

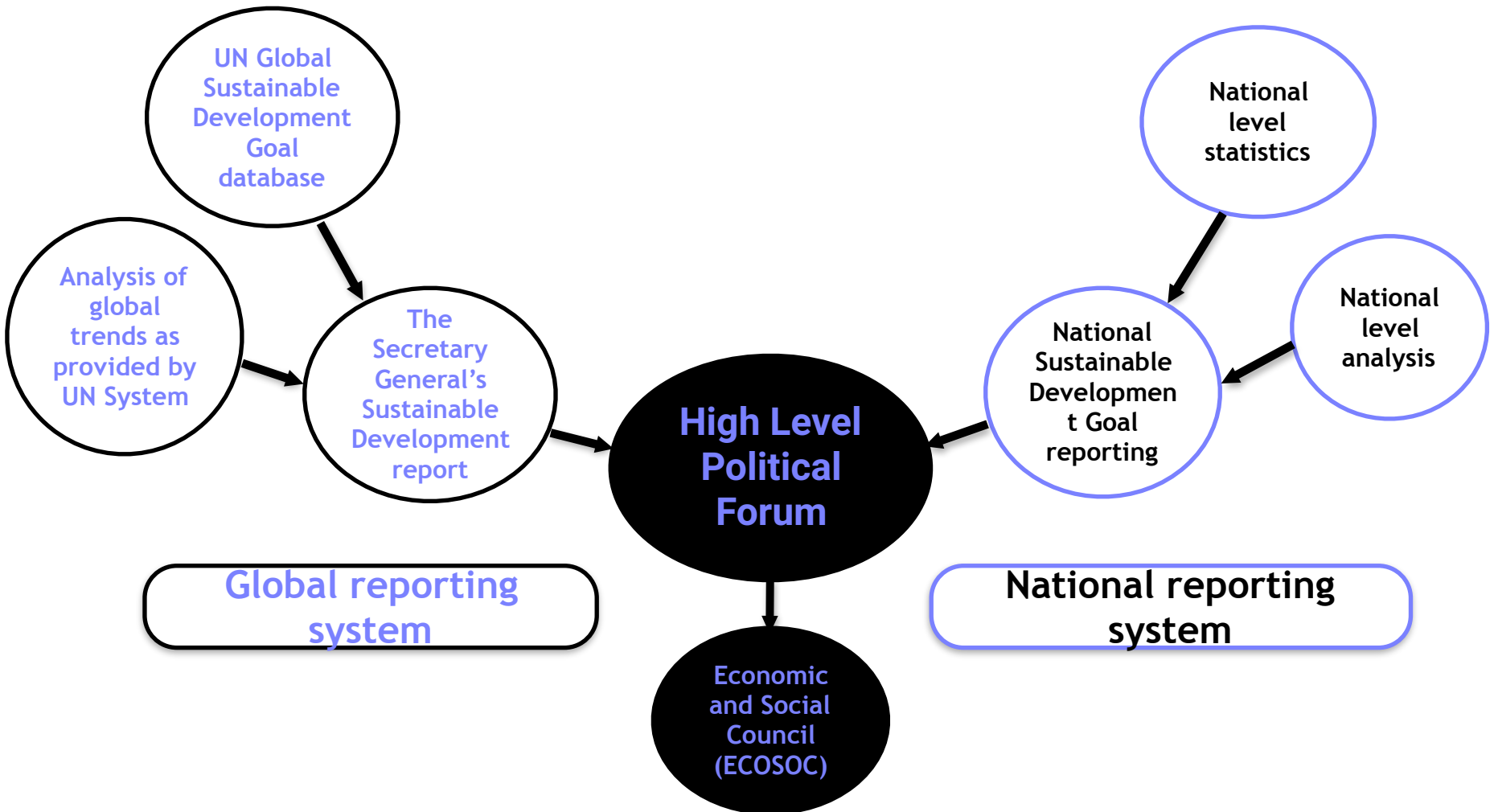
Monitoring the environmental dimension of the 2030 Agenda: the importance of geospatial information

UN Environment Science Division

Outline

- **Overview of the process and the role of UN Environment**
- **EOs for monitoring SDG indicator 6.6.1 on freshwater ecosystem extent: an example**
- **Ocean statistics and geospatial information**
- **Policy linkages using Map-X and the extractives industry: an example**

SDG Monitoring framework



UN Environment SDG Indicators



Water quality, water resource management, freshwater ecosystems and water and sanitation



Sustainable consumption and production, including material flow accounts, chemicals and wastes, environmental policy, food waste and fossil fuels.



Ocean related indicators on marine litter, acidification, marine management and coverage of protected areas



Protected areas, including mountains, and national targets for the Convention on Biological Diversity



Environmentally sound technology and sustainable development policy

UN Environment SDG Indicators



6.3.2, 6.5.1, 6.6.1, 6.a.1, 6.b.1



8.4.1, 8.4.2, 12.1.1, 12.2.1, 12.2.2, 12.3.1, 12.4.1, 12.4.2, 12.5.1, 12.6.1, 12.7.1, 12.a.1, 12.c.1



14.1.1, 14.2.1, 14.5.1



15.1.2, 15.4.1, 15.9.1



17.7.1, 17.14.1

SDG Indicator 6.6.1

- SDG target 6.6: “By 2020 **protect and restore** water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes”.
- SDG indicator 6.6.1: “**Change in the extent** of water-related ecosystems over time”.¹
- In order to be relevant, a land accounting system which allows basin level, district level and local level analysis is essential.

¹ See the Step-by-step methodology for more information:

<http://www.unwater.org/publications/step-step-methodologies-monitoring-sdg-6-global-indicators/>

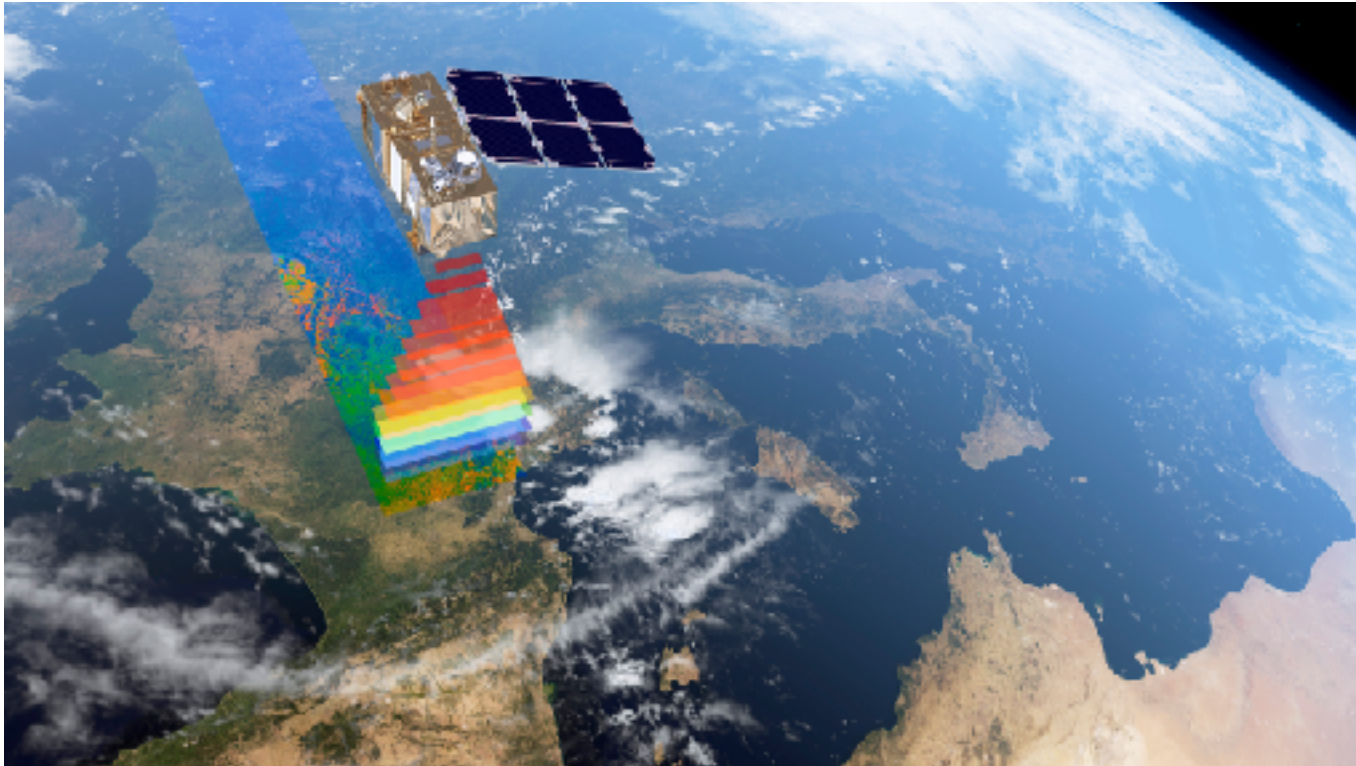
Challenges

- Many countries lack of the capacity to effectively measure the spatial extent or health of water-related ecosystems.
Ramsar sites may not be a good proxy as only areas that are protected are captured.
- Lack of consistency of definitions and methods.



Remote Sensing potential

- Earth Observation (remote sensing) can provide data where none exists, can identify where ground truthing should occur and can ensure comparability.



Earth Observation and 6.6.1

- UN Environment is partnering with the European Space Agencies (ESA), the United States NASA, GEO Secretariat and the EU Joint Research Center (JRC) to bring the most relevant EO data into the scope of 6.6.1
- Highlights:
 - JRC has developed the Global Surface Water dataset which has 32 years at 30-metre resolution of water bodies
 - NASA and ESA are supporting a number of pilot countries to ground truth and use the data
 - GEO Secretariat and ESA are working on a toolkit of data which can support countries in monitoring fresh water ecosystem extent
 - In addition to coordinating this partnership at the country and global level, UN Environment will use this for regional and global monitoring of the extent of open water bodies

Ocean Statistics

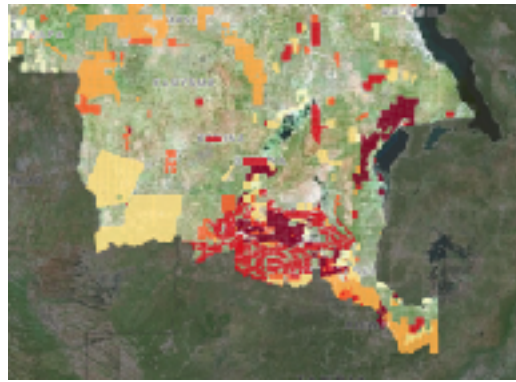
- UN Environment is the Custodian for marine litter, coastal eutrophication, protected areas and EEZ's managed using ecosystem based approaches (Goal 14).
- Also supporting measuring ocean ecosystems, fisheries, coastal zone management, the state of the oceans, etc.
- Partnership with the GGIM community on ocean statistics is essential.



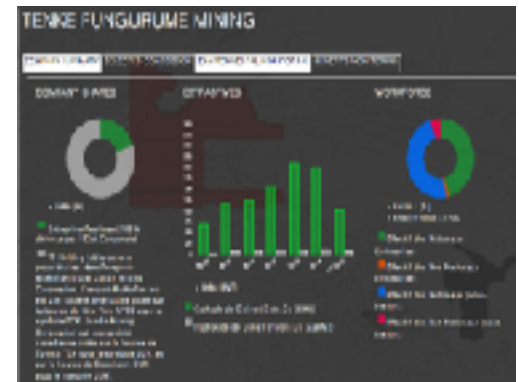
Extractive industries



Site-specific data



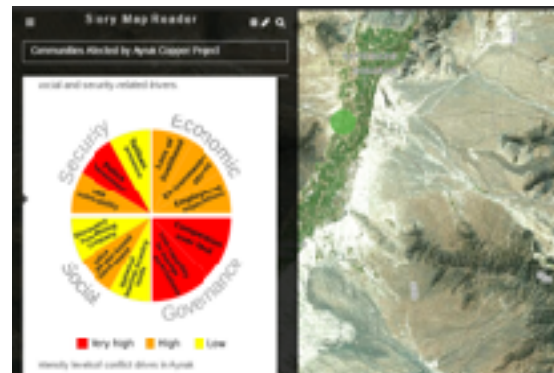
Heat Mapping



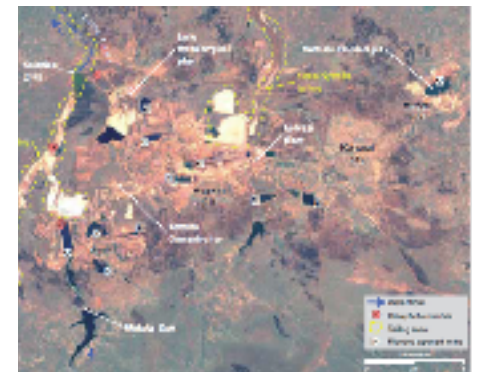
Custom dash boards



Overlapping layers



Story mapping



Satellite analysis

Conclusions

- High potential for using Earth Observation for other indicators related to land, oceans, population and disaster related SDG indicators.
- There is still a need for ground data production and integration and for validation and ground truthing of RS information, particularly for the information to be useful for national policy making.
- Collaboration is vital to support this work and to ensure consistency between SDG indicators.

Thank you



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Sustainable consumption and production and ODS

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