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Coalition Clean Baltic

EESTI VEEÜHING
ESTONIAN WATER ASSOCIATION

# RIVER UNIVERSITY

## OPEN SCIENCE WITHIN RIVER ECOLOGY: HOW TO MAKE THE BEST OF IT?

11–15 July 2022

Haaliste river, credit, Ilmar Roosmaa, www.Soomaa.com

EWA LEŚ

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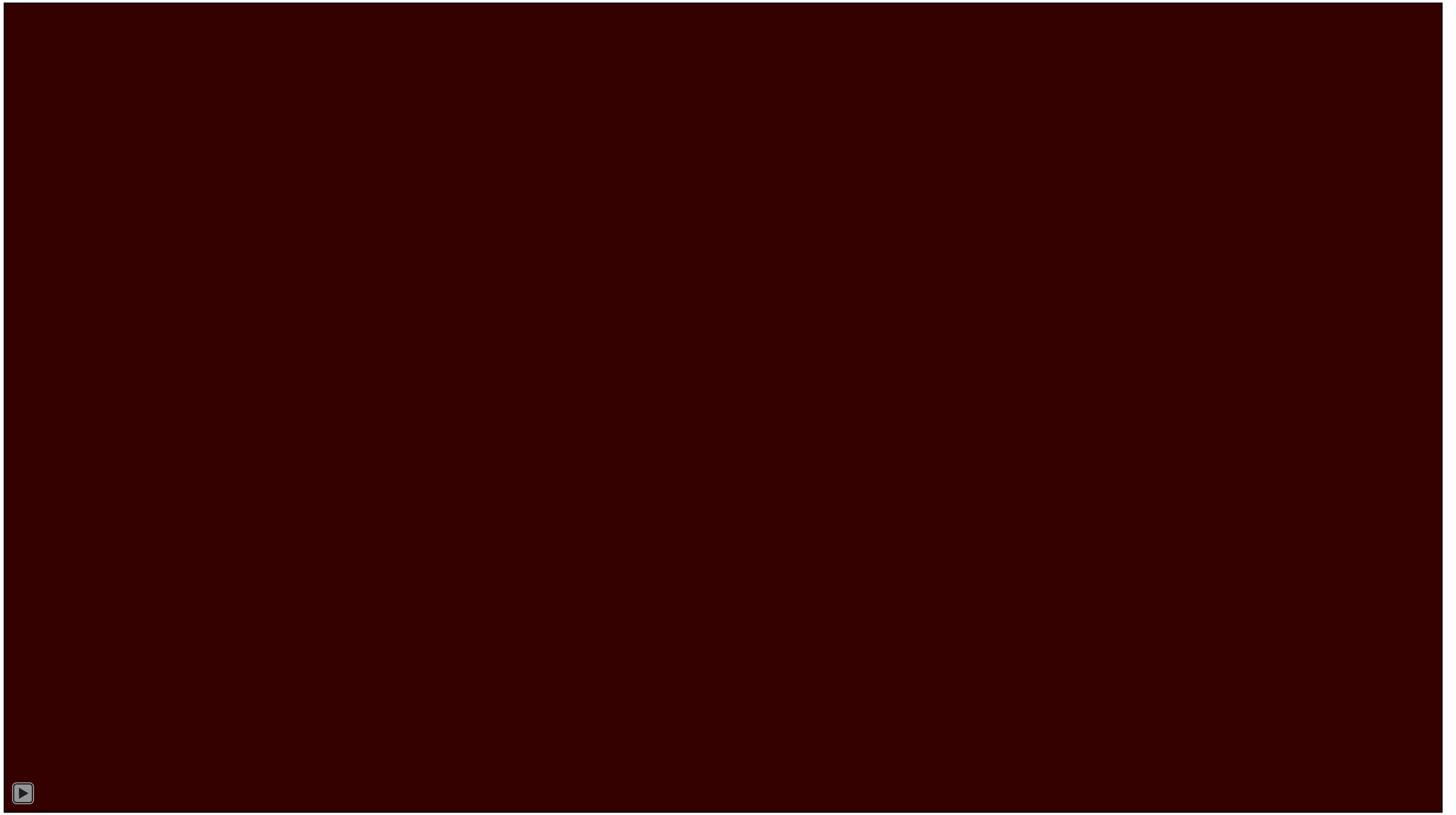
# OPEN QUESTIONS TO US:

WHAT IS AN OPEN SCIENCE?

WHAT ARE WE, RIVER UNIVERSITY?

HOW CAN WE ENSURE OPEN SCIENCE WITHIN RIVER ECOLOGY through River Uni?



Credits: Agnieszka Czajka, Silesian University, 2nd edition of River University, Lithuania

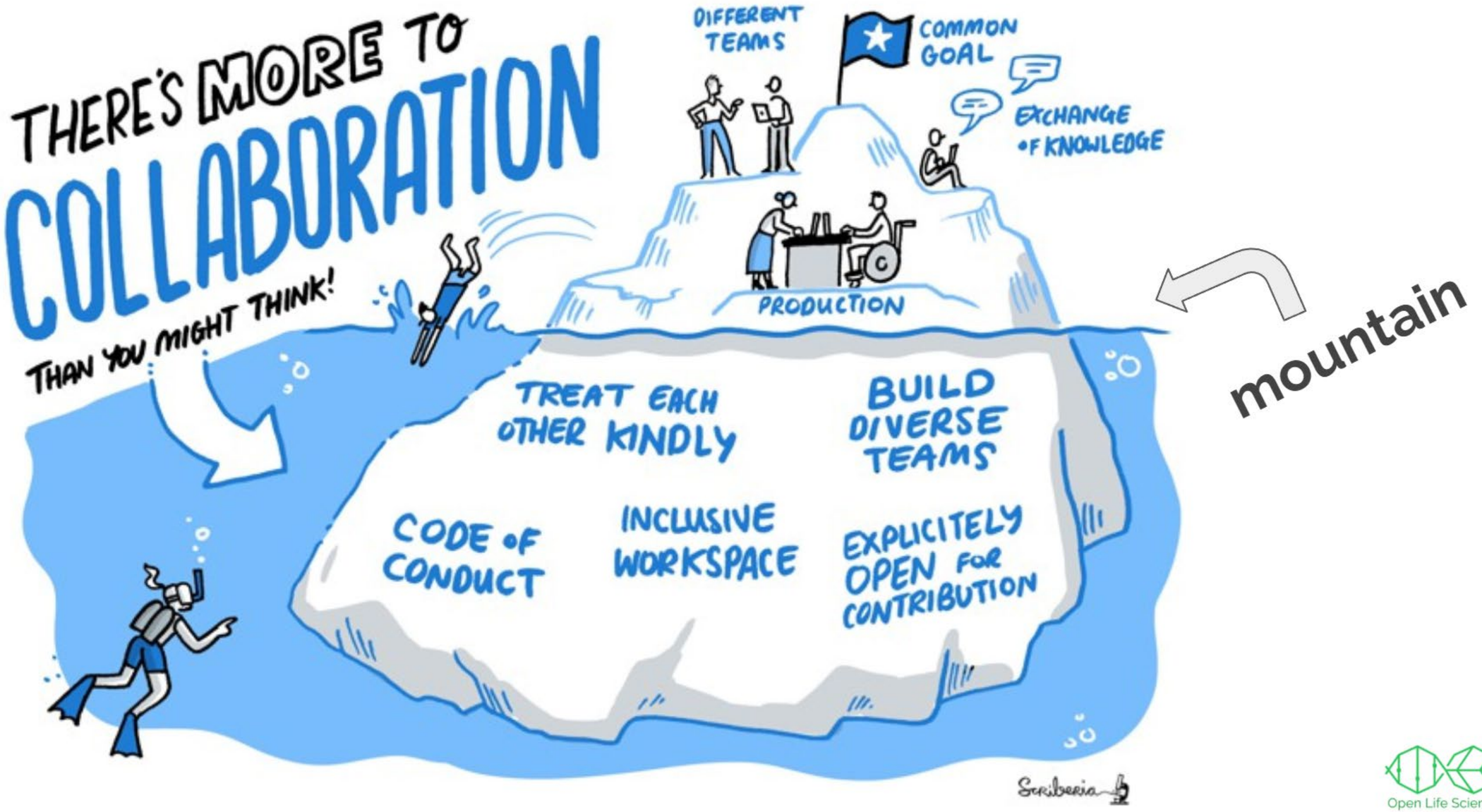

Open Life Science
science can advance only when we share our work with others
Image on Unsplash by @unlesbar

Open Life Science



# … but, researchers are often skeptical about sharing their work due to their fear of getting scooped, being criticised …

Also read: https://www.software.ac.uk/blog/2020-12-17-ten-arguments-against-open-science-you-can-win, Image on Unsplash by @rodlong




Open Life Science

The Turing Way Community, & Scriberia. (2020, March 3). Illustrations from the Turing Way book dashes. http://doi.org/10.5281/zenodo.3695300

Open Life Science

Open Leaders design, build, and empower their projects and communities for understanding, sharing, and participation and inclusion

Do I do this?

| | Understanding | Sharing | Participation & Inclusion |
|---|---|---|---|
| **Design for...** | • Content focus<br>• Community interactions<br>  ○ Learning through use<br>• Storytelling | • Information-sharing focus<br>• Community interactions<br>  ○ Gifting<br>  ○ Enhancing value exchange<br>  ○ Networking common interests | • Governance focus<br>• Community interactions<br>  ○ Creating together<br>  ○ Soliciting ideas<br>• Project identity |
| **Build for...** | • Communication<br>• Design<br>• Facilitation<br>• Maintenance<br>• Project management | • Commons-based production<br>• Data stewardship<br>• Documentation<br>• Licensing<br>• Networking | • Decision-making<br>• Delegation<br>• Event planning<br>• Community Management<br>• Mentoring |
| **Empower for...** | • Maintains clarity of vision & purpose<br>• Maintain authenticity & integrity<br>• Stays curious | • Makes connections<br>• Resilience<br>• Self-care | • Embraces failure<br>• Ensures safety<br>• Inspires contribution |

Life Science

Open Life Science

**Open science can mean many things:**

- Openly sharing your data (Open Data)
- Openly sharing your source code (Open Source Software)
- Openly sharing your hardware designs (Open Source H
- Openly sharing your papers or protocols (Open Access)
- Sharing results early (Preprints)
- Sharing paper reviews (Open Reviews)
- Sharing knowledge by training (Open Education)
- Collaborating with public openly (Citizen Science)
- Supporting and connecting others in your field (Scientif

## Open data

data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.

## Fair data

Stands for Findable, Accessible, Interoperable and Reusable.
“FAIR means thinking about the people who could benefit from your data,”

As open as possible, as closed as necessary”

## FAIR vs Open

FAIR is not the equivalent of open, but open needs to be FAIR to be useful

❌ Making your data/software freely and openly available does not translate to it being reusable!

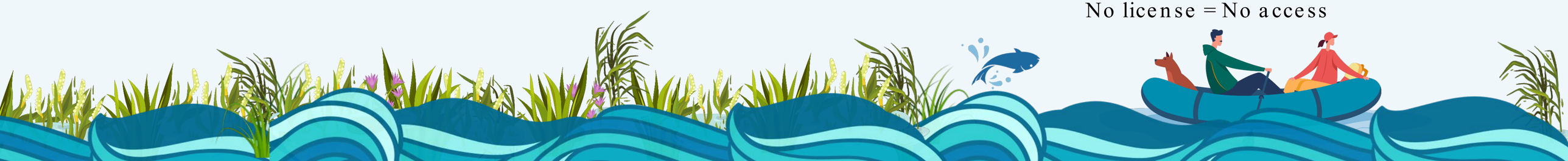
To do so, we need clear, detailed contextual information and data description.

Ideally you want FAIR data/software/content shared openly!

❌ Using work shared with an open license without attribution CAN BE legal, but is still a violation of *academic* ethics.

“Open source software is software that can be freely used, modified, and shared (in both modified and unmodified form) by anyone. “

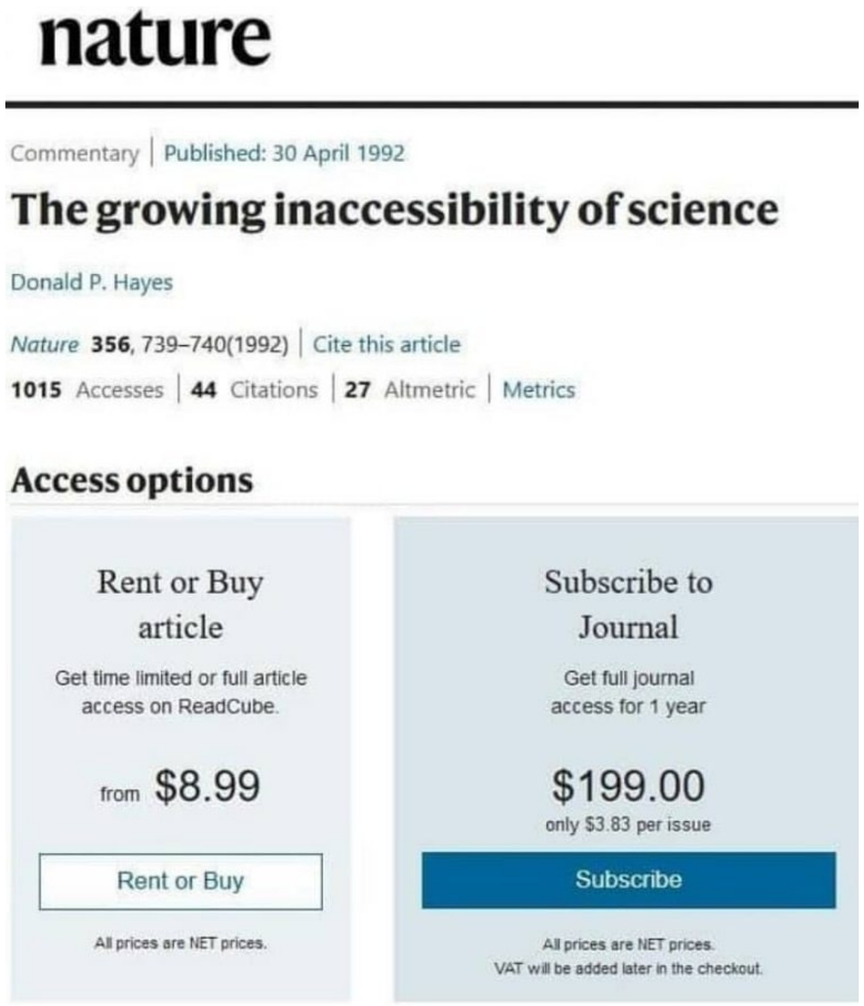
No license = No access



# BE FAIR!

1. Deposit your data where others can find it, keep in mind where your peers can find it, i.e. field specific repository and give it a stable unique identifier (PID).
2. Make your data & metadata accessible via standard means such as http/API
3. Create metadata and explain in detail what this data is about, never assume people know!
4. Deposit metadata with PID and make it available with/out data i.e. in case data itself is heavily protected.
5. Include information on ownership and provenance.
6. Outline what the reusers of your data are/not allowed to do, use clear license. Commonly used licenses like MIT or Creative Commons (keep in mind funders requirements).
7. Specify access conditions, if authentication or authorization is required.
8. Describe your data in a standardized fashion using agreed terminology and vocabulary.
9. Share the data in preferred & open file formats.
10. Start the process early on!

# Is the science open nowadays?



nature

Commentary | Published: 30 April 1992

**The growing inaccessibility of science**

Donald P. Hayes

*Nature* **356**, 739–740(1992) | Cite this article

**1015** Accesses | **44** Citations | **27** Altmetric | Metrics

**Access options**

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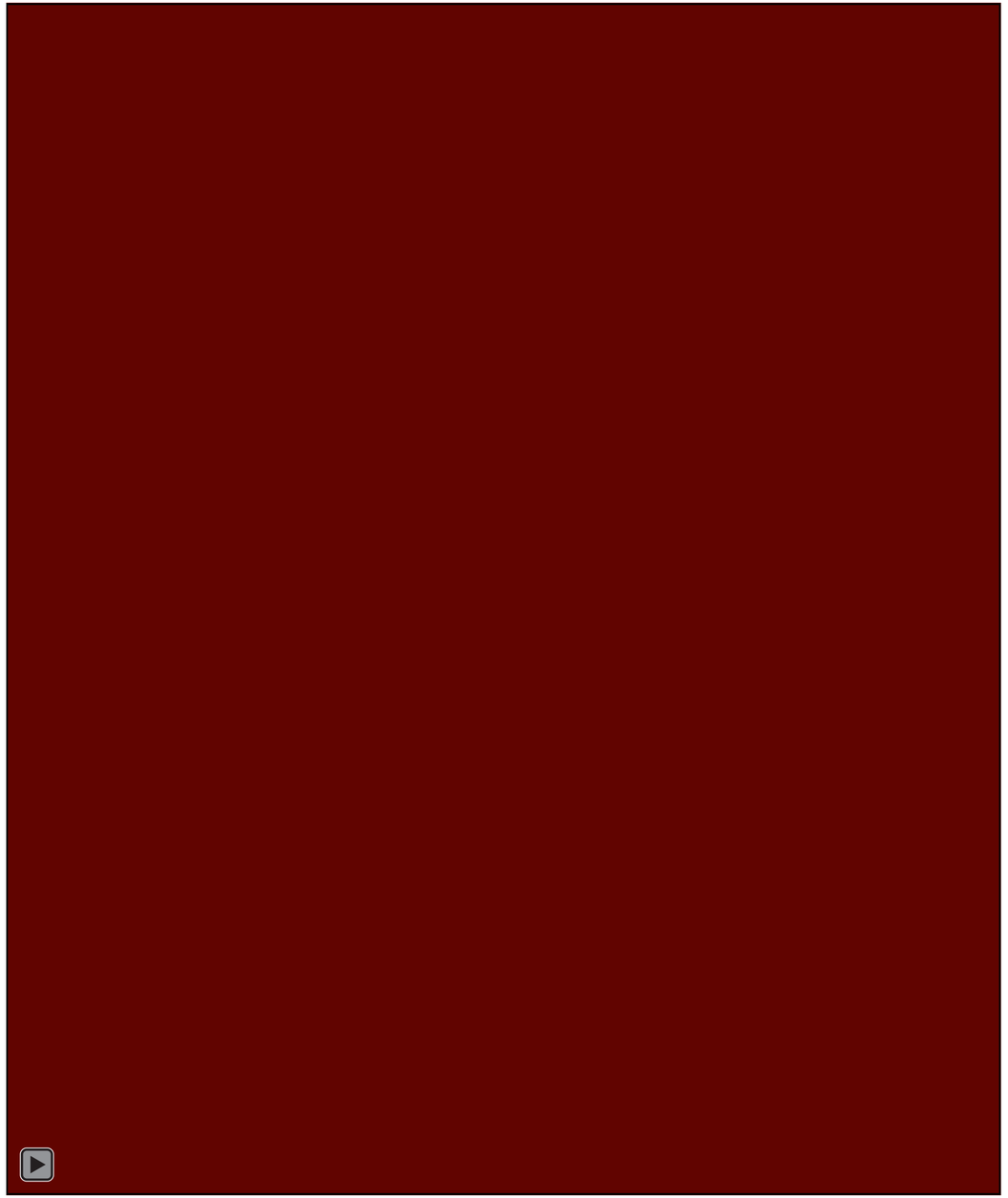

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# Open Science

An approach to the scientific process that focuses on spreading knowledge as soon as it is available using digital and collaborative technology. Expert groups, publications, news and events.

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## The EU's open science policy

Open science is a policy priority for the European Commission and the standard method of working under its research and innovation funding programmes as it improves the quality, efficiency and responsiveness of research.

When researchers share knowledge and data as early as possible in the research process with all relevant actors it helps diffuse the latest knowledge.

And when partners from across academia, industry, public authorities and citizen groups are invited to participate in the research and innovation process, creativity and trust in science increases.

That is why the Commission requires beneficiaries of research and innovation funding to make their publications available in open access and make their data as open as possible and as closed as necessary. It recognises and rewards the participation of citizens and end users.

Furthermore, the European Open Science Cloud will enable researchers across disciplines and countries to store, curate and share data.

The effective linking of open science practices to innovation and business models requires careful consideration of issues such as Intellectual Property Rights (IPR), licensing agreements, interoperability and reuse of data.

To develop its open science policy the Commission works closely with 2 expert groups:

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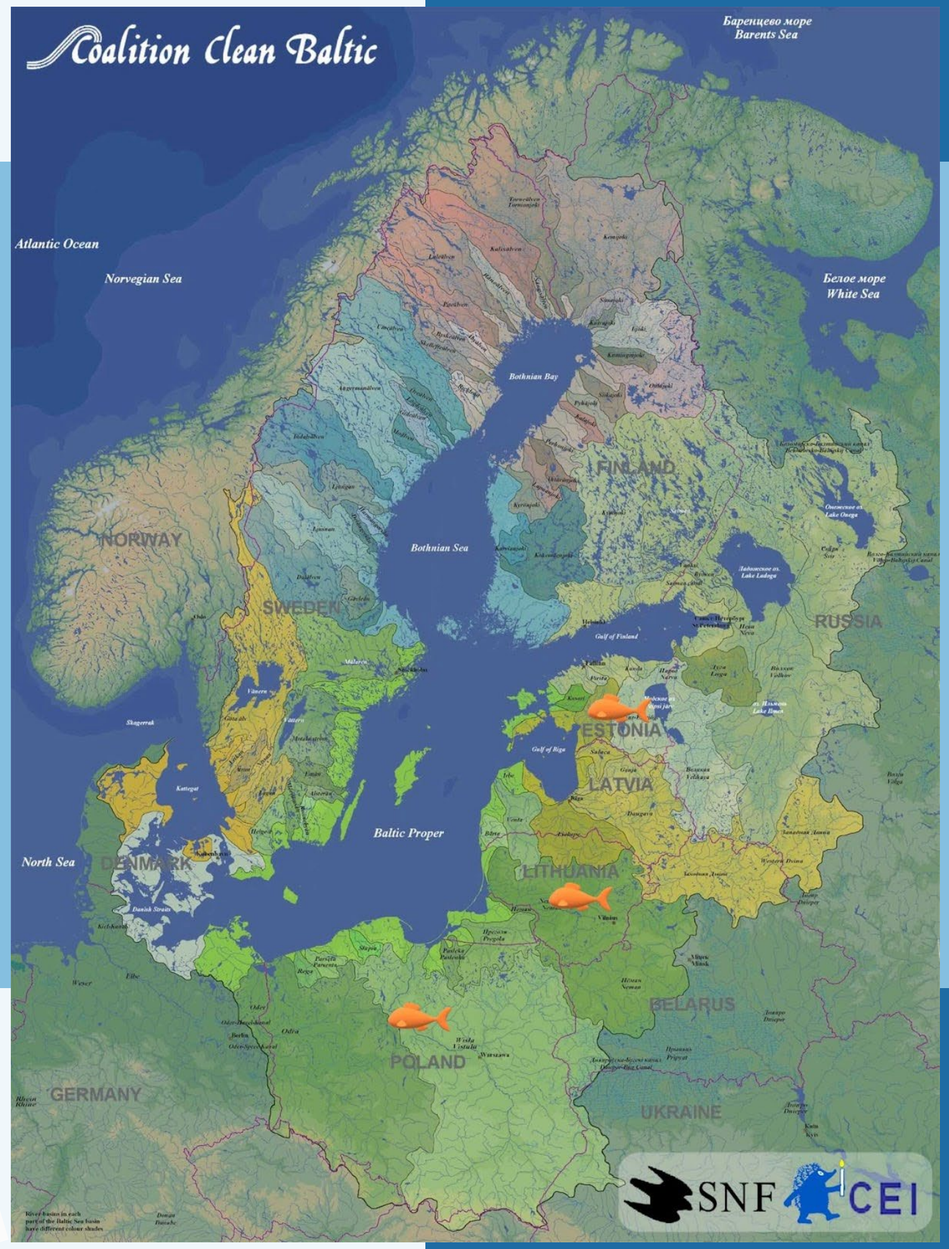



Colorful river basins in the Baltic Sea region and countries RU was hosted so far.

## Vision:

Open and international, interdisciplinary River University,
sharing river/freshwater ecosystems knowledge via open access, wide availability and understandable science platform in the Baltic Sea Region (BSR) & Europe,
for variety of participants - river stakeholders.

River University supports institutional and official knowledge, collaborating with existing universities across Europe.

## Value:

contribution to the improvement of BSR's waters condition;
environmental stewardship;
shared sense of responsibility around water management;
supporting the official education

# River University: our timeline



## 2018

Pilot – testing, Poland

Investments on large rivers

## 2020

1st, Poland (online)

River continuity, healthy rivers

## 2021

2nd, Lithuania (live!)

River basin management

## 2022

3rd, Estonia (live)

Flood management risk, entering Nature Positive Universities cooperation, Open science

## 2023

...

## 2024

...

## 2025

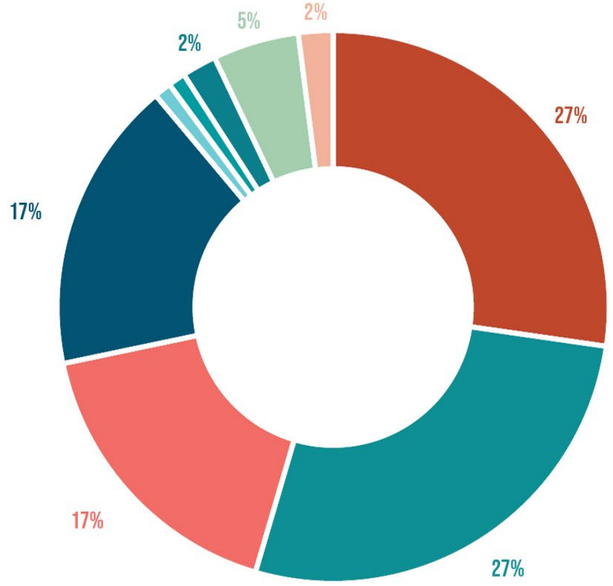
...

...

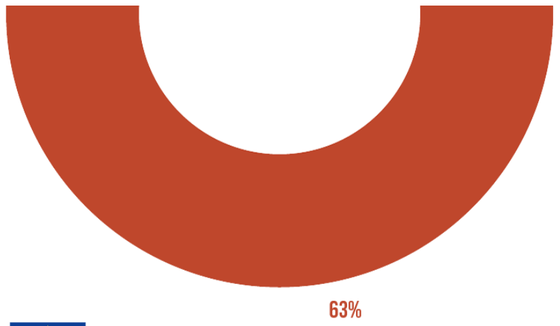
Coalition Clean Baltic

# Registered participants of 1st edition of River University 20-24.10.2020

## Sector




- NGO
- SCIENCE
- INSTITUTION
- INDIVIDUALS
- LANDSCAPE ARCHITECTURE
- POLITICAL PARTIES
- MUNICIPALITIES
- BUSINESS
- OTHER




- BOLIVIA
- BELARUS
- POLAND
- CALIFORNIA
- MOLDOVA
- CANADA
- INDONESIA
- BELGIUM
- ESTONIA
- UNKNOWN
- BELGIUM

ersities

RIVER UNIVERSITY 2022

# Do we meet our aim?

to make the river science more open and understandable for all of us, citizens!

To make the River University more useful, open, connecting environments and river stakeholders

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EESTI VEEÜHING
ESTONIAN WATER ASSOCIATION

# THANK YOU,

## Let's meet by the river!


EWA LEŚ

evvales@gmail.com

LinkedIn, ResearchGate


MORE INFORMATIONS: **CCB River University**


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# Sources:


1. Open Life Science course I graduated in 2021
2. River University materials
3. Open Science | European Commission (europa.eu)
4. Open Science - taltech.ee
5. Photos from 1st edition of River University in Lithuania: Ewa Leś, Jūratė Morkvėnaitė, videos by Agnieszka Czajka