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

Forest Tracker

Authors
Monica Miguel-Lago, Francesca Piatto, Laurine Tertre (EARSC)
Mihai Daniel Nita (Forest Design)
Alessandro d'Anca, Jishnu Jeevan (CMCC)
Stefano Natali, Simone Mantovani (SISTEMA)

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 types of users will be available:

1. Consultation mode: non-expert users will be allowed to explore the new indicators developed by the different pilots.
2. Exploitation mode: expert users will be able to:
    a. 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
    b. execute from remote the indicators (through standard interfaces) and retrieve the results.

2. Platform's Role in Supporting SDG Indicators (Specific Pilot Indicator)

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.

	Forest Tracker
Objectives	• Detect and monitor forest cover change and disturbances. • Enable timely, spatially detailed forest monitoring using Sentinel-2, GEDI LiDAR, SUMAL records, and national cartographic datasets. • Contribute to SDG 15.1 and support sustainable forest and land-use policy.

Alignment with SDGs (which SDG indicators are being calculated, which variables)	• SDG 15.1.1: "Forest area as a proportion of total land area." • EU indicator: "Share of forest area." • Support for policies related to sustainable forest management and land degradation neutrality (SDG 15.3).

Specific Guidelines for Use Cases: It provides a practical scenario for users to engage with the platform. It outlines the steps for monitoring and reporting, as well as the workflows for the pilot, from data access to figure generation and feedback submission.

Forest Tracker
Data Access: Instructions on accessing satellite data related to forest cover, tree loss focusing on vulnerable ecosystems. **Visualization**: Step-by-step guide to visualizing forest cover changes, with a focus on tracking deforestation trends. **Analysis**: Generate reports detailing deforestation rates, and areas requiring reforestation or conservation. **Scenario**: Users can select specific forest regions and analyze deforestation trends over time, focusing on regions most impacted by forest loss for targeted intervention.

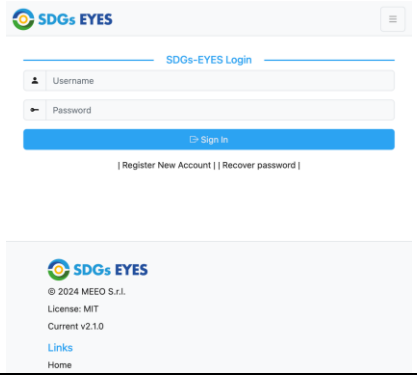
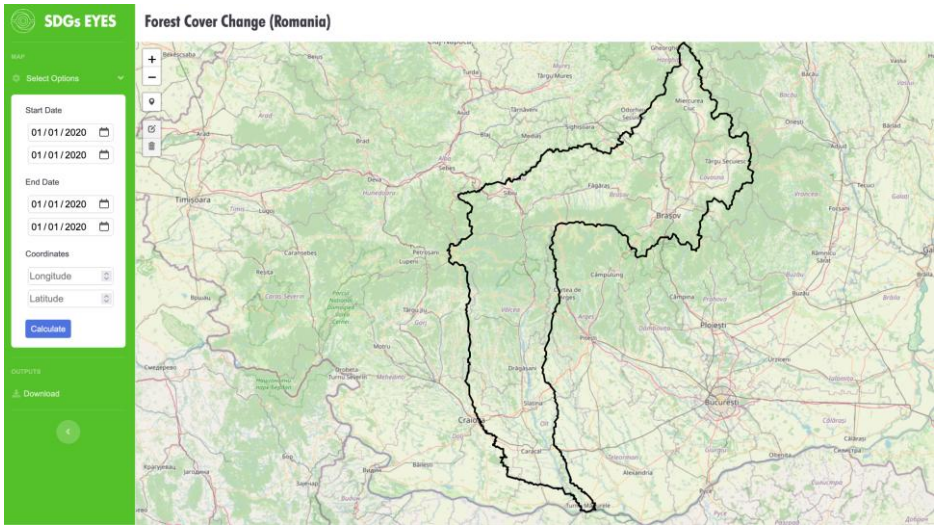
Data Access	• Access Sentinel-2 and data related to forest cover and disturbances. • Use export tool to integrate the result with other data such as SUMAL logging records and ancillary datasets
Visualization	• Visualize forest cover and change detection results. • Explore patterns and trends of deforestation or regrowth.
Analysis	• Generate reports on forest loss and gain. • Identify hotspots for conservation or reforestation efforts.
Scenario	• Users can focus on specific forest areas and assess changes over time. • Useful for identifying policy-relevant trends or intervention zones.

4. Navigating the Platform

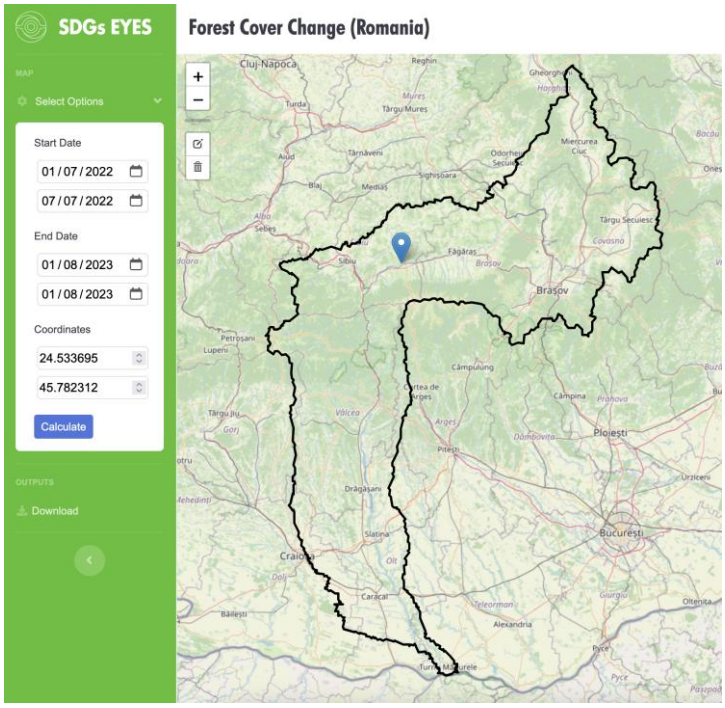
Step-by-step instructions on using the platform: logging in, accessing the dashboard, selecting relevant SDG indicators, and utilizing platform features. A detailed description of the platform can be found here.

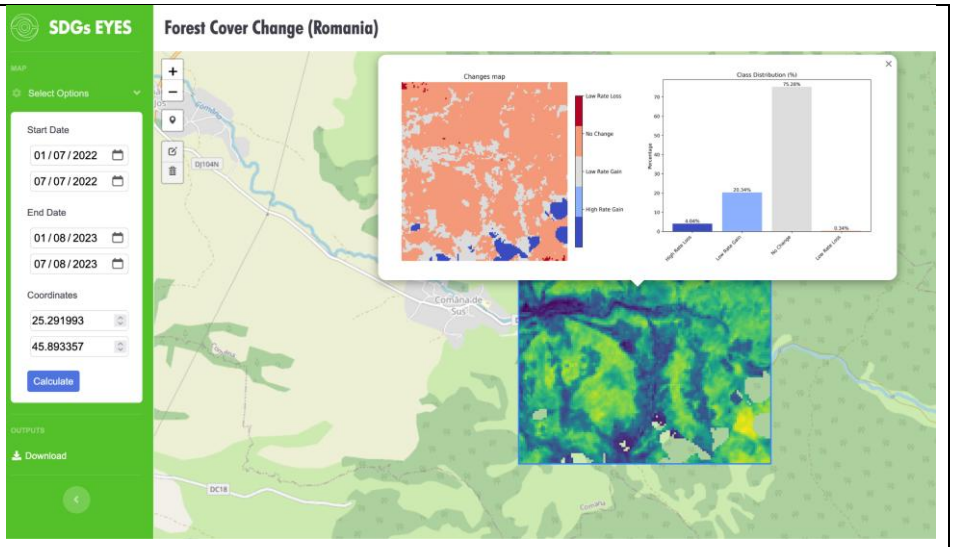
The platform offers two user-interaction modalities:

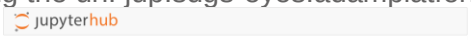
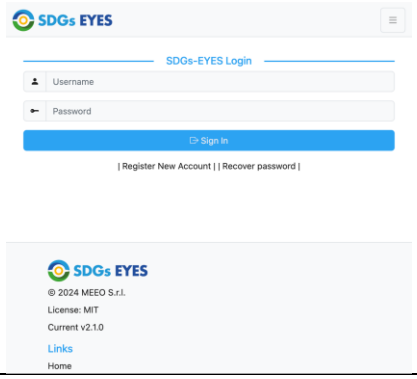
- **Pilot Frontends.** Dedicated frontend prototypes developed on the needs of the stakeholders to be consumed by the stakeholders are made available to demonstrate the capabilities of the new indicators.
- **Laboratory.** This is an environment where the indicators are developed, tuned, and finalised. Practically it is a Jupyter lab[1] 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.

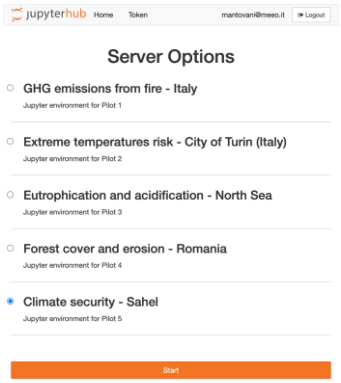
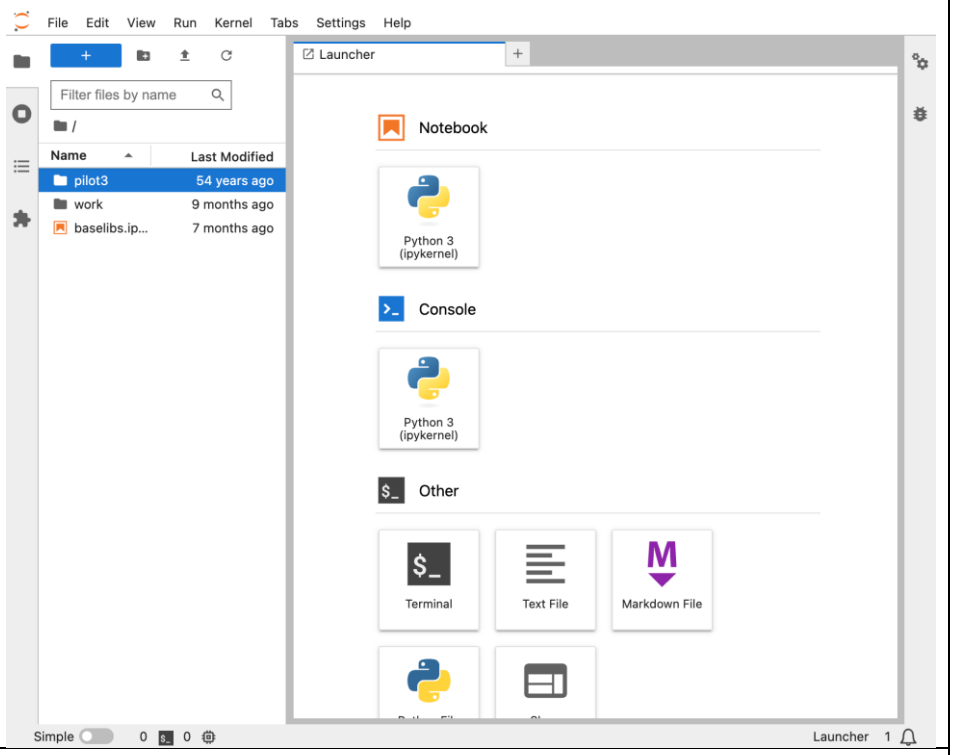
Tool Frontend (Consultation mode)	
Step-by-Step Process	The user accesses the UI via the website or directly by entering the url [Forest Cover]
Logging-in	The user enters credentials to access the UI and is redirected to the UI 
Accessing the dashboard	Forest cover: The UI presents a selection menu on the left and a map of the Olt river basin in the middle. 

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

Selection of SDG indicators	The user selects the start and end dates, the location (by placing a marker on the map or by typing latitude and longitude), and clicks on the “Calculate” button. 
Platform features	The resulting layer is displayed on the map. It is possible to zoom in or select the layer. It is displayed the vegetation index and differences, the forest disturbance as changes map and the forest cover share. The user can download the results as images in png format.



Laboratory/Jupyter Lab (Exploitation mode, i.e., using your own workspace)	
Step-by-Step Process	The user accesses the SDGs-EYES Laboratory via the website or directly by entering the url: jup.sdgs-eyes.adamplatform.eu   Then the SGDs-EYES login page is presented. 

Logging-in	The user enters credentials to access the SDGs-EYES Laboratory. To create a new account follow the Sign-Up procedure i.e. “Register New Account”
Selection of Pilot	The user selects the Pilot of interest  Then the “baseline” of the select Pilot is loaded and the user has access to data and material made available for the Pilot 
Execution	Notice that (i) Users cannot modify the existing code, but can create a copy of it, modify and run it (ii) Users can upload owned data and run the code on them

	The Jupyter Notebooks are located in the "/work/pilot4/codes/" directory within the respective folders along with a readme.md file. The main algorithm to run can be found at the following path: "/work/pilot4/codes_4a/pilot4a_main.ipynb". Please note that the end user should be experienced with the Jupyter environment and Python programming language to be able to change the input/output directories in the workflow to be able to save their own results in a folder assigned to them.

5. Testing

Information about the description of the datasets.

	Forest Tracker
Input new data	Upload, GEDI Data, or in-situ data for custom analysis.
Adjust relevant SDG indicator	Users can select timeframes and location to get the percentage of disturbance and the Share of forest area. Visual outputs include map of disturbances, summary charts
Submit report	Export results for integration into national or European reporting frameworks.

FEEDBACK

1. Feedback Mechanism

Generic: 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.

Platform usability	
Overall impression new products (exploitation)	
Visualization (exploitation)	
Downloading (exploitation-laboratory)	
Processing(laboratory)	
Interpreting data (exploitation)	

Expectation from needs (exploitation-laboratory)	

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.

	Forest Tracker
Spatial and Temporal Resolution & Scale	
Focus on Specific Indicator	
Access & Visualization	
Future Use	
Recommendations	

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.

Forest Tracker
For the validation phase, should you encounter any problem in accessing, or retrieving any data, please contact (i) For the service: mihai@forestdesign.ro; For Pilot Frontend (Consultation): alessandro.danca@cmcc.it or for the Laboratory (Exploitation - Using your own workspace) JupyterLab: natali@sistema.at and mantovani@sistema.at

Learn more about SDGs-EYES:
https://sdgs-eyes.eu/

The SDGs-EYES Project has received funding from the European Union's Horizon Europe Programme for research and innovation under project number 101082311.