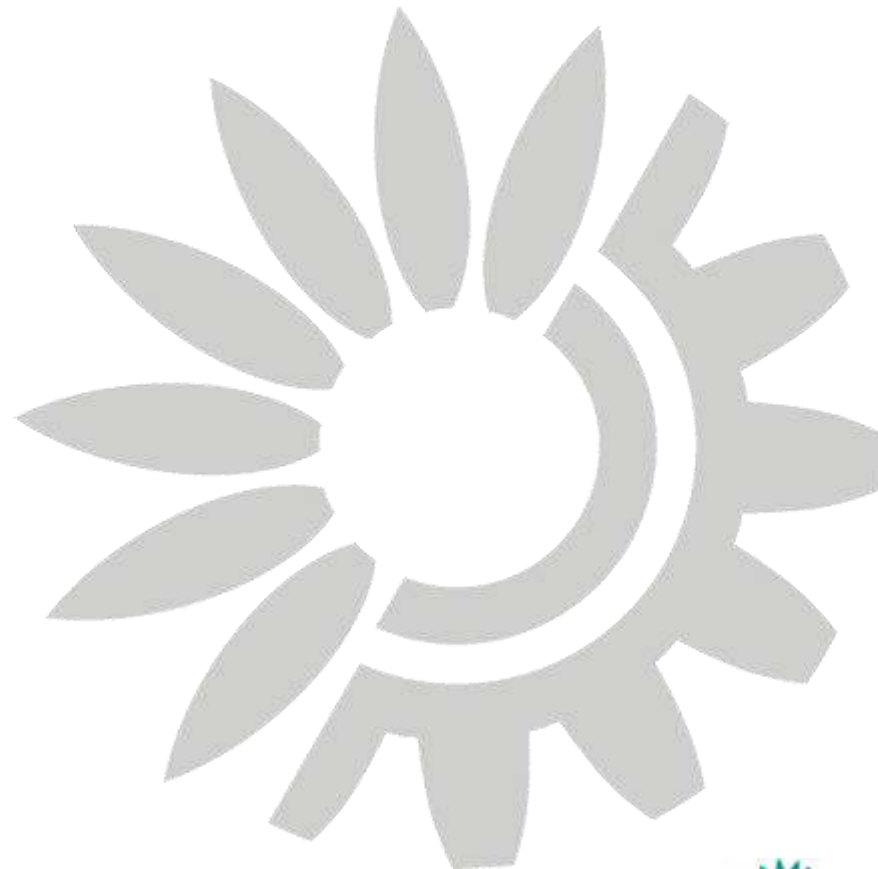# INSPIRE implementation in the environmental domain

Key opportunities and obstacles after Mid-term

Stefan Jensen

Head of data management group
European Environment Agency (EEA)

European Environment Agency

Which are the discussions?

The Mid-term review discussion

Opportunities

The environmental challenges discussion

Obstacles   **Obstacles**

The governance discussion

Opportunities

Opportunities

The technical challenges discussion

Opportunities

Obstacles

The INSPIRE implementation discussion

Opportunities

Obstacles

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Summary on Mid-term report

(as presented in the EEA/JRC Mid-term report 2014)

- Implementation with some delay and non-uniformity
- According to 92 % of respondents, objectives remains pertinent
- So far in line with expected costs and benefits

- Major investments and benefits have yet to materialise
- Implementation has taken place in the most difficult financial circumstances in many European countries

- More effort is needed to embed INSPIRE into environmental legislation
- Improving coordination between neighbouring countries
- Technical complexity and communciation are main areas of concern

The environmental challenges

Air pollution, transport and noise

Industrial Pollution

Climate change mitigation and energy

Climate change impacts, vulnerability and adaptation

Marine and maritime, fisheries and coastal

Water management, resources and ecosystems
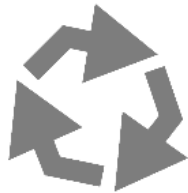
Biodiversity, ecosystems, agriculture and forests

Urban, land use and soil

Waste and material resources

The analytical setting

Resource-efficient economy and the environment

Megatrends and transitions
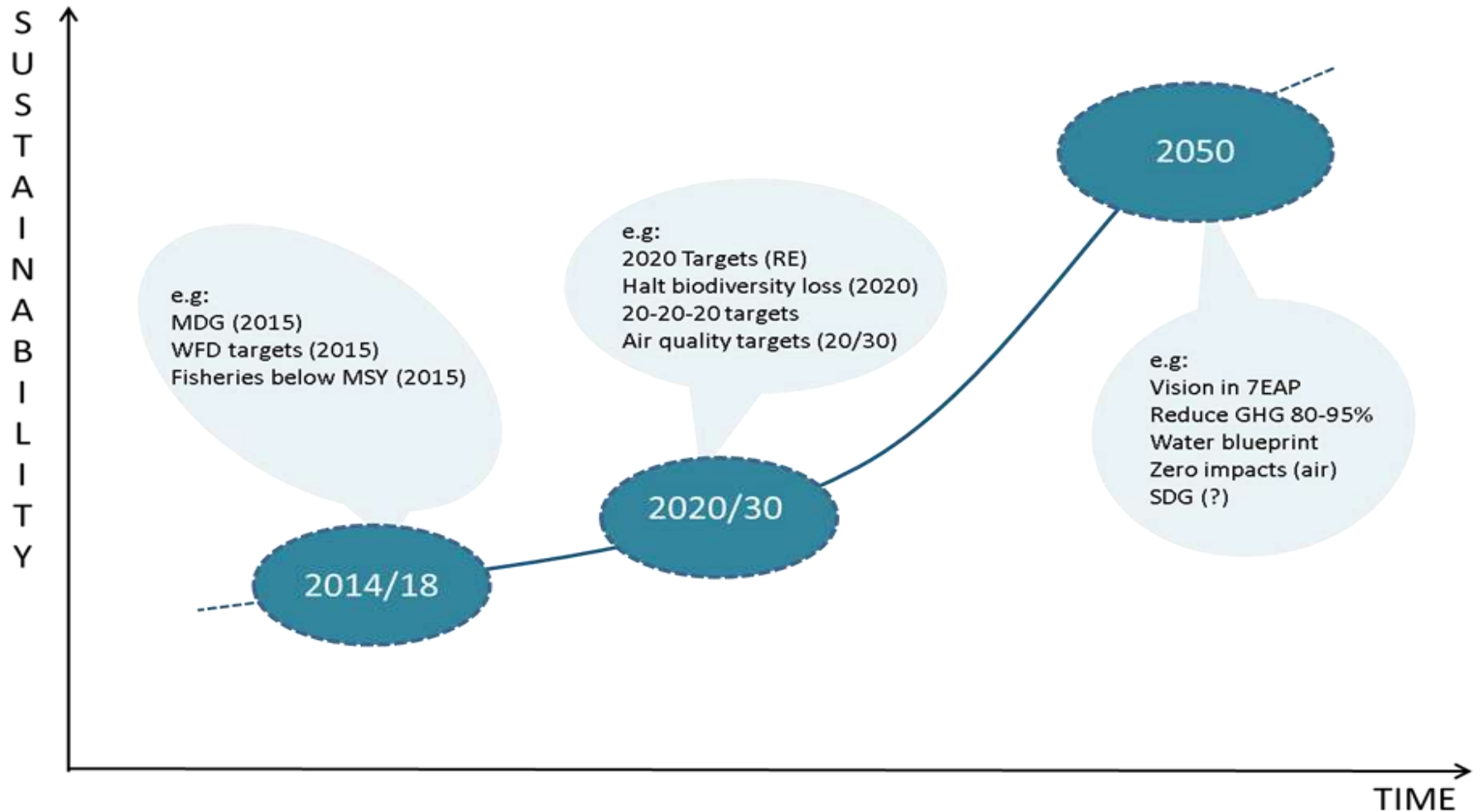
Environment, human health and well-being

SOER15

Sustainability assessments and state of the environment reporting

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The environmental challenges

Do the actions need modification?

The environmental challenges

Create an understanding of INSPIRE benefits

Navigating between supporting a generic eGovernment based SDI (Spatial Data Infrastructure) and Open Data agenda ("data access") and providing concrete benefits to environmental data management ("data interoperability") and availability

Impacting environmental data as such:

Broad set of themes - dynamically evolving - determining sustainable use cases
INSPIRE acts as a generic foundation - but it is often not yet in place
INSPIRE is not known and or regarding at non-relevant or too technical

to do

- Indentify sustainable environmental use cases (beyond eReporting)
- Provide an approach based on generic data provision (core data, open data)
- Strenghten implementation of Annex I and II data to serve as a foundation

The environmental challenges discussion

Impacting eReporting:

Streamling reporting is ongoing, triggered by various legal processes:
- EU Communication on better legislation
- The REFIT process *(latest encourgement on May 19th by VP Timmermans)*
- The INSPIRE directive
- Other related policy instruments (Aarhus, PSI ...)

to do

- Reinforce the understanding of the added benefit of INSPIRE in thematic reporting
- Imbedd INSPIRE elements better into thematic reporting data
- Identify the suitable „depth" of integration
- Provide capacity building for national implementation

General governance discussion

INSPIRE supports the building of Spatial Data Infrastructures in the MS – through that, it adressess a broad set of use cases – beyond Environment and the related eReporting.

Several MS are positioning INSPIRE <u>only</u> as a generic infrastructure initiative.

INSPIRE implementation is picking up in many MS while others are falling (more and more) behind.
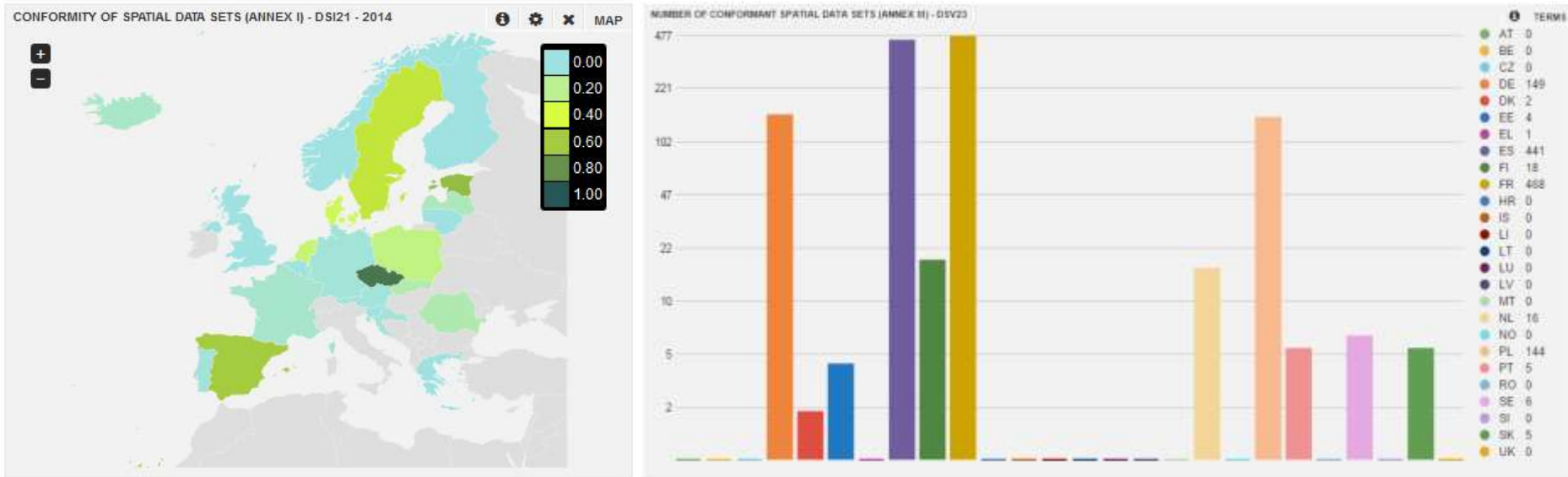
INSPIRE implementation is know-how intensive, such know-how is still rare in the environmental community and needs to be built within EEA and EIONET. This is also valid regarding the availability of capable consultants.

Implementation needs time since a wide stakeholder participation is needed.

While environmental data is the intended target, a reference data foundation is needed to be in place which depends on the co-operation with other communities (mapping agencies, statistical offices). Delays in that impacts the environmental use cases.

INSPIRE governance

MS implementation is very heterogeneous

2015 data – see Paul Hasenohr presentation

MS engagement in the INSPIRE governance is unbalanced
(e.g.in the maintenance and implementation groups (MIG-T, thematic clusters) or in implementation reporting timeliness)

Engagement of environmental administrations is difficult to achieve
(e.g. linkage INSPIRE – Eionet governance, networking within the MS)

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Technical discussion

What is the relation between INSPIRE data and (spatial) reference data?

Some defintions of reference data:

- It is a series of datasets that **<u>everyone involved with geographic information</u>** uses to reference his/her own data as part of their work.
- It provides a **common link between applications** and thereby provides a mechanism for the sharing of knowledge and information amongst people.

It must
- provide an **unambiguous location** for a user's information
- Enable the **merging of data from various sources**
- **Provide a context** to allow others to better understand the information that is being presented

From: INSPIRE - Reference Data and Metadata Position Paper, October 2002

Reference data arrangements can be used for priority setting!

Technical discussion

Is there a possibility for optimisation or simplification?

Stepwise implementation based on key reference data (from Annex I)

Further explore the concept of core (reference data) linked with thematic data (as in the current SIIF projects)!

Provide reference implementations for Annex III
- very difficult to do per Annex theme
- some Annex themes are extremly non-concrete and far from relevant environmental use cases (e.g. env. and health, energy …)

More rules, tools and guidelines for validation!

More and better software tools to integrate and reuse INSPIRE data!

INSPIRE implementation

EEA goals and motivation

- Use the INSPIRE implementation process to assure better availability of environmental data and other reference data

- Enhance interoperability across thematic areas which would benefit integrated assessments

- Create a higher level of standardisation and quality within thematic dataflows

  (based on reporting obligation, data flows , eReporting)

EEA's general work plan and principles

- Stepwise pragmatic implementation

- „Learning by doing"

- Based on thematic interest and needs *(eReporting pilots)*

- Based on milestones coming from reporting obligations *(eReporting pilots)*

- Building data models, data sets and services

- Involving EIONET in stages *(CDDA project, WISE SoE, land cover (CLC)*

- Capacity building through EIONET NRC EIS and other networks (e.g. INSPIRE MIG) and tools (e.g. INSPIRE FORUM)
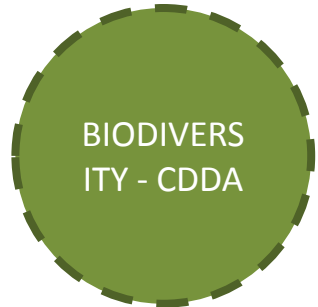
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INSPIRE implementation

Activities

- Attend selected (cross-)national INSPIRE activities (conferences, coordination meetings etc.) on request (shared task with JRC and DG Env) *(CZ-SK, DE, Nordic cooperation)*
- Advise EU funded projects in support of INSPIRE implementation around environmental topics

  (GS Soil, Nature SDI, eENVplus, ENPI, Danube Strategy …)
- Contribute to an INSPIRE training program – related to EIONET
- Support EIONET in implementation matters

- Conduct eReporting and reference data related implementation projects *(next slide)*

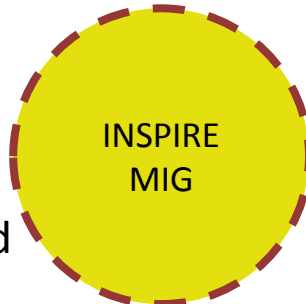# 2015 summary planning: EEA - JRC INSPIRE cooperation
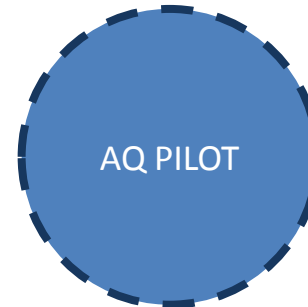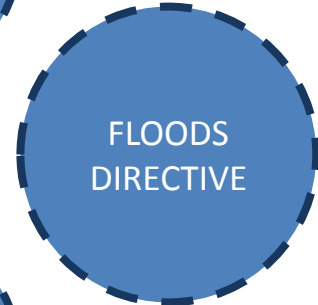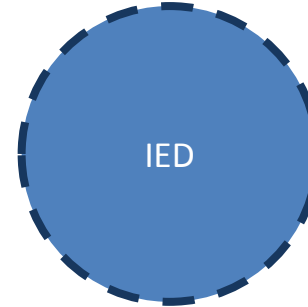
EEA main activities

STRONG COOPERATION EEA-JRC

JRC main activities

WISE SOE

CORINE LAND COVER / COPERNICUS LAND

BIODIVERSITY - CDDA

MARINE PILOT (MSFD)

WFD RBMP II

EC informal expert group

INSPIRE MIG

MATERIALS

IED

FLOODS DIRECTIVE

AQ PILOT

EEA lead

Chaired by EC

JRC lead

Summary

Implementation is stepwise happening
– time horizons are long which bear some risks

Conclusions for selected adjustements are possible and need to followed up by DG Environment based on the Mid-term review findings

Most Member States need to intensify their efforts

Environmental reporting and INSPIRE still need to grow more together

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Thank you

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