

NURTURING THE EU SCIENCE DIPLOMACY COMMUNITY:

THE LAUNCH OF A EU SCIENCE DIPLOMACY ALLIANCE FOR ADDRESSING GLOBAL CHALLENGES

Ana Elorza, Lorenzo Melchor and Izaskun Lacunza
Spanish Foundation for Science and Technology (FECYT)¹



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

1. The opinions expressed in this policy brief are those of the authors and do not necessarily reflect the views of FECYT, the S4D4C partners and the European Commission

Report, Deliverable D5.11 “Science Diplomat Networks: a report informing about currently existing science diplomacy networks and how they can be improved”

QUALITY ASSURANCE

The following reviewers have undertaken quality assurance of this report:

Elke Dall, Centre for Social Innovation (ZSI), Austria

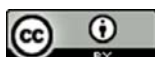
Helen Woods, University of Sheffield

Ewert Aukes, University of Twente

HOW TO CITE THIS CONTENT

If you want to refer to this report, please use:

Elorza, Ana, Lorenzo Melchor, and Izaskun Lacunza (2021): *Nurturing the EU Science Diplomacy Community: The Launch of a EU Science Diplomacy Alliance for Addressing Global Challenges*. Report, Deliverable D5.11, S4D4C.



This work is licensed under a Creative Commons
Attribution 4.0 International License

TABLE OF CONTENTS

1. WHAT IS THIS REPORT ABOUT	4
2. THE S4D4C APPROACH TO SCIENCE DIPLOMACY:	
A MULTI-STAKEHOLDER ENDEAVOUR	5
3. SCIENCE DIPLOMACY STAKEHOLDERS: OUR PROPOSAL	7
3.1. Types of Science Diplomacy Stakeholders	8
3.2. Stakeholders Interests and Challenges	8
4. TYPES OF SCIENCE DIPLOMACY NETWORKS	13
4.1. Subnational Networks	14
4.2. National Networks	15
4.3. Sub-global Networks	19
4.4. Global Networks	21
5. SCIENCE DIPLOMACY NETWORKS CHALLENGES	24
6. CATALYSING SCIENCE DIPLOMACY NETWORKS FOR GLOBAL CHALLENGES	26
FACTSHEET I- SCIENCE DIPLOMACY SUBNATIONAL NETWORKS	29
SCITECH DIPLOHUB – BARCELONA	29
SCIENCE AND TECHNOLOGY DIPLOMATIC CIRCLE (S&TDC), BOSTON	30
FACTSHEET II- SCIENCE DIPLOMACY NATIONAL NETWORKS	31
UK SCIENCE AND INNOVATION NETWORK	31
SWISSNEX NETWORK	32
GERMAN ACADEMIC INTERNATIONAL NETWORK (GAIN)	33
SCIENTIFIC MALAYSIAN	34
RED DE ASOCIACIONES DE INVESTIGADORES Y CIENTÍFICOS ESPAÑOLES EN EL EXTERIOR (RAICEX)	35
KNOWLEDGE AND PARTNERSHIP BRIDGES (GEFYRES GNOSIS KAI SYNERGASIAS) INITIATIVE	36
FACTSHEET III- SCIENCE DIPLOMACY SUB-GLOBAL NETWORKS	37
SOCIETY FOR THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY IN THE ARAB WORLD (SASTA)	37
EUROPEAN DIASPORAS NETWORK IN USA	38
THE UNIVERSITY OF ARCTIC (UA)	40
PROGRAMA IBEROAMERICANO DE CIENCIA Y TECNOLOGÍA PARA EL DESARROLLO (CYTED)	41
FACTSHEET IV- SCIENCE DIPLOMACY GLOBAL NETWORKS	42
THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)	42
INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM FOR BIODIVERSITY AND ECOSYSTEM SERVICES - IPBES	43
FOREIGN MINISTRIES S&T ADVICE NETWORK (FMSTAN)	44
NETWORKS OF DIASPORAS IN ENGINEERING AND SCIENCE (NODES)	45
SCIENCE DIPLOMATS CLUB OF WASHINGTON DC	46
BIG RESEARCH INFRASTRUCTURES FOR DIPLOMACY AND GLOBAL ENGAGEMENT THROUGH SCIENCE (BRIDGES)	47
REFERENCES	48
ACKNOWLEDGEMENTS	51

1 WHAT IS THIS REPORT ABOUT

The European Union (EU) should learn from the COVID-19 crisis and embrace science diplomacy as critical to EU and Member States interests. In today's world, science, technology and innovation practices are international in scale and scope and play a key role in addressing complex transnational matters. Every country, even the most advanced and rich ones in the world, needs multilateral cooperation to face global challenges. Given this reality, science diplomacy, science advice and international science cooperation is a must for a nation to thrive. Nonetheless, the COVID-19 crisis is also a unique chance for the EU and Member States for real-time learning of practical lessons and inspiring practices but also from failures to strengthen EU capacities and to prevent and mitigate societal challenges in the future (Young et al., 2020; Gual Soler et al., 2021).

This report is intended to add a perspective to the global conversation about science diplomacy already under way and about how to craft improved responses to health, social, economic, and environmental challenges using diplomatic, science, technology and innovation communities as main drivers. The active engagement of different stakeholders has seen a remarkable push by many countries to build up different networks to foster science diplomacy (SFIC input paper, 2020). The prominence of global challenges with scientific components has raised the relevance of collaboration in science, evidence-based policies and joint international action (Gabriel, 2020).

This report identifies and highlights different types of science diplomacy stakeholders (governmental, intergovernmental and supranational, research and academic, from private sector and civil society) and maps the currently existing science diplomacy networks (at the subnational, national, sub-global, and global levels).

In profiling science diplomacy stakeholders and networks, our aims are to showcase the different realities of science diplomats, bring the abstract concept of "science diplomacy" to life, and inspire scientists, researchers, innovators and diplomats to build from all of these models and apply them to different challenges or cultural contexts.

More practically, S4D4C wants to provide science diplomacy with higher visibility in the EU context as a first step to understand how to foster the science diplomacy process, to address and to lead the response to global and societal challenges.

We should, therefore, underline that although the examples highlighted here hold promise, we are not asserting that they represent best practices, as we simply do not have enough data to make any conclusions regarding performance. Rather, these examples should be interpreted as illustrative points of what we see as a clearly emerging global trend that can be used by the EU science diplomacy stakeholders and institutions to experiment with ways to harness the power of science, technology, and innovation in external relations.

Box 1: The S4D4C project in a nutshell

S4D4C ("Using Science for/in Diplomacy for addressing global Challenges") is a Horizon 2020-funded consortium comprised of 10 European partner institutions that aims to support current and future European science diplomacy for the benefit of European capacities, EU foreign policy goals and especially the development of solutions for global challenges. S4D4C pursues the following specific objectives:

- Providing new insights and a better understanding of the contributions of science and science collaborations to foreign policy goals, especially in the context of European models and experiences
- Facilitation of effective and efficient interfaces for European science diplomacy to take better advantage of European science and science cooperation
- Provision of policy guidance on where and how EU and EU Member State (MS) science diplomacy can be active in the future
- Better preparation, clearer mandate and stronger identity of European science diplomacy
- Increased capacities and knowledge resources for EU and MS science diplomacy
- Expanding global reach and visibility for EU science diplomacy

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

2

THE S4D4C APPROACH TO SCIENCE DIPLOMACY: A MULTI-STAKEHOLDER ENDEAVOUR

S4D4C's approach to science diplomacy promotes a multi-stakeholder endeavour and searches to nurture a European science diplomacy community where scientists, scholars, innovators, diplomats, policy-makers, and other practitioners have the opportunity to interact for the benefit of EU science diplomacy. Research (Young et al., 2020), networking and training opportunities (Josten et al., 2020) are at the core of the S4D4C project, providing policy recommendations (Melchor et al., 2020), governance practices and principles for the effective science diplomacy practice (Aukes et al, 2019; Aukes et al. 2020). The science diplomacy community is key to provide policy guidance to the European Union (EU) and Member States (MS) about the impact and influence of the use of science diplomacy to tackle societal challenges.

The S4D4C Madrid Declaration on Science Diplomacy, endorsed by over 170 experts in the field by the end of 2020, has gained traction among the science diplomacy community. This declaration defined science diplomacy "as a series of practices at the intersection of science, technology and foreign policy" (S4D4C, 2019), identified the benefits and principles of good science diplomacy practice, and emphasised that science diplomacy still remains an asset not fully leveraged by all governance levels, recommending the implementation of more comprehensive science diplomacy strategies to build bridges and tackle global challenges.

More importantly, the declaration urges scientists, policy makers and diplomats on an "all stakeholder approach" (including citizens and researchers themselves) to work together as a way to contribute to address global challenges in a more effective way (S4D4C, 2019). The Madrid Declaration on Science Diplomacy also recognises the need for a support system that helps scientists and diplomats to make the most out of collaborations (especially highlighting training and partnerships).

Box 2: The S4D4C Community

The main objective of the networking meetings organised by S4D4C is to bring together different stakeholders with a say in science diplomacy with the aim of raising awareness about its importance and to facilitate open discussions about what needs to be done to improve both the European science diplomacy and those of the EU Member States.

The discussion has been kicked off with the [1st S4D4C Global Meeting 'EU Science Diplomacy Beyond 2020'](#), which took place in Madrid in December 2018. The "Madrid Declaration on Science Diplomacy" is a direct outcome of this event and the first declaration of its kind to proclaim a common vision of science diplomacy in the future.

[2nd Networking Meeting 'Towards a European Science Diplomacy Roadmap'](#) – Berlin (10/2019).

In a second, European networking meeting, which took place in Berlin on October 10, 2019, the goal of the event was to identify science diplomacy drivers and barriers, as well as recent advances and challenges ahead, putting together a set of recommendations for all relevant stakeholders (institutions, governments, civil society, academia and private sector).

[3rd Networking Meeting 'Addressing Global Challenges Together: the Role of Science Diplomacy'](#) – online (03/2021).

The final meeting takes place online for a week from Monday 15th March to Friday 19th March 2021, combining plenary sessions and satellite sessions.

Furthermore, S4D4C brought the community together via social media and via webinars and training offers.

Box 3. The Madrid Declaration on Science Diplomacy

The "Madrid Declaration on Science Diplomacy" aims to foster agreement and raise awareness about the need to strengthen science diplomacy strategies and practices world-wide for the support of universal scientific and democratic values.

Benefits of science diplomacy

- Endeavours to address global challenges
- More productive and sustainable international relations
- Evidence-informed foreign policy
- Better conditions for scientific activities due to the contribution of foreign policy agendas
- Improved interfaces between science and public policies

Principles to foster science diplomacy worldwide

- Value for citizens
- Methodological diversity
- Demonstrable impact
- Evidence-informed
- Collaboration and inclusion
- Capacity building
- Independence of science

For more details and download, please see <https://www.s4d4c.eu/s4d4c-1st-global-meeting/the-madrid-declaration-on-science-diplomacy/>

To endorse this declaration, please write to s4d4c@fecyt.es with your full name and affiliation.

3

SCIENCE DIPLOMACY STAKEHOLDERS: OUR PROPOSAL

We propose to categorise the different stakeholders working in science diplomacy in a simple, yet effective way, based on the nature of their work or the type of sector they belong to. Once we have described this classification, we will reflect on how these stakeholders operate and collaborate in different networks.

Thus, our proposal has two levels:

1. Types of science diplomacy stakeholders, where stakeholders of different nature are identified and explained
2. Types of science diplomacy networks, where stakeholders interact and collaborate creating networks with different purposes

Figure 1: Types of Science Diplomacy Stakeholders



2. The World Bank defines civil society organisations as "the wide array of non-governmental and not-for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations". Civil Society Organisations (CSOs) therefore refer to a wide of array of organisations: community groups, non-governmental organizations (NGOs), labour unions, indigenous groups, charitable organisations, faith-based organisations, professional associations, and foundations."

3.1 Types of Science Diplomacy Stakeholders

- Governmental stakeholders: involving national and subnational governments in science diplomacy;
- Intergovernmental and supranational stakeholders: including multilateral international and supranational organisations that transcend national boundaries and that are directly engaged in global governance;
- Research and academic stakeholders: involving research and academic actors from research councils to universities, research centres, national academies, learned societies, science foundations and also independent researchers;
- Private sector stakeholders: including industries and private companies, which can be trans- or multinational organisations as well as Small and Medium Enterprises (SMEs) and Start Ups;
- Civil society stakeholders: involving national and transnational NGOs, civil society organisations², private charities, and individuals.

However, this taxonomy has certain challenges that are worth mentioning here:

1) Level of action: all stakeholders may operate at the subnational, national, sub-global and global levels, as an example, industry can have transnational companies but we do not include them within the intergovernmental and supranational stakeholders because these are focused on those bodies formally related to global governance and International Law.

2) Governments are the actors in the international bodies: Because of the international nature of science diplomacy, we want to cover intergovernmental and supranational stakeholders as a separate actor but understand that they are highly dependent on their nation states' interests. Regarding supranational bodies, nation states come together in a process studied by the integration theory to constitute a supranational organisation that gathers legal jurisdiction, policy competences, sovereignty from its member states, executive powers, etc. Again, nation states are actors in this integration process but the supranational body has a degree of manoeuvring worth noting (actors such as the European Commission (EC) or the United Nations (UN) develop a political role of their own).

3) Research is everywhere: research and individual researchers can be found not only in the academic sector, but also in industry, government, NGOs, think tanks, and other sectors. In a 'scientific knowledge production' arena, actors discuss and decide on required scientific insights, technological innovation and related infrastructures (Aukes et al., 2021.). We ascribe it here to the academic sector to focus on academic research and the concrete role of academic institutions and individual researchers in science diplomacy.

Box 4: Methodology

Our methodology combines desk research, participant observation and the qualitative analysis of expert interviews conducted with representatives from different science diplomacy networks showcased in the report. For the purpose of this section, 10 interviews were performed with representatives and members of the different science diplomacy networks shown in the report. The interviews were performed during November and December 2020 and January 2021.

3.2 Stakeholders Interests and Challenges

The contemporary changing international scene welcomes many diverse new stakeholders. We explore in this document the main interests and challenges that they face. Although different actors may seem homogeneous in our proposal, we are aware that they are still heterogeneous in terms of objectives and defies (see detailed information in Table 1).

Table 1. Interests and challenges of science diplomacy stakeholders

	Stakeholder	Interests	Challenges
	Governmental stakeholders National and subnational governments in science diplomacy;	Strengthening bilateral scientific collaborations and the support of countries' STI interests Facilitating evidence-informed positions of the country in multilateral endeavours and global challenges Bringing new scientific opportunities and scientific talent to the country Using scientific collaborations as a tool for improving bilateral relations with strategic countries Acknowledging STI as a key asset of the country in its image abroad Facilitating country companies to have a good place in the international innovation market as well as in the research and development international arena Subnational government stakeholders searches to promote the regional/local STI ecosystem to attract foreign investments and scientific talent Networking with other cities for addressing common challenges, such as climate change	High-level coordination and policy coherence among different stakeholders Training of the diplomatic corps in science and technology matters Training of STI officials with regard to diplomatic issues Creation of interfaces for science and policy Administrative and bureaucratic processes Deploying scientific counsellors or attachés in strategic Embassies abroad and appointing science advisors to Ministries of Foreign Affairs Trust-building among different stakeholders Acknowledging the diversity of the science diplomacy ecosystem and learning how to make the most out of this diversity Respecting different stakeholders' independence and a country's self-interests. Sorting out of delegation subnational competences
	Intergovernmental and supranational stakeholders Multilateral international and supranational organisations that transcend national boundaries and that are directly engaged in global governance.	Helping to set the international agenda for common policy goals Mediating political negotiations and providing a forum for political initiatives Catalysing international Cooperation and collaboration among members. Regional international stakeholders foster diplomatic ties and collaboration between scientific members to tackle regional challenges.	Balance of power among members in these structures may cause challenges for policy negotiations and reaching agreements. Relations among countries are subject to changing scenarios due to political cycles and international relation approaches
	Private sector stakeholders Industry, private companies, which can be trans- or multi-national organisations as well as SMEs and Start Ups	Building large research infrastructures. Accompany civil society organisations or national governments in specific actions. Collaborating with embassies and scientific and commercial attachés	Engaging into new business models for global challenges Rethinking organization culture and developing new talent at the interface of science and diplomacy Conducting successful pilots Interconnecting all departments
	Research and academic stakeholders Research and academic actors from research councils to universities, research centres, national academies, learned societies, science foundations and also individual researchers	Establishing cross-border scientific collaborations Exploring new research funding opportunities Acting as science advisors to the Ministries of Foreign Affairs and other ministries and governments Lobbying for certain scientific issues to permeate into public policy affairs and raising awareness of the importance of evidence-informed policy making Representing academia's interests and concerns at the national level Raising the public value of science and making the case for science to be a key element to achieve national/regional/global goals Training on science diplomacy matters to the research community Mainstreaming the science diplomacy dimension into research projects	Training researchers in science diplomacy, science advice and open science Acknowledging an active role in science diplomacy in research organisations Building trust between scientists, policy-makers and diplomats Finding steady sources of funding to sustain specific science diplomacy projects Establishing well-defined boundaries between all stakeholders to both ensure mutual interest and safeguard independency Designing adequate governance models Freedom of scientific research ³
	Civil society stakeholders National and transnational NGOs, civil society organisations, private charities, and individuals	Engaging with the general public Advocating for science as a key element to improve international relations Facilitating communication channels and exchange interfaces among researchers, politicians and other stakeholders Supporting research by providing funds for international research projects Increasing science education worldwide with special emphasis in developing countries Promoting and advancing on science diplomacy for concrete specific goals Advocating for concrete specific goals of science diplomacy (climate change, etc.)	Lack of funding to sustain professional activity may hinder the reach of many civil society organisations. Building up a social capital network to gain credibility and ensure policy impact is a challenge for new organisations. Navigating changes in local, regional, national and/or supranational governments (depending on their area of influence) because of new elections, switch of government officials and policy-makers, or change of policy priorities.

3. The European Research Area Adopted at the Ministerial Conference on Scientific Research Bonn Declaration on Freedom. The declaration commits governments to an EU system for monitoring academic freedom along with safeguarding research from political intervention, the move aims to increase public trust in science https://www.bmbf.de/files/10_2_2_Bonn_Declaration_en_final.pdf



Governmental Stakeholders

Governments usually deploy science diplomacy strategies that aim to raise the importance of science, technology and innovation in the country's foreign policy affairs (Ruffini, 2017; Gluckman et al., 2012; Sunami et al., 2013).

The most common objectives of these approaches are:

- Strengthening bilateral scientific collaborations and the support of countries' STI interests
- Facilitating evidence-informed positions of the country in multilateral endeavours and global challenges
- Bringing new scientific opportunities and scientific talent to the country
- Using scientific collaborations as a tool for improving bilateral relations with strategic countries
- Acknowledging STI as a key asset of the country in its image abroad
- Facilitating country companies to have a good place in the international innovation market as well as in the research and development international arena

Although these approaches are government-led, the importance of other government bodies, third sector organisations, research funding and performing organisations, industry and the research community are commonly acknowledged as key elements of these strategies and their eventual success (Flink and Schreiterer, 2010).

Governments deploy their policies at different layers: from high-level coordination among ministries or governmental departments to the deployment of scientific counsellors or

attachés in strategic Embassies abroad and/or the appointment of high-level science advisors to Ministries of Foreign Affairs.

Budget-wise, there are again a number of formulas: cooperation among ministries, one ministry taking full responsibility, etc. As many countries are facing unprecedented challenges from COVID-19 the strain on our governments is extreme, departments with different portfolios are obliged to collaborate and better coordinate. Different approaches are used depending on the country (Van Langenhove, 2017).

Increasingly, subnational levels of public administration are key stakeholders in the global scene. For all countries to establish a coherent public policy followed by the different stakeholders and the coordination among different ministries is a challenge. Not only against this backdrop, training of the diplomatic corps in science and technology matters, and training of STI officials with regard to diplomatic issues and the creation of interfaces, administrative processes and trust-building among different stakeholders are examples of common challenges.

Also, acknowledging the diversity of the science diplomacy ecosystem and learning how to make the most out of it is very important. Moreover, this must be done whilst respecting different stakeholders' independence and a country's self-interests.



Intergovernmental and Supranational Stakeholders

The impact of intergovernmental and supranational stakeholders on international relations has been increasing for decades, and so is their influence in science diplomacy and foreign policy goals. These organisations main role is helping to set the international agenda, mediating political negotiations, providing a forum for political initiatives and catalysing international cooperation and collaboration among members.

In science diplomacy they are fundamental in establishing a global agenda for common policy goals such as the United Nations' Sustainable Development Goals (SDGs) for 2030, which triggers policy implementation and cooperation among many different countries and stakeholders.

Specific regions such as the Mediterranean, Antarctica, or the Middle-East have certain needs and demands that make different national governments establish joint partnerships and institutions to execute science diplomacy ac-

tions. Regional international stakeholders are key to foster diplomatic ties and collaboration in general and also scientific cooperation in particular between scientific members to tackle regional challenges. The Union for the Mediterranean is one example that brings together 43 countries to promote dialogue and cooperation in the Euro-Mediterranean region around human and sustainable development. All these organisations have divisions or projects related to science diplomacy even though sometimes they will not be identified as such.

The balance of power among members in these structures may cause challenges for policy negotiations and reaching agreements.

Their relations with nation states are subject to changing scenarios due to political cycles and international relation approaches. Some countries want to advance in transnationalism giving more power and influence to these structures; some other countries prefer more protectionism wanting to retain their borders and power in the international scene.

Box 5. Science Diplomacy and UNESCO

UNESCO plays an important role in the field of science diplomacy⁴, within their Science, Policy and Society department based on UNESCO's universal mandate for science for peace and development since 1946. UNESCO has been key in creating:

- Science centres and organizations: such as [CERN](#), [SESAME](#), [the Abdus Salam International Centre for Theoretical Physics \(ICTP\)](#), [the World Academy of Sciences \(TWAS\)](#), or [the Israeli-Palestinian Science Organization \(IPSO\)](#)
- International science programmes: such as the [International Hydrological Programme \(IHP\)](#), [the Man and the Biosphere Programme \(MAB\)](#), [the International Geoscience and Geoparks Programme \(IGGP\)](#), the [International Basic Sciences Programme \(IBSP\)](#) or [the Intergovernmental Oceanographic Commission \(IOC\)](#)
- Science-Policy interfaces: such as the [World Science Forum](#), and the [Scientific Advisory Board of the UN Secretary-General](#).



Research and Academic Stakeholders

Research and academic stakeholders are fundamental players of science diplomacy and they can take many different not exclusive roles in the science diplomacy arena. Likewise to governmental stakeholders, they belong to and/or operate at the local, regional and national level.

More and more, research and academic organisations develop their role in the science diplomacy domain and are becoming more important. Some of their interests:

- Establishing cross-border scientific collaborations
- Exploring or establishing new research funding opportunities
- Acting as science advisors to the Ministries of Foreign Affairs and other ministries and governments
- Lobbying for certain scientific issues to permeate into public policy affairs and raising awareness of the importance of evidence-informed policy making

- Representing academia's interests and concerns at the national level
- Mainstreaming the science diplomacy dimension into research projects

Training researchers and research organisations wanting to have an active role in science diplomacy is a pending issue on many occasions. Certain skills and professional profiles are required both to first build trust between scientists, policy-makers and diplomats, and then ensure a positive impact on science diplomacy activities.

In their collaboration with Governmental stakeholders, one of the main challenges is to establish well-defined boundaries between all stakeholders to both ensure mutual interest and safeguard independency.

4. [Science Diplomacy | United Nations Educational, Scientific and Cultural Organization \(unesco.org\)](#)



Private Sector Stakeholders

The private sector can also benefit strongly from science, technology and innovation diplomacy. Through consortia of private companies, this stakeholder is a very important partner in science diplomacy efforts led by multiple governments to build large research infrastructures, such as [Square Kilometre Array](#).

Established large research infrastructures, such as European Organization for Nuclear Research (CERN), may also launch public-private partnerships where private sector stakeholders will be quite crucial to develop state-of-the-art technologies.

In other scenarios, private companies also accompany civil society organisations or national governments in specific actions. For instance, The "[Geneva Science and Diplomacy Anticipator](#)" (GSDA) is being launched by Federal Department of Foreign Affairs (FDFA) and the Geneva authorities, with funding from not only federal, regional and local go-

vernments, but also private sponsors. Swiss science and innovation diplomacy strategy is more important than ever in supporting Switzerland's economic and technological leadership (Schlegel, 2014).

Science- and technology-driven companies have a long history of collaboration with Embassies and scientific and commercial attachés. In this sense, consider the [Office of Denmark's Tech Ambassador](#), a formal diplomatic platform (thus, a Government stakeholder) with physical presence across three time zones in Silicon Valley, Copenhagen and Beijing – transcending borders and regions and rethinking diplomacy (Klynge, 2019). The platform aims to engage in dialogue and collaboration on a broad range of topics with the tech-industry in key technology clusters, bringing them on board in STI diplomacy actions. This is recognition of the political and global influence that the tech-industry has in the 21st Century.



Civil Society Stakeholders

Civil society is gaining relevance in all fields of public policy as a key that participates and co-creates policy priorities with policy makers and other stakeholders. Science diplomacy is not an exception to this trend.

Civil society stakeholders take a number of roles in this field and, among their goals we highlight:

- Engaging with the general public
- Facilitating communication channels and exchange interfaces among researchers, politicians and other stakeholders
- Focusing on increasing science education worldwide with special emphasis in developing countries
- Advocating for concrete specific goals of science diplomacy (climate change, etc.)

Civil society stakeholders will face challenges depending on their specific nature. For instance, the lack of funding to sustain professional activity may hinder the reach of many civil society organisations. Also, the need to build up a social capital network to gain credibility and ensure policy impact is a challenge for new organisations. For those organisations already established and actively present, they must navigate changes in local, regional, national and/or supranational governments (depending on their area of influence) because of new elections, switch of government officials and policy-makers, or change of policy priorities.

4 TYPES OF SCIENCE DIPLOMACY NETWORKS

Having sorted the diverse ecosystem of science diplomacy stakeholders by type (who is the owner of the initiative), the dimension of collaboration among stakeholders and

established networks with a variety of scopes come into focus. These often operate on more than one geographical level (Young et al. 2020), and vice versa.

1. Subnational Networks: when their focus is on the local or subnational level such as any global city, province, etc.;

2. National Networks: when their focus pursues national interests;

3. Sub-global Networks: when the array of activities are focused on a specific common interest or world region;

4. Global Networks: involving stakeholders from all nationalities

In our proposal, we identify networks as groups of actors joining together for a joint effort or a common purpose. It is important to bear this in mind throughout the following examples. Sometimes, one single entity operates in a distributed way internationally but this does NOT make it a network according to our framework, since they only involve one actor without any further distinction.

Hence, networks mapped below bring together stakeholders same or different natures, from government, intergovernmental international and supranational organisations, research and academia, private sector, and civil society. Therefore, there are:

- **Mono-stakeholder networks:** when it only involves different stakeholders from the same category. For instance, governmental networks that gather together different governmental departments or ministries around a common network;
- **Multi-stakeholder networks:** when the collaboration is among stakeholders of different types, such as a group composed of stakeholders from the private sector and civil society.

The following examples should be interpreted as illustrative points of what we see as a clearly emerging global trend: stakeholders are increasingly experimenting with many different ways to harness science and technology in external relations and vice versa. Note that the networks shown are examples and not an exhaustive list.

4.1 Subnational Networks

Cities have played a role in the international system, and they are increasing their involvement in science diplomacy actions. Cities, regions and their markets, collaborate across borders. Local stakeholders of different types may gather together to build up a network to project the image of their city or region as a global one that is friendly to STI activities promoting the local STI ecosystem in order to connect foreign investments and scientific talent. The subnational networks might use scientific collaborations as a tool for improving bilateral relations with strategic partners acknowledging STI as a key asset of the city/region in its image abroad. In doing so, they also facilitate local companies to have a good place in the international innovation

market as well as in the research and development international arena exploring or establishing new research funding opportunities.

In this regard, Barcelona has been one of the world's first cities to implement a comprehensive science and technology diplomacy strategy (Roig et al., 2020). Other local Science Diplomacy networks are being created, such as the Science and Technology Diplomatic Circle (S&TDC) in Boston, existing since 2013 to promote informal exchange between diplomatic missions in Boston and leaders of government, academia, and industry in Massachusetts. See the detail of these examples in Factsheet I.

Box 6. Subnational Science Diplomacy Networks

SCITECH DIPLOHUB – BARCELONA



Nature
Multi-stakeholder network



Lead
Civil Society



Other stakeholders involved
Regional and local government, Researchers and academia, Industry sector



Place
Barcelona, Spain

Web
<http://www.scitechdiplohub.org/>

SCIENCE AND TECHNOLOGY DIPLOMATIC CIRCLE (S&TDC), BOSTON



Nature
Multi-stakeholder network



Lead
Governmental Stakeholders



Other stakeholders involved
Regional and local governments, Regional and local Researchers and academia, Regional and local Industry sector and Regional and local civil society



Place
Boston, USA

Web
<http://stdc-boston.com/>

4.2 National Networks

Countries have different science diplomacy national strategies to pursue their international policy goals in STI bringing new scientific opportunities and scientific talent to the country and using scientific collaborations as a tool for improving bilateral relations with strategic countries. STI becomes a key asset of the country in its image and visibility abroad.

The majority of states rely heavily on specifically recruited experts working together with career diplomats in order to strengthen bilateral scientific and diplomatic collaborations. In many cases these tend to be local employees of the respective embassy or deployed diplomats and/or officers from their home countries.

The coordination of these stakeholders may rely solely on the Ministry of Foreign Affairs, the Ministries in charge of science, technology and innovation, the Economics and Trade Department, or on a mixed governance model facilitating science advice positions of the country in multilateral endeavours and global challenges helping to set the international agenda for common policy goals.

National Networks might articulate national consortia of private companies in science diplomacy efforts led by multiple governments to build large research infrastructures, promoting private sector collaboration with embassies.

Finally, science diplomacy national networks advocate for science, public policy and politics to communicate better engagement with the national scientist abroad and the general public.

The UK Science and Innovation Network is one example of mono-stakeholder governmental national networks. An increasing number of countries are also extending their national networks (which are associated with their embassies) by establishing additional innovation hubs abroad not necessarily linked to embassies or consulates, but to global innovative clusters. Here we want to highlight the case of the Swissnex Network of Switzerland (Cassis, 2019), as a showcase of public and private partnership. Research and academia as well as civil society organisations may develop their own national networks too, and in doing so they influence the strategy of national governments, becoming even a significant collaborative driver for some countries. This is the case for Spain, which includes a bottom-up, multi-stakeholder approach to science diplomacy. The Spanish government has been collaborating with communities of Spanish scientists abroad as key partners for public diplomacy (Elorza et al., 2017). See more information on the different examples of National Science Diplomacy Networks in Factsheet II.

Box 7. National Science Diplomacy Networks

UK SCIENCE AND INNOVATION NETWORK



Nature
Mono-stakeholder network



Governmental stakeholder is the unique and lead stakeholder, bringing together two governmental departments.



Country
United Kingdom

Web
<https://www.gov.uk/world/organisations/uk-science-and-innovation-network>

SWISSNEX NETWORK



Nature
A multi stake-holder network involving:



Lead
Government and Industry sector



Other stakeholders involved
Research and Academia, and Civil Society Organisations



Country
Switzerland

Web
<https://www.swissnex.org/>

STI Diaspora Networks

Indeed, Science, Technology and Innovation Diaspora Networks may play an active role in science diplomacy and represent a special type of network that is worth exploring further. Researchers, tech experts and innovators of a specific nationality who live and work abroad may establish Research and Academic organisations with the aims of:

1. Increasing their voice in their host countries
2. Influencing STI policies in their home countries
3. Fostering bilateral STI collaborations and talent mobility

STI diaspora networks have vast potential as agents for innovation and internationalisation in their home countries as well as for exploring new ways of engagement between stakeholders of all natures⁶.

These organisations are usually run by researchers and/or tech experts and they may differ in both scope and nature (multisector, multidisciplinary, etc.). Some of these organisations closely interact with governments, other research and academic institutions, civil society and private funders to achieve their goals and develop projects in partnerships.

Governments for whom their STI diaspora is a policy priority strive to establish mechanisms to interact and collaborate with their STI diaspora for mutual benefit, be it

through either their networks of embassies and consulates or through different STI governmental departments. This is of special importance for developing countries and emerging economies, but it is also becoming more important for advanced economies as a way to include more STI affairs in their foreign policy agenda. Some governments are even the ones establishing and managing the STI diaspora, such as Germany and their German Academic International Network (GAIN) or Greece and their "Bridges" initiative (Lambrianidis et al., 2019).

Research and academic institutions are also crucial partners of the STI diaspora, as they will be the direct beneficiaries of international scientific cooperation and talent mobility. Going one step further, some universities keep track of their alumni establishing their own alumni networks, while other universities foster foreign student and researcher associations in their campuses to increase their internationalisation profile, among other goals. Additionally, scientific and engineering professional societies, as well as national academies of science can support the development of STI Diasporas and collaborate with them in specific projects.

There is not a single model of STI diaspora network. Some STI diaspora have a bigger policy impact/engagement with the home or host countries than others (Burns, 2013). In Factsheet II we list some examples.

6. Please note that we are considering networks from one nationality that transcends physical borders. There are STI diaspora scientific associations based in just one country, which would fall, following our taxonomy, under the category of "Research and Academic" stakeholders, and not under "National Networks".

Box 8. National STI diaspora networks

GERMAN ACADEMIC INTERNATIONAL NETWORK (GAIN)



Nature
Multi-stakeholder network



Lead
Government and Research and Academia (research funders)



Partners
Research and Academia (research performing organisations and individual researchers)

Country
Germany

Web
<https://www.gain-network.org/en/>

RED DE ASOCIACIONES DE INVESTIGADORES Y CIENTÍFICOS ESPAÑOLES EN EL EXTERIOR (RAICEX)



Nature
Mono-stakeholder network (a network of 18 researchers' associations in different countries).



Lead
Research and Academia (researchers' associations)



Country
Spain

Web
<https://raicex.wordpress.com>

SCIENTIFIC MALAYSIAN



Nature
Mono-stakeholder network (group of Malaysian scientists around the world)



Lead
Research and Academia (individual researchers)



Country
Malaysia

Web
<http://www.scientificmalaysian.com>

KNOWLEDGE AND PARTNERSHIP BRIDGES (GEFYRES GNOSIS KAI SYNERGASIAS) INITIATIVE



Nature
Mono-stakeholder



Lead
Governmental Stakeholders (Ministry of Economy and Development and the National Documentation Centre)



Country
Greece

Web
<https://www.knowledgebridges.gr/>

4.3 Sub-global Networks

Stakeholders may gather around specific regions or interests. The scope of their actions or their nature may differ. In the following, there are three types of regional networks.

Sub-global STI diaspora networks differ from national STI diaspora networks because their members belong to or strive to improve the conditions of a specific region rather than a certain nationality. The illustrative example is the Society for the Advancement of Science in the Arab World (SASTA), which represents all Arab researchers working abroad.

Sub-global educational networks focus on building capacities and knowledge around a certain region, such as for example the UArctic Science Diplomacy Thematic Network. These are networks of practitioners, educators and students that are interested in receiving formal and informal science diplomacy education. This can be achieved by training workshops, scientific conferences, online training courses, informal channels of knowledge sharing, newsletters, etc. They are also key to foster networking and sharing of best practices to elevate the importance of science diplomacy within each stakeholder's landscape.

Lastly, sub-global research networks are research funding programmes, research clusters, or international scientific cooperation networks or tools that certain countries launch to promote scientific collaboration with countries of geopolitical interest. The Ibero-American Program of Science and Technology for Development (Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo, CYTED) for example, is an interregional cooperation programme between Spain, Portugal and Latin America.

All these networks share common interests and objectives, bringing new scientific opportunities and scientific talent to the region and acknowledging STI as a key asset of the region in its image abroad. In some cases, networks provide additionally a forum for political initiatives and catalyse international cooperation and collaboration among members (exploring or establishing new research funding opportunities in the region). They can also advocate for concrete specific goals of science diplomacy (climate change, etc.).

Box 9. Sub Global Science Diplomacy Networks

**SOCIETY FOR THE
ADVANCEMENT OF SCIENCE
AND TECHNOLOGY IN THE
ARAB WORLD (SASTA)**



Society for the
Advancement of
Science and Technology
In the Arab World

Nature
Mono stakeholder



Lead
Research and Academia (individual researchers)



Place
International network, registered as a non-profit organization with the Office of the Secretary of State of California

Web
<http://www.sastaworld.com>

**THE UNIVERSITY
OF ARCTIC (UA)**



Nature
Mono-stakeholder



Lead
Research and Academia (research performing organizations and individual researchers)



Place
Sub-global network

Web
<https://www.uarctic.org/organization/thematic-networks/science-diplomacy>

**EUROPEAN DIASPORAS
NETWORK IN USA**



Nature
Multi-stakeholder



Lead
Research and academia (European associations of researchers of different Member States across the world) and supranational organisation (European Commission programme EURAXESS Hub North America and Canada)



Country
USA and Canada

**PROGRAMA IBEROAMERICANO
DE CIENCIA Y TECNOLOGÍA
PARA EL DESARROLLO
(CYTED)**



Nature
Multi-stakeholder



Lead
Governmental stakeholders



Partners
Research and academia



Country
Greece

Web
<http://www.cytel.org>

4.4 Global Networks

Global Networks on Science Diplomacy usually bring together stakeholders from different countries/nationalities in order to fulfil goals such as:

- Sharing best practices and fostering networking
- Promoting bilateral and multilateral cooperation
- Promoting research or collaboration projects to tackle common global challenges
- Strengthening multilateral scientific collaborations and STI interests
- Facilitating evidence-informed positions in multilateral endeavours to tackle global challenges
- Helping to set the international agenda for common policy goals
- Exploring or establishing new research funding opportunities for global challenges
- Raising the public value of science and making the case for science to be a key element to achieve global goals

Global Advisory Networks

These networks are comprised of knowledge brokers who advise to policy-makers and decision-makers in governmental institutions or intergovernmental and supranational institutions (such as the United Nations). Working in the interface between science and policy is a challenge that requires sharing best practices as to how to best present the scientific evidence or to address questions from policy-makers and decision-makers (Ruffini, 2018). In Factsheet IV you may find some examples of this type of global networks.

More examples can be mapped on the global level (see Factsheet IV).

Global Diaspora Networks

As already mentioned, Diasporas are characterised as

groups of researchers and tech-experts from a specific nationality or region scattered worldwide. Global diaspora networks, however, group several national or regional diaspora networks or individual professionals from different nationalities under the same umbrella.

Global Networks - Diplomatic Circles

These are networks of diplomats and science officers from different embassies and consulates that gather on a periodic basis. As a group, they are able to better engage with the government authorities of the host country, arrange visits to scientific research centres or large research infrastructures, and organise scientific conferences in collaboration with public agencies, universities and academia, civil society organisations or even the industry sector.

These types of informal networks of government representatives are a useful and dynamic information and communications channel, benefiting not only international members, but also those science, technology and higher education stakeholders in the hosting country. These institutions may rely on the diplomatic circle to amplify their own messages to reach the international community abroad.

Usually they foster bilateral and multilateral collaborations and sometimes they also focus on addressing global needs together.

Global Academic and Research Networks

These global networks gather different stakeholders together primarily to assemble resources for research. They also promote collaborative research projects and foster networking and capacity training for researchers to better engage with the diplomatic world (Müller and Bona, 2018).

Box 10. Advisory Global Science Diplomacy Networks

THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)



Nature

Multi stakeholder



Lead

Intergovernmental and supranational stakeholders – UN



Other stakeholders involved

Research and academia (panel of individual researchers)



Place

UN, Geneva, Switzerland

Web

<http://www.ipcc.ch>

INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM FOR BIODIVERSITY AND ECOSYSTEM SERVICES - IPBES



Nature

Multi-stakeholder



Lead

Intergovernmental and supranational stakeholders – UN



Other stakeholders involved

Research and academia (panel of individual researchers)



Country

Greece

Web

<http://www.ipbes.net>

FOREIGN MINISTRIES S&T ADVICE NETWORK (FMSTAN)



Nature

Mono-stakeholder network



Lead

Governmental (science advisers from national governments)



Place

Global Network

Box 11: Global Science Diplomacy Networks

NETWORKS OF DIASPORAS IN ENGINEERING AND SCIENCE (NODES)

Nature

Multi-stakeholder



Lead

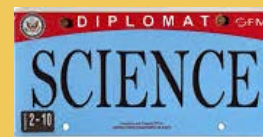
A partnership between government (the U.S. Department of State), civil society organisation (the American Association for the Advancement of Science, AAAS) and research and academia (the National Academy of Sciences (NAS) and the National Academy of Engineering (NAE)).



Place

USA

SCIENCE DIPLOMATS CLUB OF WASHINGTON DC



Nature

Mono-stakeholder network



Lead

Government (diplomats and STI delegates in embassies/consulates).



Other stakeholders involved

Research and academia (panel of individual researchers)

Place

Washington DC, USA

BIG RESEARCH INFRASTRUCTURES FOR DIPLOMACY AND GLOBAL ENGAGEMENT THROUGH SCIENCE (BRIDGES)

Nature

Mono-stakeholder



Lead

Research and Academia (Large research infrastructures)



Place

International network with the coordination based in IIASA in Austria.

5 SCIENCE DIPLOMACY NETWORKS CHALLENGES

The different types of science diplomacy networks profiled in the report illustrate the important role of international science-policy interface platforms to bridge gaps between governments, private sector, civil society and international and international and supranational organizations. As we have seen above, they all deploy different strategies to put science diplomacy into practice.

However, these science diplomacy networks looking to influence the broader system in which they operate face also complex challenges to achieve their objectives. In the following, the most relevant challenges of science diplomacy networks that were identified in our findings are presented below (for full methodology see Box 4).

We wanted to get an understanding of challenges and barriers that they face. Of course, these challenges will vary depending on the different stakeholders involved and the nature of the science diplomacy network. We would like to underline here the most relevant ones.

These challenges include some common ones for all networks, but are not limited to: funding; organization of workloads (e.g. designing adequate governance models, workforce and volunteers); coordination and policy

alignment; trust building among stakeholders, lack of science-policy interfaces and deficiency of training in science and technology diplomacy matters.

Lastly, many science diplomacy networks still depend on the personal commitment of researchers and scholars, individuals within civil society, or champions within government and international organizations (see table 2 for more detailed information).

These weaknesses and barriers make it difficult for promising science diplomacy initiatives and networks to grow and last. Nurturing this community and developing new talent at the interface of science and diplomacy might be the path to develop new ideas and models to better address existing and emerging social challenges in the EU. It is a unique opportunity, at a strategic level, for improving the science diplomacy European system. Priorities might include the availability of specific sources of funding more developed science-policy interfaces; enhanced knowledge and evidence-informed policies for the whole field of science diplomacy; and stronger incentives for science diplomacy stakeholders. Together, these would contribute to a more mature EU science diplomacy community to promote solutions to meet social needs.

TABLE 2. Challenges of the Science Diplomacy Networks

Science Diplomacy Networks	Challenges
Subnational networks: when their focus is on the local or regional level	<ul style="list-style-type: none"> • Aligning interests and actions of the very diverse stakeholders. • Training in science and technology diplomacy matters • Easing administrative and bureaucratic processes • Trust-building among different stakeholders • Finding steady sources of funding to sustain specific science diplomacy projects and diaspora networks • New business models to engage for global challenges from the local and regional arena • Navigating changes in local, regional governments (depending on their area of influence) because of new elections, switch of government officials and policy-makers, or change of policy priorities.
National networks: when their focus pursues national interests	<ul style="list-style-type: none"> • Coordination among different stakeholders • Coherence of public policies among the governmental actors • Training in science and technology and diplomacy matters • Administrative and bureaucratic processes • Trust-building among different stakeholders • Acknowledging the diversity of the science diplomacy ecosystem. • Respecting different stakeholders' independence • Lacking of political stability • Establish well-defined boundaries between all stakeholders to both ensure mutual interest and safeguard independency. • Designing adequate governance models • To motivate and engage people to commit with the diaspora network (based on volunteers with high rotation) • To be a single voice to give the network more power and impact (Win-Win strategy) • Financial sustainability –public private balance – perception of lack of independence
Sub-global networks: when the array of activities are focused on a specific world region	<ul style="list-style-type: none"> • Commitment of persons that collaborate on voluntary bases • Training in science and technology matters • Creation of science-policy interfaces • The balance of power among members in these structures may cause challenges for policy negotiations and reaching agreements. • Finding steady sources of funding to sustain specific science diplomacy projects
Global networks: involving stakeholders from all nationalities and tackling global challenges	<ul style="list-style-type: none"> • Coordination among different international stakeholders • Training in science and technology matters • Creation of science-policy interfaces • Trust-building among different stakeholders • Explicit label on Science Diplomacy activities • The balance of power among members in these structures may cause challenges for policy negotiations and reaching agreements. • Finding steady sources of funding to sustain specific science diplomacy global projects

CATALYSING SCIENCE DIPLOMACY NETWORKS FOR GLOBAL CHALLENGES

After the COVID-19 crisis, science advice and diplomacy will gain more and more momentum worldwide. We believe science diplomacy can become a fundamental dimension of the European Union and its Member States global strategy. EU science diplomacy can contribute to address global challenges, promoting both sustainable development and just and socially fair approaches. This would also help the EU to position itself as a global role model in integrative leadership and multilateral responses. The largest potential lies with the EU's role as an enabler of international scientific cooperation (Wilsdon and de Rijcke, 2019), which also informs the European scientific community of existing external policy priorities (Trobboni and Hatenoer, 2018).

As we have seen throughout this report, using science diplomacy for addressing global challenges is a complex endeavour (SAPEA, 2019) as it involves bringing together professionals with different backgrounds, nationalities, and interests to work together on common and collaborative joint initiatives. It cannot be improvised.

S4D4C paved the way for advancing a EU joint strategy on science diplomacy for addressing societal and global challenges. The project proposed final recommendations aiming at triggering systemic change⁷ in the EU governance of science, diplomacy, and science diplomacy in order to align and maximize the impact of everyone's efforts towards addressing global challenges (Melchor et al, 2021). Scientific and foreign affairs institutions as well as government departments need therefore better interactive spaces (Aukes et al., 2019) and science-policy interfaces.

New alliances require including all relevant stakeholders in the process leaving no one behind. Building networks⁸ that study, pilot, and support the new vision of the system is essential in establishing lasting systemic change (Melchor et al., 2020).

Launch of a European Union Science Diplomacy Alliance for addressing global challenges

From our point of view, the trend lines shown in this policy report are encouraging. A confluence of factors (including a greater emphasis on evidence-based interventions, growing consciousness among member states, and a new generation of talented science diplomats who are pushing boundaries and developing networks) all point to a window of opportunity that cannot and should not be missed.

The different types of science diplomacy stakeholders and networks demonstrate different ways how science diplomacy activities may create a common interactive space between governments, academia, private sector, civil society and intergovernmental organizations. We believe that it is in the European Union's public interest to encourage the growth of these models through appropriate policy tools.

We recommend the launch of a **European Union Science, Technology and Innovation Diplomacy Alliance to address global and societal challenges as an interface platform in charge of fostering integration of science diplomacy practices in the EU.**

EU Science Diplomacy Alliance's proposed activities range from policy support for EU Institutions⁹ to strengthening communities of practitioners through dedicated trainings and enhanced exchanges.

Building up capacity and science diplomacy skills; conducting different case studies on demand to provide advice to the EU institutions or to advance in the basic research understanding of science diplomacy; running specific schemes to promote science advice and science diplomacy at the European and national level.

7. S4D4C identified, among other outputs, three transversal processes required for a systemic change to address global challenges to happen integrating (1) a learning system in place through a wide array of science advice mechanisms to feed the EU policy-making process, (2) integrative leadership to better generate and absorb knowledge so that it is fully exploited for addressing global challenges and to find ways to break the existing governance silos, (3) a change of culture to address global challenges with agile, adaptive, effective, and permeable environments for professionals of all kinds to collaborate.

8. These networks typically do not rely on the existing bureaucratic structures and work with a lot of flexibility. They link people of similar roles across existing organisational lines.

9. Supporting the European Commission, the Joint Research Center and European External Action Service in whatever they require to fulfil their science diplomacy actions.

Box 12. European Union Science Diplomacy Alliance strategic axes of action to tackle global challenges

EU Science Diplomacy Alliance will be facilitating the framework, training, institutional capacity building and funding, but it is up to the thriving science and innovation diplomacy community thought the networks to put these goals into practice and provide innovative contributions to be developed in every area, focused on a different societal challenge.

We propose the EU Science Diplomacy Alliance focusing on different areas and activities that cover the entire science diplomacy process to address global challenges:

Supporting information exchange and awareness raising to promote the relevance of Science Diplomacy activities throughout Europe and worldwide, in particular the collaboration between scientists (of all disciplines), diplomats, policy makers and other professionals addressing global challenges as well as multi-stakeholder approaches to find solutions to major societal challenges (e.g. through updates on the page www.science-diplomacy.eu and social media);

Training, education and institutional capacity building through formal and informal education programmes for scientists, diplomats, science diplomats, policy makers, and other relevant actors to strengthen science and diplomacy literacy on EU and Member States level, reinforcing competences and knowledge in science diplomacy theory and practice in the EU and globally;

Promoting and creating knowledge exchange and interaction interfaces such as dialogue between stakeholders, workshops and conferences, policy papers and think pieces, scientific articles and scholarly exchange, fellowship and funding programmes, STI diplomacy awards for outstanding contributions, funding for science diplomacy pilot projects and research studies etc.

Connecting and nurturing a science, technology and innovation diplomacy community in Europe and beyond, promoting science diplomacy networks (offline and online) and providing possibilities for their exchange, cooperation and active engagement of partners with the SDGs;

Encouraging project collaboration between partners and use of the network as a reference, launching pilot projects to address global challenges connecting its partners to thriving innovation ecosystems worldwide, in particular developing, maintaining, and organising joint research projects, capacity building and training activities (such as open online course, summer schools, trainings, etc.);

Keeping track of European Union Science Diplomacy activities, advising on trends and opportunities, monitoring and accompanying policy shaping processes at national, European and international level;

Advising science diplomacy stakeholders (tailor-made advice for ministries, European and international organisations, funding agencies, universities and the private sector etc.) depending on their needs, resources and available instruments and strengthening the national and multinational science diplomacy approaches.

10. EL CSID, European Leadership in Cultural, Science and Innovation Diplomacy is a Horizon 2020 funded project that had contribute not only to a strengthening of EU policy towards the use of science, culture and innovation in its wider diplomacy, but also to a deepening of scholarly understanding of diplomacy.

11. InsSciDE, Inventing a shared Science Diplomacy for Europe is a Horizon 2020 funded project centered on the development of a shared science diplomacy across Europe through international, interdisciplinary and ground-breaking research.

12. The Cluster is an umbrella platform offering information from currently three existing EU-funded projects exploring the topic:

EL-CSID – European Leadership in Cultural, Science and Innovation Diplomacy

InsSciDE – Inventing a shared Science Diplomacy for Europe

S4D4C – Using science for/in diplomacy for addressing global challenges

Each project focuses on a different aspect of science diplomacy, a discipline which aims at building bridges between the world of scientists and the one of diplomats, permitting to address global challenges as a whole and in a more efficient way.

Results presented by the project "EL-CSID"¹⁰ (Van Langenhove, L., 2017) and inputs from InsSciDE¹¹ inspired also the proposed lines of these S4D4C policy recommendations consolidated in this report (Melchor et al., 2021). The three projects joined forces in the EU science diplomacy first Cluster¹².

The Strategic Forum for International Science and Technology Cooperation (SFIC) proposed to establish a related EU Science Diplomacy Platform (SFIC Input Paper 2020) as a knowledge exchange platform for Science Diplomacy professionals and practitioners having as the main tasks monitoring the field, awareness-raising, training the science diplomacy community and networking.

Thus, the EU Science Diplomacy Alliance may develop as a European platform that brings together institutions from the research and innovation and international relations fields to achieve the science diplomacy alliance's mission of advancing institutions to promote awareness and a new culture for collaboration between scientists, diplomats, policy-makers, and other professionals to address global challenges. The EU alliance will support the outreach and active engagement of the partners in the international exchange of knowledge to contribute to reinforce European Union's profile as world-leading science diplomacy hotspot.

Throughout nurturing the science, technology and innovation diplomacy community in Europe and world-wide, the EU Science Diplomacy Alliance will strengthen cooperation among higher education institutions and research organisations, scientists, diplomats and international organisations

to form dynamic pan-European networks, and create favourable environments for mutual learning and connection to flourish to address global challenges.

EU Science Diplomacy Alliance will bring together scientific and diplomatic institutions to engage into any of the 17 SDGs and provide opportunities to interact with policy-makers, politicians, diplomats and national and international government organisations, as well as with media and/or industry. The EU science diplomacy network will also incentivise scientists and scholars who work full-time in academia performing their research duties to actively engage with members of the general public, policy-makers and diplomats to make their knowledge and research results have a direct impact on society, public policies, or international relations.

This network will allow the EU to enhance its leadership in science diplomacy as an evolving concept, fostering in a systematic and reinforced way science diplomacy mechanisms to address global challenges. EU Science Diplomacy Alliance will promote these European science assets in a future joint EU global strategy designed by the EEAS and the European Commission to bring together different stakeholders and to put the EU at the forefront of many scientific endeavours with clear global societal relevance.

We hope this report will advance the debate beyond a general recognition that science diplomacy is a necessary ingredient to tackle global challenges and will inspire policy institutions to accelerate the innovation already beginning to take root.

10. [EL-CSID](#). European Leadership in Cultural, Science and Innovation Diplomacy is a Horizon 2020 funded project that had contribute not only to a strengthening of EU policy towards the use of science, culture and innovation in its wider diplomacy, but also to a deepening of scholarly understanding of diplomacy.

11. [InsSciDE](#). Inventing a shared Science Diplomacy for Europe is a Horizon 2020 funded project centered on the development of a shared science diplomacy across Europe through international, interdisciplinary and ground-breaking research.

12. The [Cluster](#) is an umbrella platform offering information from currently three existing EU-funded projects exploring the topic:

EL-CSID – European Leadership in Cultural, Science and Innovation Diplomacy

InsSciDE – Inventing a shared Science Diplomacy for Europe

S4D4C – Using science for/in diplomacy for addressing global challenges

Each project focuses on a different aspect of science diplomacy, a discipline which aims at building bridges between the world of scientists and the one of diplomats, permitting to address global challenges as a whole and in a more efficient way.

13. The "organic" science diplomat researcher will be active and activist researchers who engage, either on an individual level or via any expert advisory committee or both, in public or policy discussions to make science present outside the traditional academic ivory tower.

14. From conducting a research more aligned to society and innovation (Responsible Research and Innovation, RRI), to involving citizens in the scientific practice (Citizen Science) or making publicly available all scientific results funded by public grants (Open Access) under the umbrella of Open Science.

FACTSHEET I

SCIENCE DIPLOMACY SUBNATIONAL NETWORKS

SCITECH DIPLOHUB – BARCELONA



Nature

Multi-stakeholder network



Lead

Civil society



Other stakeholders involved

Regional and local government, Researchers and academia, Industry sector

The network at a glance

SciTech DiploHub, the Barcelona Science and Technology Diplomacy Hub, is a non-profit, independent, nonpartisan civil initiative led by an interdisciplinary, international team of scientists, engineers and foreign affairs and public policy professionals. SciTech DiploHub is committed to making Barcelona the first city in the world to implement a science and technology diplomacy strategy and to make Barcelona an influential global player in tackling humanity's grand challenges through science and technology.

Date

November 2018

Place

Barcelona, Spain

Funding

Public-private partnership

Type of Members

Individuals

Rationale and activities

SciTech DiploHub takes advantage of the increasingly relevant geopolitical actor: global cities. Big cities are economic, political and innovation powerhouses discreetly transforming the international scene, becoming essential diplomatic players and increasingly bypassing nation states to create city-centred global policies. At the same time, science and technology are the driving forces in economic and social progress and have become key tools to tackle humanity's grand challenges. In this exciting context Barcelona has taken the lead with its own science and technology diplomacy strategy.

SciTech DiploHub has launched The Barcelona Manifesto for a City-led Science and Technology Diplomacy supported by 150 world-class scientists, tech experts, public policy and foreign affairs professionals. The manifesto aims to consolidate Barcelona as an innovation capital, ready to position the city as an influential geopolitical actor through science diplomacy.

Barcelona's science diplomacy action plan includes partnerships among the scientific community, start-ups, policy-makers, NGOs, the diplomatic corps, the private sector and civil society.

The network also aims to empower a global network of top scientists and technology experts educated in Barcelona, **Barcelona Alumni**, to foster international cooperation, showcase scientific strengths abroad and interpret key global issues. Finally, SciTech DiploHub wants to pave the way for other global cities committed to developing their own science and technology diplomacy strategies creating a network of networks.

Web

<http://www.scitechdiplohub.org/>



SCIENCE AND TECHNOLOGY DIPLOMATIC CIRCLE (S&TDC), BOSTON



Nature

Multi-stakeholder network



Lead

Governmental Stakeholders



Other stakeholders involved

Regional and local governments, Regional and local Researchers and academia, Regional and local Industry sector and Regional and local civil society

The network at a glance

The Science & Technology Diplomatic Circle "S&TDC" Boston is an association of members from 60+ diplomatic missions and affiliated organizations in the Boston area to promote informal exchange between diplomatic missions in Boston and leaders of government, academia, and industry in Massachusetts.

Date

2014

Place

Boston, USA

Funding

Public-private partnership

Type of Members

Individuals (official representatives of countries and regional entities in the Greater Boston Area¹⁵)

Rationale and activities

The objective of the S&TDC is to offer a platform for activities, seminars and visits interacting with leaders and officials of the government, academia and private sector of Massachusetts. The primary focus is science & technology. In a team effort among the consular diplomats in the Greater Boston area, they focus on visits and encounters to explore the political, academic and private sector of Massachusetts, which shapes the innovation ecosystem. Their mission is to discover new bonds with greater Boston and connect back to their countries in the field of science & technology.

Web

<http://stdc-boston.com/>



15. Membership now including representatives from over 65 diplomatic missions in Greater Boston.

Recent (Co-)Chairs of the Science & Technology Diplomatic Circle

2014 – 2017 : Dr. Felix Moesner, Consul & CEO, Swissnex Boston

2017– 2018 : Walter de Wit & Mart Duitemeijer, Consul, Consulate of the Kingdom of the Netherlands, and Sophie Cerny, Research & Innovation Attaché, Québec Government

2018-2019 : Walter de Wit & Mart Duitemeijer, Consul, Consulate of the Kingdom of the Netherlands, and Patricia Gruver, Research & Innovation Attaché, Québec Government

2019-Present: Patricia Gruver, Research & Innovation Attaché, Québec Government and Lucius Lichte, Science Liaison, German Consulate

FACTSHEET II

SCIENCE DIPLOMACY NATIONAL NETWORKS

UK SCIENCE AND INNOVATION NETWORK



Nature

Mono-stakeholder network



Governmental stakeholder is the unique and lead stakeholder, bringing together two governmental departments. It may collaborate with other national and international stakeholders on a project basis.

The network at a glance

The UK is a global leader in science and innovation, and international collaboration is essential to maintaining the excellence of the UK's research base and the competitive advantage of their innovative businesses.

The Science and Innovation Network (SIN) allocates local officers in over 40 countries and territories around the world, in order to build partnerships and collaborations between the UK and other countries.

SIN officers work with the local science and innovation community in support of UK policy overseas, leading to mutual benefits to the UK and the host country.

Date

Established in 2001

Place

Around 110 officers in 40 countries and regions

UK SIN has officers around the world covering countries and territories



UK Science
& Innovation
Network

Funding

A network managed and funded by the UK Foreign and Commonwealth Office (FCO) with coordination and additional funding from the UK Department for Business, Energy and Industrial Strategy (BEIS).

Type of Members

A network of STI attaches (locally hired officers) who are embedded in British embassies and consulates abroad, working alongside career diplomats

Rationale and activities

SIN strives to build up key science and innovation partnerships between UK and host countries to maintain the UK's scientific excellence and reputation, and support British interest in the global footprint on innovation. These collaborations may fill capability gaps, add value by leveraging international resources, ensure the UK is a partner of choice, and help British companies to tap into foreign markets.

SIN teams develop country-specific action plans and work to the following global objectives:

- Prosperity – enhancing UK growth and exports; connecting innovative UK industries and scientific expertise with international opportunities
- Security – delivering solutions to global challenges such as anti-microbial resistance (AMR), health, energy, the conservation and sustainable use of oceans, and enhancing resilience to natural disasters
- Influence – strengthening the UK's foreign policy influence through science and innovation
- Development – supporting international development goals and matching UK expertise to international need

SIN is pursuing these objectives via a series of thematic programmes such as: Health and Life Sciences, Clean Energy, Food and Agriculture, Future Manufacturing, Cyber and Information Communications Technology (ICT), Quantum Technology, Future Cities, Resources and resilience, Polar Regions, Space, and Oceans.

SIN has published a list of impact stories, where you may understand their impact all around the globe in different topics and scenarios.

Main website:

<https://www.gov.uk/world/organisations/uk-science-and-innovation-network>

The Global Science and Innovation Network Blog: <https://blogs.fco.gov.uk/global-science-and-innovation-network/>

SWISSNEX NETWORK



Nature

Multi-stakeholder network



Lead

Government (bringing together two governmental departments) and Industry sector (start-ups, innovation-driven companies and creative industries linked to education, research and innovation)



Other stakeholders involved

Research and Academia, and Civil Society Organisations

The network at a glance

Swissnex is the Swiss global network connecting the dots in education, research, and innovation. Their goal is to support the outreach and active engagement of Swiss partners in the international exchange of knowledge, ideas and talent.

The Swissnex Network is an initiative of the State Secretariat for Education, Research and Innovation (SERI) and is part of the Confederation's network abroad managed by the Federal Department of Foreign Affairs. The activities of the Swissnex Network are based on a collaborative approach, relying on public and private partnerships and funding

The five Swissnex locations and their outposts are established in the world's most innovative hubs. Together with around twenty Science and Technology Offices (STO) and Counsellors (STC) based in Swiss Embassies, they all contribute to strengthen Switzerland's profile as a world-leading innovation hotspot.

Date

2000

Place

Swissnex offices are located in Boston (2000), San Francisco (2003), Singapore(*) (2004), Shanghai (2008), Bangalore (2010) and Rio de Janeiro (2014), with additional outposts and the connection to Science and Technology Offices in Swiss Embassies. See map below.

(*) In 2015, after 10 years of activity, it was decided to transform Swissnex Singapore into a Science and Technology Office within the Swiss Embassy

The Swiss global network comprises five Swissnex locations (in big red), three Swissnex outposts (in small red), twenty Science and Technology Offices and Counsellors based in Swiss Embassies (in blue), and its headquarters (in green).

Funding

Public (SERI and other public partners) with Private partners

Type of Members

A network of over 70 employees deployed in over 30 locations



Rationale and activities

The Swiss government is active in science, policies, and diplomacy through the internationalisation of almost all technical departments, its support for developing and emerging countries. For that purpose, the Swiss federal government has created a formal science diplomacy network that includes eighteen science counsellors and a set of Swissnex offices and outposts.

Swissnex is a public-private partnership to promote cooperation in science, technology, and innovation. The network is based on the organization ordinances of the Federal Department of Economic Affairs, Education and Research (EAER) and the Federal Department of Foreign Affairs (FDFA).

The Swissnex Committee (public and private members) advises the State Secretary for Education, Research and Innovation on strategic issues relating to the Swissnex Network. It comprises ten high-ranking representatives from the most important ERI institutions (Swiss National Science Foundation, Innosuisse, swissuniversities), the foundations sector, and the public and industry sector.

The Swissnex model is based on four basic principles: strategic location selection, partnership funding model, autonomy and decentralised governance, and entrepreneurial organisational culture.

Web

<https://www.swissnex.org/>

GERMAN ACADEMIC INTERNATIONAL NETWORK (GAIN)



Nature

Multi-stakeholder network



Lead

Government and Research and
Academia (research funders)

Partners

Research and Academia (research
performing organisations and
individual researchers)

The network at a glance

GAIN is a joint initiative of the three major research funding organizations in Germany: the Alexander von Humboldt Foundation (AvH), the German Academic Exchange Service (DAAD), the German Research Foundation (DFG) and receives support from the Federal Ministry of Research and Education (BMBF). With its associated members and cooperation partners, the network covers the entire spectrum of the German research landscape.

Country

Germany

Place

GAIN has a total of 49 GAIN chapters present in the United States of America, Canada, the United Kingdom, Austria, Singapur, and Germany.



Date

2003

Mission

GAIN is the network of German scientists and researchers of all disciplines, working at leading research institutions worldwide. GAIN helps its members maintain and build their international networks and facilitates transatlantic mobility and cooperation. GAIN informs about career and funding opportunities and recent developments in science policy in Germany. To achieve these aims, GAIN displays a variety of professional networking events and an annual career fair in the US.

Web

<https://www.gain-network.org/en/>

SCIENTIFIC MALAYSIAN



Nature

Mono-stakeholder network (group of Malaysian scientists around the world)



Lead

Research and Academia (individual researchers)

The Network at Glance

The initiative aims to connect Malaysian scientific researchers and industry professionals across the world to discuss research issues in Malaysia, to represent the voice of the Malaysian scientific community across the world, to provide collective ideas in hopes to improve scientific research and development in Malaysia, to promote research collaboration within academia and/or with the industry, and to inspire and provide guidance for early stage Malaysian researchers.

Country

Malaysia

Place

Individual Malaysian scientists, researchers, and tech innovators belong to this network and are scattered throughout 24 countries, most of them in Malaysia, US, UK, and Australia.

Date

2011

Web

<http://www.scientificmalaysian.com>



SCIENTIFIC MALAYSIAN



Nature

Mono-stakeholder network (group of Malaysian scientists around the world)



Lead

Research and Academia (individual researchers)

The Network at Glance

RAICEX aims to foster networking and knowledge exchange between Spanish researchers and scientists abroad. It also wants to position itself as an advisory body to the Spanish STI system to exchange information and to catalyse international and multinational scientific collaborations.

Country

Spain

Place

The network is present in 18 countries around the world: United Kingdom, Germany, United States of America, Sweden, China, Norway, Denmark, Australia, Mexico, Belgium, France, the Netherlands, Japan, Ireland, Italy, Switzerland, United Arab Emirates and South Africa.

Date

2018

Web

<https://raicex.wordpress.com>



RAICEX Red de Asociaciones
de Investigadores y
Científicos Españoles
en el Exterior

KNOWLEDGE AND PARTNERSHIP BRIDGES (GEFYRES GNOSIS KAI SYNERGASIAS) INITIATIVE



Nature

Mono-stakeholder



Lead

Governmental Stakeholders (Ministry of Economy and Development and the National Documentation Centre)

The Network at Glance

Bridges' focuses on the 'returning' of the best knowledge and experience of Greeks abroad and their interconnectivity with the country. The objective of the initiative is to bring high quality human capital of the country together and to create collaboration links between them. As part of this effort, the country's scientific personnel living abroad can have a direct active role in the transformation of the Greek economy, forming nodes of productive and innovative international centres.

The platform designed to meet the aforementioned objectives, operates on three pillars: the networking and subsequent partnerships through the creation of a global network of Greek scientists, professionals and entrepreneurs, updates on funding opportunities in Greece and the mapping of highly skilled Greeks who live and work abroad.

The above pillars are intended to run simultaneously so as to provide reliable comprehensive updates on funding and scholarships, data for Greeks in Greece and those abroad so that they can implement or boost their existing activities, and, through their registration on the platform, further enhance their search activity for new contacts and partnerships with multi-level benefits.

Country

Greece

Place

The network is present in 18 countries around the world: United Kingdom, Germany, United States of America, Sweden, China, Norway, Denmark, Australia, Mexico, Belgium, France, the Netherlands, Japan, Ireland, Italy, Switzerland, United Arab Emirates and South Africa.

Date

2018

Web

<https://www.knowledgebridges.gr/>



FACTSHEET III- SCIENCE DIPLOMACY SUB-GLOBAL NETWORKS

SOCIETY FOR THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY IN THE ARAB WORLD (SASTA)



Nature

Mono stakeholder – Research and academia (individual researchers across the world)



Governmental stakeholder is the unique and lead stakeholder, bringing together two governmental departments. It may collaborate with other national and international stakeholders on a project basis.

The network at a glance

The **Society for the Advancement of Science and Technology in the Arab World (SASTA)** was born out of the mutual interest of Arab Expatriate Scientists (AES) and Academics living abroad to engage more effectively with the Arab Education, Science and Technology community to create a positive impact in the Arab World.

Date

2011

Place

International network, registered as a non-profit organization with the Office of the Secretary of State of California



Funding

Membership fees and donations

Type of Members

All local and expatriate Arab scientists who are graduates (holders of a PhD, MD, DO, DDS or equivalent terminal degree) are eligible for membership and voting

Rationale and activities

SASTA's mission is to mobilise and catalyse the engagement of scientists, professionals, NGO's, academic institutions and professional societies to advance higher education, science and research in Arab countries. To contribute to the advancement of science, technology, higher education and research in the Arab region through supporting scientific human capacity building, development of academic and research programmes and providing scientific, technical and material support to local academic, scientists and universities. SASTA seeks to achieve these objectives by:

- Developing and maintaining a comprehensive database of Arab expatriate and scientists in the Arab world and develop tools that would enable the use of this database as a catalyst for capacity building through networking and collaboration between scientists in the Arab world and abroad.
- Establishing partnerships with universities, NGO's, professional societies and industries in and outside the region.
- Developing programmes to train local scientists in specific research areas of special importance to their local society needs and/or national priorities
- Acting as an independent non-partisan scientific body on issues related to science and its advancement in the Arab region
- Promote science-based programmes on sustainable economic development and establish a cooperation of sustainable science and technology between academic institutions, industry and government.

To date, SASTA has established partnerships and collaborations with different institutions such as the Arab League, the Jordan University of Science and Technology, and the World Economic Forum.

Web

<http://www.sastaworld.com/>

EUROPEAN DIASPORAS NETWORK IN USA



Nature

Multi stakeholder – Research and academia (European associations of researchers of different Member States across the world) and supranational organisation (European Commission programme EURAXESS Hub North America and Canada)



Lead

The EU as a supranational organization addressing regional and global challenges and Scientists and their networks



Other stakeholders involved

Researchers, universities, research organisations, industry, and others

The network at a glance

EURAXESS North America reaches out to reach out European Scientific Diasporas in the United States and Canada to promote the European Research Area (ERA) as a place of excellence where they come from and can function as ambassadors.

EURAXESS Worldwide¹⁶ is the international arm of EURAXESS and has been operating as a part of the practical/operational side of the new ERA since it links the ERA to the rest of the world

EURAXESS Worldwide in general helps support researcher mobility and career development connecting various actors and stakeholders in science, technology, and innovation (STI) and promoting European Research Area. It offers to interact on a global scale; it is a pan-European initiative and is a networking tool supporting researchers working outside of Europe who wish to connect or stay connected with Europe.

The overall aim is to support researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

It has dedicated teams in eight countries and regions: ASEAN (with a focus on Singapore, Thailand, Indonesia, Malaysia, and Vietnam), Australia and New Zealand, Latin America and the Caribbean (LAC, with a focus on Brazil, Argentina, Chile, Mexico, and Colombia), China, India, Japan, Korea, and **North America (Canada and the United States)**.



The main objective of EURAXESS North America is to develop, run, and animate a network outside of Europe aiming at supporting researchers working outside of Europe who wish to connect or stay connected with Europe and to promote mobility.

- Through its information portal EURAXESS North America provides free information on career opportunities, fellowships, and funding programmes available to researchers in the U.S. and Canada who wish to conduct research in or by collaborating with Europe
- It is a tool for creating and highlight events, and showcasing strong examples around the world
- It promotes framework programmes (Horizon 2020, Horizon Europe) from the angle of mobility, e.g. MSCA and ERC.

European researchers and scientists have been an integral part of the North American research landscape for a long time. However since 2015, European scientific diaspora networks meet annually as a vital form of support and community building.

The network integrates diasporas from nearly 20 countries, among which are [ECUSA](#) (Spanish Scientists in the USA), [GAIN](#) (German Academic International Network), [ISSNAF](#) (Italian Scientists and Scholars of North America), [HBA USA](#) (Hellenic Bioscientific Association in the USA), [IASF](#) (Ireland America Science Forum, formerly the Wild Geese Network of Irish Scientists), [FR@NIH](#) (French Fellows at the NIH), [TASSA](#) (Turkish American Scientists and Scholars Association), [ASCINA](#) (Austrian Scientists and Scholars in the USA, Canada, and Mexico), [RINA](#) (Research and Innovation Network Austria) and [STARS](#) (Swedish Trans-Atlantic Researchers and Scholars Network). Beyond groups representing a nation, we also include cross-cutting groups such as the [IWS Network](#) (Immigrant & International Women in Science Network) in Canada for immigrants of all nationalities.

¹⁶ <http://euraxess.ec.europa.eu/worldwide>

Date
2013

Place
Washington, DC (covering the U.S. and Canada)

Funding
European Union Commission

Type of Members
Individuals and Organizations

Rationale and activities

Scientists and their networks have emerged as the crucial agents of change for the EU in the process of creating a unified European scientific and cultural space.

Networks of scientists, scientific Diasporas, research partnerships, laboratories, and collaborations among different nations have gained prominence more than ever.

Scientific Diasporas including researchers, technology experts, and innovators are potential actors of science diplomacy and they bring different perspectives to science diplomacy.

EURAXESS North America connects European scientific Diasporas and bridges them together through its events and missions as well as web portal and online presence.

Interests

- Fostering closer cooperation between scientists and entrepreneurs in diaspora community
- Providing free information on jobs and funding, career development, partnering through the EURAXESS portal (one-stop-shop portal) that researchers can access for a number of services
- Organising events and missions for researchers and scientific diaspora networks (science slams, proposal writing, fireside chats, diaspora meetings, et cetera)
- Using social media to further connect diaspora networks to one another as well as North America- and Europe-based institutions and funding
- Sending flashnotes and newsletters
- Organising webinars on and info sessions on new programs and funding opportunities
- Encouraging researchers to publish together and building relevant connections
- Creating partnerships with not only researchers but also with diplomats, business sector and industry, and diaspora networks
- Promoting cross-border collaboration
- Organising joint activities and training for researchers

Web
<https://euraxess.ec.europa.eu/worldwide/north-america>

THE UNIVERSITY OF ARCTIC (UA)



Nature
Mono-stakeholder



Lead
Research and academia

The network at a glance

The University of the Arctic (UArctic) is a cooperative network of universities, colleges, research institutes and other organizations concerned with education and research in and about the North. UArctic launched the Science Diplomacy Thematic Network in 2017 in order to train scientists as diplomats with theory, methods and skills that contribute to informed decision-making for sustainable development in the Arctic and elsewhere across generations.

Date

UArctic – 1998,
UArctic Science Diplomacy Thematic Network – 2017

Place

International Network

Funding

Public / Private

Type of Members

Higher education institutions and organisations concerned with education and research in and about the North

Rationale and activities

UArctic wants to build and strengthen collective resources and collaborative infrastructure. Through cooperation in education, research and outreach they enhance human capacity in the North, promote viable communities and sustainable economies, and forge global partnerships. The UArctic network includes nearly 190 institutions collaborating¹⁷. The network empowers the people of the Circumpolar North by providing unique educational and research opportunities through collaboration within a powerful network of members. The Arctic Council, the Standing Committee of Arctic Parliamentarians and other Arctic leadership institutions recognize UArctic and its members as the educational, training and research engine of the North. The UArctic Science Diplomacy Thematic Network¹⁸ builds on scientific cooperation. The Network was launched in 2017 and enhances interdisciplinary research (natural sciences, social sciences, indigenous knowledge and international relations) in the Arctic context, collaborative and innovative education opportunities across the UArctic Network (science diplomacy joint courses, faculty exchanges, etc.), and will convene high-level, international dialogues and conferences. The aim is to engage the full range of stakeholders, from diplomats and experts to students, in an international, interdisciplinary and inclusive manner. Science diplomacy in the Arctic has already proven its global relevance, as highlighted by the Agreement on Enhancing International Arctic Scientific Cooperation signed by the foreign ministers of all eight Arctic states as well as from the Governments of Greenland and the Faroe Islands on 11 May 2017 at the Arctic Council Ministerial Meeting in Fairbanks, Alaska.

Web

<https://www.uarctic.org/organization/thematic-networks/science-diploma>



**UNIVERSITY
OF THE ARCTIC**

¹⁷. <http://www.uarctic.org/about-uarctic/members-list/>

¹⁸. <http://www.uarctic.org/organization/thematic-networks/science-diplomacy/>

PROGRAMA IBEROAMERICANO DE CIENCIA Y TECNOLOGÍA PARA EL DESARROLLO (CYTED)



Nature

Multi-stakeholder



Lead

Governmental stakeholders



Partners

Research and academia

The network at a glance

CYTED's main objective is to contribute to the harmonious development of the Ibero-American region through cooperation mechanisms that seek scientific and technological results, transferable to production systems and social policies. The beneficiaries of CYTED financing instruments may be universities, R&D centres and innovative corporations in member countries. The CYTED Programme also answers the calling to act as a bridge for interregional cooperation in Science and Technology between the European Union and Latin America. CYTED was created in 1984 through an Interinstitutional Framework Agreement signed by 21 countries of Spanish and Portuguese language. Since 1995, the CYTED Programme has been formally included among the Cooperation Programmes of the Ibero-American Summit of Heads of State and Government. The specific goals of the CYTED Programme are:

- Encouraging the integration of the Ibero-American Scientific and Technological Community, promoting an agenda of shared priorities for the region.
- Strengthening the technological development capacity of Ibero-American countries through the promotion of joint scientific research, the transfer of knowledge and techniques, and the exchange of scientists and technologists among R&D+i groups in the member countries.
- Promoting the participation of business sectors from member countries interested in innovation processes, in accordance with the research and technological developments of the Ibero-American Scientific and Technological Community.
- Promoting the participation of researchers from the Region in other multilateral research programmes through agreements for this purpose.

Date

1984

Place

Regional Network

Funding

Public



Type of Members

The CYTED Programme is organised according to a decentralised model, whose institutional framework is comprised of the Organismos Nacionales de Ciencia y Tecnología (ONCYT), the bodies responsible for the scientific and technological policies of the 21 participating countries¹⁹. Each ONCYT is responsible for the management of the programme in their country and participates with a representative in the administration bodies of CYTED. The General Assembly is the highest level political decision-making body of the CYTED Programme. It is integrated by the highest authorities of the ONCYT. The General Secretariat is the management body of the CYTED Programme, and which is of international nature. It comprises the Secretary General (appointed every 3 years by the General Assembly), the Area Managers (appointed for a period of two years and may be elected for a further period), a scientific coordinator and the technical staff that provides support in the secretariat at the headquarters located in Madrid (Spain).

Rationale and activities

As mentioned above, CYTED aims to foster scientific and technological projects to encourage harmonious development in Ibero-America. As such, the type of Research and Development tools available for CYTED are as follows:

- **Funding calls for Projects on Strategic Issues:** call for participants to apply for funding for research and technological development projects within groups of CYTED countries. These are financed with both CYTED funds as well as with external contributions from the member countries through their national organisations (ONCYT). The projects must be relevant from the viewpoints of research and innovation should have transnational character and their duration will be of up to three years.
- **The Thematic Networks: clusters of research and development (R&D)** formed by public or private entities and corporations from the member countries of the CYTED Programme, whose scientific or technological activities are related within a common area of interest and included in one of the Programme Areas. Their main objective is the exchange of knowledge between R&D groups and the strengthening of cooperation as a work method.

Web

<http://www.cytmed.org>

19. Argentina, Bolivia, Brasil, Colombia, Costa Rica, Cuba, Chile, República Dominicana, Ecuador, El Salvador, España, Guatemala, Honduras, México, Nicaragua, Panamá, Paraguay, Perú, Portugal, Uruguay, Venezuela

FACTSHEET IV- SCIENCE DIPLOMACY GLOBAL NETWORKS

THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)



Nature

Multi-stakeholder network



Lead

Intergovernmental and supranational stakeholders – UN



Other stakeholders involved

Research and academia (panel of individual researchers)

The network at a glance

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. The objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies. IPCC reports are also a key input into international climate change negotiations.

Date

1988

Place

UN, Geneva, Switzerland

Funding

Public



Type of Members

Governments. The IPCC is an organization of governments that are members of the United Nations or WMO. The IPCC currently has 195 members.

Rationale and activities

The IPCC provides regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.

The IPCC produces assessment reports; IPCC scientists volunteer their time to assess the thousands of scientific papers published each year to provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those risks.

An open and transparent review by experts and governments around the world is an essential part of the IPCC process, to ensure an objective and complete assessment and to reflect a diverse range of views and expertise. Through its assessments, the IPCC identifies the strength of scientific agreement in different areas and indicates where further research is needed. The IPCC does not conduct its own research.

The IPCC is divided into three Working Groups and a Task Force. Working Group I deals with The Physical Science Basis of Climate Change, Working Group II with Climate Change Impacts, Adaptation and Vulnerability and Working Group III with Mitigation of Climate Change. The main objective of the Task Force is on National Greenhouse Gas Inventories.

Representatives of IPCC member governments meet one or more times a year in Plenary Sessions of the Panel, where non-members can assist as observants. They elect a Bureau of scientists for the duration of an assessment cycle. Governments and Observer Organisations nominate, and Bureau members select experts to prepare IPCC reports. They are supported by the IPCC Secretariat and the Technical Support Units of the Working Groups and Task Force.

To support the preparation of its reports, the IPCC organizes scoping meetings, lead author meetings, workshops and expert meetings. It also organises various outreach events that communicate its findings, methodologies and explains the way the organisation works.

The Paris Agreement on climate, concluded in 2016, was a success facilitated in part by science diplomacy. In this, the partnership of the worldwide scientific community and governments through the Intergovernmental Panel on Climate Change (IPCC) was a game changer.

Web

<http://www.ipcc.ch>

INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM FOR BIODIVERSITY AND ECOSYSTEM SERVICES - IPBES



Nature

Multi-stakeholder



Lead

Intergovernmental and
supranational stakeholders – UN



Other stakeholders involved

Research and academia (panel of
individual researchers)

The network at a glance

IPBES was created to strengthen the science-policy interface on issues related to biodiversity and ecosystem services through its four functions to:

- Identify and prioritize key scientific information needed for policymakers on appropriate scales and to catalyse efforts to generate new knowledge;
- Perform regular and timely assessments of knowledge on biodiversity and ecosystem services and their inter-linkages
- Support policy formulation and implementation by identifying policy-relevant tools and methodologies to enable decision makers to gain access to those tools and methodologies and where necessary, to promote and catalyse their further development
- Prioritize key capacity-building needs to improve the science-policy interface at appropriate levels
- Engaging the scientific community and other knowledge holders with the work programme, taking into account the need for different disciplines and types of knowledge, gender balance, and effective contribution and participation by experts from developing countries.

Date

2012

Place

UNESCO, Bonn (Germany)

Funding

Public

Type of Members

All States Members of the United Nations are eligible for IPBES membership. More than 100 governments are part of IPBES nowadays.

Web

<https://www.ipbes.net/>



FOREIGN MINISTRIES S&T ADVICE NETWORK (FMSTAN)



Nature

Mono-stakeholder network



Lead

Governmental (science advisers from national governments)

The network at a glance

The Foreign Ministries Science and Technology Advice Network (FMSTAN) is a global network of science advisers with experience within countries' Foreign Ministries, operating under the auspices of the International Network for Government Science Advice (INGSA)²⁰. It began in February 2016 with a meeting convened by the U.S. Science and Technology Advisor to the Secretary of State at the National Academy of Sciences in Washington, D.C. This initial meeting involved the four S&T advisers to foreign ministers from Japan, New Zealand, United Kingdom and United States along with diplomats from twelve other nations: Chile, Ghana, Kazakhstan, Kenya, Malaysia, Oman, Panama, Poland, Senegal, South Africa, Ukraine, and Vietnam. A few months later, Senegal became the next member of FMSTAN. And in 2017, Oman and Poland joined formally the network.

Date

February 2016

Place

Global Network

Funding

Public / International Organisations. Special division within INGSA. INGSA operates under the auspices of the International Science Council²¹.



Type of Members

Government representatives. FMSTAN involves science advisors to Foreign Ministries, diplomats, and other practitioners working for national. Membership to FMSTAN is by invite only governments.

Rationale and activities

FMSTAN is under the umbrella of INGSA, a collaborative platform for policy exchange, capacity building and research across diverse science advisory organisations and national systems. The network aims to enhance the global science-policy interface and improve the use of evidence-informed policy formation at both national and transnational levels through workshops and fora.

FMSTAN's main goals are:

- to raise awareness about the importance of enduring S&T advisory capacity in foreign ministries
- to share best practices and lessons learned in building S&T advisory capacity
- to strengthen S&T advisory capacity in foreign ministries
- to coordinate respective S&T diplomacy activities.

S&T advisors to foreign ministries are not necessarily experts on all scientific matters, but they understand the logics of science are very well networked with scientists and academic institutions and thus know where to find the most appropriate expert on any given topic. They have the skills to explain evidence required for informed decision-making about foreign affairs, serving as evidence brokers. to reveal options that contribute to informed decision-making by nations across the international landscape.

Web

<https://www.ingsa.org/divisions/fmstan/>

20. <http://www.ingsa.org/>

21. <http://council.science>

NETWORKS OF DIASPORAS IN ENGINEERING AND SCIENCE (NODES)



Nature

Multi-stakeholder network



Lead

A partnership between government (the U.S. Department of State), civil society organisation (the American Association for the Advancement of Science, AAAS) and research and academia (the National Academy of Sciences (NAS) and the National Academy of Engineering (NAE)).

The network at a glance

This multi-stakeholder initiative seeks to support the establishment and practice exchange of STI diaspora networks in the United States of America.

Date

Launched in 2013

Place

USA

Rationale and activities

NODES is an initiative from different US stakeholders to bring together STI diasporas of different nationalities that are active in the USA. NODES strives to:

- Sharing best practices and knowledge about science diasporas
- Increasing visibility and viability of knowledge networks by identifying appropriate capacity-building tools
- Catalysing and strengthening STI diaspora networks by linking to professional societies, universities, NGOs, and government agencies at home and abroad
- Convening diasporas to share information and best practices at various fora

NODES usually organises an annual forum during the AAAS Annual Meeting to engage scientists and engineers, students, innovators, and government and embassy officials by sharing stories from the diaspora that highlight the ways that individuals and groups are mobilizing diasporas to make a difference for and in their local, national, and global communities.

SCIENCE DIPLOMATS CLUB OF WASHINGTON DC



Nature

Mono-stakeholder network



Lead

Government (diplomats and STI delegates in embassies/consulates).

The network at a glance

glance The Science Diplomats Club (SDC) is a social club in Washington DC to provide an informal meeting place and networking channel for all science diplomats from diplomatic missions. The membership includes Science and Technology counsellors, attachés, or representatives of research institutions from more than 40 Washington-based embassies, about half of them from Europe. In addition, a few former science counsellors, as well as some U.S. personalities, have been granted the status of SDC honorary members.

Date

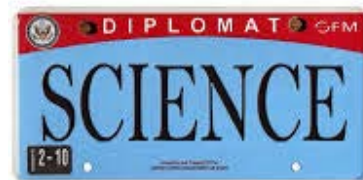
SDC was established in January 1965

Place

Washington DC, USA

Funding

Public



Type of Members

Government representatives' science diplomats

Rationale and activities

The Science Diplomats Club was established during a lunch held by the Embassy of Denmark at the Cosmos Club in DC in January 1965. The club was the initial site for luncheons; when the Embassy of the Netherlands took over the secretariat, luncheons were also held at their embassy and other local restaurants. Starting in 1982, various science counsellors started hosting luncheons at their embassies²².

During these meetings, guest speakers from the government, associations, universities, and industries informed SDC members about developments in science and technology policy and on progress in Research and Development (R&D). In recent years, the club has also made visits to S&T organisations inside and outside the Washington area. In 2007 the Embassy of France in Washington DC began co-organising with SDC "Science Breakfasts", which take place eight to ten times a year with speeches from prominent members of the American science and technology community. These breakfasts have provided the 30-40 guests from 15-20 countries with the opportunity to strengthen ties with American leaders in science and technology in a positive atmosphere.

Web

<http://www.sciencediplomats-washington.org/>

²². Chair

Jan. 1965 – Jan. 1981 Louis Groven (Embassy of Belgium)
Feb. 1981 – Dec. 1981 Herman van Vierssen (Embassy of the Netherlands)
Jan. 1982 – Aug. 1984 John Gaunt (Embassy of the United Kingdom)
Aug. 1984 – Dec. 1989 Cyril Hide (Embassy of South Africa)
Dec. 1989 – Sept. 1992 Alastair Allcock (Embassy of the United Kingdom)
Sept. 1992 – July 1994 Claude Wolff (Embassy of France)
July 1994 – June 1997 Paul op den Brouw (Embassy of the Netherlands)
June 1997 – June 1998 Donald L.P. Strange (Embassy of Canada)
June 1998 – June 1999 Yoram Shapira (Embassy of Israel)
June 1999 – Dec. 2001 Kees Planqué (Embassy of the Netherlands)
Jan. 2002 – Dec. 2005 Jostein Mykletun (Embassy of Norway)
Dec. 2005 – June 2010 Paul op den Brouw (Embassy of the Netherlands)
June 2010 – Sept. 2013 Annick Suzor-Weiner (Embassy of France)
Sept. 2013 – Sept. 2018 Minh-Hà Pham (Embassy of France)
Sept. 2018 – present Yves Frenot (Embassy of France)

BIG RESEARCH INFRASTRUCTURES FOR DIPLOMACY AND GLOBAL ENGAGEMENT THROUGH SCIENCE (BRIDGES)



Nature
Mono-stakeholder



Lead
Research and Academia
– Large research infrastructures

The network at a glance

BRIDGES is an informal network of people who deal with science diplomacy and international relations in international research organisations.

Date
2019

Place
International network with the coordination based in [IIASA](#) in Austria.

Funding
Public

Type of members
Delegates from large research infrastructures

Rationale and activities

The BRIDGES network involves delegates from CERN, EMBL, ESA, ICTP, IIASA, ITER, JRC, SKA and XFEL participating. ESO, ILL and SESAME are part of it as well, and some more are being approached. In recent years the topic of science diplomacy is gaining more and more importance; however the concept itself has remained somewhat abstract and would benefit from becoming more hands-on and operational. So, BRIDGES participants wanted to establish a joint science diplomacy platform to create a community of science diplomacy practitioners in international research organizations. The network is a very lean operation without fees, legal commitments, or the like, and has hosted two meetings in 2019.

Web
<https://www.iiasa.ac.at/web/home/research/sciencepolicy/bridges/bridges.html>

REFERENCES

- Aukes, E.; Honarmand Ebrahimi, S.; Ordóñez-Matamoros, G. and Kuhlmann, S. 2020. Towards effective science diplomacy practice. S4D4C Policy Brief no. 2. S4D4C (Vienna). <https://www.s4d4c.eu/wp-content/uploads/2020/01/S4D4C-Towards-effective-science-diplomacy-practice.pdf>.
- Aukes, E.; Ordoñez-Matamoros, G.; and Kuhlmann, S. 2019. Meta-Governance for Science Diplomacy - towards a European Framework. Edited by Stefan Kuhlmann. Twente: Universiteit Twente - Department of Science, Technology and Policy Studies (STePS). <https://doi.org/10.3990/4.2589-2169.2019.01>.
- Aukes, E., Wilsdon, J.; Ordóñez-Matamoros, G. and Kuhlmann, S. 2021. "Global resilience through knowledge-based cooperation: A New Protocol for Science Diplomacy". S4D4C Policy Brief February 2021, Vienna: S4D4C. [The-New-Protocol-for-Science-Diplomacy_S4D4C-Policy-Brief.pdf](#)
- Burns, W. J. 2013. "The Potential of Science Diasporas." Science & Diplomacy 2 (4). <http://sciencediplomacy.org/perspective/2013/potential-science-diasporas>.
- Cassis, I. 2019. "Science Diplomacy as an Innovative Tool in Our International Relations." Swissinfo.Ch, November 8, 2019. https://www.swissinfo.ch/eng/swiss-foreign-ministerop-ed_science-diplomacy-as-an-innovative-tool-in-our-international-relations/45354504.
- Elorza Moreno, A., Melchor, L.; Orts-Gil, G.; Gracia, C.; Lacunza, I.; Izquierdo, B. and Fernández-Vera, J. I. 2017. "Spanish Science Diplomacy: A Global and Collaborative Bottom-Up Approach." Science & Diplomacy 6 (1). <http://sciencediplomacy.org/article/2017/spanish-science-diplomacy-global-and-collaborativebottom-approach>.
- Flink, T. and Schreiterer, U. 2010. "Science diplomacy at the intersection of S&T policies and foreign affairs: toward a typology of national approaches". In: Science and Public Policy, Volume 37, Issue 9, November 2010, Pages 665–677, <https://doi.org/10.3152/030234210X12778118264530>.
- Gabriel, M. 2020. "Insights from Commissioner Mariya Gabriel "Towards Science Diplomacy in the European Union". Last Modified October 29. Accessed 28 November. <https://www.s4d4c.eu/insights-from-commissioner-mariya-gabriel-towards-the-european-union-science-diplomacy/>.
- Gluckman, P. D.; Goldson, S. L. and Beedle, A. S. 2012. "How a Small Country Can Use Science Diplomacy: A View from New Zealand". In: Science & Diplomacy, Vol. 1, No. 2 (June 2012) www.sciencediplomacy.org/perspective/2012/how-small-country-can-use-science-diplomacy.
- Gual Soler, M.; Holford, M.; and Oni, T. 2021. Twelve Months of COVID-19: Shaping the Next Era of Science Diplomacy. Science&Diplomacy. Special Issue. <https://www.sciencediplomacy.org/editorial/2021/twelve-months-covid-19-shaping-next-era-science-diplomacy>
- Josten, M., Meyer, N., Müller, A.P., Reschke, S., Gual Soler, M., Perosa, S., Melchor, L., Elorza, A., Lacunza, I. 2020. Teaching Science Diplomacy: Planning, designing, delivering and evaluating training activities on Science Diplomacy. Proposal for a curriculum and toolkit for trainers. S4D4C Deliverable 5.2 , <https://www.s4d4c.eu/toolkit-for-trainers/>

- Labrianidis, L.; Sachini, E.; and Karampekios, N. 2019. "Establishing a Greek Diaspora Knowledge Network through 'Knowledge and Partnership Bridges'". In: Science & Diplomacy, Vol. 8, No. 1 (May 2019). <http://sciencediplomacy.org/article/2019/establishing-greek-diaspora-knowledge-network-through-knowledge-and-partnership-bridges>.
- Klynge, C., Ekman, M., and Waedegaard, N. 2019. Diplomacy in the Digital Age: Lessons from Denmark's TechPlomacy Initiative. The Hague Journal of Diplomacy 15 (1-2). https://brill.com/view/journals/hjd/15/1-2/article-p185_10.xml
- Melchor, L., Elorza Moreno, A. and Lacunza I. 2020. Calling for a Systemic Change: Towards a European Union Science Diplomacy for Addressing Global Challenges. Version 2.0. S4D4C (Vienna). <https://www.s4d4c.eu/wp-content/uploads/2021/03/S4D4C-Calling-for-a-Systemic-Change-Policy-Report-v2.0-1.pdf>.
- Müller, J. M. and Bona, M. 2018. „Past, Present, and Future of Science Diplomacy in Europe." Science & Diplomacy 7 (3): 7. <https://www.sciencediplomacy.org/perspective/2018/past-present-and-future-science-diplomacy-in-europe>.
- Roig, A.; Sun-Wang, J. L. and Manfredi-Sánchez, J. L. 2020. Barcelona's science diplomacy: towards an ecosystem-driven internationalization strategy. Humanities and Social Sciences Communications volume 7, Article number: 114
- Ruffini, P. B. 2017. Science and Diplomacy. A New Dimension of International Relations. Science, Technology and Innovation Studies. Cham: Springer International Publishing. www.springer.com/gp/book/9783319551036#aboutBook
- Ruffini, P. B. 2018. " The Intergovernmental Panel on Climate Change and the Science-Diplomacy Nexus." Global Policy 9: 73-77. <https://doi.org/10.1111/1758-5899.12588>.
- S4D4C. 2019. The Madrid Declaration on Science Diplomacy. Madrid: S4D4C. <https://www.s4d4c.eu/wp-content/uploads/2020/01/madrid-declaration-1.9.pdf>.
- SAPEA. 2019. Making Sense of Science for Policy under Conditions of Complexity and Uncertainty. Berlin: SAPEA, Science Advice for Policy by European Academies. <http://www.sapea.info/topics/making-sense-of-science/>
- Schlegel, F. 2014. "Swiss Science Diplomacy: Harnessing the Inventiveness and Excellence of the Private and Public Sectors," Science & Diplomacy, Vol. 3, No. 1 (March 2014). <http://www.sciencediplomacy.org/editorial/2014/educating-for-science-diplomacy>.
- Strategic Forum for International Science and Technology Cooperation (SFIC) 2020. Input Paper "Science Diplomacy". Advancing the Impact of Science Diplomacy at EU and Member States Level through Targeted Support and Improved Coordination. ERAC-SFIC. Brussels: SFIC Secretariat. <https://data.consilium.europa.eu/doc/document/ST-1352-2020-INIT/en/pdf>.
- Trobbiani R., and Hatzenboer C., 2018. The Future of EU Science Diplomacy: Conceptual and Strategic Reflections. EL-CSID Policy Paper 2018/14. <https://cris.unu.edu/sites/cris.unu.edu/files/EL-CSID%20Policy%20Paper%202018-14.pdf>
- Sunami, A.; Hamachi, T. and Kitaba S. 2013. "The Rise of Science and Technology Diplomacy in Japan". In: Science & Diplomacy, Vol. 2, No. 1 (March 2013) www.sciencediplomacy.org/article/2013/rise-science-and-technology-diplomacy-in-japan.
- Trobbiani, R.; and Hatzenboer, C. 2018. The Future of EU Science Diplomacy: Conceptual and Strategic Reflections. EL-CSID (Brussels). <https://cris.unu.edu/sites/cris.unu.edu/files/EL-CSID%20Policy%20Paper%202018-14.pdf>

Van Langenhove, L. 2017. "Tools for an EU science diplomacy". European Commission. Luxembourg: Publications Office of the European Union, 2017. <http://op.europa.eu/en/publication-detail/-/publication/e668f8cf-e395-11e6-ad7c-01aa75ed71a1/language-en/format-PDF/source-108595623>

Wilsdon, J.; and De Rijcke, S. 2019. "Europe the Rule-Maker." Nature. Nature Publishing Group. <https://doi.org/10.1038/d41586-019-01568-x>.

Young, M. 2020. Building Better Science Diplomacy for Global Challenges: insights from the COVID-19 crisis. S4D4C POLICY BRIEF, June 2020. With contributions from: Aukes, E.J., Dall, E., Elorza, A., Kuhlmann, S., Lacunza, I., McGrath, P., Melchor, L., Meyer, N. Vienna: S4D4C. Available at: <https://www.s4d4c.eu/policy-brief-building-better-science-diplomacy-for-global-challenges-insights-from-the-covid-19-crisis/>

Young, M., Flink, T. and Dall, E. 2020. Science Diplomacy in the Making: Case-based insights from the S4D4C project. https://www.s4d4c.eu/wp-content/uploads/2020/03/S4D4C_REPORT_Science-Diplomacy-in-the-Making.pdf

Young, M., Rungius, C., Aukes, E., Melchor, L., Dall, E., Cernovská, E., Tomolová, E., Plumhans, L. A., Ravinet, P., Flink, T., and Elorza Moreno, A. 2020. The 'Matters' of Science Diplomacy: Transversal Analysis of the S4D4C Case Studies. S4D4C. https://www.s4d4c.eu/wp-content/uploads/2020/09/S4D4C_REPORTS_The-Matters-of-Science-Diplomacy_Sept2020.pdf.

ACKNOWLEDGEMENTS

This project has received funding from the Research and Innovation Programme Horizon 2020 of the European Union under grant agreement 770342



The authors wish to acknowledge the productive discussions and cooperation of our S4D4C partners. Also, we are thankful to all the representatives of the different Science Diplomacy Networks for their time and fruitful insights to this report.

PROJECT PARTNERS

Centre for Social Innovation – ZSI
(Coordinator)

Charles University Prague – CU

German Aerospace Centre, Project
Management Agency – DLR

German Centre for Science Studies and Higher
Education Research – DZHW

The Spanish Foundation for Science and
Technology – FECYT

The World Academy of Sciences – TWAS

University of Lille – ULille

University of Sheffield – USFD

University of Twente – UT

Vienna School of International Studies – DA

ASSOCIATE PARTNERS

Center for Science Diplomacy at AAAS,
Washington

Higher School of Economics, Moscow – HSE
InterAcademy Partnership – IAP

National Graduate Institute for Policy Studies,
Japan – GRIPS

International Institute for Applied Systems
Analysis – IIASA

Indian Institute for Science/DST – Centre for
Policy Research

www.s4d4c.eu

twitter.com/S4D4C

contact@s4d4c.eu

s4d4c@fecyt.es

WE EXPLORE AND INFORM EU SCIENCE DIPLOMACY



Networks
and dialogue



Governance
framework



Knowledge
resources



Trainings for
science diplomats