



USING SCIENCE DIPLOMACY FOR ADDRESSING GLOBAL CHALLENGES

## OPEN SCIENCE DIPLOMACY

FOLLOWING THE CALL FOR 'OPEN SCIENCE, OPEN INNOVATION, AND OPEN TO THE WORLD' BY THE EU COMMISSIONER FOR RESEARCH, SCIENCE AND INNOVATION CARLOS MOEDAS IN 2015, WE LOOK FOR APPLICATIONS AND IMPLICATIONS OF OPEN SCIENCE IN SCIENCE DIPLOMACY.

Open Science is the idea that scientific knowledge of all kinds should be openly shared as early as it is practical in the research process. The international Open Science movement strives to improve accessibility to and reusability of research and takes the opportunity to renegotiate the roles and responsibilities of publicly funded research in society. There are already many initiatives and programmes supporting the Open Science approach. Europe is striving to lead Open Science to new frontiers.

Within the RRI (Responsible Research and Innovation) framework for research and innovation funding, a set of priorities was defined to make Europe a stronger global actor through science and collaboration, thus evoking core aspects of science diplomacy.

When examining the Open Science policy arena as a potential site for science diplomacy, several questions are asked: How can Open Science be exploited for decision-making support, knowledge resources and science diplomacy governance frameworks? How is the European Open Science strategy perceived and how can it be harnessed for foreign policy? How can science diplomacy and Open Science mutually benefit from each other, while the modus operandi of the global science system is facing fundamental changes?

Governance of international cooperation in the science system varies highly, and international Open Science stakeholder landscapes have changed dramatically in the last 30 years: there are a broad variety of advocacy actors and policy implementing organisations (such as funders and research organisations) along with the increased involvement of publishing and content service industries, while many cross-border activities still rely on informal and personal relationships.

A central finding is that Open Science Diplomacy can be defined today mostly as international political cooperation for the advancement of the transition towards Open Science, even though 'science diplomacy' is not a term used very often in the global Open Science realms. The impact of changes in the international science system on foreign relations is in some cases already tangible – e.g. in the creation of international partnerships for the promotion of Open Access publishing or the exchange of Open Research Data.

On the other hand, Open Science has only marginally been used for science advice in foreign relations until now. Their potential link was reflected in most case interviews as 'non-existent', 'un-anticipated', but 'interesting' and 'improvable'. This potential – for example to tackle societal challenges such as infectious diseases efficiently across borders - has not been harnessed yet, even though research policy makers and Open Science advocates are aware of it and have started to promote it.

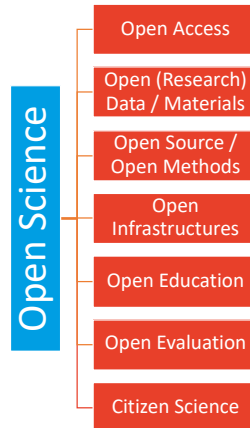


FIGURE: KATJA MAYER, CC BY 4.0



FIGURE: Why Open Science? Graphic for University of Cape Town, Gaelen Pinnock, CC-BY-SA-4.0

### KEY FINDINGS OF THIS CASE STUDY

- » European Open Science priorities are seen internationally rather positively, commitments and partnerships are increasing, implementation is still cautious.
- » Open Science is rarely on the diplomatic agenda, and science diplomacy is only marginally used for international orchestration and coordination, even though advocates would welcome the involvement of foreign policy actors.
- » Pressing issues, like the harmonization of standards and legal frameworks for the exchange of data ('data diplomacy'), as well as new opportunities for innovation have not yet been discussed.
- » The rare instances of involvement of diplomatic institutions has mostly been triggered by local advocates, and is often not sustainable.

### KEY RECOMMENDATIONS

- » Open Science priorities should be high on the agenda for international scientific cooperation as they can help tackle societal challenges, define missions and realise the UN Sustainable Development Goals.
- » Open Science actors would benefit from diplomatic skills for multi-national, multi-stakeholder negotiations, so as to translate their needs into coherent sets of policies, monitoring measures, etc.
- » Foreign policy actors need tailored information and training about Open Science in order to understand the potential both for their own interests and for the advancement of international scientific cooperation and innovation.

“It is a human right to have access to publicly funded knowledge. Not a single person should be left behind.” - science policy-maker

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 770342

