



AGÊNCIA NACIONAL
DE INOVAÇÃO

Portuguese Stakeholder event: Mission Area Soil Health & Food

*Report on the first reflections &
preliminary contributions from the
Portuguese community towards
the mission's codesign*

Background

On the 16th of June 2020, the Portuguese National Innovation Agency (ANI) and the Foundation for Science at Technology (FCT) held an online stakeholders' event on the European Commission's Mission Soil Health & Food. This one hour online information session was held through Zoom and joined together **113 participants** from several Portuguese entities (companies, researchers, higher education institutions, associations and other interface entities), with the objective of presenting the Mission's expected main goals and implementation activities and collect feedback from the Portuguese community.

This report is the result of the discussion held between Teresa Pinto Correia, Board Member and Vice-Chair of the Mission Soil Health & Food, and Portuguese stakeholders attending the online session based on the **presentation of the preliminary Mission report “Caring for soil is caring for life**, presented to the European Commission in May 2020, that presents a set of concrete indicators that the Mission wants to tackle until 2030 in order to reduce soil degradation. The main discussion topics are presented below.

Main discussion topics

- The Mission's goals follow the guidance provided by those of the Green Deal, but no articulation is currently foreseen in terms of calls and budget. It is however possible that activities funded in one of the programs contribute to the goals of the other.
- There will be a mapping of possible living labs (experimental farms) and lighthouses (demonstration farms) in each Member State, per region, including those who exist already. In parallel, there should be a search for available private or public national/regional resources to co-fund these infrastructures, together with the European Commission. It is expected that these entities work as a network within the same regional context, in a complementary way, as they are considered a key element for knowledge sharing and transfer on soil health and management.
- The health status of all soils should be assessed according to the 8 indicators presented in the preliminary report. The main objective should be a harmonization of soil characterization and monitoring in Europe. These indicators should also be adapted to the specific regional context – using the same indicators but different thresholds of what should be considered a healthy soil, depending on the region's soil characteristics.
- The discussion on soil should include all areas, from agriculture to forestry, but a greater focus should also be given to soil management at the periphery of urban areas (i.e. healthy soils for a healthy urban way of life), which is where the majority of European citizens live. An important goal is also to stop soil degradation on the outskirts of urban areas, which can be good for agricultural use (i.e. avoid urban expansion).
- The connection between soil health and food sometimes is not clear. Contrary to other Missions Areas, the Mission Area on Soil Health and Food lacks awareness from European citizens. Only a few know how to classify soils or even identify the type of soil of their region in order to understand, for instance, capacities and limitations to food production. By focusing on soil quality, the Mission intends to look at food as a channel and not as a goal in itself – i.e. food production systems should be more aware of soil quality and act as a certification for soil quality to European consumers.
- Understanding the importance of soil and soil health should start in schools, to increase awareness to soil degradation and pollution. This Mission should thus heavily rely on citizen engagement to increase awareness among European citizens.
- Although a connection is not clearly defined, the Mission can capitalize on past European R&D projects in the area of soil and soil health. However, the Mission's goals for R&D and innovation clearly state that there is a need for integrated knowledge and a clear link between natural sciences and social

sciences, which should be the added value of future Mission funded projects, in order to better support the decision making processes on soil management.

- With 2.8 million areas of contaminated soil in Europe, the solution is not only remediation, but also the implementation of processes for ecological risk evaluation in different Member States. The Mission foresees advisory systems to implement ecological risk evaluation processes in Member States that do not have them, thus maintaining the same level of demand in terms of soil health in all countries. How this is going to be made still needs further discussion, as it is part of the Mission's implementation phase.

During the session, a set of 3 questions was asked to participants¹:

- (1) The first one related with the suitability of the Mission's specific objectives for Portugal, taking into consideration the urgent need to stop soil degradation. The majority of the participants considered that **the Mission's objectives were adequate, although ambitious for Portugal**.
- (2) The second one presented a set of enabling environment conditions for increasing soil health, as included in the preliminary report. When asked about the top 3 priorities for Portugal, participants considered that **public and private sector investments in R&D to foster sectoral innovations, city-region relations and regional food systems and waste management systems**. Changes across food systems, including at transformation, retail and consumer level, to provide the 'market pull' to drive the changes needed and De-risking and guarantee mechanisms for those who engage in transformation towards increased soil health, should be the main areas of top investment in Portugal in order to enable the development of national / regional actions towards soil health.
- (3) Finally, the third one was about the 4 main indicators that participants considered to be most important for monitoring soil health in Portugal. These were: **Soil biodiversity, Presence of soil pollutants, excess nutrients and salts, Soil structure including soil bulk density and absence of soil sealing and erosion, Vegetation cover**.

Final remarks

This online information session was widely praised by participants and the majority considered it of great importance for learning more about the Mission Soil Health & Food and what could be expected for Portugal and Portuguese regions. Further stakeholders' information events such as this one might be organized until the end of the year, following the approval of the Mission's preliminary report by the European Commission. Participants recognized that the way Portuguese citizens look at soil should change and hope this Mission helps to move forward with a greater awareness on soil conditions and degradation, with an emphasis on best practices for soil management. There is an understanding that this Mission proposes a very ambitious program, namely for its R&D and innovation activities, and thus future communications on how the Mission will be implemented are eagerly expected.

¹ For technical reasons we had to relaunch the questionnaire after the event, which was sent to everyone who had registered. These results (27% responses) are presented in Annex III.

ANNEX I: Agenda

Stakeholder Event

Missions in Horizon Europe – Missions Climate, Soil and Cities

Online discussion and information
sessions with the national community

JUNE 16 2020 | 11:00-17:30
VIA ZOOM / COLIBRI
PLEASE FIND THE **AGENDA** ON THE FOLLOWING PAGES

PERIN
PORTUGAL IN EUROPE RESEARCH
AND INNOVATION NETWORK  AGÊNCIA NACIONAL
DE INOVAÇÃO **FCT** Fundação
para a Ciência
e a Tecnologia

15:15 – 16:15
THEMATIC WORKSHOP 2 | MISSION SOIL

15:15-15:20
Opening Remarks
National Innovation Agency (ANI)

15:20-15:35
Presentation of the Mission Soil and its Roadmap


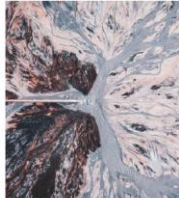








- Teresa Pinto Correia, University of Évora, Vice-President of the Mission Board,
Mission Soil health and food

15:35-16:05
Interaction with stakeholders









16:05-16:15
Conclusions and Final Remarks

[Event website](#)

ANNEX II: MB Presentation

<p>WORKSHOP TEMÁTICO 2</p> <p>MISSÕES NO HORIZONTE EUROPA: MISSÃO SAÚDE DOS SOLOS E ALIMENTAÇÃO</p> <p>Sessão online de informação e de discussão com a comunidade nacional</p> <p>16 de Junho 15:15-16:15</p> <p>A sessão terá início dentro de momentos. Por favor, aguarde com o microfone e o vídeo desligados. Esta sessão irá ser gravada apenas para efeitos de reporte. Os slides apresentados serão disponibilizados após o evento.</p> <p>AGENDA</p> <p>15:15-15:20 Boas-vindas Marta João Fernandes, Agência Nacional de Inovação</p> <p>15:20-15:35 Apresentação da Missão Solo e do seu Roadmap Teresa Pinto Correia, Universidade de Évora, Vice-Presidente do Mission Board, Missão Soil health and food</p> <p>15:35-16:05 Interação com os stakeholders Moderado por Ana Soutinho, Agência Nacional de Inovação</p> <p>16:05-16:15 Conclusões e encerramento Teresa Pinto Correia, Universidade de Évora, Vice-Presidente do Mission Board, Missão Soil health and food</p>	<p>Pedidos para o bom funcionamento da sessão:</p> <ul style="list-style-type: none"> • Por favor, mantenha o microfone e o vídeo desligados. • Quando quiser colocar uma questão, por favor, utilize APENAS o chat e identifique-se com primeiro e último nome e organização que representa • O moderador da sessão irá selecionar as perguntas a colocar ao orador por ordem de chegada e/ou relevância para a sessão. • Se, devido a limitações de tempo, não for possível responder à sua questão, deverá endereça-la a nadine.teles@ani.pt.
<p>https://www.youtube.com/watch?v=57mncg</p>  <p>Soil hosts most of our biodiversity</p>	<p>Missões no Horizonte Europa 16 de Junho de 2020 sessões online de informação e de discussão com a comunidade nacional</p> <p>Horizon Europe MISSION BOARD FOR SOIL HEALTH AND FOOD</p> <p>The Mission: Caring for soil is caring for life</p> <p>Teresa Pinto Correia</p> <p><small>This presentation is delivered by a member of a Horizon Europe Mission Board, which is an informal group of experts set up by the European Commission to provide advice for the identification and implementation of missions in the Horizon Europe programme. The contents of the presentation do not represent the official views of the European Commission, nor do they constitute a commitment of any kind on its behalf.</small></p>
<p>Why do we have to act now?</p> <p>Soils are threatened all over Europe and globally</p> <p>For instance, in the EU:</p> <ul style="list-style-type: none"> • 2.8 million potential contaminated sites • 65-75% of agricultural soils with nutrient inputs at levels risking eutrophication (excessive richness of nutrients) • only 13% urban development on recycled urban land  <p> European Commission</p>	<p>Why do we have to act now?</p> <p>Soils are threatened all over Europe and globally</p> <p>For instance, in the EU:</p> <ul style="list-style-type: none"> • 24% of land with unsustainable water erosion rates • 23% of land with high density subsoil indicating compaction • 25% of land at High or Very High risk to desertification in Southern Europe  <p> European Commission</p>
<p>Why do we have to act now?</p> <p>The costs associated with soil degradation in the EU may exceed 50 billion € per year</p> <p>The process of soil degradation can lead to a collapse of landscapes and ecosystems » societies more vulnerable to extreme weather events, risks to food security and political instability. Land degradation is further exacerbated by the effects of climate change</p>  <p>Soil health may be lost quickly but is slow to restore. The time for action has already been delayed for too long. It is time to act.</p> <p> European Commission</p>	<p>What do we want to achieve with this Mission?</p>  <p>by 2030, at least 75% of all soils in each EU Member State are healthy, i.e. are able to provide essential ecosystem services</p> <p>for healthy food, people, nature and climate</p> <p>This goal corresponds to a 100% increase in healthy soils in Europe in relation to now » 60-70% of soils are unhealthy as a direct result of current management practices !</p> <p> European Commission</p>
<p>Caring for soil is caring for life – what do we want to achieve with this Mission?</p> <p>Tackle the issues that are threatening soils:</p> <ul style="list-style-type: none"> • 100% increase in healthy soils • restore 50% of degraded land • conserve soil organic carbon stocks (e.g. in forests, permanent pastures) • stop soil sealing and increase re-use of urban soils  <p> European Commission</p>	<p>Caring for soil is caring for life – what do we want to achieve with this mission?</p> <p>Tackle the issues that are threatening soils:</p> <ul style="list-style-type: none"> • reduce soil pollution: at least 25% area of EU farmland under organic agriculture, and 5-25% of land with reduced risk from eutrophication, pesticides, anti-microbials, etc. • double the rate of restoration of polluted sites  <p> European Commission</p>

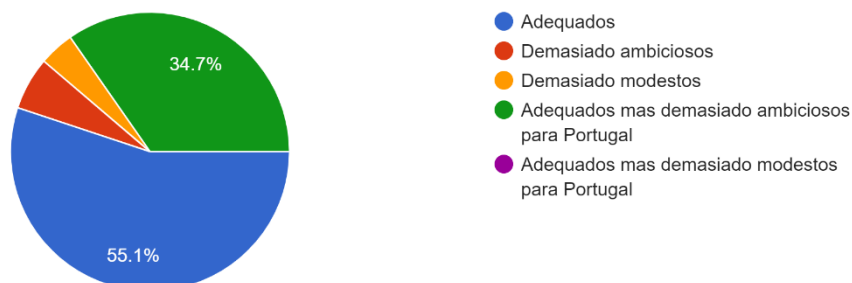
<p>Caring for soil is caring for life – what do we want to achieve with this mission?</p> <p>Tackle the issues that are threatening soils:</p> <ul style="list-style-type: none"> prevent erosion on 30 to 50% of land reduce by 20-40% the global footprint of EU's food and timber imports on land degradation  	<p>The Mission Building Blocks</p> <p>a cross-scale, inter and transdisciplinary Research and Innovation programme;</p> <p>Living Laboratories (experimental farms) and Lighthouses (demonstration farms) within and across farms, forest, landscape and urban settings;</p> <p>Independent advisory services for farmers and foresters</p> <p>a robust soil monitoring programme by each Member State using agreed methodologies & selected indicators;</p> <p>communication and citizen engagement embedded into all activities</p> <p>Supportive Environment: policy framework, consumer attitudes, market mechanisms information platforms</p> 
<p>Cooperation across sectors and citizen engagement at the core of the mission</p> <p>Researchers, land managers, businesses, policy decision makers and citizens working together in</p> <ul style="list-style-type: none"> Living laboratories → to create knowledge Lighthouses → to test and demonstrate solutions <p>Ambition » to establish in the first years of the Mission at least five, preferably 10 living labs and/or lighthouses in each of the regions of the EU. This will result in 1000 – 2000 living labs and lighthouses as incubators and demonstrators of change.</p> 	<p>Research and Innovation (R&I)</p> <p>Knowledge exists within individual disciplines, but there is hardly any integrated knowledge on soil health</p> <p>Research tailored to local/regional circumstances & linked to living labs for more fundamental work.</p> <p>Interdisciplinary teams with a systemic approach working in a transdisciplinary mode.</p> <p>Integration of natural and social sciences at an equal level is crucial.</p>  
<p>Monitoring</p> <p>6 + 2 selected indicators</p> <ol style="list-style-type: none"> 1) Presence of soil pollutants, excess nutrients and salts 2) Vegetation cover; 3) Soil organic carbon; 4) Soil structure including soil bulk density and absence of soil sealing and erosion; 5) Soil biodiversity; 6) Soil nutrients and acidity (pH) which we have matched to individual issues 7) landscape heterogeneity (composition and configuration) 8) area and composition of forest and other wooded lands <p>An unhealthy soil is present if any indicator is below an agreed threshold, defined for that soil type, land use and climate zone</p>  	<p>Enabling Environment</p> <p>CAP new payment schemes, with long term contracts, for more diverse, regenerative and systems-based approaches;</p> <p>De-risking and guarantee mechanisms for those who engage in transformation towards increased soil health;</p> <p>Regulations and taxes that reward goods produced in a soil protective manner;</p> <p>Context specific advisory services to individual land managers</p> <p>Online, easy to use, multiple platforms to access and share knowledge and experiences;</p> <p>Changes across food systems, including at transformation, retail and consumer level, to provide the 'market pull' to drive the changes needed;</p> <p>Public and private sector investments in R&D to foster sectoral innovations, city-region relations and regional food systems, waste management systems.</p> 
<p>Soil health and food – at the right time!</p> <p>Mission area is critical to meet global political commitments such as the Paris Agreement and Sustainable Development Goals</p> <p>And it is highly relevant for new Commission priorities, notably the Green Deal:</p> <p>Farm to Fork and Biodiversity Strategies</p> <p>Land/soil management is relevant to major policy objectives on:</p> <ul style="list-style-type: none"> food and nutrition security climate change mitigation protection of biodiversity reduction of pollution vibrant rural areas  	<p>Steps towards Horizon Europe Strategic Plan & Missions in the Work Programme</p>  
<p>Do you want to know more?</p> <p>Join the mission activities, have your say and spread the message</p> <ul style="list-style-type: none"> EU Survey https://ec.europa.eu/survey/turner/mission-soil-health-and-food Mission soil health and food webpage https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/mission-area-soil-health-and-food_en EIP-AGRI news https://ec.europa.eu/eip/agriculture/news/soils-matter DG AGRI – Soil matters for our future https://ec.europa.eu/info/news/soil-matters-our-future-2019-dec-05_en 	 <p>Obrigado ! Thank you!</p> <p>#HorizonEU #EUmissions #MissionSoil</p> <p>http://ec.europa.eu/horizon-europe</p> <p><small>© European Union 2020. Images and text are for illustrative purposes only. All rights reserved.</small></p>

<p>  </p> <p>No seguimento da apresentação anterior, gostaríamos que respondesse a um breve questionário sobre a Missão*</p>  <p>*As respostas serão processadas de forma anónima</p>	<p>  </p> <p>  <h2>Q&A</h2> <p>Por favor, coloque as suas questões no <i>chat</i> e identifique-se com primeiro e último nome e organização que representa</p> </p>
<p>  </p> <h2>Conclusões e encerramento</h2> 	<p>  </p> <p>WORKSHOP TEMÁTICO 2</p> <p>MISSÕES NO HORIZONTE EUROPA: MISSÃO SAÚDE DOS SOLOS E ALIMENTAÇÃO</p> <p>Sessão online de informação e de discussão com a comunidade nacional</p> <p>16 de Junho 15:15-16:15</p> <p>Muito obrigada pela vossa presença! Para mais questões, por favor contacte nadine.teles@ani.pt</p> 

ANNEX III: Results of the questionnaire launched after the event

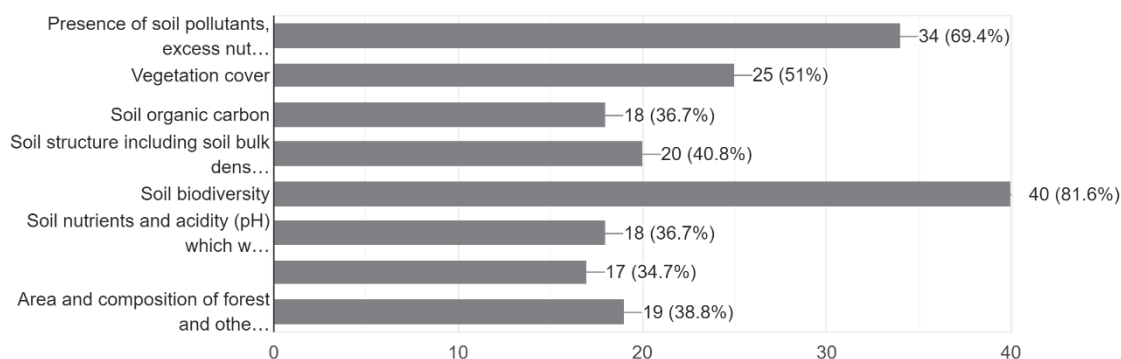
Tendo em conta a urgência em alterar as tendências de degradação dos nossos solos, considera que os objectivos específicos da Missão são:

49 responses



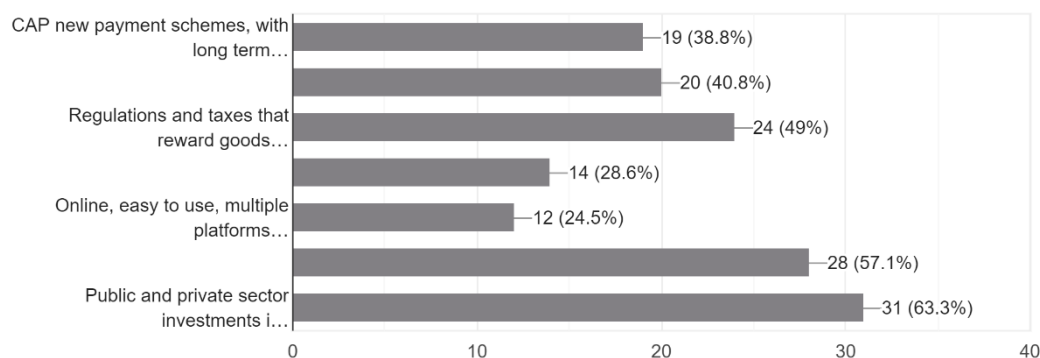
Escolha os 4 indicadores que considera mais importantes para a monitorização da saúde dos solos em Portugal:

49 responses



Das condições listadas como “Enabling Environment”, indique as três que considera serem prioridades para Portugal

49 responses





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