



EU Soil stakeholders' Conference

5th December 2016

Management Centre Europe (MCE), 118 Rue de l'Aqueduc, 1050
Brussels

Conference Report

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Executive Summary

This report summarises the Conference “Soil Stakeholders conference” held on 5 December 2016 in Brussels. The aim of the conference was to contribute to the World Soil Day 2016 by raising awareness about the importance of soils and the ecosystem services that they deliver, and to contribute to the implementation of the EU Soil Thematic Strategy. The importance of soil in relation to ecosystem services, current threats to soil health and current international responses were highlighted in the first plenary. This was supplemented with the results from the current project on the ‘Updated Inventory and assessment of soil protection instruments in the EU Member States’. The project developed an inventory of soil related policies at both EU and MS levels in order to provide a comprehensive review on how MS instruments complement and address the identified gaps at EU level.

The second part of the conference focused on gathering the views, ideas and priorities from stakeholders in four parallel working sessions. Each working session identified key issues, actions and priorities on different soil-related topics which were then presented and discussed in plenary. The results of the working sessions provide rich ideas for further work in the area of soil protection - from the need to provide common definitions relevant for soil protection to raising awareness on the role of soil in climate-related policies to concrete actions, such as developing of integrated spatial planning policy and making the most of synergies between public/private partnerships motivating further action. The conference successfully brought together stakeholders from a variety of sectors to discuss the current state of play of soil policy and ways to move forward. This structured dialogue with ‘soil stakeholders’ was highlighted as essential in developing future policy on soil in the EU.



1 Introduction

This report summarises the Conference “Soil Stakeholders conference” held on 5 December 2016 in Brussels in the context of facilitating dialogue with stakeholders. The conference was organised under the EU project “Updated inventory and assessment of soil protection policy instruments in EU Member States”¹ and brought together around 200 participants from a variety of backgrounds comprising EU and national decision makers, researcher, managing authorities, industry, NGOs and civil society.

This conference report provides an overview of the programme and summarises the main elements of the presentations, subsequent discussions, as well as the key messages and stakeholders’ views derived from the four parallel working group sessions.

The aim of the conference was two-fold. First, to contribute to the World Soil Day 2016 by raising awareness about the importance of soils and the ecosystem services that they deliver, and second to contribute to the implementation of the EU Soil Thematic Strategy.

The specific objectives of the conference were to:

- present inventory of soil-related legislation at EU and national level and gap analysis, as well as the first outcomes of the MAES Soil pilot;²
- discuss challenges and ideas with stakeholders relating to current policy and identify possible improvements

The conference consisted of two plenary sessions and four parallel working sessions. Keynote speakers and panelists were invited to share their views on possible ways forward for EU soil policy. The parallel working sessions were interactive, giving stakeholders the opportunity to discuss challenges and opportunities in more detail. The working sessions were built up around two horizontal and two thematic soil related themes:

- Session I Identifying challenges and opportunities for further policy development;
- Session II Potential of an ecosystem services approach;
- Session III Soil contamination; and
- Session IV Sustainable management of agriculture and forest soils.

In addition, a Lunch session was organised to present the European Soil Partnership in presence of its Chairwoman Ms Elena Havlicek (Switzerland).

The report is structured using the agenda for the conference provided in section 2. Section 3 provides a summary of the presentations and panel discussion in the morning plenary session. Section 4 provides a recap of the lunchtime session “The European Soil Partnership”. Section 5 describes objectives and methods used in the Parallel working sessions. Key messages, actions and priorities, discussion and conclusions of these are presented in section 6.

¹ This project was carried out by the Ecologic Institute in cooperation with IEEP, Milieu, CEET, BEF Group and KU , for more information see <http://ecologic.eu/13090>

² Mapping and Assessment of Ecosystem Services is part of the EU biodiversity strategy (Action 5) COM(2011)244 – more information on MAES can be found at <http://biodiversity.europa.eu/maes>

2 Agenda

9:30 – 12:30 Plenary Session I – State of play of soil policy in the EU to protect soil

Chair: *Claudia Olazaábal (Head of Land use and Management unit, DG Environment, European Commission)*

9:30 – 10:10 Opening session

- Welcome, European Commission, *Claudia Olazábal (European Commission, DG Environment)*
- Keynote speech, *Pr. Olivier De Schutter (University of Louvain-la-Neuve, Belgium, Co-Chair, International Panel of Experts on Sustainable Food Systems - IPES-Food)*,
- International context and importance of soil sustainable management, *Dr Luca Montanarella (European Commission, JRC and Chairman of the International Technical Panel on Soil)*

10:10 – 12:30 State of play of soil protection and soil policy in the EU

- 10:10 – 10:25 Overview of key recent activities at EU level, *Josiane Masson (European Commission, DG Environment)*
- 10:25 – 11:15 Presentation of the inventory of national and EU legislation pertaining to soil protection and gap analysis, *Ana Frelih-Larsen (Ecologic Institute), Catherine Bowyer and Clunie Keenleyside (Institute for European Environmental Policy)*
- 11:15 - 11:30 Conclusions on the inventory of legislation on soil protection in the EU and identified gaps, *Josiane Masson (European Commission, DG Environment)*
- 11:30 – 12:30 Panel and debate on soil policy in the EU - *Co Molenaar (Senior advisor soil and water, Ministry of Infrastructure and Environment, NL), Eric Gall (Policy Manager, IFOAM EU), Pieter de Pous (Policy Director, European Environment Bureau), Liisa Pietola (Chairwoman of Working Party on Environment, COPA-COGECA)*

12:30 – 14:00 Lunch break

13:10 – 14:00 Lunchtime session – European Partnership

- Presentation of the European Soil Partnership and call for European partners, *Elena Havlicek, ESP Chair*

14:00 – 16:00 Parallel Working Sessions

14:00 – 14:15 Objectives and organisation of the parallel working sessions, *Robert Pederson (Milieu)*

14:15 – 16:15 Parallel working sessions I, II, III, IV

- o Session I: Identifying challenges and opportunities (international agenda, duty of care, comprehensive vs. 'cluster' based approach etc.)
- o Session II: Moving from a physico-chemical mind-set towards a soil ecosystem and ecosystem services approach?
- o Session III: Identification and remediation of contaminated sites - how much public intervention is needed for historically degraded soils?
- o Session IV: How to promote agriculture and forest soil sustainable management?

16:15 – 16:45 Coffee break

16:30 – 18:10 Plenary Session II: Wrap up of parallel sessions and conclusions

16:45 – 18:00 Feedback from parallel sessions by the rapporteurs of the parallel sessions and final discussions with stakeholders

18:00 – 18:10 Conclusions, DG ENV

18:10 End of the conference

3 PLENARY SESSION 1- STATE OF PLAY OF SOIL POLICY IN THE EU TO PROTECT SOIL

Claudia Olazábal (Head of Land use and Management unit, European Commission, DG Environment) opened the conference and welcomed participants. She recalled the context of this conference organised by the European Commission as a contribution to the World Soil Day declared by the United Nations General Assembly on 5th December. The European Commission remains fully committed to soil protection in the EU and has set up a soil expert group with experts mandated by the MS to reflect on 7th EAP commitments on soil.³ At a global level (Sustainable Development Goals (SDGs), Climate Change) the importance of soil is recognised and is moving at a higher speed than EU policy, so there is a need to move forward in Europe.

3.1 Opening Session

3.1.1 Towards soil health in the EU, Keynote Speech, Professor Olivier De Schutter



Professor Olivier De Schutter (University of Louvain-la-Neuve, Belgium, Co-Chair, International Panel of Experts on Sustainable Food Systems - IPES-Food) started his key note speech by highlighting six key threats to soil health, including soil erosion, soil organic matter decline, compaction, salinisation, contamination and sealing. At global level 42% of cultivated land is degraded due to unsound agricultural practices and this is exacerbated by climate change. Prof. De Schutter stressed that investing in soil health and soil ecosystem services brings multiple benefits.

Prof. de Schutter outlined 'the vicious cycle of productivism' - intensive use of inputs, intensive irrigation, aggressive process such as tillage resulting in loss of fertility - as the main driver behind soil degradation processes. However it is not irreversible, a transition from this cycle is possible, from a more vicious circle towards virtuous cycles such as agroecology and diversified farming systems. The main barriers to achieving this transition were then presented briefly in terms of the 'eight lock-ins of industrial agriculture' including inter alia compartmentalized thinking, the consumer expectations relating to cheap food, higher demand for biomass production, path dependency and export orientation of our current food

³ "The Union and its Member States should also reflect as soon as possible on how soil quality issues could be addressed using a targeted and proportionate risk-based approach within a binding legal framework. Targets should also be set for sustainable land use and soil."

system and policies. The narrative of 'feeding the world' is also an obstacle for change and the productivity per ha is still very often seen as a single or dominant target. Market prices are decreasing and farmers do not have other choice than to grow or die.

In summary Prof. De Schutter, emphasised that in order to improve soil health, a new approach is needed that looks at not only production outputs in terms of yield per hectare, but also broader benefits such as consumption outcomes, environmental protection and health. The need for a Common Food Policy was highlighted which would integrate The Common Agricultural Policy (DG AGRI), Environmental policy (DG ENVI), The Health and Food Safety policy (DG SANTE) and The Trade Policy (DG TRADE) to deliver a holistic and more consistent and coherent policy approach beneficial for farmers, environment and EU citizens.

3.1.2 International Context and importance of sustainable soil management, Dr. Luca Montanarella



Dr Luca Montanarella (European Commission, JRC and Chairman of the International Technical Panel on Soil) stressed the importance of sustainable soil management in the international context and the importance of soil as a cross-cutting issue linking the areas of food security, climate change, biodiversity and desertification. Dr Montanarella gave an overview of the international context, highlighted the role of the Global Soil Partnership initiative set up by UN General Assembly, consisting of the GSP Secretariat, intergovernmental technical panel on soils (ITPS) and its key partners focusing on the current membership of the ITPS as well as the development of regional soil partnerships. There is a growing interest in soil linked to climate change (UNFCCC COP21 and COP22, the 4p1000 initiative), UNCCD Land Degradation Neutrality (SDG 15.3) and on soil biodiversity (in the context of the Convention of Biodiversity and with the publication of the Global Atlas of Soil Biodiversity by the JRC in 2016). He provided a summary of the status and trends of soil threats that have been published in the Global Soil Partnership World Soil Atlas in 2015.

In closing, Dr Montanarella stressed the significance of soils and soil science in the context of the UN Sustainable Development Goals (SDGs), with soils explicitly mentioned in four targets but also required for the achievement of several goals. the SDGs. Dr Montanarella emphasised the need for the dissemination, use and evaluation of the Voluntary Guidelines for Sustainable Soil Management (VGSSM) which provide ten key guidelines for sustainable soil management. This process should be facilitated by national governments, regional and sub-regional soil partnerships and local actors need to be closely involved. . According to Dr Montanarella, looking at difficulties to set up binding instruments at Global and EU level voluntary and partnership approaches are another way to progress.

Following these keynote speeches participants were invited to raise questions relating to the keynote speakers, which were addressed as following:



Is there sufficient evidence for sustainable management practices to communicate those to farmers and promote their uptake? (National Farmers' Union, Wales)

- In general, soil assessment and sampling are quite costly and time consuming, but the EU Land Use/Cover Area Frame Survey (LUCAS) provides a first step in this direction. (Dr Luca Montanarella)

How to cope with the costs of change in practices? (DG Agriculture)

- Economic incentives need also to be aligned with societal benefits. Moreover, an increase in awareness for healthy soils benefiting to society (clean water, biodiversity etc.) is needed. It is also important that farmers get rewarded and supported to enable a transition toward sustainable farming (for 2-3 years). (Prof. De Schutter)

How can the Sustainable Soil Management (VGSSM) guidelines be implemented in practice? (Environment Agency Austria)

- There is low progress towards soil protection, but to date there is also an increasing interest in healthy soils in science, policy and also society/citizens. Overall there is a clear need to work more at local level. (Dr Luca Montanarella)

3.2 State of play of soil protection and soil policy in the EU

3.2.1 Overview of key recent activities at EU level

Ms Josiane Masson (DG Environment) provided an overview of the Soil Thematic Strategy from 2006 in relation to its overall objectives and guiding principles and outlined the four key pillars of EU soil policy namely, awareness raising, research, legislation, and integration in other policies.

The main threats to soils were presented and key achievements of the Thematic Strategy were highlighted. Ms Masson explained the structure of the proposed Soil Framework Directive which was withdrawn in 2014 and outlined the interactions of current work on soil health in relation to 7th Environment Action Programme (EAP). In the following, she outlined the key ongoing actions on EU soil policy, including the launch of an EU Expert Group on Soil Protection, the creation of an inventory of soil protection measures at EU and national level and an analysis of gaps in current policy.

In conclusion, Ms Masson gave an overview of the state of soils within the EU highlighting the main soil threats faced by the continent as described by the European environment — state

and outlook 2015 (SOER2015) and the report's conclusion that the current EU legal framework is insufficient in relation to soil protection.

3.2.2 Updated Inventory and Assessment of Soil Protection Policy Instruments in EU Member States



Dr Ana Frelih-Larsen, Ecologic Institute, gave an overview of the project concerning the 'Inventory and assessment of soil protection instruments in the EU Member States'. Dr Frelih-Larsen pointed out that the study aims were three-fold: First, the aim was to develop an inventory of existing and upcoming policy instruments at EU level and in 28 Member States (MS) in a collaborative Wiki web platform. Second, based on this inventory, to identify gaps in EU legislation with respect to soil threats and functions which feed into the third aim, to provide a comprehensive review on how MS instruments complement and address the gaps at EU level.

Dr Frelih-Larsen provided a brief summary of the soil Wiki platform development process as well as structure of its content. The Wiki includes both MS instruments as well as EU level instruments. In relation to MS instruments, it was noted that there is a great diversity across Member States in terms legislation and policy relating to soil. There are 671 national instruments in total recorded in the Wiki, the majority of which (61%) were in the "regulatory binding" category. Dr Frelih-Larsen highlighted that the majority of national-level instruments are directly or partly linked to the EU level instruments (507 in total).

Dr Frelih-Larsen illustrated the situation by MS in relation to number of MS policy instruments per soil threat and soil function and examples for binding instruments (such as for example an overarching Soil Policy Act) in various MS were provided. The Wiki also provides a summary of EU-level instruments, and Dr Frelih-Larsen pointed out that 35 EU policy instruments were analysed for their relevance to soil threats and functions, and highlighted the most frequently tagged EU policy instruments within the national inventory. In conclusion, Dr Frelih-Larsen stressed that the soil inventory creates an overview and a baseline, however the interactions between instruments are more difficult to capture and analysis would need to go beyond the inventory in order to capture these.

3.2.3 Inventory and Assessment of Soil Protection Policy Instruments in EU Member States – Methodology for EU gap analysis and MS review



Ms Catherine Bowyer, Institute for European Environmental Protection (IEEP) gave an overview of the second element of the study, the gap analysis. In particular, Ms Bowyer explained how the methodology was used for the gap analysis and MS review. First, Ms Bowyer explained the aims and objectives of the task at hand i.e. carrying out the preliminary gap analysis by contrasting soil threats and soil functions and how these are covered by the policy instruments, and assessing how well the policy cover soil protection issues. She pointed out that the analysis provided an assessment of existing policies contribution to preventing soil threats and/or recovering soil functions. Based on this, MS summaries were created according to soil threat and soil function.

Consequently, Ms Bowyer explained in greater detail how the gap analysis was performed at both MS and EU-level. EU policies were reviewed and feeding into the gap analysis at national level, and helped to identify whether MS policies consistently address these EU-level gaps. Ms Bowyer clarified that a “cluster approach” was used to support the assessment of whether groupings or clusters of policies and instruments are relevant in relation to the nature of the given threats, act coherently and/or result in gaps. Ms Bowyer then summarized the process of national policies review and noted that this complemented the inventory documented in the Wiki by giving a historical perspective and reviewing the threats and functions that are the addressed by MS policies.

In conclusion, Ms Bowyer provided an overview of overarching policies at EU level and highlighted a couple of important issues revealed by the analysis. First soil protection is an outcome mostly derived from protecting other environmental resources, second the EU Thematic Strategy on Soil is the only EU policy dedicated solely to soil and third only a limited number of MS have strategic, coordinated approach in relation to soil protection.

3.2.4 Inventory and Assessment of Soil Protection Policy Instruments in EU Member States, Soils and the CAP - EU legislation and MS implementation,



Ms Clunie Keenleyside, IEEP, focused on instruments for protecting soil within the context of the Common Agricultural Policy (CAP). Ms Keenleyside provided a brief summary of the instruments under the current CAP (2014-2020) and emphasised the role of CAP as an important economic driver of land management decisions across the EU.

An overview of relevant Good Agricultural and Environmental Conditions (GAEC) pertaining to soil standards was provided, GAECs number 4, 5, 6 specifically provide agricultural and

environmental conditions relating respectively soil cover, soil erosion and soil organic matter - defined by Member States for 2015. Ms Keenleyside explained greening obligations in the current CAP and their potential impact on soil protection/improvement. In relation, to greening obligation concerning crop diversification, Ms Keenleyside pointed out that preliminary analysis of this greening measure indicates that farmers must change the crop on only approx. 1% of EU arable land. In relation to permanent grassland greening obligation, Ms Keenleyside noted that outside Natura 2000 areas only three Member States and one region have designated Environmentally Sensitive Permanent Grassland (ESPG) in contrast to 75% of permanent grassland designation as ESPG within Natura 2000.

Ms Keenleyside concluded her intervention by bringing attention to EU-28 analysis of selected land management practices required or programmed for GAEC standards 4, 5, 6 and 7, Pillar 1 greening obligations and agri-environment-climate schemes (under the Rural Development Policy) and illustrating the situation by showing the presence/absence of good management practices in Member States. The CAP is rather different from other EU policies in its scope and implementation, making it difficult to assess gaps at EU level when so much depends on implementation choices. The high a level of subsidiarity in Pillar 2 gives Member States the freedom to design and target very specific support for soil protection, if they wish to do so. They have choices in Pillar 1 too, for example in defining farm-level requirements for cross-compliance and Pillar 1 greening, within a framework set at EU level. It is clear from the EU-28 analysis that this flexibility has been used in many different ways, both in choosing which soil management actions to prioritise and whether to do this using Pillar 1 requirements or RDP funding. Perceived gaps in implementation in some Member States may be difficult to address without constraining the flexibility necessary for effective soil protection elsewhere in the EU, although there is scope to tighten some of the EU rules in a way that would strengthen potential soil protection benefits at Member State level.

3.2.5 Conclusions on soil inventory and identified gaps

Ms Josiane Masson (DG Environment) presented an overview of the current gaps in EU policies and instruments relating to soil health in general. Key disparities were highlighted, with a focus on the lack of a clear definition of soil across EU policies and in national legislation.

Ms Masson presented the main gaps in groupings or clusters of EU policy. These clusters are:

- CAP and forest cluster
 - Soil protection is addressed in 3 CAP instruments but a large flexibility is left to MS and farmers which do not always use the full potential of soil-related measures; forest soil protection is still limited.
- Local contamination cluster
 - Industrial Emissions Directive (2010/75/EU) - not all installations are covered, emissions to soil is mentioned but it is not a priority. The Environmental Liability Directive (2004/35/EC) only covers part of activities, only applies to damages caused after April 2007. Historic contamination and orphan sites are not addressed by EU policies and vary a lot from one MS to the other. Remediation can be financed under EU regional funds.

- Diffuse soil pollution cluster
 - Diffuse soil pollution partly addressed by EU legislation (waste and landfills, water policies etc.) but difficult to address and quantify

In conclusion, Ms Masson pointed out that there is a list of ‘open issues’ pertaining to legislative gaps within the current EU framework, with emphasis put on the need to demonstrate that healthy soil and soil ecosystem services are essential for societal challenges and for sustainable development.

3.2.6 Panel and debate on soil policy in the EU

Ms Claudia Olazábal introduced the expert panel, and stressed the importance in engaging with stakeholders to examine current gaps in legislation and developing ideas on how to move forward. The panelists were asked to highlight the most important issues from their perspective and their thoughts on how to move forward.



Mr Co Molenaar, Senior advisor Soil and Water, Ministry of Infrastructure and Environment in the Netherlands, stressed that policy-making is more than legislation and some MS may decide consciously to use non-binding instruments instead of regulations. It is the role of governments to build capacity and facilitate change i.e. by raising awareness about the importance of soil and building support for action among citizens. Mr Molenaar also pointed out that soil policy in the Netherlands is currently in transition moving away from sectoral instruments towards an integrated approach (under spatial planning) that is fully decentralised policy and the responsibility of local governments This new development is expected to deliver tailored solutions at the local and regional level and ensure a more effective soil protection.

Ms Liisa Pietola, Chairwoman of Working Party on Environment, COPA-COGECA, highlighted that soil is the farmers’ main partner, specifically referring to the following three key elements. First, it is in the interest of farmers to have good productive soil, therefore, many agri-environmental schemes under the Rural Development Programme are useful for farmers and that there has been a lot of improvement in European farming practices over the last decades. Second, attention needs to be paid to key soil threats – in particular soil sealing and land abandonment which are big issues for productivity, and the impact of climate change on loss of fertility. Third, there is a lack of data relating to carbon content of soils. Ms Pietola stressed that this issue needs to be researched further, data collected with the active engagement of farmers as a prerequisite for developing targets for soil carbon content. In conclusion, Ms Pietola stressed that there is already too many instruments and flexibility is

needed because soil management depends on local conditions and farmers are the ones who have the best knowledge in this area.

Mr Eric Gall (Policy Manager, IFOAM EU) stressed that intensive farming practices are part of the current problem relating to soil degradation and that we cannot afford to continue with a business – as – usual approach. Mr Gall pointed out that there is also good news, because there are a number of agri-ecological practices that can improve soil organic content and thus overall soil health. As farmers are among the first victims of climate change, the implementation of these practices is equally important for farmers as well as addressing climate change. Although a lot has been achieved over the years, the key question is whether it is enough.

In relation to the CAP, Mr Gall highlighted several issues. CAP continues to favour export based production and does not reward farmers who implement practices which are beneficial for the environment. Although greening measures are a positive step forward, a number of farms are exempted from obligations, thus the efficiency of these measures is significantly reduced. There is a lack of monitoring of the impact of CAP on the ground and first analyses show little impact of greening on the ground. Mr Gall also pointed out that the subject of soil is often sidelined because of focus on other issues like water quality, which have clear targets through environmental policies. He stressed that an essential step forward is to reward farmers who maintain ecosystem services.

In conclusion, Mr Gall stated that there is no contradiction between the EU- level legislation and local level implementation as the authorities have sufficient scope for maneuver to achieve the desired outcome. Looking at past reforms CAP is a very big policy with many instruments but it is difficult to change, it should be reoriented towards ecosystem services delivered to farmers but also to citizens , which is not reflected in the current discussions on the new CAP reform. IFOAM supports the People4Soil initiative calling for a Soil Directive at EU level.

Mr Pieter Depous (Policy Director, European Environment Bureau) stated that currently it is not possible to think of any topic as critical, and as essential as soil which at the same time receives so little political attention and that the fundamental problem is a structural neglect linked to the shrinking number of priorities of the Commission.

Mr Depous stressed that there is now scientific consensus that soil is doing very badly in relation to its quality and health but 10 years after the Soil Framework Directive proposal little has changed at MS level. Mr Depous emphasised that during the 40 years of EU environmental policy there has been improvement in air quality, return of wildlife, legislation dealing with chemicals, but a successful dealing of soil as a vital resource is still missing and the need for action is now greater than ever. Mr de Pous brought attention to the fact that currently it is possible to address the ownership issues with the collective problem together. Mr de Pous cited the example of EU directive on energy efficiency in buildings where these two issues were brought successfully together.

In conclusion, Mr Depous stressed the need for the CAP to be transformed into a real food and farmer policy, close to citizens and consumers and that political responsibility on national level is critical for success in addressing soil protection issues.

Debate – questions and comments from the audience

The presentations were followed by discussion with the audience. The following issues were highlighted:

- Soil health definition and target setting should be done at farm level, employing a practical and bottom up approach
- The issue of soil sealing, which is currently the main soil threat for agricultural land.
- The issue of implementation of soil protection measures within the CAP on the national level, where the Member States have a large scope for intervention and manoeuvre (DG AGRI)
- The potential of local measures and society at large as opposed to the continual and numerous legislative measures at EU level i.e. many Member States still need soil protection legislation as they are at different development stages (an academic representative from Portugal in reference to Mr Co Molenaar's intervention)
- Substantial volume of regulation is counterproductive in achieving healthy soil i.e. there is a need to take a different approach – start at the farm level as every farm is unique and requires targeted solutions - a bottom-up approach is therefore a way forward.

The panelists were then asked to respond to these issues:

Mr Gall stated that CAP is not currently supporting small farmers, in relation to soil management and on-going soil sealing, it is very difficult for small farmers to find land. Therefore, access to land as basis for agricultural production is crucial and priority has to be given to sustainable farming practices. In response to emphasising bottom-up approaches, Mr Gall agreed in principle, but stressed that since the action on soil is given very low priority, we first need clear policy framework, which could then drive action on the ground. What is needed is flexibility at the local level as well as clear targets to drive policy action. Mr de Pous also stressed that we need both bottom-up and top-down approaches to be successful and address current gaps in policy implementation.

Ms Pietola agreed that we need farm specific measures. She also emphasised the need to focus in particular on productive soils. Mr Molenaar highlighted that there are differences between Member States and legislation needs to reflect this, and suggested strongly, that we need to harness the energy of society not just legislation, and that the instruments and solutions are tailor-made. Ms Pietola re-stated that farmers have too many regulations to deal with and that, in her opinion, this represents a barrier because farmers fear that they will be penalised if they are not compliant with all these rules. Mr Gall restated that there are regulations applicable to farmers but this is necessary because soil is a common good and farmers receive a significant public support, referring to current expenditure for CAP (approx. 40% of the EU budget).

Ms Olazábal concluded the morning session and thanked the speakers, panelists and participants for their active participation.

4 Lunch Time Session – European Soil Partnership (ESP)

4.1 Introduction to the European Soil Partnership

Ms Elena Havlicek (ESP Chair) explained that the European Soil Partnership (ESP) was launched in 2013 and members include all 28 EU Member States (plus other non-EU countries) as well as 90 pan European organisations. Ms Havlicek then emphasised soil sealing as a main threat alongside soil contamination and loss of biodiversity. The main challenge is not only to protect the soil but also to manage it (as opposed to other elements like the air for example where management is not needed). Along these lines, Ms Havlicek stressed that we need different approaches than the ones we currently apply to other resources, as soil is a living organism.

Consequently, Ms Havlicek noted that knowledge, practice, legislation and guidance are all in place, so where are the problems coming from? What is needed is a shift in thinking and convincing politicians about various soil functions, for example the role of soil in food security.

In this respect, Ms Havlicek explained that the role of the ESP is not primarily concerned with obtaining more knowledge and developing more studies, but it is concerned with bringing people together and talking to people on the working on the ground. Using a case study from Germany, where a tool to embed soil functions in the spatial planning was developed, Ms Havlicek illustrated the work of the ESP. The tool that was created was a map indicating soils of high value. The map can be used to determine differentiated taxes for developers or planner intending to use a certain parcel of land.

In conclusion, Ms Havlicek stressed that in many countries such as Switzerland, UK and Germany, guidelines to protect soil during construction and excavation already exist and this good practice should be spread.

Luca Montanarella added that everyone is welcome to join the ESP and that the partnership is open to anyone interested in the issue of soil. Josiane Masson said that more promotion of the ESP activities would be good to facilitate sharing knowledge, and exchange experiences and good practice. All participants are invited to become partners to the ESP by contacting the ESP secretary (email address esp-sc@jrc.ec.europa.eu).

4.2 Discussion with the audience

A question regarding how “in-the-field” organizations can get involved was put forward. Ms Havlicek referred to the implementation of the five Global Soil Partnerships pillars, indicating that one pillar aims to create a network of advisers and farmers. This action is also supported by DG Environment as it sees bringing soil stakeholders together as an essential step. Mr Montanarella stressed that the ambition is to involve all stakeholders i.e. each time there is a discussion about soil we end up discussing agriculture, and pointed out that there is a lot of soil which needs attention not just agricultural and we need to reach out to all stakeholders.

A second remark from the audience stressed that farmers do not operate in the vacuum – how do we integrate all relevant stakeholders, not only farmers?

In response, Mr Montanarella stressed that the idea of the Global Soil Partnership was to involve everyone, not only farmers but also agro-industry. Currently, complex global soil data systems are being developed by big companies. Mr Montanarella agreed that there are many communities which deal with soil and have a lot of valuable information not just farmers and this needs to be explored.



5 Parallel working sessions

Robert Pederson (Milieu) introduced the parallel working sessions and explained that the objectives of the working sessions were to:

- Identify key challenges and gaps (both knowledge and policy); and
- Develop possible ideas and improvements on ways to move forward on soil protection in the EU ;
- Collect stakeholders opinions and views related to the themes;

Or put in simpler terms to get input from stakeholders regarding current challenges and potential solutions.

The parallel working sessions were built up around four themes as described in the agenda and the participants were dividing into 3 – 4 smaller subgroups of 10-15 people to facilitate richer discussion of the issues. A “world café” method was used to ensure active discussion and participation in the working sessions. Each subgroup worked with a specific sub-theme and was give a set of guiding questions to ensure a more targeted discussion of relevant issues. Details on the sub-themes and guiding questions for each parallel working session are provided in Appendix 2.

Each subgroup was then asked to identify three to four key actions, based on their discussion and present those to the bigger session group. In the following all participants were ask to prioritize all presented actions (using three votes per participants). The rapporteurs for each of the parallel working sessions presented then the key messages and results in the plenary session. The outcomes are presented in section 6 below.



6 Plenary Session 2 – Wrap up from parallel sessions

6.1 Reports from parallel sessions



Session I – Identifying challenges and opportunities

Dr. Ana Frelih-Larsen (Ecologic Institute) presented the following priorities and actions in relation to the theme of identifying challenges and opportunities:

- Improve policy coherence following agreed environmental / soil targets
- Reach agreement on common definitions (good status, soil functions) before defining duty of care
- Need to regulate land use change (e.g. spatial planning)
- More specific focus on soil protection within climate policies
- Gaps in EU soil policy remain (historical contamination, agricultural soil management)
- Opportunity for the EU to be a frontrunner in implementing international targets (SDG 15.3, FAO's Voluntary Guidelines for Soil Sustainable Management)

Session II – Moving from a physico-chemical mind-set towards a soil ecosystem and ecosystem services approach?

Robert Pederson (Milieu) highlighted the active participation in this group and outlined the themes that the parallel session worked with and based on discussion across groups highlighted two cross cutting issues that are important to consider:

- Ecosystem services is not only about farms but also about cities where the majority of people live in EU and where the majority of consumption takes place
- The concept of ecosystems and ecosystems services is still evolving

Mr. Pederson highlighted three main priorities and actions identified by participants in the working session:

- Ecosystem services are an integrated tool to raise awareness on the value of soil among stakeholders - companies, farmers, citizens
- The need to develop integrated spatial planning policy
- Developing tools to help people understand ecosystem services– user guidance to define and assess ecosystem services – the objective is to develop an ecosystem assessment tool – as very practical approach

In addition, discussion on ownership relating to private land and public goods (ecosystems services) an interesting case of good practice from the Netherlands was highlighted – a pilot partnership between water providers and farmers, where water providers pay farmers for the ecosystem service they provide in relation to water.

Session III – Identification and remediation of contaminated sites – how much public intervention is needed for historically degraded soils?

The rapporteur for Session III, Ms Bowyer (IEEP) outlined the main emphasis of the work of Session III:

- Preventing contamination/site identification/promoting remediation – what motivated change/how can change be motivated/good examples
- Public versus private interventions and case of orphan sites
- Agreement on gaps and issues identified and question of historic sites/ coordination of soil contamination activities

In the discussions in the smaller groups 3, three cross-cutting themes emerged:

- Discussion on the role of overarching policy; its role in setting a baseline and methodological approaches
- How to overcome the issue of funding and the funding gap for remediation and who pays, the role of private actors and the role of public actors in their motivation
- Role of public actors as facilitators in the process of remediation not delivering but making it happen.

Ms Bowyer then presented definite ‘top actions’ with a high degree of agreement and common themes that emerged from the groups:

- Make the most of synergies between public/private partnerships and motivate this further – good examples of this with proven value in recycling land. Motivator for action.
- Transfer of ownership – opportunity linked to real estate, generation of data for understanding potential contamination. Linked to the point on feasibility studies to support land purchases and encourage investment.
- Legislation is a motivator for water protection/food quality.
- Procedural instrument would be helpful setting out methodological approaches to standards, risk based approaches setting continuity of approach but allowing site specific adaptation.

- Guidelines for use of public versus private funding, clarification of what is possible in line with state aid.

Session IV – How to promote sustainable soil management in agriculture and forestry?

Rapporteur Ms Keenleyside (IEEP) presented the following key messages for Session IV:

- Soil policies, measures and targets must respect the specific local soil conditions, status and issues (e.g. relative importance of peat soils and salinisation varies across the EU). Targets may be difficult but if attempted must respect this point.
- Soil organic matter is critical to soil regeneration and to soil fertility and soil biodiversity. It takes time to improve Soil Organic Matter (SOM) at farm level, but soil can be regenerated. There is a need to remember that soils should not be treated as renewable resources.
- Importance of training, information and advice/advisers needs to be given more recognition/effort in context of changing land management behaviour and farmer attitudes. More specific points in this context:
 - To raise technical skills of farmers, training could be a compulsory condition of CAP support (with those farmers who could pass a soil management ‘exam’ or test exempted from this requirement)
 - Must train the farm advisers, not just the farmers; also focus on ‘lead’ farmers who can influence their peers.
- Another approach to changing farmer behaviour/management, raised in one subgroup, could be an initial up-front incentive payment which would no longer be necessary after a few years.
- To improve orientation of the CAP towards soils, there is a need for underpinning soil legislation (compare with WFD for water, Natura 2000 for biodiversity). Peat soil management and maintenance of soil carbon needs specific rules.
- European Innovation Partnership on Agricultural Productivity and Sustainability (EIP-AGRI), Operational Groups (which are bottom-up) and farming industry-led initiatives (which may not be using government funds) could be a useful way of promoting local/regional initiatives on soil protection/management.
- Paludiculture (production of specialised crops which grow in rewetted peatland soils) was mentioned as a promising approach.
- Result-based payments and targets may be possible for SOM but more difficult for erosion.
- Crop rotation has benefits (but unclear if it can replace crop diversification in CAP greening obligations).

6.2 Plenary discussion

Following the presentations of key messages, conference chair Claudia Olazábal opened the floor to the audience to raise any outstanding points/comments in relation to the four parallel sessions in turn. The following provides a summary of the points raised in each session.

Session I

It was highlighted as a positive sign that the discussion is moving from soil threats to ecosystem services (COPA-COGECA).

Session II

- The change from a physico-chemical mind-set towards a soil ecosystem and ecosystem services approach presents a major shift and huge step in thinking, which also necessitates new knowledge (Claudia Olazábal, DG ENVI)
- It is important to show how ecosystem services are connected to societal challenges and that ecosystem services can be protected by protecting soil rather than emphasising soil threats and decline of soil functions (Dutch Ministry of Infrastructure and Environment).
- The role of soil in carbon sequestration and climate change mitigation was stressed (COPA-COGECA).
- A question was asked regarding compensation for ecosystem services i.e. what would be the territorial limits (researcher in Environmental Law)?
- Finally, regarding integrated spatial planning, a question was asked regarding who would be responsible for implementing an integrated/spatial planning approach and what does it include, e.g., water, soils (German Environmental Agency)? Mr. Pederson responded, that by integrated spatial planning, his understanding was to develop a more integrated approach across sectors. Ms Olazábal (DG ENVI) added that it is Member States who would be responsible for spatial plans, while the Commission is asked to assist Member States in implementation (with data, guidance, tools etc). Finally the point was raised– that integration should be taken very broadly, involve different sectors and societal challenges employing a systematic approach. It is a challenge but an important one (the Dutch National Institute for Public Health and Environment).

Session III

No issues or comments were raised.

Session IV

- At the beginning of the session a point was made that soil can be regenerated and restored. Ms Olazábal confirmed that indeed there is a lot of effort focusing on restoration and remediation activities at the Commission.
- A question about new technologies, which were hardly discussed, was raised i.e. substantial amount of data is currently available via digital technologies, satellites which create a situation ('data economy') where companies have more information than farmers. What is the view of the panellists in building this big data platform and

how to combine public and private investments in data gathering and made it publically available (Yara, Mineral Fertilizer Company)? Ms Olazábal responded that data generated by private companies such as Unilever or Kellogg's are very useful and available without compromising commercial confidentiality and creating new public-private partnerships could be an option. Rapporteur Ms Freluh-Larsen added that the issue of coordinating and harmonizing data sources is an important one. For example, combining data for CAP payments with carbon accounting for farms requires harmonization, but it is an interesting area to explore. Such data could provide a valuable source for CAP assessments and the evaluation/valorisation of land. Finally, it was stressed that the quality of data is very important as well as privacy issues - farmers have their responsibility but should also gain some profit if their data are shared (COPA-COGECA).

6.3 Conclusions

In conclusion, Ms Olazábal announced that the report on the 'Inventory and Assessment of Soil Protection Policy Instruments in EU Member States' will be publicly available in the first quarter of 2017 on the Commission's website (http://ec.europa.eu/environment/soil/publications_en.htm)

The Commission plans to continue to engage in a structured dialogue with the Member States and with 'soil stakeholders' to discuss the possibility of a new soil policy legislation and to conduct an impact assessment to prepare for a new policy proposal. Ms Olazábal pointed also out, that although the legislative proposal on soil by the Commission is unlikely to come in 2017 or 2018, a continuous dialogue between the Member States, the Commission and stakeholders is nevertheless very important in order to come up with a high quality proposal which will receive sufficient support. Ms Olazábal closed the conference and thanked the organisers, and speakers and participants for the fruitful discussions.

Appendix 1: Themes and questions for parallel working sessions

Session 1: Identifying challenges and opportunities (international agenda, duty of care, comprehensive vs. 'cluster' based approach etc.)

Moderator: Claudia Olazábal, DG Environment

Subgroup 1 - Gaps in EU legislation

- Which do you think are the main gaps at EU level and why? What could be the added-value of EU action to fill the existing gaps?
- What would be the advantages and disadvantages of a common binding framework at EU level vs. voluntary approaches or various national rules?
- Should the EU focus on a subset of the soil threats or on all the soil threats present in the EU?

Subgroup 2 – Integration in other policy areas

- In terms of integration in other policy areas, what are the key policy areas (besides agriculture and forestry) where challenges for integration exist and what is needed to improve the integration of soil protection concerns in these policies?
- How can the 2030 climate policy being developed (e.g. LULUCF, etc.) contribute to the protection of soil in the EU? Are there any associated risks/threats to be managed?
- How can the global Sustainable Development Goals and targets on soil protection and land degradation neutrality trigger EU action on soil? How to ensure that the different SDGs with provision on land and/or soil (SDGs 2, 3 and 15) are implemented in an integrated manner? What policy changes are needed?

Subgroup 3 – Level playing field and duty of care

- How should a level playing field be ensured for economic operators to operate in the internal market?
- What degree of duty of care should be applied on privately owned soils given that these are delivering benefits for the wider society (i.e. ecosystem services)?

Subgroup 4 - Data to support policy making

- In your view is there sufficient soil data generated in the EU or should there be an extra effort on data collection and dissemination?
- How to improve the valuation of soil functions and soil protection costs-benefit analysis (e.g. how to collect evidence, quantitative vs. qualitative approach, etc.)?

Session II: Evolving from a pure physico-chemical mind-set towards a soil ecosystem and ecosystem services approach?

Moderators: Margot de Cleen (Ministry of Infrastructure and the Environment, NL and Robert Pederson (Milieu)

Subgroup 1 - Benefits and good examples of an ecosystem services approach

- What are the benefits of moving towards an ecosystem service approach for soil protections and what would be necessary for such a transition?
- What are existing good examples for this and opportunities for moving forward?

Subgroup 2 – Legislative tools for ecosystem approach

- How could soil protection be better ensured with an ecosystem approach and what policy and legislative tools should be employed?

Subgroup 3 – Information and capacity building needs

- What are the information and capacity building needs?

Session III: Identification and remediation of contaminated sites – how much public intervention is needed for historically degraded soils?

Moderator: Johan Ceenaeme (OVAM, Belgium)

Subgroup 1 – Motivators and good examples

- What are the key motivators to take forward identification and remediation of sites?
- What are existing good examples of identification and remediation approaches (privately and publicly funded)?

Subgroup 2 – Public vs. private intervention, and management of orphan sites

- What are the advantages and disadvantages of public intervention and the key success factors for this to work better than private intervention? When private intervention is on the contrary necessary or more effective?
- What are the conditions for dealing with orphan sites and remediating those with high risk to human health and environment? Set up of specific fund for orphan sites: is it feasible/acceptable for all MS? How to incentivize PPPs?

Subgroup 3 - Gaps and the role of EU policy for soil contamination

- Do you agree with identified gaps in existing legislation (identification of historical contaminated sites, remediation of sites when there is a risk on human health and/or environment, issue of remediation)? Do you consider those gaps should be covered by EU policy instrument?
- The national legislation on contaminated sites varies a lot from one MS to the other. Would it be possible to define common requirements and/or targets to deal with

contaminated sites? How to define actions with sufficient flexibility to accommodate the variety of situation, avoiding additional requirements for MS already well advanced in the management of contaminated sites but defining objectives for MS where national legislation is less advanced?

Session IV: How to promote sustainable soil management in agriculture and forestry?
Moderators: Josiane Masson (DG ENVI) and Angelo Innamorati (DG AGRI)

Subgroup 1 & 2- CAP

- This year the Global Soil Partnership of FAO adopted the "Voluntary Guidelines for Soil Sustainable Management" which identify sustainable management practices applicable at global level. Such practices are already implemented e.g. in conservation agriculture. How to promote the implementation of those guidelines in the EU? Do you consider that they need to be adapted to the European situation? How could their implementation be better supported by CAP measures (compulsory/voluntary)?
- How to make best use of existing CAP instruments and principles (subsidiarity, flexibility)?
- Do you consider that more precise targets on soil would help to improve soil protection in CAP? What changes to existing instruments and/or additional instruments under a future CAP could be envisaged to ensure a sustainable management of agricultural and forestry soils? Could result-based payment be an effective way of achieving soil protection under the CAP?

Subgroup 3 - Research and innovation, and new technologies

- Within the CAP framework, what should be the soil protection priorities for research/innovation and farm advisory systems? What characterises the best examples and what issues have these focused on?
- How can new technologies and innovation help to protect soils and get a better knowledge of soil properties?
- What are the challenges for national and regional authorities in promoting sustainable soil management in both agriculture and forestry and how can these be overcome?

Subgroup 4 - Balance between voluntary and legal obligations

- How can sustainable soil management be ensured at the scale of individual holdings? Can this be ensured only by voluntary action or should there be legal obligations to ensure a level playing field among different agriculture/forestry holdings?