

## Impact4Soil: user journeys through a platform for soil-health intelligence

### Introduction

This document provides a clear and practical overview of how different user groups can make the most of Impact4Soil (<https://soilcarbonfutures.earth/impact4soil/>), the digital platform developed to support evidence-based action on soil health. By mapping relevant datasets, showcasing real-world practices, visualising geospatial information and connecting organisations across sectors, Impact4Soil offers a comprehensive environment for understanding, planning and accelerating soil-related initiatives.

The following sections describe tailored user journeys for each profile—policy makers, funding agencies, researchers, private-sector organisations and NGOs. Each journey highlights the parts of the platform most relevant to their needs, from exploring geospatial layers and scientific evidence to identifying partners, discovering datasets and analysing best practices. Together, these scripts illustrate how Impact4Soil can support informed decision-making, strengthen collaboration and unlock new opportunities to protect and restore soil health worldwide.

### 1. Policy Makers

**Objective:** Explore use cases, identify partners, assess impacts, and inform policies on soil health.

#### Script for Policy Makers

- Homepage Orientation
  - Start at the Impact4Soil homepage.
  - Scroll to “What can Impact4Soil do for me”.
  - Hover over Geospatial data, click Learn more, then Go to Geospatial data.
- Explore Geospatial Data
  - Scroll through layers (soil carbon stocks, land use, SOC changes over time).
  - Select Global Soil Organic Carbon map v1.5 and Clay content layers.
  - Use info icons to access metadata and source links.
  - Adjust opacity to visualize overlaps and gaps.
  - Explore Annual Carbon Budget Components for croplands.
- Identify Partners and Funders (Network Module)
  - Go to Network on the homepage, hover, click Go to Network.
  - Use filters to identify:
    - Research organizations in agriculture (e.g., AGES – Austrian agency for health and food safety)
    - Funders (public and private) relevant to soil carbon projects
  - Explore ongoing projects and their partners.
- Access Scientific Evidence
  - Navigate to Scientific Evidence
  - Explore land use types (cropland, grassland, forestland, etc.).
  - Review impact of climate change, land use change, and management practices.
  - Access related publications with abstracts, methodologies, and DOI links.
- Review Practices
  - Open Practices module.

- Filter by land use (e.g., cropland) type.
- Explore detailed descriptions and linked initiatives and organisations (ex Banana manure pits and mulching)
- Use the map to visualize practices across countries.
- Conclusion
  - Integrate insights from geospatial layers, practices, and network data to design policies.

## 2. Funding Agencies

**Objective:** Assess available data, identify gaps, and promote collaboration or new funding opportunities.

### Script for Funders

- Visualize Available Data
  - Open the Geospatial Data module. Example layers to explore:
    - Global Soil Organic Carbon map v1.5 – see where SOC is high or low globally.
    - Clay content – understand soil characteristics that influence carbon storage.
    - Land Use / Land Cover – identify areas under cropland, grassland, forest, or wetland.
    - Annual Carbon Budget Components – examine aboveground and belowground biomass for specific regions.
  - Use the legend and opacity tools to compare layers and spot data gaps or coverage areas.
- Identify Ongoing Projects
  - Navigate to the Network module.
    - Filter for funded projects by:
      - Geography (e.g., Europe, Africa, Latin America)
      - Area of intervention
    - Explore projects such as ORCaSa to see project locations, partners, and funders.
    - Identify areas where no projects are active to guide new funding priorities.
- Explore Scientific Evidence
  - Open the Scientific Evidence module.
    - Explore land use types such as Cropland, Grassland, Forestland.
    - Analyze the quantified impacts of interventions like cover cropping.
    - Review meta-analyses and publications to identify trends and knowledge gaps that could guide funding strategies.
- Access Datasets
  - Open Datasets module.
  - Search datasets using keywords (e.g., “Agriculture”).
  - Access datasets from trusted sources: Harvard Dataverse, INRAE, Cirad, ISRIC, Zenodo, JRC.
  - Access datasets directly to assess availability and relevance for potential projects.
- Network Engagement
  - Use the Network module to identify potential collaborators and funders internationally.
    - Example: Filter organizations by type (research, funder) and thematic focus.

- Explore profiles to understand ongoing activities, areas of expertise, and opportunities for co-funding or partnerships.
- Conclusion : By combining Geospatial Data, Network, Scientific Evidence, and Datasets, funders can:
  - Assess where resources are already allocated.
  - Identify gaps in research or projects.
  - Promote collaboration, avoid duplication, and make informed decisions for future funding calls.

### 3. Researchers

**Objective:** Quickly access high-quality data, evaluate interventions, and find synergies for collaborations.

#### Script for Researchers

- Geospatial Exploration
  - Go to Geospatial Data.
  - Select relevant layers to identify research areas. Examples include Global Soil Organic Carbon map v1.5, Clay content, and Annual Carbon Budget Components showing aboveground and belowground biomass.
  - Compare SOC maps and overlay different datasets for insights.
- Access Scientific Evidence
  - Open Scientific Evidence.
  - Explore impact of climate, land use, and management on SOC.
  - Filter publications by country, land use, or year.
  - Use graphs to assess interventions' effectiveness.
- Datasets
  - Navigate to Datasets.
  - Search by keyword or source, such as Agriculture, Soil Carbon, or specific data providers.
  - Download datasets for analysis.
- Network
  - Identify ongoing projects to find potential collaboration opportunities.
  - Explore organizations to locate research partners.
- Practices
  - Review interventions applicable to your research focus. Examples include cover cropland, forestland, etc.
  - Cross-check scientific evidence with real-world practices, including links to initiatives and technical descriptions.
- Conclusion: By combining Geospatial Data, Scientific Evidence, Datasets, Network, and Practices, researchers can quickly access high-quality data, evaluate interventions, and find collaborations to strengthen their work.

### 4. Companies (Private Sector)

**Objective:** Locate experimental trials, evaluate effectiveness of practices, and contribute data.

#### Script for Companies

- Locate Trials
  - Open Geospatial Data.
  - Select relevant layers for trial locations and SOC analysis. Examples of layers to use:
    - Global Soil Organic Carbon map v1.5 – shows global distribution of soil organic carbon stocks.
    - Clay content – highlights soil clay proportions, useful for understanding SOC storage capacity.
    - Annual Carbon Budget Components – includes sub-layers such as aboveground biomass, belowground biomass, and SOC changes; for example, case studies in croplands in France.
    - Land Cover – shows types of land use (cropland, grassland, forest, wetland), helping identify areas for potential trials.
- Add/Edit Projects
  - Navigate to Network.
  - Click + Organization to add your own projects.
  - Fill out the form with project details. After validation by platform administrators, your data will appear on Impact4Soil.
- Explore Practices
  - Open Practices module.
  - Filter by land use type relevant to your operations.
  - View detailed descriptions and links to initiatives, helping evaluate the effectiveness of practices for potential adoption.
- Conclusion
  - By combining Geospatial Data layers, Practices, and Network information, companies can identify gaps in trial coverage, evaluate SOC interventions, and contribute their own data to the platform.

## 5. NGOs

**Objective:** Access and share reliable data, support evidence-based decision-making, and foster collaboration.

### Script for NGOs

- Access Evidence and Practices
  - Open the Scientific Evidence module.
    - Example: Select Cropland under land use types.
    - Click on Management interventions such as cover cropping to see its quantified impact on soil organic carbon.
    - Explore the graphs showing effects of CO<sub>2</sub> enrichment, land use change, or management practices with confidence intervals from meta-analyses.
  - Open the Practices module.
    - Example: Filter for Cropland + Main intervention: Management.
    - Click on a practice like “Banana manure pits and mulching”.
    - Access technical and practical descriptions, plus links to WOCAT or FAO databases for replication or local adaptation.
- Network Exploration
  - Open the Network module.
    - Example: Search for organizations like ORCaSa or INRAE to find research partners and ongoing projects.

- Use filters to find funders (public and private) interested in agriculture or soil carbon projects.
  - Explore profiles to understand each organization’s focus and potential collaboration opportunities.
- Visualize and Share Data
  - Open the Geospatial Data module.
    - Example: Overlay layers such as Global Soil Organic Carbon map v1.5, Clay content, and Land Cover to identify regions for intervention.
    - Use Annual Carbon Budget Components to examine the SOC contributions of aboveground and belowground biomass.
  - Use the Datasets module to access open-access datasets relevant to your projects.
    - Example: Download datasets from Harvard Dataverse, INRAE, or ISRIC Data Hub for analysis.
- Conclusion
  - By combining Scientific Evidence, Practices, Geospatial Data, and Network modules, NGOs can:
    - Identify high-impact interventions.
    - Collaborate with research organizations and funders.
    - Map and share project data for global or regional initiatives.