



NBSOIL

Nature-Based Solutions
for Soil Management

Communication Toolkit - Soil Health NBS Discussion and Visioning Cards - early version

Deliverable 48 [D6.8]

Comms Toolkit: Visioning Cards -
Early version

30.11.2023



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2	15.11.2023	First internal review	Josep Crous-Duran (REV)
3	27.11.2023	Second internal review	Oliver Ejderyan (FiBL)
4	27.11.2023	Second internal review	Karin Pepers (AERES)
5	14.10.2024	Review after evaluation	Javier Montellano (REVOLVE)

¹ R=Document, report; DEM=Demonstrator, pilot, prototype; DEC=website, patent fillings, videos, etc.; OTHER=other

² PU=Public, CO=Confidential, only for members of the consortium (including the Commission Services), CI=Classified



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1 History of changes – addressing evaluation comments

This deliverable has been updated on the 14th of October 2024 in order to address the evaluation comments received on the 23rd of September 2024:

“ Good – the deliverable covers in an adequate way the commitments reflected in the GA. The cards look great, however this is a missed opportunity to include more information (facts and figures) - for example the soil profile cards look amazing but they don't really tell you anything apart from that there are different types of soil and they look different - needs some bullet points about the different properties. The blank cards could be used during meetings led by the consortium, but as a resource to benefit the wider soil teaching community, adding additional information would expand their usefulness to teachers / communicators not directly involved in the NBSOIL project. Please re-submit within 15.10.24”

We are thankful for the constructive and encouraging criticism and will address the comments with small updates and clarifications in the relevant sections of the deliverable, highlighted to make the review process easier. More importantly, this feedback will be considered for the final version of this deliverable and the Visioning Cards due before the 1st of December 2024 (D6.9, REV, M24).

We need to mention that the Soil Types deck already includes a short sentence highlighting the main characteristics of that order of soils according to the USDA system. These sentences are not fully readable in the images included in the deliverables (higher resolution versions of the cards can be downloaded from the project's website: <https://nbsoil.eu/visioning-cards/>) but it is included in Section 3. Soil Types explaining that deck.



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2 Executive Summary

In this deliverable we are presenting the first version of the NBSOIL Visioning Cards with the aim to build a flexible and modular visual language to help describe and define soil related problems and solutions.

This first version defines a total of 36 cards as a minimum set of decks which represent the basic aspects related to important aspects of soil related discussion. Each deck contains cards representing the basic concepts related of:

1. Biogeographical regions and their climatic context.
2. Soil use sectors
3. Soil Types
3. Soil Ecosystem services
4. Soil Mission Objectives (designed by the Soil Mission Secretariat)
5. The soil related Nature Based Solutions being researched by NBSOIL.

These decks have been thought as a graphical facilitation tool to support initial discussions regarding soil health and create a common vision in a group of diverse stakeholders working on a defined area or region, such as the ones expected in the frame of the Soil Health Living Labs. This could be an immersive, interactive, and flexible learning experience on soil health. The target audience involves agricultural advisors, farmers, researchers, knowledge-sharing experts, policy makers and other stakeholders interested in the characteristics of soil health, how to ensure it and how to maintain it.

In most cases, the Visioning Cards are expected to be used as a facilitation prop by an experienced facilitator and in combination with other materials. Once achieved this initial set of decks and cards, we are planning to explore potential use cases within the NBSOIL consortium and with the NBSOIL Academy participants, with other Soil Mission and Horizon Europe projects, and eventually with projects and organisations from all over the world.

In line with NBSOIL's main goal to empower the new generation of Soil Advisors, we aim to deliver a final version which is fit to support soil advisory processes and works seamlessly together with the other NBSOIL results.



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3 Introducing the visioning cards

This document presents the first version of the NBSOIL Visioning Cards. The aim of these cards is to build a flexible and modular visual language to help describe and define soil related problems and solutions, promoting soil, climate, and biodiversity literacy in a wide range of formal and informal settings, such as educational activities, advice giving processes, policy making discussions and others.

In most cases, the Visioning Cards are expected to be used as a facilitation prop by an experienced facilitator and in combination with other soil related materials. The Cards are meant to support stakeholders in describing their experience of soil - related issues by linking these experiences to specific cards. By combining cards from different decks, they can provide a starting point and allow different actors to contribute detailed, context-based information, while keeping the discussion focused.

The cards need to be used in combination with other materials such as local maps for place-based discussions, or soil educational resources such as the [European Atlas of the Soils by the EUSO](#), or scientific and technical materials. In this sense, the cards are expected to support creating a common understanding between scientific and non-scientific stakeholders.

The icons and graphics created for the cards are fully integrated with NBSOIL's visual identity and will appear in other main deliverables and communication materials of the project such as the Practice Abstracts, the Massive Online Open Course (MOOC), or the NBSOIL Academy portal. [The Visioning Cards are available here](#)

3.1 Some comments on the design process

The concept for this initial set of decks was developed by the REVOLVE team and refined with the contributions of the coordinators.

The amount of text in the cards has been kept to a minimum to preserve their highly visual and intuitive character and considering that they are intended to be used together with other materials. These materials (for example, further information on soil types) will be made available through QR



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codes included in the final version of the Visioning Cards which will be delivered by the 1st of December 2024 (D6.9, REV, M24). While trying to keep cards with a minimum of text, some cards will include a short sentence (like the one already included in the the “Soil Types” deck), relevant statistics (such as the ones mentioned in “Soil Sectors”) or a few bullet points with basic information.

A first printed version was presented to all NBSOIL partners during the second General Meeting in Vienna (26-29th of September 2023). The same version was presented at the Soil Mission Projects Coordination meeting on 5/09 and at the NATI00NS meetings on the 16/10.

The cards have been also presented during the first Soil Mission Week in Madrid (21- 23 November 2023), during the CURIOSOIL Kick Off meeting in Aveiro (19-21 February 2024) and internally during the NBSOIL Academy meeting in Warsaw (20-22 March 2024) and in the NBSOIL GA meeting in Albacete (23-25 of September 2024).

The version presented here has already been improved according to the feedback received from partners during the previous meetings.

A survey has been sent to all partners to gather further feedback and define how they will be able to use the cards in their activities.



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Image 1. Visual aspect of the Initial version of the NBSOIL Visioning Cards.

3.2 How to use this initial version

This first version is a “proof of concept” which defines a minimum set of decks representing the basic aspects related to important aspects of a soil related discussion. Each deck is formed by several cards referring to the basic related concepts. These decks have been thought as a graphical facilitation tool to support initial discussions regarding soil health and create a common vision in a group of diverse stakeholders working on a defined area or region, such as the ones expected in the frame of the Soil Health Living Labs.



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The intention is to build a logical pathway between the climatic context, the specific soil use sectors present, the soil types involved, the ecosystem services they provide, the related soil health challenges and the potential nature-based solutions.

At this stage, in NBSOIL we are especially interested in having the cards tested by groups for place-based discussion involving a wide diversity of stakeholders, such as researchers, public authorities, farmers, forest managers, SMEs, building companies, conservationists, schoolteachers, neighbours and citizens. We will propose them to encourage discussion and participation by using the decks in the order they have been designed:

1. Biogeographical regions and their climatic context

Climate researchers discuss how climate change affects the region and what to expect based on current climate scenarios.

Public authorities outline their implementation of climate mitigation and climate adaptation plans.

Conservationists describe the main ecosystems and key species in the area and how they are being affected by climate change and other threats.

Other stakeholders share their experiences with climate change, the threats to their activities and health and the solutions they are implementing.

2. Soil use sectors

Public authorities explain the regulation of spatial planning and soil uses.

Depending on the land use sector involved, farmers, forest managers, land managers in urban and (post)industrial areas can describe how they manage soil in their areas and the challenges they are facing. SMEs and other businesses can also elaborate about how soil relates to their activity.

3. Soil Types

Soil researchers explain the different soils present in the area and their characteristics.

School teachers discuss activities they implement to enhance awareness of soils and their characteristics among students.

We have realised that soil classification and its terminology remains a highly technical subject so it is important to provide non-scientific users with support by an advisor or researcher, or complementary information which will be included in the final version as QR codes.



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4. Soil Ecosystem services

Researchers provide a local context on soil ecosystem services and their importance for health and wellbeing. Stakeholders identify the soil ecosystem services most relevant to them and those they directly influence or manage, following the introduction by researchers.

5. Soil Mission Objectives and the challenges they are addressing

After introducing the Soil Mission Objectives, the facilitator can ask all participants to put them into local context and establish the relationships between the Soil Mission Objectives and the elements identified in the previous steps: climate related threats, the sectors and activities, the soil types and the ecosystem services identified in previous steps.

6. The soil related Nature Based Solutions being researched by NBSOIL

Finally, researchers and practitioners introduce different NBS. Stakeholders managing land directly can identify the combination of NBS most appropriate for addressing the challenges identified earlier. Public authorities provide information on potential barriers and levers in the current regulatory framework.



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1. Biogeographical regions and their climatic context

The deck initially contains cards for the five Biogeographical regions present in the NBSOIL consortium countries (see image 2): Continental (Poland); Mediterranean (Spain and Italy); Atlantic (United Kingdom, France, and The Netherlands); Alpine (Switzerland and Austria); and Pannonian (Austria). The regions 'areas considered was the distribution proposed by the European Environment Agency (EEA, 2017) (see image 2).

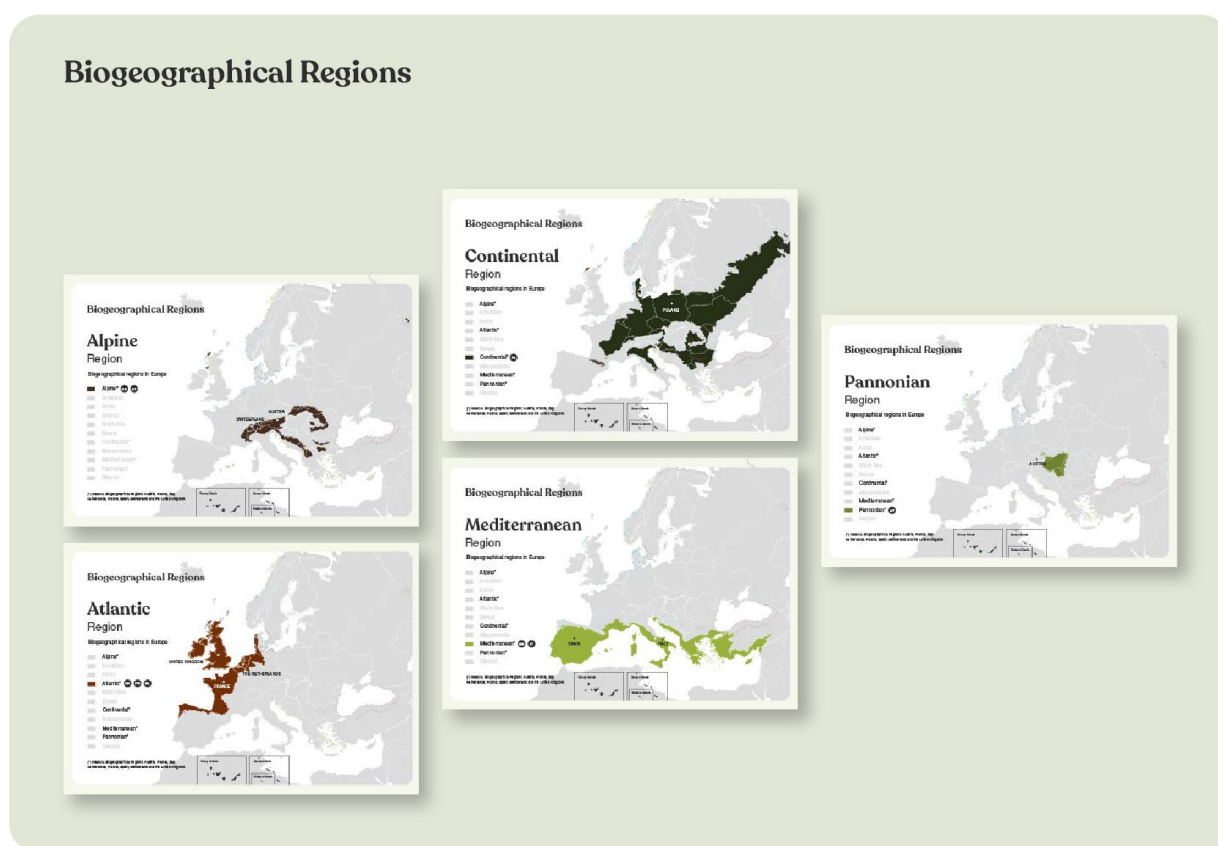


Image 2. Visual aspect of the Biogeographical Regions playing card suit of the NBSOIL Visioning Cards.



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2. Soil use sectors

Five different cards are proposed for presenting the Soil Use Sectors: Agricultural, Forestry, Urban and Industrial as they occupy 42%, 30%, 5% and 3% of the surface in the EU countries respectively as mentioned by the Soil Health and Food Mission, and the proportion they occupy of the EU's total surface (EUROSTAT, 2023) (see image 3)

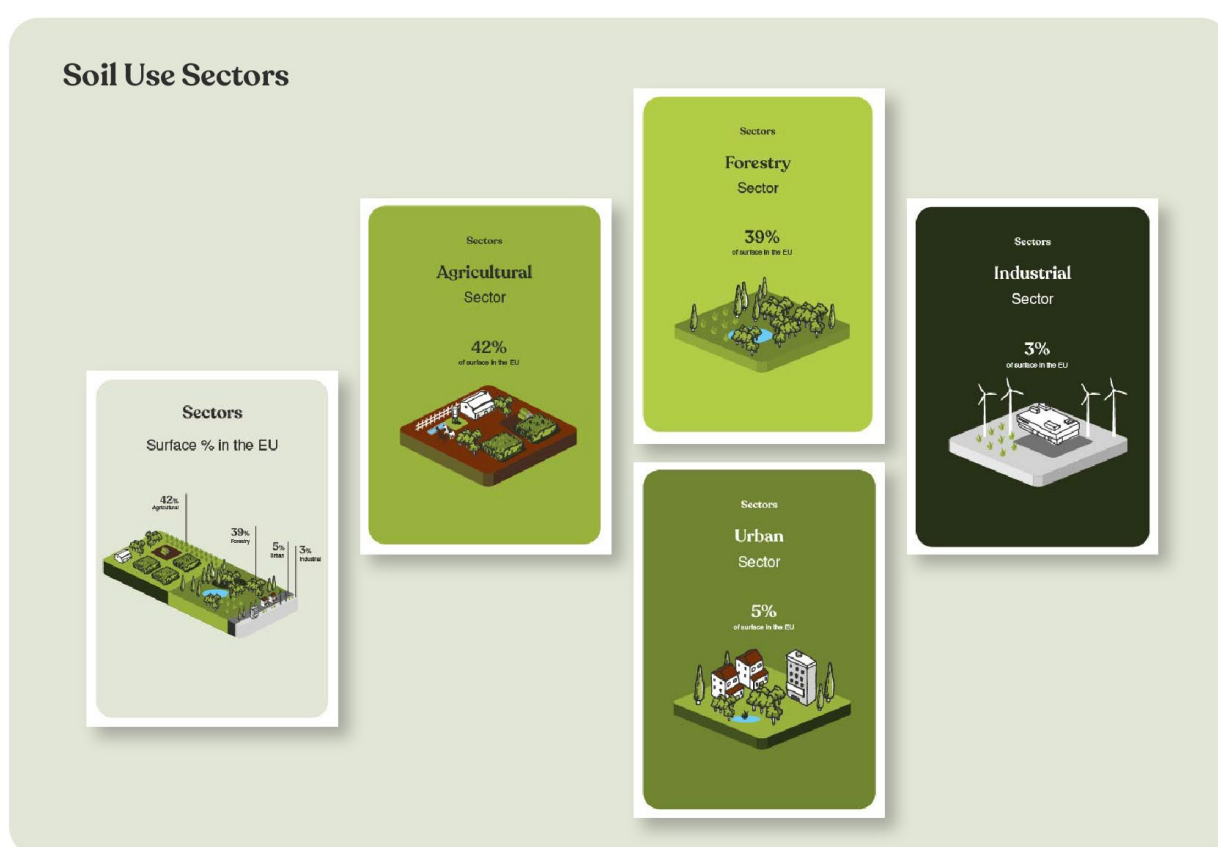


Image 3. Visual aspect of the Soil Use Sectors playing card suit of the NBSOIL Visioning Cards.



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3. Soil Types

In this first version we have created cards for each of the 12 orders from the Soil Classification system devised by the United States Department of Agriculture (USDA, 2006) (see image 4). For each soil type a sentence summarising the main characteristics of this order has been included:

- Alfisols: Clay-rich mineral soils for agriculture.
- Andisols: Volcanic ash-derived fertile soils.
- Aridisols: Dry soils in arid areas.
- Entisols: Young, undeveloped soils.
- Gelisols: Frozen soils in cold regions.
- Histosols: Organic soils in wetlands.
- Inceptisols: Soils with limited development.
- Mollisols: Fertile soils for agriculture.
- Oxisols: Highly weathered tropical soils.
- Spodosols: Acidic Forest soils with organic matter.
- Ultisols: Weathered, clay-rich soils.
- Vertisols: Clay-rich soils prone to cracking.

The fact that we addressed soil types only through the USDA system in this initial version has been subject to criticism, as the WRB is the reference soil classification system in Europe. This choice was mostly due to practical reasons: the USDA system considers 12 main orders and the WRB 32. Besides, we have also found that soil advisors will often use the USDA system, or both. In any case, both systems will be included in the final version.



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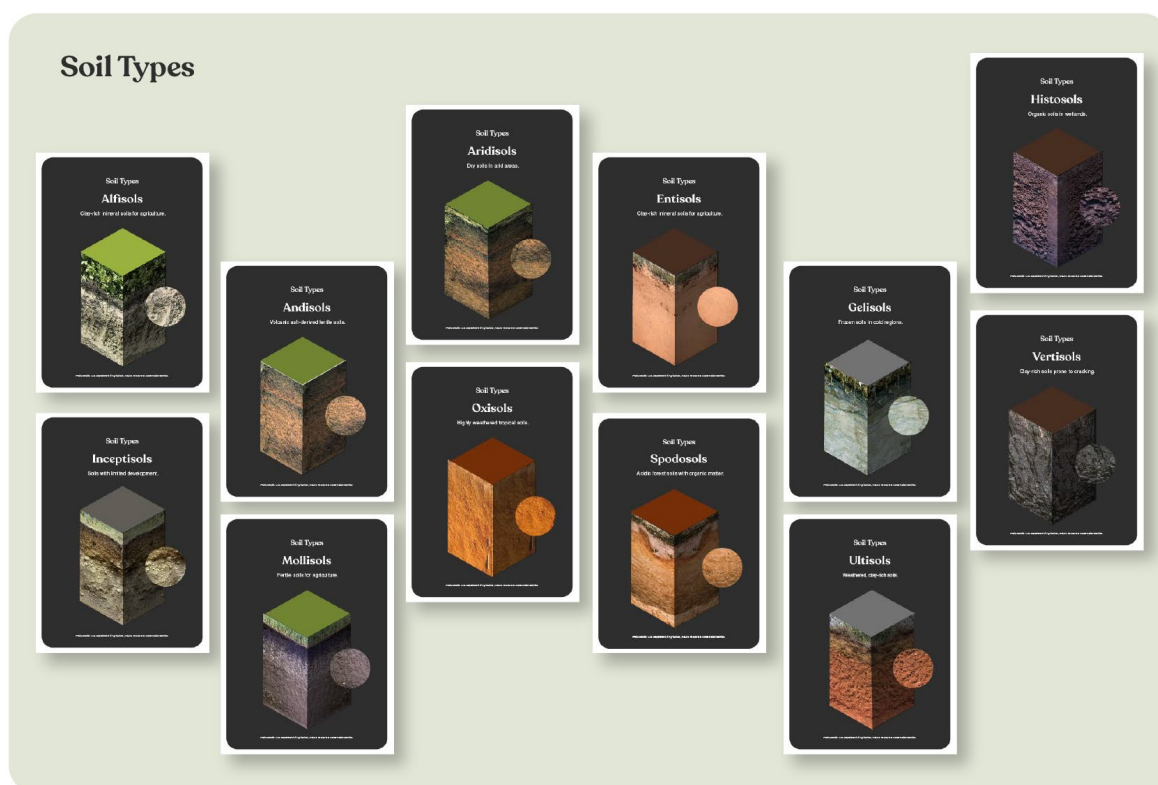


Image 4. Visual aspect of the Soil Types playing card suit of the NBSOIL Visioning Cards.

For the coming versions, it is foreseen to have as a soil type alternative, a deck containing the 32 Reference Soil Groups from the World Reference Based international system for soil classification (P. Schad, 2023). This system has the advantage that it already includes anthrosols and technosols.



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4. Soil Ecosystem services

For this initial version we have considered 7 of the 11 Soil Ecosystem services from the FAO “Soil functions - soils deliver ecosystem services that enable life on Earth” infographic (FAO, 2015). The remaining 4 cards will be created for the following version (see image 5).

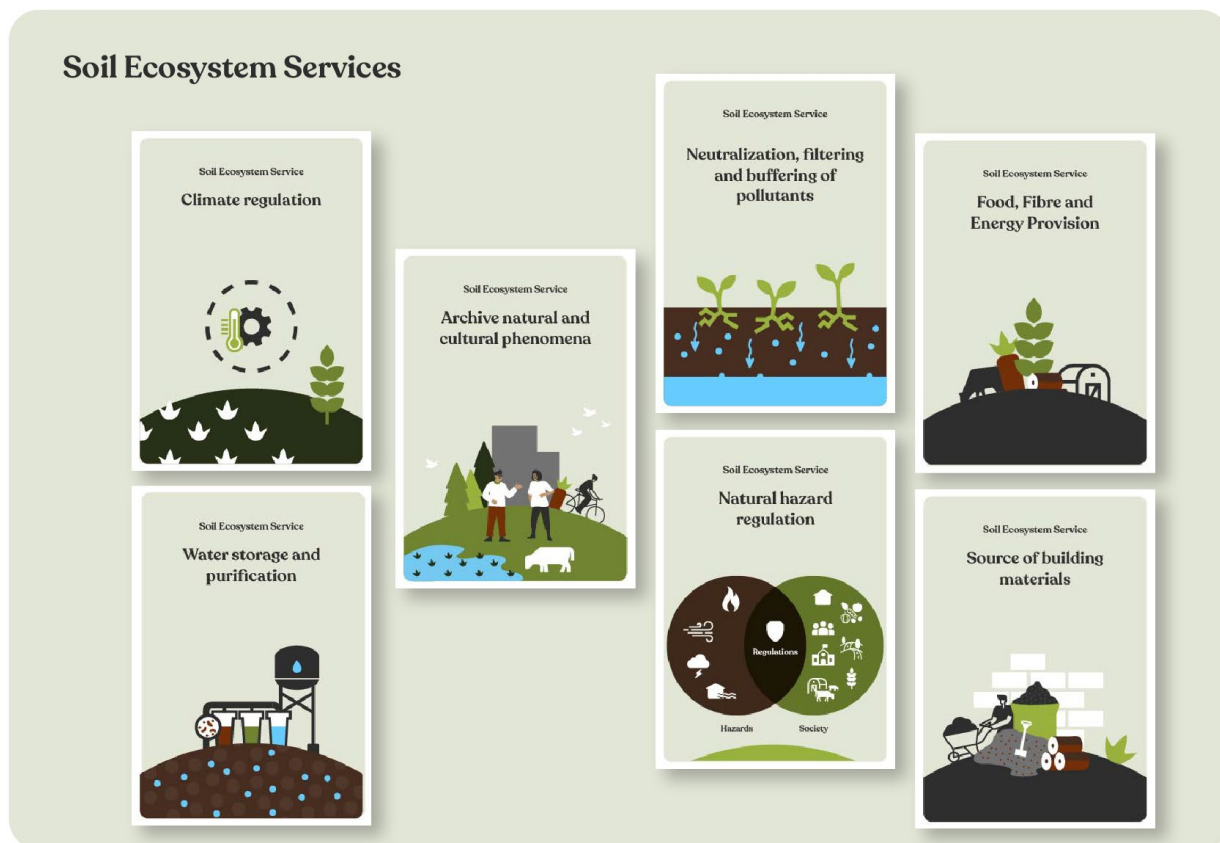


Image 5. Visual aspect of the Soil Ecosystem Services playing card suit of the NBSOIL Visioning Cards.



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5. Soil Mission Objectives and the challenges they are addressing

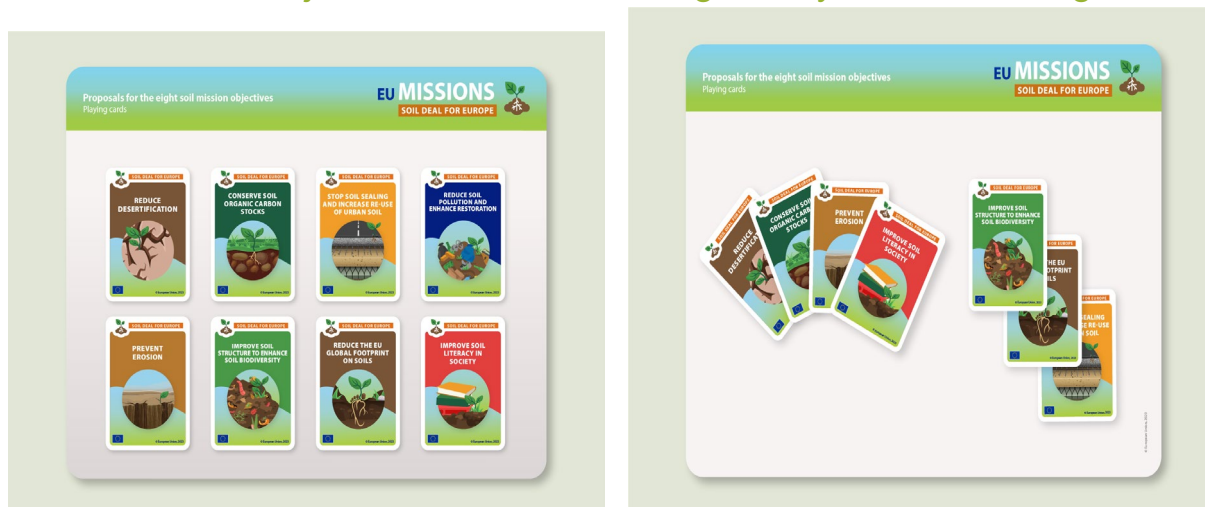


Image 6 (A and B). Visual aspect of the Soil Mission cards with the 8 Soil Mission objectives

This deck consists of 8 cards presenting the Soil Mission objectives and challenges; to be addressed has been designed by the Soil Mission Secretariat and it depicts the Soil Mission Objectives as presented in the Soil Mission website (DG RTD, 2023).

This is the first of many expected such collaborations where other projects or organisations will be invited to design their own decks or cards to keep expanding the Visioning Cards.



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6. The soil related Nature Based Solutions being researched by NBSOIL

This last deck presents the 6 broad NBS categories that will be explored by NBSOIL as potential solutions to soil related challenges across the four soil use sectors. The NBS are: organic fertiliser, bioremediation, cover crops, paludiculture, forest diversification and blue-green infrastructure (see image 7).



Image 7. Visual aspect of the Nature Based Solutions playing card suit of the NBSOIL Visioning Cards.



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3.3 Future developments: putting the cards into action, exploring new formats and creating new decks through collaboration.

Once achieved this initial set of decks and cards, the focus will be on making sure they are put into action. We have launched an initial survey among the NBSOIL consortium partners to know about how they expect to use them. We are planning to explore potential uses cases within the NBSOIL consortium and with the NBSOIL Academy participants, with other Soil Mission and Horizon Europe projects, and eventually with projects and organisations from all over the world.

As mentioned before, the main user case for this initial version foreseen is to facilitate discussion in a diverse group of stakeholders such as the Soil Health Living Labs to identify soil related challenges in a given areas and potential solutions, with a focus on Nature Based solutions. In this sense, contacts have been made with the NATI00NS and the SOIL projects. A deck containing basic insights regarding Living Labs is under negotiation.

In line with NBSOIL main goal to empower the new generation of Soil Advisors, the main goal is to deliver a final version which is fit to support soil advisory processes and works seamlessly together with the other NBSOIL results.

We also consider that these Visioning Cards can be used in educational activities, to prepare presentations or as a basis to create visually attractive educational games and quizzes. Their simple and distinctive icons can also be used to create mind maps and visualise data, or even as part of labels and posters in exhibitions and events.

In this sense, discussions will happen about new formats and variations in the current design, notably a one-sided digital version integrating all relevant logos and a smaller, plastic-coated, physical version of the cards for field and classroom use. We are also considering enhancing the accessibility of the cards by including QRs to audio description, punching Braille codes in the physician cards or creating versions fit for people with different colour perceptions.

Besides the new cards and decks already mentioned, IUCN has already developed icons for an additional deck introducing the NBS concept through each one of the eight criteria of the Global Standard for NBS, and some of the societal challenges that NBS must address.

The possibilities are multiple, and we are looking forward to collaborating with other Soil Mission and Horizon Europe projects, inviting them to create their own cards and decks, including more specific and locally relevant cards, either under the main decks or by adding completely new ones.



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The feedback received from this initial proof-of-concept version has been incredibly valuable in designing a fully usable final version. It will include new decks that have been highly requested, notably the WRB main orders, the main soil threats, and a specific deck on soil biodiversity.

The main target audience for the final version will be the new Soil Mission projects implementing the Soil Health Living Labs (GOV4ALL, SOILCRATES, iCOSHELLs and Living SOILLs), their use by the NBSOIL Academy participants, plus their adaptation for educational settings together with the projects CURIOSOIL and LOESS.



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4 Other visual materials

In addition to the Visioning Cards other materials have been developed with the objective of maximising visibility and impact for NBSOIL, both during and after the project phase. These are three practical formats designed for promoting the projects at events where NBSOIL is represented: the poster presentation, the roll-up, and the project info sheet (see images 8, 9 and 10).



Image 8. The NBSOIL roll up is the communicative support that combines branding and a very powerful visual identity in a convenient versatile format to take to the events where NBSOIL partners participate.



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Image 9. The NBSOIL poster presents in a very attractive way the six nature-based solutions (NBS) to develop a holistic approach to land management and soil health.



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NBSOIL
Nature-Based Solutions
for Soil Management

Why NBSOIL?

Soil is crucial for sustaining life on earth and combating climate change. However, it tends to take a backstage seat in the policy sphere. NBSOIL will reposition soil health as one of the core topics in food systems discussions. The project is funded under the EU Mission 'A Soil Deal for Europe' contributing to the objective of leading the transition towards healthy soils by 2030.

The project will focus on **six multifunctional NBS** categories to develop a holistic approach to land management and soil health: **organic fertilisers** from locally available biowastes; **cover crops**; **paludiculture**; **forest diversification**; **bioremediation**; and **blue and green infrastructure** in urban and periurban areas on natural, rural, urban and industrial setting contexts.

How will NBSOIL achieve its goals?

The project builds up on existing soil knowledge and available open-source technology to develop a two-year hybrid course to train the new wave of soil advisors. The learning programme aims to train over 300 participants from eight European countries: Poland, Austria, Switzerland, United Kingdom, France, Netherlands, Italy and Spain. The course will be available in the countries' local languages and will be comprised of both online and field sessions.

NBSOIL will also deliver a knowledge base hub, a policy navigator, a set of soil health monitoring tools and a marketplace. The project will contribute as well to achieving the Soil Health Mission by providing soil health living labs facilitators, making soil monitoring and mapping tech user-friendly and inclusive and embedding soil care across all land management and land-related decision-making processes.

Key facts & figures

6 M€ *4.7 M€
Total budget
*EU contribution

4 years
Project duration

14 partners

The project in numbers

1,000
stakeholders engaged

300
soil advisors trained

50
projects start to be developed

Cover crop adopted by
10,000
farmers

20
Soil Health Mission Living Labs

7
European local and regional authorities receiving advice

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www.nbsoil.eu

NBSOILProject

nbsoil-project

Image 10. The NBSOIL info sheet provides summarised information about the project a communicates key data in a concise manner. This rich infographic accompanies key facts & figures and explains how the project will achieve its objectives.

[The NBSOIL info sheet is available here](#)



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5 References

1. EEA, 2017

“Biogeographical regions in Europe” European Environment Agency (EEA). European Environment Agency, 2017, <https://www.eea.europa.eu/data-and-maps/figures/biogeographical-regions-in-europe-2>. Accessed 14 November 2023.

2. EUROSTAT, 2023

“Land use statistics - Statistics Explained.” (EUROSTAT, August 2023), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Land_use_statistics. Accessed 14 November 2023.

3. USDA, 2006

“NRCS Publications - Item Detail.” *NRCS Publications - Item Detail*, United States Department of Agriculture (USDA, 2006). <https://nrcspad.sc.egov.usda.gov/DistributionCenter/product.aspx?ProductID=587>. Accessed 14 November 2023.

4. P. Schad, 2023.

World Reference Base for Soil Resources - Its fourth edition and its history, in *Journal of Plant Nutrition and Soil Science* Volume 186, Issue 2, p 147-236 <https://doi.org/10.1002/jpln.202200417>

5. FAO, 2015

“Soil infographics | Global Soil Partnership | Food and Agriculture Organization of the United Nations (FAO, April 2015), <https://www.fao.org/global-soil-partnership/resources/news/presentations-gsb23/en/c/284443/>. Accessed 14 November 2023.

6. DG RTD, 2023

“EU Mission: A Soil Deal for Europe.” Directorate-General for Research and Innovation – (European Commission, 2023) https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/soil-deal-europe_en. Accessed 14 November 2023.



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