


S4D4C Training Material for Workshops on Science Diplomacy

Water Diplomacy and its Future in the National, Regional, European and Global Environment (presentation followed by group discussion)

Background	<p>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.</p> <p>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).</p>
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Details on the attribution	<p>Creator: Eliska Cernovska, https://www.s4d4c.eu/eliska-cernovska/</p> <p>We are happy if you drop us a line when re-using the materials to learn about their dissemination: contact@s4d4c.eu</p>

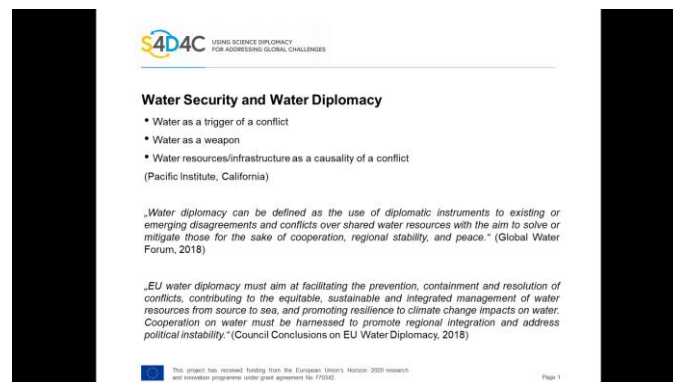


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Short description	<p>The material presents the case study "Water diplomacy and its future in the national, regional, and European environments" (https://www.s4d4c.eu/wp-content/uploads/2020/03/D3.2_2_Water_final.pdf) within S4D4C projects conducted by Eliska Tomalova (Charles University), Eliska Cernovska (Charles University), Ewert Aukes (University of Twente), Jasper Montana (University of Sheffield).</p> <p>The S4D4C case on water diplomacy illustrates there is no single understanding of the link between water diplomacy and Science Diplomacy in analysed sub-cases even though the scientific evidence is acknowledged as integral elements of effective water diplomacy. In this regards, national countries possess advanced water knowledge (e.g., flood management for the Netherlands or nanotechnologies in water sanitation for the Czech Republic) which is accounted for the central aspect of water diplomacy, so called „niche“ in water diplomacy.</p> <p>Although the EU and its Member States have not formulated explicit strategy linking water diplomacy defined as „the use of diplomatic instruments to existing or emerging disagreements and conflicts over shared water resources with the aim to solve or mitigate those for the sake of cooperation, regional stability, and peace“ (Global Water Forum, 2018). Water diplomacy potentially opens an innovative approach of Science Diplomacy with socio-economic elements, interdisciplinarity and cross-sectional actors' cooperation.</p>
Learning objectives	<p>Provided basic knowledge about</p> <ul style="list-style-type: none"> • What is science diplomacy? • What is water diplomacy? • Links between science and water diplomacy • EU as well as national water diplomacy • Role of water in international relations <p>Objectives:</p> <ul style="list-style-type: none"> • To introduce linkage between science diplomacy and water diplomacy and to inform about EU water diplomacy • To illustrate the relevance of water diplomacy because of the increasing role of water in international relations based on group discussion • To initiate a discussion on the potential and future development of water diplomacy
Material type	<p><input checked="" type="checkbox"/> presentation <input type="checkbox"/> method <input type="checkbox"/> simulation game <input type="checkbox"/> exercise <input checked="" type="checkbox"/> other: group discussion</p>
Overall content category (if adequate and applicable)	<p><input checked="" type="checkbox"/> What is Science Diplomacy? <input type="checkbox"/> Who are the Science Diplomacy stakeholders? <input checked="" type="checkbox"/> How does the European Union practice Science Diplomacy? <input checked="" type="checkbox"/> Which thematic and regional approaches of Science Diplomacy do exist? <input type="checkbox"/> What set of skills do I need to be a good science diplomat?</p>

	<input type="checkbox"/> Which are good examples where Science Diplomacy has proven to be successful?
Target groups (1)	<input type="checkbox"/> Mainly for scientists <input type="checkbox"/> Mainly for diplomats <input checked="" type="checkbox"/> For any of the groups
Target groups (2)	<input checked="" type="checkbox"/> Mainly for beginners in Science Diplomacy <input type="checkbox"/> Mainly for trainees with basic understanding of Science Diplomacy <input type="checkbox"/> Mainly for advanced science diplomats <input type="checkbox"/> For any of the groups
Group size	<input type="checkbox"/> For individual learners <input checked="" type="checkbox"/> For small groups (up to 20) <input checked="" type="checkbox"/> For large groups (between 20 and 100) <input type="checkbox"/> For any group size
Duration	Presentation + questions – 20 minutes Group discussion – 60 minutes (three rounds á 20 minutes) Debriefing session – 20 minutes (presentation of the outcome and discussion in plenum)
Level of interactivity	<input checked="" type="checkbox"/> high <input type="checkbox"/> medium <input type="checkbox"/> low
Preparation and material needed	The trainer should be familiar with the role of water in international relations overlapping with water diplomacy (in particular with EU water diplomacy) and science diplomacy. Please check also the additional articles and papers related to the presentation (see GUIDANCE NOTE Presentation below) to prepare properly your presentation.
Recommended use case and guidance for the trainer	<p>Ideally, the presentation would be followed by a group discussion. We recommend you the method “World Café” (see GUIDANCE NOTE Group Discussion below).</p> <p>Specific requirement to the room(s): flexible seating for group works, flipcharts and pens for noting main points from group discussion for the purpose of the debriefing session.</p>
Further resources and links	Alternatively you could prepare a simulation game if you want to train your participants how to negotiate. The Program “Indopotamia River Basin” from the Harvard Law School created by Catherine Ashcraft, Lawrence Susskind and Shafiqul Islam might be an option for that. It is however associated with costs and might take several hours (see GUIDANCE NOTE Simulation Game below).
Evaluation and assessment	Follow-up discussion with participants

GUIDANCE NOTE Presentation



Purpose of the slide: introduction

Content of the slide:

Water Security: A wide range of water-related risks undermine human well-being and can contribute to political instability, violent conflict, human displacement and migration, and acute food insecurity, which in turn can undermine national, regional, and even global security.

Political instability and conflicts are rarely caused by any single factor, such as a water crisis. Instead, water crises should be seen as contributing factors to instability.

While water risks have threatened human civilizations over millennia, today's global population growth and economic expansion—together with threats from climate change—create a new urgency around an old problem.

Water risk is not only a function of hazards, such as extreme droughts and floods, it is also a function of a community's governance capacity and resilience in the face of natural hazards.

No single strategy is sufficient to reduce water risk. Instead, multifaceted approaches will be needed.

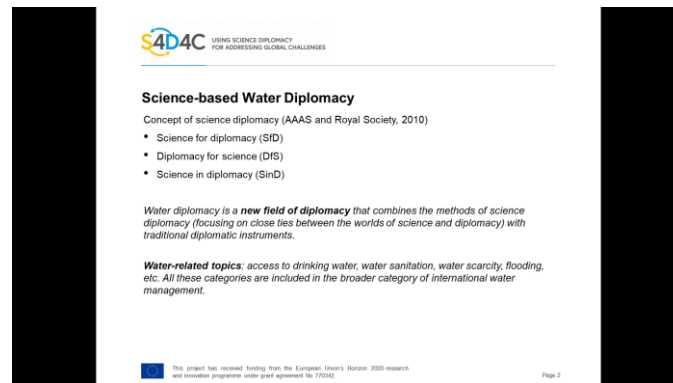
Further information:

- Peter Gleick and Charles Iceland (2016), Water, Security, and Conflict; <https://pacinst.org/publication/water-security-and-conflict/>

Water Diplomacy: see definition

Further information:

- Susanne Schmeier, IHE Delft (2018), What is water diplomacy and why should you care?; <https://globalwaterforum.org/2018/08/31/what-is-water-diplomacy-and-why-should-you-care/>
- Council Conclusions on EU Water Diplomacy, adopted on 19 November 2018 by the EU; <https://globalwaterforum.org/2018/08/31/what-is-water-diplomacy-and-why-should-you-care/>



Purpose of the slide: relation between Science Diplomacy and Water Diplomacy

Content of the slide:

Science diplomacy is still a fluid concept that can usefully be applied to the role of science, technology and innovation in three dimensions of policy:

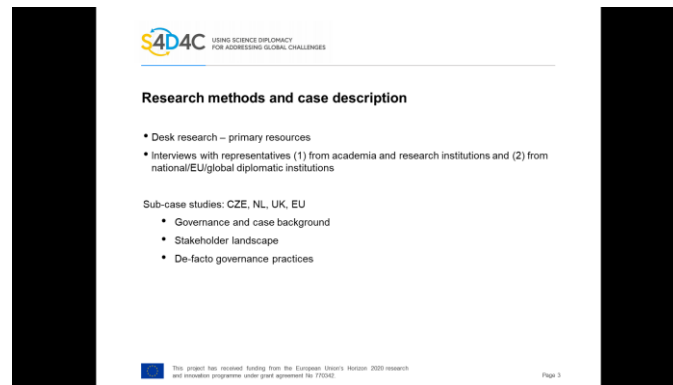
- informing foreign policy objectives with scientific advice (science in diplomacy);
- facilitating international science cooperation (diplomacy for science);
- using science cooperation to improve international relations between countries (science for diplomacy).

Further information:

- AAAS and Royal Society (2010), New frontiers in science diplomacy;
https://royalsociety.org/~media/Royal_Society_Content/policy/publications/2010/4294969468.pdf

Water Diplomacy: see description at the slide

Water management is a multifarious responsibility that extends to agriculture, national security, public health and other areas. A diplomacy that promotes efficient water management requires the involvement of different actors who need to understand and take into account the 'water dimension' of a specific diplomatic situation. As needed, it can employ the tools of pre-emptive diplomacy, designed to head off critical international problems, and crisis management. That is why the cooperation of government officials with the scientific community (including experts in the hard sciences, technical disciplines, the social sciences and the humanities) is crucial to successful water diplomacy. The case of water management is very well suited for a study of the practice of science diplomacy.



Purpose of the slide: methods and main outcomes

Content of the slide:

Methods: Desk research as well as interviews with representatives (1) from academia and research institutions and (2) from national/EU/global diplomatic institutions.

This case study is an example of a foreign policy driven analysis, as it focuses mainly on actors, topics and instruments that contribute to the achievement of foreign policy goals as mentioned in main conceptual documents of the three countries and the EU. It mainly studies the science for diplomacy category – methods and instruments that contribute to an effective cooperation and communication between the scientific and diplomatic communities and follow diplomatic objectives.

The sub-case studies (CZE, NL, UK, EU) has been structured in a similar way:

- Governance and case background
- Stakeholder landscape
- De-facto governance practices

As the report shows, there is no single understanding of water science diplomacy at the national level in the three countries. The three subcases present some common features, such as acceptance that scientific expertise must be part of decision-making and foreign policy, but every country has its own specific approach and different de-facto governance practices.

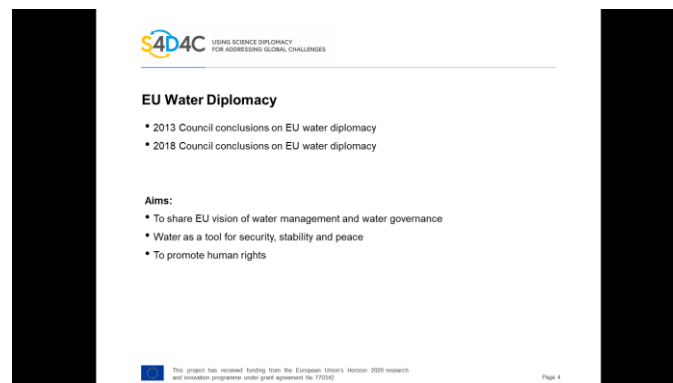
Dutch water management and water diplomacy is an example of a niche where the Netherlands is positioned as an expert. Its expertise is based on its long cultural, scientific and technical experience, and makes the Netherlands a reliable partner for water-related projects on all levels (regional, bilateral, EU and global).

The UK case is characterized by complex governance methods and the importance of water diplomacy is highlighted as a part of development aid and technical assistance.

Czech water diplomacy is a new element of Czech foreign policy that is seeking to find a place in both traditional and public diplomacy. Its main focus is on bilateral and international transboundary waters cooperation.

The EU case is unique, with no relationship to national science diplomacy models, even though its practice does reflect the ambitions, areas of expertise and excellences of its

Member States. It offers an insight into new management and organizational methods used by the EU for its diplomacy and for cooperation among its different actors and units. The EU experience is a perfect example of project management in diplomacy, applicable to both pre-emptive diplomacy and crisis management.



Purpose of the slide: methods and main outcomes

Content of the slide:

There is a significant effort within the EU to create a complex framework for its water diplomacy. That effort started in 2013 when the first document dealing with the issue was published. In 2018, Council Conclusions on EU Water Diplomacy were published. Other documents related the water agenda (e.g., water governance guidelines) are in preparation.

EU water diplomacy aims to be a pre-emptive diplomatic tool 'for peace, security and stability' building upon the long-term, positive experience of water cooperation within the EU. In addition to the ambition of ensuring sustainable water supplies and water sanitation in regions of focus (e.g., Central Asia, Middle East, and Mediterranean region), EU water diplomacy is targeting one of grand challenges of the twenty-first century, water scarcity.

Further information:

- Council of the European Union (2013): Water Diplomacy – Council Conclusions. Retrieved from: http://www.europarl.europa.eu/meetdocs/2009_2014/documents/droi/dv/1407_councilconclusions_/1407_councilconclusions_en.pdf
- Council of the European Union (2018): Water Diplomacy – Council Conclusions. Retrieved from: <http://data.consilium.europa.eu/doc/document/ST-13991-2018-INIT/en/pdf>
- Council of the European Union (2018): Water Diplomacy – Council Conclusions, p. 3, Retrieved from: <http://data.consilium.europa.eu/doc/document/ST-13991-2018-INIT/en/pdf>



Purpose of the slide: national, EU and global approaches

Content of the slide:

EU water diplomacy as a bottom-up initiative:

EU Member States are also crucial players in EU water diplomacy because European water diplomacy documents were produced by the European Council. National experts play an important role in the consultation process for water issues. As shown in the national subcases, Dutch professionals are well-known for their expertise in advanced technologies and their know-how in the field. However, other national experts are also involved, e.g., a Czech expert participated in the special committee that prepared the Nitrates Directive. Member States engage in an EU water dialogue with third countries, e.g. with India, China, and Israel, where their bilateral relationship with a particular country can have a positive impact. Last but not least, the EU builds on the best practices in water management and governance of its Member States.

Active role of EU MS in EU water platforms:

The European Union has several platforms for water-related issues (the Joint Programming Initiative for Water, the Water Supply and Sanitation Technology Platform (WSSTP), a European Technology Platform, and the European Innovation Partnership for Water). Diverse research institutions, universities, think tanks, private and public companies are members of these platforms. They are chosen by the European Commission, pay membership fees, and are consulted as needed.

Niche" in water diplomacy

UK: In the UK, government policy is set out by periodic white papers, which are government documents that define the future direction that the government would like to take on issues. National strategies for water management were recently set out in a white paper entitled Water for Life, and a white paper prepared under a Labour government entitled Future Water — The Government's water strategy for England. The governments of Scotland, Wales and Northern Ireland each generate and implement their own policy agendas. Over time, the UK Government has legislated the policy through acts of Parliament, secondary legislation and guidance that it provides to water regulators. Water regulators are independent bodies established to regulate the activities of the water industry. They include the Environment Agency, the Drinking Water Inspectorate and the Office of Water Services. The water industry has played a central role in defining the direction for development of UK water management. In addition to

government white papers, a manifesto published by the water industry in 2018 set out their vision for the UK water sector into the 2020s.

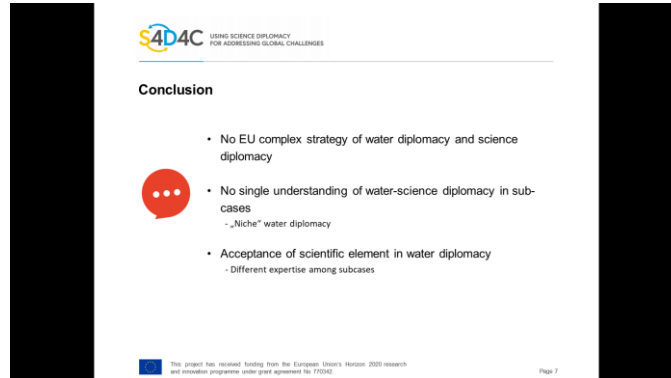
NL: Dutch engineers have used invention, science and technology to fend off sea water for centuries. Since the Dutch people began to settle in areas threatened by flooding, they have successively protected themselves with mounds, seawalls, concrete-and-metal structures and recently with sand nourishment. In the process, they have reclaimed large areas of land from the sea. During the middle ages, Dutch engineers were already travelling to Northern Germany to advise on flood control construction. Nevertheless, systematic, large-scale flood protection only developed in the twentieth century, when the means for large-scale monitoring of conditions as well as improved institutional organization became available. Improvements in flood management were always linked to critical events such as large floods. In the first half of the twentieth century, such events inspired a more integrated approach to flood management involving all the governmental institutions in the Netherlands dedicated to water issues. Naturally, the systemic transformations of the Netherlands' approach to flood management were coupled with a growing body of knowledge about flood control. While Dutch flood management experts have always travelled and worked abroad, their value is now even greater in a more and more globalized world. Since the second half of the nineteenth century, the Netherlands' governmental water management was staffed by civil engineers. In the 1970s, the engineers were joined by ecologists, which led the government to take a more complex approach to water management. At the same time, Dutch companies, which were often contracted to implement the government's water management plans, grew in expertise. They are now some of the world's most renowned business' experts in the sector. Dutch water management scientists played a significant role in formulating flood risk reduction plans for post-Hurricane Katrina New Orleans and for New York City after Hurricane Sandy. The Dutch government has advised on water management plans for low-lying countries in river deltas like Bangladesh.

CZE: One of the strengths of Czech science diplomacy is its use of public diplomacy. The Czech Republic is a small country and its international prestige is maximized by efficient use of branding strategies and public diplomacy instruments. Czech water diplomacy is not guided by a specific conceptual document. Still, Czech know-how in water-related research and innovation has become an integral feature of the part of many state PR campaigns. The crucial task for Czech science diplomacy in general, and in its water diplomacy in particular, is shifting the perception of the Czech Republic from being a receiving country for technology transfer to that of a donor. There are many 'niches' in water management where the Czech Republic could contribute to high quality science diplomacy projects as a technological leader, projects that would better market its innovation, science and technology potential to the world. An example is the use of nanotechnology in water sanitation.

European level: An example for science diplomacy with the focus on water issues: EU-Central Asia water science diplomacy platform. The European Commission explicitly aims to use scientific cooperation as an instrument to improve international relations (science for diplomacy) in this region and the term "Science Diplomacy" was explicitly used to describe a new Stakeholder Platform launched in 2018 focusing on water. The stakeholder platform aims to find novel solutions to address the regional water challenges founded on a scientific basis and sensitive to societal constraints. The instrument has the explicit aim to deploy scientific cooperation to help to overcome

the divides and conflicts.

European and global level: see slide



Slide 7: Conclusion

S4D4C USING SCIENCE DIPLOMACY FOR ADDRESSING GLOBAL CHALLENGES

Conclusion

- No EU complex strategy of water diplomacy and science diplomacy
- No single understanding of water-science diplomacy in sub-cases
 - „Niche“ water diplomacy
- Acceptance of scientific element in water diplomacy
 - Different expertise among subcases

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Purpose of the slide: final remarks

Content of the slide: see slide

GUIDANCE NOTE Group Discussion



Slide 8: Discussion

S4D4C USING SCIENCE DIPLOMACY FOR ADDRESSING GLOBAL CHALLENGES

Discussion

- Water as a global challenges of science diplomacy :
 - Can we speak of a global interest and/or global needs?
 - If so, what is it and how can it be leveraged by science diplomats?
- What is the potential EU role in water and science diplomacy on the global level?
 - Mediator
 - Normative leader
 - Bilateral/Multilateral partner in water cooperation
 - Platform for EU MS activities
- What is the future and optimal EU/MS scenario in science diplomacy in water agenda?

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Method: World Cafe

The World Café methodology is a simple, effective, and flexible format for hosting large group dialogue. It is a creative process for leading collaborative dialogue, sharing knowledge and creating possibilities for action in groups of all sizes. By organizing several discussion rounds where people are invited to discuss a topic of mutual interest in small groups, the technique enables bringing together individual ideas into one comprehensive message.

1) Setting: We have three questions (see above). Prepare three small round tables covered with a tablecloth, plenty of paper or a flipchart paper tablecloth, coloured pens. Small group sizes are essential.

2) Welcome and Introduction: The moderator introduces the World Café process: 3 questions, 3 round, app. 20 min. á round, explaining the etiquette of the cafe, and forming the groups (e.g. via counting 1,2,3, 1,2,...) and defining one host for each group.

3) Small Group Rounds: The process begins with the first of three twenty minutes rounds of conversation for the small group seated around a table. At the end of the twenty minutes, each member of the group moves to a different new table. Only the table host stays to welcome the next group and briefly fills them in on what happened in the previous round, using the flipchart tablecloths as a visual reminder of the previous conversation.

4) Harvest: After the small groups individuals are invited to share insights or other results from their conversations with the rest of the large group.

When bringing together the discoveries and insights of the small groups, the group gets an opportunity to see and link all the harvested information from a broader perspective.

Alternative: GUIDANCE NOTE Simulation Game (for 9 participants)

Simulation Game **Indopotamia River Basin** - Program on Negotiation at Harvard Law School; Catherine Ashcraft, Lawrence Susskind and Shafiqul Islam

Reference: <https://www.pon.harvard.edu/shop/indopotamia-negotiating-boundary-crossing-water-conflicts/>

Charge options: The teacher's package sample is free of charge. You may order this role simulation as a soft copy (electronic) only.

Per participant you might choose soft copy (electronic: 3\$) or hard copy (paper: 5\$) format. If you select the soft copy option, you will receive an e-mail with a URL (website address) from which you may download an electronic file in Adobe Acrobat PDF format.

Content:

Indopotamia is a nine-party, mediated, multi-issue negotiation game involving a dispute over the allocation of land and water resources shared by three countries in an international river basin. The game provides opportunities to discuss the natural, societal, and political dimensions of science-intensive policy disputes in which high levels of uncertainty are involved. The game also introduces water professionals and aspiring water professionals to the Water Diplomacy Framework (WDF).



Three riparian states sharing one river basin are included:

- Alpha (Mu State)
- Beta
- Gamma

Several national and international actors:

- The Regional Development Bank (RDB)
- Global Water Management Organization (GWMO)
- International Conservation Institute (ICI)
- Water Infrastructure Engineering and Design (WIED)

Structure:

- The negotiation game includes four rounds.
- The group consists of nine participants as representatives from national governments, a local government, international and regional organisations and a mediator.
- The aim of the simulation game is to go through four stages of the negotiation whose final outcome should be a deal among involved stakeholders.
- The negotiation game is designed for 5 or more hours.

Annex – Details on the License

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