

Groundstation SPACE

Developments 2021-2027

From Horizon 2020 to **Horizon Europe**

Missions – Clusters - Destinations:

- Health
- Civil Security for Society
- Climate, energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Developments 2021-2027



EU funding instrument for the environment and climate action (and 2021-2027 also transition to clean energy)

Bridging the gap between development of new knowledge (Horizon Europe) and implementation (large-scale deployment finance).

Destination Earth (DestinE)

Develop a very high precision digital model of the Earth to monitor and simulate natural and human activity and to develop and test scenarios that would enable more sustainable development and support European environmental policies.

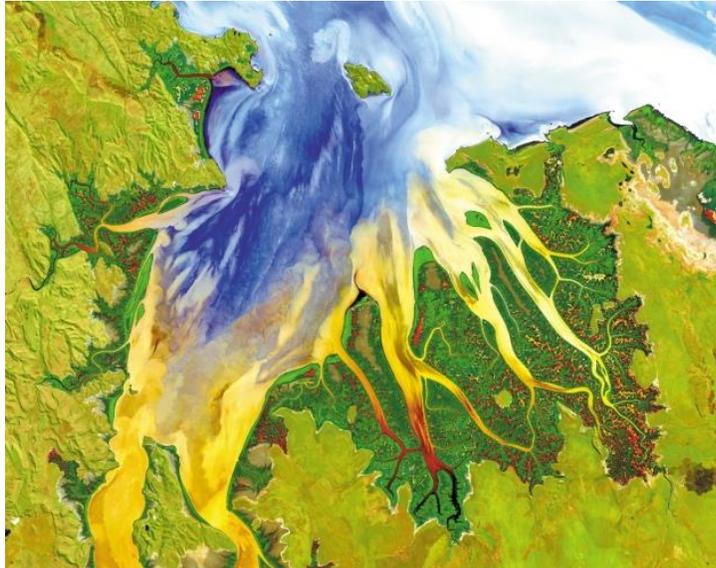
→ Digital Twin of the Oceans (Green Deal)



European Maritime and Fisheries Fund

Fund to invest in the maritime economy and support fishing communities

Biodiversity and Ecosystems



HORIZON-CL6-2021-BIODIV-01-02: Data and technologies for the inventory, fast identification and monitoring of endangered wildlife and other species groups

Destination:
Biodiversity and ecosystem services

Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment ([WP9](#))

Work programme year

Type of action: RIA
Budget (EUR million): 10
Expected EU contribution/project (EUR million): 3 to 5
Opening: 22 June 2021
Closing: 6 October 2021 17:00 Brussels time
Single Stage

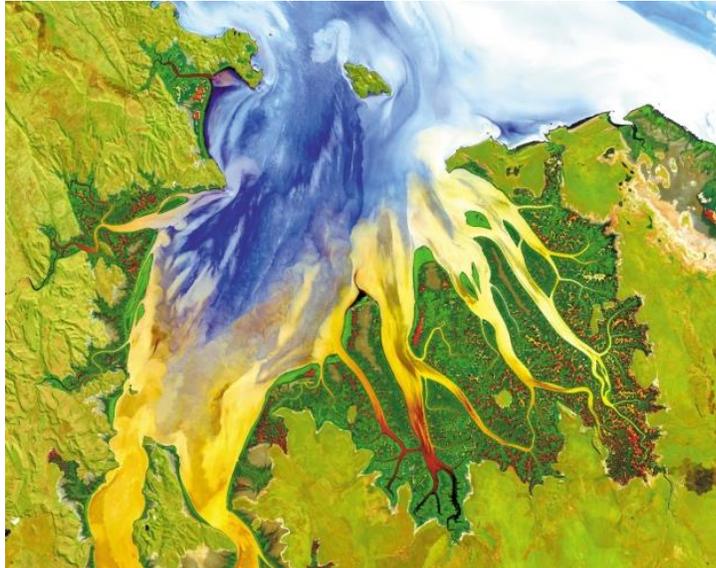
Expected outcome:

In support of the implementation of the Green Deal, the EU biodiversity strategy 2030 and the Birds and Habitats Directives, successful proposals will help to bridge taxonomic and **monitoring** gaps, by providing methods, data, knowledge and models on the conservation status and ecological requirements of species and habitats and help to better understand and address biodiversity decline, its main direct drivers and their interrelations.

Projects results should contribute to **some** of the following expected outcomes:

- Systemic, integrated and (open-)standardised data, knowledge and models on the conservation status and ecological requirements of species and habitats, with a focus on those covered by the Birds and Habitats Directives and IUCN Red List. This will lead to better management of protected sites and species, in particular with a view to setting conservation objectives and developing appropriately designed and effective management plans
- The bridging of taxonomic and monitoring gaps thanks to new enabling tools, technologies, fast identification methodologies and integrated monitoring systems across Europe on wildlife species. These will help to identify biodiversity threats, such as invasive species, emergence of disease threats, conflict situations with production animals and/or human communities, etc.
- Models upscaling the results of biodiversity assessments to wider areas, based on existing datasets of environmental descriptors.
- Integrative taxonomy of inventory pollinator species (bees, butterflies, moths and hoverflies), soil fauna (mites, springtails, woodlice, millipedes and earthworms) and/or other threatened species groups

Biodiversity and Ecosystems



HORIZON-CL6-2021-BIODIV-01-03:
Understanding and valuing coastal and marine biodiversity and ecosystems services

➤ TRL 4-5 at end of project

Type of action: RIA
Budget (EUR million): 16
Expected EU contribution/project (EUR million): 16
Opening: 22 June 2021
Closing: 6 October 2021 17:00 Brussels time
Single Stage

HORIZON-CL6-2021-BIODIV-01-04: Assess and predict integrated impacts of cumulative direct and indirect stressors on coastal and marine biodiversity, ecosystems and their services

➤ TRL 4-5 at end of project

Type of action: RIA
Budget (EUR million): 10
Expected EU contribution/project (EUR million): 10
Opening: 22 June 2021
Closing: 6 October 2021 17:00 Brussels time
Single Stage

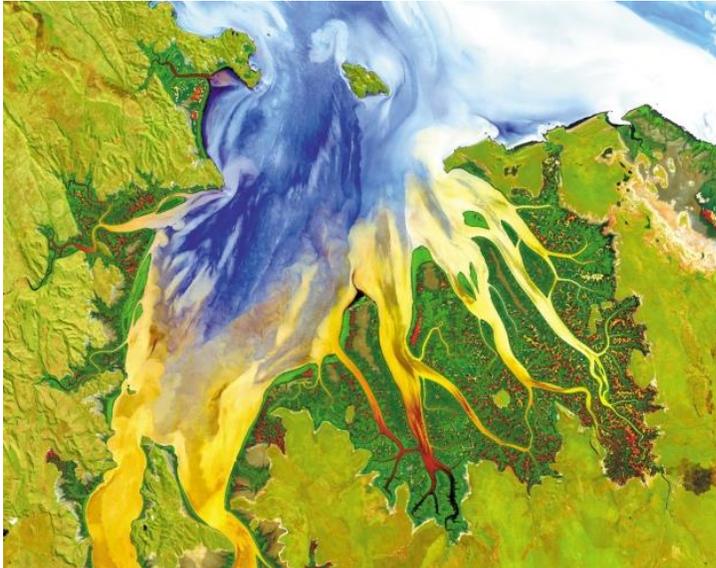
HORIZON-CL6-2021-**GOVERNANCE**-01-14:
User-oriented solutions building on environmental observation to monitor critical ecosystems and biodiversity loss and vulnerability in the European Union

Type of action: RIA
Budget (EUR million): 20
Expected EU contribution/project (EUR million): 3-5
Opening: 22 June 2021
Closing: 6 October 2021 17:00 Brussels time
Single Stage

HORIZON-**EUSPA**-2021-**SPACE**-02-51:
EGNSS and Copernicus applications fostering the European Green deal
➤ Preserving and restoring biodiversity
➤ TRL 7-9 at end of project

Type of action: IA
Budget (EUR million): 14
Expected EU contribution/project (EUR million): 2-3
Opening: ?
Closing: ?
Single Stage

Biodiversity and Ecosystems

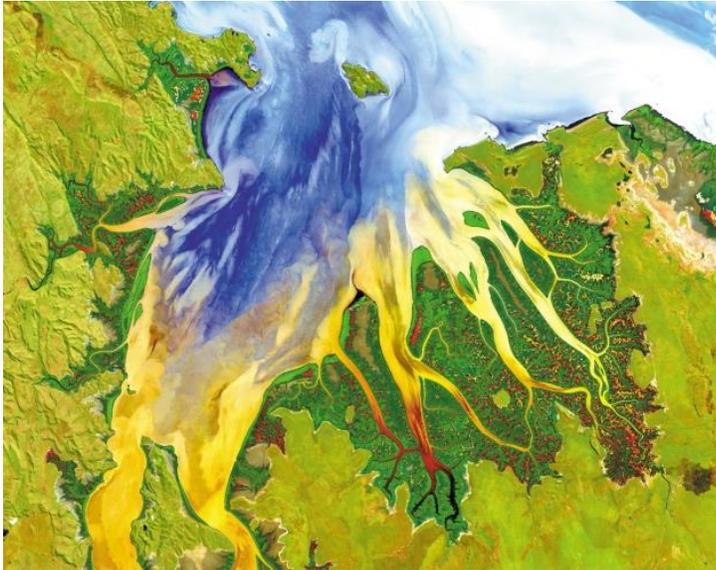


HORIZON-CL6-2021-BIODIV-01-15: Quantify impacts of the trade in raw and processed biomass on ecosystems, for offering new leverage points for biodiversity conservation, along supply chains, to reduce leakage effects

Type of action: RIA
Budget (EUR million): 10
Expected EU contribution/project (EUR million): 2-3
Opening: 22 June 2021
Closing: 6 October 2021 17:00 Brussels time
Single Stage

The call text makes no explicit mention of satellite technologies such as references to Copernicus, EGNSS/Galileo or “observation”, “monitoring” and such. However, the description of biomass and implied land use changes would make satellite data relevant (but not the predominant factor). For this you will need to form a consortium with a broad range/type of stakeholders.

Further information



NL Enterprise Agency (RVO) national contact points / [advisors](#) (NL organisations)

Horizon Europe [Info Days](#) 2021
June 28 – July 9

The brokerage events by the various National Contact Point networks. All the brokerage events require registration:

Industry, 22 June: <https://events.b2match.com/events/cluster4industry>
and/or 1 July: <https://industry2021.b2match.io/>

Digital, 24-25 June: <https://www.ideal-ist.eu/event/horizon-europe-digital-face2face-brokerage>

Space, 28 June: <https://events.b2match.com/events/cosmos2020plus-heu-cluster4-space-brokerage>

Impact Pathways – evolution Horizon 2020 to Horizon Europe

SCIENTIFIC IMPACT

1. EU world-class excellence in science
2. Emergence of new technologies or fields of science in the EU
3. Better transnational and cross-sector coordination of R&I efforts

1. Creating high-quality new knowledge
2. Strengthening human capital in R&I
3. Fostering diffusion of knowledge and Open Science

SOCIETAL IMPACT

4. Better contribution of R&I to tackle societal challenges
5. EU steering the international agenda to tackle global SCs
6. Better societal acceptance of science and innovative solutions

4. Addressing EU policy priorities through R&I
5. Delivering benefits & impact via R&I missions
6. Strengthening the uptake of innovation in society

ECONOMIC IMPACT

7. Diffusion of innovation generating jobs, growth and investments
8. Strengthened competitive position of European industry
9. Better innovation capabilities of EU firms

7. Generating innovation-based growth
8. Creating more and better jobs
9. Leveraging investments in R&I

SPECIFIC NEEDS

What are the specific needs that triggered this project?

Example 1

Most airports use process flow-oriented models based on static mathematical values limiting the optimal management of passenger flow and hampering the accurate use of the available resources to the actual demand of passengers.

Example 2

Electronic components need to get smaller and lighter to match the expectations of the end-users. At the same time there is a problem of sourcing of raw materials that has an environmental impact.

EXPECTED RESULTS

What do you expect to generate by the end of the project?

Example 1

Successful large-scale demonstrator:

Trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.

Algorithmic model:

Novel algorithmic model for proactive airport passenger flow management.

Example 2

Publication of a **scientific discovery on transparent electronics.**

New product: More sustainable electronic circuits.

Three PhD students trained.

D & E & C MEASURES

What dissemination, exploitation and communication measures will you apply to the results?

Example 1

Exploitation: Patenting the algorithmic model.

Dissemination towards the scientific community and airports:

Scientific publication with the results of the large-scale demonstration.

Communication towards citizens: An event in a shopping mall to show how the outcomes of the action are relevant to our everyday lives.

Example 2

Exploitation of the new product: Patenting the new product; Licencing to major electronic companies.

Dissemination towards the scientific community and industry:

Participating at conferences; Developing a platform of material compositions for industry; Participation at EC project portfolios to disseminate the results as part of a group and maximise the visibility vis-à-vis companies.

TARGET GROUPS

Who will use or further up-take the results of the project? Who will benefit from the results of the project?

Example 1

9 European airports:

Schiphol, Brussels airport, etc.

The European Union aviation safety agency.

Air passengers (indirect).

Example 2

End-users: consumers of electronic devices.

Major electronic companies: Samsung, Apple, etc.

Scientific community (field of transparent electronics).

OUTCOMES

What change do you expect to see after successful dissemination and exploitation of project results to the target group(s)?

Example 1

Up-take by airports: 9 European airports adopt the advanced forecasting system demonstrated during the project.

Example 2

High use of the scientific discovery published (measured with the relative rate of citation index of project publications).

A major electronic company (Samsung or Apple) **exploits/uses the new product** in their manufacturing.

IMPACTS

What are the expected wider scientific, economic and societal effects of the project contributing to the expected impacts outlined in the respective destination in the work programme?

Example 1

Scientific: New breakthrough scientific discovery on passenger forecast modelling.

Economic: Increased airport efficiency
Size: 15% increase of maximum passenger capacity in European airports, leading to a 28% reduction in infrastructure expansion costs.

Example 2

Scientific: New breakthrough scientific discovery on transparent electronics.

Economic/Technological: A new market for touch enabled electronic devices.

Societal: Lower climate impact of electronics manufacturing (including through material sourcing and waste management).

Scientific impact indicators

Toward scientific impact	Short-term	Medium-term	Longer-term
Creating high-quality new knowledge	Publications – Number of FP peer reviewed scientific publications	Citations – Field-Weighted Citation Index of FP peer reviewed publications	World-class science – Number and share of peer reviewed publications from FP projects that are core contribution to scientific fields
Strengthening human capital in R&I	Skills – Number of researchers having benefitted from upskilling activities in FP projects	Careers – Number and share of upskilled FP researchers with more influence in their R&I field	Working conditions – Number and share of upskilled FP researchers with improved working conditions
Fostering diffusion of knowledge and Open Science	Shared knowledge – Share of FP research outputs (open data / publication / software etc) shared through open knowledge infrastructures	Knowledge diffusion – Share of open access FP research outputs actively used / cited	New collaborations – Share of FP beneficiaries having developed new transdisciplinary / trans-sectoral collaborations with users of their open FP R&I outputs

Societal impact indicators

Toward scientific impact	Short-term	Medium-term	Longer-term
Addressing EU policy priorities through R&I	Outputs – Number and share of outputs aimed at addressing specific EU policy priorities	Solutions – Number and share of innovations and scientific results addressing specific EU policy priorities	Benefits – Aggregated estimated effects from use of FP funded results, on tackling specific EU policy priorities, including contribution to the policy and law-making cycle
Delivering benefits and impact through R&I missions	R&I mission outputs – Outputs in specific R&I missions	R&I mission results – Results in specific R&I missions	R&I mission targets met – Targets achieved in specific R&I missions
Strengthening the uptake of innovation in society	Co-creation – Number and share of FP projects where EU citizens and end-users contribute to the co-creation of R&I content	Engagement – Number and share of FP beneficiary entities with citizen and end-users engagement mechanisms after FP project	Societal R&I uptake – Uptake and outreach of FP co-created scientific results and innovative solutions

Economic impact indicators

Toward scientific impact	Short-term	Medium-term	Longer-term
Generating innovation-based growth	Innovative outputs – Number of innovative products, processes or methods from FP (by type of innovation) & Intellectual Property Rights applications	Innovations – Number of innovations from FP projects (by type of innovation) including from awarded IPRs	Economic growth – Creation, growth & market shares of companies having developed FP innovations
Creating more and better jobs	Supported employment – Number of FTE jobs created, and jobs maintained in beneficiary entities for the FP project (by type of job)	Sustained employment – Increase of FTE jobs in beneficiary entities following FP project (by type of job)	Total employment – Number of direct and indirect jobs created or maintained due to diffusion of FP results (by type of job)
Leveraging investments in R&I	Co-investment – Amount of public & private investment mobilised with the initial FP investment	Scaling up – Amount of public & private investment mobilised to exploit or scale up FP results	Contribution to ‘3% target’ – EU progress towards 3% GDP target due to FP