



COPERNICUS THEMATIC WORKSHOP: COMPLIANCE ASSURANCE



Thursday 20th of June 2024



Online



Agenda

09:15 - 9:30 **Introductions and context on KCEO**
 Mauro FACCHINI, Head of Unit – DG DEFIS
 Ivan Davor KULIS, Head of Unit – JRC

09:30 - 10:45 **Session 1: Global and EU Policy landscape - Chair & moderator: Mark Dowell (KCEO)**

09:30 - 09:45 Christelle Vancutsem, KCEO
 09:45 - 10:00 Stephanos Ampatzis, DG ENV
 10:00 - 10:15 Gerardo Herrera, DG GROW
 10:15 - 10:30 Ion Nedelcu and Seraphine Luneau, FPCUP
 10:30 - 10:45 Federico Filipponi, CNR-IMPEL

10:45 - 11:00 **Coffee break**

11:00 - 12:45 **Session 2: EO current and future products and services - Copernicus contribution - Chair & moderator: Richard Gilmore (DEFIS)**

11:00 - 11:10 Helena Duarte, EMSA- CMS
 11:10 - 11:20 Jenni Attila, Finnish Environment Institute - Syke project

11:20 - 12:45 **Panel discussion with the EEs**

Richard Engelen, ECMWF - CAMS
 Muriel Lux, Mercator Ocean - CMEMS
 Yannick Arnaud, Satcen - SESA
 Andreas Brink, JRC – CLMS/JRC
 Peter Spruyt, JRC – CEMS
 Usue Donezar - CLMS/EEA

12:45 - 13:45 **Lunch Break**

13:45 - 15:30 **Session 3: EO current and future products and services – Research contribution - Chair & moderator: Jean Dusart (RTD)**

13:45 - 13:55 Michela Corvino, ESA – Environmental crimes
 13:55 - 14:05 Mirco Migliavacca and Emanuele Lugato, JRC – Carbon removal
 14:05 - 14:15 Pieter Beck, JRC - Geoint

14:15 - 15:30 **Panel discussion**

Machi Simeonidou, AgroApps – ENVISION
 Steven Wonink, eLEAF - WaterSENSE
 Stefan Erasmí, Thünen Institute- MonViA
 Sean Salazar & Saman Tavakoli, NGI – MINEYE
 Gianni Picchi, CNR - SINTETIC

15:30 - 15:45 **Coffee Break**

15:45 - 17:15 **Session 4: EO current and future products and services – Industry contribution - Chair & moderator: Mark Dowell (KCEO)**

15:45 - 15:55 Emmanuel Pajot, EARSC – Overview of Industry activities
 15:55 - 16:05 Catharina Bamps, DEFIS - Copernicus Contributing Missions

16:05 - 17:15 **Panel discussion**

Antoine Benoit, Kayros
 Inés Ruiz, GAF AG
 Carsten Brockmann, Brockmann Consult
 Piero Boccardo, Ithaca
 Gunter Zeug, Riscognition
 Antonio Tabasco Cabezas, GMV

17:15 - 17:30 **Outlook and Conclusions**

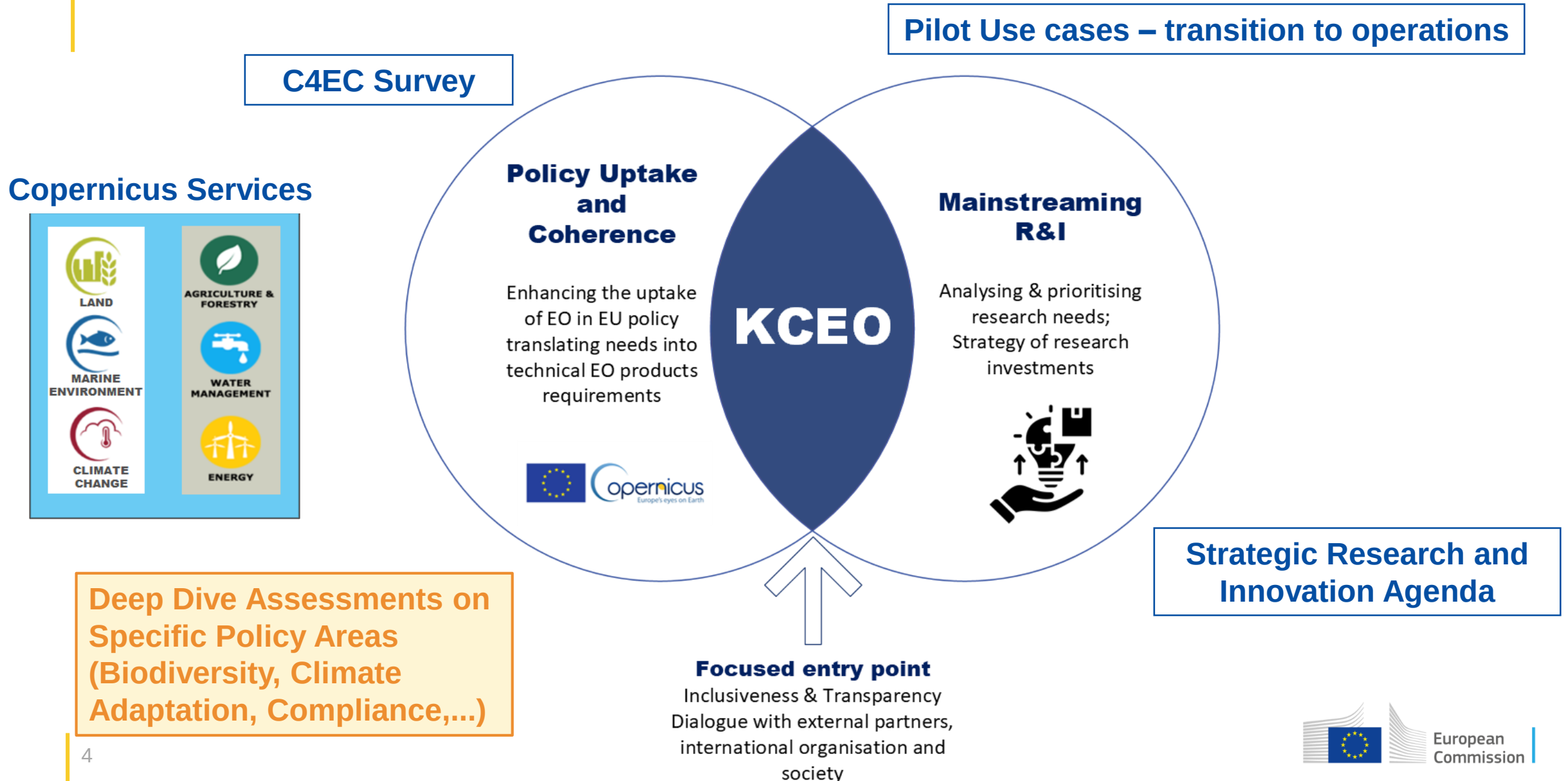
Deep Dive on Earth Observation in support of Compliance Assurance

C. Vancutsem, R. Grecchi, M. Lahsaini, D. Weckmueller, C. Kilsedar, P. Beck, P. Strobl, M. Dowell

Knowledge Centre on Earth Observation

June 2024

KCEO & DD assessments

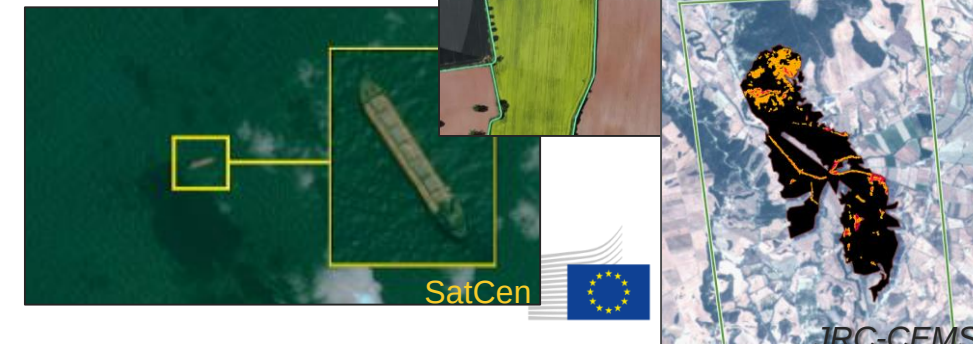
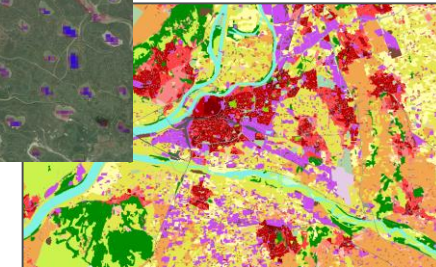
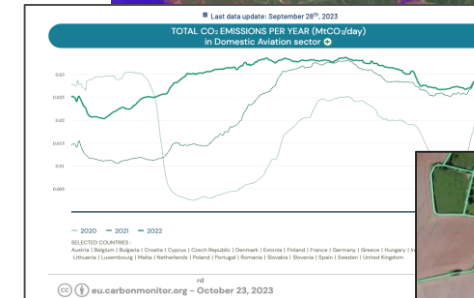
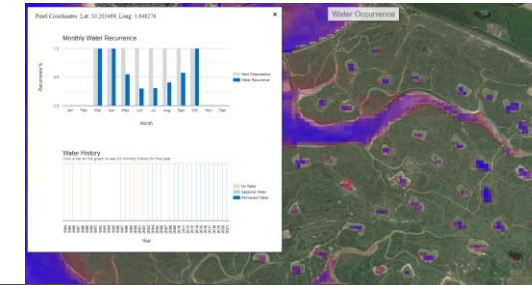


Compliance Assurance

Central role of the European Commission in overseeing and enforcing EU laws

Compliance Assurance refers to the process and mechanisms designed to ensure adherence to EU laws, regulations, and policies by individuals, organizations, and Member States. It comprises 3 components:

- EO supports **compliance promotion** by providing free-and-open data, fostering awareness and transparency, and educating stakeholders
- EO enables **broad-scale and continuous monitoring** to detect areas at risk of non-compliance and ensure prompt detection of any deviations
- EO provides a rapid response and essential evidence for **legal interventions and enforcement**, and allows assessing impacts of illegal activities



Deep Dive Methodology

Identify Policy areas and needs

Technical Assessment:

1. EO already support or is sufficiently mature for supporting CA
2. EO is underutilized but has the potential to support Policy DGs

Working Group meeting & Co-Design sessions

- Online meetings with DGs, experts, JRC colleagues & EEs
- Written feedback

Deep Dive Methodology

A state-of-the-art assessment

Lessons learnt from past and current experience

- CAP
- Security & Marine surveillance
- GHG inventories and Air quality
- Environment and forest monitoring

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Define specific use cases to be developed collaboratively

A case-by-case assessment

- Translation of policy needs into technical requirements
- Analysis of the EO value chain
- Assessment of the fitness for purpose of existing products and services

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Cross-cutting topics

- Data uncertainty & veracity
- Methodology for assessing compliance/non-compliance ensuring traceability/reproducibility
- Legal constraints related to admissibility in court

Identification of gaps and recommendations

Use cases assessment

DGs involved in the exercise

DG CLIMA

DG ENER

DG GROW

DG ENV

Reforestation & afforestation

Peatlands restoration

Monitoring energy efficiency of buildings

Monitoring GHG emissions of cities & fossil-fuels production and delivery

Mapping and monitoring of mining sites

Evaluating environmental impacts of strategic CRM projects

Monitoring water areas at risk for ecological status deterioration at EU level

Control of water quality for specific environmental permits at local scale

Cross-cutting topics

Data uncertainty & veracity

Legal constraints related to admissibility in court

The regulation proposal of a certification framework for carbon removals

EU Nature Restoration Law

The Covenant of Mayors

The Energy Performance of Buildings, The Energy Efficiency Directives, & The Adaptation Strategy

The Regulation Proposal on Methane emissions reduction & The upcoming Communication on Fossil fuel phase-out

The Critical Raw Materials Act

The Water Framework Directive

The Marine Str. Framework Directive

The Industrial Emissions Directive, The extractive Waste Directive

The Nitrate and Sulphur Directive

The Urban Waste Water Treatment Directive

Use cases assessment

DG ENER

Two different units at ENER (B1/TF), CLIMA.C1, JRC colleagues (C2-C5), ECMWF

Monitoring of GHG emissions & Energy efficiency at local level

- CoM to support municipalities in achieving EU carbon reduction goals
- Systematic approach to provide baseline inventory and regular monitoring
- Alleviate the reporting efforts and provide independent information

Provision of a baseline inventory and subsequent monitoring of CO₂ and CH₄ emissions for 13000 EU cities of the CoM

Monitor CH₄ and CO₂ emissions through the fossil fuels lifecycle at EU level

Inventory and monitoring of fossil fuels facilities and infrastructures at the global scale to control new investments

Monitoring energy efficiency of buildings (thermal transfer and PV mapping) for the EU cities of the CoM

The Ambient Air Quality & the National Emission reduction Commitments Directives, the Zero Pollution Action Plan

The European Covenant of Mayors

The Regulation Proposal on Methane emissions reduction

The upcoming Communication on Fossil fuel phase-out

The revised Energy Performance of Buildings & The Energy Efficiency Directives

Use cases assessment

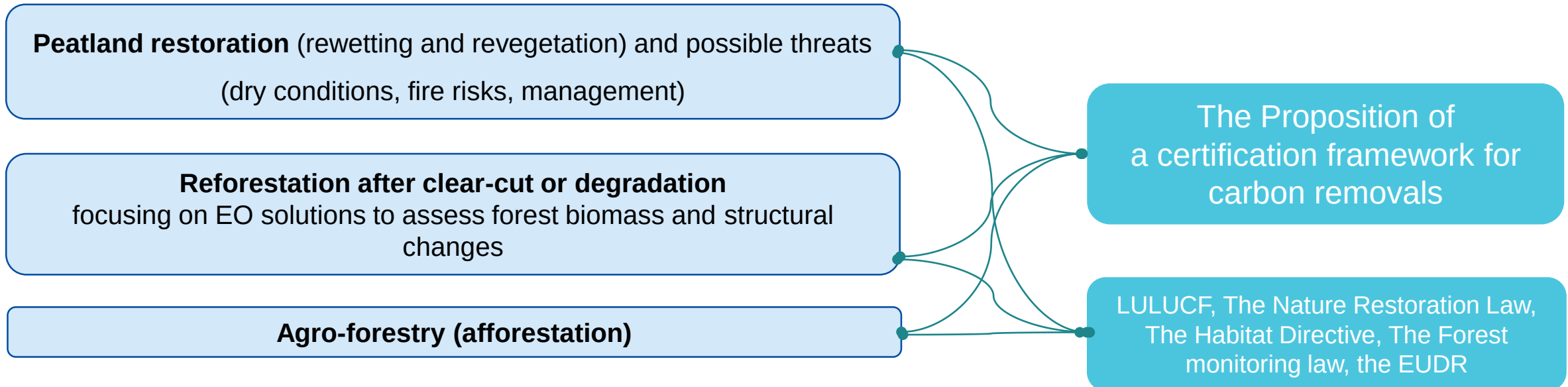
DG CLIMA

CLIMA C3 (C1), JRC colleagues involved in the CFC AA (D1, D3, D5)



Support the new Carbon Removal Certification Framework, focussing on nature-based solutions

- The first EU-wide voluntary framework for certifying CR, carbon farming and carbon storage in products across Europe
- EO-based standardized approach to quantify the CR and control the adherence to different criteria
- The activities of CR operators will be regularly verified and certified by independent certification bodies
- This process will result in the issuing certificates of compliance and in the recording of CR units in public registries



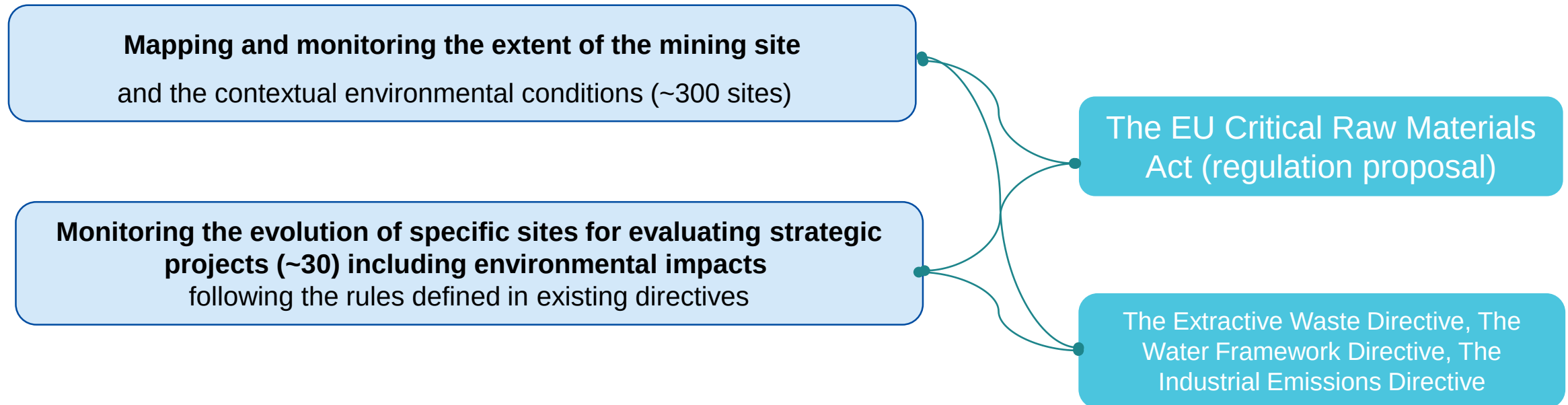
Use cases assessment

DG GROW

DG GROW (I1), JRC colleagues working on soil (D3)

Mapping and monitoring critical raw material mining extractive areas in Europe

- In the context of the CRM Act, the MS have to monitor the development of CRM sites and report annually
- The Proposed Regulation also envisages a framework for selecting and implementing strategic raw materials projects

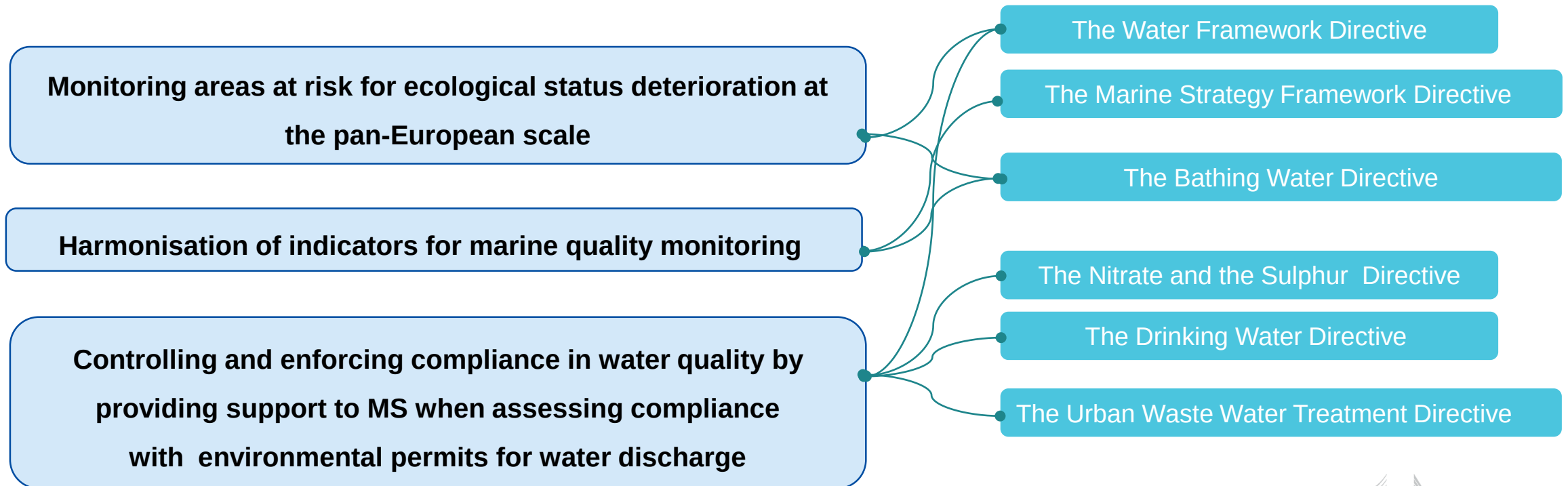


Use cases assessment

DG ENV

DG ENV (C1-C2, E2-E3-E4), JRC colleagues (D2), EEA, Mercator Ocean

Support water quality monitoring and control



DD Status and next steps

- Technical assessment of the use cases, reviewed by Policy DGs and partners involved
- State-of-the-art assessment and cross-cutting topics
- Finalization of the science for policy report & policy brief (September)

Thank you



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