GROWING INTO ECO-CONSCIOUS ADULTS

Copernicus

Sustainability Toolkit

2022-1-IT02-KA220-ADU-000087270

https://geaeducation.eu

Co-funded by the European Union

1 Introduction to Copernicus and URL

Copernicus is the Earth observation component of the European Union's Space programme, looking at our planet and its environment to benefit all European citizens. It offers information services that draw from satellite Earth Observation and in-site (non-space) data.

Vast amounts of global data from satellites and ground-based, airborne, and seaborne measurement systems are present. They are free and openly accessible to users. The site offers diverse data that can be either analysed individually or could be taken in from case studies.

https://www.copernicus.eu/en

2 Classification

Classification Tag	**Mark X if applies**	**Criteria**
Purpose of tool	X	Water saving
	X	Energy saving
		Smart shopping / food planning
	X	Waste management
	X	Active transport and mobility
	X	Shrinking our carbon footprint
	X	Other
Purpose of tool Stages where it can be used	X	Awakening
	X	Understanding
		Enlightenment – Action
		Advocacy
		Evaluation
	X	Other
Language		Dutch
	X	English
	X	Estonian
	X	German

		Greek
	X	Italian
		Lithuanian
		Macedonian
		Other

3 Description

What is this tool about

Copernicus is an Earth observation initiative developed by the European Union, designed to monitor the Earth's environment via satellite imagery. It offers detailed data services on atmospheric conditions, marine environments, climate changes, and more.

It has publicly available data and insights derived from the data by researchers.

For which purposes is it used

Copernicus can be use dot support environmental monitoring, climate education, ecosystem studies, and disaster preparedness, providing educators and students with the necessary data to analyze and propose solutions to environmental challenges.

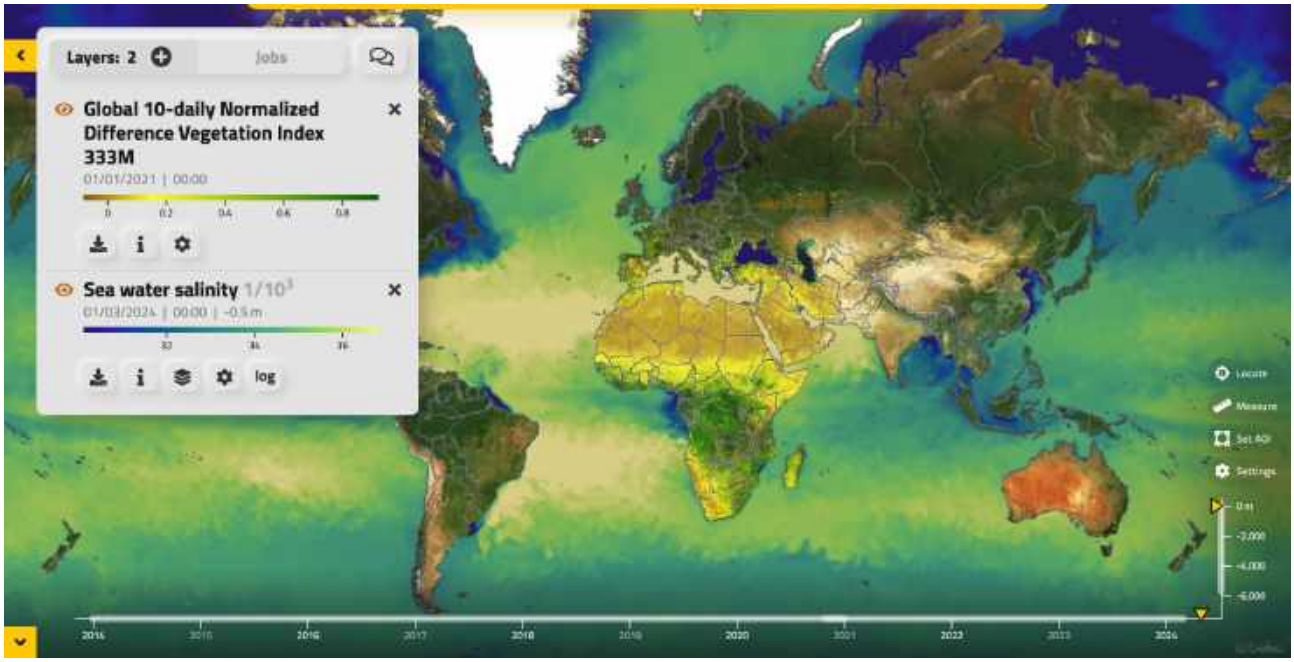

Image Source:
https://www.wekeo.eu/data?view=viewer&t=1714435200000&z=0&center=0%2C24.4152&zoom=10.13&layers=W3siaWQiOiJjMCIsInJlcGxhY2VtZW50Q29sb3JNYXBJZCI6bnVsbCwibGF5ZXJJZCI6IkVPOk1POkRBVDpHTE9CQUxfQU5BTFITSVNGT1JFQ0FTVF9QSFIfMDAxXzAyNC9jbWVtc19tb2RfZ2xvX3BoeS1zb19hbmZjXzAuMDgzZGVnX1AxTS1tXzIwMjIxMS9zbyIsInpJbmRleCI6MTAsImxvZ1NjYWxlIjpmYWxzZX0seyJpZCI6ImMxIiwicmVwbGFjZW1lbnRDb2xvcck1hcElkIjpudWxsLCJsYXllckklkIjoiRU86Q0xNUzpEQVQ6Q0xNU19HTE9C

QUxfTkRWSV8zMDBNX1YxXzEwREFJTFlfTkVUQ0RGL19fREVGQVVMVF9fL0NHTFNfTkRWSTMwMF9WMSIsInpJbmRleCI6MjB9XQ%3D%3D&initial=1&crs=epsg%3A3857

Limitations of the tool

- Data is complex and contains large data sets.
- Data analysis requires higher data analysis skills.
- The data is not real-time, but it is very frequently updated
- There are some coverage issues on a global scale

4 When and how to use this tool

Preparation:

Explore the Copernicus program and its data portals.

Activity:

Data Gathering:

Collect Arctic ice melt data from the Copernicus portal.

Create visual representations of the data.

Design an interactive infographic that highlights key findings and patterns.

Follow-up:

Share the infographic with the public online or in a community space.

Explain the data and its implications through the infographic.

Encourage others to learn about the importance of monitoring Arctic ice melt and its impact on global climate.

5 Material needed

A device with stable internet connection is sufficient to use Copernicus. The tool is free of charge. Some data access websites require registration.

6 Other resources

Links:

ESA - Introducing Copernicus
https://www.esa.int/Applications/Observing_the_Earth/Copernicus/Introducing_Copernicus

Copernicus MOOC - training how to use and analyse the sites data
https://www.copernicus.eu/en/opportunities/education/copernicus-mooc

Access to data https://www.copernicus.eu/en/access-data

Use cases nr1. https://dataspace.copernicus.eu/cases

Use cases nr2. https://www.copernicus.eu/en/use-cases

Videos:

Introduction to the Copernicus system: https://www.youtube.com/watch?v=Am93Xi0PZ5o

Introduction to the usage and research question that can be answered by using the tool: https://www.youtube.com/watch?v=yv7pKLwXo5c

News:

June 2024 the hottest on record, Copernicus study finds
https://en.mercopress.com/2024/07/09/june-2024-the-hottest-on-record-copernicus-study-finds

World breaches critical 1.5C warming threshold 12 months in a row, Copernicus data finds
https://news.sky.com/story/world-breaches-critical-1-5c-warming-threshold-12-months-in-a-row-copernicus-data-finds-13174994