Soil-X-Change Dashboard – User Manual

1. Introduction

1.1 Purpose of the Dashboard and the User Manual

The Soil-X-Change Dashboard is an interactive, web-based tool designed to make complex information about sustainable soil and farm management practices easy to understand and explore. It presents documented good practices collected from European Innovation Partnership Operational Groups (EIP-OGs), related initiatives, and published research findings from partner projects, visualizing their measured effects on soil, crop, environmental and economic parameters. Through simple filters and visual tools, users can discover tested solutions, compare their impacts, and – eventually – receive decision support for implementing practices that best fit their conditions.

The purpose of this manual is to provide a practical overview of the dashboard's three main modules and to explain in a step-by-step way, how to use them effectively. It also includes short notes on interpreting charts, accessing detailed practice fact sheets, and troubleshooting common issues.

1.2 Target Users

The dashboard is open and free to use. It has been designed for a broad community of stakeholders:

- Farmers and farm managers – exploring field-tested, practical soil management methods.
- Advisors and extension services – identifying practices to recommend to clients.
- Researchers and students – analysing relationships between practices and outcomes.
- Policy makers and organisations – obtaining evidence to support sustainable farming policies.

1.3 Access and Technical Requirements

- The dashboard is publicly accessible through the project website: https://soil-x-change.eu *(Dashboard menu)*, which directly links to the dashboard interface at https://quic.hu/dashboard. No registration or login required.
- Optimized for desktop browsers (Chrome, Firefox, Edge, Safari).
- Responsive layout but best viewed on larger screens.
- Requires only an internet connection, no installation is needed.

2. Dashboard Overview

The **Soil-X-Change Dashboard** brings together data and knowledge from more than sixty documented good practices in sustainable soil and crop management across Europe. It enables users to explore, compare, and interpret practical experiences collected from real-life farm experiments and Operational Groups. The platform consists of **three main functional blocks**, each focusing on a different way to access and understand this information.

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Soil-X-Change has received funding from the European Union's Horizon Europe Framework Programme, Coordination and Support Actions under grant agreement No. 101133914

I. Practice Explorer

Discover and analyse sustainable management practices and their effects.

Users can browse and filter documented good practices by various criteria such as climate zone, country or crop, and visualise their qualitative effects on agronomic, environmental, and economic properties.

II. Comparison Chart

Compare the impact of different soil and crop management practices.

This module allows users to select two practices and compare them side by side based on several agronomic or environmental effects.

III. Decision Trees

Step-by-step decision support for implementing management practices.

A future module (coming soon) that will guide users through sequential decision pathways based on literature-derived algorithms and data from the project's database.

3. Practice Explorer in detail

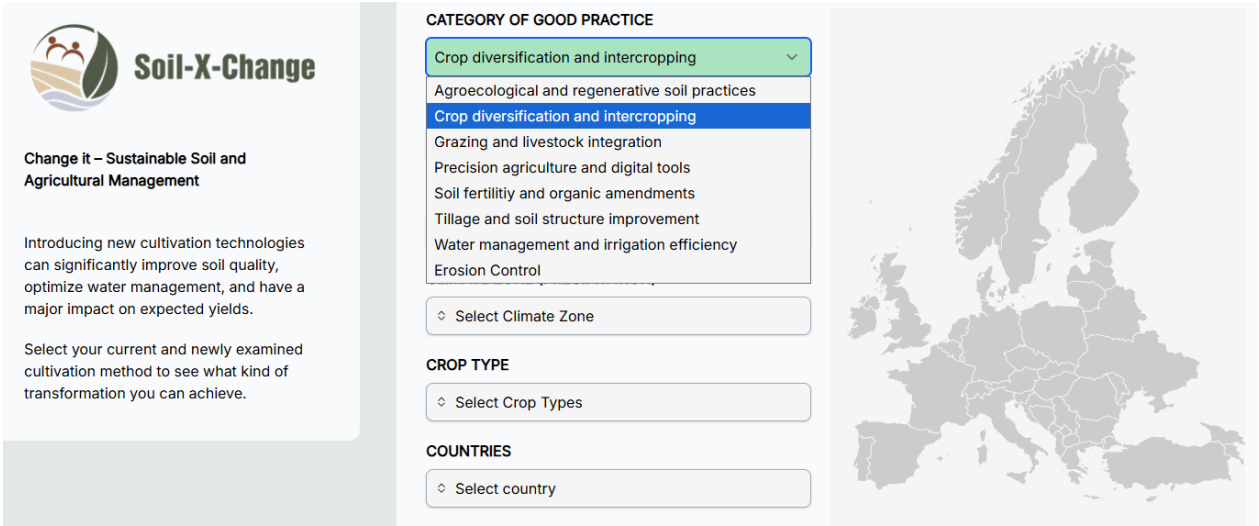
3.1 Purpose and Function

The Practice Explorer is the core section of the Dashboard. It allows users to explore and visualise data from more than 60 documented good practices across Europe. By applying multiple filters, users can focus on practices relevant to their own climate conditions and crop types, and examine their qualitative impacts on key parameters such as biodiversity, soil fertility, erosion control, yield stability or profitability.

3.2 Step-by-Step User Guide to the Practice Explorer

Step 1 – Select a Category of Good Practice (mandatory)

The first filter to be applied is the category of good practice. Choose a category that fits your interest (e.g. erosion control, soil fertility, precision agriculture). This helps to identify practices that are relevant in your case.



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Step 2 – Select Good Practice (mandatory, but can also be done after the other filters selected)
After applying the chosen category, a list of available good practices will appear. You can select one or several practices for analysis. This choice forms the basis of the graphs displayed below in the "Select Impacts" part. Select the practices you are interested in, or narrow down the list with the other filters.

Step 3 – Apply Other Filters (optional)

Refine or narrow your search using one or more of the other filters: Climate Zone, Crop type and Country. Please keep in mind that only 61 practices are currently included, so certain filter combinations may return no results. Any combination will work, but once you select e.g. a specific climate zone, the other filter will automatically display only the options available within that zone.

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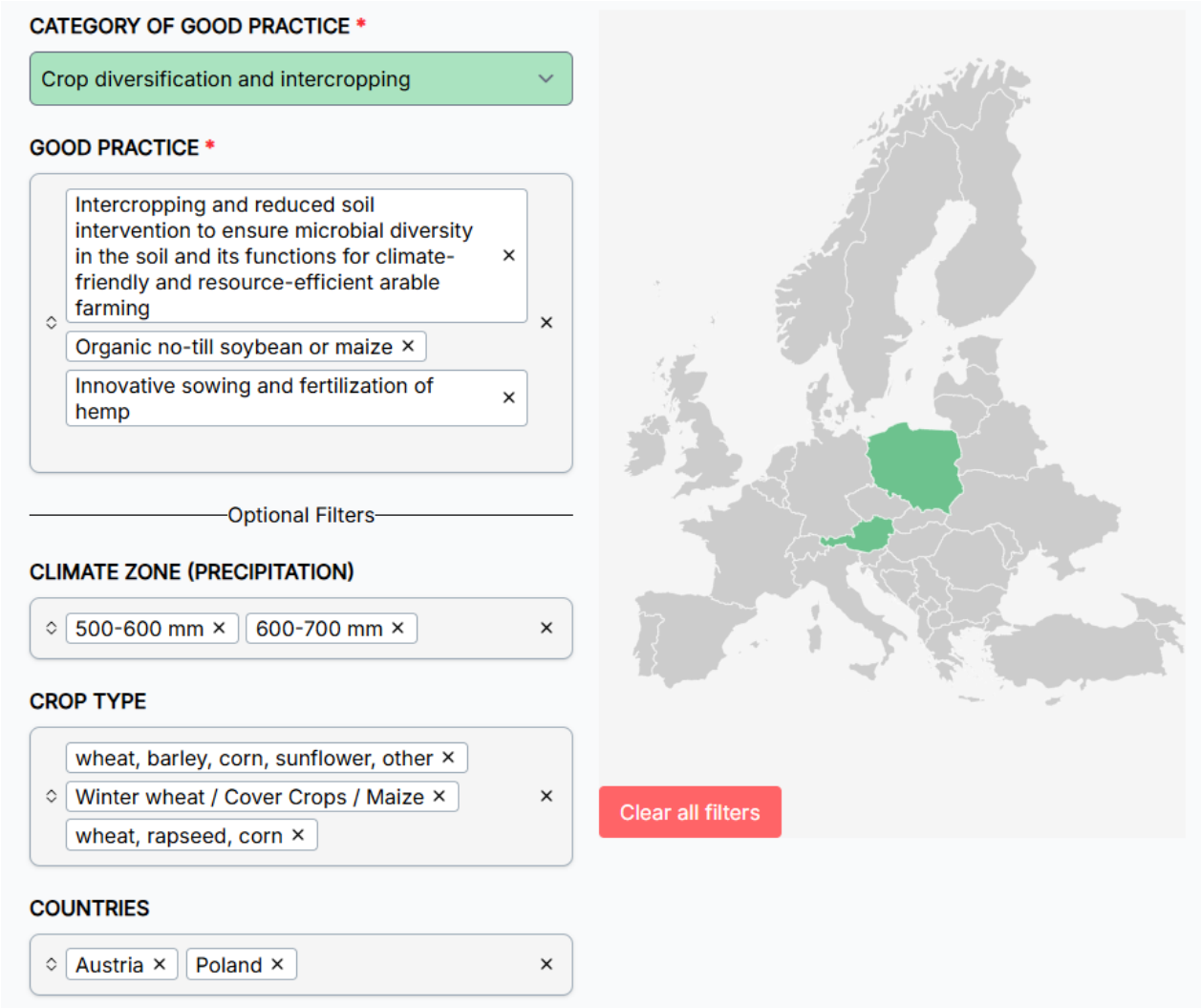

Step 4 – Explore Effects

After you have selected the good practices, the section below will be active. If you have links in the Detailed description of selected good practices, then the selection above was ok.

These links are driving you to complete infographics of the OG (or good practice) in a separate tab (below is an example). Each documented practice has an associated fact sheet, accessible through links below the main chart. These PDFs provide summaries of the practice and it's observed benefits, limitations, as well as contextual data.

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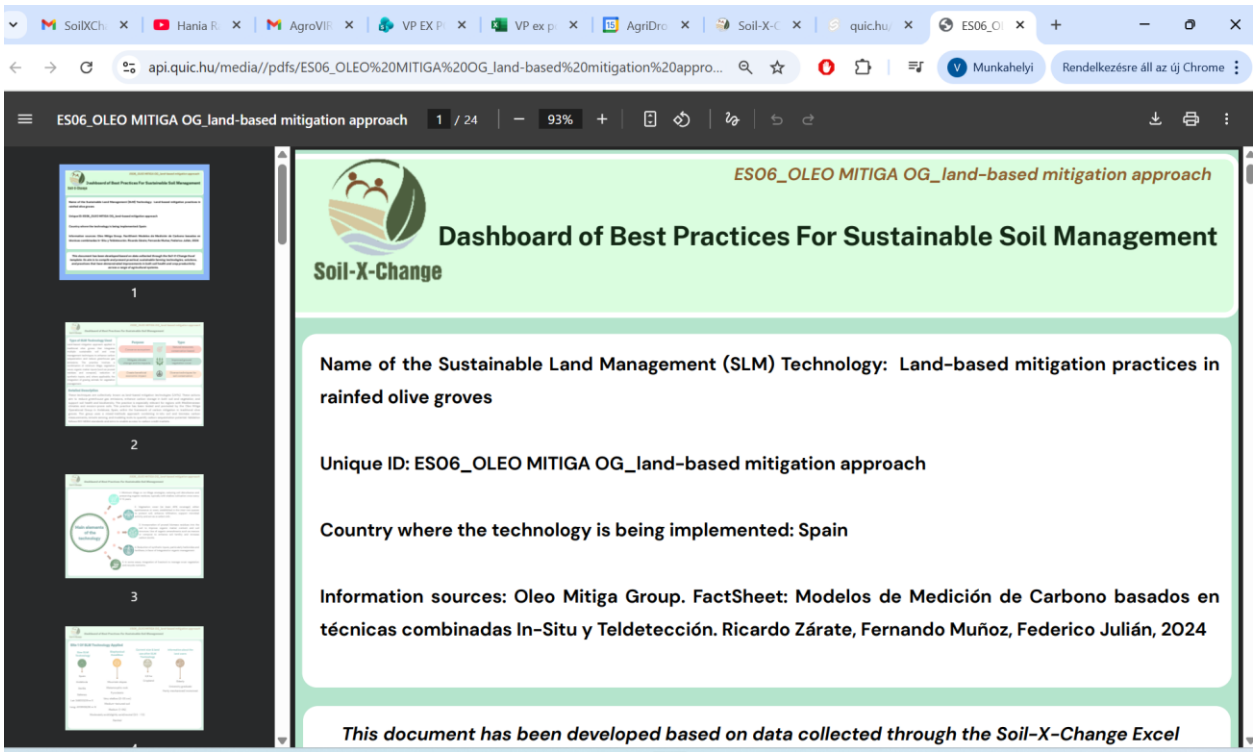

3.3 Interpreting the Charts and Scales

The other activated section is the one where you can investigate the effect of the selected good practices (OGs). You can select up to 6 effects, which are averaged out through the selected practices. The average qualitative results are displayed using sliders and color-coded scales. Each effect is represented by a normalized qualitative scale:

- Green shades indicate positive impacts (e.g., 'better' or 'much better').
- Red shades indicate negative impacts.
- Grey or neutral colours show no recorded effect or insufficient data.

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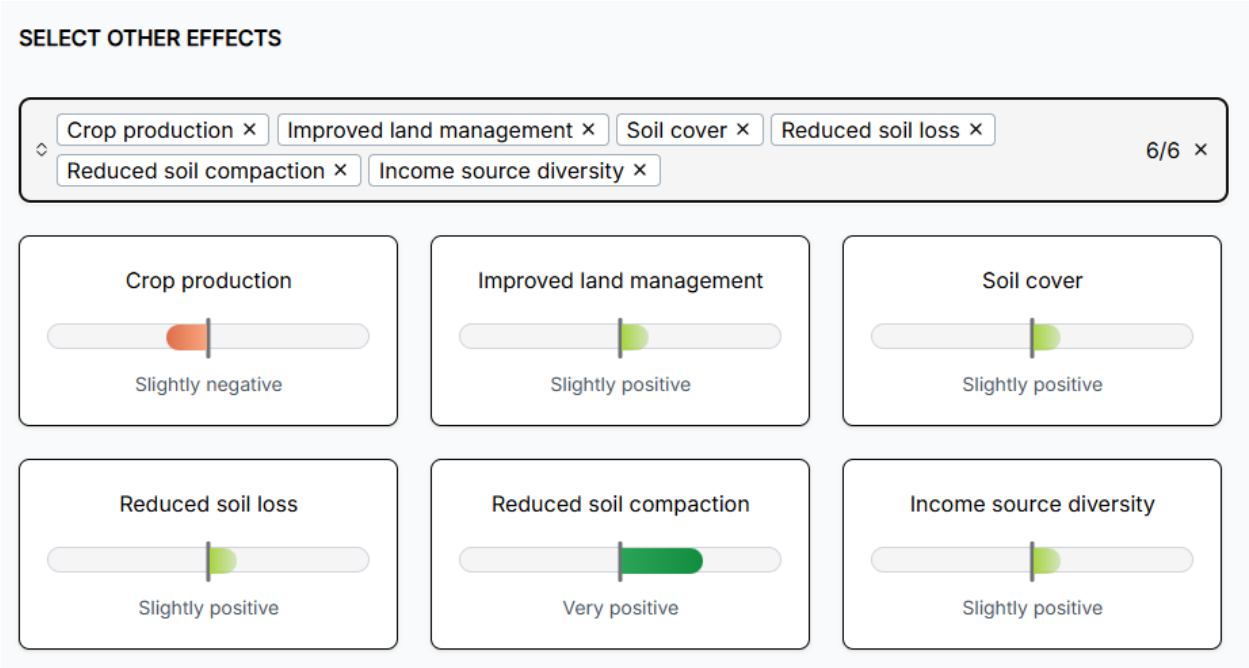

3.4 Tips and Common Issues

- Some filters may return no results because only 61 practices are currently documented.
- Multi-choice filters work best when used progressively.
- Missing effect data will result in empty chart fields.
- To start a new search or analysis, click on the "**Clear all filters**" button that clears all filters and reloads the full set of practices, or simply refresh the page (press **F5** or use the **Refresh** button) in your browser.

4. Comparison Chart in detail

4.1 Purpose and Use Cases

The Comparison Chart enables users to evaluate two selected practices side by side, comparing up to six effects to identify performance differences. Please note that missing values are common in the database so not all effects will have entries for both practices.

4.2 Step-by-Step User Guide

Step 1 – Select Two Practices
Select Technology category, which refers to the Category of the Practices, then choose the two practices you are planning to compare.

Step 2 – Choose Effects
Select up to six parameters or effects to compare.

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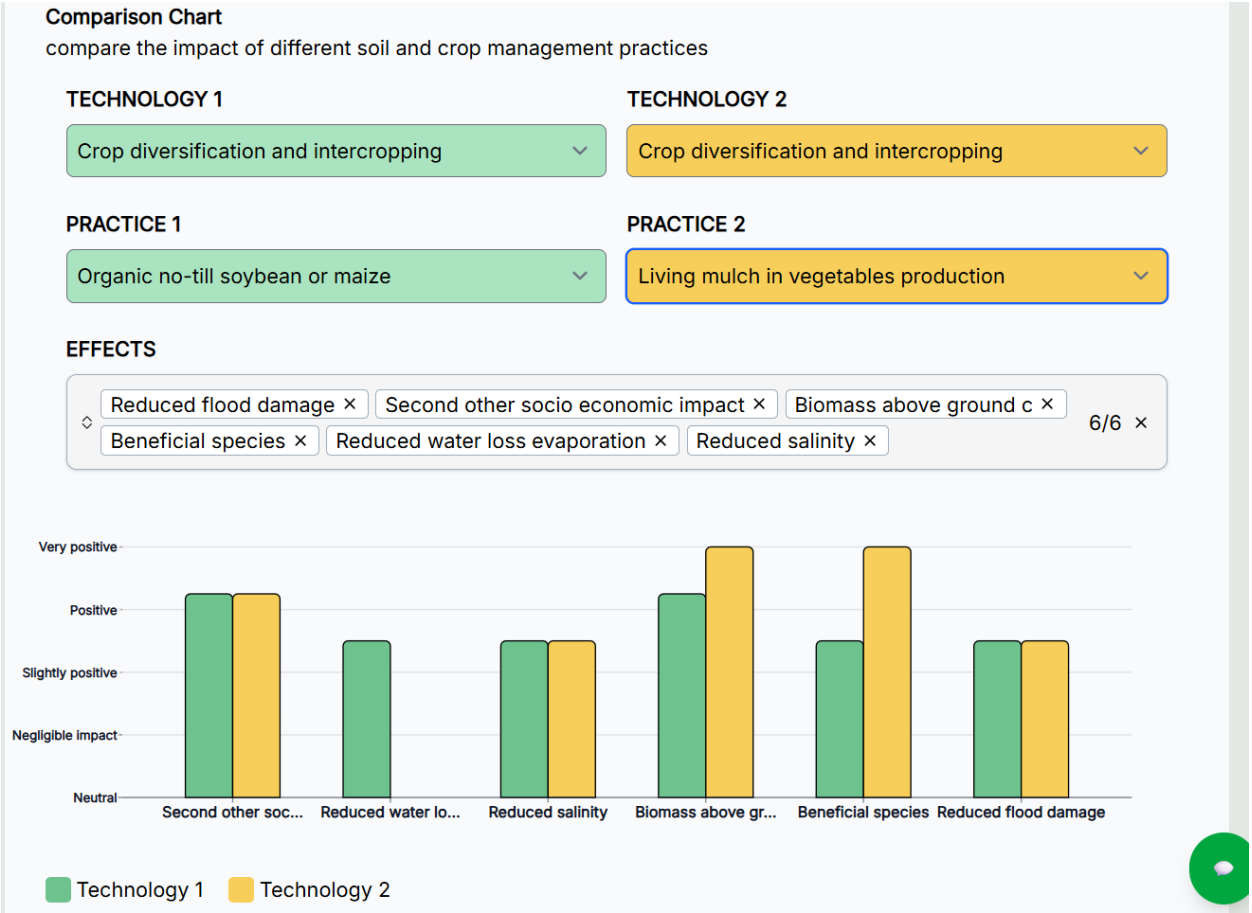
Step 3 – View Comparison Chart

The grouped bar chart displays relative qualitative impacts of both practices across the chosen effects.



5. III. Decision Trees in detail (Coming Soon)

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