USING SCIENCE DIPLOMACY
FOR ADDRESSING GLOBAL CHALLENGES

S4D4C Training Material for Workshops on Science Diplomacy

INTERNATIONAL SCIENCE ECOSYSTEM

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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Details on the attribution	Basically, you are free to share and adapt for any purpose with attribution (more information about the licence is provided at the end of the document). Creator: S4D4C (Horizon 2020 project 770342). *Peter McGrath, TWAS* www.s4d4c.eu We are happy if you drop us a line when using these materials. This way we can keep track of their dissemination and maybe also update the material to account for issues arising: contact@s4d4c.eu
Short description	Power point presentation on the International Science System
Learning objectives	The presentation highlights the complexity of the system, illustrates the variety of actors involved, explores the issues that a scientist may encounter in his/her profession and tackles at the communication mechanisms between science and policy.
Material type	☒ presentation ☐ method ☐ simulation game ☐ exercise ☐ other: _____.

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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	*The power point has to be integrated with an oral presentation. The overall session should last about 1 hour*
Level of interactivity	☐ high ☐ medium ☒ low
Preparation and material needed	The power point requires a pc, screen and a microphone for the trainer.
Recommended use case and guidance for the trainer	The trainer has to be very familiar with the science system and with the presentation. The presentation can be modified and updated depending on the targeted public (if known in advance). In this case, one or more slides could be added on the role of Science Diplomacy if targeting only scientists (while removing some on the functioning of the science system), or on job opportunities. Otherwise, it can be useful if the presenter asks for a show of hands at the start of the session to evaluate whether the audience is composed of mostly scientists or people in governmental positions who likely have less insight into the subject matter. The presenter can then make adjustments or pause for questions more frequently, as appropriate.
Further resources and links	Various links to relevant background material (e.g. on open access publishing) are provided in the Ppt. The following article may also be useful: Source: Cunningham, J.A. Menter, M. and O'Kane, C. (2018): Value creation in the Quadruple Helix: A Micro Level Conceptual Model of Principal Investigators as Value Creators, R&D Management, 48, (1), pp. 136-147. Link: https://onlinelibrary.wiley.com/doi/full/10.1111/radm.12310

Evaluation and assessment	Please allow for some time for question and answers to ascertain that the presentation is clear

Outline:

The presentation on the International Science System aims at giving a picture of the international science system from the point of view of a scientist. The presentation aims to help scientists (especially young scientists) and non-scientists (e.g. those working in government/policy) in understanding the global science system. It progresses by following how the research and career of an individual scientist contributes to education and training, career development of job opportunities of students and mentees, knowledge production and communication, and the implications of scientific research for policymaking and diplomacy. As such, the presentation should be especially useful to policy makers and diplomats who may be unfamiliar with their national and the international science systems.

The presentation proceeds through five main sections:

1) *What is the landscape the scientist works in? Who are the main actors?*

   The international science system is complex and non-homogenous. Universities, research centres, national academies, scientific organizations as well as the private sector co-exist, collaborate and compete in the scientific arena.

2) *How does a scientist share her/his results with other scientists?*
   - Publications (beware of the "impact factor" of the research depends on where the work is being published, therefore best journals have a higher impact)
   - Patents
   - Scientific Conferences

3) *How does a scientist make her/his research results known to the public?*
   - Open access journals
   - Press releases / traditional news media
   - Blogs
   - Social Media
   - Open days (Science in the City)

4) *How can these results influence policy making?*

   Individual scientists can make their voices heard especially by joining scientific societies, unions, etc. (open membership) or being elected into science academies (typically most eminent scientists only). By speaking collectively, it is more likely that the voice of science will be heard.

   However, science can provide information, recommendations and advice, but scientists should be aware that policymaking is based on many other considerations, ranging from financial to public opinion.

5) *Science Diplomacy:*

The presentation concludes with examples of how scientists (and science) contribute to Science Diplomacy, including though the UN system (using in particular examples of the SDGs and Agenda 2030 and the IPCC climate change reports).

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