

EEA needs for soil information

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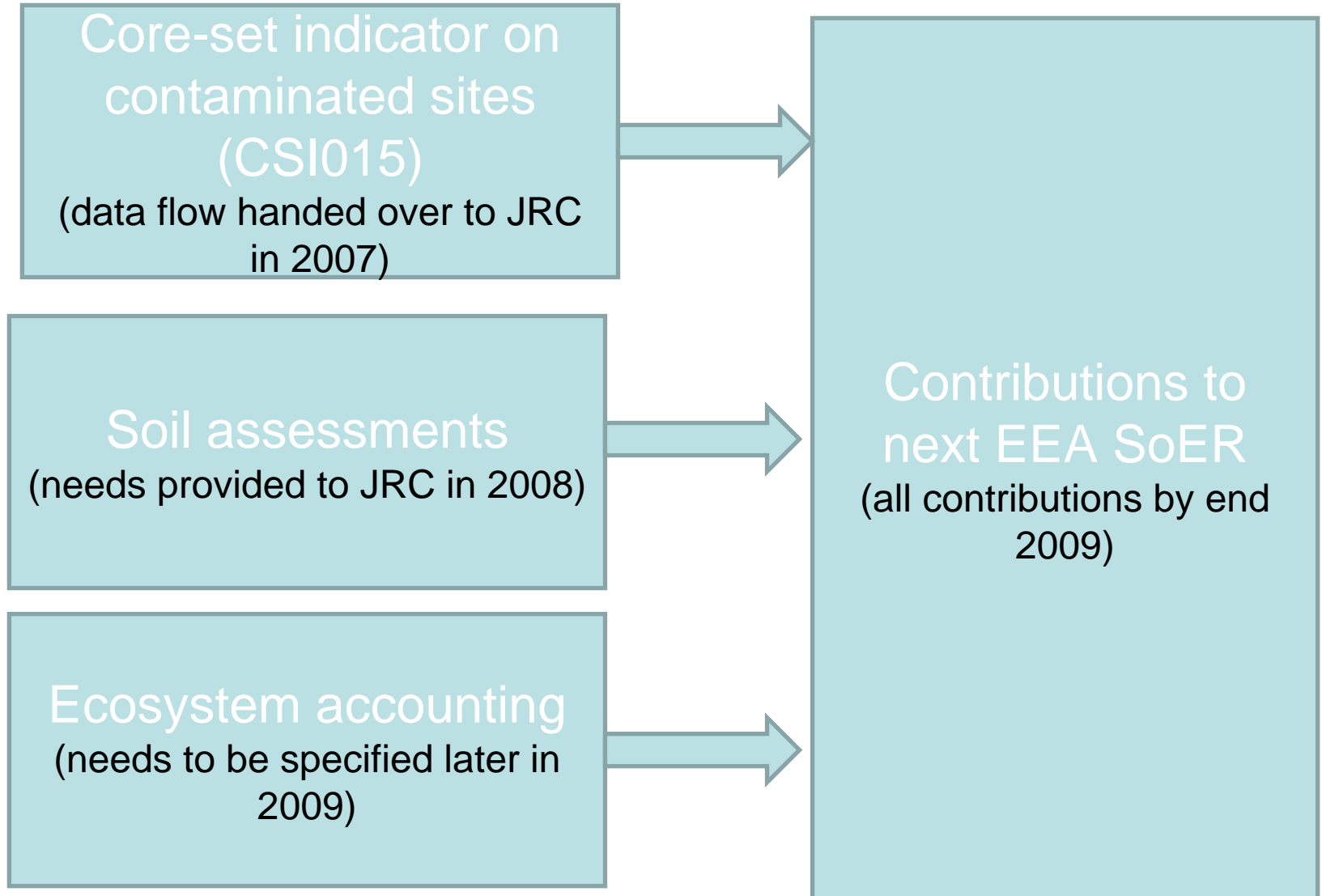
Eionet workshop on soil - JRC, Ispra – 4 March 2009



Content

- EEA needs for soil information
- Transfer of data flow on contaminated sites to JRC
- EEA SoER 2009
- Progress on soil country analyses

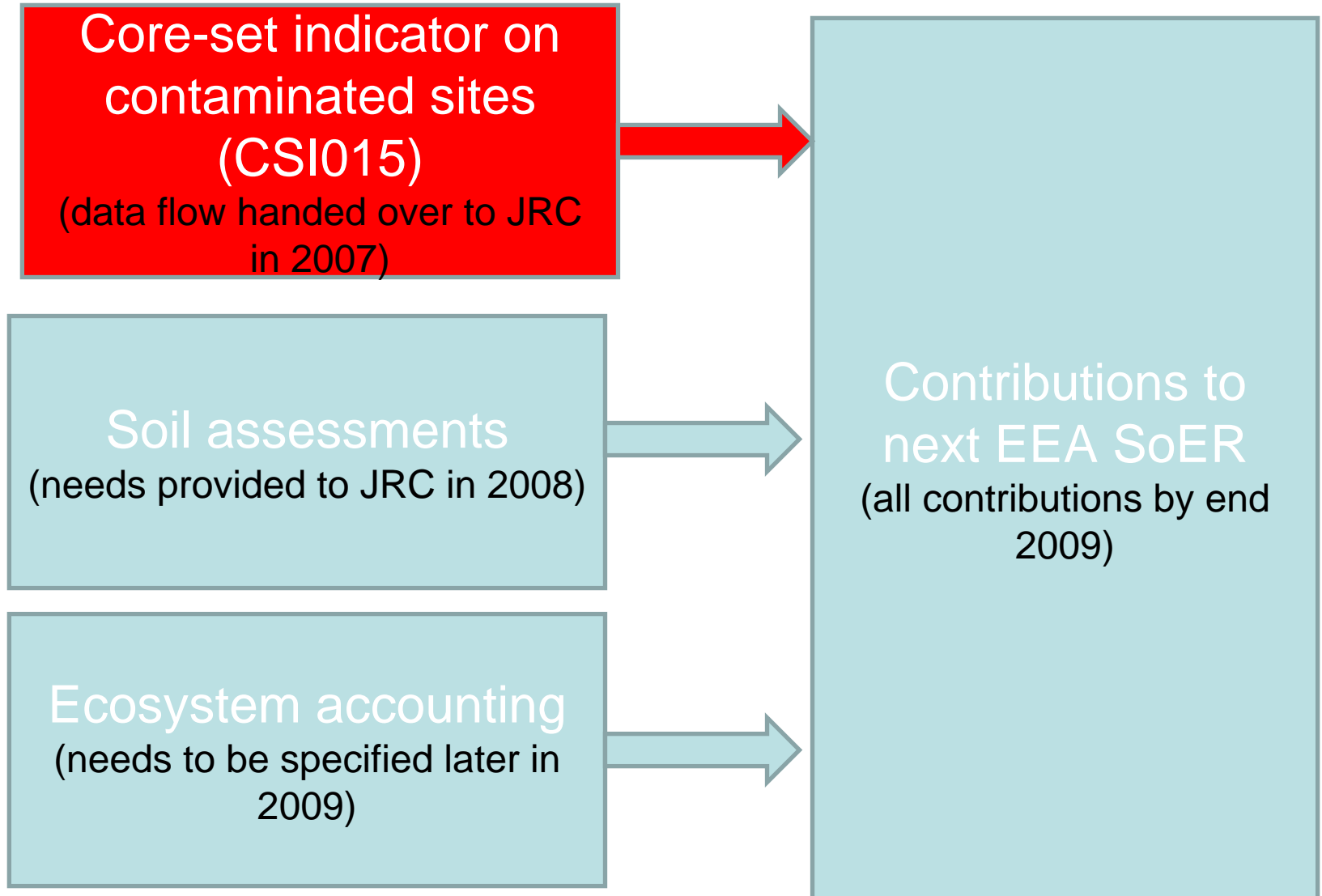
Soil information: what for?



EEA expectations from workshop

- Learn on progress and future developments of ESDAC
- Learn on progress on contaminated sites data flow
(steps agreed in October 2007)
- Feedback on data needs
- Gather country views in particular on soil country
analyses (their experience and future developments)

Soil information: what for?



EEA core set of indicators

The core-set comprises 37 indicators covering

- **six environmental themes:**
 - air pollution and ozone depletion (6)
 - climate change (4), waste (2),
 - water (7), biodiversity (3) and soil (2) ; and
- **four economic sectors:**
 - agriculture (2), energy (5),
 - transport (3) and fisheries (3)
- **three under development:** water (1), waste (2)

Examples of core-set indicators

CSI-ID	Name	Theme
CSI 005	<u>Exposure of ecosystems to acidification, eutrophication and ozone</u>	Air pollution and ozone depletion
CSI 009	<u>Species diversity</u>	Biodiversity
CSI 010	<u>Greenhouse gas emission trends</u>	Climate change
CSI 014	<u>Land take</u>	Terrestrial
CSI 015	<u>Progress in management of contaminated sites</u>	Terrestrial
CSI 016	<u>Municipal waste generation</u>	Waste
CSI 021	<u>Nutrients in transitional, coastal and marine waters</u>	Water
CSI 030	<u>Renewable primary energy consumption</u>	Energy
<i>CSI 040 (under development)</i>	<u><i>Hazardous substances in marine organisms</i></u>	<i>Water</i>

Core-set objectives

- Provide a manageable and stable **basis for indicator-based assessments** of progress against environmental policy priorities;
- Strengthen the **environmental dimension of assessments** alongside the social and economic dimensions
- **Prioritise** improvements in the quality and geographical coverage of **data flows**, especially Eionet priority data flows, in order to enhance comparability and certainty of information and assessments;
- **Streamline EEA/Eionet contributions** to other European and global indicator initiatives, e.g. structural indicators and sustainable development indicators

EEA core set indicator “Progress in management of contaminated sites” – CSI15

Indicators

- » Indicators home
- » Indicators by theme
- » Key messages by themes
- » Core Set of Indicators (CSI)
- » CSI data sets

» CSI policy questions

» List only CSI figures

Progress in management of contaminated sites (CSI 015) - Assessment published Aug 2007

Key policy question

How is the problem of contaminated sites being addressed (clean-up of historical contamination and prevention of new contamination)?

Key message

Soil contamination requiring clean up is present at approximately 250000 sites in the EEA member countries, according to recent estimates. And this number is expected to grow. Potentially polluting activities are estimated to have occurred at nearly 3 million sites (including the 250000 sites already mentioned) and investigation is needed to establish whether remediation is required. If current investigation trends continue, the number of sites needing remediation will increase by 50% by 2025.

By contrast, more than 80000 sites have been cleaned up in the last 30 years in the countries where data on remediation is available. Although the range of polluting activities (and their relative importance as localised sources of soil contamination) may vary considerably across Europe, industrial and commercial activities as well as the treatment and disposal of waste are reported to be the most important sources. National reports indicate that heavy metals and mineral oil are the most frequent soil contaminants at investigated sites, while mineral oil and chlorinated hydrocarbons are the most frequent contaminants found in groundwater. A considerable share of remediation expenditure, about 35% on average, comes from public budgets. Although considerable efforts have been made already, it will take decades to clean up a legacy of contamination.

Fig. 1: Overview of progress in the management of contaminated sites in Europe (Ver. 1.00)

Note: The graphs shows the status in investigation and clean-up of contaminated sites in Europe.

Belgium refer to Flanders and the Brussels region only.

Time coverage: 2006
 Croatia, Denmark, Netherlands, Spain: 2004;
 Iceland: 2002;
 Slovenia: 2001;
 Liechtenstein: 2000;
 Other contries: 2005.

Data source: EIONET priority data flows on contaminated sites
 Turkey: NATO/CCMS-Turkey, 2006;
 United Kingdom: Environment Agency of England & Wales, 2005.
[Downloads and more info](#)

Category	Number of sites in 2006 (x 1 000)
Remediated sites	80,7
Contaminated sites (estimate)	245,9
Potentially contaminated sites (identified)	1823,6
Potentially polluting activity sites (estimate)	2965,5

Soil contamination data set on data service

The screenshot shows the European Environment Agency (EEA) Data Service website. The header includes the EEA logo and navigation links: Home, Products, Themes, Press room, About EEA, and Contact us. The main content area is titled 'Soil contamination' and provides information about the dataset, including its maintenance by the European Topic Centre on Terrestrial Environment and its availability in English, version 4. A table lists two data sets: 'Progress in management of contaminated sites indicator data set' (available in Microsoft Excel format) and 'Problem areas of contaminated sites' (available in Microsoft Excel format). An 'Authentication' section on the left allows users to log in with a name and password. A 'Produced map(s)/graph(s)' section is also visible at the bottom.

European Environment Agency

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Data

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- » Thematically
- » By keyword
- » Providers
- » Data viewers
- » Terms of use
- » About this service

Home » Products » Data Service » search » Soil contamination

Soil contamination

The dataset on soil contamination contains information provided on a regular basis by [EIONET countries](#) on the following issues:

- Progress in the management of contaminated sites;
- Expenditure and estimated costs;
- Industrial and commercial branches responsible for local soil contamination;
- Main contaminants affecting soil and groundwater.

The dataset is maintained for EEA by the [European Topic Centre on Terrestrial Environment](#).

European data set (language: English, version 4)

versions		
	v3	v4
English		<input checked="" type="checkbox"/>

This is the latest available version of the dataset

European data set

Progress in management of contaminated sites indicator data set	CSI15_Compilation2006_v4_6 Microsoft Excel format
Problem areas of contaminated sites	PA_2006 Microsoft Excel format

Additional information

Structure and definitions	Structure and definitions Microsoft word format
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Produced map(s)/graph(s)

Internet

Soil contamination data set: structure and definitions

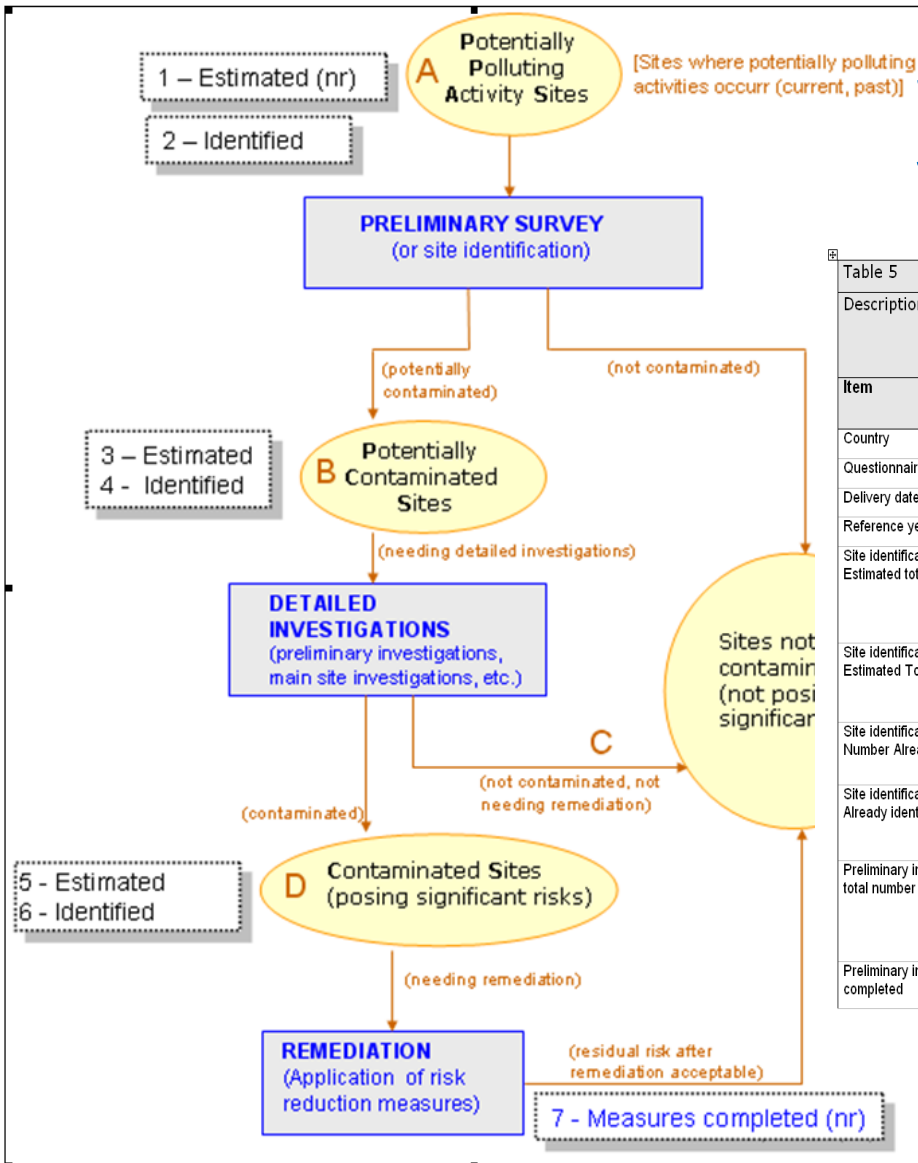
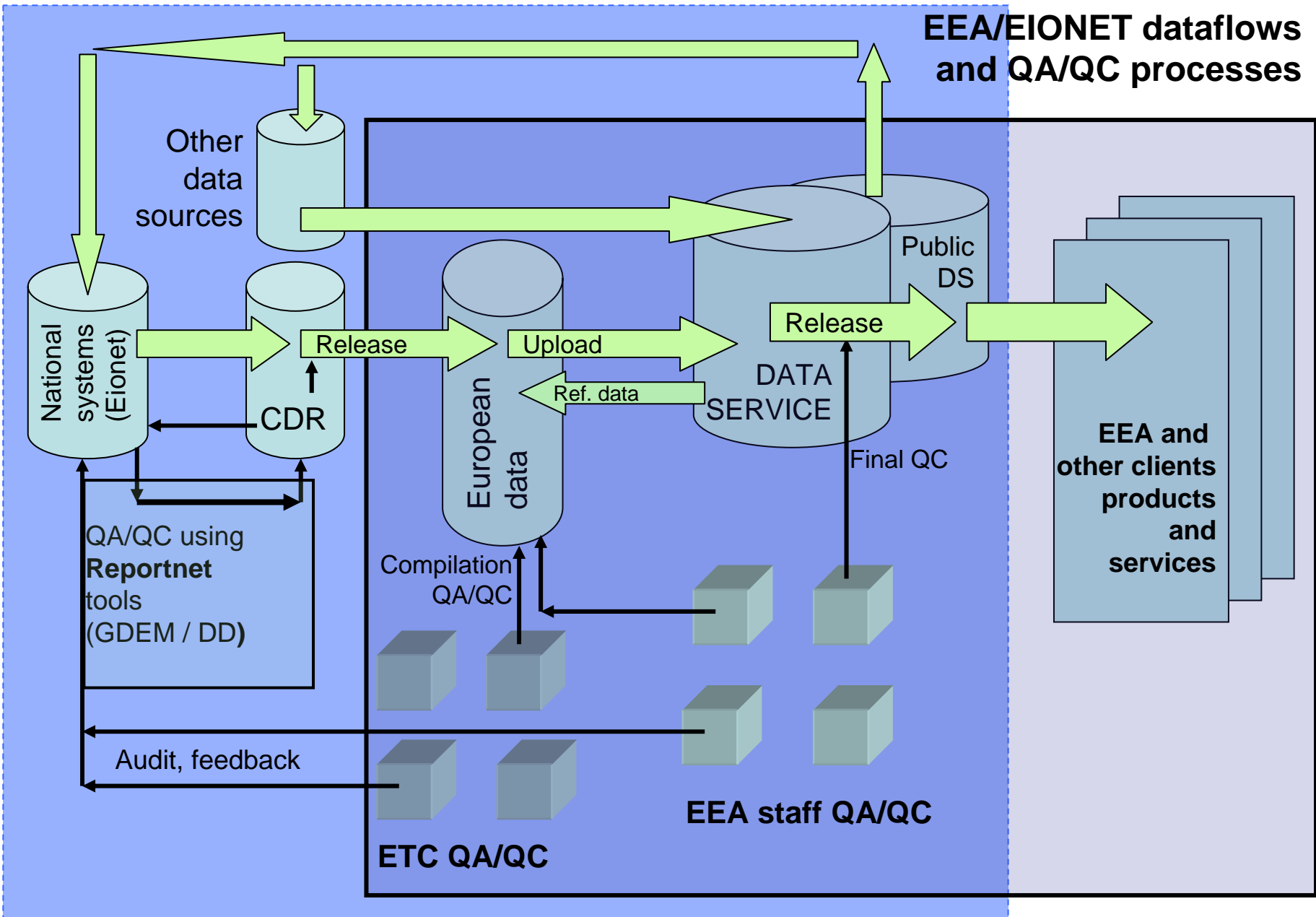


Table 5

CSI15_Compilation2006_v4_3.xls Variables included in the worksheet: 1.ProgressCtrlRmdtn

Description: Management of contaminated sites : Overview of progress in control and remediation of soil contamination by country
See Table 20 for detailed definition of management steps in the columns F to S.

Item	Column(s) in worksheet	Definition	Data type	Units
Country	B	Country name.	varchar(50)	Not applicable
Questionnaire	C	The year which the questionnaire was sent. YYYY	int(4)	Year
Delivery date	D	The year which data was provided. YYYY	int(4)	Year
Reference year	E	The year which the data refers. YYYY.	int(4)	Year
Site identification / Preliminary Study Estimated total number	F	Estimated total number of sites that still require preliminary study.	int(6)	Number of sites
Site identification / Preliminary Study Estimated Total Area	G	Total area of estimated number of sites that still require preliminary study.	int(5)	ha
Site identification / Preliminary Study Number Already Identified	H	Number of sites that have ever passed the preliminary study.	int(6)	Number of sites
Site identification / Preliminary Study Already identified Area	I	Total area of sites identified by preliminary study.	int(5)	ha
Preliminary investigation Estimated total number	J	Estimated expected overall number of sites ever passing through Preliminary Investigation. The number therefore includes not only those sites, still necessary to be managed, but also the already managed sites or sites currently handled at the Preliminary Investigation.	int(6)	Number of sites
Preliminary investigation Already completed	K	Number of sites that have ever passed the Preliminary Investigations.	int(6)	Number of sites



Handed over to ESDAC

CDR = Central Data Repository
 GDEM = General Data Exchange Modules
 DD = Data Dictionary

Handover of data flow to ESDAC: Elements passed by EEA to JRC

- A) **Documents prepared for the 2006 data collection:** guidelines, questionnaire template (on EIONET Circa)
 - B) **Original country data** (on the Reportnet Central Data Repository/CDR)
 - C) **EEA datasets on contaminated sites:** Compilation of the country data 2001-2006 and previous versions; Data description and metadata (on EEA data service)
 - D) **2007 Eionet review of the datasets:** Background information and country replies (available on the EEA IMS web site); data quality report listing country specific quality issues (on EIONET Circa)
- The **Reporting Obligation Database/ROD** provides links to: next reporting deadline, guidelines, delivery format, national contacts.

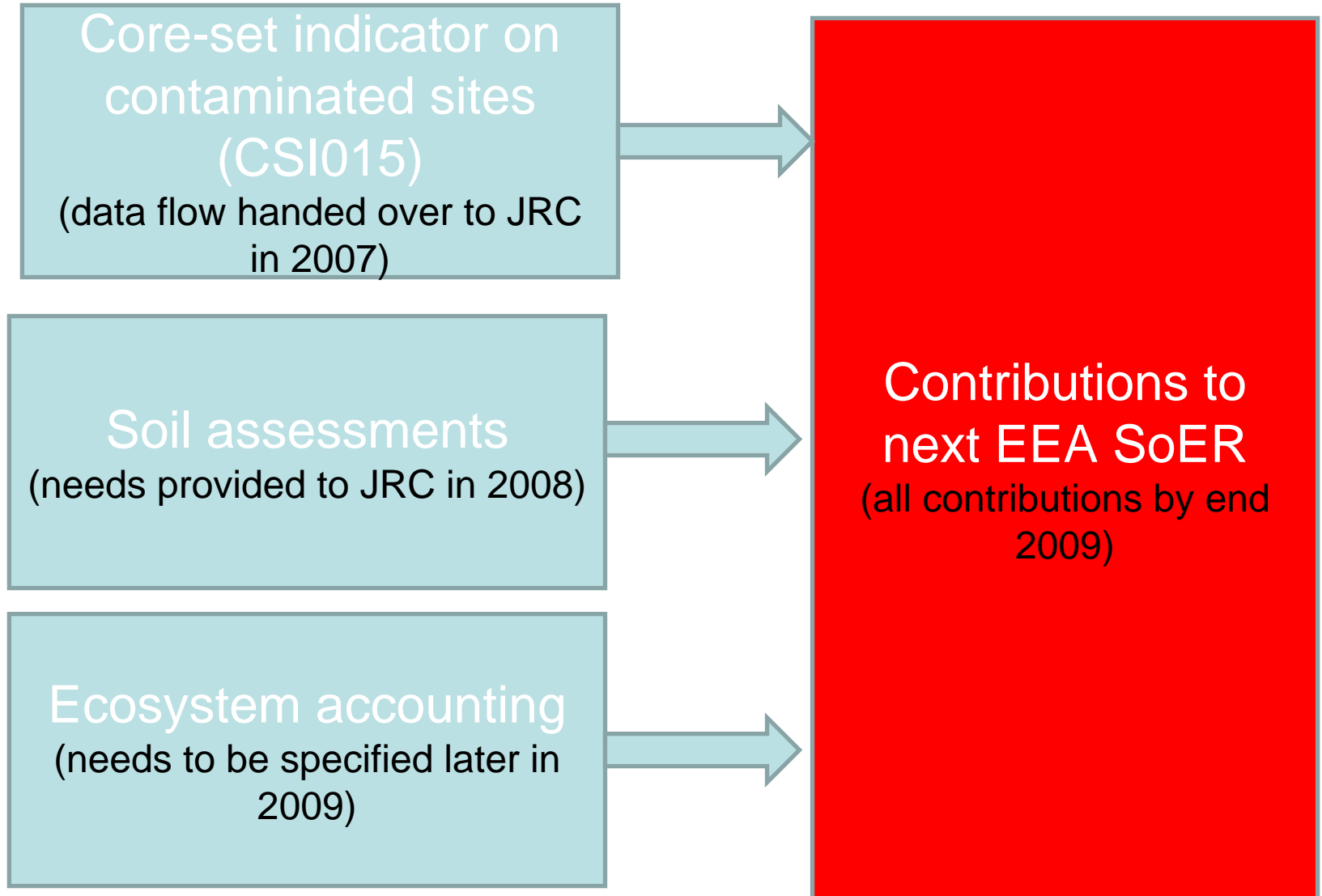
Data flow: outstanding questions

- Regular cycle: frequency?
- EIONET National Reference Centres role?
- Use of Reportnet?
 - Deadline in ROD
 - Country deliveries in CDR
 - Future use of Data Dictionary
- European data set publication: where?

Data flow: what could be further improved

- Data model and definitions
- Reporting format
- Mechanism for filling format (web forms: from Excel to xml)
- Automate data rules
- Consolidate current dataset
- A whole load of knowledge could be inherited from EIONET data flows (Reportnet, not just thematic knowledge)
- A library of routines that could be reused from other data flows

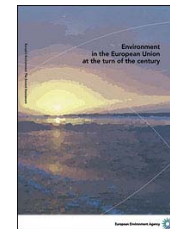
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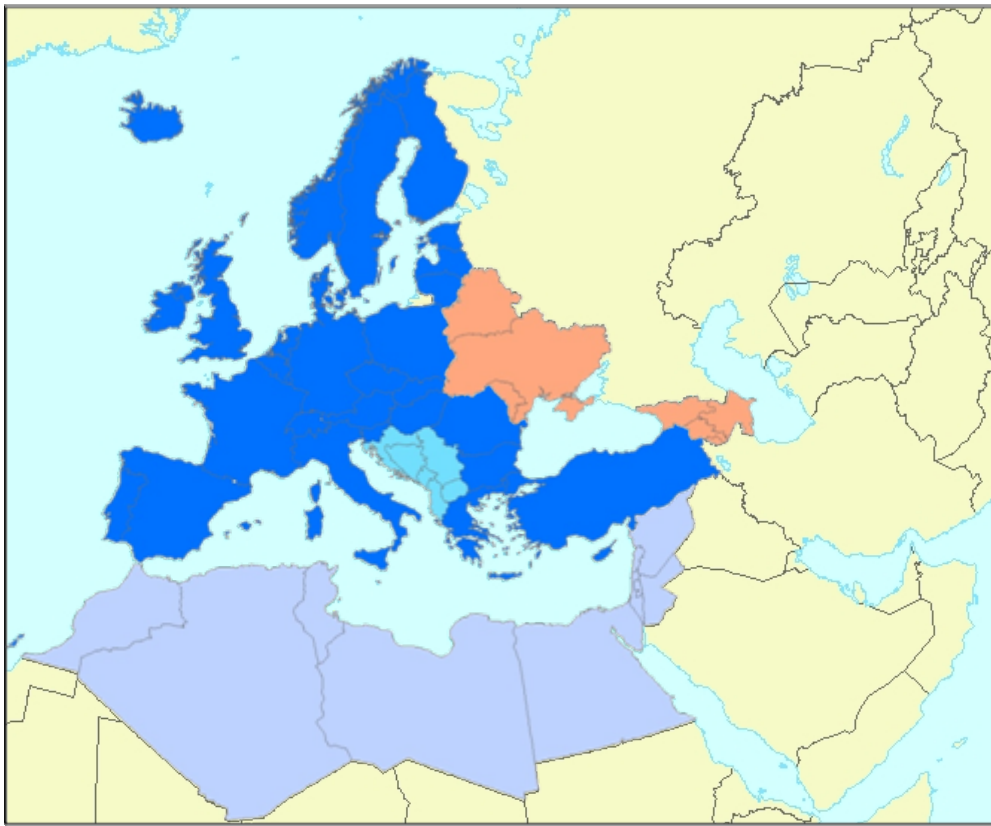


Mandate & History – 5-year SOER

This is THE Council regulation mandated report of the EEA:
“(vi) to publish a report on the state of, trends in and prospects for the environment every five years, supplemented by indicator reports focusing upon specific issues;”

- 1995 SOER = Dobris + 5EAP report
- 1999 SOER = Turn of the Century
- 2005 SOER = 2005 State & Outlook report (A, B & C first appeared)
- **2010 SOER = 5-year reporting process (2015, 2020) anchored by our next strategy**





EEA works with

- EEA member countries
- EEA collaborating countries

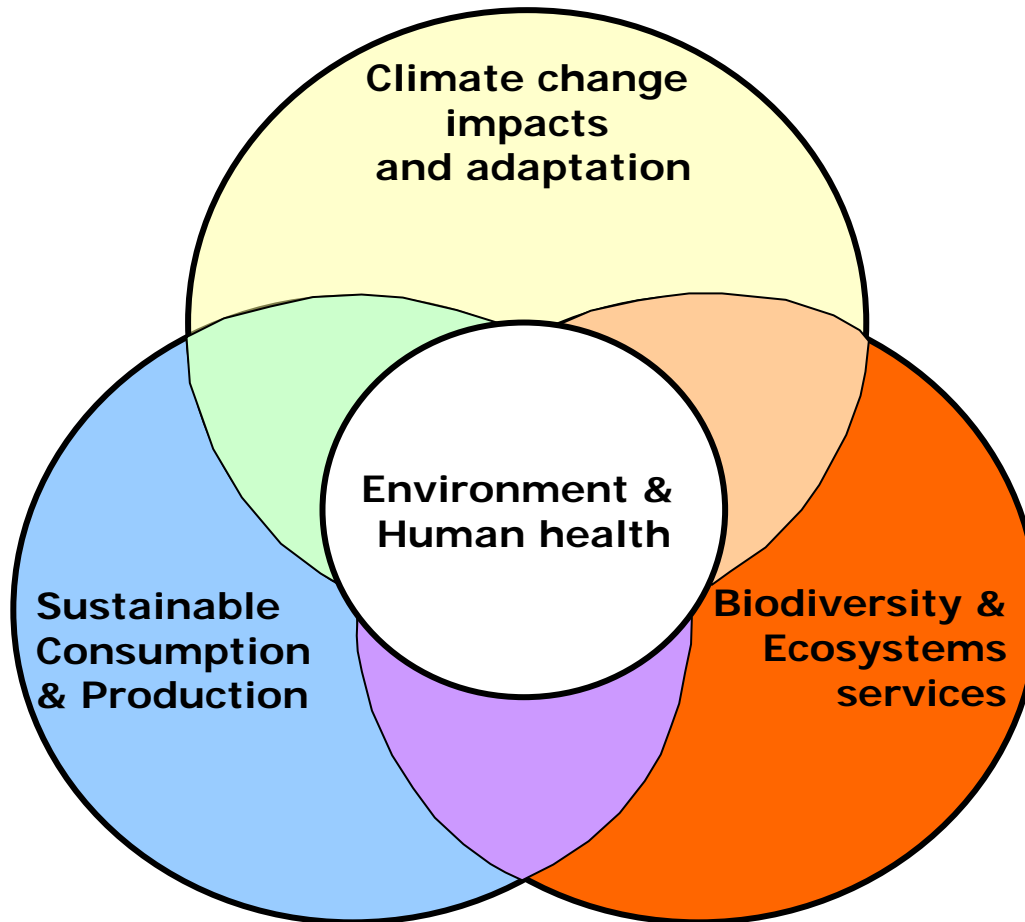
European Neighbourhood Policy

- ENP East
- ENP South

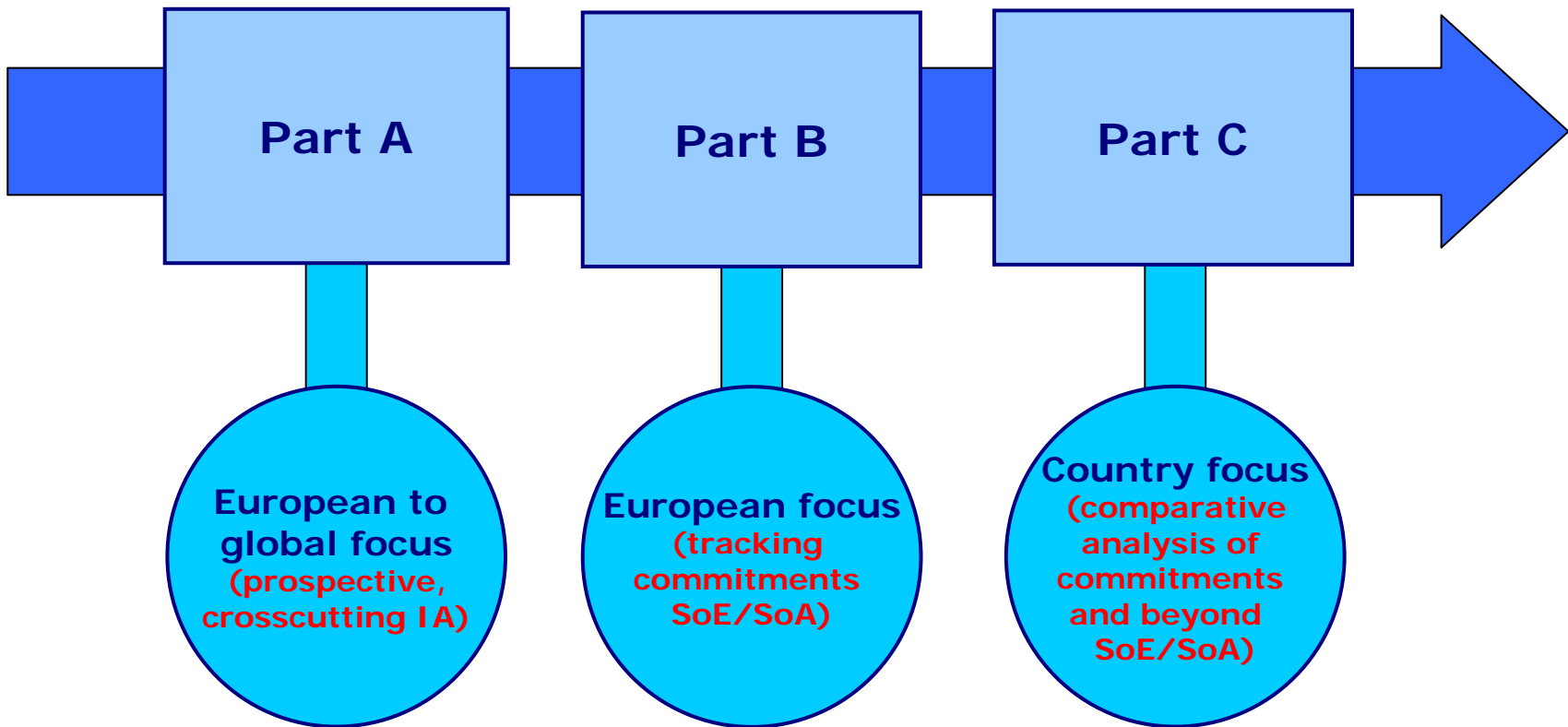
Geographical coverage

- EEA 32
- Monaco
- Albania, Bosnia & Herzegovina, Croatia, former Yugoslav Republic of Macedonia, Kosovo, Montenegro, Serbia
- Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine
- Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestinian Authority, Syria, Tunisia

... building on four foci of interest ...



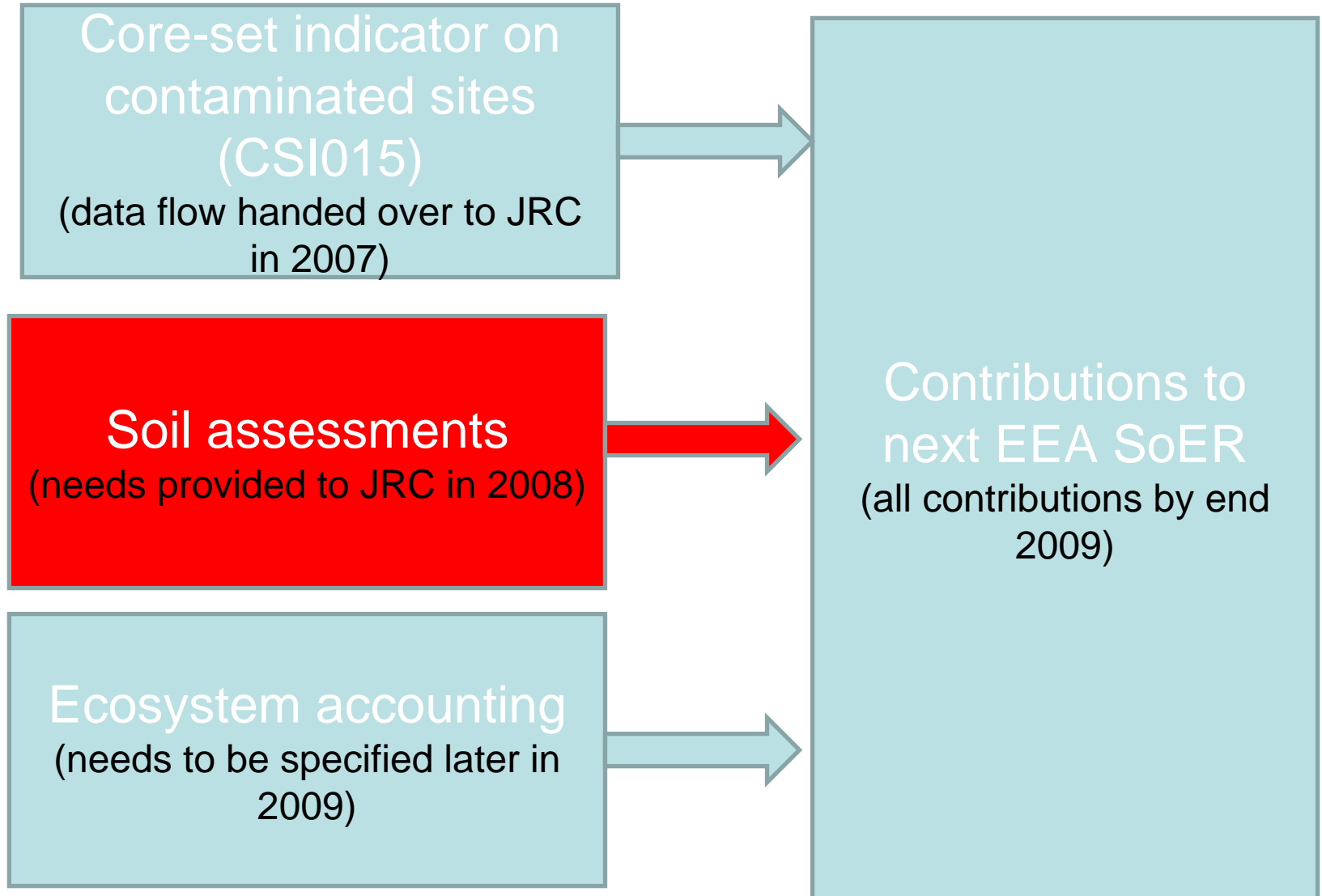
SOER2010: The A-B-C logic



Initial timeframe for implementation

- Guidelines across A-C by February 2009
- Delivery of first A-C contributions by June
- Broad stakeholder consultations by October
- Delivery of 2nd A-C contributions by December
- Final EEA synthesis of B-C by April 2010
- Final EEA synthesis of A-B-C by June
- Translation/web/comm/launch prep by October
- Launch 29 November 2010

Soil information: what for?



Integrated environmental assessments

- The DPSIR approach has been widely used to carry out integrated environmental assessments.
- It requires the integration of socio-economic information on driving forces and pressures with:
 - media-specific information on state and impacts;
 - information on the impacts of environmental degradation on society;
 - information on responses and their effects.

Integrated soil assessments

- Data on the different aspects of soil at the pan-European scale are scarce and patchy.
- Information currently available is not sufficient to cover all the soil threats nominated in the EU Thematic Strategy; and socio-economic aspects are in general not taken into account.
- This has prevented so far the production of a comprehensive assessment on soil in Europe.
- To approach this challenge, the EEA initiated the preparation of soil country analyses in early 2007.

Soil country analyses: context

- Geographical coverage: 32 EEA countries
- Similar activities in other thematic areas:
 - SERIS: <http://www.eionet.europa.eu/seris>
 - Part C SOER2005 (Country analysis)
 - Country fact sheets on greenhouse gases: <http://www.eea.europa.eu/themes/climate/ghg-country-profiles>
 - Country sketches on land use changes
 - Waste country profiles (under development)

Soil country analyses: content

- **the status of soil resources**
 - the threats to soil (contamination, erosion, salinisation, soil organic matter, sealing, hydro-geological risks, compaction, soil biodiversity)
 - soil functions and services
 - hot spots and sensitive areas
- **cross-cutting issues** (e.g. desertification, soil and climate change, soil and land planning)
- **the socio-economic dimension of soil degradation** (e.g. market-based instruments for soil protection)
- **soil policy, management and information**

Soil country analyses: process and results

- Pilot phase in 2007: Austria, Belgium, Germany, Greece, Spain
- Follow-up in 2007-2008: 27 countries
- EEA collected available information and uploaded data in customized country questionnaires
- Countries reviewed information and provided additional data where possible (27 countries)
- EEA prepared soil country reports, further reviewed by country experts (19 countries)
- Results: 32 reports, of which 5 (pilot) completed, further 22 reviewed by countries

Soil country analyses: outcomes(1)

- Putting together this wide range of information has not been an easy exercise
- Countries have made considerable efforts over a two-year period
- The completeness and quality of information which underpins the analyses is variable, reflecting the range of resources and information available at the national level
- It remains clear that soil is a relatively neglected medium when compared with air and water.

Soil country analyses: outcomes(2)

- Information provided by the countries filled many gaps;
- For the first time, soil information spanning across the aspects of the EU Thematic Strategy is available from one place, thus facilitating analysis and further use;
- The completed questionnaires plus the country reports are available as input to national activities;
- Lists of national data sources have been collected and can be used for further processing in European and national projects (e.g national and European SoERs);
- Information provided helped the validation of data already available and has in some countries led to improvements in the data reporting process, in particular contacts between national institutions.
- Information is now available to support the European State of Environment report.

Soil country analyses: developments

- Publication of country reports (baseline)?
- Regular questionnaires ?
- Web-based forms?
- Information maintained by countries (SEIS)?

To be discussed in the context of the
European Soil Data Centre

**Thank you
for your work and support to
the EEA in all these years!**