

WEkEO

WEkEO is a cloud-based platform that provides users with access to Copernicus Earth observation data and services. It is part of the Copernicus Data and Information Access Services (DIAS) initiative, which aims to simplify and enhance access to Copernicus data and information.

- [1](#)

1

1. Purpose and Mission

WEKEO's mission is to facilitate access to Copernicus data and information services, enabling users to leverage these resources for various applications in environmental monitoring, climate change, and more. It aims to streamline the process of discovering, accessing, and utilizing Earth observation data.

2. Key Features and Capabilities

WEKEO offers a range of features designed to support users in their data analysis and application development:

- **Data Access:** Provides access to a vast repository of Copernicus data, including Sentinel satellite data, Copernicus Marine Environment Monitoring Service (CMEMS), Copernicus Atmosphere Monitoring Service (CAMS), and Copernicus Climate Change Service (C3S) datasets.
- **Cloud Computing:** Offers cloud-based computational resources, allowing users to process large datasets without the need for significant local infrastructure.
- **Application Development:** Supports the development of custom applications using the available data and computing resources.
- **Interoperability:** Ensures interoperability with other platforms and services through standardized APIs and protocols.

3. Services Provided

WEKEO provides several core services to facilitate the use of Copernicus data:

- **Data Services:** Easy access to a wide range of Earth observation datasets, including real-time and archived data.
- **Processing Services:** Cloud-based processing capabilities that enable users to run complex analyses on large datasets without the need for local computational resources.
- **User Support and Documentation:** Comprehensive support and documentation to help users navigate the platform, access data, and utilize the processing capabilities.

4. User Interface and Tools

WEKEO's user-friendly interface and tools are designed to cater to a diverse user base, from researchers and developers to policymakers and commercial users:

- **Dashboard:** A centralized dashboard for managing data, processing tasks, and accessing tools.
- **Catalog Search:** An intuitive search tool for discovering datasets based on

various parameters.

- Data Download: Easy download options for selected datasets.
- Jupyter Notebooks: Integrated Jupyter Notebooks environment for data analysis and visualization, supporting Python and other programming languages.

5. Applications and Use Cases

WEkEO supports a wide range of applications across various sectors, including:

- Environmental Monitoring: Tracking changes in land use, deforestation, urban growth, and more.
- Climate Change Analysis: Studying the impacts of climate change on different regions and ecosystems.
- Disaster Management: Monitoring natural disasters such as floods, wildfires, and hurricanes to support emergency response.
- Marine and Atmospheric Studies: Analyzing oceanographic and atmospheric data to understand environmental changes and support maritime operations.

6. Collaborations and Partnerships

WEkEO collaborates with various organizations and initiatives to enhance its services and expand its reach:

- Copernicus Services: Works closely with other Copernicus services like CMEMS, CAMS, and C3S.
- Research Institutions: Partners with research institutions to support scientific studies and innovation.
- Commercial Users: Engages with commercial entities to facilitate the development of value-added services and products.

7. Access and Availability

WEkEO is designed to be accessible to a broad user base, providing various access levels based on user needs:

- Free Access: Basic access to data and services is available for free, supporting a wide range of users.
- Subscription Models: Offers subscription-based access for more advanced features and increased computational resources.

8. Notable Achievements

WEkEO has achieved significant milestones since its inception, including:

- User Growth: Attracting a growing number of users from different sectors and regions.
- Enhanced Capabilities: Continuously improving its data access and processing capabilities to meet user demands.
- Supporting Innovation: Facilitating the development of innovative applications and services that leverage Copernicus data.

Conclusion

WEkEO is a comprehensive platform that simplifies access to Copernicus Earth observation data and provides powerful tools for data analysis and application development. Its cloud-based infrastructure, wide range of services, and user-friendly interface make it an essential resource for anyone working with environmental and climate data