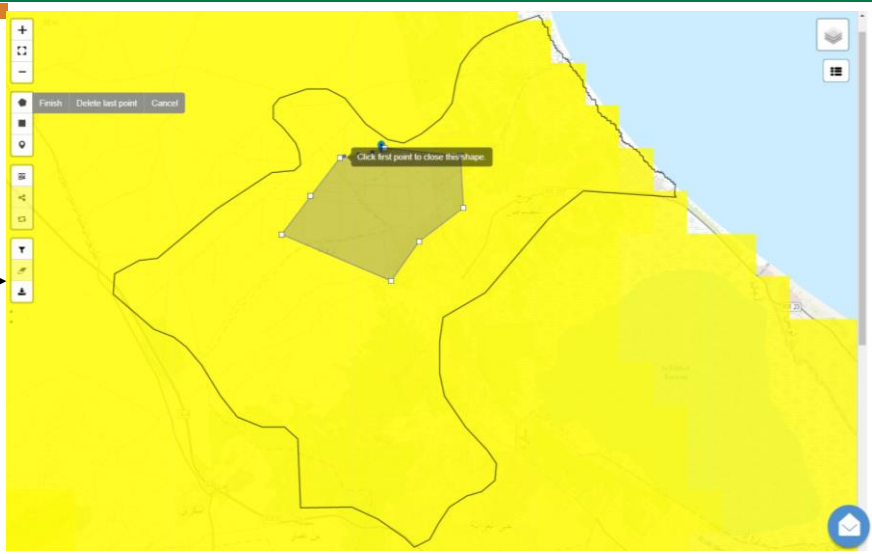
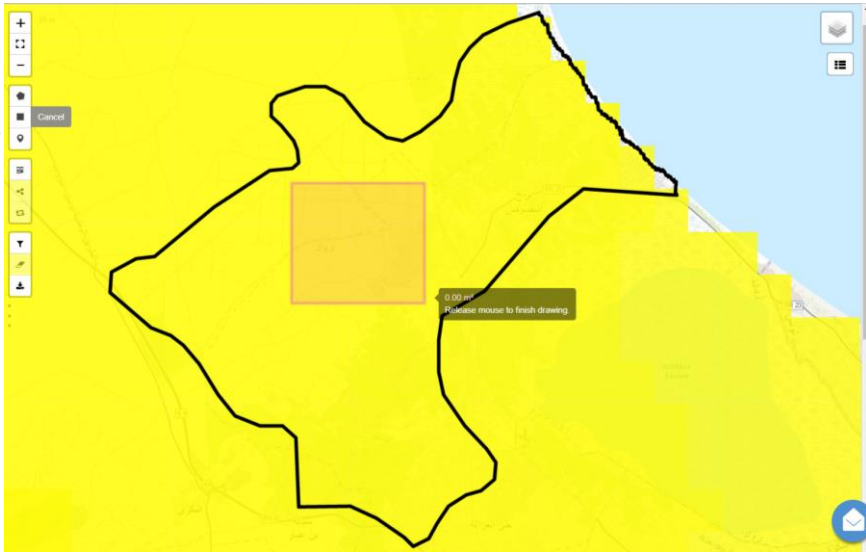
Defining an area of interest: based on administrative units and variables of interest

Step 4: Use the filtering buttons for defining area of interest







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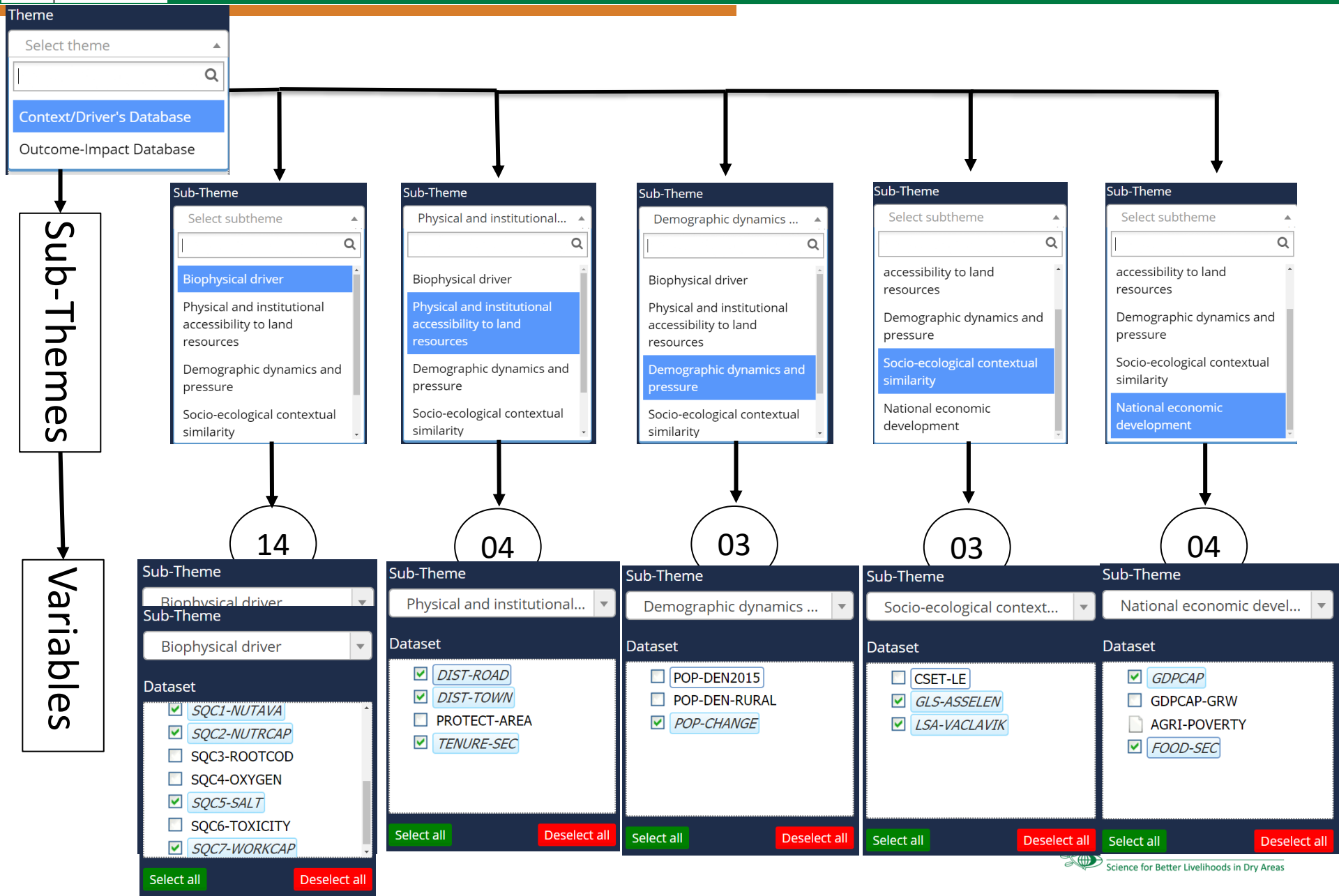
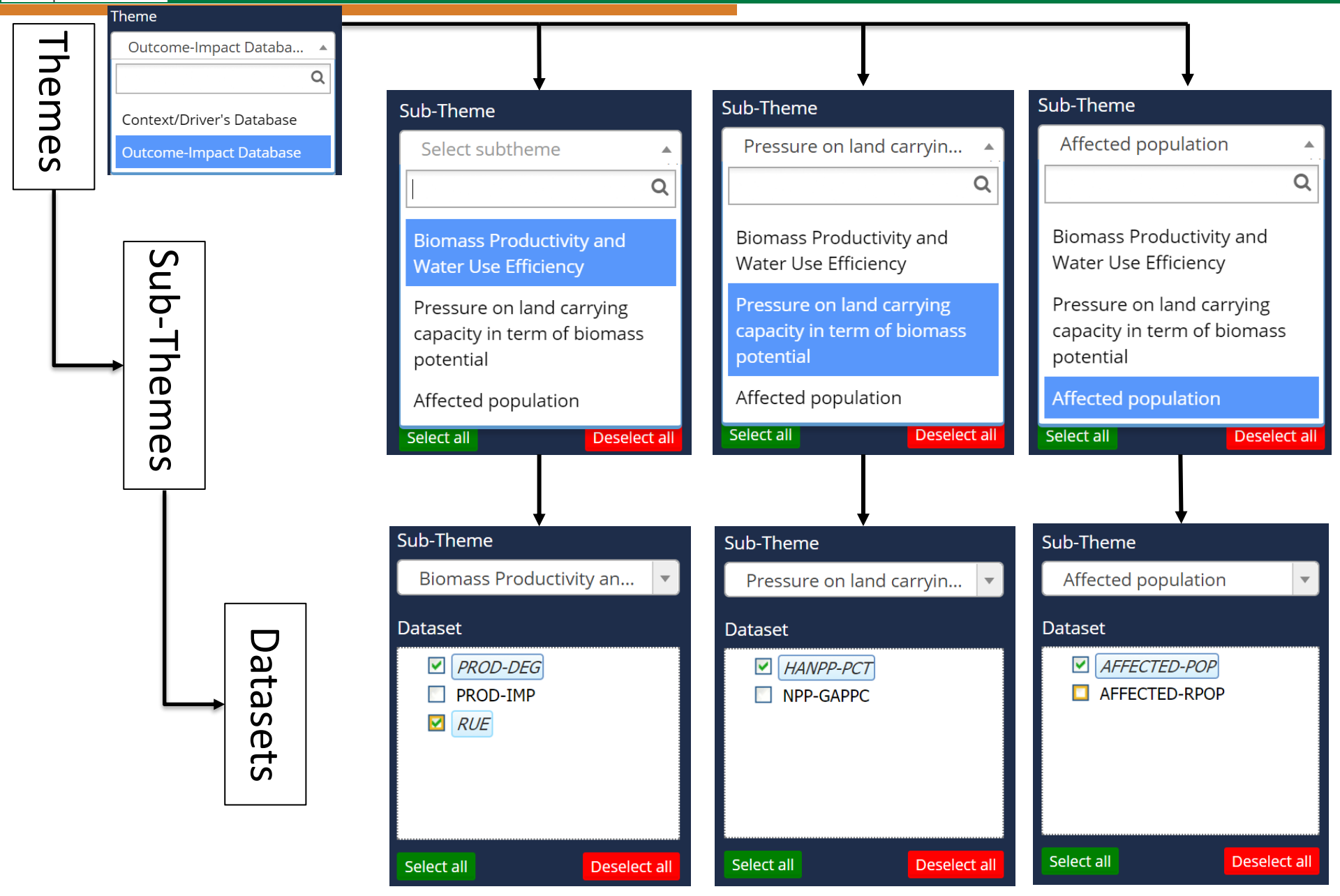
Filtering the variables the main category «Context/Drivers»

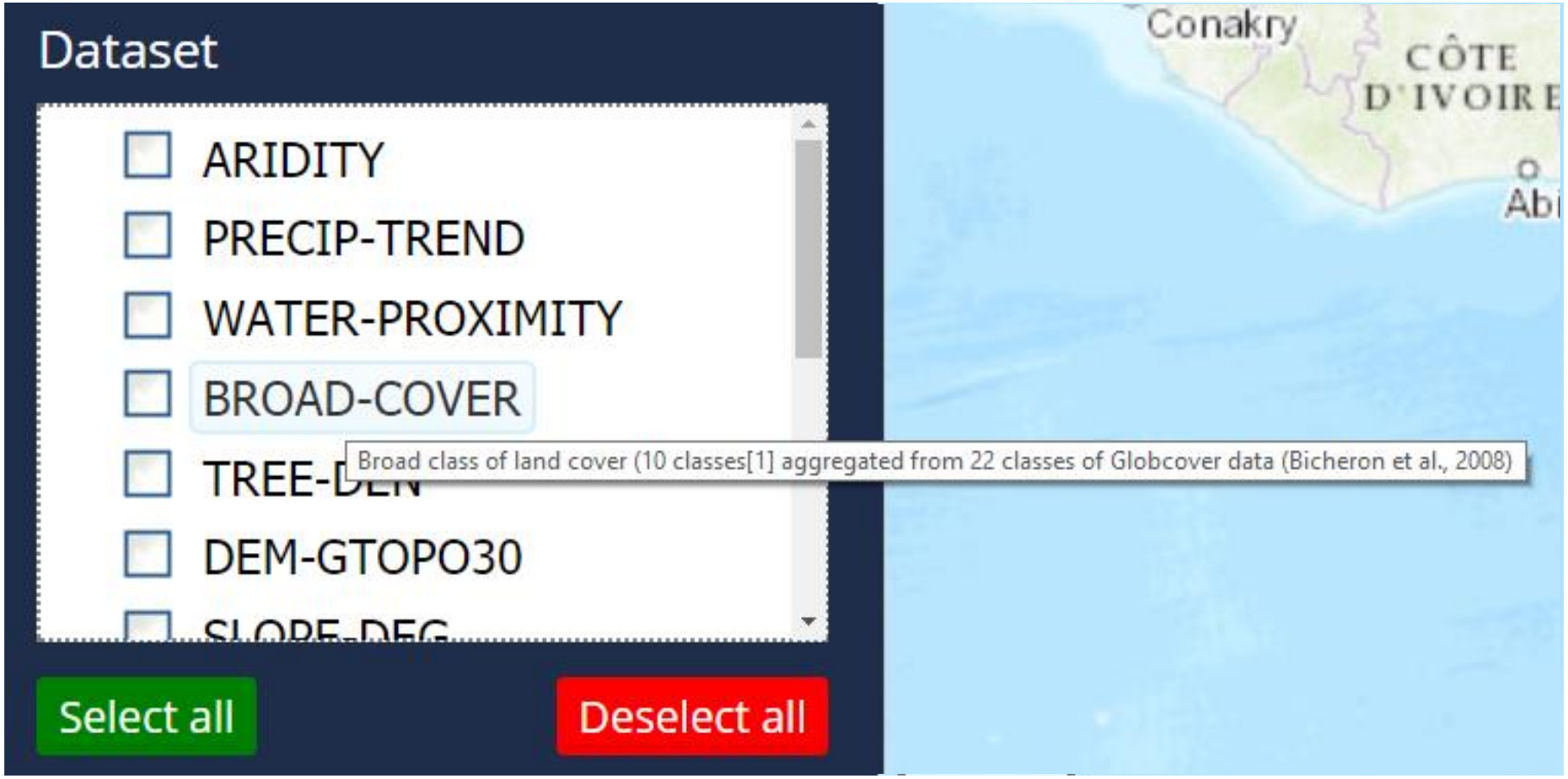


Filtering the variables of the main category « Outcome-Impact»



Viewing the short definition of a variable in the WebGIS

The short definition of variable in the WebGIS can be viewed by hoving the mouse on the variable name in the dataset list.

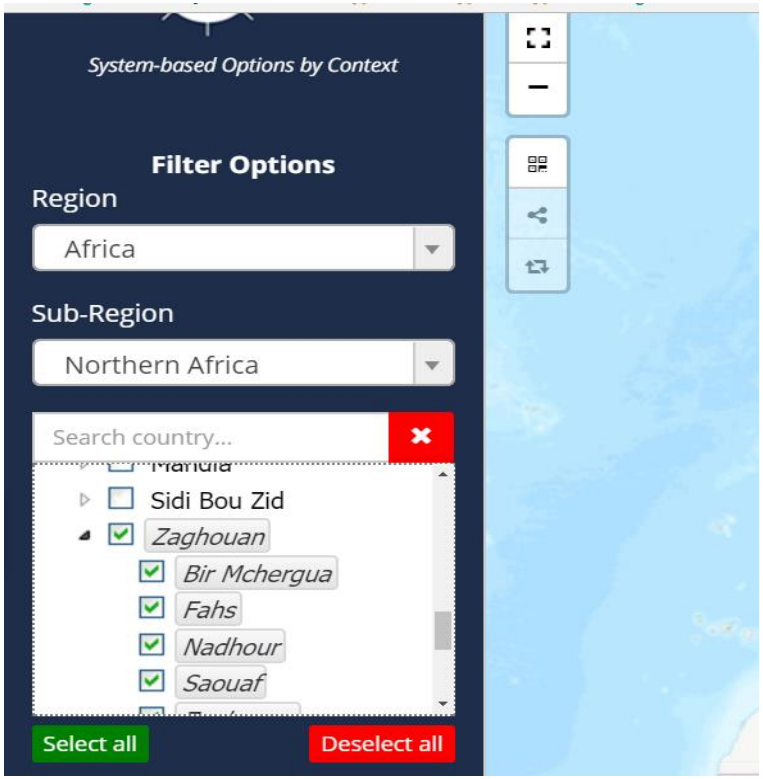


Data structure: administrative units

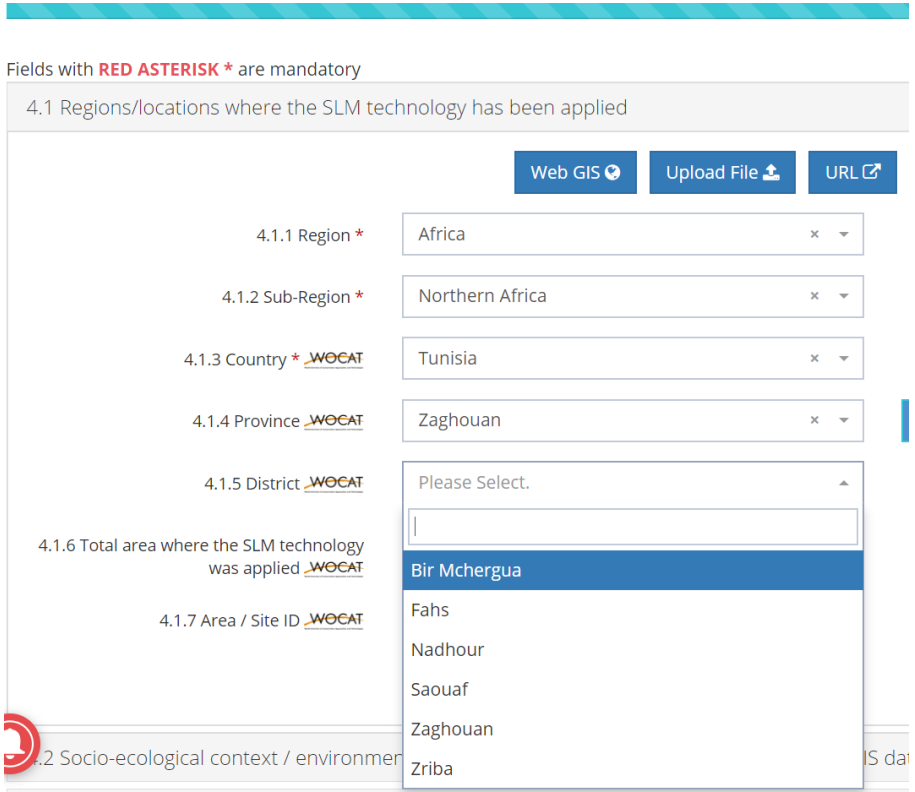
Administrative units at Region, Sub-region, Country, Province & District levels

Well synchronised and matched WebGIS from "GeOC visualisation" and the "SLM web form"

WebGIS of GeOC visualisation



WebGIS in SLM web form



Outlook & perspectives: enhancements on the course

- Proxies of land degradation/improvement in the areas with implemented SLMs

Column for SLM names with hyperlink to their metadata

Columns for indicators of SLM performance in the areas of interest

SLMs in the area of interest	Biomass productivity decline (PROD-DEG)	Biomass productivity improvement (PROD-IMP)	Rain use efficiency (RUE)	Human appropriation of NPP (HANPP-PCT)	Gap between actual and potential NPP	Affected population (AFFECTED–POP)	Affected rural population (AFFECTED-RPOP)
Area enclosure							
Hill lake							
Meskats							
Manual terrace							
…							

Outlook & perspectives: enhancements on the course

- Cost for SLM's establishment and maintenance

Column for SLM names with hyperlink to their metadata

Column for SLM establishment costs

Columns for SLM maintenance costs

SLMs in the area of interest	Establishment cost (in US Dollars)				Maintenance cost (in US Dollars)			
	Labor	Equipment	Materials	Other inputs	Labor	Equipment	Materials	Other inputs
Area enclosure								
Artesian well								
Fixation of sand dunes								
Cisterns								
Desert wells								

Outlook & perspectives: enhancements on the course

- Indicators of On-site impacts of the SLM options

Column for SLM names with hyperlink to their metadata

Indicators of On-site impacts of SLM Options in the areas of interest

	Impact types						
SLMs in the area of interest	Socio-economic (Production)	Socio-economic (Water availability & quality)	Socio-economic (Income & costs)	Socio-cultural	Ecological (Water cycle & runoff)	Ecological (Soil & biodiversity)	Ecological (Climate & disaster risk reduction)
Area enclosure							
Artesian well							
Fixation of sand dunes							
Cisterns							
Desert wells							

Outlook & perspectives: enhancements on the course

- Indicators of Off-site impacts of the SLM options

Column for SLM names with hyperlink to their metadata

Indicators of Off-site impacts of SLM Options in the areas of interest

	Impact types						
SLMs in the area of interest	Water availability, quality and stable stream flow	Reduced downstream flooding	Reduced downstream siltation	Buffering/ filtering capacity (by soil, vegetation, wetlands)	Reduced wind transported sediments	Reduced damages on neighbour field and infrastructure	Reduced greenhouse gasses emissions
Area enclosure							
Artesian well							
Fixation of sand dunes							
Cisterns							
Desert wells							

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Global
Geo-informatics
Options by Contexts

GeOC™

A tool for better investment decisions in agriculture and rural development

CGIAR RESEARCH PROGRAM ON Dryland Systems

CGIAR RESEARCH PROGRAM ON Water, Land and Ecosystems

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Thank You!