S4D4C Training Material for Workshops on Science Diplomacy

Co-Creation Workshop on 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, events 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	We interpret the concept of co-creation in the tradition of deliberative and participatory approaches that have developed over the past few decades. In general, co-creation can be understood as an **inductive, participatory method** that does not privilege any kind of knowledge over others. Co-creation workshops aim to provide a **discussion space** for different groups, in our case scientists, policy makers and diplomats with expertise in the field of science diplomacy. By strengthening the link between research and science diplomatic practice, this co-creation approach increases actual usability and use of guidance frameworks for science diplomacy, but can also be applied to other topics. Co-creation can take **different shapes**. Its impact only becomes comprehensible once the method by which it is encouraged is explained. The workshop is envisioned in four phases (see guided note below): 1. **Exploration phase**: give the floor to participants to discuss their notions of Science Diplomacy with each other. During this phase, challenges, conflicts and barriers should be unearthed. 2. **Presentation phase**: present preliminary, premeditated ideas about the envisioned science diplomacy activity. This phase is less interactive and contains mainly results communication by the organizing team. 3. **Investigation phase**: contrast the discussion from the exploration phase with the content presented in the previous phase. 4. **Concretization phase**: explore future pathways based on the discussion in the investigation phase.
Learning objectives	The learning objectives when using this approach and training material are: - Developing interactively a governance arrangement for an envisioned science diplomacy activity; - Analysing different actors' perspectives on and approaches to science diplomacy; - Experiencing the setting of co-creation workshops (e.g. workflow plan, recommendations for smooth implementation) -
Material type	☐ presentation ☒ method ☐ simulation game ☒ exercise ☐ other:
Overall content category (if adequate and	☐ What is science diplomacy? ☐ Who are the science diplomacy stakeholders? ☒ How does the European Union practice science diplomacy?

applicable)	☒ 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	1. **Workshop preparation: 3-4 days**
	2. **Workshop duration: app. 6 hours** (e.g.: 9am- 3pm; see guided note below)
	    - Welcome & getting to know each other: 30 min.
	    - Exploration phase (discussion and wrap-up): 60 min.
	    Coffee break: 15 min.
	    - Presentation phase (and Q&A): 45 min.
	    - Investigation phase (discussion and wrap-up): 75 min.
	    Lunch break: 45 min.
	    - Concretization phase: (discussion and wrap-up): 60 min
	    - Closure: 30 min.
	3. **Follow-up report: 2 days**

Level of interactivity	☒ high ☐ medium ☐ low
Preparation and material needed	**Concept** • Guiding questions • Criteria for selection of participants • Invitation letter • Moderator, sharing responsibilities **Logistics** • Name tags • Participation list • If available: posters • Guiding questions on each of the flip-overs • Mobile walls • Papers for mobile walls **Please notice:** You could choose different discussion formats, which should be tailored to the expected participants. The chosen format would influence the preparation and material needed.

Recommended use case and guidance for the trainer	Co-creation workshops could be organized in the **margins of other activities** (e.g. conferences related to the topic) to increase the availability of participants as well as the visibility of the event. The workshops should begin with a **brief introductory statement** by the initiators. The initiators should take a relatively "neutral" role to enable the participants' discussion to become as deep as can be. The **exploration round** should be done in 2 groups of participants, with each one moderator and note-taker. The rapporteurs should be defined before starting the discussion. To encourage an open brainstorming atmosphere the moderators can prepare some **guiding questions**. Each phase/discussion should be completed by either a recap moment by the moderators or a brief Q&A session for clarification and understanding questions. The **workshop locations** should be appropriate for conducting interactive settings: you need separated working spaces in one big room or at least two small rooms.
Further resources and links	S4D4C online lecture "Science Diplomacy in the Making": https://www.s4d4c.eu/s4d4c-online-lecture-science-diplomacy-in-the-making/ Kuhlmann & Aukes: Science diplomacy in the making (videos): http://www.zhb.tu-dortmund.de/zhb/hdhf/en/research/he-colloquium/he-colloquium_2020/video_kuhlmann_aukes/index.html
Evaluation and assessment	*n.a.*

Guided Note

1. Background and Objectives

With this training material S4D4C presents an empirically founded co-creation approach to exploring and understanding the contemporary topic of science diplomacy. In the case of S4D4C, two co-creation workshops aimed to provide a discussion space for scientists, policy makers and diplomats with expertise in the field of science diplomacy. During these co-creation workshops, a draft science diplomacy governance framework has been reflected, improved and validated.

A core aspect of the envisioned co-creation approach is the openness of the discussion. This ideally suits the development of measures and instruments in the field of science diplomacy. From this experience, we

believe that co-creation workshops can be used as a training setting with mixed groups of experienced stakeholders.

2. Participants

We recommend to have max. 15 experts and approximately 5 persons as organizing team. All participants should have experience with science diplomacy in their respective contexts, ranging from some experience to long-standing careers. They should represent different organisations (e.g. ministries, universities, NGOs, funding agencies etc. from various countries in Europe or the whole world) as far as possible.

3. Setting

The organising team should define two moderators and three note-takers in advance. The time the organizing team talks or presents should be reduced to a minimum, while the atmosphere at the workshop should invite to speak freely and openly about science diplomacy. The participating practitioners are all regarded as experts in their own everyday work and should be left the floor during the discussions.

For the setting, the organisation team should prepare seating arrangements, e.g. to place the chairs in a circle for the start, to have the mobile walls with brown papers and post-its prepared etc.

4. Structure

The co-creation workshop structure works according to the basic principles of openness and minimal steering by facilitators. The phases explained below are one example how you could structure your event, but there is abundant flexibility in the specific formats within the phases. As long as the basic principles, e.g. intellectual and experiential openness, transparency and protection of confidential information, are adhered to, organisers can apply the workshop formats they want.

Welcome & getting to know each other:

The workshops should begin with a brief introductory statement by a guiding expert and host, who introduces the purpose of the workshop, the workshop team and an overview of the schedule incl. practical information. This could be followed by a brief round of introductions, in which participants could share their name, affiliation, relations of their work with science diplomacy and their expectations of the workshop.

Exploration phase:

The exploration round can be done in two groups of participants (app. 7-8 participants per group), each with one moderator and one note-taker. During this round, a set of three prepared questions could be discussed. These aim at warming up the participants and eliciting their own conceptions and ideas about science diplomacy. These questions could have a general character and they should be used as an introduction in the topic, e.g.:

- What works in science diplomacy and what does not work?

- What are the largest drawbacks of science diplomacy as a concept and as you know it is done in practice?

- Which framework conditions need to be realized for science diplomacy activities to thrive?

As a preparation, the participants could be asked to contemplate these questions beforehand.

The results of the discussions should be brought back into the plenary by means of a rapporteur and the presentation of brown papers with post-its.

Presentation phase:

Experts should present the respective current state of developments in an envisioned science diplomacy activity. The presentation could be based on different information sources, e.g.:

- empirical work in this context, e.g. case studies;

- relevant literature on science diplomacy and in the field of STI studies;

- needs assessment and state of the art reports on science diplomacy;

- experience within other projects and similar measures.

Investigation phase:

Then, participants' thoughts about the previously presented proposal for a science diplomacy activity must be elicited and discussed. This happens in plenary to encourage an open brainstorming atmosphere. Moderators should have concrete guiding questions in mind elaborated by the organizing team in advance, e.g.:

- How well does the proposed activity capture the difficulties that exist in science diplomacy nowadays?

- Which necessary framework conditions enabling successful science diplomacy practices does the activity fail to provide?

- Which mechanisms and activities enable science diplomats to collaborate despite diverging and sometimes conflicting motivations and drivers?

Concretization phase:

In the last phase, the participants split up into groups of three to discuss steps forward. Brown papers should be prepared that depict for example a road towards the horizon. Participants should be asked to use post-its to illustrate which steps need to be taken to make science diplomacy in general or special activities more appropriate.

The moderators should stimulate the discussion by using future oriented guiding questions like

- What needs to be done to make the planned measures helpful?

- How can it be more applicable for participants' different everyday contexts?

- What kind of resources, capabilities, standards, interaction formats, teaching materials would participants need?

- What other recommendations do participants want to share?

- What suggestions for further developing the science diplomacy activities do participants have?

- How do participants envision the elaborated activities be used best?

This phase should end by either a recap moment by the moderators or a brief Q&A session for clarification and understanding questions.

5. Workflow Plan

Time Schedule			Content			Role			
Start	End	Dura-tion	Topic	Goal	Details	Moderation	Note taking	Facilitation	Materials
9:00	9:15	15 min.	Welcome	-	Host welcomes participants and introduces the goals and not-goals of the workshop and the agenda. eventually: brief introduction of project.	*Name*	-	-	- PowerPoint presentation - Computer - Screen
9:15	9:30	15 min.	Getting to know each other	People know each other, and break the ice between them		*Name*	-	-	
9:30	10:15	45 min.	Exploration	Discuss participants' notions of science diplomacy, challenges, conflicts, barriers	- 2 groups - 3 guiding questions (prepared and shared on forehand with participants) written on flip overs - Facilitators write down important concepts on post its/moderation cards and hand them to moderator or stick them on brown paper directly	*Name*	*Name*	*Name*	- 2 Flip overs - Brown paper - Markers - A lot of Post its - Pens for everyone
10:15	10:30	15 min.	Wrap-up exploration	Results of the group discussions are revisited in plenary	- Recap main results and elaborate if necessary - New aspects are added to brown paper on post-ist by facilitators	*Name*	*Name*	*Name*	- Markers - Post-its
10:30	10:35	5 min.	Hang up/ Move brown papers	Results of exploration visible on the wall	Anyone with time	-	-	-	Tape or thumbtacks

10:30	10:45	15 min.	Coffee Break						
10:45	11:15	30 min.	Presentation	In our case the S4D4C science diplomacy governance framework has been presented. For each co-creation activity, the experts in the organising team need to prepare a specific input.	Presentation about coming about and resulting building bricks of governance framework	*Name*	-	-	- PowerPoint presentation - Computer - Screen
11:15	11:30	15 min.	Q&A	Governance framework is understood by and clear for all participants	- Participants pose questions immediately answered by project team - Facilitator writes down discussion questions that are postponed to the discussion later	*Name*	*Name*	*Name*	- 2 Flip overs - Markers - Post-its
11:25	11:30	5 min.	Hang up/ Move brown papers	Exploration results on the wall	Anyone with time	-	-	-	Tape or thumbtacks
11:30	12:30	60 min.	Investigation	Results of exploration and presentation phase are contrasted	- Discussion in plenary - open and brainstorming manner - participants write on post-its - guiding questions/topics only for moderators - facilitators write post-its as required	*Name*	*Name*	*Name*	- 2 Flip overs - Markers - Brown paper - Post-its
12:30	12:45	15 min.	Wrap-up investigation	Results of the group discussions are revisited	- Recap main results and elaborate if necessary - New aspects are added to brown paper on post-ist by facilitator	*Name*	*Name*	*Name*	- 2 Flip overs - Markers - Brown paper - Post-its
12:45	13:30	45 min.	Lunch break						

13:15	13:30	15 min.	Recap workshop for wrap up/closure	Outline rough results of the day (for session closure)	Workshop team				
13:30	14:15	45 min.	Concretization	Define next steps	- Participants work in 3 groups on their own brown paper - Brown paper with paths into the future - Our next steps and development of recommendations	*Name*	*Name*	*Name*	- 2 Flip overs - Markers - 3 brown papers with paths drawn on them - Post-its
4:15	14:30	15 min.	Wrap-up concretization	Results of the group discussions are revisited	- Recap main results and elaborate if necessary - New aspects are added to brown paper on post-ist by facilitator - One facilitator reproduces results visually on brown paper	*Name*	*Name*	*Name*	- Flip over - Brown paper - markers
14:30	14:45	15 min.	Closure	Brief overview of the day, next steps		*Name*	-	-	-
15:00	15:15	15 min.	Photograph all flip overs and other materials used	Documentation of all visual results	organizing team				- Mobile phone/photo camera - Poster tube

6. Reporting and evaluation

At the end of the whole process, we recommend that the note-takers prepare an integrated report summarising the main findings of the workshop:

- The report should reflect on the workshop and its results and share these reflections with the participants.

- It could include the co-creation method, the emerging governance framework, the settings and participants of the workshops, the results of the workshops and general lessons learnt. Based on the results follow-up activities with the participants and experts from the workshop could be planned additionally.

- A suggested report structure could look as follows:

Section number	Section name	Brief description
1	Introduction	Introduces the report briefly
2	Description co-creation method	Describes the specific workshop method that was used
3	Overview of the governance arrangement	Gives and overview of the envisioned governance arrangement for a science diplomacy activity
4	Setting and participants	Describes the participants to show the range of stakeholders present
5	Results of the workshop	An overview of thematic aspects that came up during the workshop
6	Lessons and adaptations	Thematic overview of the lessons drawn from the results; Potential changes to the presented governance arrangement
7	Conclusions	Brief concluding section
8	References & Annexes	Optional/if needed

Annex – Details on the License