



## Eionet NRC Soil

### Minutes of the Eionet NRC Soil Meeting

**Date:** Thursday, 15 October 2015, 09:00-17:30

**Venue:** EEA, Copenhagen, Denmark

Minutes drafted by Jaume Fons and Martha Wepner-Banko (ETC ULS); revised by Geertrui Louwagie and Andrus Meiner (EEA), Ana Payá-Perez and Marc Van Liedekerke (JRC), Jacques Delsalle (DG ENV), Virgilija Gregorauskienė (LT), Jorge Santos Garcia (PT), Igor Dvořák (CZ), Kees Versluijs (NL), Frank Glante (DE), Teija Haavisto (FI), Kadri Allik (EE), Martha Wepner-Banko (AT)

### Welcome and setting the scene

**Andrus Meiner** (EEA) opened the meeting stressing the role of the NRCs as contributors to knowledge-based assessment and related policy support, with NRC Soil being one of the 24 Eionet NRCs.

**Geertrui Louwagie** (EEA) presented the background and the objectives of the meeting:

- Review of NRCs, including their scope and kind of expertise required, finalised in 2014. Continuation of NRC Soil was confirmed, with clearly defined focus:
  - In the past management of contaminated sites was the main topic addressed by NRC Soil. Its scope has broadened covering more general aspects like soil functions or soil degradation (including drivers, pressures and responses).
  - Foresee an active role for NRC Soil in supporting soil-related assessments and reporting.
- The main objective of the meeting was to update on current developments on soil related issues both at European institutions and also at country level. The meeting was also intended to define further actions for cooperation in 2016.

**Jacques Delsalle (DG ENV)** presented the recent EU land and soil activities. The most relevant points are detailed as follows:

- Regarding soil activities, the Soil Thematic Strategy from 2006 of the 6<sup>th</sup> Environmental Action Programme (EAP) is the main reference, the 7<sup>th</sup> EAP being the current legal background.
  - Soil Thematic Strategy is based on 4 pillars, which require specific actions
    - Research. There is a need to better integrate research into policy making in order to demonstrate its added value.

- Integration in other policies. The contribution of existing EU policy instruments on soil protection needs to be better understood. Moreover, the review/refit of various policies in the coming years opens the opportunity of further integration of soil protection aspects.
    - Awareness raising. Emphasis is needed on economic arguments.
    - Legislation. Better understanding of what is done at EU and MS levels is needed.
  - Work done in 2015
    - Launch of an Expert Group on soil protection (objectives: discussion of key policy issues; contribution to inventory and gap analysis of soil protection policy instruments);
    - Pilot mapping and assessment of soil-related ecosystem services.
  - Work expected in 2016 and beyond
    - Inventory of EU and EU MSs policies regarding soil protection measures (as part of study contract analysing soil-relevant policies, to be launched end 2015);
    - Better assessment of CAP impact on soil ecosystems and ecosystem services;
    - Cost of inaction and socio-economic benefits of soil protection;
    - Integration of findings (MAES – see below, etc.).
- Land activities.
  - Land is at the crossroad of objectives 1 (natural capital) and 2 (resource efficiency) of 7<sup>th</sup> EAP, with strong policy background:
    - Resource efficiency (RERM - Roadmap for resource-efficient Europe: milestone: no net land take by 2050)
    - Rio+20 outcome document (land milestone: land degradation neutral world in the context of sustainable development)
    - 7<sup>th</sup> EAP (setting targets on land take and on a number of crucial soil quality aspects)
  - Conference on *Land as a resource* in 2014 was a starting point of the activities. Currently, the following issues are identified as relevant to developing a land 'strategy':
    - Better understanding of land functions, land-soil relationships, and how land functions impacted by land use;
    - Integration with existing EU policies;
    - Focus on the socio-economic impacts
    - Identify market, strategic, regulation and knowledge failures
    - Development of indicators: land use efficiency, land take, etc.
    - The previous elements should help to identify where action is needed at EU level.
  - These priorities are addressed through different activities:
    - External studies
    - Joint JRC-EEA-DG ENV work on land functions and land degradation
    - Integration into existing processes (e.g. follow-up of Sustainable Development Goals)
    - Potential Communication on land as a resource in 2016 (currently being debated internally)

After the presentation it was asked whether NRC Soil had a role to play in these activities. It was stated that various national representatives are also members of the new soil expert group, and that NRC soil will be formally associated to the forthcoming consultation process on the inventory and evaluation of existing soil policy instruments and to the assessment of soil functions and mapping of soil-related ecosystem services.

## **NRC Soil contributions over the past year**

**Geertrui Louwagie** (EEA) presented the main messages of the SOER 2015 and the follow-up.

- SOER 2015 is structured around several products, one of them the European briefings. Two of the European briefings relate to land and soil:
  - Land systems. One important element is the conceptual framework for the analysis: a DPSIR-based scheme in a multi-level place-based governance setting.
  - Soil. Focussed on soil functions.
- Follow-up.
  - Planned EEA reports
    - Soil resource efficiency in urbanised areas, Q4 2015.
    - European soil nutrients balances and critical loads, 2016.
    - Climate change, impact and vulnerability, 2016.
    - Land recycling, Q1 2016.
    - Land resource efficiency, 2016.
    - Land degradation, 2016.
  - EEA indicators
    - Land take (CSI 0014/LSI 001). Review and update of the existing indicator.
    - Imperviousness/soil sealing (LSI 002). This is a new indicator based on the high-resolution layer (HRL) Imperviousness.
  - Some activities were focused on communication and awareness raising (e.g. video at launch of the UN IYS 2015 'Not just dirt: the importance of soil', interviews).

**Marc Van Liedekerke** (DG JRC) presented the work done by JRC on the Soil Atlas of Europe. The Soil Atlas has been a successful product to disseminate soil knowledge, not only between scientists, but also to a wider community. The main developments were listed as follows:

- The 1st Soil Atlas was published in 2005. After the meeting of an expert group at the Global Soil Week 2015 it was concluded that there is the need for some updates/improvements, namely
  - Update of some maps (correction of errors, new data,...)
  - New materials (update to current state of art)
  - NRC Soil has been involved in the review with country contributions.
  - First editorial board meeting expected by January 2016.
  - Publication is planned by the end of 2016
- Based on the success of Soil Atlas of Europe, JRC has produced other Atlases:
  - Global Soil Biodiversity Atlas (early 2016)
  - Soil Atlas of Africa. Currently the French version is under preparation.
  - Soil Atlas of Latin America. The Portuguese translation is being revised.

**Ana Payá Pérez** (DG JRC) reported on the NRC ad-hoc Working group meetings on contaminated sites and brownfields, back-to-back with the NRC LUSP meeting:

- Publication of report "Remediated Sites and Brownfields – Success Stories in Europe". This report is based on contributions of countries presenting several case studies. Currently they are working on the zero version and it is foreseen to be published on the celebration of World Soil Day, December 4, 2015.
- Revision of the indicator 'Progress in management of contaminated sites' (LSI 003):

- Eionet NRC Soil Ad-hoc WG on Contaminated Sites and Brownfields
  - Meeting in March 2015. New proposal for format and content of the indicator and agreement to prepare report on success stories.
  - Meeting in October 2015. The draft version of the report was presented and the revision of the indicator was further discussed.
- Summary proposal (see minutes 2<sup>nd</sup> meeting NRC Soil Ad-hoc WG Contaminated Sites and Brownfields for details)
  - 2001 proposed as baseline (year when indicator was established). In case a country started building a national programme after 2001, a different baseline year to be specified by the country.
  - Preliminary agreement (i.e. within WG) on new expressions
    - 1.Sites where polluting activities took place - (rather than 'Sites registered');
    - 2.Sites in need of investigation/still to be investigated – clear suspicion of contamination (not relevant to all countries, in some countries there is a transition from situation 1 to situation 2 following risk assessment);
    - 3.Sites that have been investigated, but no remediation needed (unless land use change, i.e. fit for current use);
    - 4.Sites that need remediation or RRM (risk-reduction measures, including natural attenuation if monitored) – see Common Forum's definition of remediation;
    - 5.Sites under/with on-going remediation or RRM (probably common for all countries);
    - 6.Sites remediation completed (it may include after care measures, RRM i.e. monitoring)
  - Redrafting of other questions (e.g. referring to inventory/register and contaminant threshold values)
- Networking
  - New COST Action: "Industrial Contaminated Sites and Health Network" (ICSHNet)
  - IPChem – Information Platform on Chemical Monitoring (IPChem)

After the presentation the following questions were addressed:

- Way forward of the indicator. Not defined yet: the LSI 003 indicator proposal will be formally distributed to NRC Soil, and the way forward has to be decided amongst DG ENV-EEA-JRC, considering financing.
- Priority list of Eionet data flows and options to include soil data. Andrus Meiner explained that the data flow review proposal – the product of an EEA/NFP Working Group on Eionet priority data flows –will be presented at the NFP meeting in October and that this will be another opportunity for the EEA member and cooperating countries to comment.

## **Recent, on-going and planned soil activities**

**Jacques Delsalle (DG ENV)** presented the Commission study to analyse soil legislation and policy instruments.

- Background of the study.
  - SOER 2015 reflects the on-going soil degradation.
  - Soil is not subject to a comprehensive and coherent set of rules in the EU.
- Therefore a study has been commissioned by DG ENV with the following objectives:

- Critical analysis of the efficiency of soil-related policies and measures at EU or Member State level, including those not specifically aiming at soil protection.
- Outcome shall support the baseline for any further proposal for action at EU level, taking fully into account the proportionality and subsidiarity principle.
- There are already available databases and reports at EC level. Any potential assessment at EU MS level is welcome.
- Timing & consultation (from signature of contract)
  - Month 3. Inventory of policy instruments compiled in a web collaborative form.
  - Month 6. Gap filling analysis.
  - Months 6 to 9: Further consultation with stakeholders.

The following questions were addressed after the presentation:

- A clarification was requested on the concept "gap analysis". Gap analysis is intended to identify those cases (countries, thematic areas, economic sectors) where a soil threat is relevant and no policy is implemented. Gaps can also refer to situations where the response is not proportional to the dimension of the threat.
- Two countries presented initiatives that could provide relevant information to the study:
  - Germany. There is a research project on the Soil Framework Directive (cost/benefit) which will soon be finalised.
  - Poland. A programme has been established recently in more than 100 farms to analyse the impact of CAP on soil.

**Geertrui Louwagie** (EEA) presented the EEA Technical Report 'Soil Resource efficiency in urbanised areas':

- Conceptual framework of the report:
  - Soil within the land system: DPSIR approach.
  - In a multi-level, asset- and place- based governance setting.
  - Soil as part of natural capital:
    - Soil as resource (stock)
    - Services that provide benefits (flows)
  - Focus on core urban and peri-urban (urbanised) areas, where the pressure on the soil resource and derived services is stronger.
  - Balance between demand and supply of services.
- Aspects addressed in the report
  - Ecological soil valuation
    - Urbanised areas are new context for soil formation and development.
    - Soil information in core urban areas missing or fragmented.
  - Information on monetary soil valuation in urbanised areas is very limited.
  - Governance. Overview of soil-relevant policy instruments – public and private.

The following comments were provided after the presentation:

- Germany. Relevant soil functions: a) cooling effect of soil, and b) role of soil on water cycle, in particular related to its role as a buffering factor to climate change (floods) – evidence available from Stuttgart.
- DG ENV. The role of soil in flood reduction to be highlighted, as it is becoming more and more relevant.

**Andrus Meiner** (EEA) presented the progress on the Mapping and Assessment of Ecosystems and their Services (MAES):

- MAES is one of the actions defined in the EU Biodiversity Strategy 2020. The work is organised in two blocks:
  - Mapping ecosystems and ecosystem conditions, coordinated by the EEA
  - Mapping ecosystem services, coordinated by JRC.
- Within the main work under the responsibility of the EEA, the following tasks have been developed:
  - Mapping ecosystem types. This provides a European-wide simplified classification based on EUNIS. The approach is based on a crosswalk between Corine land cover (CLC) – EUNIS data complemented with additional data.
  - Mapping pressures and conditions, based on the DPSIR framework.
- BISE (Biodiversity Information System for Europe) is the platform where the results are made publically available.
- Key achievements
  - Conceptual framework developed and tested for specific ecosystems
  - Main pressures mapped
  - First version of the European ecosystems map delivered.
- Way forward
  - Ecosystems conditions have to be linked to ecosystem services
  - Data integration and update
  - New research projects (ESMERALDA, OPERA, OPENNESS)
- Note: a process to involve non-EU MSs in the MAES work has been kicked off through the Eionet NRC 'Biodiversity Ecosystems, Indicators and Assessments'. The overall aim of this process is to accommodate a better link between ecosystem assessment-related activities in all EEA member and cooperating countries.

**Jacques Delsalle (DG ENV)** presented the MAES Soil pilot:

- Objective of the soil pilot
  - Capacity building.
  - Policy-oriented, i.e. provide realistic methods to be applied.
  - Improve knowledge base.
- Work developed so far
  - Shortlisting ecosystem services
  - Policy briefs (e.g. description of key soil-related ecosystem services and interactions)
  - Inventory of indicators (including supply and demand)
  - Development of a network of practitioners
  - All this work uses a wiki collaborative platform
- Next steps
  - Provision of contents for policy briefs and indicators
  - Input to assessment of LUCAS-soil module user needs
  - Coordination with H2020 LANDMARK project

Information on national level interesting for the MAES work is welcomed. MAES meets twice a year where EU MSs are informed of what is available and asked for comments.

**Tobias Langanke** (EEA) presented the new indicator on imperviousness based on Copernicus Land Monitoring Services HRL:

- Policy context for the indicator

- Water Framework Directive. Imperviousness is an important actor on the water cycle, with a strong impact on water infiltration/runoff and water quality.
  - No net land take by 2050 objective in 7<sup>th</sup> EAP.
- Main characteristics of the Imperviousness HRL
  - Remote sensing product
  - 20 m x 20 m resolution
  - Satellite Sentinel-2 will enable continuity of the data even with better resolution.
  - This data represents a substantial improvement on resolution compared with Corine Land Cover.
- Imperviousness indicator to be published Q4/2015; will show the yearly average of soil sealing change between two imperviousness/soil sealing status products, aggregated for a certain reference unit and relative to the size of that reference unit
- The imperviousness indicator could be considered complementary to the land take indicator:
  - Land take provides information on land use change, while soil sealing is a land cover indicator.
  - It is interesting to explore soil sealing profiles for different CLC classes.
- Next steps:
  - Improvement on the methodology and calibration
  - Publishing the indicator
    - 2006-2009 changes, Q4 2015
    - 2009-2012 changes, Q2 2016
    - 2006-2009-2012-2015. Update using full-time series, expected 2017

The following issues were addressed after the presentation:

- Is the soil sealing information linked to soil information? This information is not provided by the land monitoring service (based on remote sensing). However, the issue is highly relevant and could be further analysed in the future by combining imperviousness with soil information.
- Would it be possible to differentiate the type of crop with land monitoring information? There is no particular HRL focussed on crops given its inherent complexity linked to different agricultural practices. This should be addressed at regional level where HRL could be used to contextualise.
- Almeria appears as one of the areas with higher degree of imperviousness, is it related to greenhouses? Soil sealing classifies permanent greenhouses as sealed areas, whereas non-permanent greenhouses are excluded.

**Marc Van Liedekerke** (DG JRC) presented the LUCAS-Soil:

- The Land Use/Cover Area frame Survey (LUCAS) started in 2006. In 2009, the European Commission extended LUCAS to sample and analyse the main properties of topsoil (0-20 cm) in 23 Member States. By means of geostatistical tools several soil properties have been derived at European scale.
- LUCAS 2012. Additional member states provided samples in 2012.
- LUCAS 2015 is ongoing. 90% of samples are taken on the same points as in the previous survey, and 10% of samples are new points. Balkan countries and Switzerland are also included (separate contracts). More than 22.000 samples. This time no heavy metals and texture (apart from 10% new samples)
- Preparation of LUCAS 2018. Probably the approach will be on sampling fewer sites, but in more detail.

The following issue was raised:

- Serbia asked whether heavy metal analyses for new countries would be included.

**Ana Payá Pérez** (DG JRC) presented the soil activities in JRC WP 2015-2016:

- Soil ecosystem services, biodiversity, soil organic carbon
- Highlights of 2015
  - Raising awareness. Contribution to different events
  - High resolution database
  - Modelling of soil organic carbon
- Directions 2015-17
  - Competition for land use will intensify – within EU and globally
  - R & D must reduce pressure on land
  - Land-policy must be based on evidence at all stages
- UN Sustainable Development Goals relevant for soil: goal 2, target 2.4 (by 2030 ...improve land and soil quality); goal 3, target 3.9 (by 2030, substantially reduce the number of deaths and illnesses from ... soil pollution and contamination); goal 15, target 15.3 (by 2030 ... achieve a land degradation neutral world)

## Country contributions and discussions

**France** (Véronique Antoni) presented the French contribution to the UN IYS 2015: booklet 'Soil and Environment':

- The main objective of the booklet was to disseminate helpful, easy to read and nearly exhaustive soil information to reach a wide audience.
- The booklet was based on an update of indicators presented with a common template to facilitate the reading and understanding. The main indicators are listed below:
  - State of soils
    - Fertility -C, P, water capacity.
    - Biodiversity - DNA amount.
    - Pollution -heavy metals, PAH, pesticides.
  - Pressures on soils
    - Agricultural pressures.
    - Soil as resource: land use and land take, material extraction, agriculture and forestry.
    - Industrial pressures: contaminated sites.
  - Risks
    - Soil loss by landslides, water and wind erosion, water mudflows, compaction.
    - Other environmental risks.

**Czech Republic** (Igor Jan Dvorak) presented an early warning system for flash floods.

- Flash floods occur when soils are full of water and precipitation is too heavy. However, sometimes they are not only caused by heavy rain but also by the fill-and-spill effect. That is why the dynamics of water in soil (unsaturated zone) are measured. There are three main groups of influences on flash floods:
  - Hydro-meteorological
  - Hydrological
  - Basin influences (geology and geomorphology)
- The following measures are monitored



- Soil moisture
- Precipitation
- Water level
- The area under study covers about 100 km<sup>2</sup>, with 15 basic monitoring stations (under different vegetation cover), 6 stations for water level, and 4 heated rain gage (snow).
- Monitoring stations are integrated in an early warning system. Data is transmitted to the server and made readily available to the public. The system also provides an automated transmission of messages to stakeholders according to different thresholds of measured parameters.
- In the future it is foreseen to include geological information as well.
- Even though the original/primary focus is on warning the population, the monitored data (intervals of 20 min.) can be further used for other purposes, e.g. climate change impact.

**Austria** (Martha Wepner-Banko) presented the application of the Copernicus data to mapping soil sealing in Austria:

- Copernicus data has been used to present sealed area as % of permanent settlement area, sealed area per head in m<sup>2</sup>, % of sealed area. This information is available through the Austrian Soil Atlas.
- Comparison of Copernicus information with Austrian (local) data provides a good correlation.

**Germany** (Frank Glante) presented the work done on soil organic carbon:

- Context of soil activities in Germany. Soil has been gaining more prominence in recent years. Since 2005 the selection of the Soil of the Year has been established as a mean to promote awareness to a wider audience. For the International Year of Soils two publications are planned:
  - National Soil Atlas (Nov 2015) and a devoted web portal
  - Brochure on State of the Soil in Germany
- Soil and climate change. As result of the observed increase of average temperature a study has been developed to assess to what extent a climate signal could also be observed on soil. The results showed that changes on soil organic carbon (SOC) are related to initial SOC and soil management, but not to climate change. The practical conclusion has been to focus on the protection of those soils with higher C content.

After these presentations, each country had the opportunity (following a spontaneous call) to explain the main activities prepared on occasion of the **UN International Year of Soils 2015 (UN IYS 2015)**:

- UK. DEFRA has not been directly involved, but some activities which are relevant were mentioned
  - A research has been published on landscape and soil protection in UK by the University of Cranfield.
  - Review of evidence on effectiveness of soil protection practices. These results are valuable for finding gaps that need further research.
- Netherlands. The NRC was not aware of any particular activity, nor event planned.
- Poland.
  - National conference on instruments and policies for soil protection (October 2015).
  - Soil portal will be launched in December (in Polish and English) for awareness rising.
  - Fifth edition of soil inventory.
- Estonia. Some relevant activities have taken/are taking place in Estonia:

- Several articles in national agricultural and environmental newspapers have been published to highlight UN IYS 2015.
  - Estonian University of Life Sciences: exhibition "The Soil in Art" (October 2015)
  - The Soil Day that takes place on 4<sup>th</sup> of December is organised by the Estonian Soil Science Society, where the soil of the year 2016 will be announced.
- Finland. Several institutions and activities have been developed over the year
  - Soil exhibition arranged by the Natural Research Institute (01.07.-31.08.2015) in Elonkierto, a rural and domestic animal exhibition park in Jokioinen
  - Agricultural soil exhibition for children (05.09)
  - The day of Geology (29.08)
  - In December (04.12) a Declaration on Soil Protection will be presented and formally delivered to the Ministry of Environment, Agriculture and Forest. This event will be preceded by a meeting with young soil scientists.
  - The Finnish Society of Soil Sciences organised a photo competition and will publish the best photos in a calendar, which will also be delivered to the Ministry on 04.12.2015.
- Slovakia. Main activities focus on dissemination and raising awareness:
  - Couple of films of environment and soil protection.
  - Book on contaminated sites and a game for schools.
- Czech Republic.
  - Several conferences during the year.
  - National Parks have also been involved developing specific activities for the general public.
  - Joint activities with Slovakia
    - Hydropedology conference
    - Meeting of the respective pedologic societies
- Albania: main activities at universities.
- Croatia
  - Event prepared by the Croatian Society of Soil Science.
  - Croatian Environment Agency has provided specific content for their web site.
- Serbia
  - Calendar with soils.
  - Specific section on the website of the Serbian Environment Agency
  - Several conferences in September and November.
  - The Annual State of Soil Report will be translated in English.
  - First estimates of C stock published (0-30 cm)
- Lithuania highlighted that soil is not the direct responsibility of any Law nor Ministry. Therefore, it is not considered a high-level governmental responsibility. The Geological Survey is responsible for the underground, but not for soil. However, the Geological Survey together with the Soil Society at the Academy of Science did:
  - two spring workshops on local and diffuse soil contamination, addressed to authorities (national and local), school teachers, students of agricultural universities & colleges
  - an autumn field workshop on problems related to adoption of the WRB soil classification system, addressed to national and foreign soil scientists and specialists.
- France. The French Association of Soil Studies organises the Soil Day every year.
- Germany organises more than 150 events; an overview of events marking the closure of UN IYS 2015 is provided at:

<http://www.umweltbundesamt.de/en/topics/closing-events-of-the-international-year-of-soils>.

- Italy highlighted some events from an intense activity during this year:
  - IMPEL 7/8 October.
  - University of Pisa: Hands in Earth.
  - National Congress of Italian Soil Society. 2-4 December.
- Spain
  - Meetings organised by several organisations:
    - Meeting of the Spanish Society of Soil Science on April.
    - Soil management in September
  - Actions taken by the government
    - Amendment of national legislation of contaminated sites: more protective and efficient.
    - Contract with INIA to revisit soil network monitored 10 years ago; monitoring several parameters, including soil biodiversity.
- Portugal. There were several activities to celebrate the IYS, such as the launch of the Portuguese Partnership for Soil (<http://parceriaptsolo.dgadr.pt/>), some conference cycles about soil promoted by public entities and NGOs and several seminars and other activities conducted by Portuguese universities, schools and other public entities. Further, the proposal of legislation on contaminated soil developed by the Portuguese Environment Agency is pending on the new government's decision.
- Switzerland organised several events
  - Photo competition
  - Soil Calendar
  - Soil exhibitions
  - Booklet
- Austria
  - Workshops, excursions, events
  - Education material for schools

## **The way forward**

### **Follow-up NRC Soil meeting 2014 action points**

Minutes of the last **NRC Soil Meeting in Ispra, May 2014**

- 6 action points were decided and nearly all are completed
  - Establishment of NRC Soil WG on contaminated sites – done
  - Compilation of soil country data – turned into contribution to Revised Soil Atlas – done – to be published end of 2016
  - Soil-related maps based on LUCAS soil data for evaluation of countries – produced recently- agreed that they would be sent for country revision
  - Work with Balkan countries on LUCAS-Soil survey - done
  - Work with Switzerland on LUCAS-Soil survey – done
  - NRC Soil profile - updated following request from NRC Soil

### **Planning 2016**

Reflections

DG ENV (Jaques Delsalle)

- Eionet NRC Soil network
  - EU Expert Group (EG) on soil protection has policy focus

- NRC Soil has role in building the knowledge base on soil, including at national level
- Contribution to different collaborative platforms would be helpful
  - Soils in ecosystems and their services (DG ENV will share access details to wiki platform with NRC Soil)
  - in support of the EC study on soil legislation and policy instruments (in addition to EG input)
- Emphasises the importance to work on soil despite lacking harmonised legislation

#### EEA (Andrus Meiner)

- Several EEA products to which NRC Soil can contribute via consultations
  - Indicators: land take and imperviousness
  - Several reports (see presentation on follow-up SOER 2015): land recycling, land resource efficiency, etc. (if subject to Eionet consultation)
- Topics of next meeting (most likely 2<sup>nd</sup> semester 2016) will discussed in due time proposals were made:
  - Soils in the nexus, i.e. linkage with other topics or policy areas/sectors – soil/water, climate change, ecosystem services, carbon content;
  - In particular: soil as part of integrated land assessment (including use of Copernicus land services products) and linkage to e.g. drivers (agriculture); impacts (biodiversity)

#### JRC (Ana Payá-Perez) in relation to the ad-hoc WG:

- Suggested that, if those countries who did not provide input to the report on success stories were interested, a second report with success stories could be envisaged.
- Proposed 'soil contamination and health' as a potential topic for the next meeting.

Germany (Frank Glante) proposed to invite a representative of the H2020 'Inspiration' project ('Towards a strategic research agenda on soil, land-use and land management in Europe' - bottom-up approach to identify research needs in land and soil) to the next NRC Soil meeting to give an overview of the results of this H2020 project and to seek input from NRC Soil. As a response it was suggested that preliminary findings of the H2020 Landmark ('LAND Management: Assessment, Research, Knowledge base') project, and the COST Action 'Industrial Contaminated Sites and Health Network' – ICSHNet could be presented as well.

The chair closed the meeting, summarising the decided and proposed **actions points** for the coming period:

- DG ENV will provide access to platforms (ecosystem services and policy gap analysis) to which it seeks input from NRC Soil
- JRC will ask Eionet countries for feedback-on/validation-of the **soil-related maps** derived from LUCAS data
- **Ad-hoc WG on contaminated sites:**
  - JRC will formally distribute the indicator (LSI 003) revision proposal to NRC Soil for feedback
  - WG continuation to be discussed and decided amongst DG ENV-EEA-JRC (financing), and outcome to be communicated to NRC Soil
- In preparation of the **2016 meeting**, EEA will propose and circulate potential topics, as well as a date (probably 2<sup>nd</sup> half of 2016).



## Eionet NRC Soil

**Date:** Thursday, 15 October 2015, 09:00-17:30

**Venue:**

EEA, Conference room

Copenhagen, Denmark

### **Background and objectives of the meeting**

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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 analyses/assessments that have a strong soil focus. 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, recently completed and on-going EEA soil activities and products 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. In this sense, an agenda item on the network's role in soil assessments is included to discuss the way forward.

### **Contact**

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- Geertrui Louwagie, EEA project manager 'Soil assessments and reporting'  
Phone: +45 3343 5921; email: [geertrui.louwagie@eea.europa.eu](mailto:geertrui.louwagie@eea.europa.eu)
- Charlotta Colliander, EEA Meeting secretary  
Phone: +45 3336 7202; email: [charlotta.colliander.golding@eea.europa.eu](mailto:charlotta.colliander.golding@eea.europa.eu)
- Marc Van Liedekerke, JRC Project officer European Soil Data Centre  
Phone: +39 0332 785179; email: [marc.van-liedekerke@jrc.ec.europa.eu](mailto:marc.van-liedekerke@jrc.ec.europa.eu)
- Ana Payá Pérez, JRC Project Officer Contaminated Soils  
Phone: +39 0332 785414; e-mail: [ana.paya-perez@ec.europa.eu](mailto:ana.paya-perez@ec.europa.eu)

## Agenda

Chair: Andrus Meiner, Geertrui Louwagie (EEA)

<b>08:30</b>	Registration	Charlotta Colliander Golding (EEA)
<b>Welcome and setting the scene</b>		
<b>09:00</b>	Welcome and 'tour de table'	Andrus Meiner (EEA)
<b>09:15</b>	Background and objectives of the meeting	Geertrui Louwagie (EEA)
<b>09:30</b>	Recent EU land and soil activities	Jacques Delsalle (DG ENV)
<b>NRC Soil contributions over the past year</b>		
<b>10:00</b>	SOER 2015 – Thematic briefings on Soil and Land systems – follow-up	Geertrui Louwagie (EEA)
<b>10:15</b>	Revised 'Soil Atlas for Europe' and other atlases	Marc Van Liedekerke (DG JRC)
<b>10:30</b>	<ul style="list-style-type: none"> <li>▪ Debriefing of NRC ad-hoc Working group meetings on contaminated sites and back-to-back meeting with NRC LUSP</li> <li>▪ Report on Contaminated Sites Success Stories</li> </ul>	Ana Payá Pérez (DG JRC)
<b>10:45</b>	Discussion	All
<b>11:00</b>	Coffee/tea	
<b>Recent, on-going and planned soil activities</b>		
<b>11:15</b>	Commission study to analyse soil legislation and policy instruments	Jacques Delsalle (DG ENV)
<b>11:30</b>	EEA Technical Report 'Soil resource efficiency of soils in urbanised areas'	Geertrui Louwagie (EEA)
<b>11:45</b>	Soil biodiversity and ecosystem services: <ul style="list-style-type: none"> <li>▪ MAES progress</li> <li>▪ MAES soil pilot</li> </ul>	Markus Erhard, Andrus Meiner (EEA) Jacques Delsalle (DG ENV)
<b>12:15</b>	Copernicus Land Monitoring Services HRL Imperviousness: new indicator 2006-2009, dataset 2012 and outlook 2015+	Tobias Langanke (EEA), ETC ULS
<b>12:30</b>	LUCAS-Soil: results 2012, status survey 2015 and outlook 2018+	Marc Van Liedekerke (DG JRC)
<b>12:45</b>	Soil Activities in JRC WP 2015-2016	Ana Payá Pérez (DG JRC)
<b>13:00</b>	Lunch	
<b>Country forum</b>		
<b>14:00</b>	Country contributions and discussion	All
<b>15:30</b>	Coffee/tea	
<b>The way forward</b>		
<b>16:00</b>	Knowledge and information sharing and networking activities for soil assessments <ul style="list-style-type: none"> <li>▪ Follow-up of NRC Soil meeting 2014 action points</li> <li>▪ Planning 2016</li> </ul>	All  Marc Van Liedekerke (DG JRC)
<b>17:15-17:30</b>	Wrap-up and conclusions	Chair

# List of participants

**Eionet NRC Soil meeting 2015**

**Date: Thursday, 15 October 2015, 09:00-17:30**

**Venue: EEA, Conference room, Copenhagen, Denmark**

<b>Country</b>	<b>First name</b>	<b>Last name</b>	<b>Institution</b>
Albania	Orela	NUREDINI	National Environmental Agency
Austria	Martha	WEPNER-BANKO	Austrian Environment Agency (UBA Austria)
Croatia	Andreja	STEINBERGER	Croatian Environment Agency (AZO)
Czech Republic	Igor Jan	DVORAK	Czech Geological Survey
Estonia	Kadri	ALLIK	Estonian Agricultural Research Centre
Finland	Teija	HAAVISTO	Finnish Environment Institute
France	Véronique	ANTONI	French Ministry of Ecology, Sustainable Development & Energy
Germany	Frank	GLANTE	German Federal Environment Agency (UBA)
Italy	Marco	FALCONI	Institute for Environmental Protection and Research (ISPRA)
Lithuania	Virgilija	GREGORAUSKIENE	Lithuanian Geological Survey
The Netherlands	Kees	VERSLUIJS	National Institute for Public Health and the Environment (RIVM)
Norway	Kine	MARTINSEN	Norwegian Environment Agency
Poland	Grzegorz	SIEBIELEC	Institute of Soil Science and Plant Cultivation – State Research Institute
Portugal	Jorge	SANTOS GARCIA	Portuguese Environment Agency (APA)
Serbia	Dragana	VIDOJEVIC	Serbian Environmental Protection Agency
Slovakia	Katarina	PALUCHOVA	Slovak Environment Agency (SAZP)
Spain	Antonio	CALLABA DE ROA	Spanish Ministry for Agriculture, Food and Environment
Switzerland	Christoph	REUSSER	Federal Office for the Environment - FOEN
United Kingdom	Caroline	KEAY	Cranfield University
United Kingdom	David	MIDDLETON	Department for Environment, Food and Rural Affairs (DEFRA)
	Jacques	DELSALLE	DG ENV
	Ana	PAYA-PEREZ	JRC
	Marc	VAN LIEDEKERKE	JRC
	Jaume	FONS	ETC/ULS
	Martha	WEPNER-BANKO	ETC/ULS

	Eva	IVITS	EEA
	Tobias	LANGANKE	EEA
	Geertrui	LOUWAGIE	EEA
	Andrus	MEINER	EEA