EuroGEOSec – CS#3: Innovative Platform Sustainability

Abstract

EuroGEO[1], Europe's branch of the Group on Earth Observations (GEO), sits at the intersection of research, policy, and markets. From this position, it remains at the forefront of Earth Observation (EO) in Europe and beyond, identifying trends, engaging with stakeholders, and mapping the current landscape of the community. It also explores ways to enhance the adoption of EO, and the steps required to achieve this objective across communities.

EuroGEOSec[2], launched in December 2023, stands for Establishing the EuroGEO Secretariat to support the EuroGEO initiative. Work Package 3 (WP3) aims to **maximise the impact of research and innovation** (R&I), including through the development of dedicated **case studies** (CS) that showcase potential innovation and market development support services that the EuroGEO Secretariat could offer. These CS highlight the stakeholder needs in bringing R&I to market.

To address these needs, five **Operational Pipelines** (OPs) have been defined, each representing a key link in the EO value chain where challenges may arise. This CS falls under the OP "Infrastructure Coordination".

This document delves into the work behind "CS#3: Innovative Platform Sustainability", detailing its sources, methodology, and key findings, including barriers and best practices. While the case study looks at ways to achieve sustainability for EO products and intelligence, it is worth noting that these outcomes are potential and thus not guaranteed.

[1] https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/knowledge-centres-and-data-portals/eurogeo_en

[2] https://www.eurogeosec.eu/

Table of Contents

List of Figures

List of Tables

List of Abbreviations

Abbreviation	Description
API	Application Programme Interface
CDSE	Copernicus Data Space Ecosystem
CEOS	Committee on Earth Observation Satellites
CMCC	Centro Euro-Mediterraneo sui Cambiamenti Climatici
CS	Case Study
DG CLIMA	Directorate-General for Climate Action
DG ENV	Directorate-General for Environment
DIAS	Data and Information Access Services
EEA	European Environment Agency
EO	Earth Observation
EO4SDG	Earth Observations for Sustainable Development Goals
EOwiki	Earth Observation Wiki
ESA	European Space Agency
ESG	Environmental, Social, Governance

EU	European Union
EuroGEO	Europe's branch of the Group on Earth Observations
EuroGEOSec	Establishing the EuroGEO Secretariat to support the EuroGEO initiative
GEOSS	Global Earth Observation System of Systems
GDDS	Green Deal Data Space
GEO	Group on Earth Observations
GHG	Greenhouse Gas
ICLEI	Local Governments for Sustainability (originally: International Council for Local Environmental Initiatives)
IRAP	Integrated Resilience Assessment Platform
JAXA	Japan Aerospace Exploration Agency
NGO	Non-Governmental Organisation
NSO	National Statistical Offices
OP	Operational Pipeline
R&I	Research and Innovation
R2O	Research to Operation
SDG	Sustainable Development Goal
SDGs-EYES	Sustainable Development Goals – Enhanced monitoring through the family of Copernicus Services
TEPs	Thematic Exploitation Platforms
UFM	Union for the Mediterranean
UN	United Nations
USGS	United States Geological Survey
WP	Work Package

1 Introduction

1.1 Purpose and context

The EuroGEOSec project addresses the **innovation and market development challenges** of the EuroGEO community – researchers, industry players (end-users and solution providers) and policy makers – through five **Operational Pipelines** (OP). Each pipeline targets specific needs and provides solution pathways across all stages, from policy development to market implementation. To this end, 10 case studies (2 per Pipeline) have been defined, based on needs identified in previous projects and stakeholder engagement, which illustrate the innovation lifecycle and testing services to be offered by the potential future EuroGEO Secretariat. Refer to the Annex for a more thorough overview.

This Case Study (CS) falls under the Operational Pipeline "Infrastructure Coordination", which illustrates how **fragmentation** among European platforms and limited **user engagement** hinder platform usability. Strengthening **integration** with other infrastructures, such as Data Spaces, can help bridge these gaps and support platform effectiveness.

Most notably, the *e-shape* project[3] (2019-2023) played a key role in advancing initiatives that support the operationalisation of R&I products. It shifted the focus from a data-centric approach to a **user-driven model**, prioritising the long-term sustainability of products.

The CS examines the challenges of **platform sustainability derived from publicly funded projects**. It focuses on the SDGs-EYES platform, developed by Sistema GmBH with exploitation activities led by T6, the point of contact for this study. The SDGs-EYES project (Sustainable Development Goals – Enhanced monitoring through the family of Copernicus Services), funded under the Horizon Europe programme, aims to **strengthen Europe's capacity** to **monitor environmental SDG indicators** using Copernicus data. It does so by developing a portfolio of decision-support tools that take an intersectoral approach and align with the EU Green Deal priorities[4].

The study aims to identify the **best practices** for sustaining such a solution and the associated knowledge in future initiatives. A brief overview of the SDGs-EYES project is provided. Additionally, this study outlines **market development and user engagement strategies** to support the project's uptake – specifically that of its platform – and to enhance the adoption of the SDGs-EYES solution.

The ultimate goal of this CS is to position EuroGEO as a **collaborative hub**, offering access to tools and best practices as it evolves into its envisioned role.

1.2 Scope of the study

The SDGs-EYES platform, designed to be user-friendly and adaptable, consists of two components – the front-end and the back-end – with different sustainability paths. This study will focus on the **back-end sustainability** for its role in integrating data across the platform, its data spaces, and other systems, aligning with long-term goals of value and scalability through integration.

[3] https://e-shape.eu/

[4] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

Using the SDGs-EYES project as a main reference, this analysis identifies **barriers to platform solutions sustainability** and **gaps in innovation and market support** that hinder the long-term uptake of grant-funded platform solutions. Within the specific context of the EuroGEOSec project (1.4), the study results in **best practices for market development** (4).

1.3 Key preliminary considerations

The SDGs-EYES platform focuses on **enhancing monitoring capacity** for indicators under SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land), which are deeply interlinked and central to addressing the climate and biodiversity crises. This initiative comes at a time of accelerating environmental change, marked by record-breaking temperatures, rapid biodiversity loss, and an increasing frequency of extreme weather events[5]. These factors demand **robust, real-time monitoring tools** to inform urgent action. Geopolitically, the EU's leadership in the global green transition is being tested by complex trade-offs between energy security, environmental ambition, and social cohesion[6]. In this context, SDGs-EYES supports the implementation of flagship EU policy frameworks such as the European Green Deal[7], the EU Biodiversity Strategy for 2030, and the Nature Restoration Law. These **policies require** Member States and subnational authorities to **report** on **ecosystem health, climate adaptation, and pollution reduction** often with spatial and temporal precision not yet available through traditional statistical means. By integrating Earth Observation data with in-situ and socio-economic datasets, SDGs-EYES provides a unique opportunity to **close the gap between data and policy**, supporting more accountable and science-based decision-making across Europe.

2 Methodology

This CS is based mainly on **qualitative research**, which includes data sources such as interviews with the relevant stakeholders and official information analysis – among them official projects' outputs, official project websites, and scientific information found therein.

2.1 SDGs-EYES engagement and meetings

EARSC, partner of the SDGs-EYES project, brought onboard the SDGs-EYES community into the EuroGEO community as a natural path to ensure **continuation and collaboration through a Joint Action Plan**. An exploratory meeting took place in March 2024 with the project officer Manuela

[5] https://www.sciencedirect.com/science/article/pii/S2542519624000214
[6] https://earsc.org/2024/11/18/earsc-industry-survey-2024/
[7] The European Green Deal is the EU Commission's roadmap to transform society and the economy to combat climate change. It aims for a resource-efficient, competitive, and climate-neutral EU by 2050. Covering climate, circular economy, pollution, biodiversity, and deforestation, it aligns with directives like the 2030 Biodiversity Strategy, Nature Restoration Law, and European Climate Law, supporting the Paris Agreement and UN SDGs. Digital technologies – edge computing, IoT, AI – and interoperable data are key enablers of this green transition. https://ad4gd.eu/what-is-the-green-deal-data-space/

Balzarolo from CMCC, followed by a second meeting and exchange with Exploitation Task Manager, Antonella Passani from T6 Ecosystems srl.

The **data sources** were mostly internal to EARSC, as a partner of the project that closely follows the development of both the SDGs-EYES platform's exploitation tasks and its associated pilots. Additional input was gathered through exchanges during the exploratory meeting and through regular SDGs-EYES project updates. In turn, the analysis phase involved a review of the provided resources.

As a final step, the qualitative data was **validated** by SDGs-EYES's T6 team as well as by the Evenflow team.

2.2 Data collection and analysis

The necessary qualitative data sources were provided by the point of contact after the first exploratory meeting took place. In turn, building on EARSC's expertise in mapping barriers and identifying best practices, the analysis phase involved reviewing the provided resources. This included the SDGs-EYES website, the EARSC taxonomy, SDGs related tools.

Further important resources were the NextGEOSS project[8], which provided deep insights regarding the usage of the platforms from the private sector perspective, and the study on the DIAS online platforms[9].

As a final step, the qualitative data was validated by a team of **subject matter experts at SDGs-EYES**. The outcome report was then **quality-checked** by a senior expert in innovation and market development support at Evenflow.

3 Findings and analysis

The market development support service provided by EARSC in EuroGEOSec is partly being tested through this case study, which focuses on **platform sustainability and integration with other data spaces, with particular attention to user engagement**. The main challenges, defined for different perspectives, are outlined as a framework for this section, and complemented by a SWOT analysis.

3.1 Platform challenges and gaps

The EO services sector is evolving rapidly, driven by advances in satellite deployment, data acquisition, and cloud-based processing capabilities. Numerous public and private initiatives – such as national platforms, **DIAS**, and early efforts like NextGEOSS have revolutionised data access and the delivery of EO-based services aligned with major policy frameworks, including the **SDGs**. However, despite these advancements, several challenges persist. The landscape of EO exploitation platforms remains **fragmented**, with varying focuses on data access, processing, or commercialisation, which

[8] https://nextgeoss.eu
[9] https://earsc.org/dias-comparison/

leads to **inconsistent user experiences** and **limited interoperability**. Many stakeholders, particularly those working in sustainable development, lack the technical expertise or awareness needed to fully harness cloud-based EO tools. While platforms provide access to vast datasets, turning this information into actionable, user-friendly services for SDG monitoring continues to be complex. Moreover, access to these digital tools still depends heavily on digital infrastructure, leaving behind users in less connected regions.

3.2 Sustainability challenges

Horizon Europe projects play a crucial role in bridging the gap between scientific research and real-world applications. However, one of the significant challenges in Horizon projects is ensuring the sustainability of outcomes beyond the research phase. For EO projects, this often involves transitioning from research-based prototypes to operational solutions that provide lasting benefits to communities. GEO has been actively working on **Research-to-Operation (R2O) pipeline**, which aims to facilitate this transition by providing structured pathways for integrating research innovations into operational and commercial environments. EuroGEO is similarly working on the **Operational Pipelines** framework. Addressing this research-to-business gap requires **targeted engagement**, **stakeholder collaboration, and support for community building**, additionally aligning with the broader Research & Innovation (R&I) to market pipeline to ensure long-term impact and scalability.

SDGs-EYES is a typical big data activity. It consumes a large variety and volume of data and focuses on performance and data quality[10]. To face these challenges and provide internal and external users with a development and operational environment while keeping costs under control, a dedicated platform has been set up and is being operated throughout the project's lifetime.

The SDGS EYES Platform is built on three main elements:

- **Data Layer:** It integrates data from the traditional Copernicus data sources (both services and satellite data), ingests ancillary data and, through the use of agnostic geospatial data management tools, generates analysis-ready datasets for tests and demonstrator cases.
- **Processing Layer:** The platform provides storage and computational capabilities; it exposes a set of tools to parallelise / optimise computational tasks in both development and pre-operational phases.
- **Front-end Layer:** The platform offers two user-interaction modalities: a laboratory and pilot front-ends.
    - **The Front-end**: This is where users (like project stakeholders) can access easy-to-use web tools designed specifically for their needs. These tools let them try out and demonstrate how the new indicators work in real-life situations.
    - **The Laboratory**: This is a workspace where experts can develop, test, and fine-tune the indicators. It runs on a Jupyter Lab environment, which gives direct access to the data and uses the platform's powerful processing tools.

[10] https://sdgs-eyes.eu/resources/the-sdgs-eyes-platform/

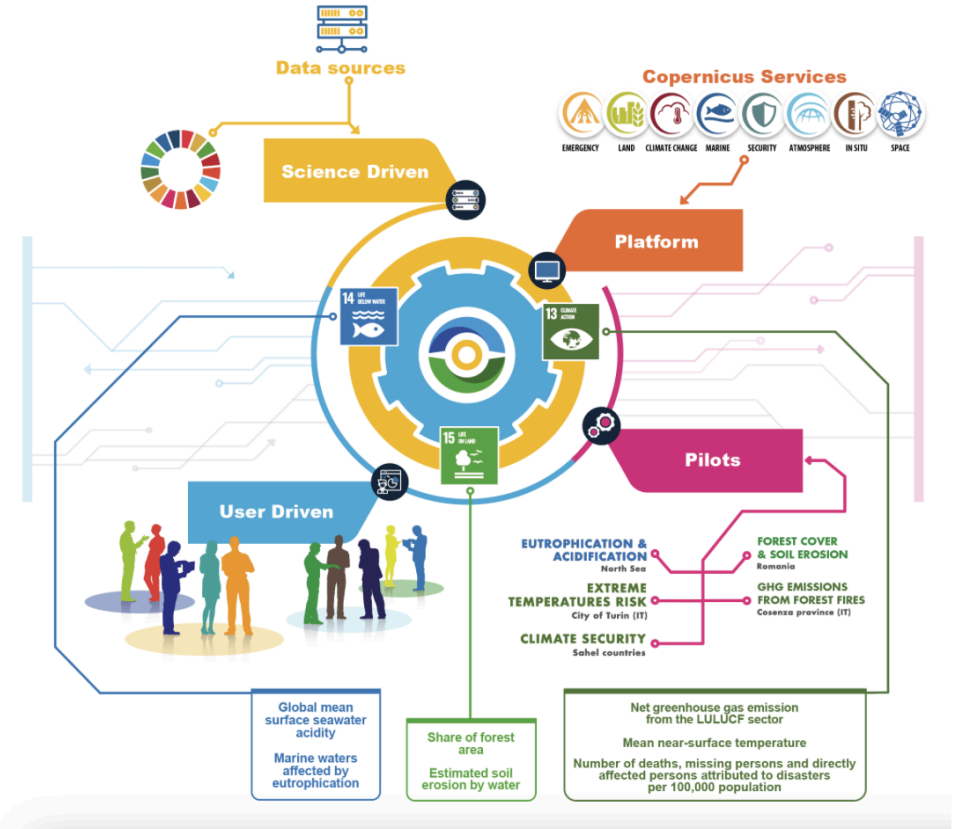


Figure 1: The SDGs-EYES methodology

In short, the platform lets users both explore ready-made tools and support the behind-the-scenes work of developing the indicators.

A major challenge for the project is maintaining the uptake and usability of the SDGs-EYES platform. From the end of the project in December 2025 for two years, the platform will be maintained by CMCC. The goal is for the platform to be picked up by national statistical offices (NSOs) and the European Commission DGs or Copernicus services to support effective decision-making.

One key barrier to the uptake and sustainability of the platform is the **lack of institutional integration into official monitoring and reporting frameworks**, such as those managed by national statistical offices or environmental agencies.

While the platform provides advanced, analysis-ready EO datasets aligned with SDG indicators, these are not yet systematically embedded in the workflows or mandates of institutions responsible for SDG reporting. Without **formal recognition** or operational uptake by such bodies, the platform risks being perceived as a research prototype rather than a long-term decision-support tool. This hinders both its sustained funding and broader adoption beyond the project lifecycle.

Given the consortium's scientific background, the primary concern of the SDGs-EYES project coordinator is to **engage effectively with the community**, including local and national users, as a significant gap exists between science and users. For the market, various stakeholder groups should be defined, such as the Environmental, Social, and Governance (ESG) community, policymakers, and others. While the platform itself may not appeal to industry, its **robust workflows** could be valuable. Following initial **research across different initiatives**, two aspects were highlighted.

- Outlining common challenges in ensuring the **sustainability** of EO research projects:
  - Limited uptake beyond the research phase
  - Insufficient community engagement
  - Difficulty connecting research outcomes to business applications
- Focusing on SDGs-EYES's **needs**:
  - Stronger community building
  - Greater engagement from end-users (e.g., municipalities, cities)

3.3 SWOT analysis

After a detailed analysis of the challenges faced by the SDGs-EYES platform, additional aspects are explored in the SWOT analysis below, highlighting overarching elements.

This analysis highlights the strengths of the SDGs-EYES platform's networking efforts, acknowledges potential weaknesses, and identifies opportunities and threats that could influence its success and scalability.

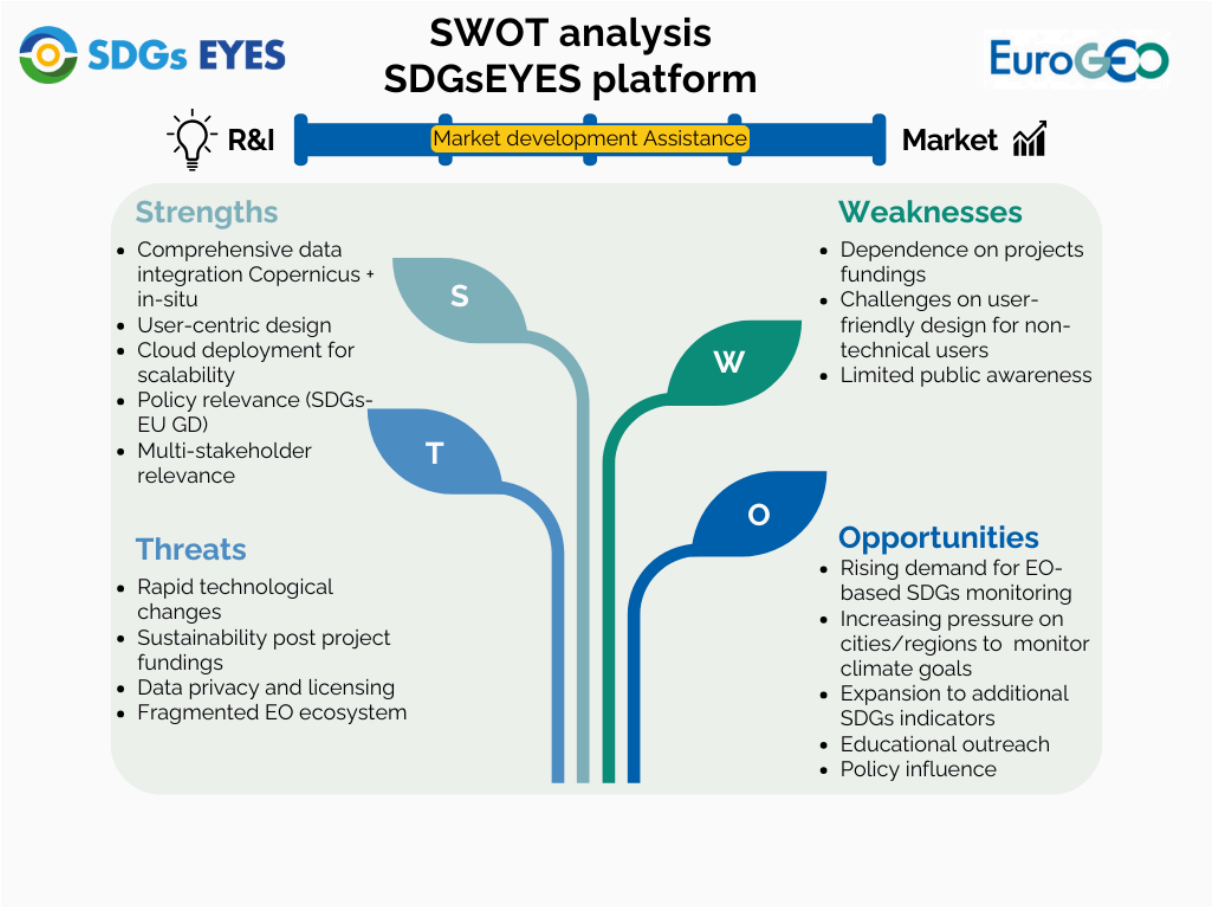


Figure 2: Market development support SWOT analysis SDGs-EYES platform

Strengths

The platform offers **comprehensive data integration** by consuming data from traditional **Copernicus sources** – both services and satellite data – as well as ingesting ancillary data. It generates **analysis-ready datasets** to support tests and demonstrator cases (the SDGs-EYES pilots). Its **robust processing infrastructure** is supported by an **ICT layer**, providing both **storage and computational capabilities**. It includes tools to parallelise and optimise computational tasks in both development and pre-operational phases. Designed with a **user-centric** approach, the platform features **two interaction modalities**: a laboratory and pilot front-ends.

Weaknesses

Some limitations of the platform include its **reliance on advanced tools** and environments like Jupyter Labs[11] may also pose **challenges for non-technical** users, potentially limiting broader adoption. Additionally, the **long-term sustainability** of the platform, which has been confirmed to be maintained by CMCC for two years after the project's end, may **depend on securing further funding** or institutional support.

Opportunities

The platform demonstrates strong **alignment** with **UN and Eurostat SDGs monitoring processes** and the EU Green Deal by focusing on Sustainable Development Goals (SDGs) related to **climate, oceans, and land**, thereby supporting broader EU environmental and sustainability objectives and potentially **attracting policy support and integration**. Its **modular design** enables future expansion to include additional SDG indicators, fostering its applicability and appeal to a wider user base. Furthermore, **collaboration with stakeholders** such as municipalities, cities, and other end-users can increase the platform's relevance and adoption by making sure it addresses **real-world needs** and challenges.

Threats

The platform faces several external challenges that could impact its long-term success; the **rapidly evolving field** of Earth Observation may lead to the emergence of **new platforms or tools** with similar or superior capabilities, increasing competition. Additionally, **data privacy and licensing** issues could restrict access to certain datasets, potentially compromising the **comprehensiveness** of the **indicators** produced.

Overall, the SDGs-EYES platform holds strong potential across several market segments and user communities, particularly those involved in environmental monitoring, policy-making, and sustainable development initiatives. **Targeted engagement strategies** will be key to driving adoption and ensuring the platform's long-term sustainability. In this context, EuroGEO will contribute by promoting engagement and raising awareness through events, workshops, and strategic partnerships with both policy and industry stakeholders. Additionally, EuroGEO can suggest efforts to secure funding by advocating for the use of Earth Observation-based solutions in SDG monitoring and by identifying opportunities to sustain the platform's growth.

[11] https://jupyterlab.readthedocs.io/en/latest/

The following best practices outline steps that SDGs-EYES can follow to achieve these goals.

4 Market analysis and best practices

Throughout the three-year process, the SDGs-EYES project put in place an effective **community engagement** and liaison strategy to leverage the uptake of the SDGs-EYES front-end platform populated by the 5 pilots, which are not part of this document analysis: Climate Security; Eutrophication and Acidification; Extreme Temperatures Risk; Forest Cover and Erosion; GHG Emissions from Fire.

Building on this, the **EuroGEOSec team** proposes additional best practices for stakeholder analysis to promote the scalability of the SDGs-EYES platform for new communities and ecosystems – these practices can be taken in account for similar professional endeavours in the future. Within EuroGEOSec, **EARSC** can support the potential outcomes through the following best practices:

4.1 Mapping stakeholders and regions with high SDG-Related EO demand

4.1.1 EARSC taxonomy

The EARSC EO Taxonomy is a **structured framework** designed to categorise and standardise the diverse applications and services derived from Earth Observation data. It serves as a comprehensive reference, organising EO services into three primary levels – thematic areas, domains, and service categories –, which collectively capture the full spectrum of EO capabilities across various industries and sectors. Covering domains such as agriculture, urban planning, climate monitoring, forestry, and more, the taxonomy provides clarity on how EO data can be applied to address specific challenges, improve decision-making, and support policy implementation. **By aligning EO services with market needs**, the taxonomy facilitates communication between EO providers and end-users, enabling a common understanding of EO value, fostering innovation, and encouraging broader adoption of EO technologies across public and private sectors.

To strengthen the work the SDGs-EYES project has already developed through the User Uptake strategy and related webinars, some strategic ways to leverage the EARSC taxonomy to broaden user engagement for the platform's sustainability include: **aligning** EO solutions with **market sectors**; identifying **new communities of users**; and developing communication tailored to **taxonomy** terminology, as expanded below.

EARSC Market Sector	Example Community of Users	Role (back-end perspective)	Related SDG (13-14-15)

Managed Living Resources	Agricultural research institutes, marine biology labs, forestry monitoring centres	Analyse crop yields, monitor forest cover and biodiversity, assess fish stocks	SDG13, SDG14, SDG15
Energy & Mineral Resources	Renewable energy labs, geoscience departments, mining research institutes	Site assessment for wind/solar, monitor extraction impacts, support raw material mapping	SDG13, SDG15
Infrastructure & Transport	Transport planning institutes, civil engineering labs, logistics research centers	Monitor infrastructure development, optimise logistics, assess climate vulnerability	SDG13
Financial & Digital Services	Environmental risk analysts, insurance modelling labs, EO data processing startups	Use EO to assess environmental risk, support Insurtech, develop analytics platforms	SDG13, SDG15
Defence & Security	Crisis monitoring centres, civil protection research units, border surveillance labs	Monitor conflict zones, support disaster response, improve situational awareness	SDG13
Environmental, Climate & Health	Environmental agencies, climate research labs, public health institutes	Track pollution, study climate impacts, correlate EO with disease vectors	SDG13, SDG14, SDG15
Urban Development	Urban planning research labs, smart city projects, municipal monitoring agencies	Map urban sprawl, assess green infrastructure, plan SDG-related city policies	SDG13, SDG15
Citizens & Society	Academic institutions, NGOs, educational labs, citizen science platforms	Promote EO literacy, develop participatory tools, engage civil society in SDG tracking	SDG13, SDG14, SDG15

Table 1: Example of taxonomy SDGs-EYES platform back-end perspective market expansion

EARSC Market Sector	Example Community of Users	Role (front-end perspective)	Related SDG (13-14-15)
Managed Living Resources	Policy officers in agriculture/fisheries/forestry ministries, NGOs	Use platform to monitor environmental status and support sustainable resource policies	SDG13, SDG14, SDG15
Energy & Mineral Resources	Energy agencies, mining/environmental authorities	Use EO indicators to assess environmental compliance, land degradation, and site selection	SDG13, SDG15
Infrastructure & Transport	Urban/regional planners, transport authorities	Access vulnerability maps and climate resilience	SDG13

		indicators for infrastructure planning	
Financial & Digital Services	Insurance analysts, risk modellers, ESG advisors	Integrate platform outputs into environmental risk assessments and sustainability reporting	SDG13, SDG15
Defence & Security	Civil protection operators, disaster response coordinators	Use real-time maps and alerts to inform emergency planning and rapid response	SDG13
Environmental, Climate & Health	Environmental agencies, public health officials, climate offices	Use dashboards to track climate variables, pollution levels, or habitat degradation	SDG13, SDG14, SDG15
Urban Development	Local governments, city resilience officers, smart city coordinators	Monitor green space, heat islands, urban sprawl, and nature-based solutions	SDG13, SDG15
Citizens & Society	Citizen observatories, educators, journalists, NGOs	Explore open-access visualisations and SDG indicators, raise awareness, support advocacy	SDG13, SDG14, SDG15

Table 2: Example of taxonomy SDGs-EYES platform front-end perspective market expansion

4.1.2 Geographical areas with high demand for SDG-Related EO services

The SDGs-EYES project's three interlinked Sustainable Development Goals **SDG 13 (Climate Action)**, **SDG 14 (Life Below Water)**, and **SDG 15 (Life on Land),** were chosen based on their high relevance to **environmental EO indicators**, the **availability of mature Copernicus service inputs**, and their alignment with EU and global policy priorities (e.g. the European Green Deal, the EU Biodiversity Strategy 2030, and the UN 2030 Agenda). This focus is reinforced by the findings of the **EARSC Industry Survey 2024**, which shows that over 75% of EO companies are either involved in Copernicus services or make significant use of Copernicus data – particularly in the areas of **land**, **climate**, and **marine** monitoring. The project's outreach strategy builds on this momentum, targeting geographic regions and institutional settings where demand for EO-based SDG indicators intersects with **policy obligations** and **growing market readiness**. By focusing outreach on **policy-aligned, high-potential geographies**, SDGs-EYES aims to maximise the platform's long-term sustainability and utility beyond the research phase. The following outlines the grouped outreach vision priorities for the SDGs-EYES platform, divided into four categories: high-priority outreach within Europe, the emerging EO ecosystem, strategic collaborations outside Europe, and future opportunities.

High-priority outreach to core EU stakeholders

Region	Countries	Driver	Engagement Focus	SDG relevance
Western & Central Europe	Germany, France, Netherlands, Austria	Mature EO market, policy-driven demand for land monitoring and urban sustainability	Strategic partnerships with mature EO users; urban SDG pilots; potential co-developers	15, cross-goal indicators
Nordic Countries	Sweden, Finland, Norway, Denmark	Strong EO infrastructure, Arctic monitoring, ocean and biodiversity policies	Arctic/marine SDGs, biodiversity, climate leadership	14 & 15
Southern Europe	Spain, Italy, Greece, Portugal	Climate vulnerability (heatwaves, droughts, wildfires), marine/coastal monitoring	Climate resilience, disaster risk, coastal monitoring	13 & 14

Table 3: Example geographic expansion – high priority outreach core EU stakeholders

Emerging EO ecosystem

Region	Countries	Driver	Engagement Focus	SDG relevance
Eastern Europe & Western Balkans	Poland, Romania, Bulgaria, Serbia	EU enlargement and cohesion policy, national SDGs reporting obligations	Forestry, land use, and agriculture monitoring (SDG 15); SDG data improvement	15
Danube Region	Hungary, Slovakia, Romania, Bulgaria	EU Danube Strategy	Cross-border indicators, water management	15

Table 4: Example geographic expansion – emerging EO ecosystem

Strategic collaboration: regional & intergovernmental initiatives

Region	Stakeholders	Drivers	Engagement Focus	SDG relevance
Euro-Mediterranean	Union for the Mediterranean (UfM), Copernicus Security Events and Warnings	- Marine Strategy Framework Directive - UfM Climate Agenda	Shared marine and coastal indicators, climate vulnerability	13-14
EU Institutions	Eurostat, DG ENV, DG CLIMA, EEA	European Green Deal, Eurostat, SDG integrator	Alignment with EU SDG reporting and Green Deal priorities	13-14-15

Table 5: Example geographic expansion – strategic collaboration

Future opportunity: global SDG monitoring gaps

Region	Stakeholders	Drivers	Engagement Focus	SDG relevance
Global South	Africa, Southeast Asia, Latin America	- UN 2030 Agenda - Development cooperation strategies - GEO / CEOS / UN custodian agencies' interest in EO data	Demonstrating EO solutions for SDG data gaps, pilot cases with international organisations. EO interest for reporting, climate resilience, sustainable land use	13–15 (scaling potential)

Table 6: Example geographic expansion – future opportunities

The above tables reveal how the outreach potential of the SDGs-EYES platform is deeply tied to regional policy frameworks and the maturity of EO ecosystems. From emerging user communities in Eastern Europe to strategic partnerships in the Euro-Mediterranean and Global South, each group of regions presents specific entry points whether through co-creation pilots, SDG reporting alignment, or capacity transfer. A key takeaway is that scaling **the platform from a back-end perspective requires more than technical readiness**: it depends on aligning with policy drivers, building institutional trust, and tailoring services to different levels of EO maturity. This highlights the importance of **targeted engagement strategies** and **multi-level collaboration** to ensure the long-term relevance and usability of the platform across geographies.

4.2 Market analysis of platforms comparable to SDGs-EYES

4.2.1 Excursus: the emergence of EO platforms and their ecosystems

To better understand the positioning of platforms like SDGs-EYES, it is helpful to revisit the evolution of the EO platform ecosystem. The **NextGEOSS**[12] concept was one of the first comprehensive efforts to address key barriers in EO service development, including fragmented data access, limited processing power, and lack of standardisation. The rise of **Open Data policies** and **cloud computing** further enabled the emergence of digital platforms offering cloud-native EO services.

The EO platform ecosystem can broadly be classified into **three tiers: resource**, **exploitation**, and **knowledge** (see Figure 3). At the **resource tier**, public institutions pioneered data access platforms. Examples include **USGS** for Landsat, **JAXA** for ALOS data, and a variety of national platforms in Europe such as **CODE-DE** (Germany), **PEPS** (France), and **CEDA** (UK), which serve as relays to the **ESA Sentinel Datahub**. In 2017, the EU launched the **Copernicus DIAS initiative** to streamline

[12] NextGEOSS: https://catalogue.nextgeoss.eu/about The **NextGEOSS** project, a European contribution to GEOSS, (2016-2020) proposes to develop the next generation European data hub and cloud platform for Earth Observation data, where the users can connect to access data and deploy EO-based applications. The concept revolves around providing the data and resources to the user communities, together with Cloud resources, seamlessly connected to provide an integrated ecosystem for supporting applications. A central component of **NextGEOSS** is the strong emphasis put on engaging the communities of providers and users and bridging the space in between.

data and service access via commercial consortia – **CreoDIAS**, **Mundi**, **Onda**, **Sobloo**, and **WEkEO** – each offering different cloud service integrations[13].

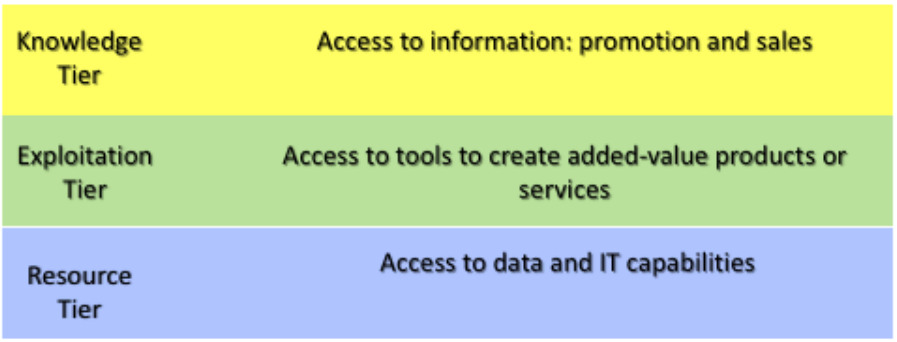


Figure 3: Tiers of the EO platform ecosystem and related platforms

At the **exploitation tier**, platforms provide toolsets for data pre-processing and value-added service development. ESA's Thematic Exploitation Platforms (TEPs) cover domains such as coastal, forestry, and food security, while EU-funded projects and commercial solutions (e.g. UP42, CLEOS) increasingly incorporate AI and deep learning[14].

Finally, at the **knowledge tier**, platforms focus on **promotion, storytelling, and sales**, helping users explore use cases or purchase EO services. Examples include eoMALL, cloudeo, and ArcGIS Online, which bridge the gap between technical services and market adoption.

While exploitation platforms offer numerous technical functionalities, their **value is still perceived primarily through the richness of available data (39%) as emerging from the survey** "*View of the private sector on Earth Observation platforms*"[15]. Other appreciated aspects include the **user interface, tool access, and data reliability**. However, support-related features such as **community engagement, customer service, or marketplace functionality**, remain under-recognised or underdeveloped, pointing to an opportunity for improvement in user experience and commercial value delivery[16].

This tiered model provides a useful lens through which to evaluate SDGs-EYES: it primarily targets the **knowledge and exploitation tiers**, aiming to make EO data actionable and meaningful for SDG reporting and local policy support, while benefiting from cloud infrastructure and data sources from the resource tier.

Considering the evolving landscape of EO platforms, SDGs-EYES seeks to fill a niche by offering a user-friendly, SDG-aligned interface targeted at regional authorities – an area underserved by more technical or global-scale platforms.

[13] NextGEOSS report "*View of the private sector on Earth Observation platforms*"
[14] Deep learning clouds are used to increase deep learning accessibility. This allows for larger data sets to be analysed and to train in different algorithms. Deep learning in the cloud allows for distribution of model training across multiple machines, instead of just in one machine.
[15] NextGEOSS report "*View of the private sector on Earth Observation platforms*"
[16] NextGEOSS report "*View of the private sector on Earth Observation platforms*"

4.2.2 Detailed comparison of DIAS and the Copernicus Data Space Ecosystem (CDSE)

In 2017, the EU launched the Copernicus DIAS initiative. As part of the NextGEOSS project, EARSC analysed the **DIAS** (Data and Information Access Services) platforms – cloud-based solutions designed to streamline and standardise access to **Copernicus** data and services. These **platforms** offer users access to Sentinel satellite data, Copernicus operational services, and a range of applications and tools. In collaboration with the four commercial DIAS providers, EARSC developed a comparison table to present the key features of each platform, helping users better understand their functionalities and choose the most suitable solution for their needs.

DIAS evolved during time through a vibrant community of platforms supported by ESA TEPs, the Copernicus Entrusted Entities and the European Commission.

	Copernicus Services available locally	EO processing tools	EO applications	Backend services for developers	Type of cloud offer
Mundi	**CLMS** **CEMS**	GDAL, Orfeo Toolbox, SNAP Toolbox	Geosigweb Land Consumption, Grassland Monitoring Egeos, KeyStone Copernicus Data Hub, ESA Web WorldWind, Eo4WildLife	Jupyter Note Book, Discovery API, Open search and OGCSW API, Download API, S3 Protocol, Reload Manager.	**Pay-per-use:** Applicable on all VM (VCPU, NVGPU), all storage component, network and services **Package offer:** From 30 to 60% off for 12 to 36 months subscription
Onda	**CMEMS** **CLMS** **CAMS**	Open source Software tools are available in our pre-configured virtual environments for data processing, software development, dissemination of value-added products and administration of front-end services. Our data processing tools include: SNAP, QGIS, Orfeo Libraries, ESA Toolboxes, GDAL.	ONDA is an "Enabler of Capabilities" and it serves a wide variety of users, regardless of what type of thematic application or business they are dealing with. In this context, ONDA provides: • The Marketplace for users to promote their own solutions • Managed Service, which benefit from our long-standing expertise in EO applications.	ONDA offers two APIs to access multi petabytes of data: OData (Open Data Protocol) and Advanced API (ENS - Elastic Node Server). • OData queries can be used directly in the Catalogue for data search, view and download • the Advanced API allows accessing any low level component of the product through ENS (Elastic Node Server). No download nor unzip are required to process the data. Both APIs can be used with any general programming or scripting language.	The ONDA Cloud provider is OVH. Two payment models are available: • pay per use (hourly) • subscription (monthly).
Creodias	**CAMS** **CMEMS** **CLMS** **CEMS**	Dedicated VM images with EO processing tools included, SNAP (s1tbox, s2tbox, sen2cor, gpt), OSGeo ready-to-use operating system images, e.g. including QGIS, FWTools, Mapserver, Python with GDAL , Mapnik, Geoserver. Batch Processing System **ArcGIS ESRI** (commercial software) - an innovative mapping and analytics platform with direct, local access to EO data.	EO Finder, EO Browser Sentinel-hub, The SPARQL interface	Possibility of customer's applications installation on CREODIAS platform with full root access to the system.	We offer pay-per-use and fixed term pricing billing models (https://creodias.eu/billing-modes). We provide discount for long term contracts and big value orders. We grant special discount for scientific institutions. The whole description and price list is available on: https://creodias.eu/price-list.
Sobloo	**CMEMS** **CLMS** **CAMS** **CEMS** **C3S**	We propose a customised "sobloo VM: " - VM pre-installed with a Virtual desktop, accessible from your favorite browser, which contains: - Processing environment: ESA Snap, BRAT, OTB, Sen2Cor - GIS solution: Qgis 2.18- GDAL 2.2 support - Development platform: Eclipse Neon with C, C++, Java, Python - Scientific computation: scilab, GNU Octave, ... - Jupyter notebook - Rstudio	All algorithms and libraries available in SNAP and OTB- Cloud coverage detection algorithm based on deep learning developed by Airbus Defence and Space (March 2019) - Change detection algorithms developed by Airbus Defence and Space (March 2019) - GeoRice - rice crop monitoring (March 2019) - GeoFire - fire damage monitoring (March 2019) - CNES LAI (June 2019)	On top of the IaaS features, sobloo offers the following services, upon request: - Ready to go K8S cluster- Apps deployment engine (Monocular), providing access to more than 150 pre-packaged apps such as ETCD, Redis, Kafka, RabbitMQ, ELK. Complete list available at https://hub.kubeapps.com	Both pay-per-use and package offers are available.
Wekeo	**CMEMS,** **CLMS** **CAMS** **C3S**	SNAP, QGIS, Panoply, Monteverdi, s3rgb	EO Workbench provides set of interactive applications like SNAP, Panoply and non-interactive processing services like NDVI generation, RGB generation. The users can also integrate their own processing service in the portal and can share the service/results with others.	-Discovery API (OpenSearch): Collection discovery and Search. -Harmonised Data Access UI & API (based on REST I/F): Search & Access of EO Data. -EO PaaS (EO Workbench): Enables users to apply pre-configured processing or their own custom processing algorithms to EO data. Using EO tools like SNAP, QGIS via browser. -Jupyter Hub: Jupyter notebooks can be developed making use of Harmonized Data Access (REST I/F); -Self provisioning of IaaS, PaaS (ranges from SDN, SDS, VMs, Docker, K8S)	**Pay per use:** A commercially attractive pay-per use will be offered on WEkEO V1 (started after summer 2019). **Package offer**: The v0 of WEkEO can host a limited number of Pilot Users free of charge ("Users to the data"). Packages are based on T-Shirt sizes for project sizes (XS, D, S, M, L).

Table 7: DIAS platform comparison

Fast forward, the Copernicus Data Space Ecosystem (CDSE) was launched in **January 2023** as a next step in the evolution of Earth Observation data services. It replaced the **Copernicus Open Access Hub** which ceased operations in **November 2023** and the DIAS online platforms. The CDSE ecosystem offers immediate access to large amounts of **open and free** Earth Observation data from the Copernicus Sentinel satellites, including both new and historical Sentinel images, as well as the Copernicus Contributing Missions and selected data sets from Copernicus Services[17]. This new ecosystem is set to be in place until **2029** and integrate researchers, industry players and

[17] https://www.copernicus.eu/fr/node/69268

policy/decision makers to access extremely large amount of EO data without need of big computer storage and computing power. Copernicus until today is Europe's ***"Largest EO data offering in the world"***, bringing together different typology of data to drive innovation, security applications and responding to the triple planetary crisis[18].

This in-depth focus wishes to provide an analysis of the DIAS and the evolution and their integration in the Copernicus Data Space Ecosystem. The SDGs-EYES platform could serve as a **value-added service** (**or layer**), translating Earth Observation data into actionable insights to support monitoring of the Sustainable Development Goals. By leveraging Copernicus data, particularly from Sentinel satellites, SDGs-EYES can offer tailored analytics and visualisations aligned with specific SDG targets, such as those related to climate action, sustainable cities, and land use (**thematic layer**). Hosted within the CDSE infrastructure, the platform could benefit from scalable cloud computing (**scalability**) and direct access to vast datasets through standardised Application Programme Interfaces (APIs), enabling efficient processing without the need for local resources (**interoperability**). As part of CDSE's broader ecosystem, SDGs-EYES could contribute to thematic hubs and support EU and global policy objectives, offering public authorities, researchers, and civil society a powerful tool to track environmental performance and sustainability outcomes (**user uptake and policy impact layer**).

4.2.3 Towards the Data Spaces

To facilitate the development of the **data market** and the general capitalisation of data, the European Commission is investing in **common European data spaces** in strategic economic areas and areas of public interest, such as health, the **Green Deal**, transport and security and law enforcement. The **data spaces** bring together data, data infrastructures, and governance structures to facilitate **secure data** pooling and data **sharing**, a pre-condition for wider availability of data across the economy and society. Under the Work Programme 2021-2022, the basis was laid for the development of 14 data spaces in line with the **European data strategy**. The work on the data spaces is accompanied by a review of the policy and legislative framework for data access and use, with the **Data Governance Act** and a proposal for a **Data Act** adopted on 23 February 2022, as well as the Implementing Act on High-value datasets under the Open Data directive adopted on 22 December 2022. Such is the case with the **Green Deal Data Space (GDDS)**, the data ecosystem of the strategies and action plans for the European Green Deal, which will offer access to a variety of data related to the environment and the EU's climate objectives, from both the public and private sectors. This will, for example, include detailed data on geospatial systems, localised water, soil and air pollution, but also detailed geo-localised systems, energy supply and consumption. Also, the **Destination Earth** initiative, which develops a very high precision digital model of the Earth to enable visualising, monitoring and forecasting natural and human activity on the planet will be a key contributor to the Green Deal Data Space. The GDDS will serve as a trusted and secure platform for accessing and sharing high value environmental data across Europe, facilitating **data-driven decision making** to support the goals of the European Green Deal.

[18] https://unfccc.int/news/what-is-the-triple-planetary-crisis

Data spaces, such as those envisioned under the Green Deal Data Space and outlined in the GREAT[19] project's roadmap, offer a trusted, interoperable, and sovereign framework for sharing and accessing environmental data across sectors and borders. Integrating the SDGs-EYES platform into such data spaces would support its ability to access high-quality, real-time Earth Observation and socio-economic data, fostering more accurate and timely monitoring of SDG indicators. This alignment would also enable greater collaboration with public authorities, research institutions, and private stakeholders, promoting data reusability and cross-domain innovation. By embedding SDGs-EYES within a federated data space ecosystem, the platform could benefit from sustained data availability, governance support, and scalable infrastructure ensuring its long-term **operational sustainability** and relevance in supporting evidence-based policy for sustainable development[20].

4.2.4 Comparable platforms

Access to Copernicus data is crucial for the operational success of EO companies. In a recent survey conducted by EARSC, companies were asked which platforms they use to access Sentinel data. The results show that the **Copernicus Data Space Ecosystem** and **Sentinel Hub** are the most frequently used platforms. When selecting a platform, companies prioritise **ease of access** and **technical capabilities** that align with their operational needs: **77%** of respondents cited ease of access as the primary reason for their choice, while **62%** highlighted platform functionality as a key factor. Against this backdrop, a market-oriented analysis of existing EO and SDG-related platforms reveals valuable insights into current best practices, gaps, and strategic opportunities for tools like **SDGs-EYES**[21].

Several platforms currently operate at the intersection of EO and SDGs, each offering unique strengths and targeting different user needs. Among these, **SDGs-EYES stands out** as a user-friendly, EU-backed platform focused on supporting regional and local authorities in monitoring SDG indicators through Copernicus data. It prioritises ease of access and alignment with UN SDGs but is still evolving in terms of advanced analytics and long-term sustainability.

Complementing SDGs-EYES, the EO4SDG, an initiative of the Group on Earth Observations (GEO), offers a global coordination framework and capacity-building resources, though it is less operational and lacks localised dashboards. OpenSDG provides an open-source, customisable platform widely adopted by governments for SDG reporting; however, it primarily handles statistical data and has limited Earth Observation integration.

At the more technical end, platforms like Google Earth Engine and Copernicus WEkEO offer powerful cloud processing capabilities and extensive data catalogues, favoured by researchers and data scientists. While Google Earth Engine provides global-scale EO analysis, it has limited accessibility for non-technical users. WEkEO, as an official EU cloud platform, excels in Copernicus data access but is also geared toward expert users rather than policy makers or local administrators.

In terms of communication and engagement, the World Bank SDG Atlas **covers a wide range of SDGs** and offers strong **data storytelling and visualisations**, effectively reaching non-technical audiences,

[19] https://www.greatproject.eu
[20] https://www.greatproject.eu/wp-content/uploads/2024/05/D6.2-Roadmap.v1.0-1.pdf
[21] NextGEOSS report "*View of the private sector on Earth Observation platforms*"

but with limited interactivity or EO data integration. The Eurostat SDG Dashboard serves as the official EU reporting tool with highly credible, harmonised indicators but lacks flexibility and EO-based enhancements.

Additional platforms such as UN-SPIDER, SERVIR Global, and Global Forest Watch also contribute valuable EO services tailored to disaster risk reduction, regional decision support, and environmental monitoring, respectively, highlighting the diverse ways EO supports SDG achievement across sectors and geographies.

Below is a list of comparable platforms offering similar EO and related SDGs services:

Platform	Description	Target Users
EO4SDG (NASA/CEOS)	Promotes the use of EO for monitoring the SDGs	National Statistical Offices (NSOs), UN agencies
UN SDG Global Database	Offers SDG indicator data at global and national levels	Governments, Researchers
Copernicus WEkEO	EU's DIAS offering access to Copernicus data and cloud processing	Data scientists, Researchers
Google Earth Engine	Provides cloud-based processing for geospatial data, with plugins for SDG tracking	Developers, NGOs
World Bank SDG Atlas	Interactive storytelling on progress toward SDGs using visualizations	Policymakers, Public
OpenSDG	Open-source platform for SDG reporting with customizable dashboards	Governments, NGOs
Eurostat SDG Indicators Dashboard	EU-level SDG progress monitoring with standardised indicators	Policymakers, analysts

Table 8: Comparable platforms

A dedicated space is for the DestinE platform, the flagship initiative of the European Commission to develop a highly-accurate digital model of the Earth (a digital twin of the Earth) to model, monitor and simulate natural phenomena, hazards and the related human activities. DestinE is highly relevant for the future sustainability of the SDGs-EYES platform, as it offers a robust, cloud-native architecture designed for scalable data integration, advanced analytics, and long-term system interoperability. Its components such as the **common data lake**[22] and the Digital Twin Engine, provide models for managing large volumes of diverse data sources, using complex workflows, and supporting real-time simulation and decision-making. By aligning with DestinE's approach, SDGs-EYES can build a more resilient backend that ensures continuity beyond the project's lifetime, facilitates integration with other European digital infrastructures, and supports the reuse of knowledge and services in future sustainability and policy-driven initiatives.

[22] A data lake is a centralised repository designed to hold vast amounts of raw data in its native format, including structured, semi-structured, and unstructured data.

4.2.5 Market gaps

Despite the growing number of platforms linking EO data to SDGs, several critical gaps remain in the market. One major gap is the **limited localisation of services**, many platforms focus on global or national-level indicators, offering little customisation for local or regional authorities. This leaves municipalities and smaller institutions without actionable insights tailored to their specific context. Another gap is the **integration of EO with official statistics**: while some platforms excel at processing EO data and others specialise in statistical SDG reporting, very few successfully bridge the two in a user-friendly, interoperable way. As a result, users often struggle to validate EO-based indicators against national statistical baselines or integrate them into formal reporting workflows.

Usability and accessibility also pose challenges. Highly technical platforms like Google Earth Engine or WEkEO offer powerful capabilities but require advanced expertise, making them inaccessible to non-expert users such as policy makers, urban planners, or NGOs. Conversely, platforms designed for broader audiences often lack robust EO functionalities, leading to a trade-off between accessibility and analytical depth. In parallel, **data fragmentation and lack of interoperability** persist, with multiple sources of EO and statistical data hosted on siloed platforms, creating barriers to holistic SDG monitoring.

4.2.6 Best practices

Leading EO platforms demonstrate several best practices that have contributed to their sustained market relevance and user adoption. A key feature is the **seamless integration of user-friendly interfaces with powerful backend capabilities**, allowing both expert and non-expert users to access and manipulate data efficiently. Platforms like Sentinel Hub and Google Earth Engine exemplify this by offering intuitive visualisation tools while supporting advanced API access for developers and analysts. Another best practice is the **emphasis on documentation, tutorials, and community engagement**, which fosters user autonomy and builds loyalty. Platforms that provide rich educational resources – such as Jupyter Notebooks, demo use cases, and webinars – help users onboard quickly and make full use of available functionalities.

Additionally, **interoperability and integration with other systems** is critical. Market leaders often support open standards (e.g. OGC protocols) and offer plugins or APIs that allow data to flow seamlessly between EO tools and statistical platforms or GIS software. This capacity is essential for aligning EO data with SDG indicators, especially when linking Earth Observation insights with statistical datasets. Finally, **transparency around data provenance, quality, and updates** is also a hallmark of market leaders, ensuring trust in EO-derived indicators. These elements – combined with cloud scalability, modular toolkits, and responsive user support – form a blueprint for platforms like SDGs-EYES to emulate and adapt to their specific target audience.

4.2.7 Opportunities for scalability of the SDGs-EYES platform

In the current EO platform landscape, **SDGs-EYES is well positioned to occupy a strategic niche** at the intersection of Earth Observation and Sustainable Development Goals, particularly by serving local and regional authorities. While many platforms offer access to EO data, few translate this into **operational SDG-relevant insights tailored to subnational contexts**. This creates a valuable opportunity to support decision-making at the level where most SDG implementation actually occurs. By offering localised indicators, dashboard functionalities, and actionable data layers, SDGs-EYES can address a gap left by platforms that remain overly global or generic in scope.

Another opportunity lies in **bridging EO data with official statistics** – an area where many current platforms fall short. Integrating EO-based indicators with statistical workflows, and guaranteeing alignment with Eurostat or UN SDG frameworks, could establish SDGs-EYES as a credible and authoritative tool for sustainability reporting. Furthermore, **co-design with end users** – including municipalities, regional planning agencies, and local NGOs – presents an advantage for ensuring relevance, usability, and long-term adoption. Platforms that are built around actual user needs, and that offer interfaces designed for policy rather than just scientific exploration, stand out in a crowded market.

These market gaps underscore the **opportunity** for platforms like SDGs-EYES to position themselves as **integrated, accessible**, and operational tools tailored to regional users navigating the complexities of SDG implementation.

Finally, with the growing demand for **cloud-based processing** and data-as-a-service models, SDGs-EYES can differentiate itself by offering lightweight, pre-processed, and ready-to-use EO products that lower the technical entry barrier. Providing training, support, and guided workflows will enhance usability and uptake, especially among non-technical actors in local administrations. By anchoring its offer in both technological usability and policy relevance, SDGs-EYES can become a go-to platform for **evidence-based SDG monitoring** and action at the regional level in Europe and beyond.

5 Recommendations and opportunities

5.1 Opportunities for engagement

The market development support under EuroGEO can foster the SDGs-EYES project and platform to multiple opportunities to engage with key stakeholders, enhance visibility, and collaboration. Through targeted meetings, strategic events, and tailored networking, SDGs-EYES has already showcased its solutions, connected with decision-makers, and explored new partnerships to drive adoption and impact.

1. **Targeted meetings and workshops:** EARSC, through its community and outreach strategy supported by multiple projects, has facilitated opportunities for SDGs-EYES to engage directly with stakeholders such as municipalities, city planners, and local governments. These events

have provided a platform to present the *SDGs-EYES* solutions, explain their benefits, and gather valuable insights from potential end-users. Notably, SDGs-EYES has attended the following event:

Attending the HARMONIA project final event to leverage the network of public sector stakeholders. This event gathered European cities and resilience experts. The four pilot cities – Milan, Piraeus, Sofia, and Ixelles – have shared their unique stories, discussing their climate challenges and how HARMONIA has supported their resilience efforts. The event included the demonstration of the HARMONIA Integrated Resilience Assessment Platform (IRAP). SDGs-EYES representatives brought the experience and point of view of SDGs-EYES to the External Feedback Panel, discussed **urban resilience and adaptation to climate change**.

2. **Participation in networking events:** SDGs-EYES leveraged EARSC's existing events, including conferences and webinars, to showcase their projects to a broader audience. EARSC's network of EO stakeholders will provide valuable connections that can enhance visibility and adoption.

   - Eurocities: Largest network of European cities, where local governments meet, exchange ideas and work together on thematic forums and 40 working groups on everything from noise pollution to gender equality and sustainable mobility.
   - EU Green Week (3-5 June 2025): the "three Cs" – Clean, Competitive & Circular – exploring how to put circularity at the centre of Europe's economic transition. The conference will enable knowledge sharing, alliance building, and raising awareness about the potential of a circular economy.
   - Smart City Expo Barcelona (3-6 November 2025): the annual event for cities and urban innovation that brings together leaders from global companies, governments and organisations towards green, smart and efficient cities.

3. **Bilateral engagement opportunities:** EARSC identified strategic partners and organise tailored one-on-one interactions to foster collaboration and build trust with key end-users.

   - GEO Global Forum **(3-5 May 2025):** from Ministers and global leaders to citizens – to harness Earth Intelligence to empower informed and ambitious actions to ensure food security, restore ecosystems, prevent disasters, and confront the triple planetary crisis, transforming the Sustainable Development Goals into an achievable reality. Key is the adoption of the post-2025 Strategy Implementation Plan that must deliver the ambitious goals of GEO's Post-2025 Strategy.
   - Living Planet Symposium **(23-27 June 2025):** emphasises transitioning from 'observation to climate action and sustainability for Earth'. The Living Planet Symposium will discuss the latest scientific findings and applications based on satellite data, review the contribution that data and technologies have made and could further make in addressing environmental and societal challenges. The symposium will showcase innovative products, services, missions and initiatives, with the overarching goal of demonstrating how science, society, policymaking, businesses and the economy can all benefit from observations made from space.

5.2 Visibility and promotion

1. **Participation in EARSC events:** SDGs-EYES has had the opportunity to present during sessions, panel discussions, and thematic workshops at EARSC events, amplifying their reach to potential end-users and stakeholders.

    - EXPANDEO (11-12 June 2025), EARSC annual event, where the market meets, provides a key platform for European Earth Observation companies, institutional actors and various other stakeholders to interact and network, learn about current policies and their impact on the industry, as well as reflect on challenges and explore new horizons.

2. **Success Stories and Case Studies:** EARSC will assist in creating impactful case studies and success stories that demonstrate the practical application of SDGs-EYES solutions in cities and municipalities. These materials will serve as powerful tools to inspire confidence and adoption. EARSC platforms will highlight successful use cases and tangible benefits will increase the visibility of the solutions:

    - EOwiki: EOwiki aims to support the awareness and the communication of EO activities from academia, research and the commercial sector. It is a tool to display to non-EO users how EO is currently used, develop the awareness of EO users which are not specialists and to promote EU capabilities.

Eurisy's recent Geospatial Tools for Cities Focus Group and the Smart Cities Marketplace is also a platform that SDGs-EYES can make use of: it provides a new platform for local decision-makers, industries, investors, researchers, and other smart city stakeholders to collaborate, prioritise needs, and leverage geospatial data to create accessible and innovative solutions for sustainable urban development. An initiative led by Eurisy and ICLEI Europe: Local Governments for Sustainability, established within the Smart Cities Marketplace of the European Commission, will connect users and developers to share best practices and models, and provide support by guiding discussions on three main topics identified as crucial for contemporary smart city stakeholders: Climate change adaptation, Disaster risk management, and procurement of innovative solutions.

5.3 Strategic partnerships

1. **Identifying relevant stakeholders:** EARSC will leverage its extensive network to connect SDGs-EYES with key stakeholders, including local governments, urban planners, NGOs, and businesses. These connections can help drive the uptake of the SDGs-EYES platform. Some relevant stakeholders include:

    - City of Ferrara, Italy
    - City of Świetokrzyskie, Poland
    - City of Milano, Italy
    - City of Bruxelles, Belgium

- City of Pireus, Greece
- City of Sofia, Bulgaria

2. EO Services survey: launched by EARSC to the EARSC members to understand the sector in which they operate.
3. EO for cities and regions: EARSC is developing a booklet of services of the EARSC community for local communities and local and regional authorities. The collected information will be used to promote the services of our members to the local authorities with which EARSC interacts through the following projects:

    - VALORADA: Data-driven climate resilience at regional level
    - HARMONIA: Climate Change Adaptation and Risk Assessment in Cities
    - OCEANIDS : Climate Resilience in Coastal Areas
    - ENFORCE: Enhance environmental compliance by integrating citizen science with innovative technologies at national level
    - LANDSHIFT: develop sustainable land use and management methods to enhance ecosystem functions, including carbon sequestration and emission reduction at regional level
    - GREEN DEAL DATA SPACE: With the launch of Common European data spaces, the European data strategy aims to create a single market for data, where data can flow within the EU and across sectors, for the benefit of the citizens and the planet Earth.

These projects support the improvement of the use of Earth Observation data to address climate change at the regional and city level, assess the climate change risks, to support adaptation to climate change and to implement appropriate mitigation measures.

4. **Policy Engagement:** Through EARSC, EuroGEO aims to support SDGs-EYES in engaging with policymakers and advocating for the integration of EO solutions into urban development strategies, facilitating their long-term adoption and support. EARSC's members' views are gathered through a series of ad-hoc working groups dedicated to important topics and to leverage the EO voice at European institutional level.

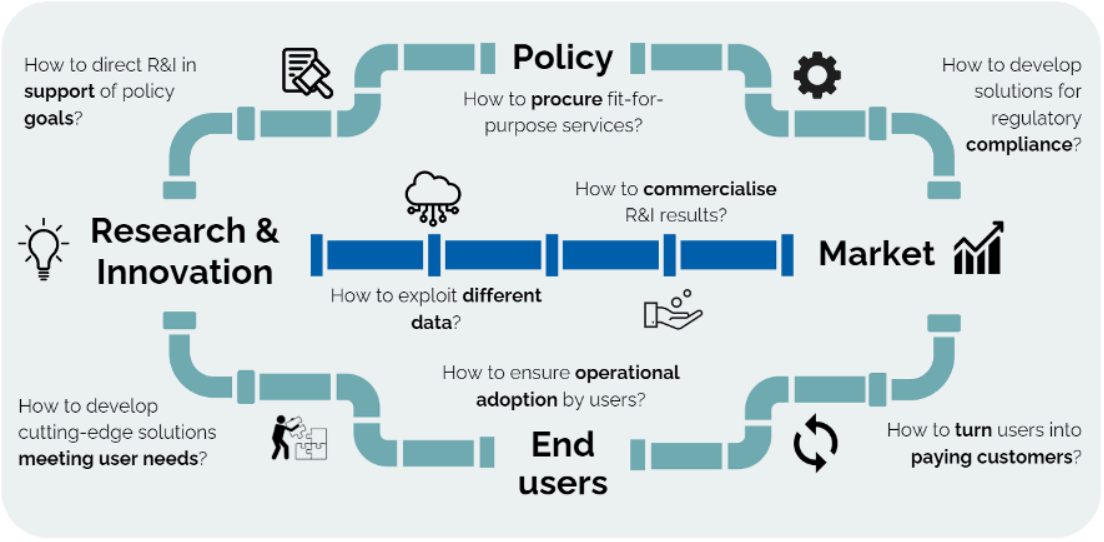
6 Annexes

6.1 Operational pipelines

Operational Pipeline	Description
Policy to market	The landscape of **solutions to new regulations** is very **fragmented** and many users **lack clarity** on how to access or use them. For example, the EUDR requires deforestation-free products supported by EO solutions, but provides limited guidance to users.
Infrastructure coordination	**Common European Data Spaces** can leverage EO data (satellite and in-situ), but **implementation** remains **fragmented** and **user engagement** is **limited**. Incorporating EO components into GDDS can help bridge this gap.
R&I supporting user needs	This pipeline addresses **inquiries and challenges** arising from **users' specific needs** or issues. For instance, the renewable energy sector must significantly increase output and can be supported by EO, but technical and awareness challenges remain.
From R&I to market	A situation where the product or service **addresses research questions** but is **unable** to **reach** the **market**. Namely, many activities have supported the use of EO for biodiversity monitoring, yet few have reached a market-ready stage.
Funding and finance	The **EU funding landscape** for **collaborative projects** is highly **diverse** and needs to be integrated and communicated effectively to optimise financial support for companies. This includes blending funding sources for service development.

Table 9: EuroGEOSec operational pipelines description

6.2 EuroGEOSec support



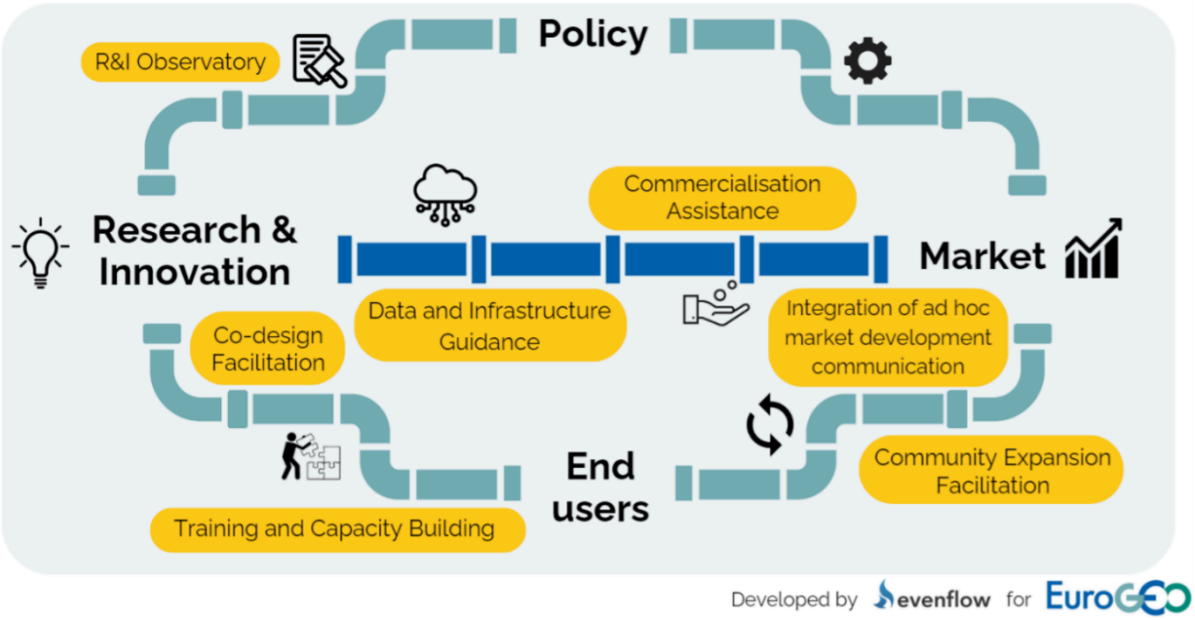


Figure 5: Innovation and market development support to be provided by the Secretariat of EuroGEO

7 References

- Pajot, E. (2020), *View of the private sector on Earth Observation Platforms*