

ESP/19/Report



Food and Agriculture  
Organization of the  
United Nations



# **6<sup>th</sup> Plenary Meeting of the European Soil Partnership**

## **ESP/19/Report**

# **Report of the 6th Plenary Meeting of the European Soil Partnership**

**Provided by the GSP Secretariat**

**Chair: Elena Havlicek, FOEN Switzerland**

**Secretary: Marc Van Liedekerke, European Commission Joint Research Centre**

**FAO Headquarters, Rome, Italy, 28 – 29 March 2019**

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

# Table of Contents

List of Acronyms	VI
1 Opening of the meeting and tour de table	1
1.2 GSP Progress	1
2 ESP Reports	1
2.1 ESP steering committee report	1
2.2 Eurasian Soil Partnership	2
2.3 Alpine Soil Partnership	3
3. Selected National Reports and Information from National Focal Points and Partners	3
3.1 Slovakian Soil Partnership	3
3.2 Italian Soil Partnership:	4
3.3 Portuguese Soil Partnership	4
4. Work Progress	5
4.1 ITPS Activity Report	5
4.2 Information from National Focal Points and Partners (all)	6
4.3 Pillar 1	11
4.3.1 GSP Secretariat	11
4.3.2 ESP Work Progress	11
4.3.3 Discussion and decision making on the way forward	11
4.4 Pillar 2	12
4.4.1 GSP Secretariat	12
4.4.2 ESP Work Progress	12
4.4.3 Discussion and decision making on the way forward	13
4.5 Pillar 3	13
4.5.1 GSP Secretariat	13
4.5.2 ESP Work Progress	13
4.5.3 Discussion and decision making on the way forward	14
4.6 Pillar 4	14
4.6.1 GSP Secretariat	14
ESP Work Progress	14
4.6.3 Discussion and decision making on the way forward	15
4.7 Pillar 5	15
4.7.1 GSP Secretariat	15
	IV

4.7.2 ESP Work Progress	16
4.7.3 Discussion and decision making on the way forward	16
5. European projects and activities (with ESP contribution)	16
5.1 EEA EIONET NRC Soil	16
5.2 DG ENV	17
5.3 ESP at EUROSIL 2020	17
5.4 LAND SUPPORT Project	18
6. Priorities for soil protection in Europe	18
6.1 Agenda 2030 and Land Degradation Neutrality indicators	18
6.2 Soil organic carbon: thresholds and soil structure quality	18
6.3 Rural Network for improvement and dissemination of soil conservation systems among local communities of farmers in France	19
7. Proposal for an ESP declaration	19
8. Way forward	20
Annex I Agenda	21
Annex II Participant list	24
Annex III Letter to the ERC president and the Petition to the ERC	27
Annex IV Report of Israel Activities within the GSP framework – 2018/19	34
Annex V Proposal for a ESP/GSP Declaration	37
Annex VI Letter to the president	40

## List of Acronyms

<b>AlpSP</b>	Alpine Soil Partnership
<b>EASP</b>	Eurasian Soil Partnership
<b>EC</b>	European Commission
<b>ESP</b>	European Soil Partnership
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>GloSIS</b>	Global Soil Information System
<b>GLOSOLAN</b>	Global Soil Laboratory Network
<b>GSOCmap</b>	Global Soil Organic Carbon Map
<b>GSP</b>	Global Soil Partnership
<b>INBS</b>	International Network on Black Soils
<b>ITPS</b>	Intergovernmental Technical Panel on Soils
<b>JRC</b>	Joint Research Centre
<b>RESOLAN</b>	Regional Soil Laboratory Network
<b>SDF</b>	Soil Data Facility
<b>SIS</b>	Soil Information System
<b>SSM</b>	Sustainable soil management
<b>VGSSM</b>	Voluntary Guidelines for Sustainable Soil Management

# 1 Opening of the meeting and tour de table

The 6th Plenary Meeting (PM) of the European Soil Partnership (ESP) was hosted at the Food and Agriculture Organization of the United Nations (FAO) headquarters, Rome, Italy. Ms Sasha Koo-Oshima, Deputy Director, FAO, Land and Water Division welcomed the members of the ESP and proceeded by thanking the representatives of the European Commission (EC) for their support. Special thanks were given to the Russian Federation, the Netherlands, Switzerland and Germany for contributing to the implementation of the Global Soil Partnership (GSP) activities. She highlighted that in the context of promoting sustainable soil management in the European region, this plenary meeting's objectives were to:

- report on the progress made to date;
- address the challenges to go forward;
- identify concrete actions.

She emphasized the need to find solutions to best utilize the limited financial resources in order to keep soils on the global agenda and for achieving a coordinated impact.

Ms Elena Havlicek Chair, Chair of ESP, invited the participants to introduce themselves and a tour de table was made; the list of participants can be found in Annex I – List of Participants.

## 1.2 GSP Progress

Presentation: <https://www.slideshare.net/FAOoftheUN/gsp-updates>

Mr Ronald Vargas, Secretary of the Global Soil Partnership (GSP) gave a brief presentation on the progress of the GSP. He stressed the need for improving the engagement of countries, which is on a voluntary basis, in order to translate the mandates that result from the GSP plenary assembly into action. Mr Vargas highlighted the role of the various Symposia, which serve as key events to determine actions to be taken to address soil related issues. He proceeded by listing the main activities the GSP is coordinating and by stressing the crucial role that regional soil partnerships play for realizing these activities.

# 2 ESP Reports

## 2.1 ESP steering committee report

Presentation (Elena Havlicek): <https://www.slideshare.net/ExternalEvents/the-european-soil-partnership>

Presentation (Carmelo Dazzi): <https://www.slideshare.net/ExternalEvents/towards-the-establishment-of-an-european-research-council-erc-panel-on-soil-science>

Ms Elena Havlicek reported on the activities performed by the ESP Steering Committee between 2018 and 2019. She underscored the fact that this year was marked by fewer but more focused and in depth activities. The steering committee succeeded in consolidating the ESP by successfully increasing the number of national focal points and members. She highlighted that three national soil partnerships were established and that the last report of the European

Academies' Science Advisory Council (ESAC) favorably mentioned both the GSP and ESP by considering the promotion of non-legally binding agreements as a way to catalyze the development of national policies related to soil. Ms Havlicek reported that the ESP was represented during the 21st World Congress of Soil Science 2018 in Rio and during the meeting of the European Environment Information and Observation Network (EIONET) in February 2019. She deemed the cooperation between EIONET NRC Soil and the ESP as positive.

Mr Carmelo Dazzi proceeded by presenting an initiative aimed at establishing a European Research Council (ERC) panel on soil sciences. This initiative started two years ago, and a petition was prepared in collaboration with the chair of the ESP and the chair of the European Confederation of Soil Sciences Societies (ECSSS), which was then sent to the president of the ERC requesting the establishment of a panel specifically dedicated to the field of soil sciences. The establishment of such a panel is envisioned to simplify the process by which the ERC provides grants for research in the field of soil sciences (Annex III).

The need for improving communication and the coordination of activities between the ESP and GSP was stressed. Ms Havlicek invited the participants of the ESP plenary to seek further information about the ESP Steering Committee, from the minutes of previous meetings on the following website: <https://esdac.jrc.ec.europa.eu/networkcooperations/european-soil-partnership>

## **2.2 Eurasian Soil Partnership**

Presentation: <https://www.slideshare.net/ExternalEvents/the-eurasian-soil-partnership>

Ms Gulchekra Khasankhanova reported on the latest activities and milestones of the Eurasian Soil Partnership (EASP).

In the framework of Pillar 1, reports for the promotion of sustainable soil management (SSM) were prepared, opportunities for the integration of the Pillar 1 implementation plan within national programs and policies were extensively reviewed and finally, in cooperation with the International Center for Agricultural Research in the Dry Areas (ICARDA), test sites for the demonstration of successful SSM practices in Uzbekistan were selected.

For the implementation plan of Pillar 2, a website containing information about the EASP was launched (<http://eurasian-soil-portal.info/index.php/en/>) and promotional material was published during the World Soil day. Finally, Ms Khasankhanova highlighted several events that were organized in cooperation with the World Bank during the World Soil Day in Russia.

In the framework of Pillar 3, several research studies on the Economics of Land Degradation in Russia, Belarus and Armenia were implemented and published. A Soil Salinity Management training was performed in Ukraine and a contest of Small Research Projects was published in a peer-reviewed journal. Various online courses for Eurasian partners on Food Security and SLM/SSM were disseminated.



For the implementation plan of Pillar 4 and the establishment of the Eurasian Soil Information System (EurSIS) several training sessions and workshops were undertaken and two articles during the Eurasian GIS conference were published.

For Pillar 5, the establishment of a Eurasian Soil Laboratory Network (EUROSOLAN) through the nomination of the Leading Soil Lab (CINNAO) and the launch of an open call for soil labs was initiated.

## 2.3 Alpine Soil Partnership

Presentation: <https://www.slideshare.net/ExternalEvents/the-alpine-soil-partnership>

Mr Borut Vrščaj reported on the activities of the Alpine Soil Partnership (AlpSP) and the Links4Soils project, which serve to support cross-border cooperation on soil protection in the countries that share the Alps. He introduced the Alpine Convention, an international treaty between the Alpine countries and highlighted that the implementation of a Soil Conservation Protocol of the Alpine Convention so far has been unsuccessful. Mr Vrščaj stressed the need to strengthen soil protection on a local level and to involve stakeholders. He proceeded by introducing the Alpine Soil Platform, which was launched through the Links4Soils projects and that consists of a web node where users can access information about soil, sustainable soil management and communicate with soil experts in the Alpine context.

Mr. Vrščaj emphasized the need to disseminate materials that promote SSM in local languages. A book on best soil management practices and a booklet on soil ecosystem services for Alpine practitioners is currently being drafted. The AlpSP is working on a declaration on sustainable land use and soil protection for the EU Strategy for the Alpine Region (EUSALP).

## 3. Selected National Reports and Information from National Focal Points and Partners

### 3.1 Slovakian Soil Partnership

Presentation: <https://www.slideshare.net/ExternalEvents/national-soil-partnership-slovakia>

Ms Zora Weberova presented the National Soil Partnership of Slovakia and its main achievements.

She informed the participants that during the conference of the Organisation for Economic Co-operation and Development (OECD) held in Bratislava in October 2018, the Slovakian Soil Partnership held a presentation on risk evaluation and management tools in the agri-food sector. She reported that Slovakia is involved in several international projects such as LUCAS 2018, Soil Portal and that the Slovakian Soil Partnership participated in a WRB 2014 training course held in Hungary in June 2018. A workshop involving children and an event was held during the annual meeting of the *Societas pedologica slovacica* during the World Soil Day celebrations. Ms Weberova informed the ESP members that Slovakia was involved in a workshop on trans-boundary comparison of national contributions to the Global Soil Organic Carbon Map (GSOCmap) between

Austria, Slovakia and Czechia, and that Slovakia was represented during the last international meeting of EIONET NRC Soil.

### **3.2 Italian Soil Partnership:**

Presentation: <https://www.slideshare.net/ExternalEvents/national-soil-partnership-italy>

Ms Anna Benedetti provided a brief history of the Italian Soil Partnership (ISP) and reported its main activities. A scientific permanent working group has been established within the Italian Society of Soil Science and a thematic web page about the ISP ([www.Scienzadelsuolo.org](http://www.Scienzadelsuolo.org)) was prepared. Ms Benedetti emphasized that the ISP faced great financial limitations and that all activities were performed on a voluntary basis. Under the framework of Pillar 1, Ms Benedetti informed the participants that the Voluntary Guidelines for Sustainable Soil Management (VGSSM) were translated into Italian and that 10,000 copies were disseminated throughout Italy. For Pillar 2 the ISP was involved in coordinating an event with students and international and national soil societies, aimed at familiarizing students with the field of soil sciences. An event on sustainable fertilizer use directed at a fertilizer organization was organized and several materials in the form of brochures and comics were disseminated during these events. For the activities related to Pillar 3, Ms Benedetti reported that the ISP participated actively in the Symposium on Soil Pollution that was represented during RIO18. Regarding Pillar 5, Ms Benedetti highlighted that, as of now no reference laboratory has been nominated. Further details regarding the activities related to Pillar 4 were presented by Mr Eduardo Costantini (ESP chair of Pillar 4).

During the discussion it was specified that an English version of the aforementioned comic book on soil can be found on the website of the Spanish Soil Society ([https://iuss.boku.ac.at/index.php?article\\_id=560](https://iuss.boku.ac.at/index.php?article_id=560)).

### **3.3 Portuguese Soil Partnership**

Presentation: <https://www.slideshare.net/ExternalEvents/national-soil-partnership-portugal>

On behalf of Portugal (Mr Antonio Perdigao) Ms Elena Havlicek presented the Portuguese Soil Partnership (PSP). Ms Havlicek highlighted that the PSP was the first national partnership to be implemented in Europe (2014), and that it succeeded in actively involving farmer associations as members. Ms Havlicek highlighted that PSP is currently coordinating activities to establish a national soil information system to be compatible with GloSIS. Also a seminar on SSM was organized and a report in English was prepared. Ms Havlicek stressed the important role that national soil partnerships play in preparing, translating and disseminating awareness raising material and publications, such as the VGSSM, in other languages to reach stakeholders.

## 4. Work Progress

### 4.1 ITPS Activity Report

Presentation: <https://www.slideshare.net/ExternalEvents/activity-report-of-the-itps>

Ms Rosa Poch, chair of the Intergovernmental Technical Panel on Soils (ITPS), presented the new ITPS, which was appointed in June 2018, and reported on its recent activities. She highlighted the fact that the ITPS now has a vice chair position, which was appointed to Mr David Allen Lobb. The main activities and products of the ITPS were presented:

- Revision of the final draft of the Technical Guidelines for Assessing, Mapping, Monitoring and Reporting on Soil Pollution by July 2019
- Organization of the Global Symposium on Soil Erosion 2019
- Revision of the outcome documents of the Global Symposium on Soil Erosion
- Revision of the concept note and technical specifications of the Global Soil Erosion Map (GSERMap)
- Support for the establishment of national soil erosion state profiles
- Support for the preparation of a Policy brief for policy-makers and of technical guidelines for policy implementation
- Support for the proposal of a methodology of a cost-benefit analysis in regard to soil erosion
- Review of the concept notes of the global maps of Soil Salinity, Soil Erosion and Soil Organic Carbon Sequestration Potential
- Review of the Technical Manual on Soil Organic Carbon Management
- Support for the preparation of a Protocol for the assessment of sustainable soil management
- Review of the concept note for an Economical Assessment on Sustainable Soil Management
- Review of the Soil Doctors Program Material
- Review of the concept note of the Global Assessments and the report on the Global Status of Black Soils
- 2nd Status of the World Soil Resources Report

Concerns were raised regarding the ambitious number of activities. The need for a more thorough validation of the products and the involvement of a broader scientific community alongside the ITPS was emphasized. It was suggested to improve the way experts are selected to be part to the ITPS to better match the activities of the GSP and to create more specific working groups for each task.

The necessity to coordinate the launch of products with other international activities to increase their visibility and implementation, was raised. It was suggested to increase the communication and cooperation between the ESP and the ITPS.

Finally, the need to improve the communication with the national focal points was stressed. Concerns were raised regarding the fact that the national focal points have proven unresponsive when contacted by the GSP secretariat.

Ms Masson further emphasized that focal points are not given enough time to mobilize resources, once a task has started.

## **4.2 Information from National Focal Points and Partners (all)**

### **Austria - Andrea Spanischberger**

- A new federal waste management plan was published in 2018 that includes rules for the re-cultivation of soil
- A new law on the remediation of contaminated sites was elaborated which includes a new funding scheme to reuse brownfield sites
- A joint declaration on sustainable soil management was accepted by the political general assembly of EUSALP on the 20th of November 2018 in Innsbruck. The declaration could gather the support of 20 regions and 6 Alpine states
- In cooperation with the JRC, Austria will conduct additional analyses of soil and detailed soil and site descriptions at selected sites covered by the LUCAS program. The aim of this research project is to improve the comparability of LUCAS results with data that are available on the national level. Based on the additional soil and site information, possibilities and limits of the use of LUCAS data for modelling purposes will be assessed.
- A new Austrian digital soil map was published in 2019 (<https://bodenkarte.at/#/center/13.804,47.499/zoom/8>)
- At the end of March 2019 a farmer association with the name “association for climate-adapted and constructive agriculture” was founded

### **Slovenia - Helena Matoz**

- A seminar on soil pollution was organized in 2018
- An e-booklet in Slovenian on the relationship between soil and the environment was published
- A new national environmental program with a part of it focused on soil degradation is being prepared by the Ministry of the Environment and Spatial Planning

**Latvia - Laura Liepina**

- Latvia is working on the creation of a national soil information system in agriculture. The Soil information system will be built on the soil database of the State Plant Protection Service.
- A set of representative agrochemical research data is being developed in agricultural lands (5000 ha/year), performed by the State Plant Protection Service.
- The project “Enhancement of sustainable soil resource management in agriculture” under Norway's Financial Mechanism 2014 – 2021 is currently underway with the aim of improving national soil data for the development and implementation of climate change policy in agriculture. The project promoter is the Ministry of Agriculture of the Republic of Latvia. The project partners are the University of Latvia, State Plant Protection Service, State Forest Research Institute SILAVA, and Norwegian Institute of Bioeconomy Research NIBIO.

**Planned activities:**

1. Improvement of reliable, country-specific soil information in agricultural land:
  - a. Update of historical soil database,
  - b. Development of national soil classification system,
  - c. Development of soil mapping methodology,
  - d. Mapping of peat soil distribution,
2. Establishment of national soil carbon monitoring system,
3. Improvement of national GHG emission calculation system.

**Estonia - Alar Astover**

- A soil policy working group was established by the Ministry of Agriculture
- The communication and cooperation between the agricultural and environmental ministries was improved
- The link between soils and rural development plans was strengthened

**Poland - Grzegorz Siebielec**

- An evaluation of the common agricultural policy (CAP) effects on soil quality was performed
- A new soil monitoring program involving peatlands was initiated
- A national soil platform was launched
- An event involving several NGOs, soil scientists and administrative bodies on soil ecosystem services was organized
- A side event on black soils during the COP24 in Katowice was organized

**Denmark - Greve Mogens Humlekrog (GSP representative)**

- No official national focal point has been appointed
- A national soil erosion map was published in 2019
- Denmark is currently involved in mapping its peatlands

- The effects of limiting the use of peatlands for agriculture is currently being assessed with regards to CO2 emissions
- A soil monitoring system in agricultural land with a 7x7 km grid was established

**Germany - Ingeborg Bayer** on behalf of the German focal point

The main activities in Germany concerning soil are:

- To carry out the Agricultural Soil Inventory and the National Forest Soil Inventory at about 5000 locations on an 8x8 Km grid/raster as permanent monitoring programs.
- The results will be used for the greenhouse gas emission reporting (LULUCF) and, in the case of forest soils, for the NEC Directive reporting. The inventory data make it possible to develop strategies about management's influences on carbon storage in soils.
- To develop a concept for a Biodiversity Monitoring which also includes organisms in soils.
- To achieve the goal of the Federal Government's sustainability policy to reduce land consumption. By 2030, the increase in settlement and traffic areas is to be reduced from more than 60 hectares (2016) to less than 30 hectares per day.

Additionally, Ms Bayer stated in a follow-up written communication that Germany does not support the following points of this ESP meeting:

The proposal of the GSP-secretariat for collecting data from member countries by the GSP and run models on such data to predict carbon sequestration potentials is not appropriate for the German case, because:

- data protection policies do not allow Germany to publish or hand over georeferenced datasets. Without exact georeferences, models won't be able to be run.
- soil processes need to be modeled specifically for land use systems, land use histories and site conditions of the location. Thus, Germany think that one common model for very different regions is not a reasonable approach.
- all member states should have the opportunity to evaluate and publish their datasets. At the last GSP PA meeting, participants were told that national policy of data will be taken into account.

Thus, Germany proposes that the GSP- group working on the respective model, hands out the model (adoptable for site conditions (soil, climate), land-use systems and land use history and management) to the data holding institutions and receives the maps which are to be published by the GSP.

**Netherlands - Hans Brand**

- A national soil strategy focused on research education and best practices (through a letter to Parliament) was presented by the Minister of Agriculture, Nature and Food Quality; as follow-up of this, a Soil Programme (focusing on awareness raising, education, training, research, extension, etc. to famers and the broader society) was developed;

- A presentation of a new vision for promoting sustainable agriculture: in a letter to Parliament (see Annex VI); a vision paper on Dutch agriculture ('Agriculture, nature and food: valuable and connected' ) by the Minister of Agriculture, Nature and Food Quality. The vision paper on Dutch agriculture can be retrieved from the following link: <https://www.netherlandsworldwide.nl/documents/publications/2018/11/19/agriculture-nature-and-food-valuable-and-connected>

#### **Turkey - Hakkı Emrah Erdoğan**

- Turkey is currently cooperating with FAO in a technical support program aimed at establishing a national program on soil
- Efforts are being made to establish a national soil information system
- A national mechanism to develop a subsidy system for sustainable soil management is being developed
- In cooperation with FAO a proposal for the implementation of the VGSSM is being prepared

#### **France - Marie Françoise Slak**

- A national plan for biodiversity was published in 2018 [http://www.ecologique-solidaire.gouv.fr/sites/default/files/18xxx\\_Plan-biodiversite-04072018\\_28pages\\_FromPdf\\_date\\_web\\_PaP.pdf](http://www.ecologique-solidaire.gouv.fr/sites/default/files/18xxx_Plan-biodiversite-04072018_28pages_FromPdf_date_web_PaP.pdf) The plan includes measures for soil conservation (quantitative and qualitative)
- Celebration of the WSD <https://www.afes.fr/actions/journee-mondiale-des-sols/>
- Journées d'étude des sols Rouen, July 9th-12th (agenda : <http://cen-normandie.fr/jes2018/programme>)
- De la connaissance de la biologie des sols et de ses fonctions, à son pilotage Dijon Octobre 2018 <https://www6.inra.fr/ciag/CIAG-Environnement/Fertilite-biologique-des-sols>
- Publication of a guide <https://www.ademe.fr/guide-determination-valeurs-fonds-sols-echelles-dun-territoire-dun-site>
- Several publications including "Les sols au cœur de la zone critique" Juin 2018 Coordinateur de la série : Christian Valentin ; "Sols en danger : réduire l'artificialisation" juillet 2018 coordination Dominique DRON et André-Jean GUÉRIN [http://www.annales.org/re/2018/re\\_91\\_juillet\\_2018.html](http://www.annales.org/re/2018/re_91_juillet_2018.html) ; "Atlas français des bactéries du sol" Décembre 2018 <http://www.inra.fr/Chercheurs-etudiants/Agroecologie/Toutes-les-actualites/Atlas-francais-des-bacteries-du-sol>

#### **Dietmar Müller-Grabherr - Common Forum on Contaminated Land in Europe**

- The Common Forum started focusing on diffuse pollution and is planning on publishing a policy brief by the end of 2019

#### **Belgium - Martien Swerts**

- Belgium was involved in GLOSOLAN and INSII. Active participation to the meetings and information exchange

- The Global Survey on soil Pollutions ([http://www.fao.org/global\\_survey\\_on\\_soil\\_pollution/](http://www.fao.org/global_survey_on_soil_pollution/)) created by the GSP is currently being distributed and filled out
- An app called “Virtual Augering” was launched, providing soil, geological and hydrogeological information for locations <https://www.dov.vlaanderen.be/page/virtuele-boring>
- Belgium is a partner of the EJP proposal
- The effect of the introduction of the CAP policy on erosion risk is being evaluated
- Belgium is currently involved in many soil projects (e.g. one aimed at monitoring carbon contents in the urban environment)

#### **Switzerland - Elena Havlicek**

- A Report on the Swiss soil state and evolution was published. The main findings suggest that Switzerland does not have a sustainable approach with regards to soil related issues
- A Synthesis report from a national research project on the sustainable use of soil as a resource was published. The main findings suggest the necessity to renounce the use of peatlands for agriculture
- A new Swiss soil strategy is in its final stages and is envisioned to be approved by the plenary council this year
- A popular initiative to strengthen soil protection in spatial planning was held
- Switzerland has been active at increasing awareness raising on soils

#### **Israel - Roey Egozi** (written contribution before the meeting)

- The beta version of the Israel Soil Archive was launched <https://gisproxy.mgtech.co.il/rd/aken>
- Israel is working on increasing the data set of soil samples with soil organic carbon information
- Dr. Ellen Graber, Head of the Department of Soil Chemistry, Plant Nutrition and Microbiology of the Volcani Center, Agricultural Research Organization, Israel, was selected as one of the five European Expert Advisors to the ITPS
- Israel first official Soil Day was organized in 2018; it covered two main sections: one on soil health, and one on general issues regarding soil conservation activities in Israel
- Israel representatives (Dr. Dafna Disegni and Dr. Roey Egozi) continue to be involved in the preparation for the Global Symposium on Soil Erosion 2019
- A detailed report regarding Israel's activities was submitted after the meeting (refer to Annex IV)



### 4.3 Pillar 1

#### 4.3.1 GSP Secretariat

Zineb Bazza, GSP chair of Pillar 1, reported on the work progress of the GSP relative to Pillar 1. The International Code of Conduct for the Sustainable Use and Management of Fertilizers reached a consensus and will be presented at the next FAO conference. A protocol for the assessment of SSM and a concept note for a study on the economic benefits of SSM are currently being refined in cooperation with the ITPS and will be presented at the next Plenary Assembly for endorsement. After the finalization and the endorsement of the Protocol to assess SSM, the creation of a database with the best SSM practices is foreseen. In a second step a map on successful SSM case studies will be prepared.

In regards to the International Network of Black Soils (INBS), Ms Bazza informed that a Symposium on Black soils was held in September 2018 in Harbin China. During the Symposium, a work plan was defined and a consensus on the definition of Black Soils was reached. Delegates from 18 black soil countries/regions signed the **Harbin Communiqué**.

Ms Bazza reported on the progress of the technical manual of SOC management, which was reviewed by several scientific bodies in addition to the ITPS and is currently being finalized by the GSP secretariat, to be presented at the 7th GSP Plenary Assembly.

In regard to the database on SSM, it was suggested to explore the possibility of cooperating with UNCCD, which in cooperation with World Overview of Conservation Approaches and Technologies (WOCAT) is establishing a similar database.

#### 4.3.2 ESP Work Progress

Presentation: <https://www.slideshare.net/ExternalEvents/esp-work-progress-on-pillar-1>

Ms Suhad Saleh, on behalf of Violette Geissen (chair of the ESP Pillar 1), reported on the outputs of Pillar 1 to the ESP plenary members. Ms Saleh presented the results of a small project (funded by the European Commission) for the development of a database that is currently filled with information on EU funded national and international projects on SSM entered. The National focal points were asked to provide information on projects that are currently ongoing in their countries and to share which best soil management practices per soil threat have been identified within their countries and climate zones. Maps of successful case studies on SSM and a short report based on the main findings and conclusions from these projects will be prepared in a subsequent step. Several experts from the SSM were contacted and an informal network was established. Ms Saleh stated that activities in cooperation with this network are foreseen, but that their realization is currently impeded by financial limitations.

#### 4.3.3 Discussion and decision making on the way forward

Concerns regarding the applicability of the database of EU funded projects on SSM were raised. It was further discussed whether an inventory of best practices by farmers on SSM should be made instead.

Ms Havlicek stressed that the main objective of this project is to adapt the VGSSM to a European context and to produce technical guidelines based on applied research.

Ms Masson highlighted that approaching farmer associations for compiling SSM practices was ultimately excluded, due to the insufficient number of said associations involved in projects dealing with SSM.

It was suggested that the activities related to the inventory of EU funded projects on SSM may be linked to the activities of the GSP Pillar 3. Finally, it was proposed that more categories should be included in the inventory in order to increase its potential applicability and to ease the evaluation of the effectiveness of these projects.

## **4.4 Pillar 2**

### **4.4.1 GSP Secretariat**

Presentation: <https://www.slideshare.net/FAOoftheUN/gsp-pillar-2>

Ms Lucrezia Caon (GSP Secretariat) presented the activities of Pillar 2 of the GSP that are relevant for the European region. She introduced SoiLEX, an online platform dedicated to soil related legislation, which will be launched in the next months, and invited the ESP national focal points to review, update and promote it. Ms Caon presented the Global Soil Doctors program, dedicated to increasing extension services, and she invited the ESP members to be actively involved by reviewing the educational material, by supporting the training sessions and/or sponsoring the program.

Finally, she requested the ESP members to review the concept note for EduSoil, an e-learning platform on soil sciences and to contribute by providing teaching material.

Ms Isabelle Verbeke reported on the activities related to World Soil day, the third Glinka World Soil Prize and on the newly introduced World Soil Day prize. She invited the ESP members to disseminate information about these awards.

### **4.4.2 ESP Work Progress**

Presentation: <https://www.slideshare.net/ExternalEvents/esp-work-progress-on-pillar-2>

Mr Arwyn Jones presented the outputs of Pillar 2. He highlighted that soil related issues need to reach a broader audience and that the events organized during World Soil Day within Europe are from his perspective too technical. The presentation focused on developments in relation to the six recommendations passed from the GSP Pillar 2 Action Plan. Mr Jones presented the multitude of soil related activities aimed at raising awareness that are currently underway at the European level and commented that there is a need to better coordinate these activities in order to scale up their impact. He addressed the lack of funding as a major limitation. He suggested that the composition of the working groups is too biased towards soil scientists and that there is a need for experts in finance, in public procurement and from advisory services. Mr Jones

stressed the need to work in a more coordinated manner and proposed that the ESP should define its activities based on one soil theme, but unlike the GSP, in a two year cycle.

#### **4.4.3 Discussion and decision making on the way forward**

During the discussion the possibility of concentrating activities around one theme for two years was explored.

Mr Vargas stressed the fact that a two year cycle would be incompatible with the way the UN system schedules its events, which is on a yearly basis. The need for all regions to coordinate their activities (especially during World Soil Day) to increase visibility on social media was raised. It was suggested to increase the presence and visibility of the ESP on various social platforms. Ms Havlicek also was more in favor of slowing down to a two-year cycle and going more in-depth when dealing with one theme.

### **4.5 Pillar 3**

#### **4.5.1 GSP Secretariat**

Presentation: <https://www.slideshare.net/FAOoftheUN/gsp-pillar-3>

Ms Natalia Rodriguez Eugenio presented the progress of Pillar 3 of the GSP. She informed the ESP members that regional chairs were contacted to initiate the establishment of an online database of soil research projects and programs, and soil science higher education programmes. A questionnaire is to be prepared to support the selection of relevant actors to populate the database. She acknowledged that the efforts performed by the Pillar 1 of the ESP regarding the launch of a database on SSM projects are relevant to this activity and additionally invited the ESP members to provide some proposals regarding the name of the database.

Ms Rodriguez Eugenio proceeded by presenting the follow up activities to the Global Symposium on Soil Pollution. A questionnaire for the assessment of the global status and regional trends of soil pollution was prepared and the ESP members were asked to participate and to disseminate this survey. Ms Rodriguez Eugenio invited the ESP members to participate in the coming regional workshops to discuss and agree on recommendations and conclusions regarding soil pollution. Finally, the ESP members were requested to review the final technical report by the first half of 2020. She stressed the importance reaching a consensus on the recommendations on soil pollution, as the final technical report will be presented during the fifth meeting of the UN Environment Assembly (UNEA 5).

#### **4.5.2 ESP Work Progress**

Presentation: <https://www.slideshare.net/ExternalEvents/esp-work-progress-on-pillar-3>

Ms Suhad Saleh presented on behalf of Mr. Coen Ritsema and Mr. Gergely Tóth (both ESP co-chairs of ESP pillar 3), the current outputs in relation to the 5 recommendations of the ESP Pillar 3. Ms Saleh highlighted the need for a more holistic approach in regard to soil research to reach

relevant stakeholders such as policy makers and farmers. She emphasized that Pillar 3 has had limited success in achieving some of its goals due to the lack of funding.

#### **4.5.3 Discussion and decision making on the way forward**

Ms Josiane Masson informed that the EU has an inventory of soil related policies that is relevant for the activities related to soil pollution. The need to improve the mobilization of funds was stressed. Mr Costantini emphasized the fact that there is a gap between the GSP activities and the ESP within all Pillars and that there is a need to improve communication among the chairs of the pillars and the regional working groups. Concerns regarding the fact that there is no link between the activities of Pillar 3 within the ESP and the GSP were raised, however, Ms Rodríguez explained that for populating a global database on soil research it is needed to start at the regional level and hence, efforts done so far by the ESP will be of paramount importance to get a high-quality global product.

### **4.6 Pillar 4**

#### **4.6.1 GSP Secretariat**

Mr Yusuf Yigini presented the activities of the Pillar 4 of the GSP. The presentation focused on the progress on the realization of GloSIS, the next global soil maps and a major update of the GSOCmap planned for the coming months. Mr Yigini highlighted the need for improving the composition of the working groups to facilitate the development of technical specifications for the upcoming global maps. He informed the ESP plenary members that a proposal will be made during the next plenary assembly to have a member of the Digital Soil Mapping Working Group of the IUSS become a formal member of the Pillar 4 working group.

Ms Rosa Corona Cuevas reported on the progress made so far in regard to creating a Global map on carbon sequestration potential (GSOCseq). After a first round of review, several concerns regarding the technical specifications were raised and therefore it was decided to postpone the launch date and to establish a GSP SOC advisory group, composed of top experts on SOC modelling, in order to develop an improved approach.

#### **4.6.2 ESP Work Progress**

Presentation: <https://www.slideshare.net/ExternalEvents/esp-work-progress-on-pillar-4>

Mr Edoardo Costantini presented the outputs of Pillar 4 for 2018 and the activities planned for 2019.

He highlighted the concerns raised by the member countries in regard to the number of Pillar 4 activities planned for 2019 and that it was decided to focus on cross-border/bilateral activities, in particular, to update the GSOCmap. Several activities performed in cooperation between the

European Joint Programme (EJP), ESP, JRC and the GSP were presented. Mr Costantini emphasized that efforts at increasing the collaboration between ESP and the EJP and national institutions only partially succeeded. He stressed that since the JRC is indirectly also part of the EJP Soil, the collaboration between countries of the EJP Soil, and between them and the JRC, could represent a big step forward in the creation of a distributed European soil data service in the next years.

#### **4.6.3 Discussion and decision making on the way forward**

During the discussion the challenge in selecting the most appropriate land cover to model potential carbon sequestration was highlighted. Mr Costantini informed that the EJP will launch an initiative about the collection of data on soil management, including data on irrigation, which is currently limited.

Due to time constraints Ms Elena Havlicek asked the ESP members to submit any remark or question in a follow up email.

### **4.7 Pillar 5**

#### **4.7.1 GSP Secretariat**

Presentation: <https://www.slideshare.net/FAOoftheUN/gsp-pillar-5>

Mr Rainer Baritz presented the activities and the major challenges in realizing the implementation plan of the GSP Pillar 5. It was highlighted that several regions have expressed the need for a revision of the FAO Guidelines for Soil Description and for the introduction of a Universal Soil Classification system. He informed that the International Union of Soil Sciences (IUSS) is active in that regard, but that the introduction of a universal classification is currently not plausible.

Mr Baritz emphasized that the introduction of a Universal Soil Classification system could greatly support the realization of GloSIS and harmonized soil indicators, needed for reporting on the SDGs and global soil statistics. He stressed the need for improving the collaboration among the global and regional pillar working groups. The focus of the GSP should be shifted from the number of products to consolidating the working groups, by improving the outreach of relevant experts and increasing their participation level.

Ms Lucrezia Caon proceeded by presenting the activities related to the Global Soil Laboratory Network (GLOSOLAN) for the harmonization of soil laboratory methods, procedures and data, and invited ESP national focal points to decide whether they would like to establish their own Regional Soil Laboratory Network (RESOLAN) or if they would like to work in GLOSOLAN together with Eurasia. No consensus was reached during the discussion. It was concluded to allow European laboratories to join the launch meeting of RESOLAN-Eurasia and that the final decision will be taken during the meeting. The GSP Secretariat asked the ESP participants to disseminate information about GLOSOLAN and its activities in the region. Finally, it was suggested to strengthen the link between GLOSOLAN and other Pillar 5 activities when working on the harmonization of soil indicators.

#### 4.7.2 ESP Work Progress

Mr Hakki Erdogan presented the outputs of Pillar 5 of the ESP. He highlighted that the main objective of the ESP's Pillar 5 was to develop an overarching mechanism for globally consistent and comparable harmonized monitoring for soil related policies. Mr Erdogan invited the ESP members to get involved in the establishment of a working group to contribute to a Universal Soil Classification and to the creation of global soil information standards, to be called SoilML, that would allow access and use of data across a broad range of international initiatives (such as GEOSS and INSPIRE).

#### 4.7.3 Discussion and decision making on the way forward

The need for globally harmonized data on soil was discussed and reaffirmed in regard to providing comparative information to assess the progress on the SDGs. The ESP members requested more background information on whether two independent regional laboratory networks, one for Europe and one for Eurasia, should be established. Mr Baritz highlighted that Eurasia could potentially benefit from being part of one European RESOLAN and suggested that a document should be prepared, summarizing how the regions could profit from having one or two regional laboratory networks.

Ms Caon agreed to provide the requested background information to the national focal points in order to reach a conclusive decision.

## 5. European projects and activities (with ESP contribution)

### 5.1 EEA EIONET NRC Soil

Presentation: <https://www.slideshare.net/ExternalEvents/eea-eionet-nrc-soil>

Mr Rainer Baritz provided some background information on the European Environment Agency (EEA) and its partnership network EIONET. The presentation focused on clarifying the role of EEA within the governing body of the ESP.

The discussion focused on the indicators for a global assessment on the progress of the SDGs related to soil. The challenges associated with defining such indicators to quantify soil degradation were highlighted. The importance of conducting assessments, notwithstanding the limitations associated with retrieving comparable data on soil conditions, was underscored. Concerns, especially in the context of soil erosion, about being consistent when reporting on the condition of soils, while at the same time improving how soil erosion is quantified, were raised.

Potential synergies between the ESP and EIONET were explored. Mr Baritz informed the ESP members that a template for countries is being prepared to provide their own summary assessment on soil condition. Simultaneously, a team of experts for different domains is being

selected. Mr Baritz stated that the ESP, through its network, can be a valuable asset in helping to realize these two activities and in promoting them.

Mr Arwyn Jones highlighted the need to work in close cooperation with Pillar 4 and 5, since the ESP activities related to the harmonization of data are relevant for the realization of an extensive assessment of soil condition within Europe.

## 5.2 DG ENV

Presentation: <https://www.slideshare.net/ExternalEvents/dg-env-138663184>

Ms Josiane Masson, representative of the European Commission as focal point for the European Union, presented the European Union's (EU) direct contributions to the ESP and GSP. For the third financing phase 2019-2020, the DEVCO – GPGC programme, sub-delegated to DG ENV, mobilized 150K euros for the following ESP activities:

- Support for the secretariat of the ESP and the contract to Wageningen University & Research (Pillar 1)
- Partial support for the summer school organized by the JRC (Pillar 2)
- Support activities for the harmonization of data (Pillars 4 and 5)

Ms Masson stressed that a new strategy for funding needs to be devised. She invited the ESP members to consider the possibility of financially contributing to support the ESP activities. She suggested to highlight the ESP, when organizing events, especially leading up to the World Soil Day.

As a means to mobilize resources, Ms Masson highlighted that HorizonEurope (the follow-up of Horizon 2020) will represent a great opportunity to fund soil related research. Due to the fact that the GSP and ESP cannot apply directly, it was proposed to the ESP members to apply singularly to fund local projects that are in line with the implementation plans of the ESP and GSP.

## 5.3 ESP at EUROSIL 2020

Presentation: <https://www.slideshare.net/ExternalEvents/esp-at-eurosoil2020>

Ms Elena Havlicek, on behalf of Pascal Boivin, presented the current progress on the preparation of the EUROSIL 2020 congress. She highlighted that the congress will not only focus on soil sciences but will also include other topics revolving around different soil related SDGs. During this event the ESP will participate by launching the new Soil Atlas of Europe.

Ms Havlicek invited the ESP members to suggest additional ways to contribute and be represented during the congress.

Mr Peter de Ruiter suggested to involve the European ITPS members during the scientific sessions. Ms Havlicek proposed that the ESP should take a lead in organizing a session on policies.

The need to involve more people from governmental agencies and farmer associations in the context of the SDGs during EUROSIL 2020, which historically was solely centered around technical topics, was highlighted.

Mr Borut Vrščaj emphasized the fact that this event is a great opportunity to increase the visibility of not only the ESP and GSP, but also of the sub-regional and national soil partnerships.

It was concluded to contact the national focal points in a follow up email to provide more background information and to select ESP members that would be willing to take up the responsibility of organizing sessions during the congress.

## 5.4 LAND SUPPORT Project

Presentation: <https://www.slideshare.net/ExternalEvents/landsupport-project>

Mr Fabio Terribile presented the Land Support Project, a project aimed at developing a web-based, open-access GeoSpatial Decision Support System to support sustainable agriculture and forestry, evaluate trade-off between land uses and contribute to the development and implementation of land use policies in Europe. It was suggested to seek possible synergies between the ESP and this initiative. Due to time constraints the ESP members were asked to submit any remarks or questions in a follow up email.

## 6. Priorities for soil protection in Europe

### 6.1 Agenda 2030 and Land Degradation Neutrality indicators

Presentation: <https://www.slideshare.net/ExternalEvents/agenda-2030-and-land-degradation-neutrality>

Ms Kirstin Marx, technical representative of the German Environment Agency (UBA), presented the outputs and activities of UBA in regard to the Land Degradation Neutrality (LDN) target. The presentation revolved around the progress made so far in defining comparable sub-indicators for reporting on SDG indicator 15.3.1

### 6.2 Soil organic carbon: thresholds and soil structure quality

Presentation: <http://www.fao.org/global-soil-partnership/regional-partnerships/europe/presentations-esp-march-2019/en/>

Ms Elena Havlicek, on behalf of Pascal Boivin, presented the role of Soil Organic Carbon (SOC) in relation to sustainable soil management. The presentation focused on the relationship between organic matter (OM) and clay content to develop a comparable indicator to assess whether a soil is depleted in terms of SOC and structural quality. Ms Havlicek informed the ESP members that there is potential in using the OM/Clay index for result-oriented management schemes, where farmers are provided subsidies not based on whether a soil sustainable management practice is implemented, but whether OM is increased in relation to the soil's clay content.



### **6.3 Rural Network for improvement and dissemination of soil conservation systems among local communities of farmers in France**

Presentation: <https://www.slideshare.net/ExternalEvents/rural-network-for-improvement-and-dissemination-of-soil-conservation-systems-among-local-communities-of-farmers-in-france>

Mr Gérard Rass presented a project led by the farmers' Association for the Promotion of Sustainable Agriculture (APAD), funded by the EC and supported by the French Ministry of Agriculture (DGPEE). The actual network of APAD local groups gathers around thousand individual farmers, all engaged into improving their farming systems towards soil conservation and restauration farming systems. This new project aims at bringing together most of other networks and local groups in country working at improving and disseminating these systems. Mutualization of their know-how in this network enables local groups of farmers to facilitate and secure their transition, and consolidate their technical and economical results, as well as implementing efficient dialog with citizens and stakeholders. Farmers to farmers and bottom up participative learning from grassroots is the most efficient way to mobilize farmers and let them appropriate awareness of importance of SSM systems, and find solutions to issues raised by changing practices. APAD study describes the facilitation expected by farmers from scientists and policy makers.

Ms Havlicek highlighted the need to address the fact that the number of farmer-lead bottom-up initiatives is increasing, which is especially relevant in the context of the Pillar 1 activities on SSM.

## **7. Proposal for an ESP declaration**

Ms Robb Cairo, representative of the Centre for International Sustainable Development Law, asked the ESP members to make a declaration on behalf of the ESP for the Global Climate Action Summit (see Annex V). It was concluded to send the proposed declaration to the focal points via email for further discussion.

## 8. Way forward

The 6th ESP Plenary closed with the following proposals regarding future steps:

- It was proposed to start coordinating the contributions to the next version of The Status of the World's Soil Resources report, which will be published in 2025.
- The need to improve communication and the coordination of activities, and to foster synergies between the ESP and GSP was highlighted.
- In order to make the ESP plenary more effective at decision making, it was suggested to the GSP secretariat to provide documents with relevant information beforehand.
- Several ESP members underscored the need to devise a more focused strategy when defining activities for the coming years.
- It was suggested to prioritize products that are readily implementable to attract donors.
- National focal points were asked to address the GSP secretariat to provide suggestions on how to improve communication.
- It was requested to the national focal points to work on a message to convey to the next GSP plenary assembly (5 to 7 June 2019).

Ms Elena Havlicek invited the ESP members to submit any further general remarks and suggestions in follow-up emails.

## Annex I Agenda



### European Soil Partnership Plenary Meeting

FAO Headquarters, Rome, Italy – German Room

28-29 March 2019

**Chair:** *Elena Havlicek, FOEN Switzerland*

**Secretary:** *Marc Van Liedekerke, European Commission Joint Research Centre*

#### Thursday 28 March 2019

##### 09:30 - 09:45

- Welcome and Opening (*Sasha Koo-Oshima* - Deputy Director, FAO, Land and Water Division) and *Elena Havlicek*, ESP Chair)
- Adoption of the Agenda
- Tour de table
- GSP updates (*Ronald Vargas* – GSP Secretary)

##### 09:45 -10:30 ESP reports

- 09:45 - 10:00** European Soil Partnership (*Elena Havlicek*)
- 10:00 - 10:15** Eurasian Soil Partnership (*Gulchekhra Khasankhanova*)
- 10:15 - 10:30** Alpine Soil Partnership (*Borut Vrščaj*)

##### 10:30 - 11:00 coffee break + group picture

##### 11:00 - 12:15 Selected National Reports and Information from National Focal Points and Partners

- 11:00 - 11:15** National Soil Partnership – Slovakia (*Zora Weberova*)
- 11:15 - 11:30** National Soil Partnership – Italy (*Anna Benedetti*)
- 11:30 - 11:45** National Soil Partnership – Portugal (*Elena Havlicek (on behalf of Portugal)*)
- 11:45 - 12:15** Information from National Focal Points and Partners (*all*)

##### 12:15 - 12:30 ITPS

##### 12:30 - 14:00 Lunch break

##### 14:00 – 14:45 Pillar 1

**14:00 - 14:10** GSP (*GSP-Secretariat*)

- Protocol to assess SSM and economic benefits of SSM.
- Implementation of INBS in Europe and Eurasia
- SSM map
- Technical Manual on SOC Management

**14:10 - 14:25** ESP work progress (*Suhad Saleh/Violette Geissen*)**14:25 - 14:45** Discussion and decision making on the way forward**14:45 – 15:30 Pillar 2****14:45 - 14:55** GSP (*GSP-Secretariat*)

- SoilEx
- EduSoil
- Soil Doctors
- International awards, global symposia and WSD

**14:55 - 15:10** ESP work progress (*Arwyn Jones*)**15:10 - 15:30** Discussion and decision making on the way forward**15:30 - 16:00** Coffee break**16:00 – 16:45 Pillar 3****16:00 - 16:10** GSP (*GSP-Secretariat*)

- ReSOIL
- National contributions to the assessment of the global status of soil pollution and regional trends

**16:10 - 16:25** ESP work progress (*Suhad Saleh/Violette Geissen/Coen Ritsema/Gergely Toth*)**16:25 - 16:45** Discussion and decision making on the way forward**16:45 – 17:30 Pillar 4****16:45 - 16:55** GSP (*GSP-Secretariat*)

- GloSIS, SoilSTAT and Global Maps

**16:55 - 17:10** ESP work progress (*Edoardo Costantini*)**17:10 - 17:30** Discussion and decision making on the way forward**17:30 – 18:15 Pillar 5****17:30 - 17:40** GSP (*GSP-Secretariat*)

- ReSOIL
- proposal for indicator report
- Proposal for fund raising
- Proposal for SoilML consultant

- GLOSOLAN
- 17:40 - 17:55** ESP work progress (*Hakki Erdogan*)
- 17:55 - 18:15** Discussion and decision making on the way forward

## Friday 29 March 2019

### 09:00 - 10:30 European projects and activities (with ESP contribution)

- 09:00 - 09:30** EEA EIONET NRC Soil (*Rainer Baritz*)
- 09:30 - 09:50** DG ENV (*Josiane Masson*)
- 09:50 - 10:10** ESP at EUROSOIL2020 (*Elena Havlicek, on behalf of Pascal Boivin*)
- 10:10 - 10:30** LANDSUPPORT Project (*Fabio Terribile*)

### 10:30 - 11:00 coffee break

### 11:00 - 12:00 Priorities for soil protection in Europe

- 11:00 - 11:20** Agenda 2030 and Land Degradation Neutrality indicators (*Kirstin Marx*)
- 11:20 - 11:40** Soil organic carbon: thresholds and soil structure quality (*Elena Havlicek*)
- 11:40 - 12:00** Rural Network for improvement and dissemination of soil conservation systems among local communities of farmers in France (*G rard Rass*)

### 12:00 - 13:00 The way forward and conclusions

- Discussion on the next steps of the ESP (*all*)
- Planning (*all*)
- Conclusions & closure of the ESP Meeting (*Elena Havlicek*)

---

### 13:00 - 14:00 Lunch break

### 14:00 - 17:30 Workshop Soils4EU

## Annex II Participant list

Name	Affiliation	Act as Focal Point?
Astover, Alar	Estonian University of Life Sciences	yes
Baritz, Rainer	European Environment Agency	
Bartke, Stephan	Helmholtz Centre for Environmental Research - UFZ	
Bayer, Ingeborg Maria	Federal Ministry of Agriculture Germany	
Benedetti, Anna	CREA	yes
Bollmann, Joachim	Federal Ministry of Agriculture and Food	yes
Brand, Johannes	Ministry of Agriculture, Nature and Food Quality	yes
Calzolari, Maria Costanza	CNR - Ibimet	
Castañeda, Carmen	EEAD-CSIC	
Costantini, Edoardo	CREA	
Darboux, Frédéric	INRA	
Dazzi, Carmelo	ESSC	
de Ruiter, Peter	Wageningen University	
Dietmar Müller-Grabherr	COMMON FORUM on Contaminated Land in Europe	
ERDOGAN, HAKKI EMRAH	Ministry of Agriculture and Forest	yes
Fantappiè, Maria	Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria	
Greve, Mette Balslev	Aarhus Universitet	
Greve, Mogens Humlekrog	Aarhus Universitet	
Hagemann, Nina	Helmholtz Centre for Environmental Research - UFZ	
Havlicek, Elena	Federal Office for the Environment (CH)	yes
Holgado Cabrera, Antonio	European Conservation Agriculture Federation	
Jacko, Karel	agrio	
Jones, Arwyn	European Commission Joint Research Centre	

KHASANKHANOVA, Gulchekhra	Design and Research UZGIP Institute, Ministry of Water Resources, Uzbekistan	
Kozak, Josef	Czech University of Life Sciences	yes
Langella, Giuliano	Università di Napoli Federico II	
Liepiņa, Laura	Latvian Ministry of Agriculture	yes
López Marco, Lucía	IAMZ-CIHEAM	
López-Francos, Antonio	Mediterranean Agronomic Institute of Zaragoza - IAMZ-CIHEAM	
Marano, Gina	Università di Napoli Federico II	
Marx, Kirstin	German Environment Agency (UBA)	
MASSON, Josiane	EU - European Commission	
Matoz, Helena	Ministry of the Environment and Spatial Planning	yes
Meijer, Maarten	University of Groningen	
MELGAREJO, PALOMA	INITIATIVE 4 PER 1000	
Peric, Nenad	Copa-Cogeca	
Poch Claret, Rosa Maria	ITPS	
Rass, Gérard	APAD	
Robb, Cairo	Centre for International Sustainable Development Law	
Rolf, Sommer	WWF-Deutschland	
Roumegous, Sebastien		
Saleh, Suhad	Wageningen University and Research	
Siebielec, Grzegorz	Institute of Soil Science and Plant Cultivation - State Research Institute	yes
SLAK, Marie-Françoise	Ministry for Agriculture and Food	yes
Spanischberger, Andrea	Federal Ministry for Sustainability and Tourism	yes
Swerts, Martine	government of Flanders	yes
Terribile, Fabio	Università di Napoli Federico II	
Topçu, Tarık	Republic of Turkey Ministry of Agriculture and Forestry	
Van Liedekerke, Marc Henri	European Commission - Joint Research Centre	
Van Looy, Kris Guy M	OVAM	

Vrščaj, Borut	Agricultural Institute of Slovenia	
Weberova, Zora	Embassy of the Slovak Republic in Italy	
Wellbrock, Nicole Yvonne	Thünen Institute of Forest Ecosystems	
Van Egmond, Fenny	ISRIC	
<b>FAO Global Soil Partnership</b>	Global Soil Partnership	
Bazza, Zineb		
Bottigliero, Fiona		
Caon, Lucrezia		
Cuevas, Rosa		
Gomes Da Silva, Camilla		
Lefevre, Clara		
Luotto, Isabel		
Rodriguez Eugenio, Natalia		
Sala, Mateo		
Stanco, Giulia		
Tong, Yuxin		
Vargas, Ronald		
Verbeke, Isabelle		
Viatkin, Kostiantyn		
Yigini, Yusuf		



## Annex III Letter to the ERC president and the Petition to the ERC



**European Soil  
Partnership**



**European Society for  
Soil Conservation**



**European Confederation  
of Soil Science Societies**

Distinguished Colleague,

In recent years, the awareness that soil is a key and very complex natural resource has increased at all levels of society. Recently, the 68th UN General Assembly declared 2015 the International Year of Soils, with the aim of increasing awareness and understanding about the importance of soil for food security and essential ecosystem functions. Moreover, to build on this momentum and the extent to which civil society contributes on soil issues, the International Union of Soil Sciences, at the end of 2015, proclaimed 2015-2024 to be the International Decade of Soils. The recent IPBES report dramatically stressed the need for soil preservation.

The Seventh Environment Action Programme, which entered into force on January 2014, recognises that soil degradation is a serious challenge. It aims to ensure that, in the coming years, land is managed sustainably in the European Union, soil is adequately protected and the remediation of contaminated sites is well underway. It also commits the EU and its Member States to increase efforts to reduce soil erosion, increase soil organic matter contents and remediate contaminated sites.

We believe that this is not enough and that such commitments must be followed by effective and positive actions to preserve the multi-functionality of soil and its role in environmental equilibria, and in human health and welfare.

For these reason we believe that one of these actions would be the establishment of an ERC panel specifically dedicated to the field of “Soil Science” in its broad meaning.

With this letter, we are sending you a petition expressing the opinion of recognised European soil scientists.

We look forward to hearing from you. Many thanks and kind regards

**Elena Havlicek**

**Chair of the  
European Soil Partnership**

**Carmelo Dazzi**

**President of the  
European Society for  
Soil Conservation**

**Pascal Boivin**

**President of the  
European Confederation  
of Soil Science Societies**

**To:**

**Professor Jean-Pierre Bourguignon**

**President of the European Research Council  
Chair of the ERC Scientific Council**

**Professor Klaus Bock**

**Vice-President of the European Research Council  
(Physical sciences and Engineering)**

**Professor Eva Kondorosi  
(Life Sciences)**

**Vice-President of the European Research Council**

**Professor Martin Stokhof  
(Social Sciences and Humanities)**

**Vice-President of the European Research Council**

**Dear Sir, Dear Madam,**

In recent years, the awareness that soil is a key and very complex natural resource has increased at all levels of society. Recently, the 68<sup>th</sup> UN General Assembly declared 2015 the International Year of Soils, with the aim of increasing awareness and understanding about the importance of soil for food security and essential ecosystem functions. Moreover, to build on this momentum and the extent to which civil society contributes on these issues, the International Union of Soil Sciences, at the end of 2015, proclaimed 2015-2024 to be the International Decade of Soils.

The Seventh Environment Action Programme, which entered into force on January 2014, recognises that soil degradation is a serious challenge. It aims to ensure that, in the coming years, land is managed sustainably in the European Union, soil is adequately protected and the remediation of contaminated sites is well underway. It also commits the EU and its Member States to increase efforts to reduce soil erosion, increase soil organic matter contents and remediate contaminated sites.

We believe that this is not enough and that such commitments must be followed by effective and positive actions to preserve the multi-functionality of soil and its role in environmental equilibria and in human health and welfare.

We, the Presidents of the European and National Scientific Societies listed below, representing over 15,000 soil scientists that belong to European universities, research agencies, government bodies, higher education, science, public non-governmental organizations, and business, are submitting to you the petition below. We count on your support to establish an ERC panel specifically dedicated to the field of “Soil Science” in its broad meaning.

## PETITION

The Presidents of the European and national scientific societies listed below, representing over 15,000 soil scientists belonging to European universities, research agencies, government bodies, higher education bodies, public non-governmental organizations and business,

### **given**

that the 68<sup>th</sup> UN General Assembly endorsed the request from the Kingdom of Thailand for the proclamation of the ‘International Year of Soils 2015’ to serve as a platform for raising awareness about the importance of soil for food security and essential ecosystem functions.

### **stressing**

- the importance of sustainable soil management as the basis for food systems, fuel and fibre production, essential ecosystem functions and better adaptation to climate change for present and future generations;
- the importance of the multi-functionality of soils on environmental equilibria and human health and welfare all over the world;

### **identified**

that the level of degradation of natural resources, and particularly soils, related to human pressure is becoming increasingly evident in all European countries;

### **considering**

that the issues concerning the field of Soil Science should be considered within the domain of “Life Science” due to their strong links with food security, ecosystems functions and human health,

### **request that**

#### **the European Research Council**

establish a unique and specific ERC panel dedicated to the field of “Soil Science”, under the Life Sciences domain. We put forward the following proposal for your attention:

**LS9 Applied life Sciences and Non-Medical Biotechnology:** Agricultural, animal, fishery, forestry food and soil sciences; biotechnology, genetic engineering, synthetic and chemical biology, industrial biosciences; environmental biotechnology and remediation.

#### **LS9\_x Soil Science**

We are strongly convinced that a panel specifically dedicated to “Soil Science” will give soil the importance that it deserves as a fundamental resource to maintain the total quality of the

environment and humankind, and will allow early career soil scientists to have a direct route through which to apply for ERC grants.

Logo	Society	President (Name and Signature)
	<b>European Society for Soil Conservation</b>	<b>Prof. Carmelo Dazzi</b> 
	<b>European Soil Partnership</b>	<b>Prof. Elena Havlicek</b> 
	<b>European Confederation of Soil Science Societies</b>	<b>Prof. Pascal Boivin</b> 
	<b>European Society for New Methods in Agricultural Research</b>	<b>Prof. Vlado Licina</b> 
	<b>European Geosciences Union Division on Soil System Science</b>	<b>Prof. Lily Pereg</b> 
	<b>Soil Science Society of AUSTRIA</b>	<b>Dr. Andreas Baumgarten</b> 
	<b>Soil Science Society of BELGIUM</b>	<b>Prof. Seppe Deckers</b> 



Soil Science  
Society of  
**BULGARIA**

**Prof. Metodi Teoharov**



Soil Science  
Society of  
**CROATIA**

**Prof. Marija Romić**



Soil Science  
Society of  
**CZECH  
REPUBLIC**

**Prof. Bořivoj Šarapatka**



Soil Science  
Society of  
**ESTONIA**

**Prof. Alar Astover**



Soil Science  
Society of  
**FINLAND**

**Prof. Helena Soinne**



Soil Science  
Society of  
**FRANCE**

**Prof. Céline Collin Bellier**



Soil Science  
Society of  
**GERMANY**

**Prof. Georg Guggenberger**



Soil Science  
Society of  
**GREECE**

**Prof. Nicola Barbayiannis**



Soil Science  
Society of  
**HUNGARY**

**Prof. Tibor Tóth**



Soil Science  
Society of  
**ITALY**

**Prof. Anna Benedetti**



Soil Science  
Society of  
**LATVIA**

**Prof. Raimonds Kasparinskis**



Soil Science  
Society of  
**LITHUANIA**

**Prof. Jonas Volungevicius**



Soil Science  
Society of  
**NETHERLAND**  
**D**

**Dr. Erik Cammeraat**



Soil Science  
Society of  
**POLAND**

**Prof. Zbigniew Zagórski**



Soil Science  
Society of  
**PORTUGAL**

**Prof. Carlos Alexandre**



Soil Science  
Society of  
**ROMANIA**

**Prof. Mihail Dumitru**



Soil Science  
Society of  
**SLOVAKIA**

**Prof. Jaroslava Sobocká**



Soil Science  
Society of  
**SLOVENIA**

**Prof. Borut Vrščaj**



Soil Science  
Society of  
**SPAIN**

**Prof. Jorge Mataix-Solera**



Soil Science  
Society of  
**UNITED  
KINGDOM**

**Prof. Wilfred Otten**



**International  
Decade of Soils  
2015-2024**



## Annex IV Report of Israel Activities within the GSP framework – 2018/19



State of Israel  
Ministry of Agriculture & Rural Development  
Division of Soil Conservation & Drainage



March 19, 2019

### **Report of Israel Activities within the GSP framework – 2018/19**

Dear colleagues,

This is a short report that summarizes recent activities of Israel since July 2018 within GSP framework.

Israel representatives continue to be involved within GSP working groups (Pillars 1-5) and ITPS.

1. We publicized the beta version of Israel Soil Archive:

<https://gisproxy.mgtech.co.il/rd/aken>

This is a GIS based application that demonstrates a scientific effort to systematically organize and archive soil data of Israel. The data is based on various soil data collections, soil surveys and research projects. The samples in the archive consist of spatial data, physical, chemical, and spectral information. The project is led by researchers from the Soil Erosion Research Station / Dept. of Soil Conservation and Drainage / Ministry of Agriculture and Rural Development together with researchers from The Remote Sensing Laboratory / Porter School of the Environment and Earth Sciences / Tel Aviv University. It is an ongoing project funded by Israel Ministry of Agriculture and Rural Development Chief Scientist. At the moment only small portion of the database has been uploaded and we expect that in the coming year the whole the database will be processed and available. For further details please contact Dr. Roey Egozi [regozi@moag.gov.il](mailto:regozi@moag.gov.il)

2. Unfortunately we were not able to attend the Fourth Working Session of the International Network of Soil Information Institutions (INSII) 06- 08/11/2018 due to



budget limitations, but we continue the work on soil organic carbon map, i.e., increasing the data set of soil samples with soil organic carbon information. For further details please contact Dr. Maya Zehavi [mayaz@moag.gov.il](mailto:mayaz@moag.gov.il)

3. Dr. Ellen Graber, Head of the Department of Soil Chemistry, Plant Nutrition and Microbiology of the Volcani Center, Agricultural Research Organization, Israel, was selected as one of the five European Expert Advisors to the ITPS at the Sixth Plenary Assembly of the Global Soil Partnership (GSP), held at FAO Headquarters in June 2018. She participated in the ninth ITPS working session of the ITPS in October 2018. The major activities she has been involved in since are the Soil Pollution Guidelines and Guidelines for Sustainable Soil Management. Dr. Graber will be participating in the Global Soil Erosion Symposium being sponsored by the GSP and ITPS in May, as well as in the 10<sup>th</sup> working session of the ITPS. For further details, please contact Dr. Ellen Graber [ergraber@agri.gov.il](mailto:ergraber@agri.gov.il).
4. Israel first official Soil Day – We are happy to report that Israel has joined with other GSP member countries that celebrated 2019 Soil Day (see pictures attached). Israel's soil day covered two main sections:

The first section focused on soil health. Leading soil scientists who are part of an ongoing research project focused on developing soil health indices reported their findings. The topics that were covered:

- Weeds and soil health by Hanan Eizenberg, Neve-Yaar Research Center, ARO.
- The effects of growing practices on nutrient uptake in the soil by Uri Yermiyahu, Gilat Research Center, ARO
- The effects of growing practices on soil OM by Oshri Rinot, Soil &Water Institute, Volcani Center, ARO
- The physical properties of healthy soil by Alex Furman, Civil and Environmental Engineering, Technion
- Soil biodiversity and food web chains of healthy soil by Yossi Shteinberger, Bar-Ilan University
- Quantitative measure to assess soil health by Oshri Rinot, Soil &Water Institute, Volcani Center, ARO

The second section of the day covered general issues regarding soil conservation activities in Israel. Among those activities, we presented GSP and ITPS current and future actions by Dr. Roey Egozi and Dr. Ellen Graber; Israel soil conservation policy and supporting system for farmers by Alon Maor, Department of Soil Conservation and Drainage, MOAG. The highlight of the day was awarding, for the first time, a prize of 5,000 USD to a leading farmer in conservation agriculture by the Israel Ministry of Agriculture and Rural Development (Please see [link](#) and pictures at the end of this document). For further details, please contact Alon Maor [alonm@moag.gov.il](mailto:alonm@moag.gov.il)

5. Israel representatives (Dr. Dafna Disegni and Dr. Roey Egozi) continue to be involved in the preparation for the Global Symposium on Soil Erosion 2019 assisting with the review of documents and submitted abstracts.
6. As of 2019, I would like to inform you that Mr. Alon Maor will take over and replace Dr. Roey Egozi as the Israel focal point for GSP and ESP. Mr. Maor is the head of soil conservation and planning section in the Department of Soil Conservation and Drainage, MOAG. He can be reached via the following e-mail address [alonm@moag.gov.il](mailto:alonm@moag.gov.il)

Kind regards,

**Roey Egozi, PhD**

Researcher – Soil Erosion Research Station  
Dept. of Soil Conservation and Drainage  
Israel Ministry of Agriculture and Rural Development

## Annex V Proposal for a ESP/GSP Declaration

### *Draft suggestion for ESP/GSP Secretariat*

Cairo Robb  
Legal Research Fellow  
Centre for International Sustainable Development Law

E-mail [car19@cam.ac.uk](mailto:car19@cam.ac.uk)

Tel +44 7939 046879

Website [www.cisdil.org](http://www.cisdil.org)

Recalling the Revised World Soil Charter, developed under the aegis of the Global Soil Partnership, which states in its Preamble that soils are fundamental to life on Earth but human pressures on soil resources are reaching critical limits, and that careful soil management is one essential element of sustainable agriculture and also provides a valuable lever for climate regulation and a pathway for safeguarding ecosystem services and biodiversity.

Recalling further the principle at paragraph 9 of the Revised World Soil Charter, which highlights that all soils – whether actively managed or not – provide ecosystem services relevant to global climate regulation and multi-scale water regulation.

Recalling also the principle at paragraph 5 of the Revised World Soil Charter, which notes that the balance between the supporting and provisioning services for plant production and the regulating services the soil provides for water quality and availability and for atmospheric greenhouse gas composition is a particular concern.

Noting the concerns expressed by youth on climate change, and the call by the UN Secretary General for accelerated levels of ambition.

**The ESP, with the support of the GSP Secretariat, proposes the setting up of an ad hoc working group to focus on soils and climate change.**

The mandate of the working group would include working, as far as possible:

- to ensure that the important role of soils is not overlooked or compromised in devising mitigation and adaptation strategies in all sectors and decision making at all levels
- to ensure that adaptation and resilience in the context of agriculture and soil in developing countries is given high priority
- to advance climate change adaptation and mitigation in appropriate circumstances

- to stimulate and harness financial resources for the above and for the supporting science, research, data, awareness raising and governance required.

## Background

To support efforts to implement the Paris Agreement and to increase ambition and climate action UN Secretary, António Guterres, will bring world leaders from government, finance, business and civil society to the Climate Action Summit on 23 September 2019.

The Secretary General aims to demonstrate a leap in collective national political ambition and massive low emission movement in the real economy

He has said “Only a significantly higher level of ambition will do. To that end the summit will focus on areas that go to the heart of the problem .... we will bring together players from the real economy and real politics, including representatives of trillions of dollars of assets, both public and private ...”

He has prioritised action portfolios including:

Finance: “mobilizing public and private sources of finance to drive decarbonisation of all priority sectors and advance resilience”.

Nature-Based Solutions: “reducing emissions, increasing sink capacity and enhancing resilience within and across forestry, agriculture, oceans and food systems, including through biodiversity conservation, leveraging supply chains and technology”.

As he said in his guest editorial in The Guardian newspaper earlier this month (15 March 2019), in support of the climate strikes by youth in over 100 countries of the world,

“School children have grasped something that seems to elude many of their elders: we are in a race for our lives, and we are losing. The window of opportunity is closing – we no longer have the luxury of time, and climate delay is almost as dangerous as climate denial

My generation has failed to respond properly to the dramatic challenge of climate change. This is deeply felt by young people ... Thankfully we have the Paris agreement – a visionary, viable, forward-looking policy framework that sets out exactly what needs to be done to stop climate disruption and reverse its impact. But the agreement is itself meaningless without ambitious action.

That is why I am bringing world leaders together at a climate action summit...

The summit will bring together governments, the private sector, civil society, local authorities and other international organisations to develop ambitious solutions in six areas: renewable energy; emission reductions; sustainable infrastructure; sustainable agriculture and management of forests and oceans; withstanding climate impacts; and investing in the green economy.

... we must set radical change in motion ... ending subsidies for fossil fuels and high emitting agriculture and shifting towards renewable energy... and climate-smart practices. ...

Momentum is building, people are listening ... I will close with a message for those who marched on Friday. I know young people can and do change the world. ... Many of you are anxious and fearful for the future, and I understand your concerns ... But I know humankind is capable of enormous achievements. Your voices give me hope.

... Together, with your help and thanks to your efforts, we can and must beat this threat and create a cleaner, safer, greener world for everyone.”

See: <https://www.un.org/en/climatechange/un-climate-summit-2019.shtml>

See: <https://www.un.org/en/climatechange/sg-guardian-op-ed.shtml>

## Annex VI Letter to Parliament

Ministerie van Landbouw,  
Natuur en Voedselkwaliteit

> Return address PO Box 20401, 2500 EK The Hague

The President of the House of Representatives  
of the States General  
Binnenhof 4  
2513 AA THE HAGUE

Date 23 May 2018  
Subject Letter to the House of Representatives on Soil Strategy

Dear Madam President,

During the debate on the Agriculture and Nature component of the Ministry of Economic Affairs' budget in December last year, I promised that I would send the House Representatives a letter on my soil strategy in early 2018. I also stated that I would provide further information on a soil programme for the agricultural sector that will be prepared jointly with stakeholders and the use of the soil passport (Proceedings of the House of Representatives 2017-2018, no. 32, item 11). This letter addresses this topic.

I have also stated how I will implement the motion put forward by members of the House of Representatives Agnes Mulder and Remco Dijkstra (Parliamentary Paper 34589, no. 13), who have requested the government to commission a study on the storage of CO<sub>2</sub> in the topsoil, and on the revenue model for CO<sub>2</sub> storage so that this can be taken into account in the regulatory framework.

**Directorate-General for  
Agro and Nature Policy**

Department of Plant Supply

Chain and Food Quality

**Visiting address**

Bezuidenhoutseweg 73  
2594 AC The Hague

**Postal address**

PO Box 20401  
2500 EK The Hague

**Government**

**identification no.**

00000001003214369000

T 070 379 8911 (general)

F 070 378 6100 (general)

[www.rijksoverheid.nl/inv](http://www.rijksoverheid.nl/inv)

**Our reference**

DGAN-PAV / 18081747

## Soil as a basis for addressing societal challenges

As a society, we are facing major challenges in the area of climate, food safety and security, biodiversity and water quality. Good quality agricultural soils not only constitute an important basis but also a condition for responding to those challenges. The Netherlands has around 1.85 million hectares of agricultural land (over 50% of the total land surface area in the Netherlands) on which a high-quality agricultural production sector has evolved. It is crucial to conserve soil quality to be able to maintain such high quality in the long term and at the same time achieve various societal objectives by the target dates set.

Sustainable soil management helps to reinforce soil quality. It will provide the agricultural sector with better soil quality and society with more sustainably grown crops as a basis for sustainable food systems, better water quality and larger water buffering capacity and more biodiversity, and can moreover contribute to achieving the climate targets. As a result, sustainable soil management makes an essential contribution to restoring the balance between agriculture and nature, a key objective of my policy, which I will discuss in further detail in the vision I have promised to submit to the House of Representatives for the broad domain of Agriculture, Nature and Food Quality. The Coalition Agreement states that efforts will be undertaken to strengthen circular agriculture, which is important in the light of the soil, water, nature and climate goals. This is also linked to nature-inclusive agriculture, which aims to restore, maintain and utilise ecosystem services for, and by the agricultural sector. These programmes and the sustainable use and management of soil support and strengthen each other.

## Quality of agricultural soils under pressure

High land prices due to the scarcity of agricultural land and an agricultural system with tight margins fuel yield maximisation. The further intensification of crop production is putting ever-greater pressure on soil quality.

Soil compaction is occurring and there are concerns about the content and quality of organic matter and soil life. In addition, subsidence is occurring in peat grassland and polder areas.

A compacted soil structure impedes the permeability of the soil to air and water, leads to crop yield losses, puts pressure on soil life and increases the risk of nutrient and crop protection agent losses to surface waters.

The quality and quantity of organic matter, combined with good soil permeability, play a key role in soil quality, for instance, in terms of whether the soil retains or builds up sufficient organic matter. Organic matter is essential for crop growth and contributes to soil moisture management (the retention and supply of water), soil structure (permeability to air and water), soil life (which is activated by organic matter) and the storage of carbon, and consequently to achieving the climate targets. One of the causes of subsidence is that intensive drainage makes the soil more compact. Oxidisation causes

the underlying layers of peat to decompose, resulting in the release of greenhouse and other gases.

### **Objective and strategy**

My objective is that by 2030 all Dutch agricultural soils will be managed sustainably so that the soil can optimally perform its functions and is, and remains, of the highest possible quality for future generations. The aspects that primarily determine soil function performance are: organic matter and soil fertility management, soil structure management and soil life and resilience management. My aspiration is that the efforts put into sustainable soil management will also be appreciated by society.

I call on interested parties to undertake and commit to efforts in this area, and to make a concrete contribution. This will not always be easy because this equally implies that difficult dilemmas must be overcome that are partly linked to the current agricultural system and the associated land use incentives. The short-term economic interest of yield maximisation on the part of entrepreneurs, suppliers and processing companies is not always in proportion to the long-term interest of good soil quality. The balanced and responsible use of manure, fertiliser and crop protection agents, sophisticated cropping plans, and the use of adapted agricultural machinery are vital for good soil quality. Fortunately, there already are numerous examples of sustainable soil practices, which demonstrates a growing awareness of their importance among both agricultural entrepreneurs and other private stakeholders, and wider society.

In this regard, I would like to give a policy impetus to sustainable soil management and, before summer, prepare a widely supported agricultural soils programme jointly with stakeholders for this government's term of office, which addresses the aspects stated. The programme will set out the shared responsibility for sustainable soil management by mutually agreeing activities that will be undertaken by the various parties. The aim is to undertake activities that reinforce each other, and to broaden support and the network. It is my intention to further develop this programme in conjunction with private sector organisations, civil society organisations and local and regional authorities.

With a view to the climate targets, I will invest over €6 million in 2018 in joint, initial activities with the relevant parties to the programme aimed at promoting sustainable soil management in agricultural practice (Parliamentary Paper 34901, no.1). The storage and capture of carbon in agricultural soils contributes to reducing greenhouse gases and, in turn, to achieving the climate targets.

### **International context**

International attention is also being paid to societal challenges in the form of sustainable development goals (SDGs). The Netherlands has committed to achieving these goals by 2030. Sustainable soil management and the



conservation and restoration of soil quality are essential preconditions in transitioning towards sustainable food systems worldwide. According to the Global Land Outlook published by the UN Convention to Combat Desertification (UNCCD), one third of the agricultural soils worldwide are in a moderate to serious state of degradation. This poses a threat to food security for a growing world population.

The UN's International Year of Soil 2015 and the adoption of the 2030 Sustainable Development Agenda have placed 'soil' as a theme firmly on the international agenda. The current Argentinian G20 Presidency designated 'sustainable soil management' as a priority theme for the G20 Meeting of Agriculture Ministers in Buenos Aires in July of this year. The Netherlands received an invitation from Argentina to participate in the meeting and has actively contributed to the preparations for the meeting and the final declaration.

The Netherlands is active in the Global Soil Partnership (GSP), which is supported by the Food and Agriculture Organization of the United Nations (FAO). This partnership welcomes participation by public authorities, private sector organisations, knowledge institutions and civil society organisations. The aim of the GSP is to promote sustainable soil practices, to coordinate the research agenda among the participants and to develop a worldwide publicly accessible soil information system.

The European Commission is currently working on a revision of the European Soil

Strategy and on a revision of the Common Agricultural Policy (CAP), both of which will focus on the European contribution to achieving the SDGs and the Paris Agreement climate goals. The role that the management of agricultural land can play in this context will be explicitly considered.

## Climate goals

The frameworks for the climate goals are set out in the Paris Agreement on Climate Change, in EU legislation and in the objectives of the Coalition Agreement. For agriculture and land use, this calls for a reduction of greenhouse gas emissions from peat grassland soils, on the one hand, and offers opportunities for additional soil carbon sequestration, on the other. The Coalition Agreement states that 1.5 metric tons of climate gains must be achieved through smarter land use by 2030.

In line with the French '4 pour mille'<sup>1</sup> initiative, which is supported by the Netherlands, additional soil carbon sequestration can be achieved in Dutch agricultural soils by sustainable soil management. The agricultural sector therefore holds the key in helping to resolve the climate problem. As a result of the inclusion of land use and forestation in recent legislation in the EU Climate Package (LULUCF)<sup>2</sup>, with effect from 2021 soil carbon sequestration

<sup>1</sup> The aim of France's '4 pour mille' initiative, launched in November 2016 at the Climate Summit (COP 22) in Marrakesh, is to increase the content of soil organic matter and therefore carbon storage, in agricultural land by 4 ‰ per annum.

<sup>2</sup> Regulation (EU) 2018/841 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework.

will be included in the mandatory national CO<sub>2</sub> emissions and storage accounting system.

### **Initial agricultural soils programme**

The conservation and improvement of soil quality is the primary responsibility of the agricultural entrepreneur who, as the landowner and land user, also has a direct individual interest in doing so. However, there sometimes is a lack of awareness and knowledge of soils. And sometimes the appropriate incentives from policy, the supply chain and the market, and the agricultural system are lacking. Moreover, sustainable soil management involves costs that will not provide return on investment in the short term. Based on earlier discussions with stakeholders from industry and society, I have arrived at the following four aspects on which to base an initial soil programme.

### **Knowledge – basis for delving into the depths**

Following on from knowledge and experience of solid and sustainable soil management practices, it is essential to invest further in knowledge development as well as in expanding knowledge of perspectives for action for entrepreneurs. The public private partnership (PPP) Sustainable Soil Management 2013-2016 has already delivered dozens of sustainable soil management measures and I consider it important to build on these measures in the PPP 2017-2020. In addition, I am working with other parties on a 'Sustainable Soils' knowledge and innovation programme.

Instruments and indicators for determining soil quality at farm level, such as the soil passport, have not yet been fully developed and their use is currently too fragmented. Together with stakeholders, I would like to define a uniform and practicable set of indicators and broadly applicable instruments to make soil quality transparent and measurable for users (in terms of chemical, physical and biological composition and characteristics).

In addition, it is important to reach and advise larger groups of farmers on sustainable soil management and the relationship with organic matter. To that end, I would like to initiate a project to train more advisers having broad soil knowledge on overall soil quality so that they can disseminate that knowledge. I am also committed to developing a module for sustainable soil management and the relationship with organic matter as a fixed component of agricultural education so that younger generations will be informed about and trained with the latest knowledge of sustainable soil management.

In 2018 scope will be offered, specifically for the climate targets, for additional pilot programmes and demonstration projects regarding smarter land use in relation to organic matter, and for developing monitoring and valorisation systems for carbon storage. Existing initiatives, such as 'Carbon farmers', 'Skylark', 'Fertile recycling', and 'nature-inclusive agricultural' initiatives will be included as far as possible.

The above also reflects how I will implement the motion put forward by members of the House of Representatives Agnes Mulder and Remco Dijkstra

(Parliamentary Paper 34589, no. 13), who have requested the government to commission a study on the storage of CO<sub>2</sub> in the topsoil and on the revenue model for the storage of CO<sub>2</sub> so that this can be taken into account in the regulatory framework.

## Policy - stewardship

Sustainable soil management either touches on other important themes or has a key role in achieving other policy objectives. For instance, pursuant to the manure policy in the Sixth Action Programme of the EU Nitrates Directive measures have been included that contribute to sustainable soil management, which is a preventive measure in the approach to integrated pest management and also is a key component of the 'nature-inclusive agricultural' concept.

Furthermore, there is a strong relationship with the agricultural leasehold policy. The fostering of long-term relationships between agricultural lessors and lessees, and sustainable soil management are therefore important starting points for the revision of the system of leasehold policy. In consultation with the Ministry of the Interior and Kingdom Relations, we will consider how these starting points can also be embedded in the redefinition of policy on state-owned land issued by the Central Government Real Estate Agency (*Rijksvastgoedbedrijf*).

In terms of the CAP, this could serve as an important instrument in promoting additional efforts in the area of sustainable soil management. Within the framework of developing the future CAP, it will be examined how to promote efforts regarding the application of sustainable soil management practices on farms (Parliamentary Paper 28625, no.256).

## Agri-chains - sustainable from soil to consumption

New methods of organisation and a balanced distribution of margins and risks in the supply chain are required in order to anchor and valorise sustainable soil management across the entire supply chain. The parties in the supply chain have a key role here. With a view to the soil programme, I will discuss how this can be promoted with these parties.

It remains important to innovate. To prevent soil densification, it is crucial to develop and use lighter and smarter agricultural machinery, building, among other things, on the precision agriculture programme that I support. I challenge the mechanisation and agricultural contracting sector to accelerate this development and use.

In addition, soil quality can be improved, for instance, by developing high-yield plant species with deeper and more intensive root systems that can be harvested early; new cultivation systems with sufficient rotational mowable crops or mixed crops and strip-tilling; and new housing systems that will produce a higher content of organic matter in manure. The Topsector policy Agro-Food with agrifood, water and high-tech crossovers offers opportunities

in this regard and ties in with the focus areas of agriculture, water and food stated in the Coalition Agreement. I call on the industry to implement this.

## Regional water network - the soil as a buffer

Regional water management is the primary responsibility of the provincial and water authorities and is the key factor that determines land use. Sustainable soil management makes a demonstrable contribution to improved water quality and water buffering capacity, and saves costs for the water authorities and drinking water companies.

Dozens of initiatives with various stakeholders are being carried out to improve water quality and the availability of water under the Delta Plan for Agricultural Water Management (DAW). Many measures in the DAW focus on the soil. Activities aimed at sustainably managing the soil also improve water quality and the availability of water. I therefore wish to strengthen these activities, and the nature and water quality budget will partly be used for this purpose.

Subsidence is a specific problem particularly in the peat grassland and polder areas which has existed for decades. Intensive drainage and other factors have made the soil more compact and the oxidation of the underlying layers of peat causes greenhouse gas emissions. Subsidence also adversely affects the infrastructure and buildings. In order to address this broad issue, under the InterAdministrative Programme I recently agreed with the members of government for Economic Affairs and Infrastructure and Water Management, and the provincial authorities to develop an area-specific approach jointly with stakeholders, agricultural entrepreneurs and the water authorities. This includes implementing projects aimed at preventing subsidence, reducing CO<sub>2</sub>-emissions and exploring alternative, wet cultivation systems, enabling a different method to be used for water-level management.

### Conclusion

Good agricultural soils constitute the basis for addressing many societal challenges. Following on from the various initiatives already being undertaken, my aim with this soil strategy is to give further impetus to the implementation of sustainable soil management.

In the coming months, I will have further discussions with the parties concerned in order to reach agreement on a soil programme.

Carola Schouten  
Minister of Agriculture, Nature and Food Quality