



REGIONE BASILICATA

SAVE-THE-DATE
28-29 SEPTEMBER 2023, MATERA, BASILICATA REGION



2ND EDITION EUROPEAN SYMPOSIUM BY NEREUS REGIONS
SPACE DATA FOR TOURISM & AGRICULTURE



[Register here.](#)

2° European Symposium by Nereus Regions hosted by Basilicata Region in a nutshell

- You are invited to attend this meeting in Basilicata and to bring a delegation of regional stakeholders: regional authorities, clusters, companies, SMEs, universities and research centers.
- During the 2 days we will debate on needs and future trends of agriculture and tourism sectors and how space data, applications and services could provide innovative solutions for the market.
- The objective is to facilitate an interactive dialogue among space sector and non-space sectors on tourism and agriculture.

2° European Symposium by Nereus Regions hosted by Basilicata Region in a nutshell

- We want to facilitate the connection and cooperation among EU regional innovation ecosystems to co-develop new technologies, to address pressing societal challenges and bring them on the market.
- Nereus regions and its clusters in line with the New European Innovation Agenda want to facilitate the links between their resources (funds, equipment, facilities,..), organizations (higher education institutions, research and technology organizations, companies, venture capitalists and financial intermediaries), investors and policymakers.
- More than ever in recent history, collaboration of regional innovation ecosystems for innovative solutions is necessary for social and economic recovery, environmental sustainability and resilience.

Topics to be discussed during Nereus symposium hosted by Basilicata Region

- Copernicus User-Uptake, use of space data strategies and space economy.
- Skills for space sector: from schools to universities. How to prepare workforce and talents to address space skills in business , research and public administration.
- How to facilitate the matching between space technologies, data, services and applications to user needs in tourism and agriculture sectors.
- How to accelerate the cooperation between our regions and their regional aerospace ecosystems & clusters to develop new products, services, applications, processes, projects, joint investments (I3) and value chains in Europe for tourism and agriculture markets.

AGRICULTURE SECTOR

- The use of digital technologies in farm management and across agriculture sector help to address several farm- and sector-level challenges for farmers, agricultural cooperatives/organisations, key decision makers and governments.
- This improve farm profitability, address resource-use efficiency and contribute to our sustainability goals.
- At the micro level, EO allows farmers to remotely monitor the performance of their crops and reduce their usage of inputs such as fertilizers, water,
- At the macro level, EO provides vast amounts of rich data which public authorities and economists can use to better inform their analysis and decision making.
- GNSS delivers huge value to the sector by helping farmers precisely guide machinery and track their livestock, ensuring farm operations remain as efficient as possible.

AGRICULTURE SECTOR

- Together, EO and GNSS allow stakeholders to better understand the sector, efficiently address its needs and help in guiding it towards a sustainable future.
- Copernicus and Galileo are at the heart of the EU Farm to Fork Strategy
- The Farm to Fork Strategy is at the heart of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly.
- The EU Farm to Fork Strategy sets the policy objectives that will govern the EU's efforts towards sustainable food production with a reduced environmental footprint.
- In the Strategy, **Copernicus and EGNSS feature as invaluable tools for sustainable nutrient management, protection of soils, reduction of the use of fertilisers and pesticides, monitoring of GHG emissions and preservation of biodiversity.**

EXAMPLES OF SPACE APPLICATIONS FOR AGRICULTURE

ENVIRONMENTAL MONITORING

- Carbon capture & content assessment
- Environmental impact monitoring

NATURAL RESOURCES MONITORING:

- Biomass monitoring
- Crop yield forecasting
- Soil condition monitoring
- Vegetation monitoring

OPERATIONS MANAGEMENT

- Asset monitoring
- Automatic steering
- CAP monitoring
- Farm machinery guidance
- Farm management systems
- Field definition
- Livestock wearables
- Pastureland management
- Precision irrigation
- Variable rate application

WEATHER SERVICES FOR AGRICULTURE

- Climate services for agriculture
- Weather forecasting for agriculture

FORESTRY

Environmental monitoring

- Biomass monitoring
- Deforestation/degradation monitoring

Natural resources monitoring

- Forest Inventory monitoring
- Forest vegetation health monitoring
 - Illegal logging monitoring

Operations management

- Automatic steering
- Forest asset management
- Forest exploitation certification
- Forest machinery guidance

TOURISM SECTOR

- Tourism is the most heavily hit ecosystem by the COVID-19 crisis, will be the first to have its transition pathway. The actions of this pathway will form the key elements of the upcoming European tourism agenda 2030/2050.
- According to non-official sources, in 2019, tourism generated 9.5% of total EU GDP and provided 22.6 million jobs in the EU.
- Key trend for the future: **Digitalisation of tourism services and Data-driven tourism services**
- Digitalisation of economy and society and the increased scope for data generation, collection and services will provide opportunities to transform tourism services.

TOURISM SECTOR

- **Data (including space data)** sharing between the public and the private sector can help create innovative tourism services that **support sustainability** (e.g. tourism mobility and transport), **manage tourism flows based on real-time data** (e.g. crowd management at attractions), **stimulate tourism demand and match supply more effectively** (e.g. over-tourism) or **services that generate data and statistics to feed into policy and decision making**
- Developing tools to support tourism companies to **make Product and Organisation Environmental Footprint methods (PEF/OEF) assessments** of their products and services.
- **Space technologies for tourism:** Earth Observation, satellite navigation, satellite telecommunication, Spaceflight Technologies and Space Weather **Coupled with other technologies:** Big Data analytics, VR/AR, Artificial Intelligence, Mega-constellations, Crowdsourcing, IoT, Cybersecurity, Blockchain, 5G,.... **serve tourism end-users and market**

TOURISM SECTOR

- Consumer applications which rely on mapping, such as smartphone navigation applications, require accurate mapping of the Earth's surface by Earth Observation satellites. Tourists are using such data for identification of interest points and route planning.
- **These applications are supported by several categories of connected devices:** mainly smartphones and tablets, but also specific equipment such as personal tracking devices, wearables, digital cameras, portable computers,
- The use of digital and connectivity solutions will help the sector embrace new business models required in post-COVID 19:
 - Unmanned transport (automation & robots)
 - Rural tourism
 - Everywhere connectivity to travellers
 - Active engagement with rural communities.
- Seamless travel
- Safe travel
- Guide investments and measuring impact
- Drive sustainable tourism development

EXAMPLES OF SPACE APPLICATIONS FOR TOURISM

SatCom

It is essential to ensure communications whenever the terrestrial communications are absent or not reliable and to support digital solutions (mountainous, costal, remote areas, ..)

GNSS

- track and trace tourists
- provide information to search and rescue teams
- enable visitor flow monitoring and location-based services to geo-localise points of interest in the tourist maps (for tourists, hikers, bikers, boats, ...)

SatEO

- Monitoring and planning of infrastructure (e.g. buildings, roads, parking lots, airports)
- Monitoring of big events for logistics planning and monitoring (e.g. sports, festivals, big trade fairs)
- Identification of open air “safe” and “unsafe” areas (e.g. parks, squares, big markets, touristic spaces with crowds).
- Data mining: Monitoring of flows, behaviors, interactive services,
- Monitoring weather
- Providing Public Institutions and Visitors with services dedicated to Cultural Heritage for Safeguard (monuments state of conservation, preventive maintenance, ..) and Fruition aspects (Augmented and Virtual reality experiences directly available on personal devices via a dedicated mobile APP).

EXAMPLES OF SPACE APPLICATIONS FOR TOURISM

URBAN DEVELOPMENT AND CULTURAL HERITAGE

Environmental Monitoring

- Air quality monitoring in urban environments
- Light pollution
- Thermal auditing
- Urban greening
- Urban heat islands

Smart Cities Operations

- Smart streetlights
- Smart waste management

Urban planning and monitoring

- Cultural heritage monitoring
- Informal dwellings
- Real estate
- Surveying and mapping of urban areas
- Urban modelling, 3D modelling, Digital Twins
- Urban planning

Thank you for your attention !

More info: <https://www.nereus-regions.eu/2023/03/08/save-the-data-2nd-edition-european-symposium-by-nereus-regions-space-data-for-tourism-agriculture-on-28-29-september-2023-matera-basilicata>

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