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Strategic Forum for International S&T Cooperation

Secretariat

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ERAC-SFIC 1354/21

NOTE

From:	SFIC Secretariat
To:	Delegations
Subject:	SFIC Task Force Science Diplomacy : "Survey Analysis On Science Diplomacy Strategies, Activities And Actors Of EU Member States And Associated Countries"

Delegations will find in Annex the final version of the "Survey Analysis On Science Diplomacy Strategies, Activities And Actors Of EU Member States And Associated Countries".

SFIC TASK FORCE

SCIENCE DIPLOMACY

SURVEY ANALYSIS ON SCIENCE DIPLOMACY

STRATEGIES, ACTIVITIES AND ACTORS OF EU MEMBER STATES AND ASSOCIATED COUNTRIES

MAY 2021

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I. INTRODUCTION

SFIC works to foster a European Union Science Diplomacy agenda working together with the different Member States (MS) / Associated Countries (AC) and the European Commission towards the European Research Area (ERA) and Horizon Europe both playing a key role in addressing complex transnational matters.

After having launched the first Science Diplomacy input paper[1] and working paper[2] earlier this year, SFIC intends to further work on deepening our understanding on how Science Diplomacy strategies, actions, plans and practises at sub-national and national levels in the Member States / Associated Countries work. Such an analysis would allow for a more effective alignment of interests and a more efficient coordination of resources.

For that purpose and in coordination with the European Commission, the Task Force[3] has developed a dedicated survey that focuses on Science Diplomacy strategies, activities, practises and topics in bilateral and multilateral programmes. This report responds to one of the objectives of the SFIC Science Diplomacy Task Force: to overview relevant national/regional strategies and activities in Science Diplomacy, exchange of best-practise examples and explore EU Science Diplomacy coordination mechanisms and activities.

The first part of the document summarises the main conclusions of the analysis, which is followed by a brief methodology section that describes the process of analysis. The final part of the document is the findings section that illustrates and analyses the answers received in more details.

II. EXECUTIVE SUMMARY AND CONCLUSIONS

This report presents the results of an SFIC survey addressed to all delegations and answered by 19 countries. Overall 18 questions have been asked related to four main categories, namely around the existence of strategic policies for Science Diplomacy, the general stakeholders in Science Diplomacy, the Science Diplomacy policy, coordination and support mechanisms used and the future planning of Science Diplomacy activities. In this chapter, we would like to highlight some main results:

[1] "Advancing the impact of Science Diplomacy at EU and Member States level through targeted support and improved coordination" (ERAC-SFIC 1352/20)
[2] "Anchoring Science Diplomacy in Horizon Europe developing specific subjects and activities" (ERAC-SFIC 1357/20)
[3] The Strategic Forum for International Cooperation (SFIC) Science Diplomacy Task Force is composed by delegations of Austria, Belgium, Germany, France, Hungary, Italy, Portugal, Spain and the European Commission (DG R&I) and operates with a mandate till October 2021.

Formal policy strategies for Science Diplomacy are often missing

The information gathered via this survey showed that most of the countries do not have a specific overarching Science Diplomacy strategy or national policy document that aims to give directions to what actors want to achieve and how to realize their policy goals.

Developing such a strategic document would, in most cases, require cross-governmental co-operation as in many countries Science Diplomacy is a joint responsibility of the Ministries of Foreign Affairs and the Ministries related to Education/Science/Research/Technology/Innovation.

However, Science Diplomacy is taken into account and mentioned specifically in a number of sectorial strategies or policy documents, establishing a basis for stronger international networking activities and thereby implicitly promoting the benefits of Science Diplomacy.

Main goals are increasing national capacities and tackling global challenges

Science Diplomacy strategic goals of the Member States/ Associated Countries focus both on increasing national capacities and on tackling global societal challenges. Facilitation of cooperation among researchers in other countries, influence, visibility and access to large-scale infrastructures are also part of the core actions. Promoting academic freedom, the valorisation of the relation with the scientific Diasporas, and strengthening the quality of (higher) education and science are also mentioned as important objectives.

Science advice for foreign affairs policies still in the making

Only few countries stated emergencies and crisis management as well as support to evidence-based decision making as core objectives for their Science Diplomacy actions.

North America, Europe and Asia Pacific are the main regions of Science Diplomacy actions

Countries give priority to North America, followed by Europe and Asia & the Pacific, but half of the responding countries also focus on Africa or Latin America and the Caribbean. Moreover, specific regions (Arctic Region, Polar Region, Mediterranean and Gulf Region) have also been mentioned for Science Diplomacy efforts.

Governmental stakeholders leading Science Diplomacy approaches

Countries perceive governmental stakeholders as most essential in the Science Diplomacy context. Around half of the countries also see research and academic stakeholders as well as industry and SMEs as important players.

Civil society not yet in the Science Diplomacy equation

In contrast to analysis that show a growing broadening of the field of actors in Science Diplomacy, only few countries perceived civil society stakeholders as an essential part of the Science Diplomacy interplay.

National Science Diplomacy policy coordination and support mechanisms are widely used

Bilateral and multilateral S&T cooperation agreements are extensively used to advance Science Diplomacy, followed by S&T advisors attached to the embassies and national or regional funding schemes.

Call for additional EU level coordination

More than half of the responding countries have indicated that there is coordination of their national efforts with the EU level. However, a majority would support to strengthen EU-level coordination between the European Commission, Member States and Associated Countries for increased visibility, a more powerful representation of common interests or avoiding the duplication of efforts.

A number of countries emphasised the need for a strategic approach, a clearer European identity and speaking with one voice, especially when dealing with strong partners like China, India or the USA. Small countries rarely have the capacity and human resources to build up a strong STI presence in third countries. Global challenges can also only be tackled by strong cooperation. In addition to joint actions, sharing best practise examples and existing knowledge was also considered to be useful.

More coordination should not mean more bureaucracy

Countries not in favour of a stronger coordination mainly referred to the differences and different needs of member states, the advantages of a bottom-up approach for scientific cooperation and the danger of increased bureaucracy.

International coordination in the making

Countries maintain and support international coordination efforts. For example, most of the responding countries have regular meetings with science attachés from foreign embassies.

Lack of Science Diplomacy training mechanisms

Most countries do not have specifically designed Science Diplomacy training schemes for career diplomats and researchers. For those who offer them workshops and seminars as well as online courses were the most frequent mechanisms offered for Science Diplomacy training.

Big potentiality of EU Science Diplomacy

Most of the countries are planning new schemes, policies, tools and mechanisms to advance Science Diplomacy in their countries.

Science Diplomacy capacity building and training activities, the establishment of an EU Science Diplomacy platform, a joint EU/MS/AC science diplomacy strategy or Science Diplomacy awareness raising activities were widely supported as key actions to promote Science Diplomacy within EU.

ERA supporting Science Diplomacy efforts of Member States

Half of the countries already monitor Science Diplomacy related activities towards the progress of the current priority 6 "internationalisation" of the ERA.

COVID 19 crisis: an opportunity for Science Diplomacy

COVID crisis has shown us how important the efficient and prompt coordination is, which should be a lesson for the future.

III. METHODOLOGY

The Science Diplomacy Survey was answered by 19 European countries:

The survey had a total of 18 questions retrieved by European Survey tool and structured along four main sets of questions:

a. Strategic policies for Science Diplomacy

b. General stakeholders in Science Diplomacy

c. Science Diplomacy policy, coordination and support mechanisms used

d. Science Diplomacy future planning

From the 18 questions:

- 8 questions were single choice questions, where delegations were able to answer "yes", "no" or "other". In case of "other" answer, they were given space to add more information.
- 7 questions were multiple choice questions, where delegations were also were given space to add more information.
- 3 questions were open and delegations were given space to add information.

The timeline of the survey included the design phase, approved by the SFIC Plenary in the fall, the data collection and analysis phase in December-March and the revisions and finalisation phase in April 2021.

The methods for analysis of the retrieved information are quantitative (see diagrams) and qualitative. The conclusions are brief and comprehensive at the same time, with the objective to give a snapshot of the information. The inclusion of the exact answers is provided in the findings section.

Member State / Associated Country acronyms referred in the survey answers are:

AT - Austria
BE - Belgium
CH-Switzerland
CY - Cyprus
CZ - Czechia
DK - Denmark
FI - Finland
FR - France
DE - Germany
EL - Greece
HU - Hungary
IE - Ireland
NL – Netherlands
NO-Norway
PL - Poland
PT - Portugal
SI - Slovenia
ES - Spain
SE – Sweden

IV. FINDINGS

A. STRATEGIC POLICIES FOR SCIENCE DIPLOMACY

The first set of question is related to whether countries have developed dedicated Science Diplomacy strategies, which ministries are in charge of these strategies, which core objectives these strategies work towards and which key world regions they tackle.

1. DO YOU HAVE ANY SCIENCE DIPLOMACY STRATEGY IN YOUR COUNTRY

Diagram 1: Existence of Science Diplomacy Strategies

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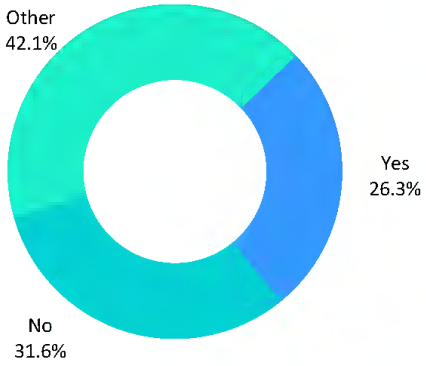

While five countries have an explicit Science Diplomacy Strategy (CZ, EL, FR, NL, PT), six countries have responded that they do not have such a strategy (AT, DK, HU, IE, SE, SI). The eight countries that have responded to the question with "other" (BE, CH, CY, DE, ES, FI, NO, PL) have given the following additional contextual information:

In **Belgium**, there is no federal level strategy but in the Wallonia-Brussels regions the Science Diplomacy strategy for the period 2019-2024 is mentioned in two international policy declarations, namely the Wallonia-Brussels Federation governmental declaration and the Wallonia Region governmental declaration.

In **Switzerland,** the Swiss International Strategy on Education, Research and Innovation and the Foreign Policy Strategy 2020-23 refer to Science Diplomacy.

In **Cyprus**, the Ministry of Foreign Affairs has identified Economic Diplomacy as a key policy priority and a decision was taken to prepare and adopt a National Economic Diplomacy Strategy. Technical assistance from the European Commission via the Structural Reform Support Programme (SRSP) was

requested and the report of the experts was completed and delivered in October 2020. Based on that, the strategy is currently in its drafting process.

In **Germany**, there is no overarching strategy explicitly referring to Science Diplomacy at the national level but the Federal Government's "Strategy for the Internationalization of Education, Science and Research" establishes a basis for stronger international networking activities and thereby implicitly promotes Science Diplomacy. Moreover, both the Federal Ministry of Education and Research and the Federal Foreign Office prepared internal documents, ensuring their commitment to advance Science Diplomacy efforts and setting the respective ministries' objectives in this regard.

In **Spain**, the Spanish Ministry of Science and Innovation and the Spanish Ministry of Foreign Affairs, European Union and International Cooperation have identified a series of recommendations to strengthen the central government's actions abroad through promoting Spain's interests by taking advantage of the country's strengths in science, technology and innovation.

Finland is currently working on cross-governmental level to define the need of such a strategy or roadmap for activities.

In **Norway**, although there is no Science Diplomacy strategy as such, the Norwegian Government's strategy on cooperation in higher education and research with priority countries outside Europe may be partly interpreted as such an effort.

In **Poland**, Scientific Diplomacy is one of the goals of Poland's foreign policy. The basis of scientific diplomacy is the dissemination of knowledge about history and culture, and encouraging learning the Polish language.

2. WHAT GOVERNMENTAL DEPARTMENT(S)/MINISTRY(S) IS (ARE) IN CHARGE OF THE OVERARCHING NATIONAL APPROACH / STRATEGY TOWARDS SCIENCE DIPLOMACY?

From the 18 countries that have responded, 10 (AT, BE Federal level, ES, DE, FI, FR, IE, NO, PT, SI) have explicitly stated a joint responsibility of the Ministries of Foreign Affairs and the Ministries related to Education/Science/Research/Technology/Innovation. In Czechia, the Foreign Ministry cooperates with the Research, Development and Innovation Council. In Cyprus, the Ministry of Foreign Affairs takes the lead with the Deputy Ministry of Research, Innovation and Digital Policy in a supporting role. In Denmark, the Ministries related to Education/Science are responsible for the topic. In Switzerland, the State Secretariat for Education, Research and Innovation within the Federal Department of Economic Affairs, Education and Research is in charge of the overarching national approach, coordinating with the Federal Department of Foreign Affairs. In the Netherlands, the joint responsibility for the Science diplomacy topic is with the Ministry of Education, Culture & Science and the Ministry of Economic Affairs & Climate.

In Portugal (+ Ministry of Internal Administration), Hungary (Ministry of Foreign Affairs and Trade, Ministry for Innovation and Technology, National Research, Development and Innovation Office) and Poland (+ National Agency for Academic Exchange, National Science Centre, National Centre for Research and Development) even more ministries and stakeholders are in charge.

3. WHAT ARE THE CORE OBJECTIVES OF YOUR NATIONAL SCIENCE DIPLOMACY STRATEGY?

16 countries (BE, CY, CZ, DE, DK, ES, IE, FI, FR, HU, NL, PL, PT, SI, CH, NO) provided input to this question. While only some of the responding countries actually indicated that they have an overarching national Science Diplomacy Strategy, others (BE, CH, CY, DE, ES, FI, NO, PL) referred to the core objectives set out in documents by single ministries. The following objectives resonated most:

Diagram 2: Core objectives of Science Diplomacy strategies

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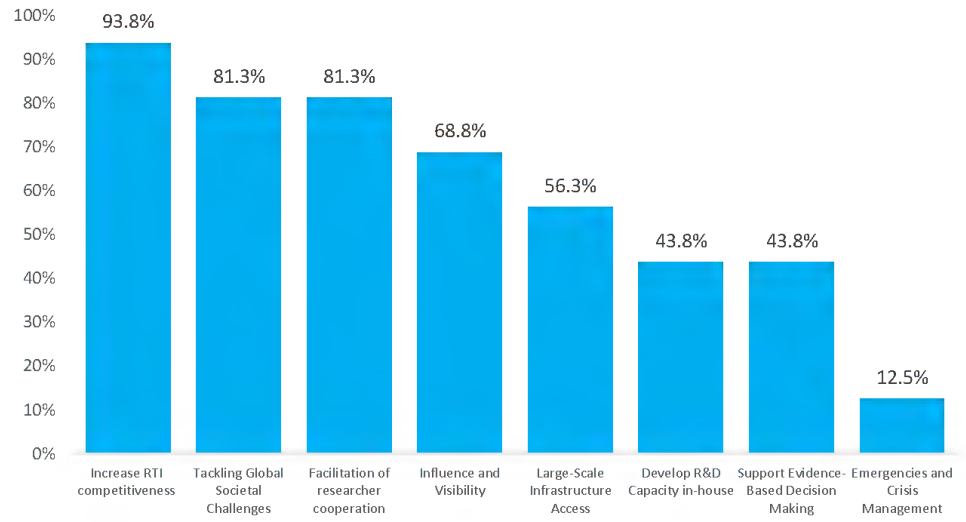


In most countries the increase in capacities (15 out of 16), followed by tackling global societal challenges and the facilitation of cooperation among researchers in other countries (both 13 out of 16) are at the core of their strategies. Influence and Visibility (11 out of 16) and access to large-scale infrastructures (9 out of 16) are still important issues for more than half of the countries and more than 12.5% think emergencies and crisis management as well as support to evidence-based decision making are core objectives. In addition to the categories mentioned, countries have also mentioned aspects like promoting academic freedom, the valorisation of the relation with the scientific Diasporas, the support of scientists and researchers abroad and strengthening the quality of (higher) education and science as important objectives.

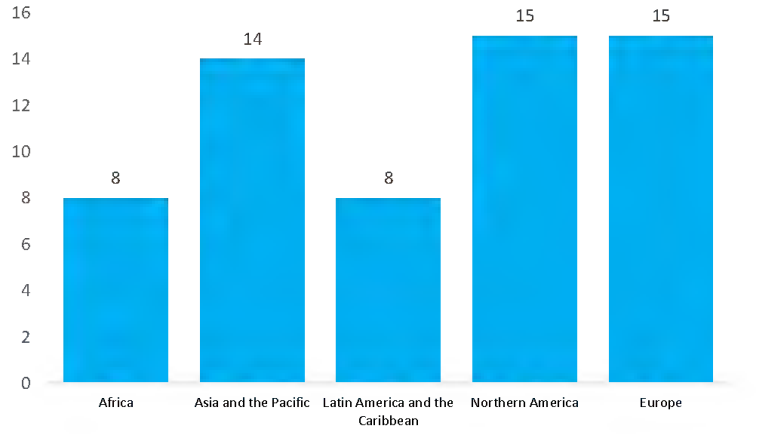
4. IN WHICH REGION OF THE WORLD DOES YOUR COUNTRY FOCUS ITS SCIENCE DIPLOMACY EFFORTS?

While most of the responding countries give priority to North America (15 out of 16), followed by Europe and Asia & the Pacific (14 out of 16 each), half of the responding countries (8 each) focus on Africa or Latin America and the Caribbean.

Within the additional information provided for this questions some countries have stated explicitly that they try to include efforts in all regions of the world (DE, FR, PT, CH), while also other more specific regions have been mentioned (Artic Region , Polar Region, Mediterranean, Gulf Region) for Science Diplomacy efforts.

Diagram 3: Focus of Science Diplomacy activities in the different world regions

N=16

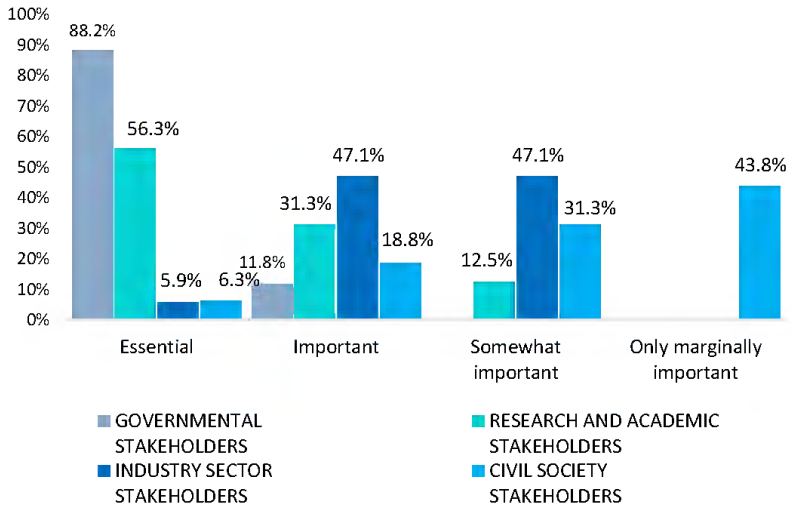


B. GENERAL STAKEHOLDERS IN SCIENCE DIPLOMACY

The second set of question is related to the kind of stakeholders that are perceived drivers in Science Diplomacy in the different countries and examples of Science Diplomacy networks existing.

5. WHO ARE THE MAIN SCIENCE DIPLOMACY STAKEHOLDERS IN YOUR COUNTRY?

Diagram 4: Main Science Diplomacy stakeholders



Almost 90% of the responding countries perceive governmental stakeholders as essential in the Science Diplomacy context, while the rest of the countries assess them as important stakeholders.

Research and academic stakeholders are seen as essential by around 56% of the countries, as important by 31% of the countries and as somewhat important by around 13% of the countries.

Industry and SME sector stakeholders are assessed as essential by only around 6% of the countries, as important by around 47% of the countries and as somewhat important also by 47% of the countries.

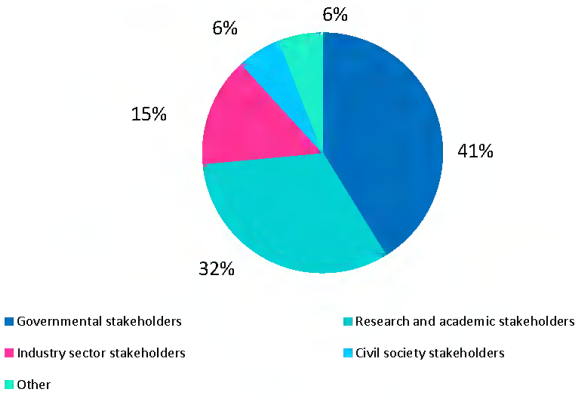
Finally, civil society stakeholders are perceived as essential by a little more than 6% of the countries, as important by 18.8% of the countries as somewhat important by 31.3% of the countries and as only marginally important by around 44% of the countries.

6. SCIENCE DIPLOMACY NETWORK EXAMPLES

Question 6 and Annex 1 were devoted to examples of networks that work in the context of Science Diplomacy in the different countries and beyond. 20 of such networks have been described by the countries, from which thirteen (65%) were multi-stakeholder networks and seven were mono-stakeholder networks.

Diagram 5: Leading stakeholders in the networks

N=17



In more than 40% of the networks governmental stakeholder are in the lead or co-lead of the network, followed by 32% of academic stakeholders and 15% networks led/co-led by industry and SMEs stakeholders.

For a detailed list of the networks mentioned as examples see chapter V.

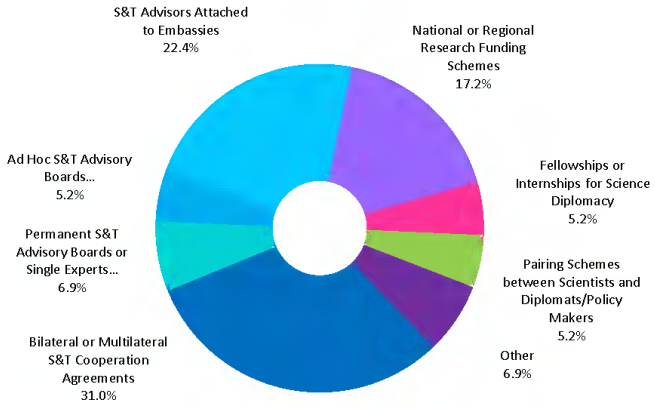
C. SCIENCE DIPLOMACY POLICY, COORDINATION AND SUPPORT MECHANISMS USED

The third set of question is focusing on the mechanisms used to advance Science diplomacy, the ways the efforts are coordinated on national level and with EU developments and structures and the potential for coordinated activities at EU level. Moreover, it tackles training mechanisms related to Science diplomacy.

7. WHAT MECHANISMS HAVE BEEN SET IN PLACE FOR ADVANCING SCIENCE DIPLOMACY IN YOUR COUNTRY?

Diagram 6: Mechanisms to advance Science Diplomacy

N=18



Bilateral and multilateral S&T cooperation agreements are widely used to advance Science Diplomacy, followed by S&T advisors attached to the embassies and national or regional funding schemes. All other mechanisms play a less prominent role in this context.

8. HOW ARE SCIENCE DIPLOMACY EFFORTS COORDINATED IN YOUR COUNTRY?

The picture regarding national coordination efforts is not very pronounced. While regular coordination between governmental actors is already in place in eight of the responding countries (CZ, FI, HU, IE, NL, SE, CH, NO), there is rather an *ad-hoc* coordination happening in seven countries (AT, DE, DK, FI, SI, PL, CH). Five countries (BE, CY, ES, FR, PT) have reported that they have coordination mechanisms that also include non-governmental stakeholders. Three countries have stated that there is no coordination on national/regional level, although they have all replied positively to one of the other three options.

Diagram 7: Science Diplomacy national coordination efforts

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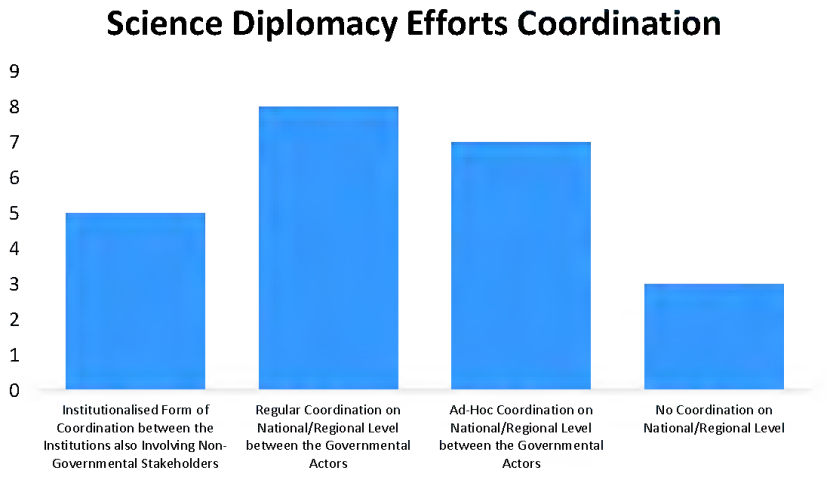

9. ARE YOUR SCIENCE DIPLOMACY EFFORTS COORDINATED WITH THE EU LEVEL?

Diagram 8: Science Diplomacy coordination with the EU level

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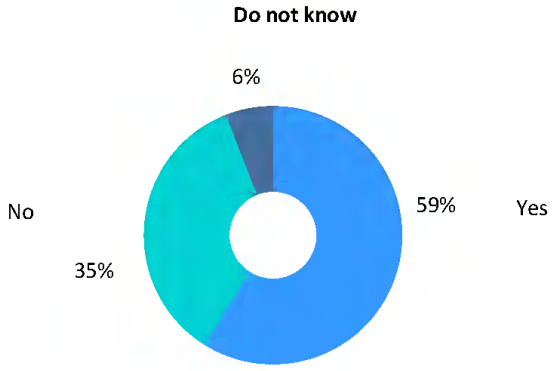

Around 60% of the responding countries have indicated that there is coordination of their national efforts with the EU level, while a little bit more than a third of the countries do not have such coordination.

Coordination does take various forms, and the following examples have been mentioned:

- Participation in EU High Level Political Dialogues (e.g. UfM, EU AFRICA, EU LAC, EU-SEA, EU-AU,EU-INDIA)
- Coordination with national and Regional EU Offices as well Innovation Centres
- Scientific Advice Mechanism of the European Commission
- Participation of organizations in Horizon 2020 Science Diplomacy projects EI-CSID, InsSciDE & S4D4C
- Participation in high-visibility showcasing events and EU initiatives
- Meetings with science and technology attachés
- SFIC
- EU-KNOC

10. WOULD EUROPEAN LEVEL COORDINATION OF SCIENCE DIPLOMACY ACTIVITIES BE USEFUL?

Diagram 9: Usefulness of coordination at EU level

N=18

Thirteen countries (BE, PT, AT, CZ, SI, DK, FI, ES, NL, FR, DE, HU) have responded positively to this question, while three countries (SE, CH, NO) do not find European level coordination of Science Diplomacy activities useful. EL and CY did not give a definite answer to this question.

The countries, supporting stronger coordination have mentioned various reasons why they find coordination beneficial like increased visibility, more powerful representation of common interests or avoiding duplication of efforts. More countries emphasised the need for a strategic approach, a European identity and speaking with one voice, especially with such strong partners like China, India or the USA. Small countries rarely have the capacity and human resources to build up a strong STI presence in third countries. Global challenges can also only be tackled by strong cooperation. In addition to joint actions, sharing best practise examples and existing knowledge was also considered to be useful.

The benefit of the running Science Diplomacy projects was also acknowledged and the need for further financial support for such activities was emphasised. Countries against stronger coordination mainly referred to the differences and different needs of member states, the advantages of a bottom-up approach for scientific cooperation and the danger of increased bureaucracy. **Greece** and **Cyprus** did not give a definite answer because of the complexity of the question, the strong linkage between Science Diplomacy and foreign policy and their national interest. They would rather support the coordination of horizontal issues like IPR, human rights or democratic values.

11. ARE THE SCIENCE DIPLOMACY EFFORTS COORDINATED AT INTERNATIONAL LEVEL?

Diagram 10: Science Diplomacy coordination at international level

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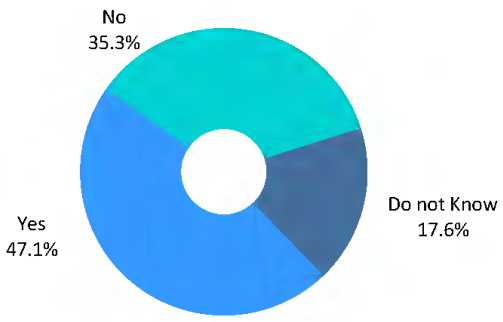

Less than half of the countries (EL, PT, DK, ES, NL, FR, DE, HU) have responded positively to this question. One third of the countries (SE, CY, AT, SI, FI, NO) do not have internationally coordinated Science Diplomacy efforts. Three countries (CZ, PL, BE) did not know the answer to this question.

Most of the positively responding countries are mainly active in the work of international organisations (e.g. OECD, UNESCO, G7, G20) or international research organisations (e.g. CERN, EMBL etc.) and mainly in the fields of global interest such as Health, Security and Environment. Other countries cooperate with their regional partners (e.g. Black Sea, Visegrád 4, Mediterranean) when coordinating international efforts.

12. ARE REGULAR MEETINGS WITH S&T COUNSELLORS OR ATTACHÉS FROM FOREIGN EMBASSIES ON GOVERNMENTAL OR INSTITUTIONAL LEVEL PART OF YOUR SCIENCE DIPLOMACY ACTIVITES?

Diagram 11: Regular meetings with S&T counsellors as part of Science Diplomacy activities

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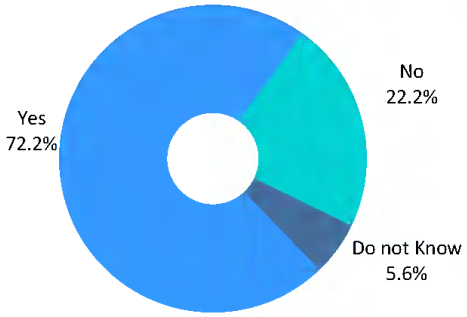

Most of the responding countries (SE, EL, BE, PT, CY, SI, FI, ES, NL, FR, PL, HU, CH) have regular meetings with science attachés from foreign embassies. This is not the case in AT, DK and NO. CZ and DE did not give a definite answer to this question.

This question was interpreted in two ways by the respondents: some countries have named both European and third countries while other respondents only named third country attachés. Although respondents were asked to list the most important three contacts, many have listed far more countries. As they were not listed in an order of priority, all these countries will be mentioned in the below summary.

As for European attachés, the following countries were mentioned: Germany (4), France (6), UK (4), Greece (1), Sweden (1), Switzerland (1), and Netherlands (1).

As for third country attachés, the following countries were mentioned: China (8), Russia (3), Israel (5), India (3), USA (7), Japan (3), Canada (2), Brazil (1), Singapore (1), Turkey (1), Korea (2).

Overall, we can see that inside of Europe France, Germany and the UK are the most active partners. As for the global actors China, the USA and Israel are leading followed by Russia, India and Japan.

Countries were also asked to mention some good examples for coordination. Here we have received again various responses. **Sweden** has mentioned the active partner search of the US and Indian embassies as good example. **Portugal** has highlighted some European partnerships like PRIMA and EDCTP.

In **Slovenia,** the UK has organised a series of scientific expert visits as a Science Diplomacy effort before the Brexit. Slovenia also considers the lead agency approach in bi- and multilateral cooperation a good example.

Finland highlighted the Team Finland Knowledge network funded by the Ministry of Education, Science and Culture and a joint programme of the Academy of Finland and the Ministry of Foreign Affairs.

Spain has found the common approach of the EU and its Member States towards the COVID-19 pandemic, vaccines and other medical solutions a success story. In the **Netherlands** the International Business instrument of the Ministry of Foreign Affairs is widely used by innovation attachés. This instrument makes it possible for companies and knowledge institutions to jointly explore the possibilities for innovation cooperation abroad. The Global Stars instrument of the EUREKA programme can also be used for bilateral cooperation with third countries.

In **Poland** there is good cooperation between the National Science Centre, the National Centre for Research and Development and the Polish National Agency for Academic Exchange. **Hungary** highlighted the V4-Israel Innovator cooperation, in which the project supports start-ups with a training programme in Israel, financed by the International Visegrad Fund and the State of Israel. The Ministry of Foreign Affairs and Trade also has a dedicated budget for STI projects, carried out by Hungarian diplomatic missions with or without science attachés. **Switzerland** mentioned the innovation roundtables, organised by the Netherlands in order to link Swiss and Dutch innovation stakeholders.

13. ARE THERE TRAINING MECHANISMS IN PLACE FOR SCIENCE DIPLOMACY?

Diagram 12: Availability of Training Mechanisms for Science Diplomacy

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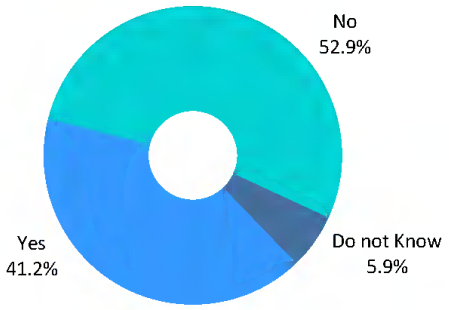

Based on the responses seven countries (PT, AT, SI, ES, NL, FR, HU) have some training activities in place for Science Diplomacy. Nine countries (SE, EL, BE, CY, DK, FI, DE, PL, NO) do not have such a scheme at the moment. CZ could not give a definite answer to the question. The type of training was further defined by question 14.

14. IF YES, WHICH TRAINING MECHANISMS ARE IN PLACE FOR SCIENCE DIPLOMACY?

Diagram 13: Types of mechanisms for Science Diplomacy Training

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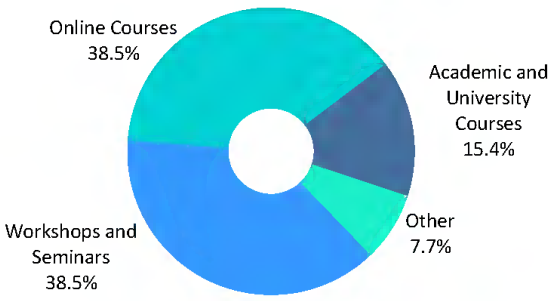


Workshops and seminars as well as online courses were the most frequent mechanisms for Science Diplomacy: PT, ES, NL, FR, HU have mentioned workshops and seminars, AT, SI, ES, NL, HU have chosen online courses as a typical form for training in their country. AT and HU also have academic and university courses on the subject.

Germany has regular meetings and exchange of science attachés on the developments in their respective countries (Network of science attachés).

As for existing good examples **Austria** has mentioned the Science Diplomacy courses at the Diplomatic Academy in Vienna and the possible uptake of the results of the S4D4C project in various curricula.

In **Spain**, Science Diplomacy trainings are specifically designed for career diplomats. In **Hungary**, the Ministry of Innovation and Technology has started and online webinar-series about recent developments in Hungarian RDI.

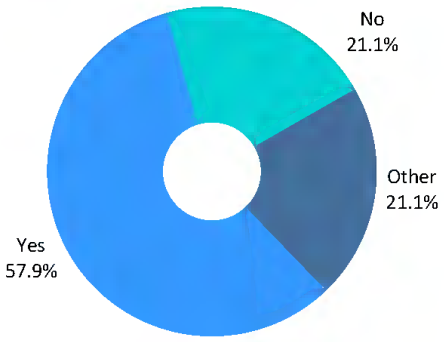
D. SCIENCE DIPLOMACY FUTURE PLANNING

The final set of questions is dedicated to future plans at national and EU level in the field of Science Diplomacy, the monitoring of Science Diplomacy in the European Research Area and again the potential to work together on that in the European context.

15. ARE THERE PLANS TO INTRODUCE NEW STRATEGIES/ACTIVITIES/TOOLS/PROGRAMMES TO SUPPORT SCIENCE DIPLOMACY?

Diagram 14: Plans to introduce new strategies/activities/tools and programmes

N=19



Although eleven countries (BE, PT, CY, AT, CZ, DK, FI, ES, NL, FR, HU) have responded positively to this question, DK and FR have not given more detailed answers. In **Belgium** the situation is quite complex: in Flanders, the aim is to establish a more integrated Science Diplomacy strategy and come up with additional, new activities. The federal level was inspired by the results of the EL CID project, which was coordinated by VUB. Some Science Diplomacy conferences have already been organised and there is a plan for a comprehensive Science Diplomacy strategy.

Portugal mainly plans activities through bilateral agreements with the Portuguese Diaspora Associations. In **Cyprus**, the Economic Diplomacy Unit of the MFA is in the process of drafting the Economic Diplomacy Strategy. Science and Innovation diplomacy was identified as one of the themes that Cyprus should give emphasis to and thus a part of the Strategy is expected to be dedicated to this topic. In **Austria**, BMBWF has contracted a study to map and describe the Austrian actors in the Science Diplomacy field and to see what potential activities could be launched such as a Round Table of Actors in Austria.

In **Czechia** and in **Spain** the network of science attachés is expected to be extended. In **Finland** there are policies to promote internalisation in Finnish higher education and research between 2017 – 2025. The monitoring of this strategy is done by the International Forum, which includes a wide range of stakeholders and an ideal forum to discuss Science Diplomacy.

In the **Netherlands**, the Minister of Education, Culture & Science recently published the International Knowledge and Talent Strategy. This strategy provides more direction for international cooperation in higher education and science. With the changed commitment to Science Diplomacy, the Ministry is making room for education and science attachés. In **Hungary**, the renewal of the set of tools used in Science Diplomacy promotion is in the making. The objective is to introduce Hungary as an innovation centre.

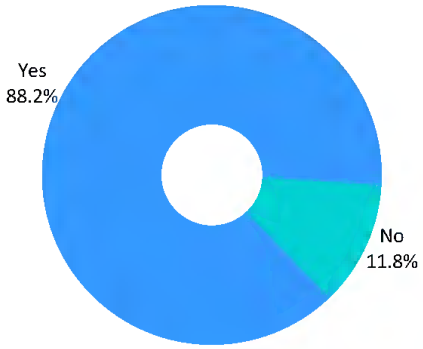
Under the other category **Greece** has mentioned the eventual appointment of a new attaché in the US. In **Ireland** changes might occur after the development of Ireland's new national research and innovation strategy later this year. In **Germany** there are several new instruments under discussion, e.g. a new programme aiming at raising the German educational, research, funding and intermediary organizations' awareness regarding the relevance of Science Diplomacy. In **Poland** the internationalization efforts might lead to new programmes in the field.

SI, SE, CH and NO do not plan to introduce new strategies, tools or programmes to support Science Diplomacy.

16. COULD NEW JOINT ACTIVITIES/TOOLS/PROGRAMMES AT EUROPEAN LEVEL TO SUPPORT SCIENCE DIPLOMACY BE OF ADDED VALUE?

Diagram 15: New joint activities/tools/programmes at European level

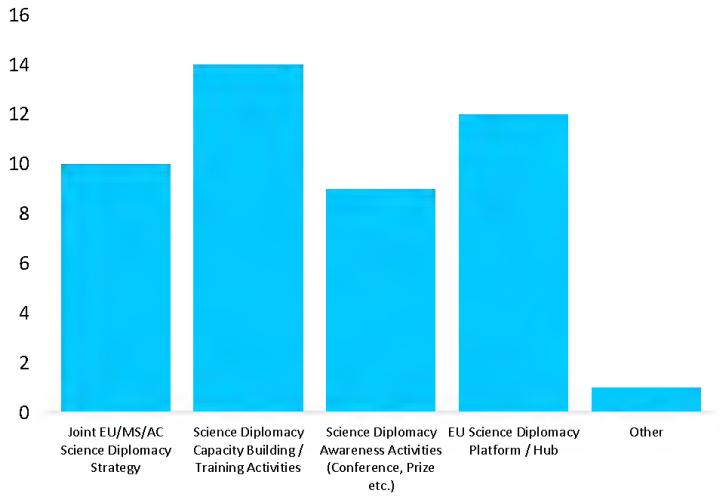
N=17



Only two countries (SE and NO) did not find European level new joint activities of added value, the remaining 15 responding countries were positive about this possibility.

Diagram 16: Areas regarded as useful for EU-level coordination

N=15



As the above chart shows, all the four predefined possibilities were supported by many respondents. 14 countries would be in favour of Science Diplomacy capacity building and training activities. 12 countries would support the establishment of an EU Science Diplomacy platform. 10 countries would find a joint EU/MS/AC Science Diplomacy strategy useful. Science Diplomacy awareness raising activities, like conferences and prizes were also supported by 9 countries.

Although only **Spain** has chosen the other option, altogether four countries have provided some additional ideas for joint actions.

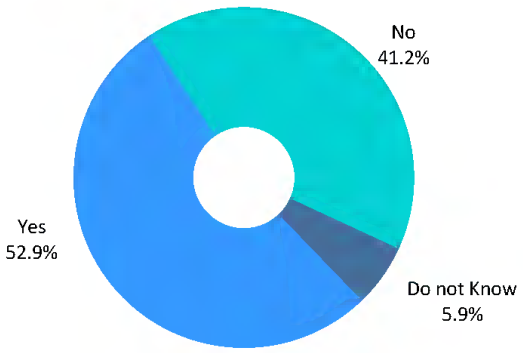
Belgium would recommend some coordination actions under cluster II or pillar IV of Horizon Europe. They also emphasised the role and better use of research infrastructures. As for citizen engagement, both **Belgium** and **Austria** has found that sharing best practise examples and mutual learning would be beneficial. Austria also finds it essential to deal with countries where cooperation in STI is increasingly perceived as sensitive (e.g. jointly developing red lines for cooperation, common values and principles).

Spain would recommend joint pairing schemes and science advice mechanisms to Foreign Affairs Ministries. As it is difficult to provide every single diplomatic mission with innovative toolbars, **Hungary** suggests that the EUDEL could offer the necessary tools (screens, exhibition accessories) for certain events to the Member States.

17. ARE SCIENCE DIPLOMACY RELATED ACTIVITIES INCLUDED IN YOUR COUNTRIES MONITORING/REPORTING TOWARDS THE PROGRESS OF PRIORITY 6 OF THE EUROPEAN RESEARCH AREA?

Diagram 17: Inclusion of Science Diplomacy in the monitoring of ERA priority 6

N=17



Slightly more than half of the respondents (EL, BE, PT, CY, SI, ES, FR, DE, PL) monitor Science Diplomacy related activities as part of their ERA National Action Plan (NAP) under priority six. Seven countries (SE, IE, AT, CZ, FI, NO, HU) have not included Science Diplomacy monitoring in their NAPs. NL could not give a definite answer to this question.

The countries with a positive response have also described how they monitor progress. In **Greece** it is part of SFIC related activities. **Belgium** has planned to develop an integrated Science Diplomacy strategy. Up to now results are mainly limited to science informed advice. **Portugal** is committed to Science Diplomacy and to the scientific diaspora, mainly by involving world leading research institutes and business groups. For **Cyprus** bilateral and multilateral cooperation agreements are the main tools for international cooperation. **Slovenia** mainly monitors the progress of research internationalization.

In the case of **Germany** Science Diplomacy is an integral part of the Federal Government's Report on International Cooperation in Education, Science and Research. The main priorities for **France** are the mobility of students and researchers and the support of universities' internationalization. In order to reinforce the strategic dialogue with France's closest partners outside Europe they regularly organise high-level Joint Committee Meetings. France considers the synergies between bilateral, multilateral and EU-based cooperation with third countries as well as the development of joint platforms of interaction crucial.

18. ANY FURTHER COMMENTS ON ISSUES RELATED TO SCIENCE DIPLOMACY?

Under this heading, five countries have provided substantial contribution. The comments are quite diverse. **Belgium** recommends that Science Diplomacy could be better integrated on the European level under such largescale initiatives like the Green Deal. Along similar lines, **Austria** would integrate Science Diplomacy relevant topics under Horizon Europe. The **Netherlands** is restructuring its Science Diplomacy policy and would love to intensify the cooperation with and learn from other EU-member states.

In **Norway** Science Diplomacy is perceived as a rather vague concept, despite relatively strong coordination and monitoring of international research cooperation on a national policy level.

Hungary highlighted that the COVID crises has shown us how important the efficient and prompt coordination is, which should be a lesson for the future.

E. SCIENCE DIPLOMACY NETWORKS EXAMPLES

Austria	Big Research Infrastructures for Diplomacy and Global Engagement through Science (BRIDGES) https://iiasa.ac.at/web/home/diplomacy/bridges.html The Africa-Uninet - academic activity which however does contain elements of Science Diplomacy https://africa-uninet.at/en/
Belgium	Individual universities have strategies for their cooperation with different countries. Wallonia-Brussels - Scientific liaison officers network of WBI
Cyprus	Steering Committee for Economic Diplomacy (covers also the part of Science and Innovation Diplomacy): This is a multi-stakeholder network consisting of stakeholders from Ministries, Public Agencies, Research Funding Organisations, and Business Associations etc.).
Czechia	CZ Science diplomats are in Israel, USA, Taipei (for all Asia) but no national network
Denmark	Innovation Centre Denmark Advisory committees regarding Horizon Europe Inter-ministerial network related to individual countries like India and China

Finland	Team Finland Knowledge network - education and science counsellors in Asia (China, SNG, India), GCC (Abu Dhabi), Americas (US/WAS DC and LatAM/Buenos Aires), Russia and Southern Africa (Pretoria). https://minedu.fi/en/team-finland-knowledge-network Innovation counsellors in Asia (China, HK, SNG, JPN) and US (NY and Silicon Valley) also cover science or collaborate with science counsellors.
France	France's network of diplomatic representations A total of 151 Cooperation and Cultural Action Advisers, 5 Science and Technology Advisors, 26 Science and Technology Attachés, 54 Scientific and University Cooperation Attachés, and 29 University Cooperation Attaché are acting in the field of Science Diplomacy. The network is piloted by the Ministry for Europe and Foreign Affairs (Sub-directorate for HE and R&I), in cooperation with MESRI (which facilitates the connection with the ecosystem of French RPOs). Network of French RPOs and HEIs French RPOs themselves are widely implanted all around the world (80 representation bureaus or antennas in around 40 countries). The main stakeholders are: - Centre national de la Recherche scientifique (CNRS) - multidisciplinary - Commissariat pour l'énergie atomique et les énergies renouvables (CEA) – - Institut de recherche pour le développement (IRD) – development research - Centre international de recherche en agronomie pour le développement (CIRAD) – agronomy/development - Institut national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE) – agronomy, nutrition and environment - Institut Pasteur – Health - Centre National d'Etudes Spatiales (CNES) – Space In many cases, these RPOs operate hand in hand with Universities, which have an increasing own network of representation bureaus and campuses abroad. European Science Diplomacy Initiative (ESDI) – Sciences Po Paris Launched in May 2019 and chaired by Carlos Moedas, former European Commissioner for Research, Science and Innovation. It aims at developing teaching and research activities as well as raising awareness of the ever-increasing role of Science Diplomacy in international relations.

Germany	German Centres for Research and Innovation: The German Centres for Research and Innovation (DWIH) are a network of German research organisations, universities and research-based companies. In five cities around the world, the DWIH provide a joint platform for German innovation leaders, present the capabilities of German research and connect German researchers with local cooperation partners. In New York, São Paulo, Moscow, New Delhi and Tokyo, they strengthen Germany's role as a land of research, science and innovation. The DWIH collaborate with actors in science and business from Germany and the respective host country: with universities and non-university research institutions, with intermediary and funding organisations, and with research-based companies, including start-ups. This gives rise to valuable cross-border networks that interlink science and business. The actors from the various sectors profit equally from the advisory services offered by the DWIH. Allianz der Wissenschaftsorganisationen: The "Allianz der Wissenschaftsorganisationen" (Alliance of Science Organisations) brings together top research organisations in Germany that regularly issues statements on key issues of research policy Netzwerk der WissenschaftsreferentInnen: The network of science attachés brings together German science consultants from foreign missions for regular exchange and seminars.
Greece	1. Joint inter-ministerial committees under the coordination of the Ministry of Foreign Affairs with the involvement of all ministries 2. Joint committees between the General Secretariat for Research and Innovation (GSRI) of the Ministry of Development and Investments and the competent authority/agency of the involved country
Hungary	Network of science and technology attachés V4 cooperation in innovation Start-up centres
Netherlands	Innovation Attaché Network There will be a new science and education attachés for the Netherlands. The exact details are currently being examined.
Norway	Network of Norwegian counsellors for science, technology and education. The University of Bergen has established the SDG Bergen Science Advice as part of a strategic initiative to create innovative channels for scientific advice. Read more here. The Research Council of Norway has funded a project – Norway-EU Science Diplomacy Network – as a follow-up of the Horizon 2020 project Inventing a shared Science Diplomacy for Europe (InsSciDE). Read more here.

Portugal	PERIN – Portugal in Europe Research and Innovation Network go Portugal - Global Science and Technology Partnership Portugal The Atlantic International Research Centre (AIR Centre) is an international collaborative organization that promotes an integrative approach to space, climate, ocean and energy in the Atlantic. The AIR Centre is driven by and at the same time supports emerging technological innovations and advances in data science. Website: https://www.aircentre.org/
Slovenia	Commissions for bilateral science and technology cooperation is a governmental mono-stakeholder network formed by representatives from the Ministry of Education, Science and Sport, the Slovenian Research Agency and the Ministry of Foreign Affairs. On an ad-hoc basis they can also include representatives of research and innovation organizations and thus transform into a multi-stakeholder network. They are formed on a bilateral basis for each partner country individually (e.g. the Commission for bilateral science and technology cooperation with Japan). The Slovenian Academy of Sciences and Arts is a mono-stakeholder network that associates scientists and artists, elected its members for their outstanding achievements in the field of sciences and arts. It is a member of several international networks (e.g. the Slovenian Academy is a member of several international organizations ALLEA, EASAC, IAP, UAI, IHRN). Further references https://www.sazu.si/en/introduction-to-international-relations As a Member State Slovenia is a member of different formal (EU, OECD, UNESCO) and project based networks (e.g. ITER). Another example of a multi-stakeholder network at the highest level is the national Science and Technology Council which includes the ministers, responsible for science, economy, technology and finance with representatives of research organisations, higher education institutions and inovation and business representatives. However, at the moment it lacks the international cooperation perspective, but has great potential to become the hub for a prospective national hub for our national Science Diplomacy.
Spain	Spanish National Science Diplomacy Network
Switzerland	Swissnex offices in 5 locations and 3 outposts Science and Technology Counsellors in 19 locations