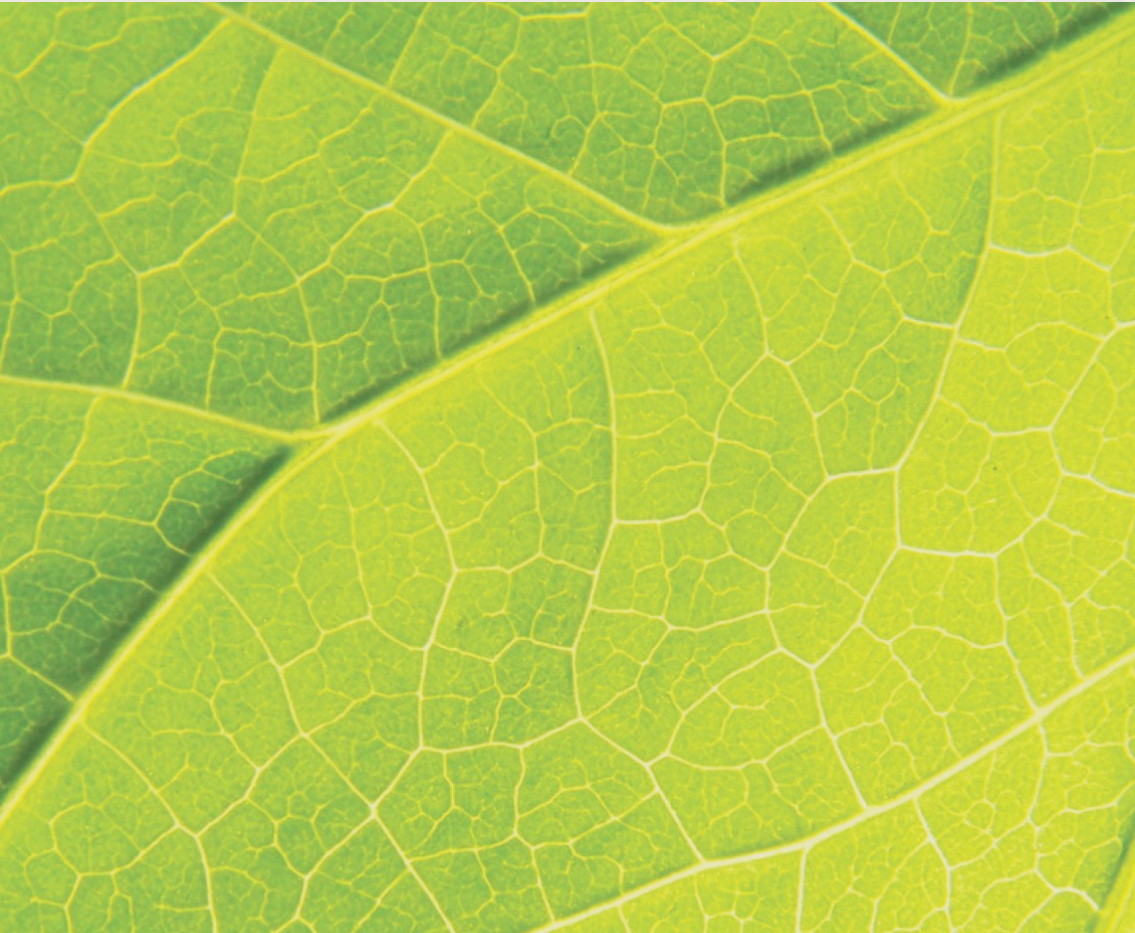


Collaboration for the impactful science the ENVRIplus experience



Welcome

Magdalena Brus, Werner Kutsch

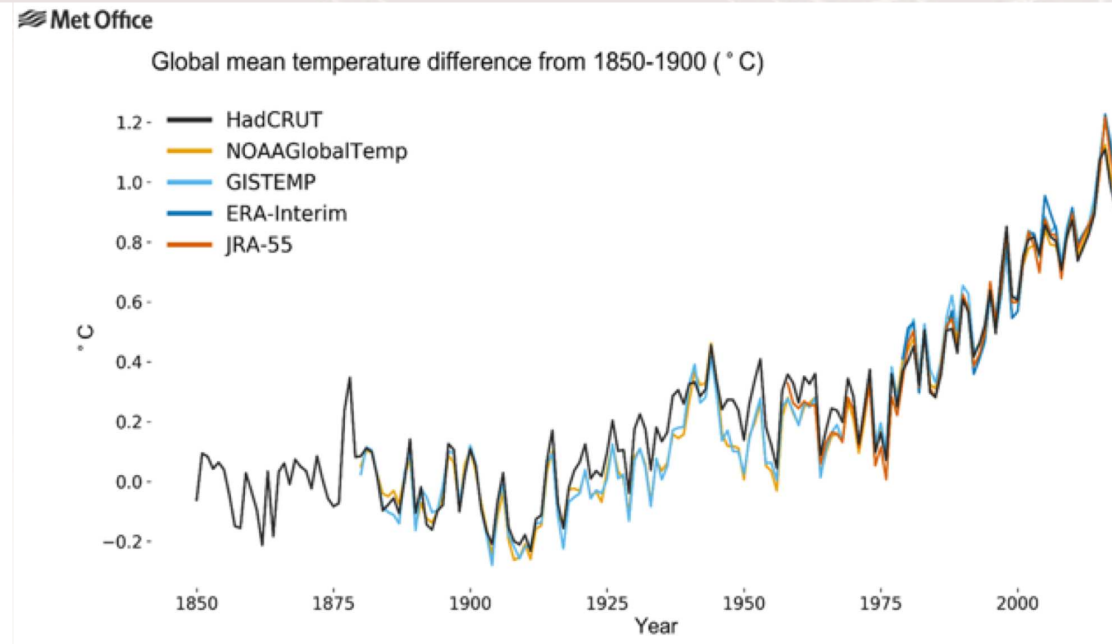
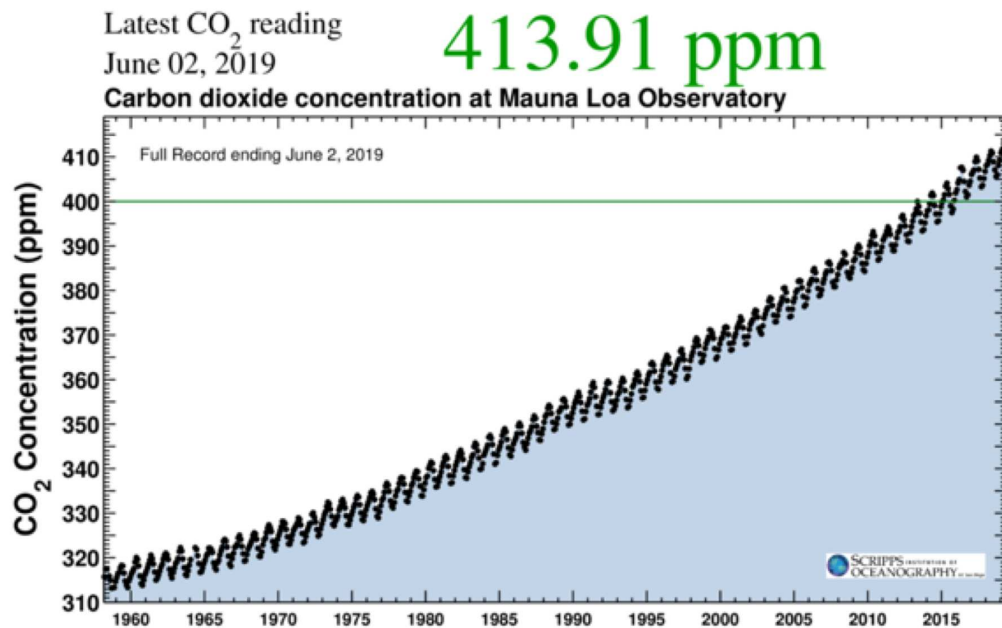
Introduction of the ENVRI community and the ENVRIplus project

Werner Kutsch



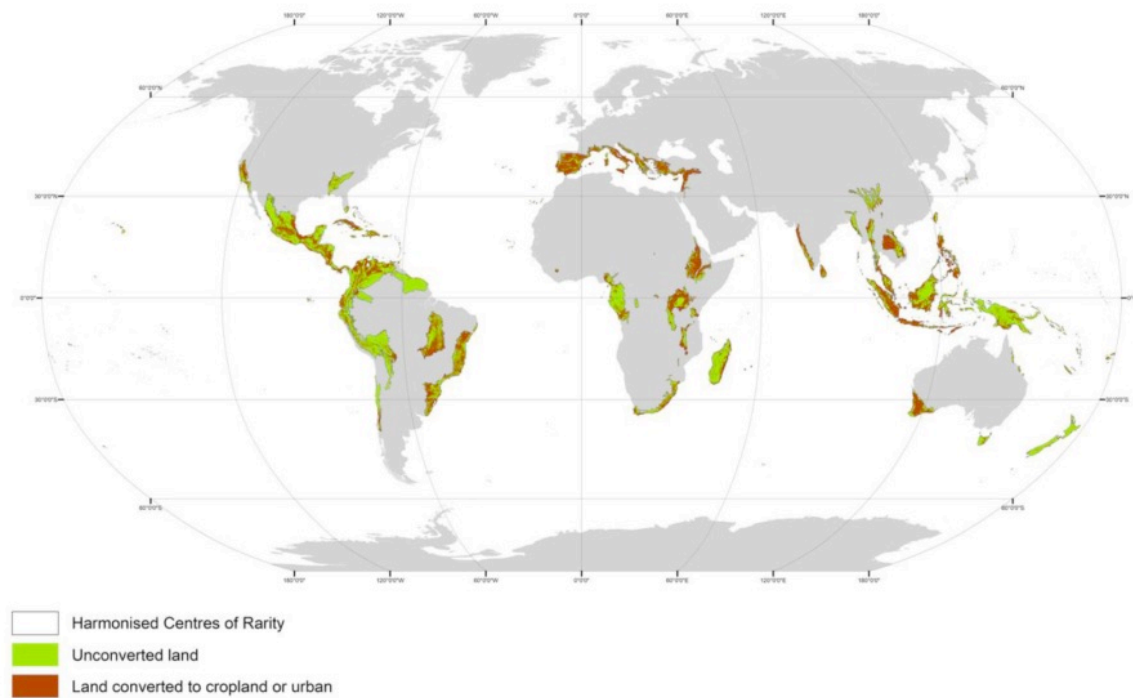
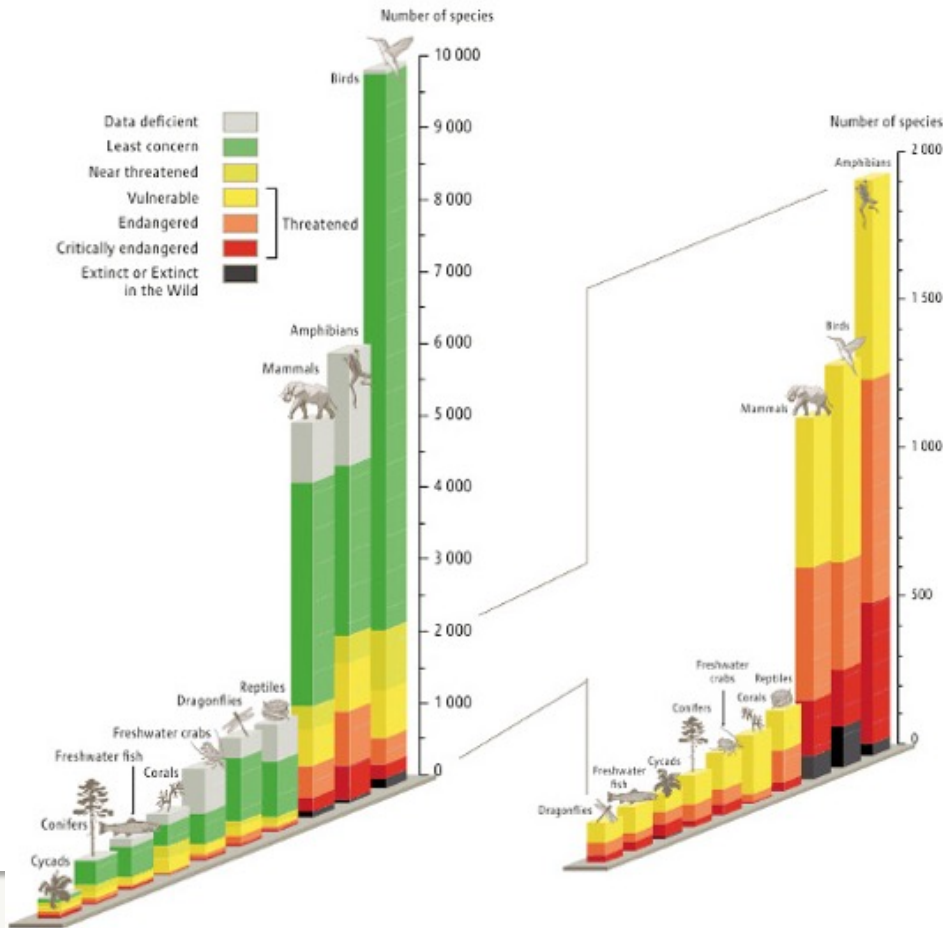
Project Number: 654182

A complex pattern of environmental problems



Greenhouse gases and global warming

A complex pattern of environmental problems

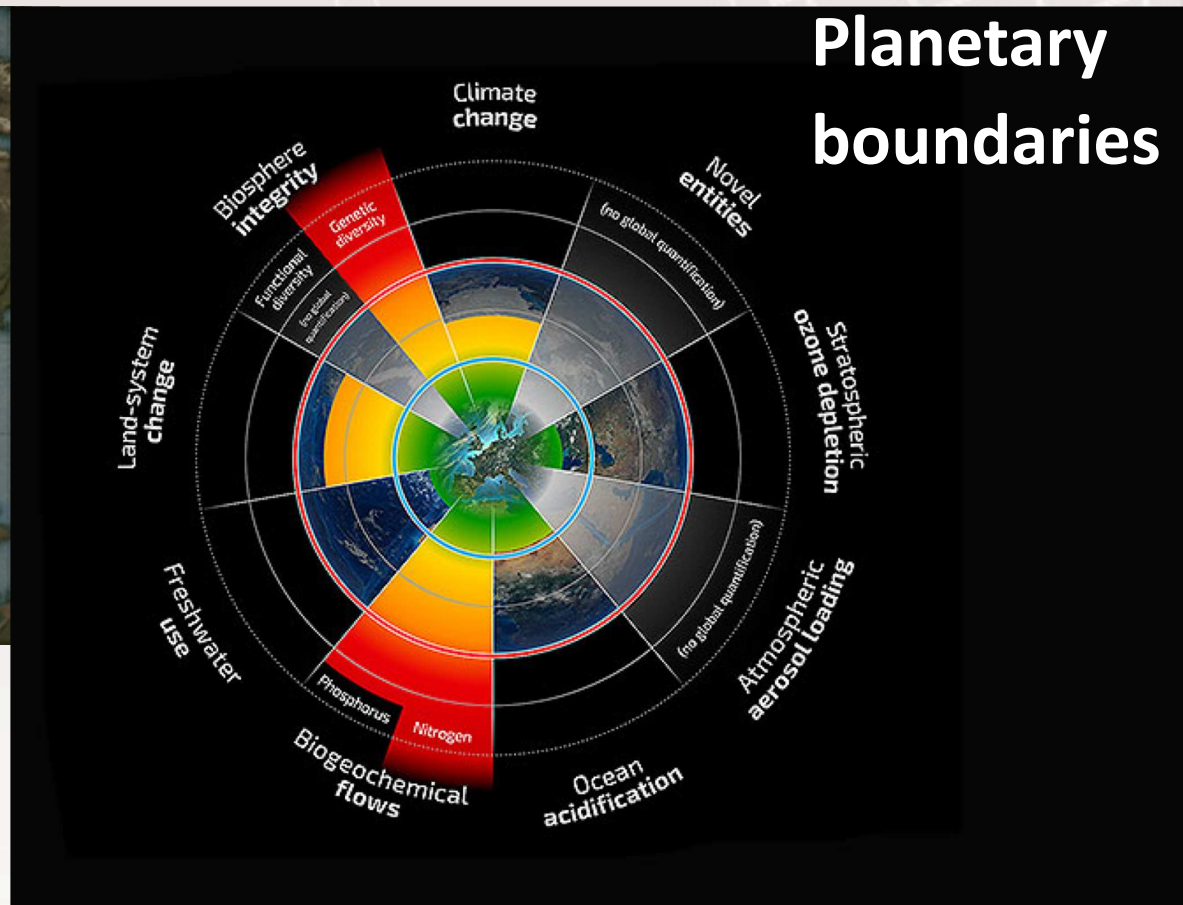


Loss of biological diversity

A complex pattern of environmental problems



Pollution

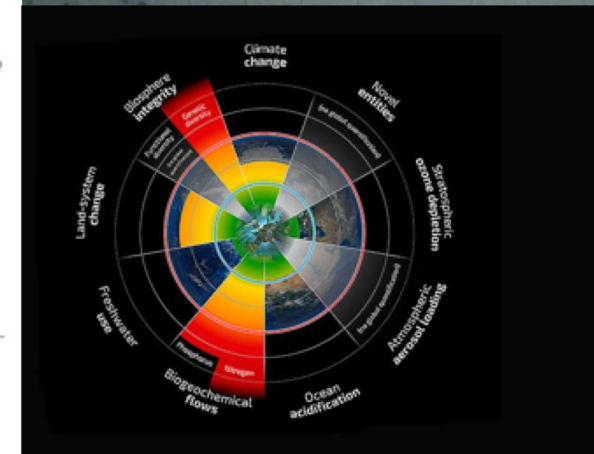
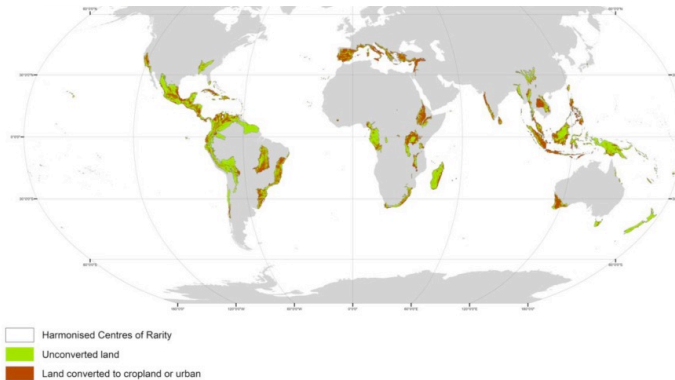
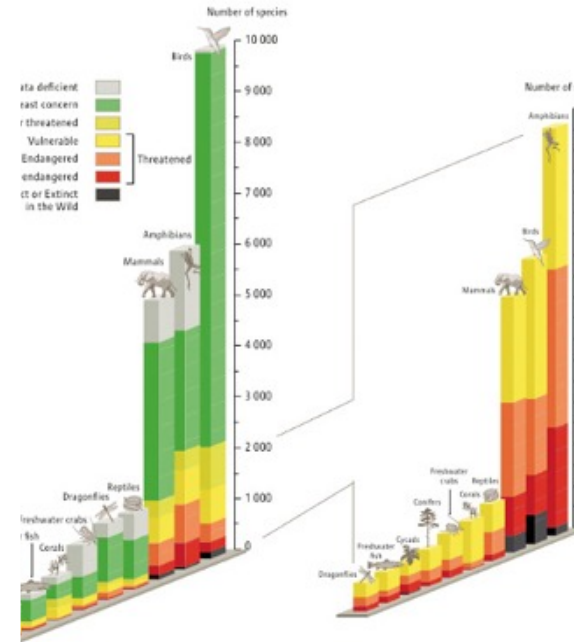
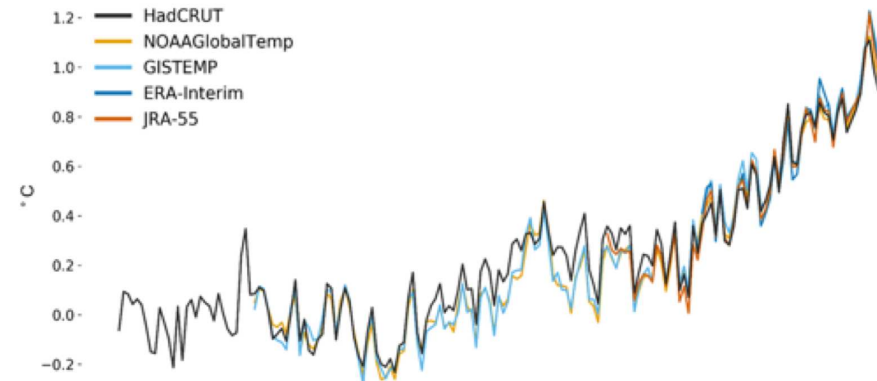
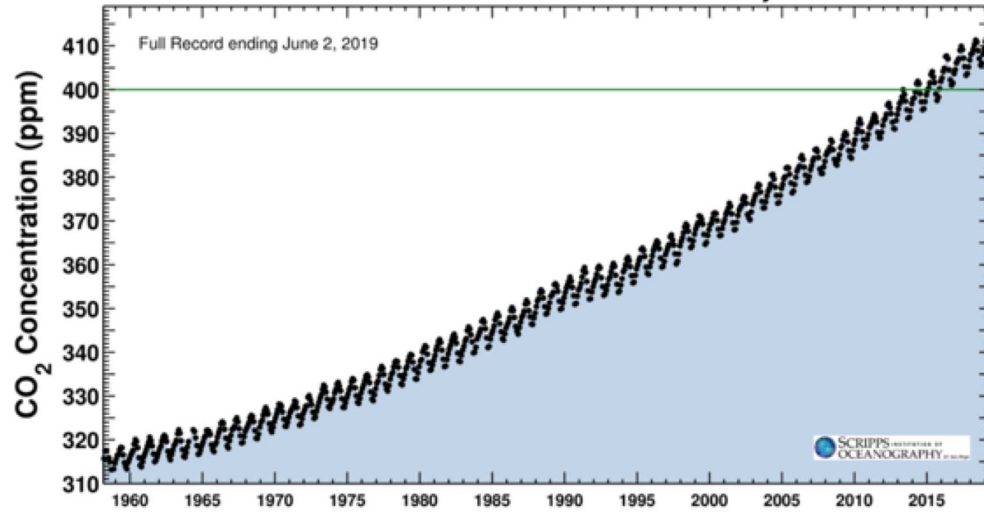


A complex pattern of environmental problems

Latest CO₂ reading
June 02, 2019

413.91 ppm

Carbon dioxide concentration at Mauna Loa Observatory



plus
ENVRI



Project Number: 654182

and a youth that demands a future!

A list of rules and recommendations
for those on schoolstrike for climate:

No violence

No damage

No littering

No profit

No hate

Minimise your carbon footprint

Always refer to science

Our demand:

Follow the Paris Agreement
and the IPCC report.

Stay below 1,5°C.

Focus on the aspect of equity
and climate justice, clearly stated
throughout the Paris Agreement.

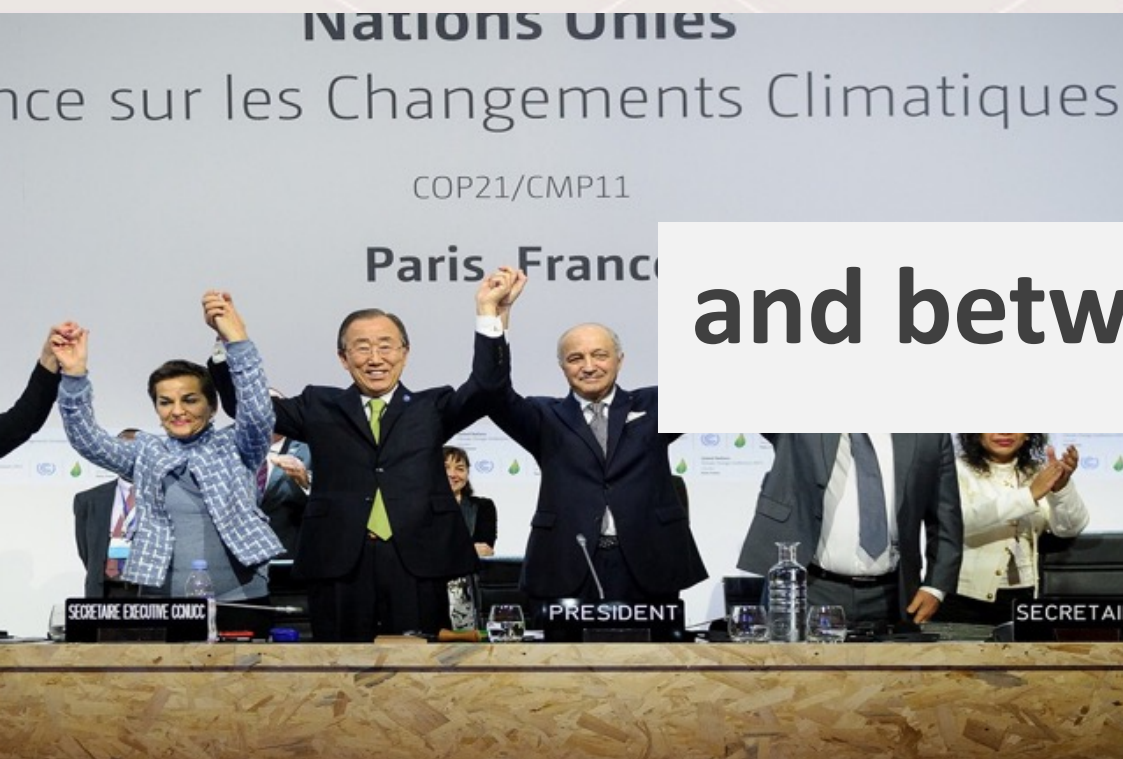
Because no manifesto can be
more radical than that.

Unite behind the science.

#FridaysForFuture #SchoolStrike4Climate



Collaboration is the key In policy making and in science



and between them



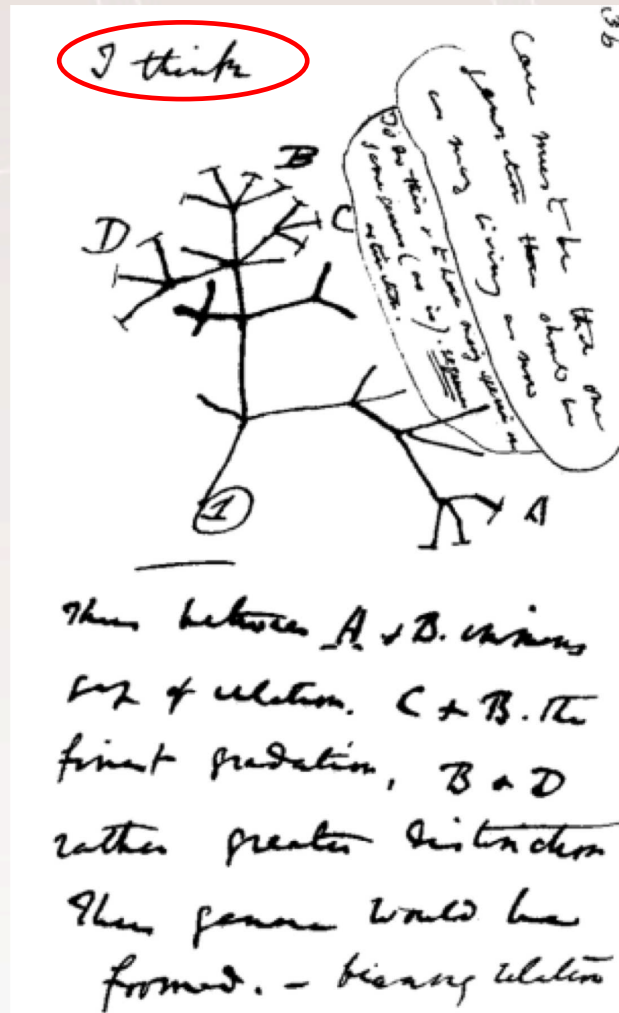
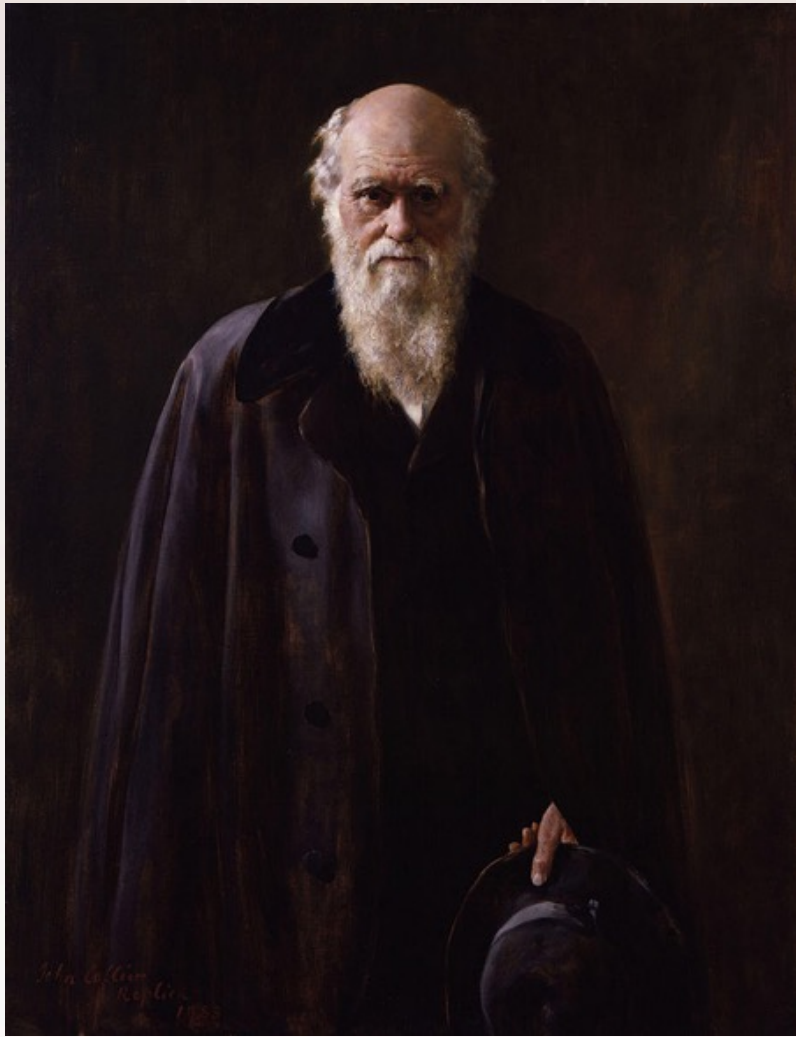
About Research Infrastructures

ESFRI RIs are facilities, resources or services of a unique nature, identified by European research communities to conduct and to support top-level research activities in their domains. They include:

- major scientific equipment – or sets of instruments;
- knowledge-based resources like collections, archives and scientific data;
- e-Infrastructures, such as data and computing systems and
- communication networks;

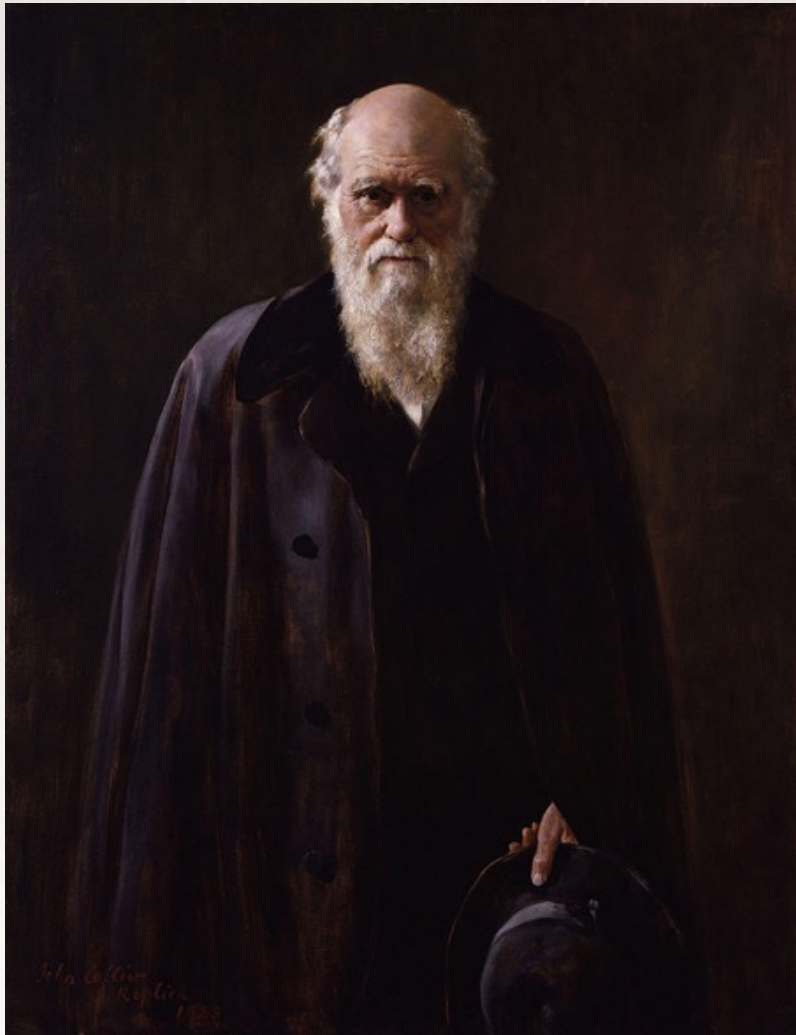
and any other tools that are essential to achieve **excellence in research** and innovation.

What is excellent science?



Charles Darwin

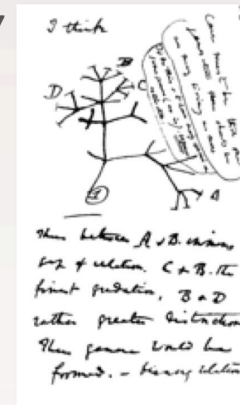
What is excellent science?



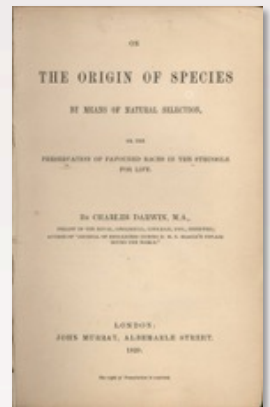
- had decades to think about his ideas,
- never worked for a university or research institution,
- was never evaluated by H-Index or H-Slope,
- never had to write a H2020 proposal.

1831 - 1836
Voyage of
H.M.S. Beagle.

1837

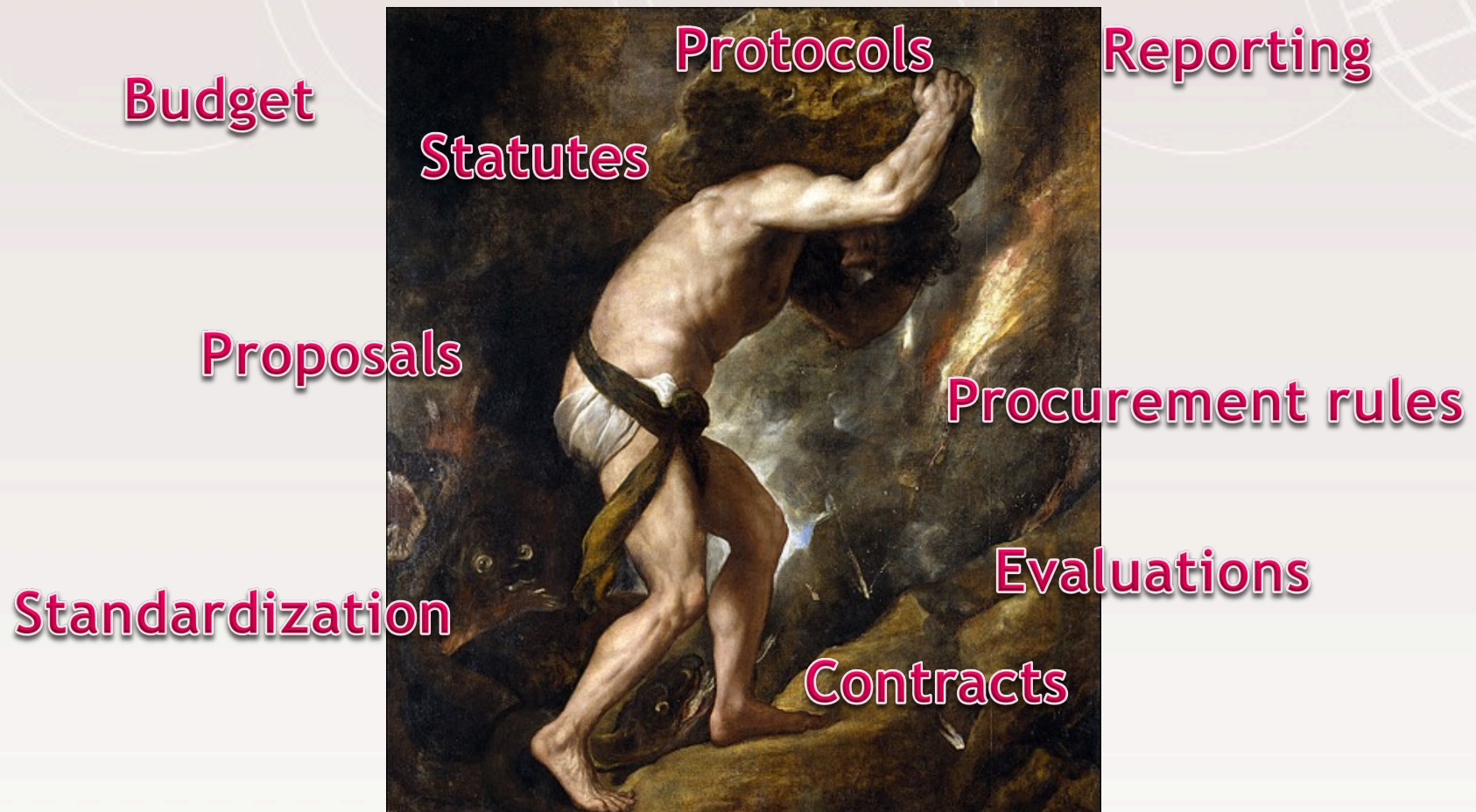


1859



Charles Darwin

What are institutions (research infrastructures)?



The infrastructure supporting Charles Darwin



The infrastructure supporting Charles Darwin



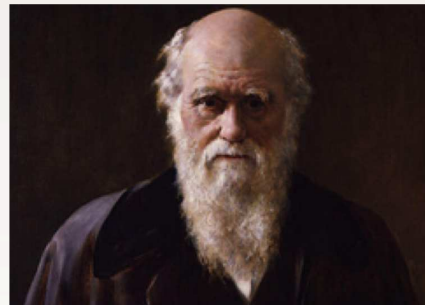
Data acquisition



Data services



Metadata
Data curation



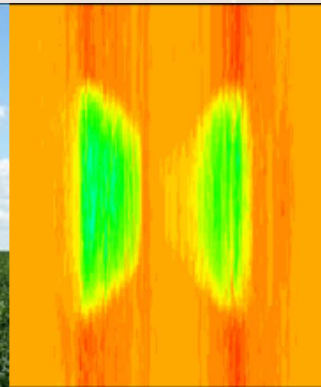
The infrastructure supporting environmental science



Data acquisition



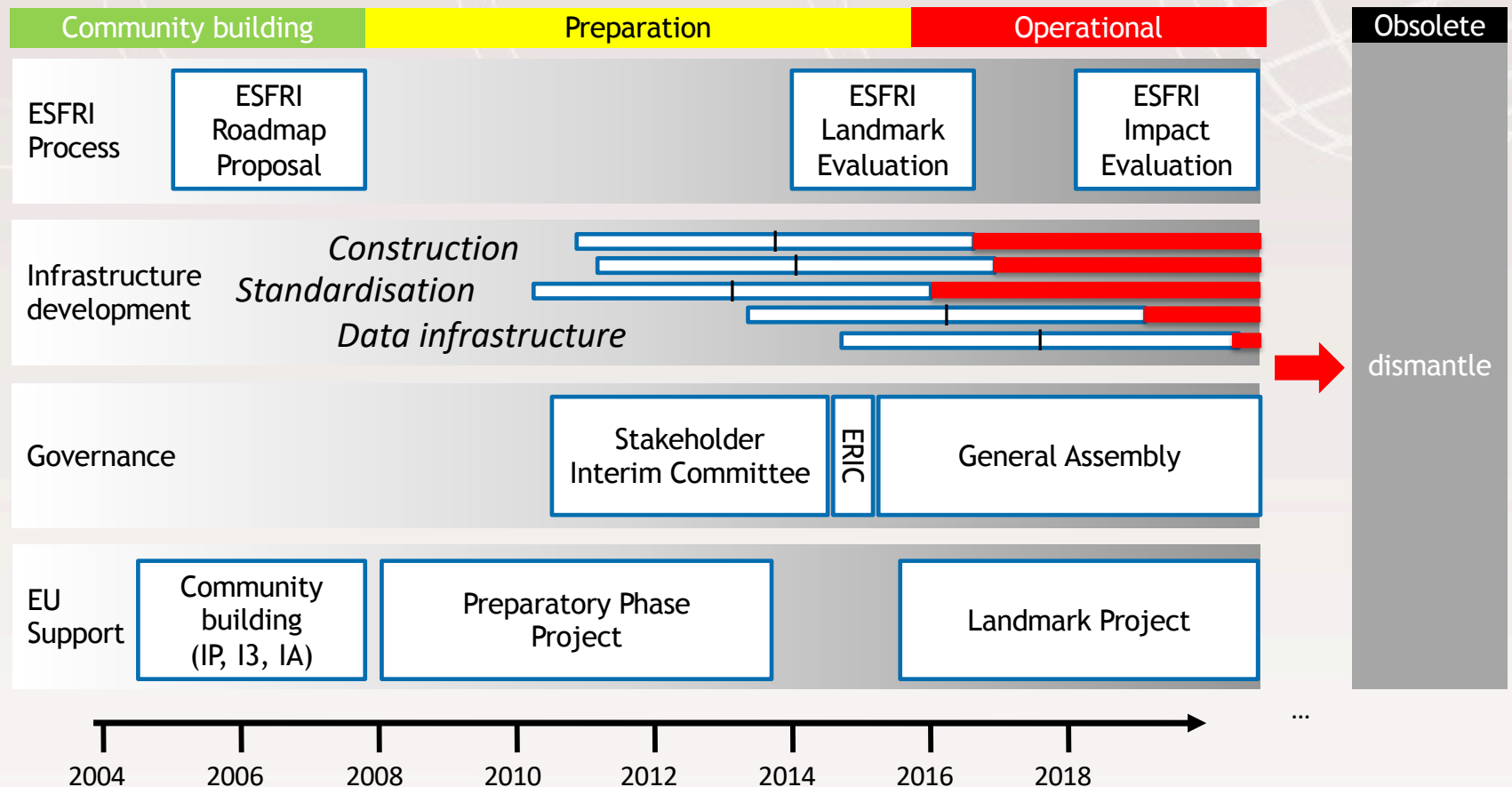
Data services



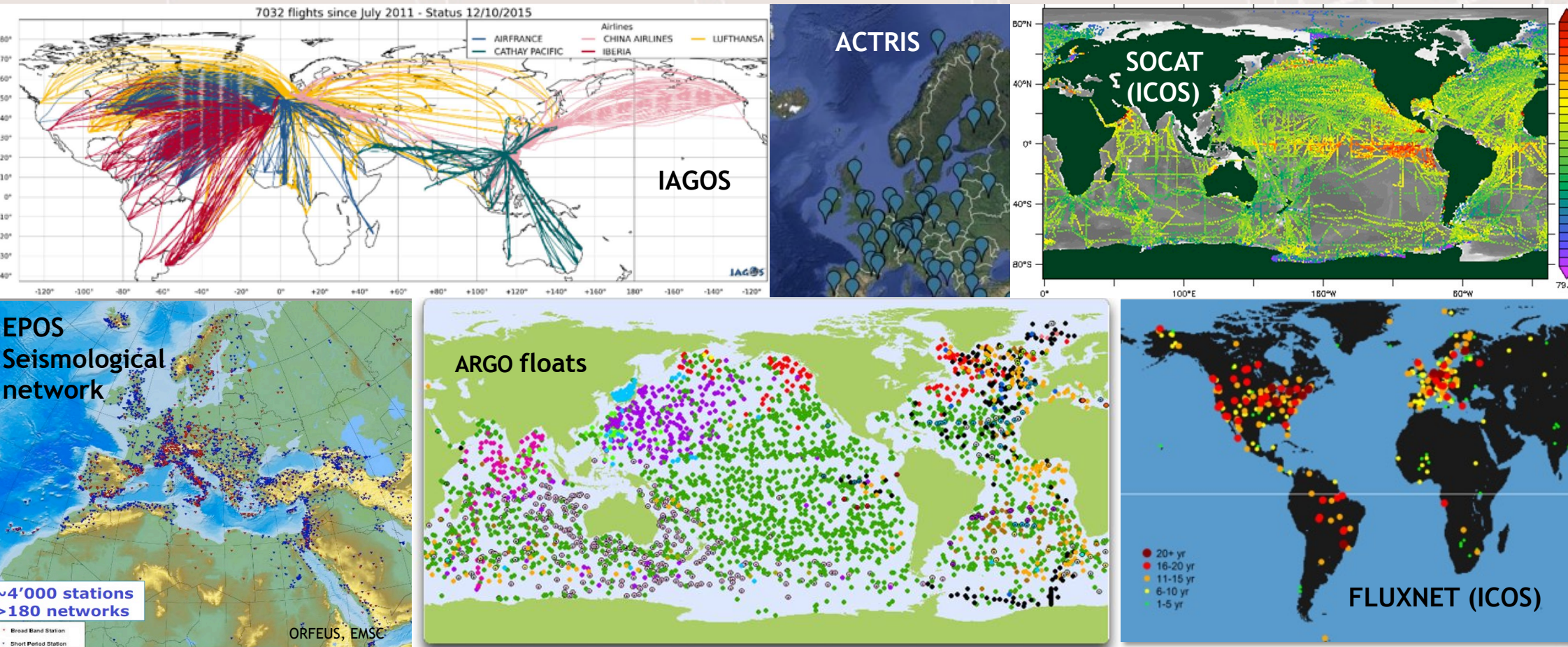
Metadata
Data curation

Who is the genius?
What are the requirements of the (genius) user?

The life cycle of a (distributed) Research Infrastructure



Environmental Research Infrastructures are often distributed



And embedded into global efforts



WHAT IS ENVRI?

**It is the collaboration of European
Environmental Research Infrastructures towards:**

Science Integration

- a universal understanding of our planet
- a framework for science on all interactions within the Earth System, from solid earth to near space

Data Integration

- common data access policies and technologies

Resource Integration

- joint innovation, common technologies,
- co-location

Common Societal Impact

The ENVRI community

ESFRI Landmarks (ERICs)

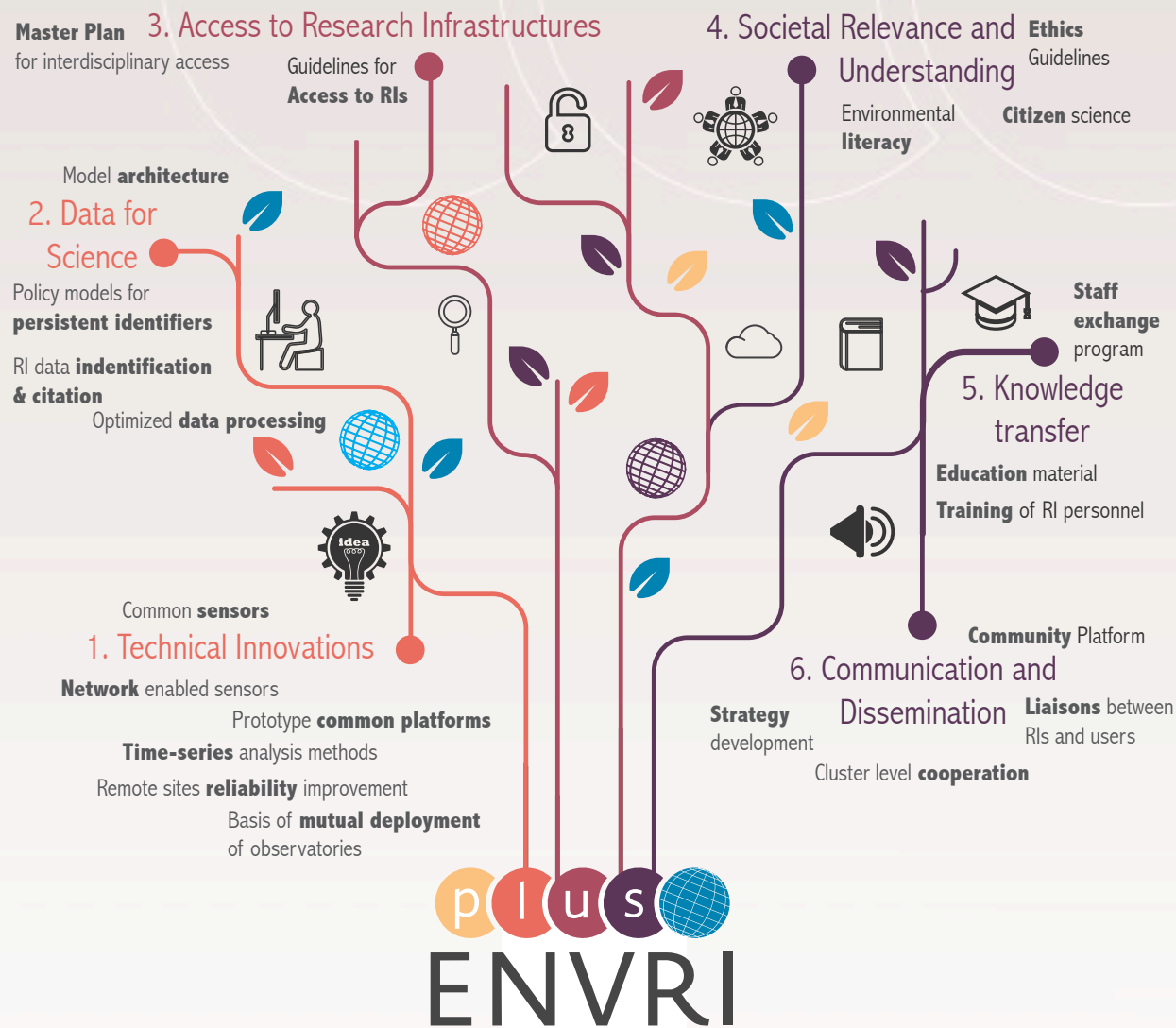
ESFRI Projects

ESFRI Wannabes

Integrated Activities



The ENVRIplus project



Project duration: 1.5.2015 – 31.7.2019

15 Mio € budget

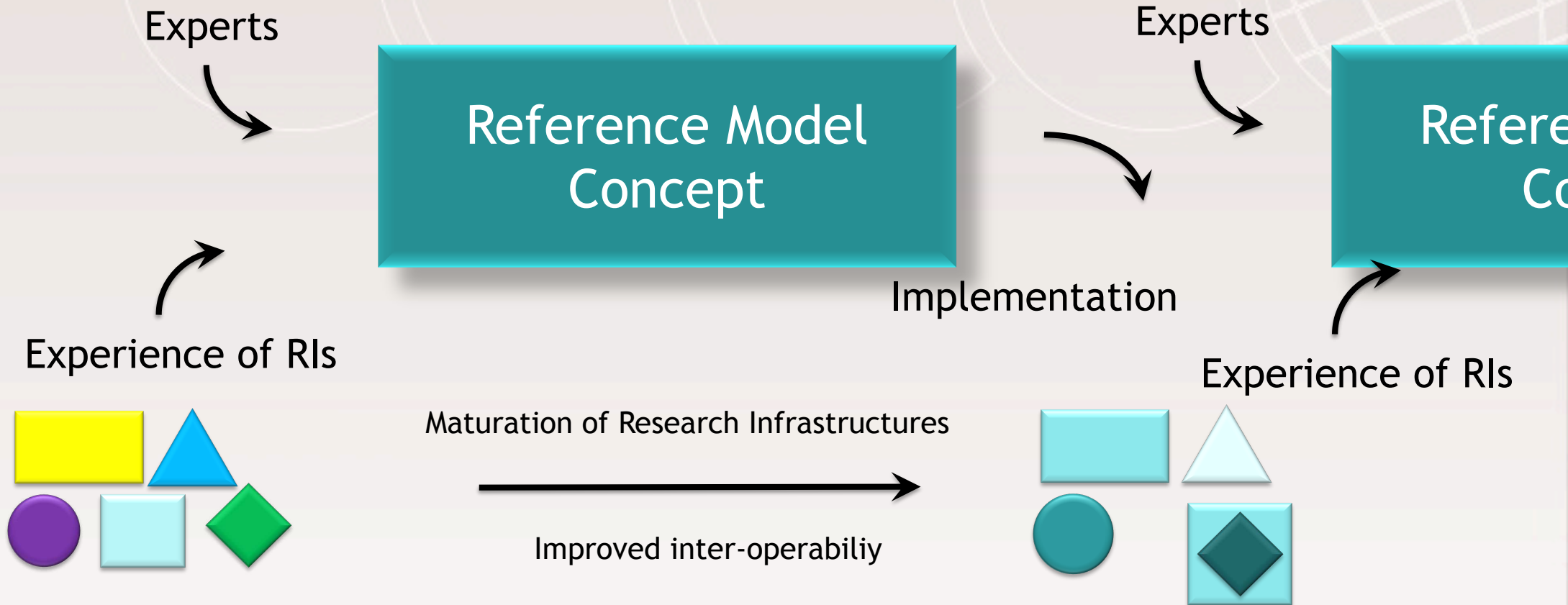
42 Beneficiaries


6 Themes / 19 Work Packages

92 Deliverables

4 Domains: atmosphere, terrestrial ecosystems, ocean, solid earth

HOW HAS ENVRIPLUS BEEN DESIGNED?





Today is to wrap up the impact of ENVRIplus on ENVRI collaboration

Better Science

Enhanced Synergies

Societal Impact

Future Developments

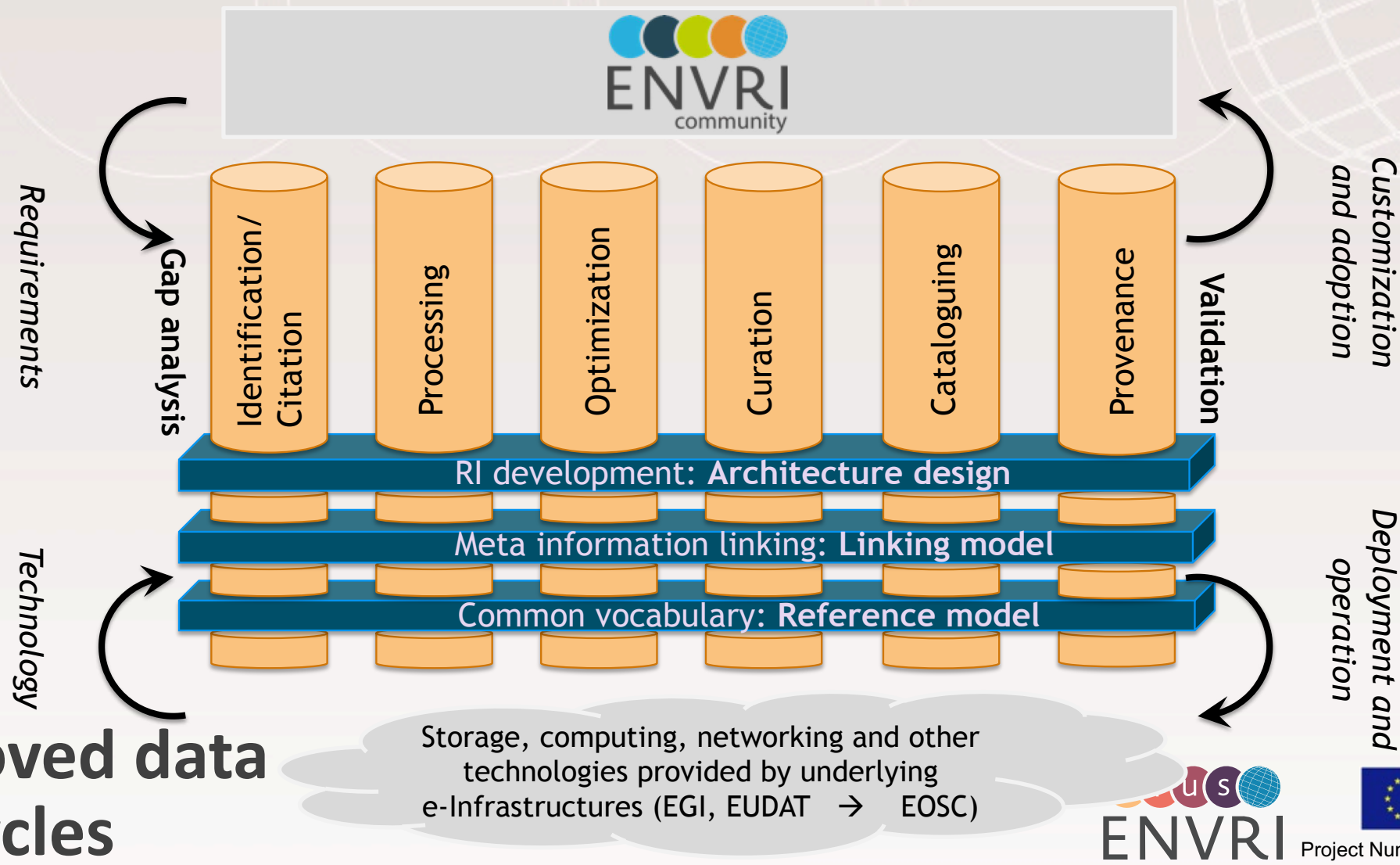
Global Collaboration and Integration

What have we achieved?



Shared technological developments

What have we achieved?



**Improved data
life cycles**

What have we achieved?



SMEAR II - Finland



OSUR La Réunion - France



USRL - Cyprus



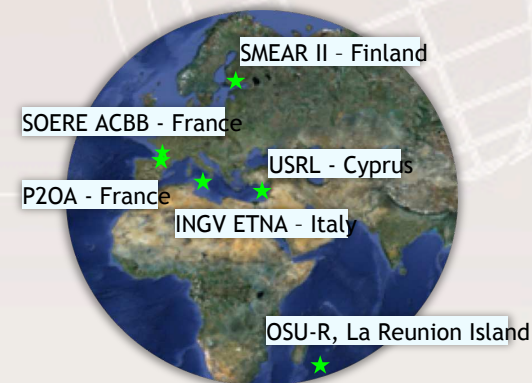
SOERE ACBB - France



P2OA-Drones - France



ETNA INGV - Italy



Multi-disciplinary Research Platforms

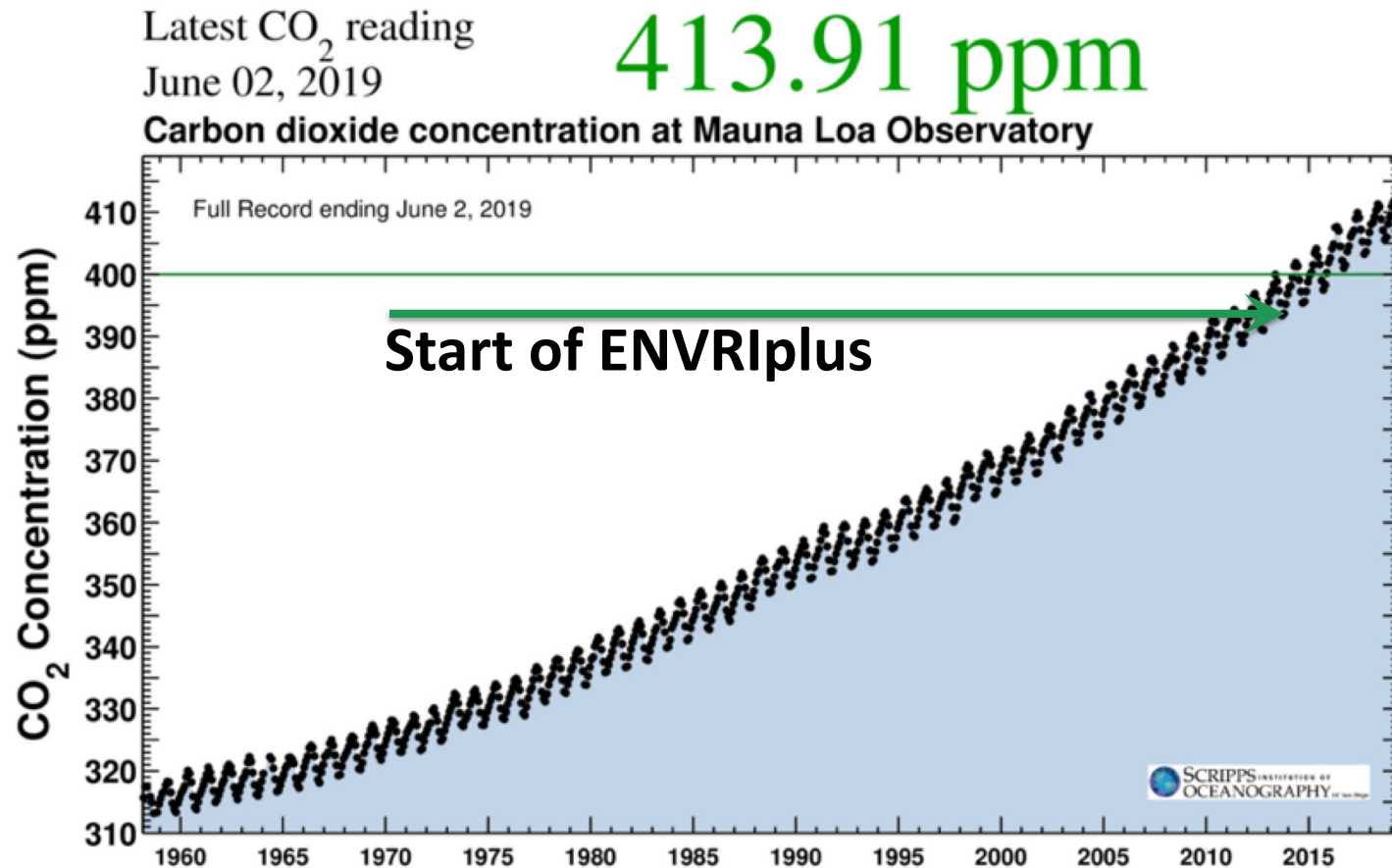
ENVRIplus use cases for access

What have we achieved? Ethical guidelines for RIs

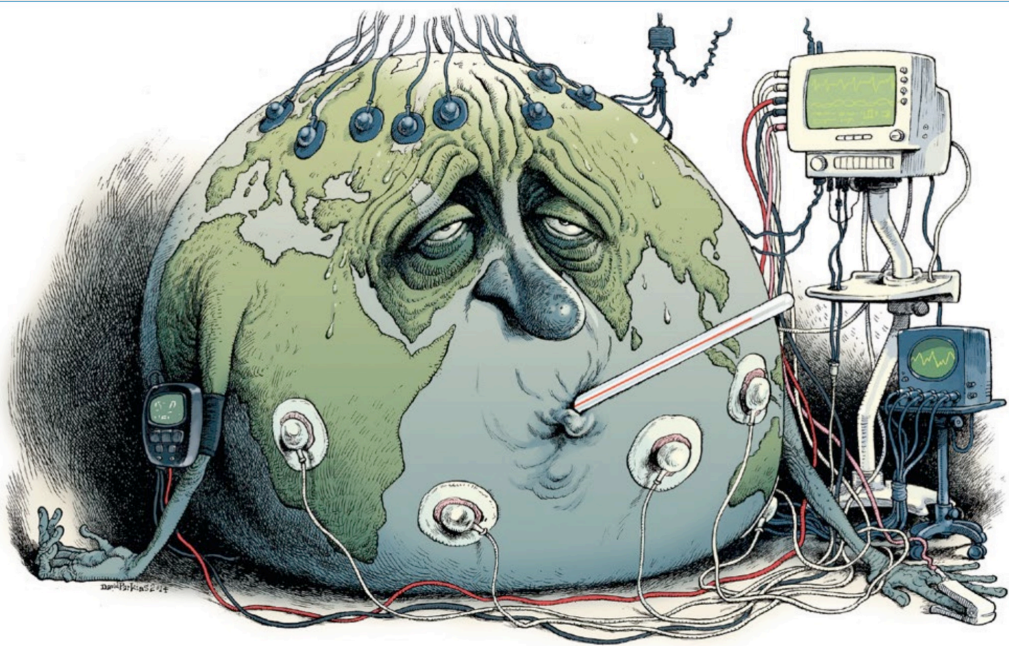
STRUCTURE

- The EGs are structured in a **main section**, containing general ethical values, and a **subordinate section**, where some delicate matters of interest for RIs are discussed from an ethical perspective.
- Ethical values included in the EGs refer to **4 ethical domains**, affecting both individual scientists and RIs.
- These domains relate to the **ethical profile of each scientist/technician**, to his/her relationships with **colleagues**, to the interaction with **society**, to the duties towards the **Earth system**.
- In addition, the EGs refer to several matters that are considered of particular importance for RIs (**working environment, data life cycle, conflicts of interest, and relationship with decision-makers**). These matters imply the construction of a respectful and responsible work-space and the projection of institutional activities and results towards society.

What we have not achieved?



In Earth Science, international collaboration is not a ,nice to have', it's a questions of **2° be or not 2° be**



**Thank you for
your attention!**