



Environment

Potential contribution of Earth observation to Environmental policies

Geo European projects
workshop, Roma

7 May 2012

Background: European Commission priorities ...

3 interlinked aspects:

*Smart, **sustainable** and inclusive growth*

→ Sustainable Growth: Promoting a more efficient, greener and more competitive economy

Flagship Initiatives, including

- Digital Agenda: e.g. „Openness and Interoperability“*
- Innovation Union*
- **Resource Efficiency***

... supported by DG Environment policy priorities

2010: Biodiversity

2011: Resource Efficiency

2012: Review Water Framework Directive, "Blueprint on Water"

2013: Review & Revision Air Quality Directive

Broader objectives (reflected in 7th EAP in preparation):

Innovation / Green Economy

Effective Implementation / Enforcement

Knowledge / Evidence Base



What can EO services deliver?

Existing issues in Europe`s environment e.g. EEA 2010 State of the Environment Report...

Link to global environment issues and changes, "megatrends"

... reinforce the need for better information

"It is essential that the evidence on which we base EU environment policies is scientifically sound, up-to-date and objectively useful. We cannot move decisively towards long-term sustainable management of resources if we do not have good information on the state of environment and emerging trends" Commissioner Potočnik, International Innovation, June 2011

As a "client", DG ENV would like to use EO services to improve the evidence base behind environment policies



EO can help environment policy with ...

Design and development of policy, e.g. providing better data on land cover/land use changes, and on long-term trends

Implementation of policy, support, where wanted, Member States monitoring obligations, e.g. Directives on Air Quality, Habitats, Marine Strategy, Water, Floods etc. Synergies...

Review of effectiveness of policy, check compliance, assessments of impacts – have changes happened?

Data for indicators on the state of environment, e.g. State of Ecosystem and Biodiv SEBI, beyond GDP

Information to the public (+authorities), e.g. air quality, oil /chemical spills

GEO 9 societal benefit areas addressing EU environmental policies

6th EAP (2002-12) – 4 priorities:

- 1. Climate change*
- 2. Nature and biodiversity*
- 3. Environment and health*
- 4. Natural resources and waste*

7 thematic strategies:

- Air*
- Waste prevention and recycling*
- Marine Environment*
- Soil*
- Pesticides*
- Natural resources*
- Urban Environment*



Global Scale Information needs

Global Impact of European activities on Global environment + vice versa (e.g. Tourism, Trade, Raw Material Import, Biofuels...) Footprint

International Treaties & Monitoring under Conventions (Desertification, Climate, Biodiversity)

*-> Important to have information on **Land cover/use changes at global level***

Support especially for

- Desertification / Droughts / Food security policy**
- Global Biodiversity and reduction of its loss**
- Deforestation (FLEGT, REDD+, LULUCF,..)**

How much is EO already used by DG ENV?

*We are **policy makers** not researchers: Raw data of no direct use for DG ENV!*

Current use of EO products in house is still low

- **Understanding space jargon is difficult**
- **Understanding the technological capabilities is difficult, what is feasible/mature enough is not always clear**

*The need for "middle-men"
(e.g. JRC, EEA,..) is apparent*

*Should improve with operational
products becoming available and
a better user interface*

Quality/accuracy essential information





Conclusions and Expectations for long-term

*Inclusive user representation
→ services fit-for-purpose*

Free and open data policy -> strong support to GEO data sharing principles, GMES

Continuity and sustainability essential for long-term data series and change detection

Robust service component supporting EU policy priorities → including supporting indicator assessments

- **Land monitoring essential contribution for many policies; this potential to be better exploited / better synergies, also with existing national assets (link to SEIS & INSPIRE)**
- **Atmosphere – Air Quality very good EO based products, quite well mature and operational (MACC and other projects)**
- **Marine environment policy can also be supported (e.g. MyOcean)**

Contribute better to in situ monitoring: Space-based technologies need to be complemented by a strong ground monitoring component



Thank you for your attention