The benefits of Earth Observation for an effective land management

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REGIONE DEL VENETO

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The strategic role of Earth Observation Data at regional level

TECHNICAL DRIVING FACTORS

- Technologic development
- Data availability, increasing number of satellites
- Spatial and radiometric resolution
- Downstream applications
- Capacity building

DATA CONTRIBUTION AT REGIONAL LEVEL

- Fast, evolving territory dynamics
- Increased availability and quality of EO data, Integration with Regional SDI
- Spatial information as decisions support tool
- Data-driven decisions and more efficient territory policy management
- Positive effects on citizens and business, greater attractiveness

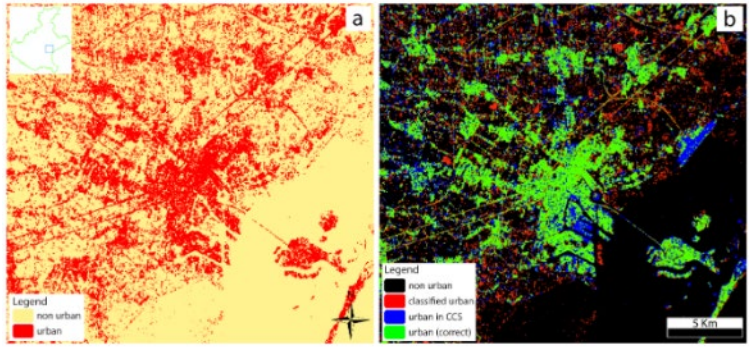
Benefits deriving from the combined use of Earth Observation Data (and SDI)

Most of EO applications in territorial planning **have real positive impacts for public sector, citizens and private companies, in terms of sustainability, costs reduction, socio-economic development.**

HOW?

1. An updated information on territory implies a **better and reliable spatial planning, at different scales** (e.g. reducing soil consumption, prevention of building abuse, environmental monitoring..)
2. More and updated information → **better, more efficient policy management**
3. The availability of satellite and positioning data **can bring to the creation of new services and businesses** (e.g. GNSS positioning and health vegetation for agriculture, forestry management..)
4. Analysis of time-series data can **highlight regional phenomena and spatial correlations**
5. The use of satellite data can lead to a **strong reduction in** costs for monitoring actions, eliminating or reducing on-site inspections (e.g. land surveys, environment, but also cadastre, agriculture payments..)
6. Active contribute to the **disaster prevention** and to the **achievement of Sustainable Development Goals** (Agenda 2030)
7. The use of EO data can be an important **driving force for synergies** between the public and private sectors
8. An essential factor to make these benefits effective, is to boost the **staff expertise (capacity building**)

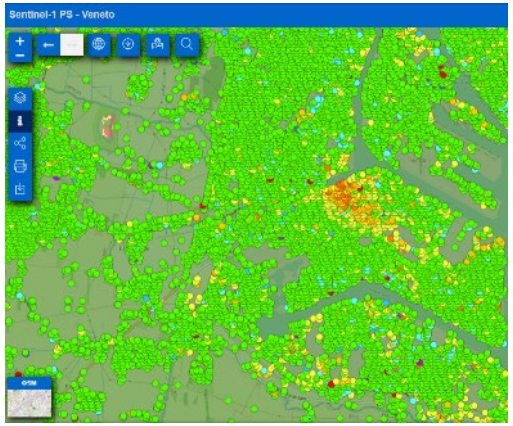
Some applications of Veneto Region in the domain of Earth Observation (1)

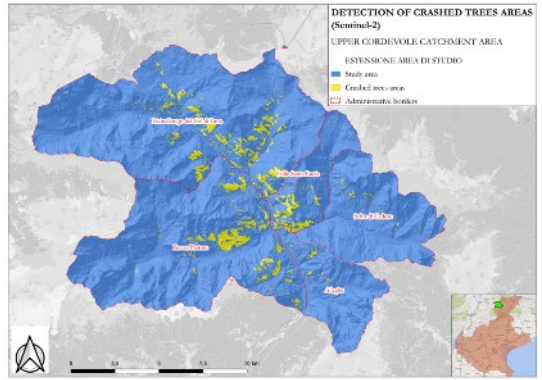


During the years, several practical applications of Earth Observation have been deployed in Veneto Region.

Some examples:

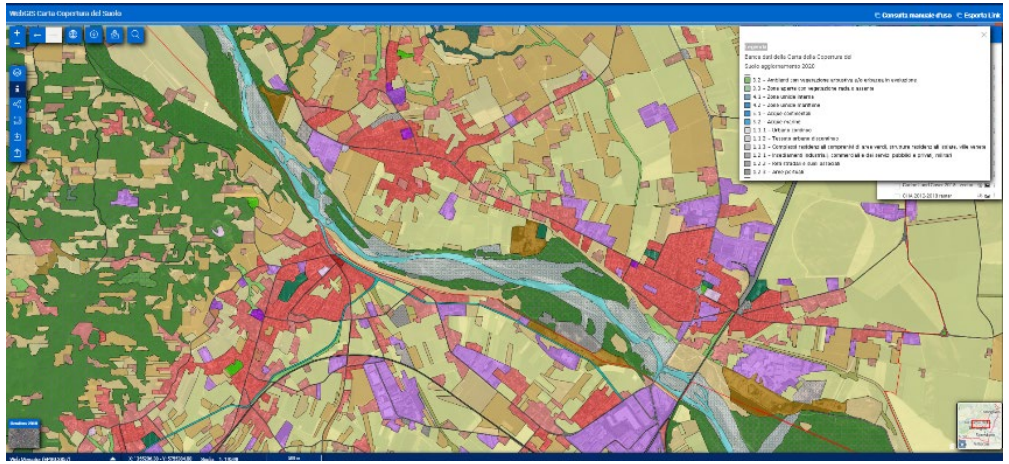
- **Urban planning**: urbanized areas (change detection), land cover map
- **Emergency**: Crashed trees areas detection
- **Land Monitoring**: Monitoring of soil deformations
- **Land Monitoring**: Impact of seasonal drought on Po river
- **Spatial Data Infrastructures**: remote sensing webGIS (IDT Veneto Region: https://idt2.regione.veneto.it/portfolio/webgis-dei-dati-satellitari/)
- **Positioning**: Regional GNSS Network



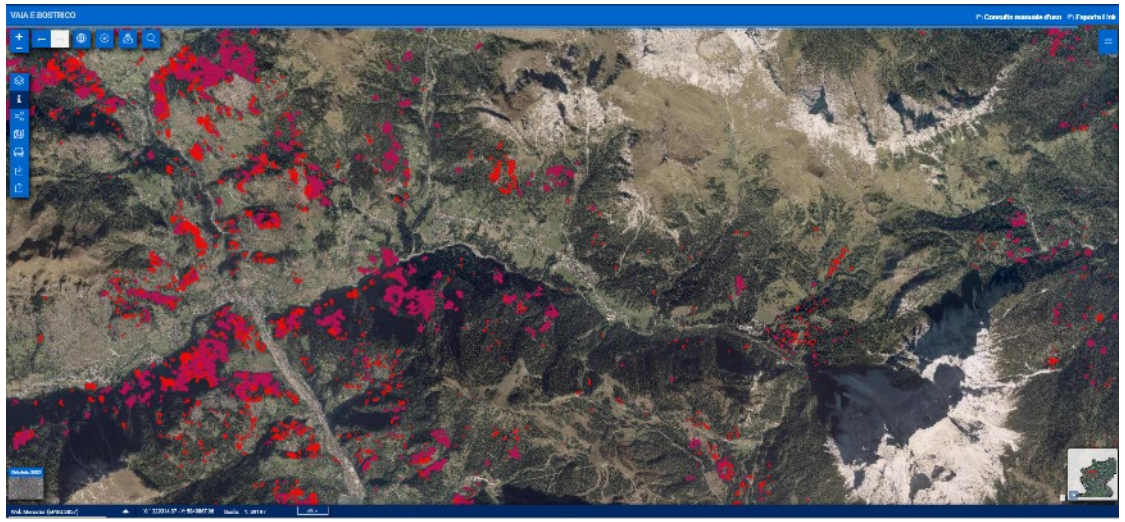


Some applications of Veneto Region in the domain of Earth Observation (2)

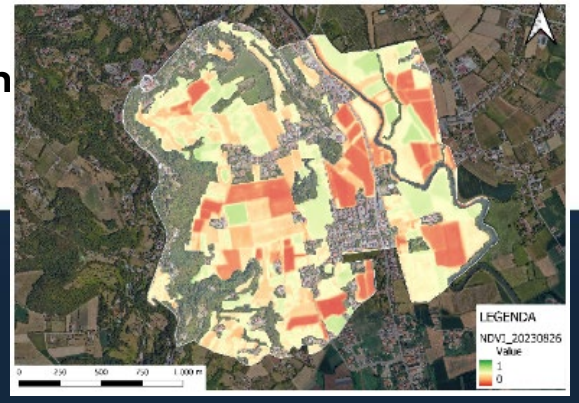
- **Urban planning**: land cover map update (based on EO data)



- **Forestry**: monitoring of wood damages caused by bark beetle (vegetation health monitoring with EO data)



- **Vegetation: monitoring of health vegetation**

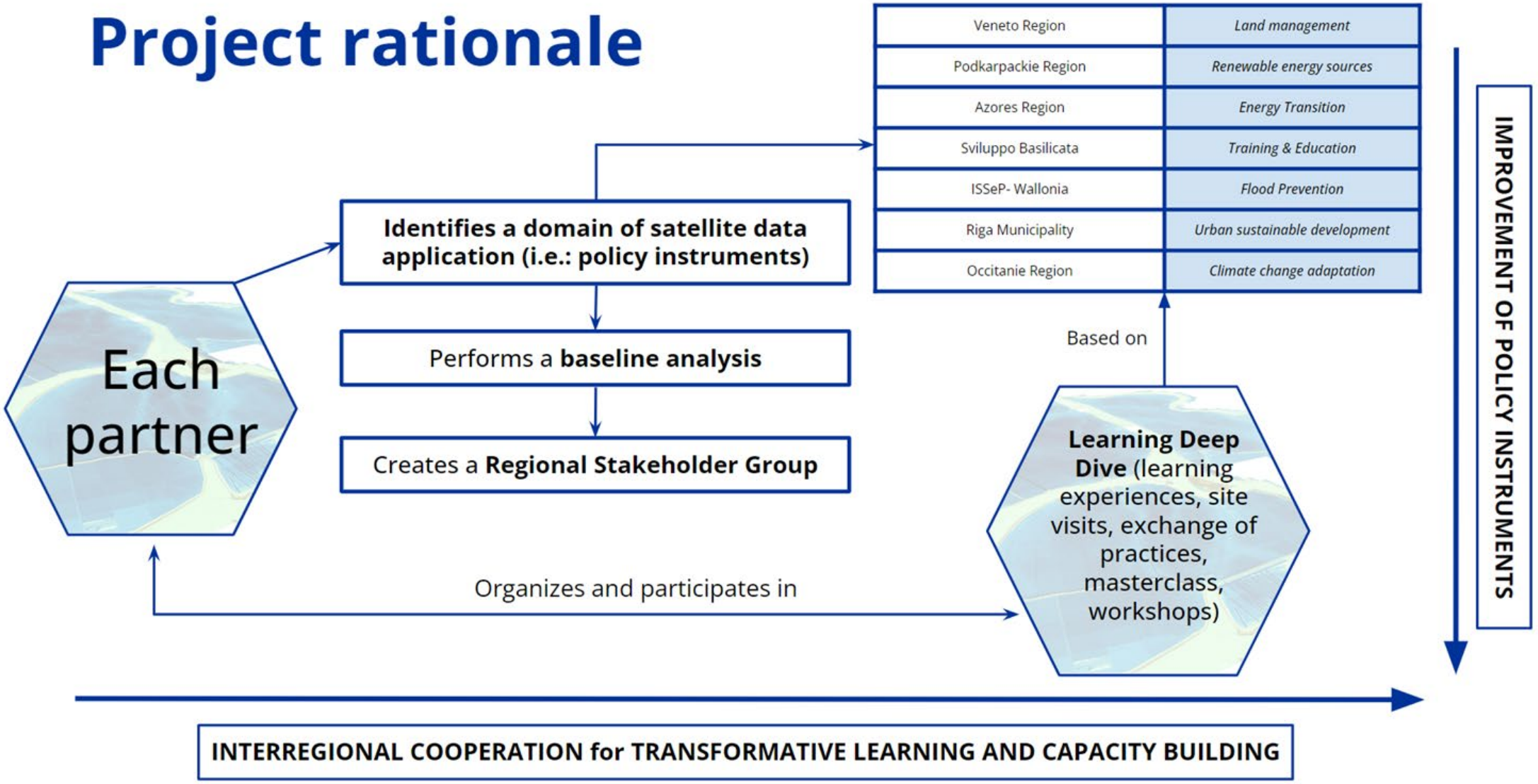


The Interreg Europe SATSDIFACTION Project

Satellite data and Spatial Data Infrastructures for an evidence-based regional governance

The SATSDIFACTION project aims at **promoting the exchange and transfer of experiences related to the use of Satellite Data in local and regional Spatial Data Infrastructures** as a mean to improve the performance of regional policy instruments, eventually **leading to a better, evidence-based governance of the regional territory.**

Project rationale



NEREUS Earth Observation working group

The EO Working Group aims to promote the use of earth oservation and space technologies between regions.

HOW?

- **Spreading** the knowledge of earth observation data and space technologies;
- **Sharing** experiences, ideas, tools, methodologies and creation of synergies;
- **Supporting** local institutions, citizens and companies in the use of space technologies;
- **Inspiring** positive policy responses to local institutions.

Thank you.

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