Report of the Eionet NRC Soil meeting at JRC Ispra, 23 May 2014

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Introduction

This meeting was held in Ispra (Italy) at the Joint Research Centre (JRC) of the European Commission on 23 May 2014. It was organized and hosted by the Institute of Environment and Sustainability (IES) of the JRC and financed by the European Environment Agency. This meeting was organized in combination with the 1st European Soil Partnership plenary meeting, organized on the same premises.

Representatives from a total of 30 Eionet countries attended the meeting, as well as representatives from the European Environment Agency (EEA) and DG Environment of the European Commission. (See Annex 2: List of participants).

The meeting was co-chaired by Luca Montanarella and Agnieszka Romanowicz.(both DG JRC)

All the documentation related to the meeting (including the presentations) can be found at:

http://eusoils.jrc.ec.europa.eu/InternationalCooperation/ESP/LaunchESP.html

Summary

The prepared agenda of the workshop (Annex 1) was followed, with minor deviations for logistic reasons.

The Chair opened the meeting with a tour de table and a short introduction as to the background and objectives of the meeting:

Covering the thematic aspects of soil and soil-related applications within the EU, the European Soil Data Centre (ESDAC) was established at the JRC following a specific agreement between the “Group of Four”, namely DG ENV, DG ESTAT, DG JRC and EEA. In the "Eionet Workshop on Soil" held in September 2007 with representatives from DG ENV, the EEA and the JRC, together with representatives from the Eionet 'National Reference Centres for Soil' and members of the Steering Committee of the 'European Soil Bureau Network', the EEA and the JRC jointly decided that all soil data management activities carried out by the EEA in collaboration with Eionet NRC Soil were to be transferred to the JRC.

In March 2009, JRC organised a first Eionet workshop on soil in which a number of soil data management issues related to the data requirements for the ESDAC were discussed. A number of conclusions and actions in the short term were drawn. The 2012 workshop discussed the soil information and data flow between the interested parties, specifically: 1) through reflection on the last two Eionet data collection exercises, held in 2009-2010 (soil organic carbon/soil erosion) and 2011-2012 (contaminated sites), 2) through discussion how new soil data requirements specified by DG ENV and EEA could be matched with contributions from NRCs for Soil, and 3) through discussion on the road ahead.

Since then, some new developments have taken place. EEA reinforced its interest in soil, which will be helpful to streamline the dataflow from Eionet to JRC to EEA. At JRC, a new multi-annual work programme (2014-2015-2016) has started with emphasis on soil in a number of projects. In the Soil Resources Assessment (SRA) project, a contribution from European countries is sought through delivery of updated soil country

reports that, in line with the work of the Global Soil Partnership (GSP) and European Soil Partnership (ESP), would contribute to the European chapter of the planned FAO 2015 Status of World Soil Resources Report.

EEA (Geertrui Louwagie) made a set of presentations to update the audience on various developments at EEA side.

A first presentation provided information on the updated NRC Soil profile in the context of the Eionet review process. This review was initiated to strengthen the existing Eionet structure in line with priorities set out in the -the new EEA multi-annual work programme (MAWP) 2014-2018. It resulted in a revision of the National Reference Centre (NRC) structure and profiles; the profiles are used by National Focal Points (NFPs) to appoint NRC representatives. Following the new NRC structure, the EEA Management Board (MB) has approved 24 NRCs, including one on Land use and spatial planning and one on Soil. Concerning the latter, the focus in the past was on contaminated sites, but now a broader scope is necessary, in line with the Soil Thematic Strategy. Despite the fact that the JRC operates the European Soil Data Centre (ESDAC), the EEA still needs soil data, and support on an evaluation of soil functions and degradation processes. A question was raised on the role of Primary Contact Points (PCPs), i.e. responsible within an NRC at national level for coordinating communication on specific topics. Within the Eionet directory, NFPs can now indicate formally if one of the NRC Soil nominees should be considered PCP; only a few NFPs/countries actually use this option though. Note: since 2009, JRC has maintained its own list of PCPs Soil in order to facilitate streamlined communication. However, following EEA practice, NRCs Soil and NFPs are kept in copy when correspondence is sent to the JRC PCP mailing list.

A second presentation informed the audience on the place of soil in EEA's MAWP 2014-2018. Under strategic area 1 - Informing policy implementation, sub-area 'Urban, land use and soil' explicitly refers to soil. In line with this activity, the EEA MB accepted the establishment of a new European Topic Centre on Urban, Land and Soil Systems" for the period 2015-2018; for which a successful consortium has been accepted in the meantime (MB 17 June 2014). Activities will start in January 2015.

A third presentation reported on the draft 4-page Soil 'fiche' in the context of the SOER 2015, including the feedback from the Eionet consultation. The Soil fiche is part of the thematic fiches (part B), and belongs to the 'environmental themes' cluster (other clusters are 'socio-economic dimensions' and 'systemic perspectives'. The fiche focusses on soil functions, but nevertheless highlights soil degradation processes affecting the proper functioning of soils. 10 Eionet countries provided comments, along with DG ENV and CLIMA. Recurrent feedback emphasised that the fiche should be more action-oriented (e.g. calling for translating existing soil data into concepts on soil functions and related services, as brought up during the discussion as well), that attention to the role of soil biota/biodiversity should be increased, that climate change aspects should be more elaborated and that the prospects section should be more policy-oriented (e.g. reference to the CAP). Inclusion of additional topics was requested as well; considering the 4-pp. fiche format not all of these requests can be taken into account though. In the subsequent discussion, it was also suggested to discuss 'land recycling' in relation to soil contamination. EEA replied that land recycling is addressed in the Land systems fiche (systemic perspectives cluster) and cross-references can be made. All fiches have to be finalised by the end of October 2014, for publication in early 2015.

EEA informed also about the coming release of two new products:

- For 2014: the EEA Technical Report 'Land-related resource efficiency - soils in urban and peri-urban zones' (working title)
- For 2015: a joint JRC-EEA technical report in support to the planned communication of the European Commission on land as a resource.

JRC (Luca Montanarella, LM) then gave (A) a detailed presentation on the contents of the Soil Resources Assessment (SRA) project, including an overview of all deliverables, and (B) a summary of the preceding two-day ESP meeting. .

A. The SRA deliverables include: (1) State of the environment country assessment, to be published as an update of the Soil Atlas of Europe and a contribution to the European chapter to GSP World Resources Report; (2) Soil indicators: soil erosion (new wind erosion map) and soil quality; (3) Soil data collection via

LUCAS; (4) ESDAC; (5) Sino-EU panel on land and soil; (6) EC communication on land as a resource; (7) Implementation of the GSP and ESP; (8) Global Soil Database (high-resolution 100m database of soil properties by end 2015); (9) Soil biodiversity and the Global Soil Biodiversity Initiative (release of the Global Soil Biodiversity Atlas in 2015 IYS + conference presenting the results of the ECOFINDERS project in Dijon on the occasion of the World Soil Day 2014); (10) Soil resources of Africa; (11) Soil-awareness raising and outreach: Global Atlas of Soil Biodiversity, Global Atlas of Organic Soils, World Atlas of Desertification; (12). Landslide inventories and (13) Soil database at 1:250k (so far only database for the Danube Region).

This presentation triggered a lot of discussions on the upcoming LUCAS 2015 survey, which was felt by participants to be a good tool for soil monitoring at EU level. Some non-EU countries (Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Serbia, and Switzerland) wanted to know whether they could participate too. While this may not be possible for the full LUCAS survey, the JRC was ready to explore practical arrangements for soil sampling (e.g. by having the countries collecting the soil samples according to the LUCAS methodology, while the soil analyses would be done centrally by the JRC). In view of the 2015 campaign, many experts suggested a broadening of the LUCAS parameters, in particular to cover soil biodiversity. Some countries (e.g. France, Hungary, Norway) already have protocols in place for soil biodiversity parameters (e.g. number of earthworms, DNA). The JRC remarked that this would have serious logistical and cost implications, as the soil samples would have to be analysed in a fresh state or fixated. Further, the NRCs suggested being involved in the quality control phase of the results of the soil analyses. The JRC was ready to associate them in the process. Finally, AT and BE (Wallonia) raised concerns about the access to private property. The JRC, while noting that the samplers were trained by JRC, responded that the collection of the soil samples was the responsibility of ESTAT.

Under related topics, Slovenia flagged the importance of soil archives for national monitoring programmes and asked for guidelines in this respect; France's national archive was referred to as a good example.

On soil-awareness-raising activities, Austria made the suggestion to establish soil-related stands in European capitals on World Soil Day (WSD). In the light of the UN IYS, he suggested to launch an action on civil science, inviting people to report (e.g. by taking photographs) each year on WSD whether they see soil on their way to work. Such reporting could give an indication of progressing soil sealing in and around urban areas over time.

B. The 1st ESP plenary concluded with a concrete action plan for the 5 pillars (soil management, awareness, research, information and data, and standards). In his briefing LM stressed that there is a role for the NRC Soil in contributing to the Status of World Soil Resources Report (and thus also to the JRC SRA deliverable) in delivering country reports. Italy suggested including a section that documents data/information on soil biodiversity in the country reports.

Country contributions

Poland (Grzegorz Siebelec) made a presentation on soil monitoring in Poland. Poland has a digital soil map at 1:25k and has a soil monitoring programme since 1995. The monitoring focusses on soil quality, defined in relation to agricultural productivity. . The resulting information on land valorisation (based on various soil parameters, such as pH, texture, organic matter content, suitability for environmental functions, etc., as well as on climate and slope), is publicly available, including to spatial planners.

Slovenia (Marko Zupan) made a presentation on soil contamination in Slovenia. Portugal communicated that it will have a new law for dealing with soil contamination and contaminated sites, and will have an inventory of contaminated sites in two years from now. Germany communicated that there is a new list of indicators related to contaminated sites. Serbia will develop a contaminated sites directory over the coming three years; Serbia also works on diffuse soil contamination at a 10km resolution, as well as on urban contamination.

JRC (Gergely Toth) gave an introduction on soil indicators (in the context of OECD and Eurostat), currently soil quality and soil erosion.

The soil quality indicator consists of a number of sub-indicators (see; also soil functions are considered. Both indicators are available on the Eurostat website as part of the EU Agri-environmental indicators (soil quality [http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Agri-environmental_indicator_-_soil_quality], soil erosion [http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Agri-environmental_indicator_-_soil_erosion]).

Exchange with EEA is on-going on improving indicators that are already in the EEA indicator management system (see below), such as soil organic carbon, soil erosion, soil moisture. Incorporation of recent survey (e.g. the LUCAS topsoil survey results for soil erosion and soil organic carbon modelling) and research project (e.g. MyWater pedotransfer functions and EU-HYDI database for soil moisture) results allow such improvement.

In the subsequent discussion, Belgium (Flanders) suggested that soil quality could also be considered in relation to geothermal energy systems; while Switzerland advocated that soil quality should not only link to immediate economic interest (e.g. agricultural production), but should .consider all 'environmental' soil functions (production, transformation, habitat, …).

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EEA (Geertrui Louwagie, GL) then gave an overview of the land and soil indicators that are part of (or or planned to be part of) the EEA indicator management system (IMS).

GL confirmed that the EEA Management Board approved the review of the EEA core set of indicators (CSIs), in which (a) soil and land indicators are kept under the heading of "Biodiversity and ecosystem services", and (b) the former core set indicator on the management of contaminated sites (CSI 015) will no longer be part of the core set. The main criteria for the revision of the core set were: evolved policy settings, thematic/sectoral balance, maintenance by EEA, and regularity of updates. The approval is currently pending implementation at the EEA.

The indicator 'Progress in management of contaminated sites', recently updated following input from Eionet NRC Soil (published as JRC Reference Report [http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/30755/1/lbna26376enn.pdf] and updated in the EEA IMS [http://www.eea.europa.eu/data-and-maps/indicators/progress-in-management-of-contaminated-sites-3/assessment]), will still be part of the panoply of indicators monitored by the EEA (some of which based on data collected through Eionet), and now belongs to the thematic cluster of Land and Soil Indicators (LSIs). Accordingly the indicator obtained a new code: LSI 003.

The LSI cluster further includes indicators on land take (CSI 014/LSI 001), imperviousness/soil sealing (LSI 002), fragmentation of habitats and ecosystems (LSI 004; to be developed as part of the core set), soil organic matter (LSI 005/CLIM 027), soil erosion (LSI 006/CLIM 028), and soil moisture (LSI 007/CLIM 029).Currently for only one indicator in the LSI list (the one on progress in the management of contaminated sites) direct input from NRC Soil is needed. EEA/DG ENV also gauged whether there was interest in working on additional indicators and suggested soil biodiversity and land recycling as additional topics; and asked input on the feasibility of update intervals.

In the following debate, few countries reacted to the indicator proposal on soil biodiversity; the Netherlands agreeing with the relevance of the topic. Serbia indicated that it could prove difficult to deliver soil biodiversity data.

Next, Luxemburg asked whether there was a new data collection planned on the soil erosion and soil organic carbon data. JRC (LM) replied that, contrary to a suggested action during the 2012 NRC soil workshop, no new round was envisaged given that only few countries replied in 2009. Switzerland suggested that the process could be redesigned following the feedback and clarifications in the 2012 NRC Soil meeting; while Belgium (Wallonia) suggested an alternative approach for the development of pan-European soil-related maps: comprising a series of iterations, whereby JRC proposes a map and countries are encouraged to validate/update the map with their country data. JRC welcomed this quality control/validation approach.

JRC (LM) also indicated that, despite the rather successful (in terms of contributions) 2011 data collection on the progress in the management of contaminated sites, it would discontinue the data collection if stronger support from the countries is not forthcoming. Countries agreed that there is room for improving the format and contents of the questionnaire in order to receive/provide more reliable and comparable data across Europe. The Netherlands recommended continuing the data collection for the current contaminated sites indicator every 3 or 4 years, and analysing the data received. Participants reacted favourably to JRC's proposal of establishing an Eionet-based working group to discuss the follow-up for the contaminated sites indicator, including the revision of the method. Austria suggested that the working group would also deal with land recycling (in particular for an evaluation of the theoretical potential of brownfield remediation). The following countries expressed interested to be part of such a group: Austria, Belgium (Flanders and Wallonia), Greece, Lithuania, The Netherlands, Serbia and Slovenia; other countries were potentially interested (i.e. had to seek confirmation): France, Hungary, Ireland, Poland, Switzerland and the UK. To make the connection with the spatial planning aspects, EEA offered to establish the link between the planned working group and the NRC on Land use and spatial planning. Some countries suggested including networks like Common Forum, Nicole, etc.
JRC (LM) suggested to re-instate the process of compilation of soil country data, starting from the data/information EEA/JRC already collected in 2007-2009; JRC will send NRC Soil the existing factsheets for revision by the end of 2014. No objections were made. In relation to the country profiles, DG ENV (Luca Marmo) gave a demo of the BISE website (example for France: http://biodiversity.europa.eu/countries/eu_country_profiles/france) that shows factsheets for biodiversity for EU countries and suggested that soil country data could be shown in a similar way.

EEA (Geertrui Louwagie) asked countries for feedback on the expected input and contributions from Eionet countries on the new/revised profile for NRC Soil as proposed under the NRC review process.

The proposed structure was considered adequate. Belgium (Wallonia) suggested adding soil quality explicitly to the indicator aspects under 'Expected input and contributions'.
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The Chair closed the meeting, summarizing the 5 action points that were decided:

1. A new working group on contaminated sites will discuss the contents, form and method for a revised indicator on the progress in the management on contaminated sites, which should allow a better comparison of data between countries. This group will be led by JRC (practicalities to be defined).

2. The process of compilation of soil country data, starting from the data/information EEA/JRC already collected in 2007-2009 will be re-instated by JRC; JRC will send out to NRC Soil the existing factsheets for updates.

3. Eionet countries will be asked by JRC for feedback-on/validation-of the soil-related maps derived with the help of LUCAS data.

4. JRC will work with Balkan countries (in particular Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Serbia,) on LUCAS soil survey data for their countries.

5. JRC will work with Switzerland on LUCAS soil survey data for the country.

6. NRC Soil profile has been agreed; with the request to explicitly add soil quality under 'Expected input and contributions' – indicators. The NFP/Eionet working group has in the meantime agreed to do so upon EEA (GL)'s request.

Annex 1. Final Agenda

Eionet NRC Soil meeting, 23 May 2014

Venue:
Joint Research Centre of the European Commission
Institute for Environment and Sustainability
Land Resources Management Unit
I-21027 Ispra (VA) - Italy

Background and objectives of the meeting

While in the past NRC Soil work may have mostly focussed on data delivery for the 'Progress in management of contaminated sites' indicator, the scope of the NRC Soil is currently broadly on providing expertise on soil functions and degradation processes, and their drivers and responses on national territories. This broadening of scope is very relevant in current policy attention to and activities around ecosystem assessment and resource efficiency.

As such, NRC Soil delivers data on a voluntary basis; while it also functions as a reviewing and commenting panel on EEA assessments/analyses that have a strong soil focus (e.g. review of EEA soil indicators, relevant web products and elements of the State of Environment and Outlook Report 2015). Through their participation in NRC Soil meetings, country representatives also have an opportunity to share knowledge and experience.

This meeting will provide an update on where soil fits within the EEA multi-annual work programme. Accordingly, on-going EEA soil activities and products that are planned in the short to medium term will be presented. Some of these activities and products are in cooperation with JRC's 'Soil Resource Assessments' Project. Countries will be invited to contribute with their view and expertise on how to develop/shape future activities, including data collection efforts. In this sense, an agenda item on the network's role in soil assessment and reporting is included to discuss the way forward.

Agenda

Chair:Luca Montanarella (JRC)

Rapporteurs: Marc Van Liedekerke (JRC) and Geertrui Louwagie (EEA)

Welcome and setting the scene		
09:00	Welcome and 'tour de table'	Luca Montanarella (JRC)
09:20	Background and objectives of the meeting	Luca Montanarella (JRC)
09:30	Eionet NRC review – NRC Soil profile	Geertrui Louwagie (EEA)
On-going and planned (short-term) soil activities		
09:40	▪ Soil in EEA's Multi-annual work programme 2014-2018 ▪ SOER 2015 – Presentation of draft Soil 'fiche' and	Geertrui Louwagie (EEA)

	feedback from Eionet consultation ▪ Planned EEA Technical Report 'Land-related resource efficiency - soils in urban and peri-urban zones' (working title)	
	Discussion	All
10:15	Coffee/tea	
10:45	Planned soil related activities by the JRC for 2014-2016 and de-briefing from the back-to-back meeting of the European Soil Partnership (previous two days)	Luca Montanarella, Arwyn Jones, Panos Panagos (JRC)
	Discussion	All
Prospects (medium-term)		
11:45	▪ Land and soil indicator developments (existing and emerging) in evolving policy settings	Gergely Tóth (JRC), Geertrui Louwagie (EEA)
	Discussion	All
13:00	Lunch	
Country forum		
14:00	▪ Introduction ▪ Country contributions	All
15:00	Coffee/tea	
The way forward		
15:30	Knowledge and information sharing and networking activities for soil assessments and reporting – the way forward	All
16:30-17:00	Wrap-up and conclusions	Chair&rapporteurs

Annex 2. List of Eionet country representatives and other non-Eionet participants

	Attended
	No representative of the country attended

Eionet NRC Soil participants

Albania		
Austria	Sigbert Huber	Environment Agency Austria
Belgium	Johan Ceenaeme Katrien Oorts Esther Goidts	OVAM - Public Waste Agency Flanders Flemish government Public Administration of Wallonia
Bosnia and Herzegovina	Tihomir Predic	Institute of Agrochemistry and Agroecology at the Agricultural Institute of the Republic of Srpska.
Bulgaria	BORISOVA BORISLAVA	Executive Environment Agency
Croatia	Andrea Steinberger	Croatian Environment Agency
Cyprus		
Czech Republic	Igor Dvorak	Czech Geological Survey
Denmark	Vibeke Ernstsen	GEUS – Geological Survey of Denmark and Greenland
Estonia	Kadri Kikkas	Agricultural Research Centre of Estonia
Finland	Teija Haavisto	Finnish Environment Institute
Former Yugoslav Republic of Macedonia	MARGARETA CVETKOVSKA	Ministry of Environment and Physical Planning

France	Véronique Antoni	MEEDDAT/CGDD/SOeS
Germany	Frank Glante	Umweltbundesamt | German Federal Environment Agency
Greece	Sideris Theocharopoulos	NAGREF - Soil Science Institute of Athens
Hungary	BERÉNYI-ÜVEGES JUDIT	National Food Chain Safety Office
Iceland	Rannveig Anna Guicharnaud	Agricultural University of Iceland
Ireland	YOLANDA SIMO JOSA	Environmental Research Centre
Italy	Carlo Jacomini	ISPRA (National Institute for Environmental Protection and Research)
Kosovo under the UNSCR 1244/99		
Latvia		
Liechtenstein		
Lithuania	VIRGILIJA GREGORAUSKIENE	Lithuanian Geological Survey
Luxembourg	Simone Marx	Administration des Services techniques de l'Agriculture
Malta		
Montenegro		
Norway	Arnold Arnoldussen	Norwegian Forest and Landscape Institute
Poland	Grzegorz Siebielec	Institute of Soil Science and Plant Cultivation - State Research Institute Pulawy
Portugal	Jorge Santos Garcia	Portuguese Environment Agency
Romania	Petru Ignat	INCDPAPM-ICPA Bucharest

Serbia	Dragana Vidojevic	Serbian Environmental Protection Agency
Slovak Republic	Katarina Paluchova	Slovak Environmental Agency
Slovak Republic	Jozef Kobza	Soil Science and Conservation Research Institute
Slovenia	MARKO ZUPAN	University of Ljubljana, Biotehnical faculty
Spain		
Sweden	ANNA NORDIN	Swedish Environmental Protection Agency
Switzerland	Fabio Wegmann	Swiss Federal Office for the Environment Soil Section
The Netherlands	Kees Versluijs	RIVM
Turkey		
United Kingdom	Thomas Mayr	Cranfield University
non-Eionet NRC Soil participants		
	Luca Marmo	European Commission - DG ENV
	Geertrui Louwagie	European Environment Agency
JRC participants		
	Luca Montanarella	JRC - IES Land Resources Management Unit – SRA project leader
	Marc Van Liedekerke	JRC - IES Land Resources Management Unit – SRA project
	Gergely Toth	JRC - IES Land Resources Management Unit - SRA project

Agnieska Romanowicz	JRC - IES Land Resource Management Unit - SRA project
Ana Paya-Perz	JRC - IHCP

The following table presents an overview of presences of countries in the last three EIONET NRC Soil meetings organized by JRC, in *2009*, *2012 and 2014*. Green means 'present'; Red means 'not present'.

	WS 2009		**WS 2012**		**WS 2014**
Albania					
Austria					
Belgium					
Bosnia/Herz					
Bulgaria					
Croatia					
Cyprus					
Czech Republic					
Denmark					
Estonia					
Finland					
Macedonia					
France					
Germany					
Greece					
Hungary					
Iceland					
Ireland					
Italy					
Kosovo					
Latvia					
Liechtenstein					
Lithuania					
Luxembourg					

Malta					
Montenegro					
Norway					
Poland					
Portugal					
Romania					
Serbia					
Slovak Republic					
Slovenia					
Spain					
Sweden					
Switzerland					
The Netherlands					
Turkey					
United Kingdom					
	22		**25**		**30**