
esa
EARTH SYSTEM SCIENCE HUB CHALLENGE
Storytelling with EO Dashboard
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JAXA
NASA
Brockmann Consult GmbH
Universität Leipzig
IPGP
Université Paris Cité
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Outline

- Introduction to EO Dashboard https://eodashboard.org
- Concept of EO Dashboard Stories

- Design your Story
- Use of EO Dashboard data

- Your story on EO Dashboard
- What's next?

EO Dashboard

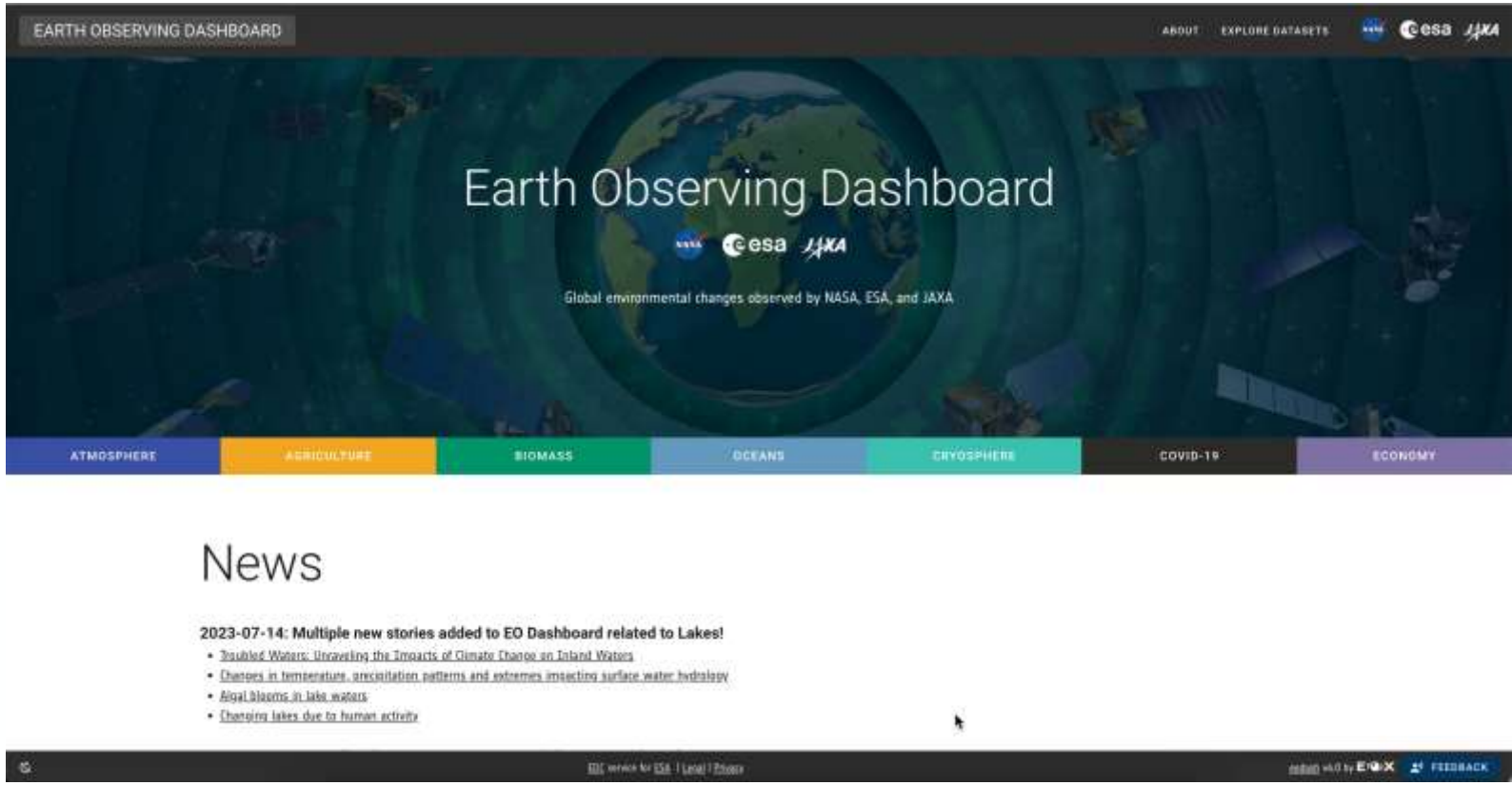
- A collaboration between NASA, ESA and JAXA, since 2020
- Illustrates global changes with tri-agency EO Data
- Communicates scientific discoveries to the general public
- Open-Source project, supported by technology developed at NASA, ESA and JAXA:
    - ESA’s Euro Data Cube, Sentinel Hub, xcube, NASA’s VEDA, eoAPI, JAXA’s Earth-graphy

EO Dashboard Hackathon 2021

GLOC 2023 IAF Award 'Space for Climate Protection

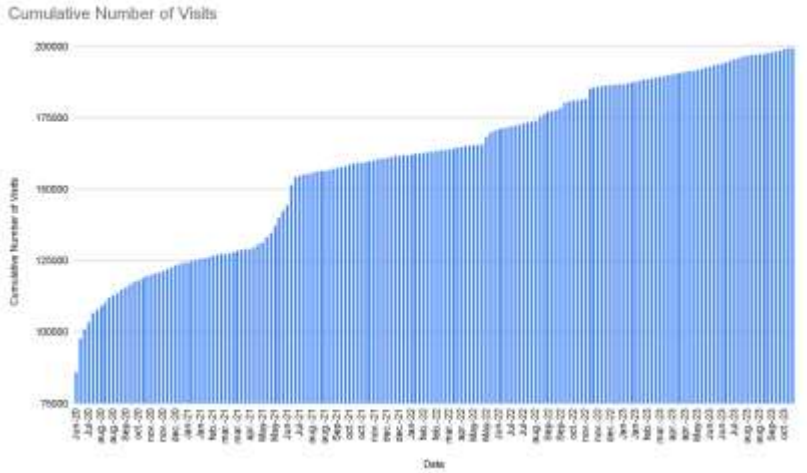
EO Dashboard

- Thematic pages:
  - atmosphere, agriculture, biomass, oceans, cryosphere, economy, covid-19
- Scientific discoveries illustrated with tri-agency EO data and indicators
- Exploration mode – to browse datasets
- Web-GIS tools to compute analytics on the fly
- Data download
- Collaboratively build custom dashboards and share with anyone
- Notebooks embedded in the stories to enable reproducbility
- Access to ESA and NASA EO platforms to execute the Notebooks: EDC, VEDA



https://eodashboard.org

USERS



~200.000
TOTAL VISITS

Academia & industry training

- Topics: Data Science, Data Visualisation, Earth Observation
- How it is used:
  - in Jupyter environments
  - for class assignments

EO Dashboard Stories - Concept

- ✓ Clear thematic focus. Current themes are:
  - Atmosphere, Biomass, Agriculture, Cryosphere (Polar), Oceans (+ inland water), Economy, Covid-19.
  - **New theme**: EXTREME EVENTS
- ✓ Each story discusses **a single subject observable from space**, e.g.: shrinking water bodies, air pollution, glacier retreat, agricultural drought, etc.
- ✓ Each subject has **societal relevance**
- ✓ Each subject is **illustrated with EO Data** from NASA, ESA and JAXA
- ✓ **Story structure:**
  - ✓ Problem statement – introduces the subject of the story. e.g. the Thwaites glacier is losing ice
  - ✓ Why this subject is important for society, e.g. sea level rise
  - ✓ What satellite Earth Observations are available from ESA, NASA, JAXA on the subject, e.g. Sentinel-1
  - ✓ How scientists use the EO data to derive insights about the subject, e.g. analysing long time series
  - ✓ Resources: Jupyter Notebook to replicate the scientific analysis, links to studies, etc.

NEW: Community-contributed storytelling

Promote storytelling more efficiently, rapidly and innovatively using three agencies EO data with science community based in Europe, US and Japan

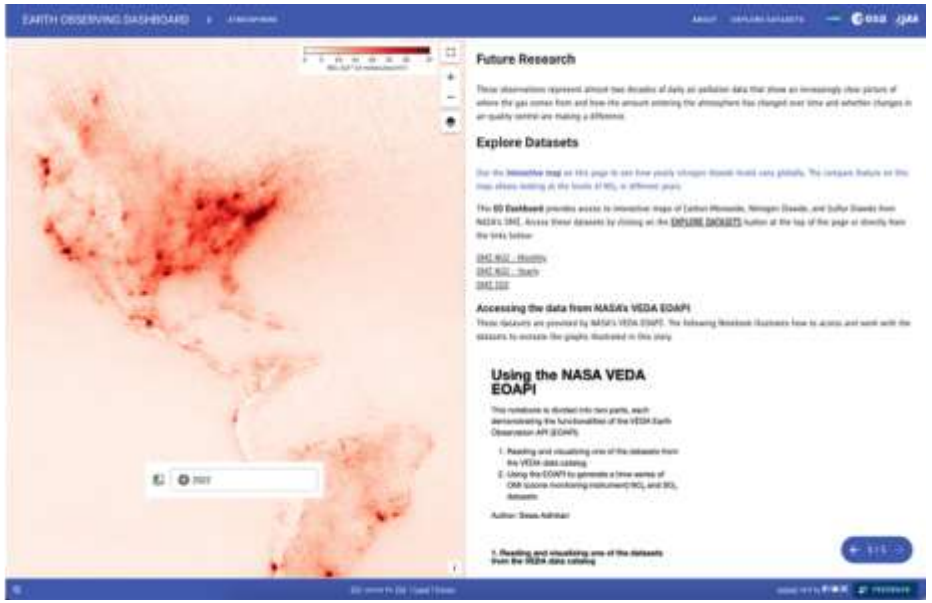
Design your story, use EO Dashboard data

1. **Pick a challenge**
2. **Develop a solution:**
    - Consider a practical use case, with societal relevance. Tip: consider a phenomenon/subject for a particular area/country.
    - Develop your workflow with EO and Earth Data, on the DeepESDL
3. **Illustrate your solution:**
    - What datasets are most relevant to convey the message of your story?
        - How would you visualise the data so that it tells the story best? Be creative!
        - You are likely to use data that is not on EO Dashboard. That's OK! You can use whatever data you need in your solution.
    - Browse the EO Dashboard for additional data that can support your narrative

Present your story

1. **How long should a story be?**
    - Short and sweet – aim for 3-5 pages (maximum!). This means 5-8 paragraphs, 2-3 images and videos, and 2-3 datasets.
    - **1 page has :** 1-2 paragraphs, 0-1 image/video, 1 dataset.

In your ppt: 1 story page on 1 slide

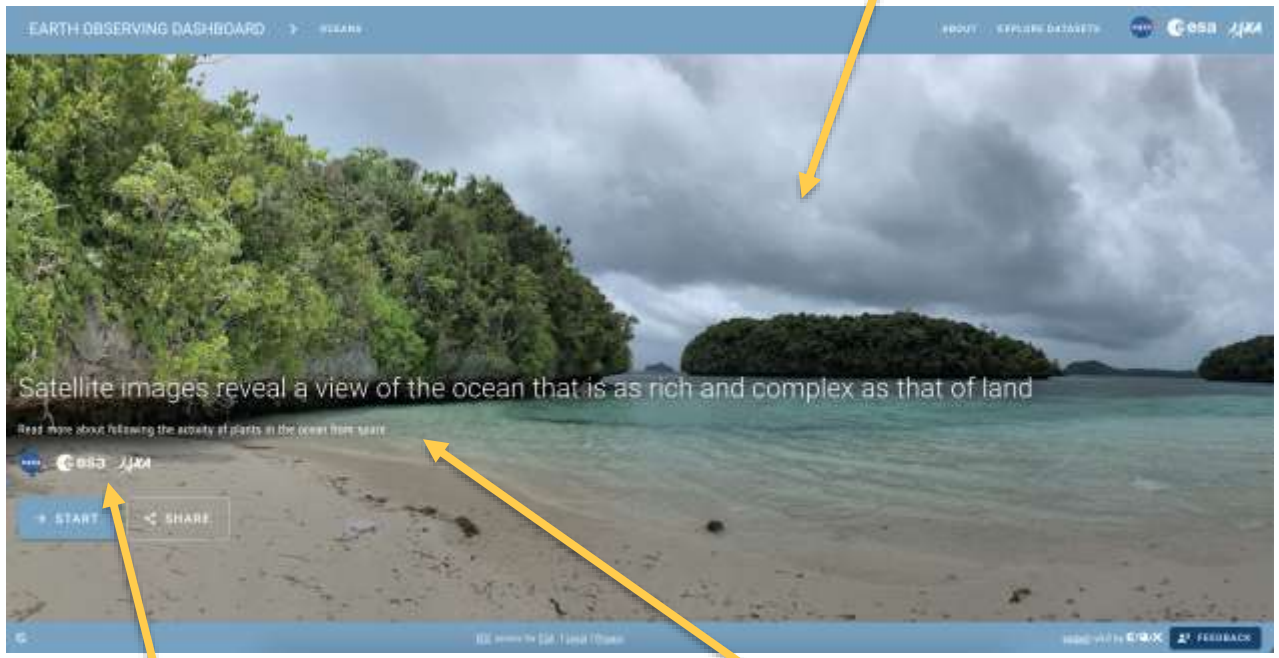


Your story on EO Dashboard

You only submit the ppt and the JN

If your story is selected, the EO Dashboard team works with you to create the EO Dashboard story:

- Ingest the missing data in EO Dashboard – EO Dashboard data team
- Finalise story text – with ESA, NASA, JAXA science support
- Select story cover, title, subtitle
- Create markdown file
- Create story pages
- Push to Github: https://github.com/eurodatacube/eodash



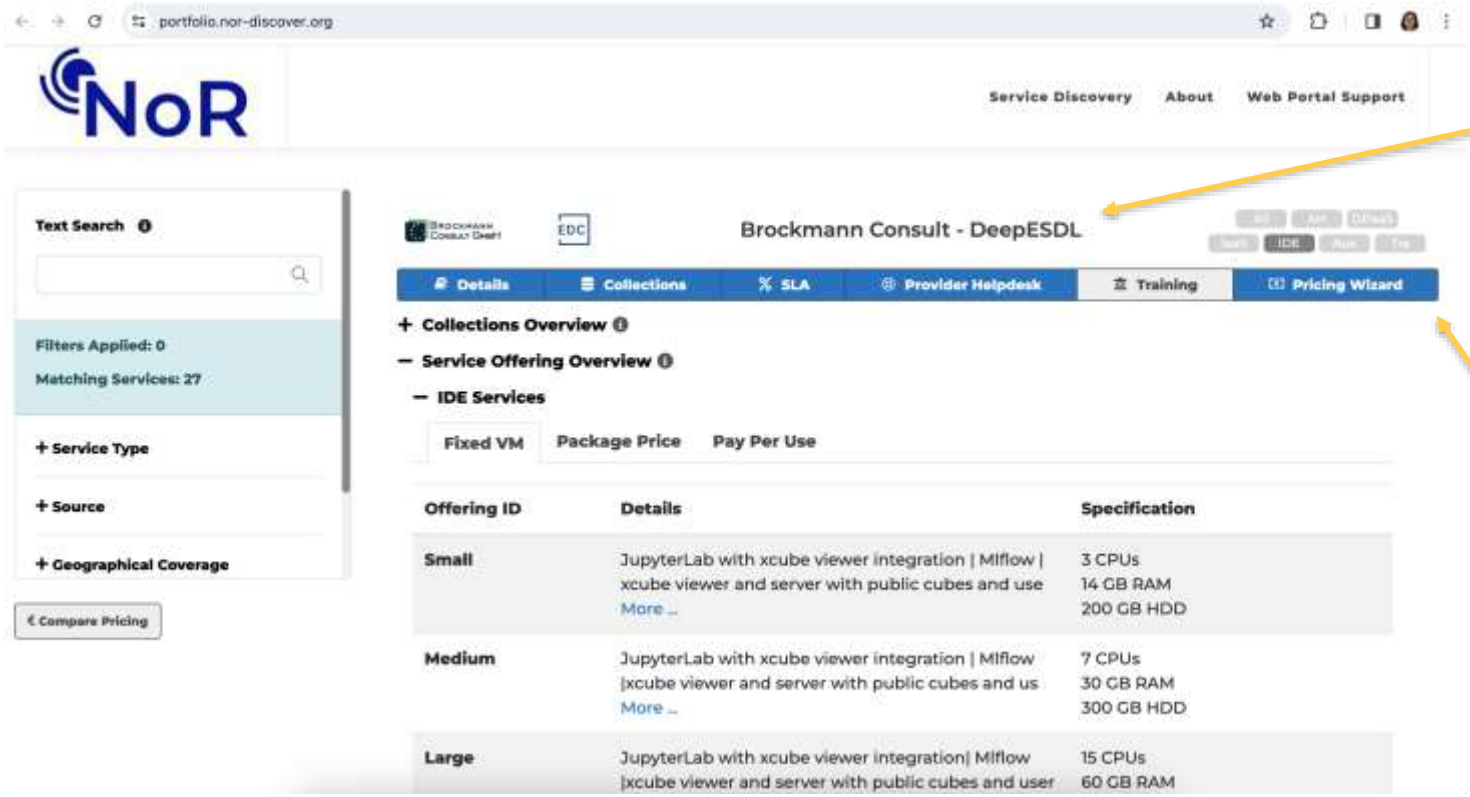
Cover image

Your story title and subtitle

Authored by: [your name, affiliation]

What's next

- You can continue to make use of the DeepESDL Platform for your research:
  - Submit a sponsorship request to the Network of Resources:
    - NoR webpage: https://nor-discover.org/en/portfolio/
    - NoR Portal (to select the services you need): https://portfolio.nor-discover.org/



DeepESDL on the NoR Portal

Use the pricing wizzard, fill in the form, send the form to ESA.

Approval within 1 week!