

**Liaison with Validation users for the SDGs-EYES User
Uptake Webinars
Platform Guidelines**

***Climate Security Watch
- The Sahel Impact Tracker:
Advancing SDG Indicator 13.1.1 to Improve Disaster-
Impact Assessment in the Sahel***

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GUIDELINES

This document proposes clear and concise guidelines explaining how users can test the platform's tool. These guidelines cover both back-end and front-end instructions, as well as practical use cases for the tool.

1. Introduction

A brief explanation of the platform's purpose and its relevance to SDG monitoring and reporting.

The SDGs-EYES platform will support users to monitor and report on the SDGs indicators selected in the project and develop new indicators based on them. Two usage modes of the platform corresponding to two different type of users will be available:

Consultation mode: non-expert users will be allowed to explore the new indicators developed by the different pilots.

Exploitation mode: expert users will be able to:

login the development environment, use (not modify) the existing algorithms, run owned algorithms, upload owned data, generate owned indicators, also based on the existing ones execute from remote the indicators (through standard interfaces) and retrieve the results.

Classified data: It is possible that some data, in particular health-related data, will stay on the internal machine (socio-economic data) and others (not sensitive) will be on the platform. However, users could explore other data, such as climate and vulnerability data, and choose which indicators to display on a map.

Should you encounter any problem in accessing, retrieving any data, please contact for the service: michele.lazzarini@satcen.europa.eu; for the platform: alessandro.danca@cmcc.it or natali@sistema.at.

2. Platform's Role in Supporting SDG Indicators

How the platform supports specific SDG indicators and how it can be used to monitor them.

The platform allows users to choose specific years and geographic parameters (such as region, province, and municipality) to calculate and visualise SDGs indicators. Through interactive maps/graphs, users can explore the SDG indicators. The platform also offers data downloads in common file formats (e.g. vector and CSV), providing convenient access and further processing of data.

3. Pilot Overview

Introduction of the pilot (and indicators), outline of its objectives, and explanation of how it aligns with specific SDGs. It also includes instructions on how to interpret and customize data visualizations and export data for reporting.

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Objectives	The present work aims at fostering the use of EO data to support the estimation of indicator 13.1.1. The methodology has been initially developed with respect to flood events and tested in the Sahel region. In the African Sahel, a population of around 100 million people lives in an arid land stripe below the Sahara Desert, from Senegal to Djibouti. In this area, the complex interactions amongst climate change, food insecurity and political instability are frequently related to the control of critical natural resources like land and

	water, to the occurrence of natural and human-made disasters (e.g. drought and flooding) and to other factors like poverty, demographics, and violent disputes. Due to the convergence of all these simultaneous threats, Sahel represents a hot-spot scenario to better understand the Climate and Security nexus. The proposed methodology is a first attempt to calculate the indicator with a strong support of EO data.
Alignment with SDGs (which SDG indicators are being calculated, which variables)	<p>In the UN framework , indicator 13.1.1 is defined as the “number of deaths, missing people and directly affected persons attributed to disasters per 100,000 population”. The indicator is currently existing only at UN level, since there is not a perfect match in the EUROSTAT framework.</p> <p>The indicator is computed on the basis of disaster loss data collected, as defined by the Sendai framework, by line ministries; national disaster loss databases are established and managed by special purpose agencies, including national disaster management agencies, civil protection agencies, and meteorological agencies. The Sendai Framework Focal Points in each country are responsible for data reporting through the Sendai Framework Monitoring System. While the indicator is essentially based on these sources for its quantification, the ambition of SDGs-EYES Climate Security pilot is to provide a scientific, technical and operational workflow to incorporate to the computation of the indicator consistent use of EO data. The use of EO data aims at reducing the dependency on national databases in a first quantification of the indicator, thus providing an initial assessment of a disaster in quasi-real time.</p>

Specific Guidelines for Use Cases: These pilot-specific guidelines provide practical scenarios for users to engage with the platform. They outline the steps for monitoring and reporting, as well as the workflows for each pilot, from data access to report generation and feedback submission.

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<i>Data Access</i>	The algorithm will automatically retrieve the necessary data. Users only need to specify the area of interest and the desired time period. If users want, they will be able to download the generated geospatial datasets.
<i>Visualization</i>	The data will be presented as predictive insights, highlighting the number of affected houses and/or people for each event.
<i>Analysis</i>	Comprehensive reports containing valuable insights will be developed for users in future updates.
<i>Scenario</i>	Users can explore data across various locations and time periods within the Sahel region

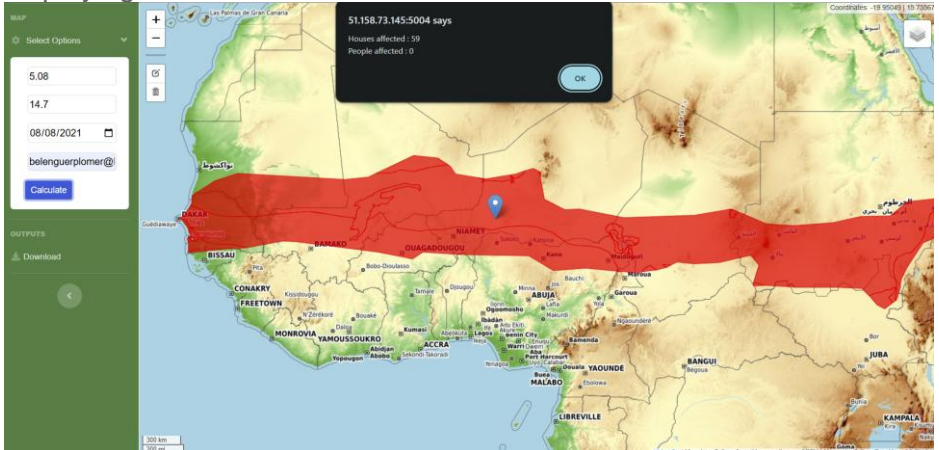
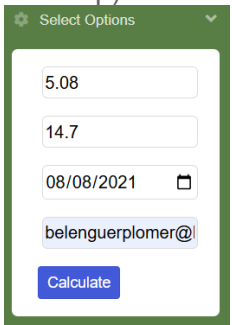
4. Navigating the Platform

Step-by-step instructions on using the platform: logging in, accessing the dashboard, selecting relevant SDG indicators, and utilising platform features. A detailed description of the platform can be found [here](#).

The platform offers two user-interaction modalities:

- **Pilot Frontends.** Dedicated frontend prototypes developed on the needs of the stakeholders to be consumed by the stakeholders are made available to demonstrate the capabilities of the new indicators.

- **Laboratory.** This is an environment where the indicators are developed, tuned, and finalised. Practically it is a Jupyter lab¹ environment with direct access to the datasets and can exploit the computational resources. The final code is stored on the project repository to be optimised and dockerized for execution.

<i>Step-by-Step Process</i>	The user accesses the UI via the website or directly by entering the url: http://51.158.73.145:5004/# (to be configured)
<i>Logging-in</i>	The user enters credentials to access the UI and is redirected to the UI
<i>Accessing the dashboard</i>	<p>The UI presents a selection menu on the left and a map in the middle displaying the results</p> 
<i>Using your own workspace</i>	Users cannot modify the existing code
<i>Selection of SDG indicators</i>	<p>The user enters the location coordinates (or he can select a point on the map) and date. Then he clicks on the “Calculate” button</p> 
<i>Platform features</i>	The platform allows users to choose a specific date and location in the Sahel region to estimate the number of affected buildings and people due to a flood event. Through an interactive map

5. Testing

Information about the description of the datasets.

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<i>Input new data</i>	1. Hazard Data <ul style="list-style-type: none"> • CHIRPS: Provides precipitation data to estimate flood-related rainfall

¹ Jupyter-based python instance to provide access to Pilot material, including shared data and re-executable notebooks

	<ul style="list-style-type: none"> • SMAP: Extracts soil moisture conditions in the affected area • DEM (Copernicus): Determines flood-prone areas based on terrain features • GloFAS Flood Data: Available but not used due to limitations in detection • Sentinel-1 & Sentinel-2: Available but not actively used due to limited flood detection in the region <p>2. Exposure Data</p> <ul style="list-style-type: none"> • ESA World Cover (2021): Reference for land use and land cover • OSM: Extracts the number of buildings in the affected area • GHSL: Provides population estimates to assess flood impact on people <p>3. Ground Truth Data</p> <ul style="list-style-type: none"> • DesInventar Database: Primary source for past flood events (2015-2023) • EM-DAT & Copernicus EMS: Considered but not used due to insufficient data
<i>Adjust relevant SDG indicator</i>	<p>The user can select a location within the Sahel region using the interactive map. They may choose an urban area of interest, which will be marked upon selection, and relevant data will load.</p> <p>The user can then specify a date of interest using the date picker, selecting any date between 01/01/2020, and today. The system will retrieve the corresponding flood data for the chosen location and date.</p> <p>To proceed, the user can click the “Calculate” button. The application will process data from various sources, including hazard data (CHIRPS, SMAP, Copernicus DEM), and exposure data (ESA World Cover, OSM, GHSL). Results will display estimated impacts, including the number of affected buildings and the population exposed to the flood event.</p>

FEEDBACK

1. Feedback Mechanism

Validation users are encouraged to suggest improvements and provide feedback on the platform’s usability. Feedback should cover aspects such as overall impressions of the new products, ease of data visualization, downloading, processing, and interpreting the data. Additionally, users can evaluate how well the new products meet their specific needs.

<i>Platform usability</i>	
<i>Overall impression new products</i>	
<i>Visualization</i>	

<i>Downloading</i>	
<i>Processing</i>	
<i>Interpreting data</i>	
<i>Expectation from needs</i>	

Workflows & Methodology: (i) **Spatial and Temporal Resolution & Scale:** Users will be asked to provide feedback on the importance of the increased spatial and temporal resolution of the new products. Specifically, they will assess how the higher resolution improves their analysis and decision-making processes. (ii) **Focus on Specific Indicators:** Users will identify which specific activities (e.g., those related to the pilots) the new products were most helpful for. They will also indicate whether the new products provided insights that they were previously unable to obtain from other sources. (iii) **Access & Visualization:** Users will provide feedback on how easily they could access and visualize the data, ensuring that the platform is user-friendly and meets their expectations. (iv) **Future Use and Recommendations:** Users will be asked to give their thoughts on how they plan to use the platform in the future and provide recommendations for improvement based on their experience.

	Climate Security Watch-The Sahel Impact Tracker
<i>Spatial and Temporal Resolution & Scale</i>	
<i>Focus on Specific Indicator</i>	
<i>Access & Visualization</i>	
<i>Future Use</i>	
<i>Recommendations</i>	

2. Support and Contact Information

Contact details for technical support, so SDGsEYES can elaborate a comprehensive FAQ section that addresses common issues and troubleshooting tips ensuring that users can quickly resolve problems and get assistance when needed.

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Learn more about SDGs-EYES:
<https://sdqs-eyes.eu/>



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