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Report on S&T Cooperation between Europe and the United States of America

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EXECUTIVE SUMMARY

While the US is one of the EU's most important industrial partners, information on the means and extent of S&T cooperation between Europe and the US is neither systematically nor readily available. Countries themselves often re-orientate their strategies and the internationalisation of their S&T policies according to emerging competitiveness and economic challenges. To obtain a better insight into current S&T cooperation between Europe and the US, a questionnaire was circulated to the delegates of the Strategic Forum for International S&T Cooperation (SFIC) in 2010. This aimed to provide an overview of their S&T cooperation policies, dynamics, government strategies and related experiences of S&T cooperation with the US. Based on an analysis of the questionnaire responses, this report provides a short assessment of the status of public S&T cooperation. The analysis draws on 26 completed questionnaires¹ covering 22 MS and 4 countries associated with the FP7 (i.e. SFIC observer countries) and an additional questionnaire regarding the activities of the European Commission. As agreed by the SFIC Task Force on Priority Setting, this report presents a simple analysis of the data received, without introducing additional elements/analytical processes such as comparative analysis using input-output indicators or benchmarking. The report summarises the main findings with regard to S&T cooperation with the US from a comparative perspective. Where possible, it points to underlying reasons for successful practices in EU-US S&T cooperation in different thematic areas, especially in the field of energy research. Thus good practices, common objectives and open questions were identified, which, in turn, fed more focused discussions and the possible transnational coordination of certain internationalisation policies between SFIC members and observers and the US.

¹ Participating SFIC member countries (i.e. EU Member States): AT, BE, CZ, DE, DK, EE, ES, FI, FR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK and UK; and SFIC observer countries: CH, HR, NO and TR.

1. INTRODUCTION

1.1. Background

Based on the new European Partnership, which fosters a strategic approach for EU-international S&T cooperation, and following the Commission's proposal on a Strategic European Framework for International S&T Cooperation (COM/2008/588) and the MS response at the Competitiveness Council, 2 December 2008, the EU Member States and the Commission were invited to work together as part of the Strategic Forum for International S&T Cooperation (SFIC) to facilitate the further development, implementation and monitoring of the international dimension of ERA.²

1.2. Provision of Information on S&T Cooperation between SFIC Members and Observers and the US

To obtain a better insight into SFIC members' and observers' S&T cooperation with the US (as one of the EU's main industrialised partners), a questionnaire on the cooperation of SFIC members and observers with the United States in the areas of science and technology was developed to capture information on SFIC members' and observers' policies on S&T cooperation with the US. The questionnaire focused on government policies and strategies rather than those of the institutional or private sectors. Thus it aimed to provide an overview of SFIC members' and observers' S&T cooperation policies, government strategies and related experiences in the internationalisation of S&T with the US.

The questionnaire was distributed among the 37 SFIC members and observers (27 MS and 10 observer countries) and the European Commission on 15 March 2010. By the closing date (20 August 2010) 26 completed sets of questionnaires had been received³ covering twenty-two Member States and four observer countries. An additional questionnaire was submitted by the European Commission.

Based on the completed questionnaires, this report provides a summary and analysis of SFIC members' and observers' policies and strategies for R&D cooperation with the US.

As agreed by the SFIC Task Force on Priority Setting, this report presents a simple analysis of the data received. The report is based solely on the questionnaire responses and has not been supplemented by any auxiliary data obtained through additional data mining or comparative analysis, i.e. input-output indicators or benchmarking.

² The countries associated with the FP7 were invited to the SFIC as 'observers'.

³ Responding SFIC member countries – EU Member States: AT, BE, CZ, DE, DK, EE, ES, FI, FR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK and UK; and SFIC observer countries: CH, HR, NO and TR.

1.3. Structure of the Report

The report begins with a description of the approach (**Chapter 1**), and is followed by **Chapter 2** containing a comparative analysis of the information provided regarding SFIC members' and observers' S&T cooperation policies, namely: agreements, trends, national strategies for the internationalisation of R&D policies, institutions and other organisations that promote S&T cooperation and trends in collaboration with the US. To provide a basis for comparison, the questionnaire responses are categorised into three clusters of S&T internationalisation policies: 1) Policy measures, instruments and cooperation frameworks; 2) Thematic priorities and energy cooperation; and 3) Challenges and transnational coordination.

The questionnaire responses are also put into a broader policy context, and the underlying reasons for certain S&T cooperation characteristics are sought.

Chapter 3 is a summary of the main findings and the lessons learned from a comparative perspective, addressing good practices in SFIC members' and observers' international S&T cooperation and, where possible, the underlying reasons for success.

The questionnaire on SFIC members' and observers' cooperation in S&T with the US is presented in the **Appendix**. As you will see in the report, the questions in the questionnaire were grouped together and then numbered to make searching and comparing the report sections that refer to particular topics covered in the questionnaire easier.

2. ANALYSIS OF SFIC MEMBERS' AND OBSERVERS' S&T COOPERATION POLICIES TOWARDS THE US

The comparative analysis of the responses to the questionnaire (see Appendix) on S&T cooperation policies is structured into 3 sections:

1. Policy measures, instruments and cooperation framework;
2. Thematic priorities and energy cooperation; and
3. Challenges and transnational coordination of activities towards the US.

2.1. Policy Measures, Instruments & Cooperation Framework with the US

2.1.1. Promotion of S&T cooperation with the US and the main interlocutors in the US

This section details the responses to questions Q1 and Q2 (d&g). Table 1 provides an overview of the SFIC members' and observers' S&T cooperation status with the US. All respondents promote S&T cooperation with the US and most have either formal bilateral governmental S&T agreements and/or are implementing arrangements with specific US federal departments, agencies or institutions. Four countries (AT, BE, LV and UK) rely on bottom-up initiatives with no formal S&T cooperation agreements.

Table 1: SFIC members' and observers' S&T cooperation status with the US.

| Cooperation agreements or implementing arrangements with specific US federal bodies | Country | Comments / Hyperlinks to further info |
|---|--|--|
| no formal S&T cooperation agreement | AT, BE, LV, UK | AT: OST in Washington DC is acting as strategic interface in science, research and technology policies between with US; BE: no formal agreements or policy measures at federal, neither at regional level of science policy management LV: agreement on Fulbright Scholarships in 2010; UK: no overarching agreement but specific agreements: http://www.dhs.gov/xlibrary/assets/agreement_us_uk_sciencetech_agreement_2004-12-08.pdf |
| agreement signed or renewed before 2007 | IE, PT, SE HR,NO,TR | NO: http://www.regjeringen.no/upload/KD/Vedlegg/Forskning/Avtale_Norge_USA002.pdf TR: http://www.tubitak.gov.tr/tubitak_content_files/ICIM/icim_anlasmalar/ABD_NSF.pdf DE: http://www.kooperation-international.de/usa/themes/info/detail/data/46315/backpid/12/ DK: http://en.vtu.dk/press/2009/denmark-and-the-united-states-agrees-on-future-collaboration-in-research/ EE: http://vlepingud.vm.ee/en/ |
| agreement recently (2007-10) signed or renewed | CZ, DE, DK, EE, ES, FI, FR, HU, IT, LT, NL, PL, RO, SK, SI, CH | FI: http://www.aka.fi/Tiedostot/Tiedostot/Kansainvaliset/Kv-verkkosivut/tt_sopimus_suomi_usa_en.pdf http://www.tem.fi/?l=en&s=2379 FR: http://france-science.org/documentNews/20030516034528.pdf HU: http://www.nfgm.gov.hu/sajtoszoba/sajtoanyagok/2010sajtohirek/2010februar/magy_am_tudomany.html?query=amerikai IT: http://www.ambwashingtondc.esteri.it/NR/rdonlyres/788BBDD0-F4DC-4DBF-A14F-12AD50FBC060/36248/joint_decl_2008_part1.pdf http://www.ambwashingtondc.esteri.it/NR/rdonlyres/33C49F34-8A88-4A9B-ABB0-C169C4982EAE/0/Agreement_nuclear_energy.pdf LT: http://www.smm.lt/smt/docs/tm_tyrimai/sutartys/Pasirasytas%20LT%20JAV%20susit%20angl%202009%2006%2022.pdf PL: http://www.msz.gov.pl/bpt/documents/13621.pdf http://www.msz.gov.pl/bpt/documents/16258.pdf SI: http://www.uradni-list.si/_pdf/1999/Mp/m1999100.pdf |

While **BE** and **CZ** reported an absence of active government policies or strategies that actively promote S&T cooperation with the US, both countries mentioned the existence of bottom-up S&T cooperation activities.

To better understand the longevity and dynamics of S&T cooperation with the US, specific information on the recent renewal of agreements and the current status of S&T agreements with the US was reported through replies to the sub-questions (see Table 1).

In practice, S&T cooperation between the SFIC members and observers and the US is enacted through a number of different interlocutors in the US (Q2). Only **IT** and **UK** (out of 25 countries that responded to this question) and the Commission described full institutional cooperation with most of the departments, agencies and institutions linked to the federal US government, while most of the responding countries stated that they cooperate via a limited number of between 3 and 5 American interlocutors. Four countries (**DK**, **HU**, **RO** and **TR**) cooperate with the NSF⁴ only; **IE** and **HR** cooperate with the NSF and NIH⁵ only; **CZ** and **ES** with the NSF and DoS⁶ only; and **PT** with the DoS, DoE and NASA. The NSF is the top US interlocutor, with 21 out of 25 responses mentioning it among their US cooperation interlocutors, and has the most diversified S&T cooperation with the EU. The top 5 US government institutions with the most diversified S&T cooperation with SFIC members and observers are shown in Table 2.

Table 2: Top 5 US governmental institutions with the most diversified S&T cooperation with SFIC members and observers.

| US governmental institutions | No. of respondents reporting cooperation (total 25 responses) |
|---|---|
| 1. NSF | 21 |
| 2. NIH | 12 |
| 3. DoE ⁷ (indicating active cooperation on Energy) | 10 |
| 4. NASA ⁸ | 7 |
| 5. DHS ⁹ and OSTP ¹⁰ | 4 |

The majority of SFIC members and observers have institutional cooperation agreements with the US - some have longstanding agreements that date back to the early 80s – however, practical cooperation in S&T has also been developed through specific agreements (**LV** and **UK**), dedicated representation offices, i.e. Office for Science and Technology Cooperation located in the US (**AT**) or through bottom-up cooperation initiatives with American partners (**BE**).

⁴ National Science Foundation

⁵ National Institute of Health

⁶ Department of State

⁷ Department of Energy

⁸ National Aeronautics and Space Administration

⁹ Department of Homeland Security

¹⁰ Office of Science and Technology Policy

2.1.2. Major objectives of S&T cooperation with the US

A variety of responses were received as regards the major objectives of S&T cooperation with the US (Q5). However, two main groups of objectives can be identified:

- 1/ RTDI and competitiveness-related objectives; and
- 2/ Global challenges, politics and diplomacy.

The most predominant RTDI and competitiveness-related objectives were the following:

- 1) **Support for the mobility of researchers and academic staff** - evident in most of the responses to the various questions but mentioned explicitly in this section by 10 respondents;
- 2) **Promoting S&T excellence and the country's attractiveness as a quality research base** - reported by 9 countries;
- 3) **Knowledge exchange, partnerships and cooperation networks for research excellence and RTDI stimulation** - reported by 8 respondents;
- 4) **Developing and facilitating Hi-Tech (start-up) companies, frameworks and partnerships in break-through technologies** (incl. academia-industry cooperation) - reported by 6 respondents;
- 5) **Promoting good practices in RTDI and strengthening its image** - reported by 4 respondents;

The most predominant among those objectives related to global challenges, politics and diplomacy were as follows:

- 1) **Developing, supporting and facilitating long-term bilateral cooperation with the US** - reported by 9 respondents.
- 2) **Addressing Grand challenges and strategic fields of cooperation, and responding to international strategies**, e.g. energy, climate change, environment, health and society, civil security - reported by 6 respondents.

2.1.3. Main policy instruments for promoting and supporting S&T cooperation

Respondents were asked to describe the policy instruments used for S&T cooperation with the US (Q6). In order to carry out a fully comparative assessment of the S&T cooperation support schemes described, the main instruments reported in the questionnaires were synthesised and ranked, as listed below, by increasing level of cooperation. This ranking begins with those instruments whose objective is knowledge exchange (**1-3**) moving towards the most demanding instruments (**7, 8**), which provide higher added-value cooperation.

1. **Exchange of S&T information** - contacts between embassies and researchers, seminars, workshops, congresses, fora, conferences, scientific and technical symposia, fact-finding missions, SME support and other bilaterally-agreed activities, i.e. Memoranda of Understanding (MoUs), etc.;
2. **Mobility and exchange of scientists** - research fellowships and scholarships, incl. mutual recognition of certificates;

3. **Joint research projects** - joint calls, cooperation in the specific areas of research/education and joint cooperation in EU Programmes incl. dissemination of results;
4. **Joint research programmes** - including framework setting/programme coordination;
5. **Joint science and academic networks and joint research institutions (including virtual) by sectors/disciplines** - including institutional partnerships such as Centres/Networks of Excellence (CoEs/NoEs) based on peer evaluation and joint committees;
6. **Joint large-scale research infrastructures and facilities** – jointly-funded and utilised;
7. **Technology-oriented cooperation with joint knowledge/innovation clusters and business cooperation** - including research marketing and IPR setting;
8. **Comprehensive strategic cross-policy/sector partnerships.**

Table 3 presents an overview of the policy instruments that SFIC members and observers reported as supporting S&T cooperation with the US.

Table 3: Instruments supporting S&T cooperation with the US by respondent
(numbers correspond to the ranking of instruments listed above)

| EC | AT | BE | CZ | DE | DK | EE | ES | FI | FR | IE | IT | LT | LV | NL | PL | PT | RO | SE | SI | SK | UK | CH | HR | NO | TR |
|-----|-----|----|-----|-------|-----|-----|-----|-------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1-6 | 1-4 | - | 1-3 | 1-5,7 | 1-4 | 2-4 | 1-3 | 1-4,7 | 1-7 | 2,3,5 | 1-3 | 2-4 | 2,3 | 1-3 | 1-3 | 1-5 | 1-3 | 1-4 | 1-3 | 1-3 | 1-4 | 1-4 | 3,4 | 1-4 | 1,3 |

Indicates the most versatile instruments (>5 instruments) that were reported to support S&T cooperation with the US

- Not defined or not reported;

All of the respondents have lower-ranked instruments (1-3) in place for S&T cooperation with the US. However, only a few Member States, those with relatively high levels of R&D intensity (**DE**, **FI** and **FR**), and the **EC** reported numerous instruments (highlighted in green in Table 3) that indicate a high level of S&T cooperation with the US. A caveat here is that some of the responses to the question on instruments may provide the two or three main S&T cooperation instruments only and may not provide a comprehensive picture of all the instruments that are in place to promote and support S&T cooperation with the US.

2.1.4. Incentives to strengthen bilateral S&T cooperation with the US

Three-quarters of respondents reported previous (since 2007) or planned strategic government initiatives to strengthen S&T cooperation with the US (Q3 and Q4). This indicates relatively stable policy support for S&T cooperation with the US.

However, four EU MS (**EE**, **HU**, **PL** and **RO**) reported an absence of recent government initiatives to strengthen S&T cooperation with the US. Of these, however, **EE**, **HU** and **PL**, do envisage introducing S&T cooperation measures in the coming years. Five MS (**LV**, **RO**, **SE**, **SI** and **UK**) did not envisage launching strategic initiatives in the next 3 years. The SFIC observer countries that responded reported stable S&T cooperation with the US.

Respondents were requested to provide outstanding examples of incentives that had strengthened S&T cooperation in the past and the most promising measures they planned to introduce in the next 3 years. Notable examples from those incentives that feature a more

strategic level of cooperation, joint executive S&T cooperation and joint strategic priority research programmes, in addition to joint laboratories and/or common infrastructures include the following:

AT: FP7 application training programmes for common AT-US applications built on recent positive cooperation experiences that were facilitated through the OST (established in 2002) - www.EuUsScienceTechnology.eu, to be further complemented and extended through ASCINA awards;

DE: Implementation of the umbrella DE-US agreement signed in February 2010 enabling the definition of common interests and the setting of priority fields for successful cooperation;

DK: In 2009 MST and Innovation Now launched “The International Network programme” with a call for bilateral network activities – <http://en.fi.dk/funding/calls/2009/international-network-programme-first-call/international-network-programme-first-callas> in addition to activities at the Innovation Center Denmark, which will continue in the coming years;

FI: In 2007 a FinNode USA Innovation Centre was established in the Silicon Valley working with America's leading thinkers to share ideas, stimulate economic well-being for all and to act as a gateway to the Finnish research and innovation system. It is co-funded by Finpro, Sitra, the Academy of Finland, Tekes and VTT, helps Finnish researchers to join current established US research projects, provides support for US researchers to travel to Finland and promotes Finland as an attractive investment target and location for business operations from the US - <http://www.finnode.com/>;

IE: Establishment of an Irish Innovation Centre by the Irish Technology Leadership Group in Silicon Valley, US (2009) - <http://www.itlg.org/>;
 - Establishment of Georgia Tech Ireland (GTI) as an Irish non-profit organisation by the US Georgia Tech Research Institute, supported by the Irish Government through IDA Ireland. As the GTRI's first applied research facility outside the US (2006), GTI partners and collaborates with Irish corporations, universities and research centres and involves academic as well as industrial exchanges. Two Irish universities have signed memoranda of understanding with GTI for collaborative research and exchange of faculty staff and students - <http://www.gtri.gatech.edu/GTIreland/> and <http://www.idaireland.com/news-media/featured-news/nui-galway-ul-strategic-a/>.
 - The IDA is developing further cooperation initiatives to strengthen S&T cooperation with the US in the context of the country's general economic strategy - <http://www.idaireland.com/news-media/publications/library-publications/ida-ireland-publications/IDA-Ireland-Strategy-2020.pdf>;

IT: 576 cooperation agreements signed between 90 Italian universities and US universities: http://accordi-internazionali.cineca.it/accordi.php?continenti=AM&paesi=840&univ_stran=%25&univ_ita=%25&anni=%25&btnSubmit=Cerca
 - California Institute of Technology (Caltech) - Istituto Nazionale Astrofisica (INAF); on hemt/mmic arrays and pulsar research
 - MIT McGovern Institute for Brain Research - “Rita Levi Montalcini” European Brain Research Institute
 - MIT Computer Science and Artificial Intelligence Laboratory - Università di Genova e Università di Pavia
 - School of Engineering and Applied Sciences at Harvard University - Ministero dell’Educazione, dell’Universita’ e della Ricerca: to collaborate with the Italian National Nanotechnology Laboratory , Scuola Normale Superiore (Pisa);

NL: Opening up NL R&D funding program “Internationaal Innoveren” to US and Canada http://www.senternovem.nl/internationaal_innoveren/subsidie/internationaal_innoveren/index.asp;

Global Innovation Strategies for some Innovation Programs, such as:

Point-One - <https://www.point-one.nl/About/Innovatieprogramma>;

LS&H - <http://www.lifescienceshealth.com/index.php?id=179>;

MIP - <http://www.maritiem-innovatieprogramma.nl/>; and

Water- http://www.senternovem.nl/watertechnologie/nieuws/incentive_for_innovations_in_water_technology_sector.asp;

PT: Four innovative programs were launched with US universities, involving research, education and industry/clinical applications, namely: **MIT – Portugal Program** (<http://www.mitportugal.org/>, since Oct 2006), **Carnegie Mellon – Portugal Program** (<http://www.cmuportugal.org/>, since Oct 2006), **Univ. Texas at Austin – Portugal Program** (<http://www.utaustinportugal.org/>, since March 2007), **Harvard Medical School – Portugal Program** (<http://www.hmsportugal.org/>, since May 2009). They operate open calls for R&D projects and PhD grants, and joint/dual degrees. In PT, they involve more than 10 universities, all 9 medical schools, and more than 20 research institutes and 50 firms. Three institutions that operate in both PT and the US were created: the Information and Communication Technologies Institute (ICTI) with Carnegie Mellon; the International Co-laboratory for Emerging Technologies (CoLab) and the University Technology Enterprise Network (UTEN) with the University of Texas at Austin. In 2009, a joint program was signed with UMass Dartmouth in marine sciences, renewable energy and climate change. A cooperation program was signed in 2009 between MIT and the "International Iberian Nanotechnology Laboratory (INL)", a research organization located in PT that was created by an International Treaty signed by PT and ES in 2007 and whose membership is open to all other countries;

UK: Establishment of UK Research Council Office in the US to forge closer links with US research funders - <http://www.usa.rcuk.ac.uk>.

While there were more examples of incentives for strengthening cooperation with the US in the questionnaires, those listed above were found to be the most indicative of advanced cooperation with the US and its S&T institutions/companies.

2.1.5. Institutions/organisations that promote S&T cooperation located in the US

An important implication for the practical feasibility of S&T cooperation is the existence of institutions/organisations that are capable of defining and implementing agreements and strategies and promoting S&T cooperation in practice (Q8).

The most outstanding institutions/organisations within the SFIC member and observer countries that promote and support S&T cooperation and have a base in the US are listed in Table 4. Some of the initiatives they support (see **AT, DK, FI, IE** and **UK**) are displayed above in Section 2.1.4.

Table 4: SFIC member and observer institutions/organisations that promote S&T cooperation and are located in the US.

| Country | Institutions/actors promoting S&T and academic cooperation located in US |
|----------------|---|
| AT | S&T Office - networking, policy advice, support to business & academia |
| DE | German Centre for Research & Innovation, NY |
| DK | Innovation Centre DK (Silicon Valley, CA) |
| EE | Enterprise Estonia (Silicon Valley, CA) |
| ES | CDTI |
| FI | FinNode & Tekes representation offices |
| FR | CNRS, INSERM, CEA, CNES representations |
| IE | IDA Ireland (6 offices) - FDI attraction; Enterprise Ireland (3 offices) - supporting export |
| IT | ICE, IISNAF, BAIA, IDC, NOVA |
| PT | ICTI at Carnegie Mellon University, Colab and UTEN at University Texas Austin |
| NL | TNO |
| UK | UK Research Councils' office, British Council representation offices |
| CH | Swissnex (2 offices), Office for science, technology & innovation (WA) |
| NO | Innovation Norway - support to business & innovation ventures (5 offices) |
| EC | EURAXESS, 10 EU CoEs at US universities |

While the majority of the respondents have public S&T cooperation support structures in place at their Embassies in the US, usually through scientific attachés – also reported in the document prepared by the EU Science Counsellor Network in the US (February 2010) – only the countries listed in Table 4 have specific institutions/organisations in addition to Embassy personnel.

Accordingly, the respondents can be grouped into the following two clusters:

- 1) **Countries without public S&T support structures in the US in addition to dedicated Embassy personnel**, e.g. **CZ, HU, LT, LV, PL, RO, SI, SK, HR** and **TR**, where the tasks involved in promoting S&T/education cooperation with the US are performed by one person (e.g. an attaché) at an embassy or other diplomatic mission. In such cases, less ambitious cooperation initiatives can be expected; and
- 2) **Countries with well-defined public S&T support structures in the US in addition to dedicated Embassy personnel**, e.g. **AT, DE, DK, EE, ES, FI, FR, IE, IT, NL, PT, SE, UK, CH** and **NO**, where additional institutions and organisations promote S&T/education cooperation.

2.1.6. Outstanding examples of SFIC members' and observers' S&T cooperation with the US

There were a great number of concrete examples of S&T cooperation by SFIC countries with the US (Q10), and these were comprehensive and quite varied. Selected examples of well-developed S&T cooperation are shown in Table.5.

Table 5: Selected examples of SFIC members' and observers' S&T cooperation with the US.

| | |
|-----------|---|
| AT | Technology Attachés of the Austrian Economic Chamber Structures and their Trade Commissions in the US focusing technology-oriented cooperation |
| FR | Joint research chemistry laboratory (UCR Riverside, US / CNRS-INC Institut de chimie, FR) |
| IE | The US-Ireland R&D Partnership with Steering Group, strategic orientation & systematic preparation phase (launch of calls after 2 years of preparatory activities) |
| PT | Innovative Research and Education Programs of PT with specific US universities (MIT, Carnegie Mellon University, University of Texas at Austin, Harvard Medical School) in thematic areas and involving universities, research institutions and industry |
| UK | Longstanding co-ordination of research (Programme of research on science security under DHS – UK Home Office MoU) Networking key research centres in the UK and US |
| EC | EU-US Task Force on Biotechnology Research (long-running successful collaboration) EU-US Energy Council -WG on Technology research, development & demonstration (expansion and reinforcement of energy collaboration, incl. mobility and mutual opening of research programmes) |

In order to carry out a fully comparable assessment of the examples of S&T cooperation, an attempt was made to systematise and classify the examples, which were then correlated with the instruments used (see 2.1.3, pp.5-6) and are ranked below by decreasing reporting frequency (see Fig.1).

- (3) **Joint bilateral projects in basic/applied research and innovation with US partner institutions** - reported by AT, CZ, DE, DK, EE, ES, FI, FR, IT, LV, NL, PT, SE, SI, UK, CH, HR, NO and TR.
- (2) **Bilaterally-funded mobility schemes and grants** including research & higher education fellowships - reported by AT, CZ, DE, ES, FI, FR, IT, LV, PT, SI, SK, UK, CH, NO, TR and EC.
- (4) **Joint multilateral calls and programmes** including cooperation of research funding organisations or at governmental/EC level (FPs) - joint launch of various multilateral training, education and research programmes - reported by AT, EE, ES, FI, FR, IE, PT, UK, CH, NO and EC.
- (6) **Joint large-scale research infrastructures and strategic use of these facilities** including joint laboratories and science centres/laboratories, indicating strategic S&T cooperation framework in certain research areas - reported by DE, FR, UK, NO and EC.

(5) Joint science and academic networks by sectors/disciplines (including virtual) including Centres/Networks of Excellence (CoE/NoE) - reported by **DK, PT, UK, NO** and **EC**.

(1) Exchange of S&T knowledge and information - S&T cooperation preparatory activities and lighter forms of cooperation such as joint seminars, workshops, congresses, intensive sandpit workshops on specific topics, etc. - reported by **EE, SK, PT, UK** and **EC**.

(7) Technology-oriented cooperation - reported only by **AT**.

Figure 1 summarises S&T cooperation with the US as reported by SFIC members and observers, systematised by type of cooperation instrument (**1-8**, see 2.1.3, pp.5-6) and in descending order of reporting frequency.

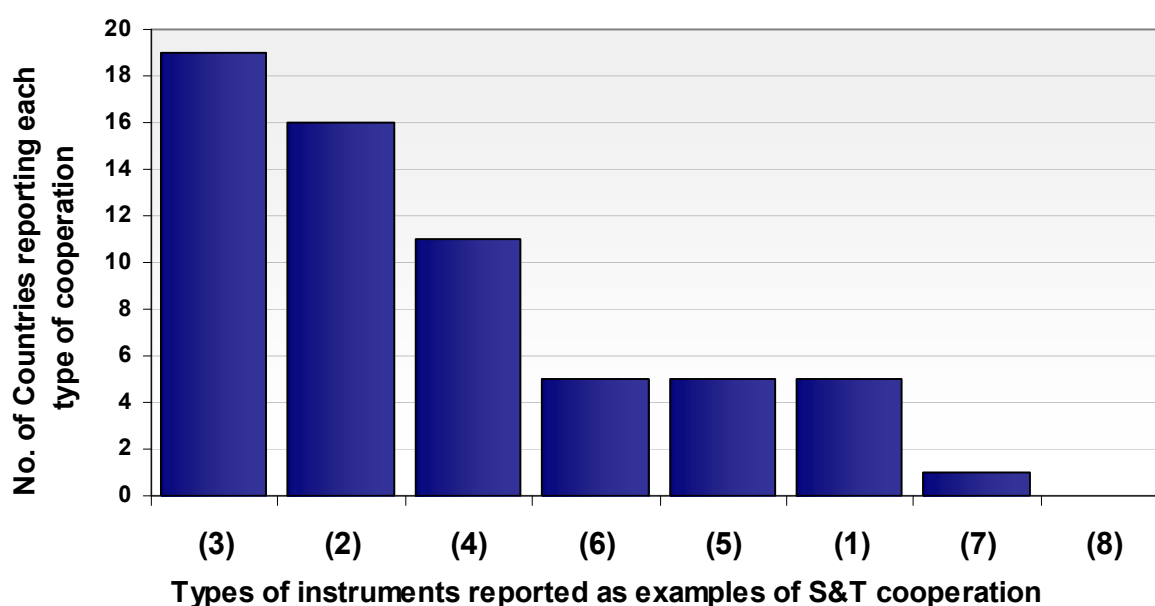


Figure 1: Examples of SFIC members' and observers' S&T cooperation with the US in descending order of reporting frequency.

Analysis on the reported examples of S&T cooperation suggests that the preferred cooperation instruments are joint bilateral research projects in basic/applied research and innovation with US partner institutions (**3**). Almost all responding countries reported examples of such cooperation. The second most frequently reported examples of S&T cooperation with the US were bilaterally-funded mobility schemes (**2**), followed by cooperation in joint multilateral calls and programmes (**4**). The next three instruments of S&T cooperation with the US (**6**, **5** and **1**) were reported equally infrequently, although they represent different levels of S&T cooperation. Technology-oriented cooperation (**7**) was reported by **AT** only. Responding countries did not provide any examples that related to comprehensive strategic cross-policy/sector partnerships with the US (**8**).

2.2. Main Thematic Priorities for S&T Cooperation with the US

The main thematic priorities of S&T cooperation with the US (Q7) are shown in Table 6.

Table 6: The main thematic priorities for S&T cooperation with the US and number of respondents reporting each of them.

| Main Thematic Priorities | No. of countries reporting (total 23) |
|--|---------------------------------------|
| 1. Energy & Renewables (incl. Energy Efficiency) | 20 |
| 2. Health, Medicine & Pharmaceuticals | 18 |
| 3. Environment / Sustainable Technologies & Resource Management | 16 |
| 4. Fundamental Technical Sciences-Mathematic, Chemistry, Physics, Optics & Laser | 10 |
| 4. ICT | 10 |
| 4. Space & Astronomy | 10 |
| 5. Nanotechnologies | 9 |
| 5. Advanced materials | 9 |

22 SFIC members and observers and the Commission responded on the issue of thematic priorities. In total, 216 different priorities were mentioned.

Cooperation in the field of socio-economics was only mentioned by a few countries (**FI, FR, IE, PT, SK, UK** and **HR**) and the EC.

All the thematic research priorities regarding the US that were reported by SFIC members and observers are shown in Table 7 on a country by country basis. A large number of reported thematic priorities are grouped into three clusters or fields within the sciences:

- **natural sciences** (shaded green),
- **technical sciences** (in grey) and
- **socio-economics** (in orange).

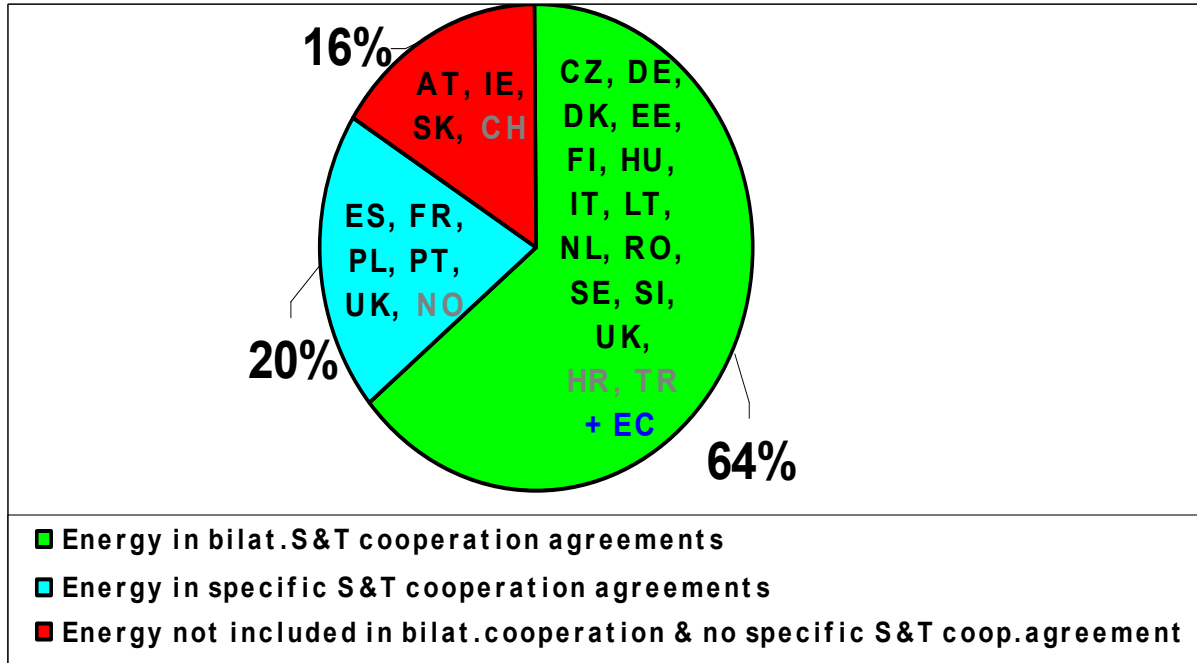
In this table, the countries reporting the most thematic priorities for S&T cooperation with the US are indicated by the highlighted columns. Similarly, the most frequently-reported thematic priorities are indicated by the highlighted rows. The responses reflect long traditions of S&T cooperation with the US in a variety of scientific fields. The four biggest MS (**DE, FR, IT** and **UK**) and the EC reported S&T cooperation with the US in numerous thematic fields (12 to 25+). Yet, some frontier science fields where the US has renowned S&T strengths, e.g. biotechnology and bio-engineering (6/23); water resources (3/23), earth sciences (7/23) within the natural sciences; and emerging technologies & global challenges (7/23), intelligent manufacturing technologies (5/23) and safety & security research (5/23) within the technical sciences, were reported by only a few of the responding countries. In addition, transport technologies were indicated by **FR, NL, PT** and **CH** only.

Table 7: Main thematic priorities for S&T cooperation with the US as expressed by SFIC members and observers (N=23).

| US | EC | AT | BE | CZ | DE | DK | EE | ES | FI | FR | HU | IE | IT | LT | LV | NL | PL | PT | RO | SE | SI | SK | UK | CH | HR | NO | TR | Sum |
|---|-----------|----------|----------|----------|-----------|----------|----------|----------|----------|-----------|----------|----------|-----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|-----------|-----------|-----------|----------|-----------|----------|
| Life (Bio-)Sciences & Genomics | x | | | | | x | | | x | x | | | x | | | x | | x | | | x | | x | | | | | 9 |
| Agriculture & Food Processing Technologies | x | | | | | x | | | | x | | x | | | | x | | | x | | | | x | | | | x | 8 |
| Biology & Biodiversity | | | | x | | | x | | | x | | | | | | | | | | | | x | | | x | | | 5 |
| Biotechnology & Bioengineering (incl. Genetics & Plant Breeding) | x | | | | | | | | | x | | | | | | | | x | | | x | x | x | x | | | | 7 |
| Health, Medicine & Pharmaceuticals (incl. Stem cells research & Forensic) | x | | | x | x | x | x | | x | x | | x | | | | x | x | x | x | | x | x | x | | x | x | x | 18 |
| Environment | x | | | x | x | x | x | x | x | x | | | x | | | | x | x | x | | | | x | x | | x | x | 17 |
| Climate change research | x | | | | x | | | | | x | | | x | | | | | | | | | | x | x | | x | x | 8 |
| Marine/Polar research | x | | | | | | x | | | x | | | | | | | | x | | x | | | | | x | x | | 7 |
| Sustainable Technologies & Resources Management | x | x | | x | x | x | | | x | x | | | | | | x | | x | x | | | x | | x | x | x | x | 16 |
| Water Resources & Hydrology | | | | | x | | | | | x | | | | | | | | | | | | | | | | x | | 3 |
| Earth Sciences (incl. Geology - Mining, Seismology & Earth Observation) | x | | | | x | | | | | x | | | x | | | | | | | | | | | x | | x | x | 7 |
| Energy & Renewables (incl. Energy Efficiency) | x | x | | x | x | x | x | x | x | x | | | x | | | x | x | x | x | x | x | | | x | x | x | x | 20 |
| Nuclear Energy | | | | | x | | | | | x | | | | | | | | | | | | | x | | | | | 3 |
| Disaster, Hazards, Safety & Security | x | | | | x | | | | | x | | | | | | | | x | | x | | | x | | | | | 6 |
| Cultural Heritage (incl. Conservation & Restoration Technol.) | | | | | | | | | | x | | | x | | | | | | | x | | | | | | | | 3 |
| Innovative Services & Standardisation | | | | | | | | | x | x | | | | | | | | x | x | | | | | | | | | 4 |
| Technical Sciences-Mathematic, Physics, Optics & Laser, Chemistry | | | | | x | | | x | | x | | x | x | | | x | x | x | x | | | | | x | | | | 10 |
| Nanotechnologies | x | | | | | | | | | x | | x | x | | | | x | x | | | | x | | x | | | x | 10 |
| Advanced Materials | x | | | | x | | | x | | x | | | x | | | | x | x | | | | x | | x | | | x | 10 |
| Design/Engineering | | | | | | | | | | x | | | | | | | | x | x | | | | | | x | | | 4 |
| Intelligent Manufacturing Technologies (incl. Mechanics&Complex syst.) | x | | | | | | | | | x | | | x | | | x | | | | | | x | | | | | | 5 |
| Transport (incl. Automotive) | x | | | | | | | | | x | | | | | | x | | x | | | | | | x | | | | 5 |
| Space & Astronomy | x | | | x | x | | | | | x | | | x | | | | | | | x | | | x | x | x | | x | 10 |
| Emerging Technologies for Global Challenges | x | | | x | x | | | | | x | | | | | | | | | | | | | x | | x | x | | 7 |
| ICT (incl. Advanced Networks and Cyber Security) | x | | | | | x | | | x | x | | | x | | | | x | x | | | | x | x | | | | x | 10 |
| Socio-Economics (incl. Education, Governance, Business & Finance) | | | | | | | | | | x | | | | | | | | x | | | | x | x | | x | | | 5 |
| Social Sciences & Humanities (incl. Ethics & Women in Science) | x | | | | | | | | x | x | | x | | | | | | | | | | | x | | | | | 5 |
| Sum | 19 | 2 | - | 7 | 13 | 7 | 5 | 4 | 8 | 28 | - | 5 | 12 | - | - | 8 | 7 | 16 | 9 | 4 | 8 | 6 | 15 | 10 | 10 | 9 | 11 | - |

2.2.1. Cooperation with the US in energy S&T

As shown in Tables 6 and 7, energy and renewable energy resources were the most frequently reported thematic priority fields for S&T cooperation with the US. The distribution of SFIC members and observers regarding the existence of specific energy cooperation provisions in their bilateral S&T agreements with the US is summarised in Figure 2.



N = 25

Figure 2: Existence of specific energy cooperation provisions in bilateral S&T agreements with the US.

Responses to a set of specific questions on energy cooperation (Q2 h-k) revealed that roughly two-thirds of all the responding SFIC members and observers have signed bilateral S&T agreements with the US that contain specific provisions for cooperation in energy S&T. A further six countries that did not have specific provisions for energy S&T cooperation in their general bilateral S&T agreements, namely **ES, FR, PL, PT, UK** and **NO**, do have in place specific bilateral cooperation agreements, partnerships or memoranda devoted to energy S&T cooperation with the US. Four countries - **AT, IE, SK** and **CH** do not have energy cooperation provisions in either their general bilateral S&T agreements, or specific memoranda on energy S&T cooperation. **IE** reported that its research groups are actively involved in an FP7 energy-related project with the US, and that it is likely that energy research will be added to the existing US-IE R&D Partnership in the near future.

Despite the fact that energy and renewable energy resources represent the most frequently reported thematic priority fields, collaboration in the specific field of nuclear energy was acknowledged as a priority by only three countries: **DE, FR** and **UK** (Table 7). Nevertheless, certain activities related to the development of components or processes for advanced energy research on energy efficiency, renewables and nuclear research might also take place in some other reported technical thematic priorities such as advanced materials, design and engineering, emerging technologies for global challenges, etc.

2.3. Challenges and Transnational Coordination of S&T Activities with the US

This section reports on the perceived challenges to and the experiences of S&T cooperation with the US. It covers the responses to questions Q9 and Q11, and describes the significant challenges and enumerates the major issues regarding which SFIC members and observers could benefit from a coordination of their activities with the US.

2.3.1. Significant challenges/difficulties in S&T cooperation with the US

The main five challenges/difficulties identified (Q9) were:

1. **Fragmentation of the US research environment**
2. **IPR & technology transfer arrangements**
3. **Balanced cooperation - disparity between resources and capacities**
4. **Overcoming legal obstacles**
5. **Different approaches to S&T priority setting and funding schemes**

All the reported challenges can be grouped into the following three groups:

a) Challenges related to setting S&T systems and funding:

- **fragmentation of the US research environment**, including policies, funding and legal regulations, i.e. different approaches to S&T cooperation settings, lack of a central ministry/agency for science and research at the US federal level and sector-related divisions in S&T competences among US departments/agencies;
- **overcoming legal obstacles** (i.e. FP7 Grant Agreement signing issues with regard to US entities);
- **mobility**, especially two-way mobility schemes with low administrative burdens;
- **IPR & technology transfer arrangements**;
- **joint exploitation of research results & PPP**;
- **incompatibility of funding instruments** and different approaches to S&T setting/funding – difficulties in long-term planning due to annual budget fluctuations in the US.

b) Challenges related to partner country size, quality of partner or research areas:

- **balanced cooperation** - disparity between resources and capacities - incompatible funding schemes, difficulty in identifying matching research organisations;
- **common funding and selection criteria for joint projects** - possibility of co-financing projects when negatively evaluated on one side;
- **“Size effect” - occasional dominance in negotiations and the management of common projects over comparatively smaller countries (PL, RO, HR)** – similarly, different interests due to differences in size of organisations.

c) Practical challenges:

- geographical distance - time zones, travel distances, high travel costs.

Flexibility is needed on both sides in such cases in order to overcome these challenges and difficulties and to best accommodate the requirements of the researchers in bilateral and multilateral S&T cooperation.

2.3.2. Transnational coordination of SFIC members' and observers' activities with the US

The success of future transnational coordination of policies on S&T internationalisation with the US will require a concerted approach and will need to target the most significant challenges. The information provided by SFIC members and observers is summarised below and represents horizontal measures. Respondents consider joint framework arrangements the most appropriate (Q11), and consider scientific areas to have the highest potential for coordinated multilateral S&T international cooperation (Q11) with the US.

The main issues for joint framework settings of S&T activities with the US (Q11) are:

1. Removing legal barriers for S&T cooperation
2. IPR
3. Multilateral coordinated calls with joint identification of priority areas
4. Global challenges, areas of common interest and joint actions with added-value
5. Large-scale investment projects
6. Coordinated mobility schemes

The creation of a European S&T House was proposed by AT as a practical solution in order to raise visibility of European S&T in the US and represent common European interests.

Among the five main suggested priority areas for enhanced transnational S&T coordination, many countries suggested challenges that should be addressed by S&T. The main challenges were as follows:

Areas of high potential for value-added SFIC transnational cooperation with US (Q11) are:

- 1. Renewable energy sources and sustainable development**
- 2. Global challenges - demographic changes, water & food security & health risks**
(i.e. population aging, pandemics, nutrition, water security, cancer)
- 3. Environment and climate change** (incl. eco-innovations)
- 4. ICT, cyber security and future internet services**
- 5. Advanced technologies**
(micro-technologies & nano-technologies, biotechnology, health IT, nano-materials, intelligent manufacturing technologies, space, etc.)

In particular, energy and renewable energy sources, those great global challenges, and environment and climate change were reported with high frequency as scientific areas for enhanced transnational S&T coordination.

3. SUMMARY OF MAIN FINDINGS

This report centres on a simple analysis of the questionnaire data. The main findings summarised here, including the identification of good practices and the implications for policies regarding S&T cooperation with the US, are based on a qualitative comparative perspective. This section also proposes possible underlying reasons for certain successful practices in EU-US S&T cooperation in different thematic areas and places these in a broader policy perspective.

3.1. Policy Measures, Instruments & Cooperation Framework with the US

Promotion of S&T cooperation with the US

All of the responding SFIC members and observers promote S&T cooperation with the US and most have either formal governmental bilateral S&T agreements with the US or are implementing arrangements with specific US federal departments, agencies or institutions. Four countries (**AT, BE, LV and UK**) rely on bottom-up initiatives with no formal S&T cooperation agreements.

Key interlocutors for S&T cooperation in the US: The NSF is the US governmental institution that has by far the most diversified S&T cooperation with the SFIC countries. Other frequently reported US governmental institutions involved in S&T cooperation with SFIC members and observers include the following (listed in descending order): **The NIH, DoE, NASA, DHS and OSTP.**

The key objectives for S&T cooperation with the US reported by SFIC members and observers can be summarised in two main groups:

- 1/ RTDI and competitiveness-related objectives; and
- 2/ Global challenges, politics and diplomacy.

The most predominant objectives in the first group were:

- 1) **Support for the mobility of researchers and academic staff;**
- 2) **Promoting S&T excellence and the attractiveness of SFIC members and observers as research bases;**
- 3) **Knowledge exchanges, partnerships and cooperation networks for research excellence and RTDI stimulation;**
- 4) **Developing and facilitating Hi-Tech start-up companies, frameworks and partnerships in break-through technologies** (incl. academia-industry cooperation);
- 5) **Promoting good practices in RTDI and strengthening its image.**

The two objectives most predominant among global challenges, politics and diplomacy were:

- 1) **Developing, supporting and facilitating long-term bilateral cooperation with the US;** and
- 2) **Addressing Grand challenges, strategic fields of cooperation and responding to international strategies,** e.g. energy, climate change, environment, health and society, civil security, etc.

Main policy instruments for promoting and supporting S&T cooperation with the US

1. **Exchange of S&T information** - contacts between embassies and researchers, seminars, workshops, congresses, fora, conferences, scientific and technical symposia, fact-finding missions, SME support and other bilaterally-agreed activities, i.e. Memoranda of Understanding (MoUs), etc;
2. **Mobility and exchange of scientists** - research fellowships and scholarships, incl. mutual recognition of certificates;
3. **Joint research projects** - joint calls, cooperation in specific areas of research/education and joint cooperation in EU Programmes incl. dissemination of results;
4. **Joint research programmes** - including framework setting/programme coordination;
5. **Joint science and academic networks and joint research institutions (including virtual) by sectors/disciplines** - including institutional partnerships such as Centres/Networks of Excellence (CoEs/NoEs) based on peer evaluation and joint committees;
6. **Joint large-scale research infrastructures and facilities** - jointly funded and utilised;
7. **Technology-oriented cooperation with joint knowledge/innovation clusters and business cooperation** - including research marketing and IPR settings;
8. **Comprehensive strategic cross-policy/sector partnerships.**

All the responding countries have S&T cooperation instruments 1-3 in place with the US. Only a few R&D-intensive member states (**DE, FI** and **FR** and the **EC**) provided evidence of the most advanced forms of S&T cooperation (6-8), which suggest high level of S&T cooperation and knowledge clustering with the US.

Incentives to strengthen S&T cooperation with the US

- Initiatives in the past 3 years: all but 4 countries (**EE, HU, PL** and **RO**)
- Initiatives in the next 3 years: all but 5 countries (**RO, SE, SI, UK** and **LV**)

A few SFIC members and observers with existing S&T cooperation have not planned any new strategic initiatives to further strengthen S&T cooperation with the US. While S&T cooperation between SFIC members and observers and the US generally appears stable, the reasons for the negative responses of the members and observers not planning further initiatives could not be extracted from the answers to the current survey.

Institutions/organisations promoting S&T cooperation in the US

- 13 MS (**AT, DE, DK, EE, ES, FI, FR, IE, IT, NL, PT, SE** and **UK**) and 2 associated countries (**CH** and **NO**) have additional institutions and organisations over and above the US Embassy personnel that promote S&T/education cooperation in the US.
- 8 MS (**CZ, HU, LT, LV, PL, RO, SI** and **SK**) and 2 associated countries (**HR** and **TR**) do not have additional institutions and organisations over and above their US Embassy personnel.

Comparisons between the two groups showed that larger and more developed research systems had additional institutions. Smaller countries and less developed economies may have limited capabilities to engage in more intensive promotion of S&T cooperation in the US. The coordination of S&T cooperation efforts at an EU level may help to promote the S&T capacities of these countries.

Examples of SFIC members' and observers' S&T Cooperation with the US

The three most commonly cited examples of S&T cooperation with the US were:

- **Joint bilateral research projects** in basic/applied research and innovation with US partner institutions (reported by 19/25 countries);
- **Bilaterally funded mobility schemes** (16/25);
- **Joint multilateral calls and programmes** (11/25).

3.2. Main Thematic Priorities of S&T Cooperation with the US

Top 5 reported thematic priorities for S&T cooperation with the US

No. of countries reporting

| | |
|---|-------|
| 1. Energy & Renewables (including Energy Efficiency) | 20/23 |
| 2. Health, Medicine & Pharmaceuticals | 18/23 |
| 3. Environment / Sustainable Technologies & Resource Management | 16/23 |
| 4. Fundamental Technical Sciences - Mathematics, Chemistry, Physics, Optics & Laser | 10/23 |
| 4. ICT | 10/23 |
| 4. Space & Astronomy | 10/23 |
| 5. Nanotechnologies | 9/23 |
| 5. Advanced materials | 9/23 |

Despite energy and renewables emerging as the top thematic priority, cooperation in life sciences prevailed over technical sciences. Socio-economic research is given a very low priority. EC and large R&D-intensive MS reported numerous fields of S&T cooperation.

Energy S&T cooperation with the US

- Roughly two-thirds of all the responding SFIC members and observers have signed bilateral S&T agreements with the US containing specific provisions for energy S&T cooperation.
- Six out of ten countries that do not have energy cooperation provisions in their general bilateral S&T agreements (**ES, FR, PL, PT, UK** and **NO**) have in place specific bilateral cooperation agreements, partnerships or memoranda devoted to energy S&T cooperation with the US.
- **AT, IE, SK** and **CH** do not have energy cooperation provisions in either their general bilateral S&T agreements with the US nor in any specific memoranda on energy S&T cooperation with the US.

3.3. Challenges and Transnational Coordination of S&T Activities with the US

Significant challenges/difficulties in S&T cooperation with the US

- The main challenges/difficulties identified:
 - 1. Fragmentation of the US research environment**
 - 2. IPR & Technology transfer arrangements**
 - 3. Balanced cooperation - disparity between resources and capacities**
 - 4. Overcoming legal obstacles**
 - 5. Different approaches to S&T priority setting and funding schemes**

Transnational Coordination of SFIC members' and observers' activities with the US

- **The main issues for joint framework setting** of S&T activities with the US:
 1. Removing legal barriers for S&T cooperation
 2. IPR
 3. Multilateral coordinated calls with joint identification of priority areas
 4. Global challenges, areas of common interest and joint actions with added value
 5. Large-scale investment projects
 6. Coordinated mobility schemes
- **Areas of high potential** for value-added SFIC transnational cooperation with the US:
 - 1. Renewable energy sources and sustainable development**
 - 2. Global challenges - demographic changes, water & food security & health risks**
(i.e. population aging, pandemics, nutrition, water security, cancer)
 - 3. Environment and climate change** (incl. eco-innovations)
 - 4. ICT, cyber security and future internet services**
 - 5. Advanced technologies** (micro-technologies & nano-technologies, biotechnology, health IT, nano-materials, intelligent manufacturing technologies, space, etc.)

Appendix - Questionnaire on SFIC members' and observers' cooperation in science and technology with the United States

1. Does your government (including your major research performing organisations) promote cooperation in science, technology, research and/or innovation with the United States in general (i.e. do you pursue an active policy/strategy complementary to bottom-up approaches)?

Yes

No

1.a → If yes, please describe briefly the policy/strategy and provide the sources/or the link to the source:

1.b → If no, does your government consider pursuing a more active policy/strategy in the future?

Yes

No

2. Do you have a governmental bilateral S&T agreement with the United States or implementing arrangements with specific US federal agencies or institutions?

Yes

No

→ If yes,

2.a Please provide a copy/the web link of/to it.

2.b Date when the agreement was signed:

2.c Date when it was renewed (if applicable):

2.d United States partner institution(s)/organisation(s):

2.e Is the agreement active?

Yes

2.f → If yes, please briefly describe e.g.:

- existence of Joint Steering Committees or similar bodies;
- composition of these Committees;
- frequency of meetings and calendar;

- jointly defined S&T cooperation priorities, joint statements, agreed deliverables such as roadmaps, etc;
- mechanisms to monitor the jointly agreed deliverables;
- other:

No

2.g Which U.S. Federal agency is the main interlocutor for your main thematic priorities (OSTP – NIH – NSF – DOE – ...) and who are your contacts?

2.h Does the main bilateral S&T agreement (or the S&T implementing arrangements) include energy cooperation?

Yes

No

2.i → If yes, please provide a copy of the agreement and/or the web link.

2.j → If no, do you have specific bilateral agreements or implementing arrangements (also between your publicly funded research institutes/centres/councils or universities and similar bodies in the US) covering energy cooperation?

Yes

No

2.k → If yes, please provide a copy of the specific bilateral agreements or implementing arrangements and/or the web link

3. Have there been any strategic initiatives (different from a strategy as such) by your government to strengthen the S&T cooperation with the United States within the past 3 years?

Yes

No

3.a → If yes, please give examples and describe them briefly and give the source and/or weblink:

4. Are there any planned strategic initiatives of your government to strengthen the S&T cooperation with the United States within the coming 3 years?

Yes

No

4.a → If yes, please describe briefly the state of discussion:

| |
|--|
| |
|--|

5. Please describe the major objectives of your governments' S&T cooperation with the United States:

| |
|--|
| |
|--|

6. What are the main instruments of your government to promote and support S&T cooperation with the United States (incl. mobility; joint bilateral or multilateral cooperation projects, initiatives, and programmes; joint laboratories, joint campuses; innovation centres; indirect instruments, such as tax deductions or other incentives particularly related to innovation)?

| |
|----------------------------|
| 1. 2. 3. 4. 5. |
|----------------------------|

7. What are the main thematic priorities of your government for S&T cooperation with the United States? Please be as precise as possible (i.e. try to avoid just mentioning general topics such as "energy", but list sub-topics/areas of cooperation).

| |
|----------------------------|
| 1. 2. 3. 4. 5. |
|----------------------------|

8. Do you have institutions/actors located in the United States with the purpose of promoting scientific/academic cooperation, including education cooperation and exchange, with the United States (in addition to Embassies e.g. S&T Houses; offices of research organisations, funding agencies, universities, industry)?

Yes

No

8.a → If yes, please state who these organisations are and what their tasks and objectives are:

8.b → If no, do you envisage to reinforce your presence in the US (when/what format)?

9. What are the most important challenges/difficulties with regard to S&T cooperation with the United States?

10. Please provide up to 5 examples of S&T cooperation with the United States and comment on how they were successful/unsuccessful (this could include joint projects or labs, joint calls for proposals, mobility schemes, government cooperation etc.)?

| | |
|----|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

11. Please name the major issues where SFIC members [and observers, if appropriate] could benefit from a coordination of their activities or joint action.

a) Issues as regards setting a joint framework for SFIC members' S&T activities (e.g. mobility, IPR, investments, S&T Houses etc.):

| | |
|----|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

b) From your perspective, what would be the S&T areas with highest potential for added-value if coordinated or possibly pursued jointly by different SFIC members?

| | |
|----|--|
| 1. | |
| 2. | |
| 3. | |
| 4. | |
| 5. | |

12. Please add any other comments or suggestions you might have below:

Thank you very much for your cooperation!

European Commission

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Title: **Report on S&T Cooperation between Europe and the United States of America**

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Abstract

While the US is one of the EU's most important industrial partners, information on the means and extent of S&T cooperation between Europe and the US is neither systematically nor readily available. Countries themselves often re-orientate their strategies and the internationalisation of their S&T policies according to emerging competitiveness and economic challenges. To obtain a better insight into current S&T cooperation between Europe and the US, a questionnaire was circulated to the delegates of the Strategic Forum for International S&T Cooperation (SFIC) in 2010. This aimed to provide an overview of their S&T cooperation policies, dynamics, government strategies and related experiences of S&T cooperation with the US. Based on an analysis of the questionnaire responses, this report provides a short assessment of the status of public S&T cooperation. The analysis draws on 26 completed questionnaires¹¹ covering 22 MS and 4 countries associated with the FP7 (i.e. SFIC observer countries) and an additional questionnaire regarding the activities of the European Commission. As agreed by the SFIC Task Force on Priority Setting, this report presents a simple analysis of the data received, without introducing additional elements/analytical processes such as comparative analysis using input-output indicators or benchmarking. The report summarises the main findings with regard to S&T cooperation with the US from a comparative perspective. Where possible, it points to underlying reasons for successful practices in EU-US S&T cooperation in different thematic areas, especially in the field of energy research. Thus good practices, common objectives and open questions were identified, which, in turn, fed more focused discussions and the possible transnational coordination of certain internationalisation policies between SFIC members and observers and the US.

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