USING SCIENCE DIPLOMACY
FOR ADDRESSING GLOBAL CHALLENGES

S4D4C Training Material for Workshops on Science Diplomacy

Open Science Diplomacy

Background	This training material is an output of the project S4D4C – Using science for/in diplomacy for addressing global challenges (www.s4d4c.eu). S4D4C has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 770342. The project S4D4C selected and developed training materials (presentations, methods, exercises, games, etc.) for trainings on Science Diplomacy for different target groups (mainly diplomats, scientists and science diplomats). These materials are open source under creative commons licences (see below for the applicable license).
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Short description	The presentation builds on the S4D4C case study on Open Science Diplomacy. It includes basic information about Open Science and its benefits and challenges for Science Diplomacy in the light of European efforts in the context of "Open Innovation, Open Science, Open to the World" (Moedas 2016). The potential of Open Access and Open Data are described along Global Health emergencies, such as the outbreaks of Ebola.

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Learning objectives	The presentation can be used as first introduction to principles of Open Science in the context of data sharing for Global Health. Learning objectives: • Understand the basic principles of Open Science • Understand the benefits and challenges of Open Access and Open Data in the context of health emergencies. • Become familiar with the diversity of views from different stakeholders. • Gain insight into the opportunities of Open Science for Science Diplomacy.
Material type	☒ presentation ☐ method ☐ simulation game ☐ exercise ☐ other: _____.
Overall content category (if adequate and applicable)	☒ What is Science Diplomacy? ☒ Who are the Science Diplomacy stakeholders? ☐ How does the European Union practice Science Diplomacy? ☐ Which thematic and regional approaches of Science Diplomacy do exist? ☐ What set of skills do I need to be a good science diplomat? ☐ Which are good examples where Science Diplomacy has proven to be successful?
Target groups (1)	☐ Mainly for scientists ☐ Mainly for diplomats ☒ For any of the groups
Target groups (2)	☐ Mainly for beginners in Science Diplomacy ☐ Mainly for trainees with basic understanding of Science Diplomacy ☐ Mainly for advanced science diplomats ☒ For any of the groups
Group size	☐ For individual learners ☐ For small groups (up to 20) ☐ For large groups (between 20 and 100) ☒ For any group size
Duration	30 minutes presentation, 15 minutes discussion
Level of interactivity	☐ high ☐ medium ☒ low
Preparation and material needed	No requirements
Recommended use case and guidance for the trainer	The presentation should be used for the introduction of Open Science and its relevance for Science Diplomacy in cases of international Health Emergencies.

Further resources and links	Science Diplomacy Mayer K. and Aukes E.J. (2019) *Open Science Diplomacy*. Output Brief. S4D4C. https://www.s4d4c.eu/wp-content/uploads/2019/10/6-Open-Science-Diplomacy_A4.pdf Boyd A., Gatewood J., Thorson S. and Dye T.D.V. (2019) *Data Diplomacy*. Science & Diplomacy. 8 (1). http://sciencediplomacy.org/files/boyd_may_2019_0.pdf Open Science, Open Access and Data Sharing Government of the Netherlands (2016) *Amsterdam Call for Action on Open Science*. https://www.government.nl/documents/reports/2016/04/04/amsterdam-call-for-action-on-open-science Research, Innovation and Science Policy Experts (RISE) High Level Group (2017) *Europe's Future: Open Innovation. Open Science. Open to the World*. Brussels: European Commission. http://ec.europa.eu/research/openvision/pdf/publications/ki0217113enn.pdf Expert Advisory Group on Data Access (2015) *Governance of Data Access*. EAGDA Report. London: Wellcome Trust. https://wellcome.ac.uk/sites/default/files/governance-of-data-access-eagda-jun15.pdf Young A., Zahuranec A.J. et al (2019) Addressing the Challenges of Drafting Contracts for Data Collaboration. *Medium Data & Policy*. https://medium.com/data-policy/addressing-the-challenges-of-drafting-contracts-for-data-collaboration-2f6ba2477c15 Global Health and Open Science, Data Sharing Goldacre B., Harrison S. et al (2015) *WHO consultation on Data and Results Sharing During Public Health Emergencies*. Background Briefing. Oxford: Centre for Evidence-Based Medicine. https://www.who.int/medicines/ebola-treatment/background_briefing_on_data_results_sharing_during_phes.pdf Yozwiak N.L., Schaffner S.F. and Sabeti P.C. (2015) Data sharing: Make outbreak research open access. *Nature*. 518: 478-479. https://www.nature.com/news/polopoly_fs/1.16966!/menu/main/topColumns/topLeftColumn/pdf/518477a.pdf Centre for Global Health Security (2017) *A Guide to Sharing of Data and Benefits of Public Health Surveillance*. London: Chatham House. https://www.chathamhouse.org/sites/default/files/publications/research/2017-05-25-data-sharing-guide.pdf Wellcome, GLOPID-R, UKAID (2019) *Data sharing in public health emergencies. Learning from past outbreaks.* Report Wellcome/DfID workshop 5 December 2018. London: Wellcome Trust. http://www.glopid-r.org/wp-content/uploads/2017/02/data-sharing-in-public-health-emergencies-case-studies-workshop-

	reportv2.pdf Munaõ M.R., Hollands G.J., Marteau T.M. (2018) Open science prevents mindless science. Editorials. *BMJ*. 363: k4309. https://www.bmj.com/content/bmj/363/bmj.k4309.full.pdf Crawley F.P. (2018) Research Integrity, Open Science, and Health Policy. Response. *BMJ*. 363: k4309. https://www.bmj.com/content/363/bmj.k4309/rr-0
Evaluation and assessment	Participants / Audience should be able to define Open Science and its dimensions and reflect on the challenges and opportunities of Open Access to publications and data. Furthermore, participants could test their knowledge via Open Science Mooc – Open Principles https://opensciencemooc.eu/modules/open-principles/ Open Science Training Handbook https://open-science-training-handbook.gitbook.io/book/open-science-basics/open-access-to-published-research-results https://open-science-training-handbook.gitbook.io/book/open-science-basics/open-research-data-and-materials

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