Policy Makers and Open Science: European Commission perspective

UN Open Science Conference: "From tackling the pandemic to addressing climate change"

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Open Science and the pandemic: what did we learn?

- Broad consensus that **Open Science accelerates scientific discovery** and that FAIR and open data can save lives
- But more action will be necessary to **make Open Science the "new normal"**
  - Reforming the research assessment system to provide **incentives and rewards**
  - **Data infrastructures inadequate** for responding to a pandemic
  - **Publishing models** need to become **more transparent and agile**

Transitioning towards open science as the new norm **requires coordinated action** by policy makers, research funding and research performing organizations, at national, regional and international levels

Open Science and climate change

OPINION article

Front. Environ. Sci., 11 October 2018 | https://doi.org/10.3389/fenvs.2018.00115

Enhancing Climate Change Research With Open Science

Travis C. Tai[1*] and James P. W. Robinson[2]

For climate change scientists, who must respond to evolving environmental changes with research that has considerable societal impact, ***the open sharing of data, code, and research outputs could be transformative*** (e.g., Lowndes et al., 2017).

Despite the clear benefits of OS in enhancing research output and communication to stakeholders, ***considerable barriers to OS uptake persist, including closed publishing, fear of being "scooped," and clarity of data ownership*** (Nosek et al., 2015).

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The European Commission commitment to Open Science

Improve *the practice* of R&I

- Openly accessible scholarly publications
- Early sharing of all research outputs
- All data FAIR, RDM
- Reproducible results
- Societal engagement and responsibility

Develop proper *enablers*

- Rewards and incentives to adopt Open Science practices, with appropriate metrics
- Appropriate skills and education, including for research integrity
- Open Research Infrastructures including the European Open Science Cloud (EOSC)

European Research Area Communication

Provisions on Open Science under Horizon Europe

Reform of research assessment

EOSC

Open Research Europe

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Towards a new ‘modus operandi’ for Science

The dominant current system	FROM → TO	Open Science
• Rewarding individual competing scientists	→	• Rewarding collaboration and sharing
• Publish as much and as fast as possible	→	• Share knowledge/data as early and as openly as possible
• Excellence defined largely on the basis of *where* scientists publish	→	• Composite definition of excellence
• Incentivises researchers to *produce specific outputs* (mainly publications) *- Use of quantitative metrics*	→	• Incentivises researchers to share, collaborate, increase quality and impact; *- Use of qualitative and quantitative metrics*
• Strong influence of commercial players from access to publications	→	• Avoid lock-in of publicly-funded R&I output, ensuring autonomy of RPOs

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Promoting global cooperation in Open Science

- Science is a **global enterprise** and many R&I collaborations are international in nature
  - Need **access** to, and **reuse** of knowledge, data, tools and infrastructure world-wide
  - Need **sharing** and **collaboration** with teams all over the globe
- **Policies & actions** for open sharing of knowledge are most often at national or institutional level
  - Need **international alignment** on **values and principles**: open science, research integrity, a level-playing field
  - Need for **international standards** and **interoperability**

➢ The Commission is participating and cooperating with the UN, UNESCO, G7, OECD, and other international organisations to enable the transition to open science

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Thank you

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