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European Union

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Brussels, 25 June 2024
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ESPACE 63
INTER-REP 69

COVER NOTE

Subject:	Satellites solutions for the benefit of society: best practices and hands-on examples
	- Powerpoint presentation (Space WP meeting 25.06.2024)

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eurisy

ACTING COLLECTIVELY TO
BRIDGE SPACE AND SOCIETY

**Satellite solutions for the benefits of society.
Best practices and hands-on examples**

Annalisa Donati
Secretary General
COMPET meeting
25/06/2024



Mission & Members



Approach



Facilitator → EXPLORE

Raise awareness of satellite applications to help professional communities in many sectors: from transport to risk management, from habitat protection to energy, from climate change to the IoT.



Matchmaker → CONNECT

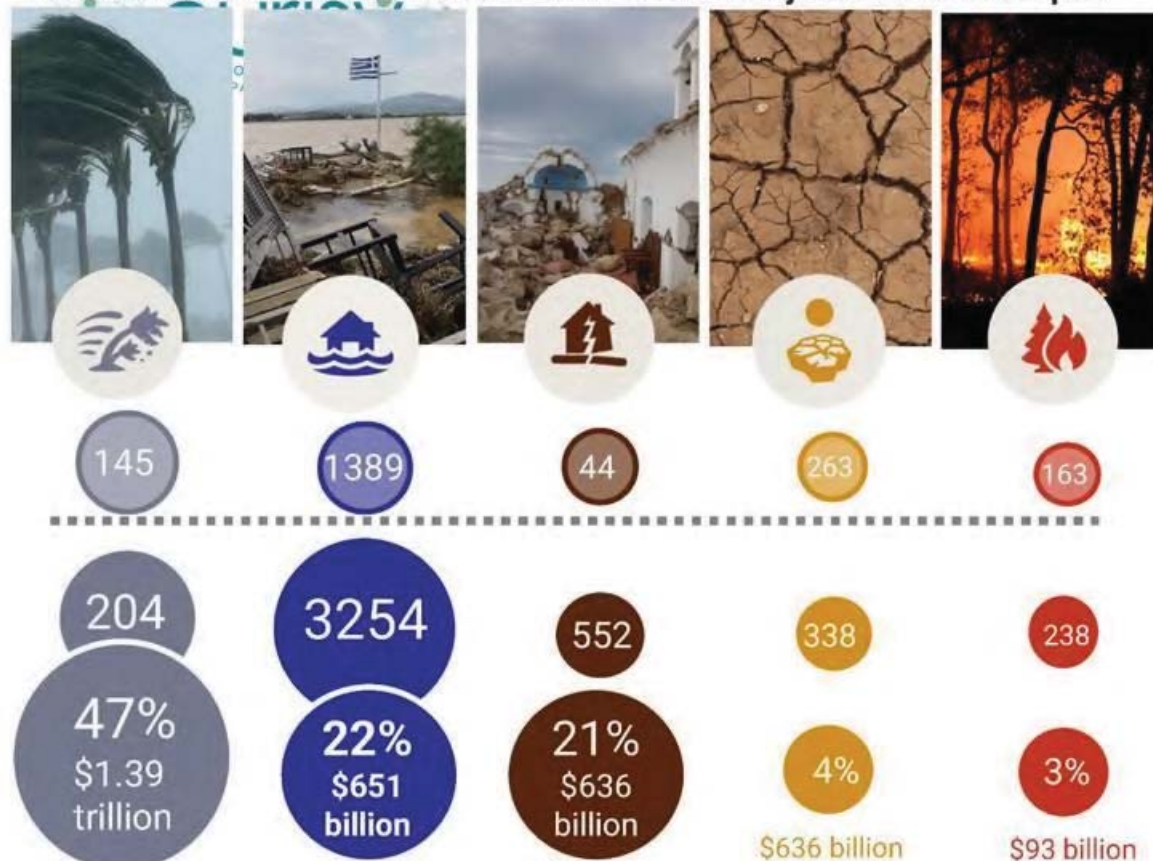
Support potential end users of satellite applications by leveraging its vast network among space and non-space communities; understanding patterns and links and/or creating them for mutual benefits.



Adviser → INFORM

Provide feedback to decision-makers on possible measures to overcome obstacles in diffusing space-derived innovation in society.

Human cost of disasters: an overview of the last 20 years – UNDRR Report



Climate challenges



US\$ Economic losses

1980
1999

1.63
trillion

2000
2019

2.97
trillion

Disaster risk management

Key information & observation needs:

- Hazards: Past events; adverse phenomena; geographic settings
- Vulnerability: physical and socio-economic vulnerability assessment
- Exposure: inventory of assets

Key information & observation needs:

- Losses and damages: post-disaster maps
- Recovery and risk: changes of risks and hazards



Key information & observation needs:

- Forecasts & early warnings: pre-disaster information
- Need for assistance: post-disaster maps; human displacement

Key information & observation needs:

- Disaster scenarios: pre-disaster information

Satellite-based Services for DRM



Satellite-based Services for Disaster Risk Management

10th November 2023
9:00 – 15:00 CEST
SLOVENIAN UNIVERSITY OF TECHNOLOGY IN Ljubljana
Faculty of Information and Information Technologies
(Engineering)
In Ljubljana, Slovenia

Satellite-based Services for Disaster Risk Management

10.05 – 17.05 Local time
16th May 2024
Lisbon Naval Base,
Alfama (Alameda), Portugal

Satellite-based Services for Disaster Risk Management

6th June 2024
International Defence Equipment and Services Exhibition
"HEMUS 2024"
Plovdiv, Bulgaria

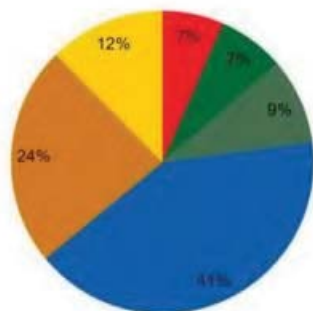
Satellite-based Services for Disaster Risk Management

19th December 2023
09:30 – 16:00 CET
Institute of Botanical Sciences
Rue de la Loi 23, 1050
Brussels, Belgium

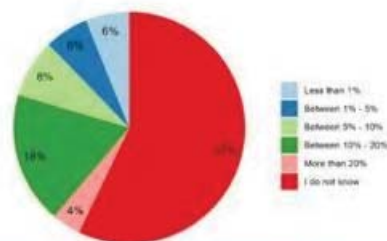
  

Satellite-based Services for DRM

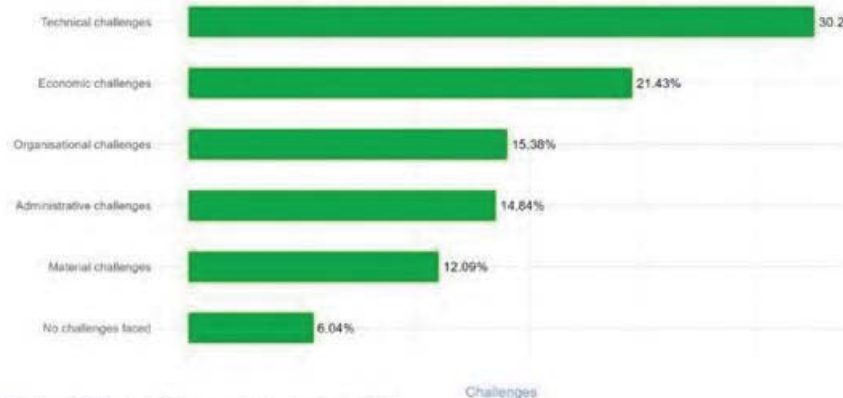
DRM Workshop Country Responses from:
Belgium (63), Cyprus (36), Greece (63),
Hungary (14), Portugal (10), Slovakia (10)



How much money did you save?



What challenges did you face?



What data do you need?



The image displays four promotional posters for satellite-based disaster risk management services, arranged in a 2x2 grid. Each poster features satellite imagery of disaster-affected areas and logos of participating organizations.

- Top Left Poster:** Titled "Satellite-based Services for Disaster Risk Management". It mentions the "30th November 2023" and "9:00 - 18:00 CEST". The organizing institution is the "SLOVENIAN UNIVERSITY OF TECHNOLOGY IN Ljubljana, Faculty of Informatics and Information Technology". It lists "In cooperation with" the "Belgian Federal Science Policy Office". Logos for EUSPA, eurisy, and the Belgian Federal Science Policy Office are present.
- Top Right Poster:** Titled "Satellite-based Services for Disaster Risk Management". It mentions the "10:00 - 17:00 Local time" and "16th May 2024". The location is "Lisbon Naval Base, Alfeite (Almada), Portugal". It lists "In cooperation with" the "Portuguese National Institute for Disaster Management". Logos for EUSPA, eurisy, and the Portuguese National Institute for Disaster Management are present.
- Bottom Left Poster:** Titled "Satellite-based Services for Disaster Risk Management". It mentions the "6th June 2024" and "International Defence Equipment and Services Exhibition 'HEMUS 2024'". The location is "Plovdiv, Bulgaria". It lists "In cooperation with" the "Bulgarian Ministry of National Defence". Logos for EUSPA, eurisy, and the Bulgarian Ministry of National Defence are present.
- Bottom Right Poster:** Titled "Satellite-based Services for Disaster Risk Management". It mentions the "10th December 2023" and "09:30 - 16:00 CEST". The location is "Institute of Remote Sensing, Royal Institute for Cultural Heritage, Brussels, Belgium". It lists "In cooperation with" the "Belgian Federal Science Policy Office". Logos for EUSPA, eurisy, and the Belgian Federal Science Policy Office are present.

SAFE & RESILIENT CITY



DISASTERS & SECURITY

- Management of natural disasters
- Coordinated emergency and rescue services
- Critical infrastructure monitoring
- Oil spills detection and removal
- Monitoring of hazardous goods' transportation
- Analysis of crime incident patterns
- Intelligents' reporting



SOIL & WATER

- Soil morphology and moisture
- Soil cover and use
- Inland and sea water quality and temperature
- Flexible control of water reservoirs
- Hazardous materials management
- Sustainable urban agriculture

HEALTHY & INCLUSIVE CITY



HEALTH

- Coordinated emergency medical services
- Remote health check-ups
- Pollution peaks alerts
- First aid apps



ENGAGEMENT

- Apps enhancing civic e-participation
- City management based on mobile behavioural data
- Apps fostering sustainable lifestyles
- City open data



CULTURE

- Monitoring of historical buildings
- Augmented reality and historical city maps
- Tourists and city guides
- Geolocated outdoor serious games



CLEAN CITY



AIR

- Air quality and temperature
- Traffic, industry and airport emissions
- Air quality modelling and management



ENERGY

- Solar energy systems' assessment
- Wind maps for wind power stations
- Remote monitoring of hydropower stations
- Synchronised power grid systems
- Remote detection of power outages



GREEN AREAS

- Urban forest and biotope maps
- Balanced green and built-up spaces
- Vegetation cover monitoring and management



WASTE

- Optimised bin collection
- Detection of illegal dump sites
- Hazardous waste tracking

EFFICIENT CITY



URBAN PLANNING

- Land cover classification
- Land use monitoring and management
- Geospatial maps
- Urban sprawl monitoring
- Property tax evaluation
- Identification of illegal buildings
- Urban 3D planning



TRANSPORT & MOBILITY

- Real-time transport information
- Bike and car sharing
- Intermodal transport
- Urban traffic modelling and analysis
- Optimisation of public transport and traffic lights
- Mobility support for persons with impaired mobility
- Parking apps



BUILDINGS & INFRASTRUCTURE

- Monitoring of pavements, buildings and critical infrastructure
- Planning of constructions and transport infrastructure
- Adapt construction materials to climate changes
- Road condition and traffic safety improvements
- Mapping of buried pipes, lines, gas and electric lines
- Soil subsidence maps to prioritise maintenance works



Sardinia Region: Monitoring the water transport and distribution network remotely with satcom

The user: **The challenge:** **The solution:** **The benefit:**

**ENTE ACQUE DELLA
SARDEGNA**



ENAS manages installations spread over 25000km², in addition to the time and workforce needed to visit the water installations, the region's landscape features mean that terrestrial telecommunications infrastructure is unavailable or unreliable outside urban and industrial areas.

Thanks to the satcom receivers installed near dams, hydroelectric power stations, pumping stations and aqueducts, ENAS is able to receive information about and control flow rates, volumes, levels and status of pumps in real time and remotely.

The current network for communication and data transmission between the periphery and the central office ensures the continuity and quality of the service, while reducing the costs and efforts necessary for monitoring the water infrastructure.



The Public Service of Wallonia (Belgium) relies on satellite imagery for a comprehensive view of land cover and use

The user:

The Public Service of Wallonia



The challenge:

Acquisition of precise, accurate and easily updatable information, on land cover (LC) and land use (LU) to comply with EU INSPIRE Legislation

The solution:

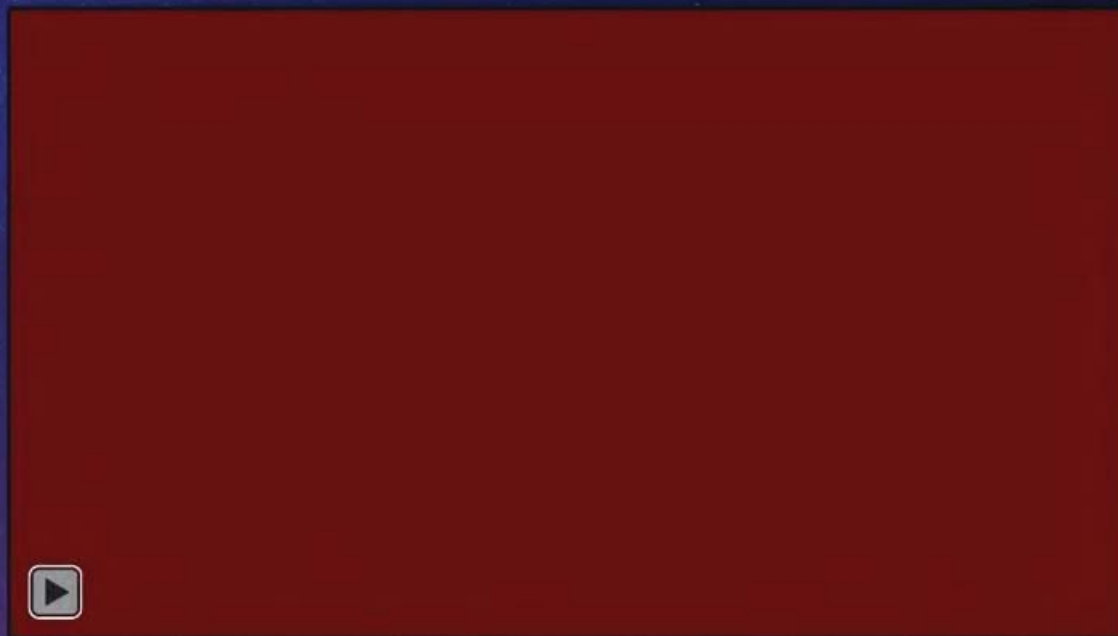
WALOUS maps' integrate the latest georeferenced data on the whole Walloon territory

The benefit:

The Department of Agriculture, Natural Resources and Environment of the PSW uses the map to support farmers in making their declarations



COPERNICUS AND ME



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Success stories database

ABOUT US | THE EUROPEAN SATELLITE | SUCCESS STORIES | PARTNERSHIP | CONTACT | SERVICES | PRESS | FAQ

SEARCH [input type="text"]

Welcome to Europe's largest repository of success stories on operational satellite applications

Europe's largest repository of success stories on operational satellite applications. Europe's largest repository of success stories on operational satellite applications. Europe's largest repository of success stories on operational satellite applications.

Send us your success story!

Do you use any satellite applications in your daily life or have you ever used them? Tell us how and we'll add them to our success stories!

→

Success stories will favour the dissemination of case studies and help connecting service providers and end users.

The **Success Stories** aim at addressing communities outside the space sector to express their needs and to present their challenges.

Objective is to favour the integration of satellite-based solutions in their workflow.

- Communication and digital society >
- Energy, infrastructure and utilities >
- Environment, climate and health >
- Maritime >
- Risk management and emergencies >
- Smart cities >
- Tourism, culture and leisure >
- Transport and logistics >



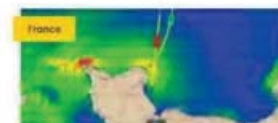
Montenegro: Protecting marine habitats thanks to a map based on satellite information



Lazio Region: supporting coastal zone management with geo-information services



Finland: All-year-round open ports due to efficient ice-breaking services



France: Weather4D: smooth seas and fair winds ahead with satellite technology



Thank you!

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