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Institute for Environment and Sustainability (IES)
Land Resource Management Unit

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Draft minutes

1st Eionet NRC Soil Ad-hoc Working Group on Contaminated Sites and Brownfields

10 and 11 of March 2015

Ispra (VA) Italy, Room 3

The meeting was chaired by A. Payá Pérez (APP). Representatives from the EIONET countries, Josiane Masson (JM) from DG ENV, Geertrui Louwagie (GL) from EEA and JRC colleagues attended the meeting (see participants list in Annex I). Luca Montanarella as group coordinator of the JRC Soil Action welcomed the participants and gave a brief introduction of the soil activities within the Land Resources Management Unit.

1. Adoption of the Agenda, background and objectives of the meeting

The agenda was modified with the following changes:

In the section of Country Forum the presentation by the Common Forum on Contaminated Land (representing a network of contaminated land policy makers, regulators and technical advisors from Environment Authorities in European Union member states and European Free Trade Association countries; <http://www.commonforum.eu/>) was included. It was agreed to have it followed by the country presentation of BE (Wallonia) as an illustration of the Common Forum analysis; followed by the other country presentations. The revised and final version of the agenda is attached.

The Chair introduced the "Discussion paper for the revision of the contaminated sites indicator" and the objectives of the meeting. The discussion of the key issues and the various proposals for the revision of the CSI015 will take place under Item 4.-Country Forum.

The Chair informed that a dedicated space was created under the [EIONET Forum](#) for NRC Soil where the documents of this meeting and other meetings of the "Ad-hoc Working Group on contaminated sites and brownfields" are placed.

2. State of Play of Soil Policy in Europe and possible support actions related to contaminated sites.

Josiane Mason (JM) presented the ongoing activities of DG ENV in support to the Soil Thematic Strategy which remains the main reference for soil policy in Europe. The Resource

Efficiency Roadmap establishes that «by 2020 EU policies take into account their direct and indirect impact on land use in the EU and globally... with the aim to achieve no net land take by 2050; soil erosion is reduced and the soil organic matter is increased, with remedial work on contaminated sites well underway» and the 7th Environmental Action Programme (EAP) contains provisions on land and soil protection to achieving land and soil degradation neutrality.

Following the withdrawal of the proposed Soil Framework Directive in 2014, the Commission will examine options on how to best achieve soil protection including targets on soils and land, based on proportionality and subsidiarity principles. To this end, the Commission will launch a study in 2015 to get an inventory of existing and emerging soil legislations and policy instruments (at national and EU level), and a gap analysis. This study should also provide a knowledge update of the Impact Assessment (2006) that accompanied the proposed Soil Framework Directive. In the context of this study of the regulatory and policy context feed-back from the EIONET NRC soil will be required.

There is also a need to improve or update the knowledge base e.g. on soil biodiversity, soil contamination etc., to rebuild the soil network and to establish a continuous dialogue with stakeholders using existing platforms, in particular the EIONET NRC soil and ad-hoc working group on soil contamination.

Josiane gave an overview of the projects financed under the LIFE, H2020 and Regional Funds/programmes (PowerPoint presentation available in [EIONET Forum](#) and see the summary table below with the calendar of next calls under LIFE 2015.

[Life Calls Provisional Calendar 2015: Summary Table](#)

Grant Type	Phase	Opening Date	Closing Date
Traditional Projects		01 June 2015	15 September 2015
Preparatory Projects		01 June 2015	30 October 2015
Technical Assistance Projects		01 June 2015	Mid-September 2015
Integrated Projects	Concept Notes	01 June 2015	01 October 2015
	Full Proposals		Mid April 2016
NGO Framework Partnerships		May 2015	July 2015

The presentation was followed by Q&A: Dominique Darmendrail (DD) informed of the synthesis and survey of European soil legislation carried out by the [Common Forum](#). Experts agreed on the importance to rebuild the soil network using existing platforms to support the Soil Thematic Strategy bearing in mind that in the absence of a Soil Framework Directive the

Commission has no formal expert groups. To the question if there are other ways to deal with soils, JM mentioned a Pilot Project on Soil which has just been launched under the MAES (Mapping and Assessment of Ecosystems and their Services) exercise in the context of the EU Biodiversity Strategy to 2020 that may interest public and private organisations like agencies, ministries, NGOs and industry. DD informed of the possibilities of the new call H2020 SC5-10 (2014-2015) and the new Joint Programme Initiative (with 20 countries interested, 16 EU and 4 non-EU countries) which aims at coordinating of the national / regional, public, research, development and innovation programmes in Europe. (Pilot call on emerging contaminants, 2014 call on technological solutions and services for water distribution and measurement, waste water treatment and reuse, desalination, 2015 call on water and agriculture challenges).. There is not a specific JPI on soils therefore a link should be made with the JPI on Agriculture Food Security and Climate Change and the Water JPI.

3. [The EEA approach for setting indicators was presented by Geertrui Louwagie \(GL\) \(EEA\).](#) (PowerPoint presentation is available in [EIONET Forum](#)).

The EEA Multiannual work programme 2014-2018 states that ‘The EEA is an important source and custodian of environment related data and indicators, and a key provider of environmental knowledge and information services’. The EEA indicators are designed to answer key policy questions and to support different phases of environmental policy making (from the design, target setting, to policy monitoring & evaluation and communication).

The indicator ‘Progress in management of contaminated sites’ (LSI 003/former CSI 015) is part of **the thematic cluster ‘Land & Soil indicators’(LSIs)** (see the table below presenting existing indicators and indicators under development). This cluster has been created to give greater visibility to the land and soil indicators.

Indicator code	Indicator name	Update/Comments
LSI 001/CSI 014	<u>Land take</u>	Following CLC updates, every 6 years
LSI 002	Imperviousness/Soil sealing	Following HRL updated, every 3 years – <i>first publication in 2015</i>
LSI 003*	<u>Progress in management of contaminated sites</u>	To be revised to increase comparability across countries
LSI 004/CSI xxx	<i>Fragmentation of habitats and ecosystems</i>	<i>Under development</i>
Cf. SEBI 013*	<u>Fragmentation of (semi-)natural areas</u>	Assessment published May 2010; update expected Q1/2015 (CLC 2006)

LSI 005/CLIM 027*	Soil organic carbon	Ideally following EEA climate change impact indicator reporting cycle, every four years
LSI 006/CLIM 028*	Soil erosion	
LSI 007/CLIM 029	Soil moisture	

Very relevant to the prime task of this ad-hoc working group (to formulate improvements to the existing LSI 003 indicator) is the way EEA indicators are structured. They consist of an indicator specification and indicator assessment part. The specification has to be defined before proceeding with the assessment, and consists of a (set of) common definition(s) and methods of the indicator, and identification of harmonised datasets to report on the indicator. The importance of consistent documentation of the metadata (temporal and geographical coverage, data sources, etc.) was emphasised (specification) as essential to the end user.

EEA has developed an interactive way to visualise data, graphs and maps using the software "DataViz". This tool allows for automated data collection and visualisation (e.g. from Eurostat); a harmonised layout ensuring consistency; attractive interactive visualisations enabling data exploration; a better sharing of data and its visualisation in multiple formats; further it enforces data transparency and traceability; allows public scrutiny, verifiability and reproducibility and is purely web-based (no extra software needed).

The presentation was followed by Q&A: Kees Verluis (KV) suggested to make the link between groundwater contamination and soil and to consider a monitoring system for diffuse pollution. EEA informed that in the area of diffuse contamination, ETC ULS (European Topic Centre on Urban, Land and Soil Systems) is working on nutrient (nitrogen, phosphorous), and metal (Cd, Zn, Pb, and Cu) budgets. Véronique Antoni (VA) asked clarification on the expected contribution of countries to the LSI set. GL clarified that, except for LSI 003, all indicators are fed by alternative data sources (e.g. Corine Land Cover for CSI 014 – Land take; HRL Imperviousness for LSI 002 – Imperviousness/Soil sealing). The Soil sealing indicator (LSI 002) will be for the first time this year (2015). The LSI 004 "Fragmentation of habitats and ecosystems" is under development and will be part of EEA's core set of indicators (CSIs), a 1st internal draft is foreseen on 2016.

Replies to questions related to brownfields were forwarded to the second day.

4. Country presentations (PowerPoint presentations are available in [EIONET Forum](#)).

4.1 DD presented "The International Committee on Contaminated Land and the European Common Forum (CF) networks" with its coverage and mission, it is active since 1993. DD informed on the following items:

1 – Results from questionnaires to CF Members: this information has been published in the [Common Forum](#) Website. The following points constitute a summary of the survey:

- ◆ All of the identified register types exist somewhere but having no register at all can also be an option;
- ◆ In general, a country has more than one inventory (e.g. one on potentially contaminated sites or sites on which polluting activities have taken place and one on contaminated sites or sites needing actions, one on remediated sites).
 - A national / regional register can be used for several inventories to keep track of the different situations and undertaken actions.
- ◆ There are also different ways to classify the sites in the different countries due to the context of the creation of these inventories and registers in relation with their objectives assigned in the national / regional legal frameworks ;
 - Contents of inventories present a great variety throughout Europe due to their creation context ;
 - Each inventory has to be understood in its context;
- ◆ Inventories are a very important management and policy making tool, but results or statistics of different inventories are not comparable;
- ◆ When remediated sites are removed from an inventory they still appear in another one.
- ◆ The elaboration and the update of the existing inventories and registers by the Member States have requested and are mobilising important financial efforts. Consequences of requesting amending / adapting / harmonising the existing tools should be carefully assessed in order to avoid additional financial burdens.

2 - Link between MS inventories & indicator, according to national or regional legislation there are various categories of registers, and definitions of the terminology, pollution, contamination and remediation. DD underlined the need to clarify the definitions and terminology to be used for the CSI015 indicator. The following points constitute a summary of the survey:

- ◆ Existing inventories do not necessarily give a direct answers to the indicator questionnaire:
 - For example Norway and Luxembourg classifications do not allow to retrace which sites have been remediated and which sites where found clean at the first assessment;
 - Some inventories are limited to a specific type of sites (e.g. only historical or only sites to be remediated / considered by public authority) -> distortion of results

3 – Conclusions & recommendations suggested by authors for improvement of CSI015 indicator report:

1. Withdrawing of the following questions:

- « Can you estimate the total area of sites identified by preliminary study »
- « Could you provide the total estimated area of sites estimated to be potentially contaminated »

- « How many of the sites identified as contaminated sites are under further investigation but not yet under remediation »
- 2. Simplification of questions
- 3. New structure for the parameters: « management of CS »
- 4. New parameters for questions related to data inventories:
 - public access and geo-referenced data
- 5. Withdrawing or linking with other questions for the question related to the estimation of national expenditures
 - « can you estimate the overall management costs which are expected to arise in your country (public+private) »

As conclusion, CF suggested the following items for the improvement of the CSI015 indicator:

- Option to limit scope to historical sites
- Option to better define the « site »
- Option to limit potentially polluting activities to list Annexe II of former SFD
- Definition of CS / RS: those of the former SFD?
- Option to clarify link between management steps and PCS / CS inventory (+ « EU thresholds »?)

4.2 Esther Goidts (EG) presented Inventories & CSI015 indicator: Case study in Wallonia (BE). EG gave an overview of the historical context and the development of the registers in Wallonia, the legal obligations and the sources of information.

The Soil Decree (2008) establishes a Soil Status Database (SSDB) or "*Inventory*" according to the EU terminology: « SSDB inventories, for each cadastral parcel and for non-cadastral properties, the following data which are available within the administration: identity of real rights holder(s), data from (potentially) polluted fields inventories, data from soil investigations, soil control certificates of investigated or remediated fields and documents attesting conform remediation, references of operating permissions and environmental permits of activities and installations potentially polluting soils and references of remediation plans », that means "***the inventory is made of several registers***". Various databases can be of high relevance for the inventory (from legal obligations, topography maps, questionnaires, ...), therefore several « registers » exist. However, they need to be integrated based on a common terminology and spatial reference resolution (this might require pre-processing or excluding some databases).

The Inventory is a main dynamic tool for polluted land management and is triggered by soil legal obligations. In Wallonia for the year 2013 the number of potentially polluted sites ranges between 15.260 and 17.510 sites (~10 sites/10 km², half of identified PS are managed). Estimates of time and cost needed especially for inventorying potentially polluted sites will be revised when SSDB will be finalised (no more spatial redundancy). The Wallonia inventory partially answers CSI015 and differs in particular from it by the terminology (site, pollution vs contamination) and first management steps.

4.3.-Johan Ceenaeme (JC) presented *Flanders Soil Policy, Current Flemish policy on soil contamination, The Soil decree and VLAREBO Indicators in remediation policy*

JC gave the historical development of the Legislation in Flanders and the latest development under the Decree on Soil Remediation and Soil Protection of 27th October 2006 which enter into force on 1st June 2008. One of the interesting aspects of this Decree is the **Soil Certificate** which informs purchasers of the quality of the soil, if there are obligations to remediate and the executed soil investigations and soil remediation projects, and for policy makers to base their decisions on facts of the quality of the soil.

The Decree establishes also the obligations for remediation and the obligation for remediation vs. liability; the operator, user or owner of the land has the duty to clean up with a multi-stage approach in obligation (operator, user and owner). There are possibilities for exemption: a) operator and user: not caused and not in period of use or operation; b) owner: + not known at purchase; c) final burden to liable party.

In the case of transfer of land then exists an optimal protection of the new owner for the following reasons: a) Soil certificate is always needed; b) Preliminary soil investigation is needed for land with risk activities; and c) Approved soil remediation project, commitment and financial guarantee is needed before transfer can take place in case a remediation is necessary.

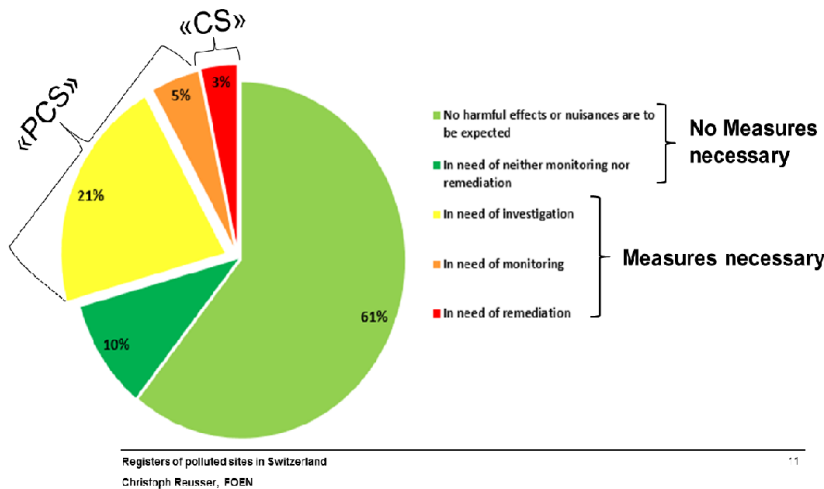
In BE (Flanders) the land information register which contains all investigated and contaminated sites based on parcel is publicly available with different levels of accessibility.

In his presentation JC underlined that in Europe, because of the different definitions, legislation, methodologies (for estimation & inventory) and different ambitions and targets, there is the need for a unifying European (legally binding?) framework.

4.4.- Christoph Reusser (CR) presented *"Registers of polluted sites in Switzerland"*.

Switzerland counts today around 38.000 polluted sites, of which nearly 4.000 contaminated sites require remediation because they represent a risk for man and environment. Considering this risk on long term, the Confederation expressed its will to get rid of this unhappy inheritance by 2040 (about two generations).

The different status of the polluted sites (38'000)



As part of the cleaning up of the contaminated sites, the Confederation is setting concrete objectives aiming at protecting the health of the population and diminishing risks for the environmental compartments, soil, air and water. Remediation has already been carried out in about 900 cases. Contaminated sites that pose an acute threat are already under remediation now. The FOEN is estimating that all the remediations shall be finished by 2040.

The federal authorities are committed to ensure that no dangerous contaminated sites will be passed on to future generations. The Environmental Protection Act (EPA) and Contaminated Sites Ordinance (CSO) provide the legal basis for the work of the FOEN (the Federal Office for the Environment is the federal environmental authority in Switzerland) in this regard. The 38,000 polluted sites are fully recorded in three of four Federal Authorities and in the 26 cantonal registers. The Cantons and the 4 Federal Authorities are obliged to prioritise the CS.

CR presented how the cantonal registers are integrated into the Federal Register. He explained the definitions according to Art. 2 of the Contaminated Sites Ordinance (CSO), the categories and status of the contaminated sites. Every Canton (26) and 3 of 4 Federal Authorities have a Register with information publicly available in Internet.

4.5 Kees Versluijs presented "Current developments in the Netherlands contaminated land policy"

The Netherlands is revising the current soil legislation into an "**Integrated environmental law**" (planned for 2018) including soil. The main goal of the new law will be the decentralisation, from responsibility of the central government to local responsibilities and secondly to avoid delays for sites with acute risks (human, dispersion with groundwater, ecological, acute used here as: not acceptable in the current situation). Secondary goals will be the development of areas with higher values (including subsurface) through spatial planning and the withdrawal of the government financial backup for soil remediation.

At present (2015) The Netherlands law gives priority to the selection, investigations and decisions on all sites with suspected acute risks from soil contamination, in order to take away acute human risks (not necessarily take away all contaminants). This is largely achieved in a working program (Soil Covenant 2009-2015) agreed on between the government and the local authorities and will be continued in a second agreement (Soil Covenant 2016-2020)

focussing more on groundwater issues. The Netherlands will proceed with remaining sites with acute risks and managing groundwater-contaminating sources with acute dispersion risks. An important aspect of the new system will be the organisation of quality management of groundwater (plumes) on a regional basis. The Netherlands System (what to do and what to monitor) is explained in the picture below.



Representatives from Austria, Luxembourg, Portugal, Croatia and Turkey presented briefly the developments in soil policy in their countries.

Austria (Dietmar Muller-Grabherr) informed that his country is discussing a major revision of legislation with regard to historically contaminated sites. The law done in 1989 established:

- a systematic identification and central register (database and geographical information system) on landfills, commercial and industrial activities under operation before July 1st, 1989 and
- a public fund to finance investigation and remediation projects for seriously contaminated sites.

Revisions under discussion shall propose a new approach for managing historic contamination ready to control human health risks and reducing environmental impacts. Consequently such a complementary approach may allow for identifying remediation targets with respect to site-specific aspects, which promotes for a more effective tailoring of projects and use of financial resources.

As for the discussion paper for the revision of the contaminated sites indicator (JRC; 26.02.2015) he summarised the comments delivered on behalf of Environment Agency Austria (EAA; 6.03.2015: expressing its favour for “switching to develop a common format for individual country reports”) and finalised by the remark that since 2009 policy documents in Austria do not any more refer to the term "potentially contaminated site" (PCS), which in the near future shall also be abandoned in terms of legislation.

Luxembourg (Sophie Capus) informed that her country is developing a law in contaminated sites and a law on soil protection.

The Luxembourg Ministry of Environment is currently discussing a bill on soil protection and contaminated land management on a governmental level in order to find a political agreement to deposit the bill in Parliament by the end of this year (2015).

The bill text aims for two main components: soil protection in a generic sense and management of contaminated land. For the soil protection aspects, the main actor is going to be the government who will need to elaborate a national soil protection plan based on soil functions and degradation threats. This part of the text also aims on one hand to elaborate a methodology to make the distinction between soil pollution to be treated under the scope of management of locally contaminated land (polluted sites) and on the other hand to diffuse pollution to be tackled in the scope of the national soil protection plan.

The management of polluted sites part defines responsibilities, trigger events and procedures for management of potentially polluted sites. Luxembourg has established a very extensive database (CASIPO) containing all known sites where potentially soil polluting activities might have taken place. This database will play a crucial role in the functioning of the future law.

According to the bill's text, the trigger events for management of (potentially) polluted sites will be very limited in order to keep the workload for our very small agency feasible:

- Voluntary approach in the scope of a development project on a site registered in CASIPO,
- Cessation of activities of potentially polluting activities,
- Injunction from Minister of Environment upon indication of a serious threat due to soil pollution.

In order to have a link to spatial planning (so that we can implement risk based land management for historical sites), there will be further triggers for information on potential pollutions: at transaction, land use change or excavation on CASIPO sites a legal information obligation is aimed, but management of the pollution will not necessarily become a legal obligation in those cases.

The management procedure will be a sequential approach from historical study via preliminary and detailed site assessment to remediation where necessary. At each step of this procedure there will be a possibility to declare the site fit for use, in which case a soil certificate will be issued informing on the potential land use.

There will also be rules on public intervention on polluted sites (where urgent intervention is required and on orphan sites). The establishment of a prioritization plan for orphan sites' remediation is also projected.

Portugal (Jorge Garcia). The proposal of Portuguese legislation on contaminated soil, developed by the Portuguese Environment Agency, is expected to be published this year (2015). The proposal is based on three pillars: the methodology for assessment of soil quality, the remediation of contaminated soil and the chain of responsibility.

The methodology for assessment of soil quality is a three step process. It starts with a preliminary evaluation made by all sites or facilities where at least one of the activities of concern took place, followed by an exploratory evaluation and lastly a site-specific risk assessment, both if necessary pending on the results of previous steps.

The remediation's goal are the reference values, the background values or the level of acceptable risk for human health and/or the ecosystems set by the risk assessment.

The chain of responsibility reinforces "the polluter pays principle" and limits public intervention to orphan sites or when an urgent remediation is needed, where public entities act on behalf of the responsible, being the remediation costs coercively charged.

The forthcoming Portuguese legislation also foresees a comprehensive national inventory with information on potentially contaminating activities, potentially contaminated and contaminated sites, sites under remediation and remediated sites. The legislative proposal also defines the procedure for the property transaction of a contaminated or potentially contaminated land.

Czech Republic (Milan Sanka) informed that in March 2015 his country has adopted a Regulation on Soil Protection only covering agricultural soil. An Environment Liability Act is covering all compartments. The system is not obligatory for contaminated sites and consequently with no complete inventory of CS.

CZ representative proposed to consider the ISO definitions (ISO TC 190 Soil Vocabulary), however after the meeting CF, AT and IT experts advised of the different opinions between the ISO and CEN TC and to consider carefully the ISO definitions.

Croatia (Andreja Steinberger) explained that Croatia doesn't have specific legal regulations that refer to soil and land protection, and (potentially) contaminated sites. There are some regulations that refer indirectly or/and generally.

There are no thresholds or limit values for contaminants/pollutants in soil depending on land use, except for agricultural land.

There is no official inventory of (potentially) contaminated sites. Some inventories/databases were developed for specific projects, but can't be used for reporting since they were not regularly updated and legally defined.

It is not expected that a specific legislation will be developed on national level anytime soon.

As for contaminated sites, Waste Management Strategy of the Republic of Croatia (Official Gazette 130/05) is the main strategic document that regards management of landfills and historical contamination sites – the "hot spots". There are 13 "hot spots" defined as areas in the environment that have become highly burdened through long term inappropriate management of industrial (technological) waste. Four sites are remediated, six sites are undergoing remediation and three sites are pending.

For EIONET reporting on potentially contaminated sites Croatia could report on the basis of EU directives and registers (IED, Waste directive...) and the potentially polluting/contaminating activities that are regulated by them. But this should be stated in Eionet guidelines for reporting on (potentially) contaminated sites, since Croatia doesn't have national legislation that defines those sites potentially contaminated.

Turkey (Öktem Gökhan) explained that in Turkey, there is a legislation related to soil pollution, "Regulation on Controlling Soil Pollution and Point-Source Polluted Fields". The purpose of this Regulation is to determine principles for preventing pollution of soil as a

receiving environment, determining fields and sectors where pollution exists or may potentially exist, and cleaning and monitoring polluted soils and fields in accordance with sustainable development targets, owing to the fact that the regulation will enter into force as of June 2015.

On soil pollution, within the meaning of the Regulation on Controlling Soil Pollution and Point-Source Polluted Fields, soil pollution risk of industrial facilities will be determined. According to criteria contained in the regulation, soil pollution analysis will be made in these industrial facilities. According to the analysis of the results, fields with identified contaminated sites will be cleaned. The Regulation on Controlling Soil Pollution and Point-Source Polluted Fields Annex II Table II determines highly soil polluting sectors and industries. The sectors or industries will be recorded into the Contaminated Sites Information System. All defined users who will enter into the system will complete the especial form (Annex III - Preliminary Information Sheet on Activity) for inventory of contaminated land.

Slovenia and Spain representatives have also submitted information on the status of CS and legislation in their countries. Their contribution is available in the [EIONET Forum](#).

Conclusions from Country presentations

Ten (10) countries informed on their national policies on soil protection and commented on the use of indicators for the management of progress in contaminated sites. Some countries are revising their legislation (AT, NL), while other countries have published (CZ) or are close to publish new legislation on soil protection and management of CS (LU, PT, and TK).

The country presentations were a learning exercise on interesting aspects of the national legislations (e.g. Wallonia inventory, the Flanders Soil Certificate, the CF proposal for revising the indicator, the CH open data access to public in Internet, the NL integrated environmental law in preparation,...) and examples of good practices.

From these presentations and discussion emerged the following issues:

- In the absence of a European Legislation for Soil countries stay supporting the importance of soil protection by itself and in relation to other environmental compartments (air, groundwater, ecosystem services,...). The meeting took note on the position of EC and EEA for a need to keep a regular reporting and to set a frequency of updating the "progress in the management of contaminated sites in Europe" e.g. every 4-5 years; COM has launched in 2015 a study on Soil legislation and policy instruments with lessons learnt exercise from the SFD and a revision of the gap analysis and options on how to best achieve soil protection based on proportionality and subsidiarity principles. COM is going to ask feedback from MS before elaborating a new legislative proposal.
- The terminology of pollution and contamination is defined with opposite meaning in some countries and for the purpose of the next exercise a common understanding of the key terminology needs to be introduced in the Indicator LSI003 report with the

explanation so that comparability¹ can be improved; Analogically, the term “site” can mean anything from an electrical transformer of 1 m² to industrial facilities of several km². This means that the comparison of the number of sites per category in each country should be kept within its context and not compared to the same category in other countries. We need to keep this in mind when it comes to the reporting of the results of the future data sets.

- Existing inventories do not necessarily give a direct answers to the indicator questionnaire, in some countries classifications do not allow to retrace which sites have been remediated and which sites where found clean at the first assessment; another problem is that some inventories are limited to a specific type of sites (p. ex only historical or only sites to be remediated / considered by public authority) with consequently distortion of results;
- The importance of forecasts with regard to the future overall “workload” for contaminated sites. Estimates on this “workload” are important and might be defined differently e.g. by the number of sites where polluting activities have taken place, which may need investigation or immediate remediation, depending of the situations at some point in time;

5. Country proposals for the revision of the indicator "the progress in the management of contaminated sites"

The Chair introduced the item by informing that a consolidated table with comments and proposals from the countries has been prepared and distributed to all the participants before the meeting.

At the last data collection exercise in 2011 it was decided to keep the data request in a format very much similar to the format of the previous reporting in 2006.

The data request had 5 sections:

1. **Management of contaminated sites**
2. Contribution of polluting activities to local soil contamination
3. Environmental impacts (pollutants)
4. Expenditures
5. Remediation targets and technologies

The discussion of this meeting focused on the 1st section (**Management of Contaminated Sites**), proposing another meeting for the other sections.

In the 2011 data collection exercise, parameters on the number of sites were introduced, specifically the parameters “potentially contaminated sites (PCS)”, “contaminated sites (CS)”

¹ The achievement of comparability of the number of sites in each category from MS to MS will be very difficult to obtain since the “philosophies” behind the ciphers differ very much from country to country, even if we manage to align terminology within the groups. We can aim at such a comparability but we need to bear in mind that most probably the only comparisons that will have a meaning is the evolution of the ciphers in the different categories within the same MS

and “sites under remediation (RS)”. The new parameters aimed to provide an insight into the current level of management of contaminated sites. As opposed to parameters referring to the management steps, these parameters (PCS, CS and RS) do not refer to cumulative total numbers but to the number of sites currently undergoing each management step.

Proposals and comments from Common Forum, BE (Wallonia) and BE (Flanders), Austria, Italy, Switzerland, Portugal, Spain, The Netherlands and Slovenia for the revision of the CSI 015 were submitted in written and are available in the password protected space under the [EIONET Soil Forum](http://forum.eionet.europa.eu/login/login_form) Website. Experts needing access can get the password by requesting it under the EIONET Website: http://forum.eionet.europa.eu/login/login_form

Key observation 1: *It can be assumed that the four management steps (1.Site identification; 2. Preliminary Survey; 3. Main Site Investigation and 4. Remediation Measures) have been commonly adopted by all EIONET countries and the methodology is quite similar. However this approach was abandoned in the 2011 exercise where parameters on the number of sites were introduced, specifically the parameters “potentially contaminated sites (PCS)”, “contaminated sites (CS)” and “remediated sites (RS)”. These parameters aimed to provide an insight into the current level of management of contaminated sites. These parameters do not refer to cumulative total numbers but to the number of sites currently undergoing each management step.*

Proposal 1: Countries were invited to comment on their experience in reporting the progress per management step, whether to use the same format as of the 2011 exercise and submit their own proposal in order to improve the data collection.

A consolidated table with comments and proposals from the countries gathering all comments was made available before the meeting.

Proposal 1 summary conclusion: After a discussion of the differences between dynamic lists vs static lists the chair proposed to establish as baseline the year 2001 when CSI 015 was established. In case the country started building a national programme after 2001 a different baseline – year will be specified by this country.

Countries are invited to submit questions before next meeting in October in order to recollect information for the revision of the (new) indicator LSI003 and to improve the comparability of the next data collection exercise. (**Proposed deadline: to submit questions until 11 September 2015**)

Following the presentation of the various countries legislative frameworks it is also evident that the terminology (inventory vs register, definitions (contamination vs pollution) and methodology (e.g. prioritisation, liability,...) for measuring the progress in the management of contaminated sites in national or regional legislation is different. Moreover due to the uncertainties and negative images of the term "potentially contaminated sites" it was proposed to revisit the terminology and specifically the parameters “potentially contaminated sites (PCS)”, “contaminated sites (CS)” and “remediated sites (RS)”. This discussion took place under the Proposal 2 below.

Key observation 2: *The estimates of the scale of local soil contamination were available for about one third (1/3) of the countries surveyed. Results clearly show that the terms*

"Potentially Contaminated Sites" and "Contaminated Sites" are interpreted differently among the European Countries. Consequently, without a common agreed terminology, results between countries cannot be compared.

The definitions provided in the EUR 26376 EN report are the following:

- a. The term 'Potentially Contaminated Site' (PCS) refers to sites where unacceptable soil contamination is suspected but not verified, and where detailed investigations need to be carried out to verify whether there is an unacceptable risk of adverse impacts on receptors.*
- b. The term 'Contaminated Site' (CS) refers to a well-defined area where the presence of soil contamination has been confirmed and this presents a potential risk to humans, water, ecosystems or other receptors. Risk management measures, e.g. remediation, may be needed depending on the severity of the risk of adverse impacts to receptors under the current or planned use of the site.*
- c. The term "Remediated Site (RS)" (has not been defined in the EUR report).- Proposed definition: RS refers to sites where the contamination has been removed, destroyed or otherwise reduced the availability of contaminants to receptors of concern and it does not represent a risk to human health or to the environment. (Other definitions available?)*

Proposal 2: To keep monitoring the progress in the management of contaminated sites in the EIONET Countries by requesting an update of the numbers of PCS, CS and Remediated Sites (RS) by a date to be decided; in order to consider existing differences in terminology: include references to national/regional legislation, definitions, etc.

Proposal 2 summary conclusions: New expressions were proposed to replace the parameters PCS, CS and Remediated Sites (RS) for measuring the progress in management of contaminated sites, in case that for some expressions a country would not be able to report figures according to the MS's own regulation, then it would be possible to report no figure while giving the explanation. The term "investigated/investigation" means that a characterisation (substances) and sources of the pollution and risk assessment is foreseen. The new expressions are ranked from 1 to 6 as following:

1. Sites where polluting activities took place (e.g. based on Annex 2 of proposed SFD, but usually based on country-specific list) - (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 definition remediation of Common Forum;
5. Sites under/with on-going remediation (probably common for all countries);
6. Sites remediation completed (probably common for all countries);

Key observation 3: From specific data on Table 2 the number of new potentially contaminated sites could be retrieved for some countries but not for others.

Proposal 3: To request EIONET countries to submit the recollection of the newly identified contaminated sites for a date to be decided.

Proposal 3 summary conclusion: The meeting agreed that the initial number of "*sites where polluting activities took place*" should be considered as the "Baseline" number from the starting year 2001, unless country's legislation refers to another date. It is proposed that New "*sites where polluting activities took place*" be counted separately from the "Baseline" and reported separately.

After the enter into implementation of the Industrial Emissions Directive (IED) new PCSs are not expected from legal point of view (as regulated in IED). Therefore New CS (based on preventive approach, plus liability provisions in case of accidents or unexpected contamination) should be considered out of the Indicator CSI015 (New LSI 003).

Key Observation 4: For eleven (11) countries it is not clear if they keep a comprehensive national/regional or local inventory for contaminated sites.

Proposal 4: To ask those eleven (11) EIONET countries in which way are they monitoring the progress in the management of contaminated sites.

Proposal 4 summary conclusion: The chair proposed to invite all countries to submit this information after the launch of the new collection exercise.

Key observation 5: No legal standards for soil quality have been set at the EU level but targets have been set by some EEA Member countries. The existing EU legislation (Integrated Pollution and Prevention Control Directive (IPPC), Industrial Emissions Directive (IED), Landfill Directive (LD)) aims at preventing new contamination from waste landfilling. However a harmonised approach to setting environmental standards for soil quality will facilitate the comparison of data among countries.

Proposal 5: A stepwise approach is proposed 1st) to gather the criteria used in each EIONET country for deciding which site is "contaminated" and what is "not contaminated"; 2nd) to assess what are the best practices and suitable methodology for establishing what is or not a contaminated soil, and 3rd) to develop a guidance document on best practices on contaminated sites.

Proposal 5 summary conclusions: The chair concluded that in the absence of a common European legislative framework on soils, it will be rather difficult to establish a working group to develop a harmonised approach to setting environmental standards for soil quality. The Chair invited the experts to share the information and methodology available in their countries.

Key Observation 6: For twenty two (22) out of 39 Countries it is not clear if they have established policy targets relating to the management of contaminated sites (see table 3 below).

Proposal 6: To ask those 22 EIONET countries if policy targets have been established and to submit their targets relating to the management of contaminated sites.

Proposal 6 summary conclusions: The chair proposed to invite all countries to submit this information after the launch of the new collection exercise.

Marc Van Liedekerke (MvL) (JRC) expressed, on various occasions during the discussions that during the last 15 years, it has not been possible by Eionet NRC soil to set definitions for the terms ‘contaminated site’ or ‘potentially contaminated site’ (and related terms such as ‘management steps’) so that collected data from different countries can be inter-compared or put together in tables/figures. Each country maintains its own definitions for terms that are related to the general concept of ‘contaminated site’. Judging from the various presentations and interventions by countries in the meeting, he said that it is unlikely that trying to come to common definitions would be feasible now or in the future, especially now that there is no need for doing so (withdrawal of the proposed SFD).

Consecutively, according to MvL measuring the progress in management of CS in a harmonized way across Europe is not possible. If we want to measure progress in the management of contaminated sites across Europe, we should look at countries individually and ask them how they measure such progress based on their terms. MvL invited the meeting participants to design a number of questions that would guide countries in such progress descriptions. The next questionnaire should use these questions to collect information/data that could set the baseline from where further progress could be measured.

KV reacted in the meeting with a proposal for these questions and submitted these after the meeting in written form (see page 20).

11th March – Land Recycling and Brownfields

The chair made a short summary of the conclusions of the 1st day and introduced the speakers of the morning session.

6. Commission communication on "Land as a resource"

JM presentation is available on the [EIONET Forum for NRC Soil](#).

7. EEA activities that are relevant to land recycling and brownfields

A story book of "good/bad/successful stories of soil land restoration" will be edited by JRC and presented to the EIONET Soil meeting in October 2015 in Copenhagen, and jointly published by Commission DG ENV, JRC and EEA as contribution of this EIONET Soil Group on Contaminated Sites and Brownfields to the **International Year of Soil**.

The Chair invited the countries to send by e-mail to ana.paya-perez@ec.europa.eu up to 10 stories, summarized in maximum of 6 pages including graphics and pictures.

Submissions are accepted until 30th June 2015

GL presentation is available on the [EIONET Forum for NRC Soil](#).

8. Land recycling new approaches of green infrastructure, re-naturing cities, and remodelling

AR presentation is available on the [EIONET Forum for NRC Soil](#).

9. Knowledge and information sharing and networking activities

The chair summarised the information presented by JM on the various call for proposals under the LIFE, H2020, Regional Funds understanding that restoring contaminated sites eliminates threats to groundwater contamination and improves the health of man and the ecosystems around the surrounding spaces. She acknowledged the work carried out by the ICCL and Common Forum and invited the participants to find ways of collaboration. The Chair proposed to send a message to DG ENV on behalf of the EIONET Soil about the need to open ways in H2020 for financing projects with clear titles of "soil protection" and "restoration of degraded and contaminated soils".

10. Proposal: Country worst CS cases and success stories

The Chair introduced the proposal:

From the 80's until today Europe has developed numerous laws to reduce and restore the adverse effects of emitting hazardous pollutants to soil and the environment. Every country has gathered very valuable information and published their work normally in the national language (normally not accessible and not known by other countries in Europe), on how to manage contaminated sites, originated by industrial settlements or by accidents.

With the aim of sharing best practices of soil restoration and management of contaminated sites among EEA countries and to raise awareness of the enormous efforts made to succeed in such difficult commitment, the Chair proposed to the participants to send their country's good (bad/worst) cases and successful stories of recovery of contaminated areas; stories can describe cases that illustrate for example creation of jobs, spin-off companies, patents, new tools and machineries, recreational areas for the cities, ...; also cases of sustainable remediation, international cooperation, polluters who present projects to remediate the subsoil, development of innovative technologies, innovative funding mechanisms etc.

Meeting Conclusions

- According to EEA terminology the new Land and Soil Indicator LSI003 will replace the CSI015.
- In the absence of a European Legislation for Soil countries stay supporting the importance of soil protection by itself and in relation to other environmental compartments (air, groundwater, ecosystem services,...). The meeting took note on the position of EC and EEA for a need to keep a regular reporting and to set a frequency of updating "The progress in the management of contaminated sites in Europe" e.g. every 4-5 years;
- COM has launched in 2015 a study on Soil legislation and policy instruments with lessons learnt exercise from the SFD and a revision of the gap analysis and options on how to best achieve soil protection based on proportionality and subsidiarity principles. COM is going to ask feedback from MS before elaborating a new legislative proposal.
- There is a need to improve or update the knowledge base e.g. on soil biodiversity, soil contamination etc., lessons learnt exercise and to rebuild of the Soil Network which was among the objectives of this meeting, and to establish a continuous dialogue with stakeholders using existing platforms, in particular the EIONET NRC soil and ad-hoc working group on soil contamination to support the Soil Thematic Strategy bearing in mind that in the absence of a Soil Framework Directive the Commission has not formal expert groups.
- After the presentation of the various countries legislative frameworks it is evident that the terminology (inventory vs register, definitions (contamination vs pollution) and methodology (e.g. prioritisation, liability,...) for measuring the progress in the management of contaminated sites in national or regional legislation is different.
- The terminology of pollution and contamination is defined with opposite meaning in some countries and for the purpose of the next exercise a common understanding of the key terminology needs to be introduced in the Indicator LSI003 report with the explanation so that comparability can be improved;
- Existing inventories do not necessarily give a direct answers to the indicator questionnaire, in some countries classifications do not allow to retrace which sites have been remediated and which sites where found clean at the first assessment; another problem is that some inventories are limited to a specific type of sites (p. ex only historical or only sites to be remediated / considered by public authority) with consequently distortion of results;
- Due to the uncertainties and negative images of the term "potentially contaminated sites" it was proposed to revisit the terminology and specifically the parameters "potentially contaminated sites (PCS)", "contaminated sites (CS)" and "remediated sites (RS)".
- It is proposed to establish as baseline the year 2001, the year when the CSI015 was established. In case a country started building a national programme in a different year after 2001 another baseline for that country will be specified.
- The meeting agreed that the initial number of "sites where polluting activities took place" should be considered as the "Baseline" number from the starting year 2001, unless country's legislation refers to another date. It is proposed that new "sites where

polluting activities took place" be counted separately from the "Baseline" and reported separately.

- The importance of forecasts with regard to the future overall “workload” for contaminated sites is recognised. Estimates on this “workload” are important and might be defined differently e.g. by the number of sites where polluting activities have taken place, which may need investigation or immediate remediation, depending of the situations at some point in time;

Meeting Follow-up Actions

- Countries are invited to send by e-mail to ana.paya-perez@ec.europa.eu up to 10 stories of "good/bad/successful stories of soil land restoration" summarized in maximum of 6 pages including graphics and pictures. Submissions are accepted until **30th June 2015** in original language and to be translated in English.
- In order to recollect information for the revision of the (new) indicator LSI003 Countries are invited to submit questions to EC-JRC by e-mail to ana.paya-perez@ec.europa.eu until **31 July 2015** in order to be presented at the Copenhagen EIONET NRC Soil meeting in October 2015.
- EC-JRC will recollect the proposals and will present a number of questions for the revision of the (new) indicator LSI003 to be discussed at the Copenhagen EIONET NRC Soil meeting on **14-15 October 2015**.
- EC-JRC will recollect the stories and will draft a booklet of "land restoration stories" which is intended to be presented to the Copenhagen EIONET NRC Soil meeting on **14-15 October 2015**.

Next meetings:

13 October 2015: NRC Land use and spatial planning (NRC LUSP);

14 October: NRC Soil WG on contaminated sites and brownfields, inviting NRC LUSP participants to attend the morning session to allow for interaction;

15 October: NRC Soil meeting.

These meetings will be organised and hosted by EEA in Copenhagen (DK).

Information arrived to EC-JRC after the meeting

KV from The Netherlands submitted after the meeting the following **proposal for questions**. These questions are inspired by topics heard in the discussion in the Eionet group and aiming to clarify the meaning of the numerical data proposed to be collected.

This is essential as we found earlier that it is difficult to draw conclusions from the last collection of data. Though the data seem to cover the same topics they have a different embedding and a different background.

The goal should be to get insight in the numerical figures but most of all to have the political/administrative managers informed.

The progress is after all also in developing a working juridical legislation, financial basis, communication channels etc. fitting for the country.

The point of departure remains that each country is free to set its own priorities on this topic (and take the consequences). This need not be in contradiction to informing the partners.

To KV opinion we should add as an instruction:

For each question the best answer is not only yes or no but also a short informative explanation of what this part consists of & how it works.

If the choice presented does not fit, please explain. Indicate if the answer differs for different regions. If you do not want to answer the question please motivate.

1. Does your country have a soil act regulating soil pollution/contamination? If yes, since when; if no, is it planned for a future year? Does it include groundwater? Does it include sediments?

2. Does our country have regulations for land selling and purchase in relation to soil pollution (e.g. the transfer or upholding of financial responsibilities)

3. Will your country make a register of polluted and potentially polluted sites and will it make inventories to get an overview of the problem or

will your country devise a mechanism to gradually catch polluted sites (i.e. connected to selling and purchase of land, to permit renewal and/or agreements with the organisations of a line of industry)

4. Does your country discriminate between historic sites and new sites (new or continuing polluting activities, accidents) and is this division marked by a year

5. Does your country have or use a formal list of threshold values, do you have a procedure for substances found on a site but not occurring on the list of threshold values?

6. Does your country have formalised procedures to assess site-specific risks?

7. Does your country register sites made fit for actual use which may have to be managed again with a change of land use?

Maybe the questionnaire of the Common Forum has already provided many answers that would be helpful if available.

That was also a reason for KV not to try to make it more complete; he just added 4 and 5.

Additional topics for questions could be the level of decentralisation within the country, balancing self-reliance and sufficient expertise/communication, or on financing, or on the difference in management rules for small and large sites.

KV from The Netherlands has also distributed after the meeting a booklet in English (80 pages) providing the overview of the Dutch Soil Policy, the relations with a large number of European legislation and technical guidance and instruments to implement their soil policy. The booklet is available in the EIONET Forum Website: http://forum.eionet.europa.eu/login/login_form



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE

Institute for Environment and Sustainability (IES)
Land Resource Management Unit

Ispira, 10/03/2015

Agenda

1st Eionet NRC Soil Ad-hoc Working Group on Contaminated Sites and Brownfields

10 and 11 of March 2015

Ispira (VA) Italy, Room 3

Chair: Ana Payá Pérez (DG JRC)

Rapporteurs: Josiane Masson (DG ENV), Agnieszka Romanowicz (DG JRC) and Geertrui Louwagie (EEA)

10th March - Welcome and setting the scene		
09:30	Registration	
10:00	Welcome and 'tour de table'	Luca Montanarella and Ana Payá Pérez (DGJRC)
On-going and planned soil activities		
10:15	1. Background and objectives of the meeting Discussion paper for the revision of the contaminated sites indicator	Ana Payá Pérez (DGJRC)
10:45	2. State of Play of Soil Policy in Europe and possible support actions related to contaminated sites	Josiane Masson (DGENV)
11:00	Q&A	All
12:30	Lunch	
14:00	3. EEA approach for setting indicators	Geertrui Louwagie (EEA)
Country forum		
14:30	4. Presentations	Dominique

	<ol style="list-style-type: none"> 1. ICCL and Common Forum overview 2. BE(Wallonia) Inventories and Case Study 3. BE(Flanders) soil remediation policy and the approach to brownfields; 4. CH_Registers of polluted sites in Switzerland - ISPRA 2015 – short 5. NL_country presentation 5. Country proposals for the revision of the indicator "the progress in the management of contaminated sites" <ol style="list-style-type: none"> 1. Country comments to discussion paper EIONET soil CSI 015 2. Belgium Inventories & CSI015 indicator « progress in management of contaminated sites »: common forum feedback & case study in Wallonia (Belgium) 3. Switzerland a) comments to discussion paper EIONET soil CSI 015; b) CH_Registers of polluted sites in Switzerland - ISPRA 2015 - short 4. Portugal a) comments to discussion paper EIONET soil CSI 015; b) proposal for the revision of the questionnaire; 5. Spain comments to discussion paper EIONET soil CSI 015; 6. Austria comments to discussion paper EIONET soil CSI 015 7. Italy comments to discussion paper EIONET soil CSI 015 	Darmendrail Esther Goidts Johan Ceenaeme Christoph Reusser Kees Versluijs Ana Payá Pérez BE (Wallonia), CF CH PT ES AT IT
15:30	Coffee/tea	
16:00	Continuation-Discussion	All
<i>The way forward</i>		
17:00	Wrap-up and conclusions	Chair & rapporteurs
17:30	Departure to Hotels	All
19:30	Social Dinner: Ristorante Melograno, Via Cavour N°13 - 21021 Angera (Va); Tel. 0331 960431	All

1st Eionet NRC Soil Ad-hoc Working Group on Contaminated Sites and Brownfields

Chair: Ana Payá Pérez (DG JRC); Rapporteurs: Josiane Masson (DG ENV), Agnieszka Romanowicz (DG JRC) and Geertrui Louwagie (EEA)

11th March – Land Recycling and Brownfields		
09:00	Summary of the 1 st Day Discussions	Ana Payá Pérez (DGJRC)
09:30	6. Commission communication on "Land as a resource"	Josiane Masson (DGENV)
<i>On-going and planned brownfield activities</i>		
10:00	7. EEA activities that are relevant to land recycling and brownfields	Geertrui Louwagie (EEA)
10:30	Coffee/Tea	
11:00	8. Example of recent land recycling that are following approaches of green infrastructure/renaturing cities/remodelling etc.	Agnieszka Romanowicz (JRC)
	Q&A	All
12:30	Lunch	
<i>Networking and collaborations</i>		
14:00	9. Knowledge and information sharing and networking activities	All
	10. Proposal: Country worst CS cases and success stories report	JRC
	Discussion	All
<i>The way forward</i>		
15:00	Wrap-up, conclusions and follow-up actions <ul style="list-style-type: none"> a. Management of contaminated sites indicator b. Management of land recycling and brownfields c. Next meetings: EEA Copenhagen (DK) 13 October 2015: NRC Land use and spatial planning (NRC LUSP); 14 October: NRC Soil WG on contaminated sites and brownfields, inviting NRC LUSP participants to attend the morning session to allow for interaction; 15 October: NRC Soil meeting	Chair & rapporteurs
16:30	Departure to Airports	

1st EIONET WG Soil Contamination and Brownfields

March 10-11 2015 at JRC – Ispra (VA) Italy, Room 3

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