Policy Makers and Open Science: European Commission perspective

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

21 July 2021

Dr Kostas Glinos
Head of Unit for Open Science
European Commission, DG Research & Innovation
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.
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).
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**

**Reform of research assessment**

**EOSC**

**Open Research Europe**

**Provisions on Open Science under Horizon Europe**
Towards a new ‘modus operandi’ for Science

The dominant current system

- Rewarding individual competing scientists
- Publish as much and as fast as possible
- Excellence defined largely on the basis of where scientists publish
- Incentivises researchers to produce specific outputs (mainly publications)
  - Use of quantitative metrics
- Strong influence of commercial players from access to publications

FROM \(\rightarrow\) TO

Open Science

- Rewarding collaboration and sharing
- Share knowledge/data as early and as openly as possible
- Composite definition of excellence
- Incentivises researchers to share, collaborate, increase quality and impact;
  - Use of qualitative and quantitative metrics
- Avoid lock-in of publicly-funded R&I output, ensuring autonomy of RPOs
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
Thank you