U.S. SCIENCE AND TECHNOLOGY COOPERATION AGREEMENTS WITH EUROPE: SURVEY & ANALYSIS

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Correction	10 November 2011	Correction	G.Coat/T. Wang

EXECUTIVE SUMMARY

The European Union (EU) and the United States (U.S.) first signed an umbrella science and technology cooperation agreement (S&T Agreement) that entered into force in 1998 and was renewed in 2004 and 2009. In addition, as of March 2010, 17 EU Member States and Associated Countries have individual S&T Agreements with the United States. These S&T Agreements provide the formal framework in which government-to-government S&T cooperation is undertaken. A survey of the current agreements between the EU, and its Member States and Associated Countries, and the United States was undertaken.

These S&T Agreements demonstrate extensive government-to-government interest and opportunities in scientific and technological cooperation between the United States and Europe. The agreements that were surveyed showed there is a general commonality of elements and content. The overall principles espoused – mutual interest and benefit, reciprocal opportunities, and equitable and fair treatment, the forms of cooperation, mechanism for coordination, entry of personnel and equipment, intellectual property rights (IPR), and security obligations are addressed similarly across the agreements. The reciprocity principle is reflected in the manner that cooperation take place, whether they be joint or coordinated activities or exchanges of information or personnel. Funding for each government's participation in any cooperative activity is typically the responsibility of each side. Variations in the S&T Agreements primarily manifest themselves in the specific areas of cooperation, some 38 areas across the 17 agreements.

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OBJECTIVE

The European Union (EU) and the United States (U.S.) first signed an umbrella science and technology cooperation agreement (S&T Agreement) that entered into force in 1998 and was renewed in 2004 and 2009. In addition, as of March 2010, 17 EU Member States and Associated Countries have individual S&T Agreements directly with the United States.

The main objective of the survey and analysis of the current S&T Agreements between the EU, and its Member States and Associated Countries, and the United States described in this report is to elucidate reciprocity conditions of the agreements. The report also includes:

- Overview of S&T Agreements,
- A Summary of Common Elements,
- Highlights of Uncommon Elements, and
- Implementing Arrangements between Specific U.S. S&T Agencies and the EU

METHODOLOGY

The agreements were collected from electronic sources available on public websites, published documents, and direct interviews with relevant government agency representatives. In the EU, the National Contact Point (NCP) networks were also utilized.

The following information was collected for each cooperation agreement:

1. Basic Information
    a. Entry Date
    b. End Date
    c. Renewal Date, if any
    d. Date of Last Joint Consultative Group Meeting (JCM)
2. Contact Information

a. in the European Commission or European Country

b. in the United States

3. Reciprocity Conditions

4. Areas of Cooperative Activities

   a. Key Areas of Cooperative Activities

   b. Coordinated Activities in each Area with Recent Examples

      i. Themes

      ii. Sub-themes

      iii. Implementing Arrangement, if any

RESULTS

OVERVIEW OF S&T AGREEMENTS

Purpose of Bilateral Umbrella S&T Agreements

Bilateral umbrella S&T agreements establish a formal legal framework to enable governments to broadly cooperate with each other on mutual areas of interest in S&T. S&T Agreements address such issues as the facilitation of the exchange of scientific results, taxation, protection and allocation of intellectual property rights and benefit sharing, facilitation of access for researchers, and response to issues associated with economic development, regional stability, and domestic security.[1] As they only provide a framework for cooperation, U.S. S&T Agreements on their own do not often indicate specific programs of cooperative activities but often rely on subsequent implementing arrangements with individual U.S. S&T Agencies (e.g., National Science Foundation (NSF) and the Environmental Protection Agency (EPA)). Moreover, the absence of an S&T Agreement does not necessarily preclude inter-governmental cooperation on S&T issues, though the trend is for the conclusion of an agreement prior to specific cooperation.

[1] U.S. Department of State, "Science & Technology Cooperation" 2010. Visited on 7 March 2010. Available at: www.state.gov/g/oes/stc/

Summary List of S&T Agreements with the United States

The survey included the U.S.-EU S&T Agreement as well as all the agreements between the United States and individual EU Member States and Associated Countries, as of March 2010. The following are the 18 S&T Agreements:

Bulgaria	Italy
Croatia	Macedonia[2]
Denmark	Poland
European Union	Romania
Finland	Slovakia
France	Slovenia
Germany	Spain
Greece	Sweden
Hungary	Switzerland

SUMMARY OF COMMON ELEMENTS OF S&T AGREEMENTS

The S&T Agreements surveyed shared many common elements. The most substantive ones are discussed below.

Areas of Cooperation

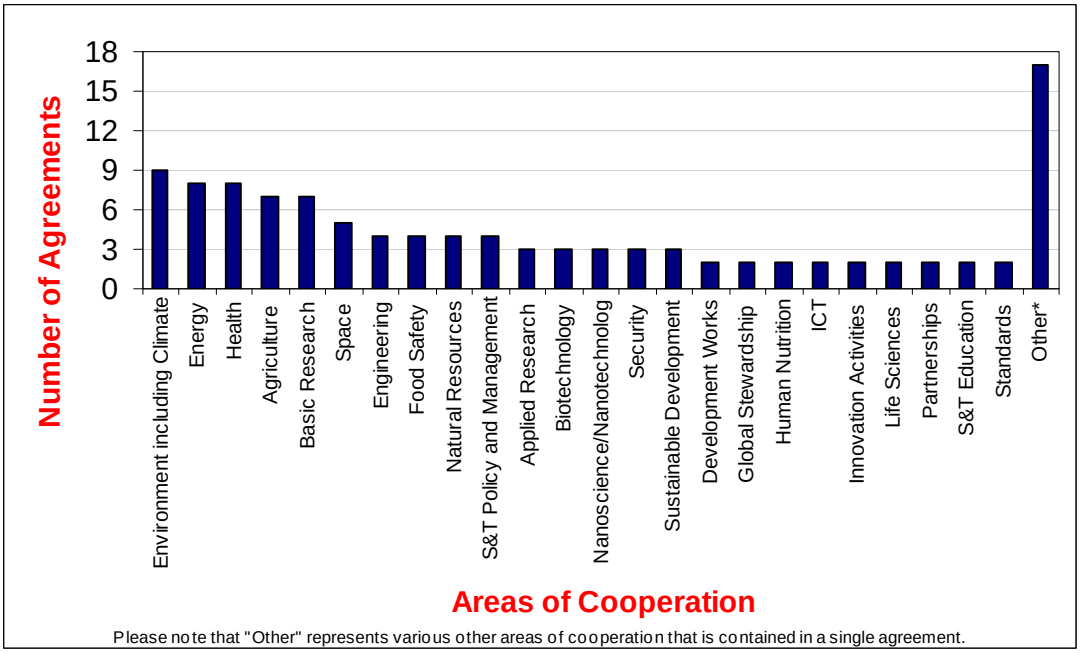
Each individual S&T Agreement is unique regarding the areas of cooperation. There is not a standard set of thematic areas indicated in all 17 S&T Agreements (minus the one with Macedonia) with the United States. Out of 17, 13 S&T Agreements indicated areas of cooperation.

Nevertheless, agriculture, basic research, energy, health, and the environment (including climate change) are the most common areas of cooperation. Of the 13 S&T Agreements indicating specific areas, seven list agriculture and basic research, eight list energy and health, and nine list the environment, including climate change, as key areas of cooperation, as seen in Figure 1. In

[2] The S&T Agreement with Macedonia was signed on 26 January 2006 as indicated in footnote 1. However no documentation of the agreement or information concerning its contents were found.

total, there are approximately 38 different cooperative areas indicated within the 13 S&T Agreements (see Annex II for summary).

Figure 1. Overview of Areas of Cooperation and Frequency in S&T Agreements



Unsurprisingly, the most commonly indicated areas reflect U.S. priorities in key areas of cooperation. Specifically, the U.S. State Department lists: agricultural and industrial biotechnology research, health sciences, marine research, natural products chemistry, environment and energy research.[3]

Forms of Cooperative Activities

In all the S&T Agreements[4], the same basic forms of cooperative activities are listed. The six basic forms indicated are:

- Coordinated research projects
- Joint task forces
- Joint studies

[3] See footnote 1.

[4] See footnote 2 regarding the U.S.-Macedonia S&T Agreement.

- Joint organization of science workshops, conferences, seminars, and symposia
- Visits and exchanges of S&T information and documentation as well as scientists, specialists, and/or researchers
- Exchange or sharing of equipment or materials

Other forms of cooperation that are included in several agreements are joint task forces and training of scientists and technical experts.

Coordination of the Agreement

A mechanism to coordinate the implementation of the S&T Agreement is established, typically as a joint committee (e.g., Joint Consultative Group or Joint Committee) comprising representatives of the signatory governments. These committees are organized by an executive agent or coordinator on each side. The U.S. executive agent resides in the U.S. Department of State and is staffed by the Office of Science & Technology Cooperation in the Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC).[5] These committees meet, "Joint Committee Meeting on S&T Cooperation" or "Joint Consultative Group Meeting" (JCM's), annually or at some other interval to review progress on cooperation and discuss areas of cooperation.

Entry of Personnel and Equipment

The language used regarding the entry of personnel and equipment is very similar from agreement to agreement. Generally a government is expected to take all reasonable steps, within the appropriate laws and regulations of the respective government, to assist in facilitating the entry and exit of persons, data, material, and equipment related to activities under the S&T Agreement.

IPR Annex

Common to all S&T Agreements with the United States is an annex on Intellectual Property Rights (IPR). Two main topics are addressed: the Allocation of Rights and Business Confidential Information. For each, similar language is used in the agreement.

[5] OES/STC is responsible for coordinating the U.S. Government negotiations of S&T Agreements. International agreements in general may not be signed or concluded on behalf of the U.S. Government without prior consultation with the Secretary of State.

Security Obligations

Security obligations are included in all S&T Agreements, except the EU-U.S. agreement, that relates to sensitive information or equipment and unclassified export-controlled information or equipment transferred under the agreement.

The obligations consist of two parts. The first is protecting information regarding the interests of national defense, foreign relations, or classified information, of either Party, in line with applicable national regulations and laws. The second part discusses technology transfer. Similar to protecting information, the transfer of export-controlled equipment and information between the two countries must comply with relevant national regulations and laws to prevent the unauthorized transfer or retransfer of information.

HIGHLIGHTS OF UNCOMMON ELEMENTS IN S&T AGREEMENTS

Implementing Cooperative Areas and Activities

The S&T Agreement between the United States and Germany, the newest (signed February 2010) of the agreements surveyed, stipulates that one key goal of the agreement is to facilitate access to National Waters for research purposes. This specific language is not found in any of the other agreements surveyed.

Other Additions to Cooperative Activities

While the co-use of instruments and facilities is fairly standard within S&T Agreements, the agreement between Italy and the United States discusses joint construction and ownership of instruments and facilities.

With Denmark, training of Ph.D. students, scientists, engineers or other appropriate personnel is indicated as a key area of cooperation. This training is not linked to any particular thematic area.

Renewal Process

There is no set duration for each agreement. Some agreements must undergo a specific renewal process when an agreement ends, while others are automatically renewed. Out of the 15 agreements that indicated the end date and previous renewals, four were automatically renewed, while 11 were not. There was no information on the France, Sweden and Macedonia agreements regarding this issue.

RECIPROCITY CONDITIONS

S&T Agreements

Reciprocity conditions are indicated in three basic ways within the agreements, and they are stated very generally. First, the goal of an agreement is to form "reciprocal opportunities to engage in cooperative activities." Second, possible areas of cooperative activities are indicated, subject to the respective regulations and laws. Finally, with regards to funding, unless otherwise provided for in an implementing arrangement, each respective government shall bear the costs of its participation in JCM's and that of its personnel engaged in cooperative activities under the agreement. Overall, the language used in the S&T Agreements to describe reciprocity is not specific regarding any exact form of reciprocity and tend to emphasize general principles.

Implementing Arrangements

Given the generality of the reciprocity conditions in the S&T Agreements, the implementing arrangements (IA) between four U.S. S&T Agencies and the European Commission were also analyzed for more specific terms. Implementing arrangements are legally non-binding but serve to outline cooperative activities in specific research areas between technical agencies. The arrangements (see Annex III) between the U.S. Environmental Protection Agency and the Commission (EPA-EC IA); the National Science Foundation and the Commission (NSF-EC IA); the U.S. Department of Transportation and the Commission (DOT-EC IA); and the U.S. Department of Energy and the Commission (DOE-EC IA) were analyzed.

The EPA-EC IA outlines research areas for cooperation in the fields of environmental research and eco-informatics, including: eco-informatics and information systems; environment and sustainability indicators; formal analysis of uncertainty in environmental programs; decision support tools; environment and health; sustainable chemistry and materials; nanotechnology uses and impacts; environmental technologies; and emissions from transport and air quality management.

Similar to the S&T Agreement, the EPA-EC IA indicates forms of cooperation:

- Direct collaboration between consortia and researchers funded by the two Sides
- Exchange of information among researchers and program managers

- Joint sponsorship of conferences, workshops, or meetings
- Coordinated calls for proposals and mutual participation in peer reviews

The NSF-EC IA covers the research areas of climate change, marine science and technology, seismic risk and hazards reduction, Arctic processes, and environmental biology.

The IA indicates similar forms of cooperation as in the EPA arrangement -- exchange of information and joint organization of scientific seminars, conferences, symposia, and workshops – but also includes the following:

- Activities to promote the opportunities provided by the IA
- Joint support of collaborative research, observational and related programs; coordinated support of complementary research, observational and related programs; supplemental support to existing grants, contracts and agreements; and funding of other related cooperative activities for mutual benefit and added value

The last point, referencing joint, coordinated, and supplemental support, is the most specific language on funding support indicated in all the S&T Agreements and IA's reviewed.

The DOT-EC IA covers the research areas of information and communication technologies (ICT) in road transport that are set out in FP7 (Intelligent Car Initiative and Challenge 6) and under the responsibility of the DOT's Research and Innovative Technology Administration. Besides cooperating by exchanging information, coordinating activities, conducting joint analyses and evaluations, and participating in working groups, both sides "are to endeavour to provide equivalent opportunities to the industry from each other's side in terms of contributing to work and access to information and results from the cooperative activities..." The specific indication of industry involvement is unique to this IA.

The DOE-EC IA focuses on broad areas of non-nuclear energy research cooperation, in particular areas of fossil energy, new and renewable energy, energy efficiency, R&D facilities sharing, and fuel cell technology (the latter was included in a 2003 amendment to the original 2001 IA). Forms of cooperation outlined in this IA are similar to the S&T Agreement, including

reciprocal opportunities to participate in each side's programmes; exchange of information, people, and materials; meetings; and joint studies and projects. The IA particularly also details the responsibilities of each side in exchanges of personnel and equipment and sharing of samples and materials.

Overall in these arrangements, as with the S&T Agreement, funding for activities under the IA's depend on appropriated funds and applicable laws and regulations, policies, and programs of each agency; and all costs of the cooperation under the IA's are the responsibility of the agency that incurs them.

KEY FINDINGS

S&T Agreements establish the legal framework for cooperation between governments, and as such, across the 17 agreements that were surveyed between the United States and European governments, there is a general commonality of elements and content. The overall principles espoused – mutual interest and benefit, reciprocal opportunities, and equitable and fair treatment – are similar in all agreements. The forms of cooperation, mechanism for coordination, entry of personnel and equipment, intellectual property rights (IPR), and security obligations are addressed similarly across the agreements. The reciprocity principle is reflected in the manner that cooperation take place, whether they be joint or coordinated activities or exchanges of information or personnel. Funding for each government's participation in any cooperative activity is typically the responsibility of each side. Variations in the S&T Agreements primarily manifest themselves in the specific areas of cooperation, some 38 areas across the 17 agreements.

These S&T Agreements demonstrate extensive government-to-government interest and opportunities in scientific and technological cooperation between the United States and Europe, which builds on and complements the already wide-ranging ties between American and European researchers and research organizations.

ANNEX I: S&T AGREEMENT DATA

Bulgaria

REPUBLIC OF BULGARIA

BASIC INFORMATION

Entry Date
1/4/2008
End Date
10 YEARS (May be extended by written agreement of the parties)
Renewal Date, if any
N/A
Date of Last Joint Consultative Meeting (JCM)
N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)
Website, if any
www.state.gov/g/oes/stc/
Phone Number, if any
+1 202-663-3219

EUROPEAN STAFF

Name
Ministry of Education and Science
Website, if any
N/A
Phone Number, if any
N/A

RECIPROCITY CONDITIONS

The parties shall develop, support and facilitate scientific and technological cooperation between their two countries based on shared responsibilities and equitable contributions and benefits, commensurate with the Parties' respective scientific, technological and engineering strengths and resources. Cooperative activities under the Agreement may be carried out in the form of coordinated programs and joint research projects; joint scientific workshops, conferences and symposia; exchange of scientific and technological information and documentation in exchange of scientists, specialists and researchers; exchange or sharing of equipment or materials; other forms of scientific and technological cooperation.The Parties shall encourage and facilitate the developmentof direct contacts and cooperation between government agencies, universities, research institutions, private sector companies and other entities of the two countries.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Support partnership between public and private research institutions and industry, and engage the scientific enterprises in : promotion of science-based decision making, environmental and biodiversity protection, marine science, energy, space, global stewardship, HIV/AIDS (and other health issues), science and technology education, engineering, sustainable development, agriculture, natural resources, human nutrition, food safety.

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Environment	1.Atmosphere/climate studies; 2.Hydrology studies; 3.Soils studies; 4.Land cover/biology studies	Agreement between the National Oceanic and Atmospheric Administration of the United States of America and the Ministry of Education and Science of the Republic of Bulgaria for Cooperation in the Globe Program (Signed in Sofia September 8, 1998 Entered into force September 8, 1998)
Humanities and the Arts	N/A	Agreement between the Government of the United States of America and the Government of the People's Republic of Bulgaria on exchanges and cooperation in cultural, scientific, educational, technological, and other fields (Agreement signed at Washington June 13, 1977 Entered into force March 23, 1978)

NOTES

The above mentioned Thematic agreements came prior to the General S&T Agreement

Croatia

REPUBLIC OF CROATIA

BASIC INFORMATION

Entry Date

Signed 27 June 1988

End Date

Remain in force for five years

Renewal Date, if any

Extended: 18 March 1994

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

The Ministry of Science and Technology of Croatia

Website, if any

N/A

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

The Parties shall develop, support and facilitate scientific and technological cooperation between cooperating organizations of their two countries on the basis of the principles of equality, overall reciprocity and mutual benefit.The Parties shall establish a U.S. –Croatia Joint Board on Scientific and Technological Cooperation.The Joint Board consists of four government representatives, two of whom designated by the Government of U.S. and two of whom designated by the Government of Croatia.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

This cooperation may be undertaken in such fields as environmental protection, medical sciences and health, basic science, agriculture, engineering research, energy, natural resources and their useful utilization, standardization, science and technology policy and management, and other areas of science and technology as may be agreed by the Joint Board established in accordance with the Agreement. Cooperative activities under this Agreement may include coordinated and joint research projects, studies, and investigations; joint scientific courses, workshops, conferences and symposia; exchange of science and technology information and documentation; exchange of scientists, specialists, and researchers; exchange or sharing of equipment or materials; and other forms of scientific and technological cooperation

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Environmental Protection	N/A	N/A
Medical Sciences and Health	N/A	N/A
Basic Science	N/A	N/A
Agriculture	N/A	N/A
Engineering Research	N/A	N/A
Energy	N/A	N/A
Natural Resources and their useful utilization	N/A	N/A
Standardization	N/A	N/A
Science and Technology Policy and Management	N/A	N/A

Denmark

KINGDOM OF DENMARK

BASIC INFORMATION

Entry Date

15 September 2009

End Date

N/A

Renewal Date, if any

N/A

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

Ministery of Science, Technology, and Innovation

Website, if any

http://en.vtu.dk/

Phone Number, if any

+45 3392 9700

RECIPROCITY CONDITIONS

Article 3 Cooperative activities shall be conducted on the basis of the following principles:
1. Mutual benefit based on an overall balance of advantages;
2. Reciprocal opportunities to engage in cooperative activities;
3. Equitable and fair treatment for the participants; and
4. Timely exchange of information which may affect cooperative activities.

AREAS OF COOPERATIVE ACTIVITIES	Article 5 2. Cooperative activities may take the following forms: a. Coordinated research projects b. Joint task forces c. Joint studies d. Joint organization of scientific seminars, conferences, symposia and workshops e. Training of PhD students, scientists and technical experts f. Exchanges or sharing of equipment and materials g. Visits and exchanges of PhD students, scientists, engineers or other appropriate personnel h. Exchanges of scientific and technological information as well as information on practices, laws, regulations and programs relevant to cooperation under this Agreement

European Union

EUROPEAN UNION

BASIC INFORMATION

Entry Date

Signed 5 December 1997; Effective 14 October 1998

End Date

14 October 2013

Renewal Date, if any

Extended twice: 22 October 2003 and 14 October 2008

Date of Last Joint Consultative Meeting (JCM)

26-27 March 2009, Brussels

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

European Commission
Directorate D - International Cooperation, Directorate-General for Research

Website, if any

ec.europa.eu/dgs/research/organisation.cfm?lang=en#D

Phone Number, if any

+32 2 2991111

RECIPROCITY CONDITIONS

Cooperative Activities will be conducted on the basis of the following principles:
a) mutual benefit based on an overall balance of advantages; b) reciprocal opportunities to engage in cooperative activities; c)equitable and fair treatment; and d) timely exchange of information which may affect cooperative activities.

(Please note that according to the official agreement, more specific details are not available)

Key areas of cooperative activities

Basic/Frontier Research; Biotechnology, Food, Agriculture, and Fisheries; Energy; Environment/Sustainable Development; Health, Biomedical and Behavioral Research; Information and Communication Technologies, Nanosciences, Nanotechnologies, Materials, and New Production Technologies; Metrology; Mobility and Human Resources; Research Infrastructures; Science in Society; Transport Research.

AREAS OF COOPERATIVE ACTIVITIES

New key areas added, if any, after the most recent renewal process

Security and space research have been added during the 2008 renewal process.

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Biotechnology, Food, Agriculture, and Fisheries	Bio-based products; environmental biotechnology; plant biotechnology; marine genomics	N/A
Energy	Bioenergy; Carbon Capture and Storage; Hydrogen and Fuel Cells; Solar Energy	Principals: European Commission/US Department of Energy Date Signed: 14 May 2001 (Fuel Cell Annex, 16 June 2003) Expiration: Duration of the S&T Agreement
Environment/Sustainable Development	Earth observation - GEO; aerosal-climate interactions; natural hazards; genomic approaches for studying the marine environment and resources; coordinated call on the harmful algal blooms; terrestrial ecosystems; integrated modelling and uncertainty in water resources management;	**Environment 1** Principals: European Commission/National Science Foundation Date Signed: 18 October 2001 Expiration: Duration of the S&T Agreement (includes Renewals) **Environment 2** Principals: European Commission/Environmental Protection Agency Date Signed: 9 February 2007 Expiration: Duration of the S&T Agreement
Health, Biomedical and Behavioral Research	Genomics and proteomics; infectious diseases; mouse functional genomics; going forward possibly Stem cells and tissue therapies, public health, drug safety assessements, biobanks and advanced technology development, clinical trials.	N/A

AREAS OF COOPERATIVE ACTIVITIES		
Information and Communication Technologies	Very open; cyber-threats; secruity and trust; ICT for health; Aging; Language technologies; ICT Applications to Road Transport; Future Internet; RFID; Components and systems;	Principals: European Commission/US Department of Transportation Date Signed: 14 January 2009 Expiration: Duration of the S&T Agreement
Nanosciences, Nanotechnologies, Materials, and New Production Technologies	Computational material science; Intelligent manufacturing systems; Health, safety, environment impacts;	Principals: European Commission/National Science Foundation Date Signed:16 December 1999 Expiration: Duration of the S&T Agreement
Metrology	Development and advancement of international measurement standards in the fields of life sciences, chemistry, and emerging technologies; research on modern measurements; quality assurance; preparation and characterization of reference materials;	Principals: European Commission/National Institute of Standards and Technology Date Signed: 5 October 1999 Expiration: December 2004 Last Meeting 3-5 September 2008
Mobility and Human Resources	Outgoing International Fellowships; Incoming International Fellowships; European Researchers Abroad-Link (ERA-LINK);	N/A
Research Infrastructures	Supporting existing research infrastructures (Integrating activities and e-infrastructures) and new research infrastructures (design studies and construction of new infrastructures)	N/A
Science in Society	Socio-economic challenges	N/A
Security Research	Maritime Security related research; Maritime containers;	N/A
Space and Earth Observation	Space weather; Space Situational Awareness; Space Exploration; Space and Climate Change; Natural resource monitoring;	NASA, NOAA, USGS; EU-US Dialogue on Civil Space Cooperation; Agreement between the JRC and USGS for joint work in the field of spatial data
Transport Research	Aeronautics; Air traffic management; Galileo; Surface transport;	(see above under ICT)

Finland

REPUBLIC OF FINLAND

BASIC INFORMATION

Entry Date

Signed 22 March 1985

End Date

N/A

Renewal Date, if any

23 October 1990, 16 May 1995 (EIF 8/27/95; automatically extended for 5-year periods)

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

N/A

Website, if any

N/A

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

Article I: 1.The Parties shall promote cooperation between the two countries in science and technology for peaceful purposes on the basis of mutual benefit, equality, and reciprocity.
2. The principal objective of this cooperation is the investigation of scientific and technological topics of mutual interest by providing opportunities to exchange ideas, information, skills, and techniques and to conduct joint research.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Article II: The activities contemplated under this Agreement may include exchanges of scientific and technological information, exchanges of scientists and technical experts, the convening of joint seminars and meetings, the conduct of joint research projects, and such other forms of scientific and technological cooperation as may be mutually agreed upon.

France

FRANCE

BASIC INFORMATION

Entry Date
22 October 2008

End Date
N/A

Renewal Date, if any
N/A

Date of Last Joint Consultative Meeting (JCM)
N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any
www.state.gov/g/oes/stc/

Phone Number. if any
+1 202-663-3219

EUROPEAN STAFF

Name
The Ministry of Foreign and European AffairsDirection générale de la coopération internationale et du développement

Website, if any
http://www.diplomatie.gouv.fr/

Phone Number. if any
+33 1 43 17 53 53

RECIPROCITY CONDITIONS

Article 3:
Principles - Cooperative activities shall be conducted on the basis of the following principles:
(a) Mutual benefit, based on an overall balance of advantages;
(b) Reciprocal opportunities to engage in cooperative activities;
(c) Equitable and fair treatment for the participants; and
(d) Timely exchange of information that may affect cooperative activities

AREAS OF COOPERATIVE ACTIVITIES

Article 4 - Areas of Cooperative Activities
(a) Priority will be given to collaboration that can advance common goals in science and technological research.
(b) The Parties may jointly pursue cooperative activities with third parties.

Article 5 - Forms of Cooperative Activities
(a) In accordance with applicable national laws, the Parties shall foster, to the fullest extent practicable, the involvement of participants in cooperative activities under this Agreement with a view to providing comparable opportunities for participation in their scientific and technological research and development activities.
(b) Cooperative activities may take the following forms:
1. coordinated research projects;
2. joint task forces;
3. joint studies;
4. joint organization of scientific seminars, conferences, symposia and workshops;
5. training of scientists and technical experts;
6. exchanges or sharing of equipment and materials;
7. visits and exchanges of scientists, engineers or other appropriate personnel; and
8. exchanges of scientific and technological information as well as information on practices, laws, and programs relevant to cooperation under this Agreement.

Germany

THE GOVERNMENT OF THE FEDERAL REPUBLIC OF GERMANY

BASIC INFORMATION

Entry Date

2/18/2010

End Date

2015

Renewal Date, if any

N/A

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

Federal Ministry of Education and Research - Department of European and International Cooperation

Website, if any

www.bmbf.de/en/

Phone Number

+ 49(0)22899570

RECIPROCITY CONDITIONS

Article 1: Purpose
The Parties shall encourage, develop and facilitate cooperative activities in fields of common interest where they are pursuing research and development activities for peaceful purposes in science and technology.

Article 3: Principles of Cooperation
Cooperative activities under this Agreement shall be conducted on the basis of the following principles:
(a) Mutual benefit, based on an overall balance of averages;
(b) Reciprocal opportunities to engage in cooperative activities;
(c) Equitable and fair treatment for participants;
(d) Timely exchange of information that may affect cooperative activities; and
(e) Third parties may be included in cooperative activities by mutual agreement.
Priority will be given to collaboration that can advance common goals in science and technological research

Article 5: Forms of Cooperative Activities
2. The Parties shall establish a Joint committee to coordinate, facilitate, and review cooperative activities...
5. Each Party shall also designate an Agreement Coordinator to conduct administrative affairs and, as appropriate to provide oversight and coordination of activities under this agreement.
6. ...each Party shall designate a point of contact to facilitate access to waters under national jurisdiction for the purpose of conducting marine scientific research...

Article 7: Funding and Legal Considerations
1. Cooperative activites shall be subject to the availability of appropriated funds, resources, and personnel.
2. Unless otherwise provided for in an implementing arrangement or agreement each participant shall bear the cost of its participation and that of its personnel in cooperative activities under this Agreement.

Article 8: Entry of Personnel and Equipment
1. Each Party shall take all reasonable steps to use its best efforts, as appropriate and in accordance with its laws and regulations, to facilitate entry to and exit from its territory of persons, material, scientific and technical information and equipment involved in or used in cooperative activities under this Agreement.
3. Each Party shall, in accordance with its national laws and regulations, work toward obtaining duty free entry for materials and equipment provided pursuant to cooperative activities under this Agreement.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Energy, food security, climate change, ocean and water sciences, and health (stem cell research and rare diseases).

New key areas added, if any, after the most recent renewal process

N/A

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Cancer	N/A	MOU signed on 2/18/2010
Energy	N/A	MOU signed on 2/18/2010

Greece

GREECE

BASIC INFORMATION

Entry Date

4/22/1980

End Date

Automatically renewed for 5-year periods

Renewal Date, if any

N/A

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

N/A

Website, if any

N/A

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

(a) Each party shall advise the other in advance of each meeting of the persons designated to participate in the session including the leader of their delegation.
(b) The working groups shall work on the basis of mutual agreement.
(c) Minutes will be kept for each meeting of the working group. The agreed minutes, signed by the executive secretaries of the working group, will be transmitted to appropriate officials of the executive agencies of both governments.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

The two parties will promote a program of cooperation between various responsible agencies or institutions in the two countries and such cooperation may include, inter alia, the following tasks:

In the field of scientific and technological cooperation:
(a)To identify common scientific and technological interests and engage in joint research projects and other types of activities which will contribute to achieving the objectives of the program;
(b) To coordinate programs of cooperation between agencies of the two countries and decide measures for their implementation, which may include, inter alia, the exchange of specialists and information, the holding of joint seminars and meetings on problems of common interest.

(Please note that according to the official agreement, more specific details are not available)

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Environment	N/A	Protocol of Intentions regarding Cooperation on the Prevention and Handling of Natural and Technological Catastrophes (2001)
Agriculture	N/A	Protocol on cooperation between Greece's Agriculture Ministry and the U.S. Department of Agriculture (1981)

Hungary

REPUBLIC OF HUNGARY

BASIC INFORMATION

Entry Date
Signed on 15 March 2000
End Date
N/A
Renewal Date, if any
4-Feb-10
Date of Last Joint Consultative Meeting (JCM)
N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)
Website, if any
www.state.gov/g/oes/stc/
Phone Number, if any
+1 202-663-3219

EUROPEAN STAFF

Name
Ministery for National Development and Economy
Website, if any
http://www.nfgm.gov.hu/en
Phone Number, if any
3613742748

RECIPROCITY CONDITIONS

The Parties shall develop, support and facilitate scientific and technological cooperation between cooperating government organizations of their two countries on the basis of the principles of equality, overall reciprocity and mutual benefit. For the purpose of implementing this Agreement, the Parties shall establish a Hungarian-U.S. Joint Committee on Scientific and Technological Cooperation.

The Joint Committee shall consist of four representatives, two of whom designated by the Hungarian Government and two of whom designated by the Government of U.S.

The Joint Committee shall:
Recommend to the Parties overall policies under this Agreement; Prepare periodic reports concerning the activities of the Joint Committee and cooperative activities undertaken under this Agreement; Undertake such further functions as may be decided by the Parties.

The Joint Committee shall meet periodically, alternately in Budapest and in Washington.
All decisions of the Joint Committee shall be reached by consensus.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Such cooperation shall cover basic research, applied research, development works and innovation activities. Cooperative activities under this Agreement could be: coordinated programs and joint research projects; joint scientific workshops, conferences and symposia; exchange of scientific and technological information and documentation in the context of cooperative activities; exchange of scientists, specialists, and researchers; exchange or sharing of equipment or materials; and other forms of scientific and technological cooperation as may be agreed.

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Basic Research	N/A	N/A
Applied Research	N/A	N/A
Development Works	N/A	N/A
Innovation Activities	N/A	N/A

Italy

ITALIAN REPUBLIC

BASIC INFORMATION

Entry Date
4/1/1988
End Date
Automatically renewed for 5-year periods
Renewal Date, if any
Apr-08
Date of Last Joint Consultative Meeting (JCM)
Washington, 22-23 April 2008

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)
Website, if any
www.state.gov/g/oes/stc/
Phone Number, if any
+1 202-663-3219

EUROPEAN STAFF

Name
Ministry of Foreign Affairs
Website, if any
http://www.esteri.it/MAE/EN
Phone Number, if any
0039-06.36911

RECIPROCITY CONDITIONS

1. The parties shall promote cooperation between the two countries in science and technology.
2. The principal objectives of the Agreement are to strengthen the scientific and technological capabilities of the two countries and to broaden and expand relations between their scientific and technological communities.

Cooperative activities under the Agreement may include: exchange of scientific and technological information, exchanges of scientistsand other research and technical personnel, the conduct of joint or coordinated research projects, the convening of seminars and meetings, training of scientists and technical experts, exchanges or sharing of equipment or materials, joint construction, ownership or use of instruments and facilities, and other forms of scientific and technological cooperation to be mutually agreed.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Biology: computer and information sciences; earth; mathematics; physics; agriculture, energy and energy related research, such as fusion and high energy physics, advanced materials and superconductors; space and astronomy; health, drugs, nutrition, biotechnologies, environment, oceanography and meteorology, engineering (including microelectronics and telecommunications), and other areas of basic and applied science and technology and their management as maybe mutually agreed between the parties.

New key areas added, if any, after the most recent renewal process

Climate Change; Robotics; Nanosciences: Technology Applied to Cultural Heritage

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Basic Sciences	Physics, Chemistry, Mathematics, Biology	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
Life Sciences	Health, Biotechnologies, Agriculture	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
Space	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.

Earth Science and Climate Change	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
ICT	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
Robotics and Production Technologies	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
Nanosciences, Advanced Materials	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.
Technologies Applied to Cultural Hertiage	N/A	Call for proposals of joint research projects within the executive programme of cooperation in the field of science and technology between Italy and the USA for the years 2008-2010.

Energy(nuclear)	1. Next generation reactor power plant designs with higher efficiency, lower cost, and improved safety and proliferation resistance; 2. Innovative nuclear plant design manufacturing, construction, operation, maintenance, and decommissioning technologies; 3. Advanced Nuclear fuels; 4. Fundamental Nuclear science areas; 5. Advanced waste treatment, storage, and disposal technologies; 6.Nuclear Safety analysis, standards and criteria	Agreement between the Department of Energy of the United States of America and the Ministry of Economic Development of the Italian Republic - signed 29 September 2009
Health	1.Bioterrorism; 2.Oncology; 3.Rare Diseases	Joint decleration between the Italian Ministry of Health and the Department of Health and Social Affairs of the United States- signed 17 April 2003

Macedonia

REPUBLIC OF MACEDONIA

BASIC INFORMATION

Entry Date

Signed June 1998; entry into force 1st December 2006

End Date

N/A

Renewal Date, if any

N/A

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

N/A

Website, if any

N/A

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

No information was available.

NOTES

The above mentioned agreeement has been signed but there is not trace of its (internet or other sources of information) contents and related coordinated activities starting from its entry into force. Signed by the Ministry of Education and Science.

Poland

REPUBLIC OF POLAND

BASIC INFORMATION

Entry Date

Signed on September 4, 1992 in Warsaw

End Date

10 years

Renewal Date, if any

Last renewal date: 10 February 2006 in Washington and it may be amended or extended for further ten-year periods by written agreement of the Parties.

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

The Ministery of Education and Science of Poland

Website, if any

www.eng.nauka.gov.pl

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

The Parties shall develop, support and facilitate scientific and technological cooperation between their two countries on the basis of the principles of equality, reciprocity, and mutual benefit according to the provisions of this Agreement.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Such cooperation shall cover basic research, applied research, development works and innovation activities.
Cooperative activities under this Agreement may be carried out in the form of coordinated programs and joint research projects, joint scientific workshops, conferences and symposia; exchange of scientific and technological information and documentation,
exchange of scientists, specialists; and other forms of scientific and technological cooperation as my be agreed.

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Basic Research	N/A	N/A
Applied Research	N/A	N/A
Development Works	N/A	N/A
Innovation Activities	N/A	N/A

Romania

ROMANIA

BASIC INFORMATION

Entry Date

Signed 15 July 1998; Effective 12 January 2000

End Date

N/A

Renewal Date, if any

Every 5 years

Date of Last Joint Consultative Meeting (JCM)

2/9/2010, Bucharest

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

National Authority for Scientific Research

Website, if any

http://www.mct.ro/index.php?&lang=en

Phone Number, if any

+ 40 21 31 83 064

RECIPROCITY CONDITIONS

Cooperative activities will be conducted on the basis of equality, reciprocity, and mutual benefits principles.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Basic research; Environment; Health sciences; Agriculture; Energy; Policy and management of science and technology;

New key areas added, if any, after the most recent renewal process

Nanotechnologies; Space, security and aeronautics; Biotechnologies;

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
R&D joint projects; joint scientific training sessions, seminars, conferences;exchanges of information and technical papers within the cooperation activities	N/A	N/A
Physics and Physics of Materials	Call for projects: "Materials World Network"	Principals: National Council of Scientific Research in Higher Education/ National Science Foundation Date signed: 2008 (renewed each year); Expiration: duration of Letter of institutional agreement. Contact: **Adriana ROTAR**, National Council of Scientific Research in Higher Education adriana.rotar@uefiscsu.ro + 40 731 23 23 25

Slovakia

SLOVAK REPUBLIC

BASIC INFORMATION

Entry Date

Signed in 1993 Science and Technology Agreement

End Date

N/A

Renewal Date, if any

21 June 1999

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

Ministry of Education.

Website, if any

http://www.minedu.sk/index.php?lang=en

Phone Number, if any

+421 2/59374111

RECIPROCITY CONDITIONS

The Parties shall develop, support and facilitate scientific and technological cooperation between cooperating government organizations of their two countries on the basis of the principles of equality, overall reciprocity and mutual benefit.For the purpose of implementing this Agreement, the Parties shall establish a U.S.-Slovenia Joint Board.

The Joint Board shall:
recommend to the Parties overall policies under the Agreement;
identify fields and forms of cooperation in accordance with Article I;
prepare periodic reports concerning the activities of the Joint Board and cooperative activities undertaken under this Agreement.The Joint Board shall consist of four government representatives, two of whom shall be designated by the U.S. Government, and two of whom shall be designated by the Government of Slovenia. The Joint Board shall meet alternating in the U.S. and Slovenia and shall act by consensus.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

This cooperation may be undertaken in such fields as basic science, environomental protection, medical sciences and health, agriculture, engineering research, energy, natural resources and their usefull utilization, standards and measurements science, science and technology policy and management, and other areas of science and technology as may be agreed by the Joint Board established in accordance with the agreement. Cooperative activities may include coordinated programs and joint research projects, studies, and investigations; joint scientific courses, workshops, conferences and symposia; exchange of science and technology information and documentation in the context of cooperative activities; exchange of plant and genetic resourses; exchange of scientists, specialists and researchers; exchange or sharing of equipment or materials; and other forms of scientific and technological cooperation agreed by the Joint Board.

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
Envirlonmental Protection	N/A	N/A
Medical Sciences and Health	N/A	N/A
Basic Science	N/A	N/A
Agriculture	N/A	N/A
Engineering Research	N/A	N/A
Energy	N/A	N/A
Natural Resources and their useful utilization	N/A	N/A
Standards and Measurements Science	N/A	N/A
Science and Technology Policy and Management	N/A	N/A

Slovenia

SLOVENIA

BASIC INFORMATION

Entry Date

Signed 12 September 2000 (EIF 10/24/00; automatically extends for consecutive periods of 5 years)

End Date

N/A

Renewal Date, if any

8 November 2007

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

Ministry of Higher Education, Science, and Technology

Website, if any

www.mvzt.gov.si/en

Phone Number, if any

N/A

RECIPROCITY CONDITIONS

No information was available.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Article I: 3. Priority will be given to collaborations which can advance common science and technology goals; support partnerships between public and private research institutions and industry; and engage the scientific enterprise on such matters as the promotion of science-based decision making, environmental and biodiversity protection, energy, information technologies, space, global stewardship, HIV/AIDS and other health issues, science and technology education, engineering, sustainable development, agriculture and landscape management, natural resources, human nutrition, food safety, genetics and genetic engineering, biotechnology, and improving the scientific basis for policies and regulations pertaining to trade.

New key areas added, if any, after the most recent renewal process

N/A

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Article I: 3. Priority will be given to collaborations which can advance common science and technology goals; support partnerships between public and private research institutions and industry; and engage the scientific enterprise on such matters as the promotion of science-based decision making, environmental and biodiversity protection, energy, information technologies, space, global stewardship, HIV/AIDS and other health issues, science and technology education, engineering, sustainable development, agriculture and landscape management, natural resources, human nutrition, food safety, genetics and genetic engineering, biotechnology, and improving the scientific basis for policies and regulations pertaining to trade.

New key areas added, if any, after the most recent renewal process

N/A

Spain

KINGDOM OF SPAIN

BASIC INFORMATION

Entry Date
4/23/1996
End Date
Automatically renewed for 5-year periods
Renewal Date, if any
N/A
Date of Last Joint Consultative Meeting (JCM)
N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)
Website, if any
www.state.gov/g/oes/stc/
Phone Number, if any
+1 202-663-3219

EUROPEAN STAFF

Name
Ministry of Foreign Affairs
Website, if any
http://www.maec.es/en/MenuPpal/Ministerio/Paginas/postingTXT(17-2)Ministerio.aspx
Phone Number, if any
91 379 97 00 / 91 379 83 00

RECIPROCITY CONDITIONS

Scientific and technological cooperation shall be based on the following principles:
(a) the mutuality of interest and the benefits to each country of the cooperative activities;
(b) the encouragement of lasting cooperation between agencies, institutions and organizations of the two countries;
(c) the provision of comparable opportunities for scientists and engineers from the other country to engage in research and study in their respective facilities and government-sponsored or government-supported research programs in basic and applied research areas.Pursuant to the objectives of this Agreement, the Parties shall encourage and facilitate, as appropriate, direct contacts and cooperation between government agencies, universities, research centers, institutions, firms and other entities of the two countries, and the conclusion of implementing arrangements between them for the conduct of cooperative activities under this Agreement.Scientific and technical information of a nonproprietary nature derived from cooperative activities under this Agreement shall be made available to the world scientific community through customary channels and in accordance with the normal procedures of the Parties and the procedures of the Annex

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities

Scientific and technological cooperation under this Agreement shall be undertaken in such scientific and technological areas as may be mutually agreed.
(Please note that according to the official agreement, more specific details are not available)

Coordinated activities under the Agreement in each area with recent examples (e.g., coordinated/joint research projects, task forces, etc.)

THEMES	*SUB-THEMES*	*IMPLEMENTING ARRANGEMENT, IF ANY*
CHEMISTRY	1. Chemical Synthesis; 2. Chemical Catalysis; 3.Theory, Models and Computational Methods; 4.Chemical Measurement and Imaging; 5.Chemical Structure, Dynamics and Mechanisms; 6.Macromolecular, Supramolecular and Nanochemistry; 7.Environmental Chemical Sciences; 8.Chemistry of Life Process	Call for Joint Project proposals in collaboration with the National Science Foundation (NSF) of USA (CHEMISTRY)
MATERIALS	N/A	Call for Joint Project proposals in collaboration with the National Science Foundation (NSF) of USA (Materials World Network: Cooperative Activity in Materials Research)

NOTES

1. The Parties shall establish a Spain-United States Joint Commission for Scientific and Technological Cooperation (hereinafter referred to as "The Joint Commission for S&T") for the oversight of scientific and technological cooperation under this Agreement. Designated officials of the Ministry of Foreign Affairs of Spain and the Department of State of the United States shall co-chair the Joint Commission for S&T. The Joint Commission for S&T shall be composed of an equal number of members appointed by each Party.
2. The Joint Commission for S&T shall review and coordinate, as necessary, cooperative activities under this Agreement and shall make recommendations to the Parties on ways to improve cooperation and on other matters as it deems appropriate.
3. The Joint Commission for S&T shall meet alternately in Spain and the United States.

Sweden

KINGDOM OF SWEDEN

BASIC INFORMATION

Entry Date
Done at 29th of June 2006.

End Date
N/A

Renewal Date, if any
N/A

Date of Last Joint Consultative Meeting (JCM)
N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name
Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental

Website, if any
www.state.gov/g/oes/stc/

Phone Number, if any
+1 202-663-3219

EUROPEAN STAFF

Name
Ministry of Education, Research and Culture

Website, if any
http://www.sweden.gov.se/sb/d/2063

Phone Number
+46 8 405 10 00

RECIPROCITY CONDITIONS

Cooperative activities shall be conducted on the basis of the following principles:
(a) Mutual benefit based on an overall balance of advantages;
(b) Reciprocal opportunities to engage in cooperative activities;
(c) Equitable and fair treatment for the participants; and
(d) Timely exchange of information which may affect cooperative activities.

AREAS OF COOPERATIVE ACTIVITIES

Key areas of cooperative activities
The Parties shall encourage, develop and facilitate cooperative activities in fields of common interest where they are pursuing research and development activities in science and technology. Priority will be given to collaboration that can advance common goals in science and technological research.The Parties may jointly pursue cooperative activities with third parties.

New key areas added, if any, after the most recent renewal process
The Parties shall endeavor, where appropiate, to bring under the terms of this Agreement new arrangements that facilitate scientific and technological cooperation between the Parties that fall under the scope of Article 4.

Switzerland

SWISS CONFEDERATION

BASIC INFORMATION

Entry Date

1 April 2009

End Date

Automatically renewed for 5-year periods

Renewal Date, if any

N/A

Date of Last Joint Consultative Meeting (JCM)

N/A

CONTACT INFORMATION

UNITED STATES STAFF

Name

Department of State
Office of S&T Cooperation , Bureau of Oceans and International Environmental and Scientific Affairs (OES/STC)

Website, if any

www.state.gov/g/oes/stc/

Phone Number, if any

+1 202-663-3219

EUROPEAN STAFF

Name

State Secretary for Education and Research

Website, if any

N/A

Phone Number, if any

+41313226497

RECIPROCITY CONDITIONS

Article I (1) The Parties shall develop, support, and facilitate scientific and technological cooperation between their two countries on the basis of the principles of equality, reciprocity, and mutual benefit. Such cooperation shall include basic research, applied research, engineering, and higher education, as well as other science and technology areas as may be agreed by the two Parties.
(2) Cooperative activities under this Agreement may include coordinated programs and joint research projects, studies, and investigations; joint scientific courses, workshops, conferences, and symposia; and exchange of scientific and technological information and documentation in the context of cooperative activities.

ANNEX II: BREAKDOWN OF COOPERATIVE ACTIVITIES

BREAKDOWN OF COOPERATION ACTIVITIES IN THE SCIENCE AND TECHNOLOGY AGREEMENTS BY AREAS OF COOPERATION AND AGREEMENT

AREAS

SCIENTIFIC AREAS													
Aeronautics									X				
Agriculture	X	X	X		X				X	X	X		
Biomedicine			X										
Biotechnology			X						X		X		
Chemistry												X	
Energy	X	X	X	X			X		X	X	X		
Engineering	X	X								X			X
Environment including Climate Change	X	X	X	X	X		X		X	X	X		
Fisheries			X										
Food Safety	X		X	X							X		
Genetics											X		
Health	X	X	X	X			X		X	X	X		
Human Nutrition											X		
ICT			X								X		
Life Sciences							X						
Marine Sciences	X												
Materials												X	
Metrology			X										
Nanoscience/Nanotechnology			X				X		X				
Natural Resources	X	X								X	X		
Ocean and Water Sciences													
Robotics & Production Technologies							X						
Security			X						X				
Space	X		X				X		X		X		
Standards		X								X			
Sustainable Development	X		X								X		
Transport Research			X										
CROSS-CUTTING AREAS													
Applied Research						X		X					X
Basic Research		X				X	X	X	X	X			X
Development Works						X		X					
Global Stewardship	X										X		
Higher Education													X
Innovation Activities						X		X					
Mobility and Human Resources			X										
Partnerships	X										X		
Research Infrastructure			X										
S&T Education	X										X		
S&T Policy and Management		X							X	X	X		
Science in Society			X								X		
Science-based Decision Making													
Technologies Applied to Cultural Heritage							X						
Please note: This list only includes those 13 agreements that reported specific cooperative areas within the S&T Agreement. For Macedonia information was not available. There were 18 agreements total surveyed.	Bulgaria	Croatia	European Union	Germany	Greece	Hungary	Italy	Poland	Romania	Slovakia	Slovenia	Spain	Switzerland

AGREEMENT

ANNEX III: U.S.-EC IMPLEMENTING ARRANGEMENTS

U.S. Environmental Protection Agency

IMPLEMENTING ARRANGEMENT

between the

European Commission

and the

United States
Environmental Protection Agency

to

Promote Cooperation
on
Environmental Research and Ecoinformatics

Pursuant to Article 5 (b) of the Agreement for Scientific and Technological Cooperation between the European Community and the Government of the United States of America[1] (hereinafter referred to as the "Agreement"), an Implementing Arrangement to promote cooperation in the fields of environmental research and ecoinformatics is hereby established between the European Commission (EC) and the United States Environmental Protection Agency (US EPA) (hereinafter referred to as the "Sides").

The purpose of this Implementing Arrangement is to advance cooperation in environmental research and ecoinformatics between the Sides, complementing the cooperation established through other Implementing Arrangements under the Agreement or through other relevant agreements. This Implementing Arrangement is concluded as a legally non-binding instrument which, therefore, is not intended to create rights and obligations binding under international law.

[1] Entered into force on 14 October 1998 for an initial period of five years and renewed for a period of 5 years, effective as from 4 October 2004. OJ L 284 of 22.10.98 p.37 and OJ L 335 of 11.11.2004 p. 7

1. AREAS OF COOPERATIVE ACTIVITIES

Cooperative activities may be undertaken in the field of environment consistent with the priorities and research programs managed by both Sides, including but not limited to the European Community's Framework Programme for research, technological development and demonstration activities, and US EPA's Strategic Plan and research strategies. Cooperation may proceed on any technical topic deemed to be of mutual interest to both Sides, including but not limited to the following research areas:

Ecoinformatics and information systems: Cooperation may focus on linking environment, environmental management and ecology with informatics and information and communication technologies to improve interoperability. Research topics may include information systems, ontology issues, terminology standardization, web mining, semantic web, and indicator issues. Information and communication technologies include a wide variety of collaborative and interactive tools (e.g., portals, data grids, web services) and associated data-sharing formats and exchange formats that better integrate data and tools for improved system connectivity. A common environmental thesaurus is to be developed.

Environmental and sustainability indicators: Cooperation may focus on exchange of information on indicators of environmental quality and sustainable development and on research activities to improve existing indicators or develop new ones. This may include development of composite indicators for presenting information in complex issues and supporting more informed decision-making. Cooperation also may focus on forecasting future changes in indicators and models and tools for analyzing linkages among indicators. Cooperation should take into account relevant international work done by other organizations, such as the United Nations (UN) and the Organisation for Economic Co-operation and Development (OECD).

Formal analysis of uncertainty in environmental models: Cooperation may focus on reviewing, developing and implementing analytical and descriptive methods for managing uncertainty within and across models (including uncertainties associated with model framing and selection, and decision-making). Cooperation also may focus on developing and implementing conceptual frameworks of analysis, including formal and informal methods, enabling an extended peer community to participate fully in the framing, choice and evaluation of models and policy options.

Decision support tools: Cooperation may focus on the development and common use of integrated environmental modeling frameworks or standards for enhanced model connectivity or expert systems. Expanded linkages with the European Cooperation in the Field of Scientific and Technical Research (COST) are also to be explored. Additionally, search techniques such as data mining are to be used to analyze the growing variety of environmental and health data sources.

Environment and health: Cooperation to better understand environment-health linkages, improved methods for tracking chronic disease, and characterizing exposures and environmental hazards are necessary in addition to traditional epidemiological studies using population cohorts. Use of these techniques would advance knowledge of long-term health impacts (such as cardiopulmonary disease, cancer, and developmental problems) from air pollution or endocrine-disrupting chemicals. Advancing environment and health sciences also can rely on new approaches such as the Global Earth Observation System of Systems

(GEOSS) process. Cooperation may include computational methods development and determining the impact of endocrine disruptors on humans and wildlife.

Sustainable chemistry and materials: Cooperation in this area may include the development, assessment and implementation of computer-based methods for assessing the environmental distribution and fate of chemicals and products and their effects on human health and the environment. Efforts also may include developing models for integrated chemical risk assessment and data formats and supporting the efficient exchange of information across regulatory programs and information systems. In order to promote alternatives to animal testing, cooperation also may focus on developments in computational chemistry.

Nanotechnology uses and impacts: Cooperation may include research and other related initiatives on applications of nanotechnology-based products to prevent and reverse environmental damage, improve environmental conditions, and enhance environmental monitoring capabilities (such as soil remediation, water purification, desalination, improved catalysts, and high-sensitivity chemical sensors). Research on using nanotechnology to reduce the environmental impacts of industrial processes and producing nanomaterials with minimal environmental impact is to be encouraged. Cooperation may extend to exchange of information on nanosciences, nanotechnologies and converging technologies with potential impact on the environment. In particular, potential impacts of manufactured nanoparticles and nanostructured materials and products on human health and the environment (such as toxicology, fate, transport and transformation, bioavailability, life cycle assessment, and exposures of human and other species in natural ecosystems) may also be considered.

Environmental technologies: Cooperation may focus on systemic analysis and methodologies for technology assessment (life cycle analysis, eco-innovation, and eco-efficiency), environmental technologies verification systems, innovative measures to support or finance eco-innovation and new ideas on raising awareness among consumers. It also may address new techniques, methodologies and incentive schemes to improve the environmental performance of various economic sectors and promote commercialization of environmental technologies. It may include environmental monitoring technologies, including remote sensing, environmental models and assessment technologies such as those being organized under the Global Earth Observation System of Systems (GEOSS) process, and nanotechnology-based sensors, sensorweb and adaptive systems.

Emissions from transport and air quality management: Cooperation in this area may focus on the field of advanced fuels and innovative vehicle concepts and on the field of air quality where emphasis may be given to the development and application of air-quality management tools such as economic analysis, modeling, optimization, emission inventories, and monitoring in support of emission abatement strategies.

2. FORMS OF COOPERATIVE ACTIVITIES

Cooperative activities may include but are not limited to:

a) direct collaboration between consortia and researchers funded by the two Sides;

b) exchange of information among researchers and program managers;

c) joint sponsorship of conferences, workshops or meetings; and

d) coordinated calls for proposals and mutual participation in peer reviews.

3. COORDINATION AND OVERSIGHT

A Steering Group representing the Sides is to be established to stimulate and coordinate cooperative activities under this Implementing Arrangement, consisting of a limited and to the extent possible equal number of official representatives of each Side. The Steering Group is to be coordinated for US EPA by the Office of Research and Development, the Office of Environmental Information, and the Office of International Affairs. For the European Commission, the Steering Group will be coordinated by the Research Directorate General.

Each Side also may designate additional participants to attend Steering Group meetings according to the topics of the agenda.

The Steering Group is to be responsible for the following tasks:

a) Updating areas of cooperative activities, identifying objectives, and developing implementation plans for each year;

b) Reviewing and evaluating completed activities;

c) Developing or identifying a collaborative web-based portal;

d) Reporting periodically on cooperative activities; and

e) Exchanging information on programs, practices, laws and regulations relevant to cooperation under this Implementing Arrangement.

The Steering Group is expected to ensure coordination and exchange of information with other bilateral relevant initiatives with a view to increase synergies and avoid overlap.

The Steering Group is expected to encourage the broadest possible participation in the work of this Implementing Arrangement from entities within the EC and US EPA as well as from relevant external agencies, experts and organizations. The Steering Group is expected to work on the basis of consensus and convene officially at least once a year or as mutually determined by the Sides. These discussions may take place in the European Community or in the United States of America or by electronic means, with the hosting side providing organization and staffing support.

4. FUNDING

Cooperative activities under this Implementing Arrangement are subject to the availability of appropriated funds, to the applicable laws and regulations, policies and programs of each Side, and to the terms of the Agreement.

All costs resulting from cooperation under this Implementing Arrangement are to be borne by the Side that incurs them, including participation in meetings of the Steering Group unless otherwise mutually determined by the Sides.

5. TREATMENT OF INTELLECTUAL PROPERTY

The provisions of Article 9 of the Agreement are to apply.

6. EFFECTIVE DATE, DURATION, DISCONTINUATION, MODIFICATION AND INTERPRETATION

Activities under this Implementing Arrangement may commence upon signature by both Sides.

They may continue for the period of the Agreement, unless participation is discontinued by either Side, for which the discontinuing Side is expected to provide 90 days' written notice to the other Side. Extending the duration of the Agreement also extends this Implementing Arrangement for the same period.

This Implementing Arrangement also may be amended in writing by the two Sides, consistent with the Agreement.

All questions or disputes related to the interpretation or implementation of this Implementing Arrangement are to be settled by consultation.

Signed in duplicate in the English language in Washington, D.C. on the 31ST day of JANUARY, 2007, and in Brussels on the 9TH day of FEBRUARY 2007.

For the European Commission

Director-General for Research

For the United States Environmental Protection Agency

Administrator

National Science Foundation

IMPLEMETING ARRANGEMENT

Between

THE EUROPEAN COMMISSION

And

THE NATIONAL SCIENCE FOUNDATION
of the
UNITED STATES

For

Cooperative Activities in the Area of Environment Research, in particular Climate Change ; Marine Science and Technology ; Seismic Risk and Hazards Reduction ; Arctic Research ; and Environmental Biology Research

According to the terms of the Agreement for Scientific and Technological Cooperation between the European Community and the Government of the United States of America, entered into force on 14 October 1998 for an initial period of five years, hereinafter referred to as the « Agreement », an Implementing Arrangement to cover cooperative activities in the study of the environment, in particular of climate change, marine science and technology, seismic risk and hazards reduction, Arctic procesesses, and environmental biology is hereby established between the European Commission (EC) and the National Science Foundation (NSF) of the United States (hereinafter referred to as the « sides »).

The purpose of this Implementing Arrangement is to advance cooperation in environment research, especially to study and to improve understanding of climate change, marine science and technology, seismic risk and hazards reduction, Arctic processes, and environmental biology. It is intended to achieve this purpose through encouragement, development and facilitation of observational and research programs and through analysis and exchange of collected data and scientific results.

Activities are expected to be conducted on the basis of mutual benefit based on an overall balance of advantages, reciprocal opportunities to engage in cooperative activities, and equitable and fair treatment. This Implementing Arrangement is not intended to create obligations binding under international law.

1. Areas of cooperative activities

Cooperative activities may be undertaken in the study of climate change, marine science and technology, seismic risk and hazards reduction, Arctic processes, and environmental biology as set out in the European Community's Thematic Programme Environment and Sustainable Development and as set out in NSF Programs in Geosciences, Arctic Sciences, Engineering, and Biological Sciences, in particular :

Climate research

- Carbon cycle, including terrestrial aspects ;

- Forecasting (needs and limits) and observation ;
- Comparison of modeling results and observation ; validation ;
- Impacts assessments (water, land resources) ; and
- North Atlantic variability.

Marine Science and Technology

- Ocean observing systems ;
- Marine biodiversity ;
- Ocean drilling ;
- Coastal engineering ;
- Continental margin research ;
- Global ocean ecosystem dynamics ;
- Harmful algal blooms ; and
- Endocrine disruptors.

Seismic Risk and Hazards Reduction

- Hazards assessment ;
- Seismology ; and
- Earthquake Engineering (including Geotechnical Aspects).

Arctic Research

- Exchanges between the Arctic and North Atlantic ; and
- Environmental observatories (e.g. Summit, Greenland).

Environmental Biology

- Ecological observatories ; and
- Long-term ecological research.

In developing cooperation in these areas (including the setting-up of relevant infrastructure), the sides intend to emphasize efficient use of new electronic communication and information technologies and systems and new e-science capabilities.

2. Forms of cooperative activities

The following forms of cooperative activities are envisaged :

3.2 Exchange of information regarding scientific and technological objectives, plans and program announcements and calls for proposals of the sides as they relate to the study of climate change, marine science and technology, seismic risk and hazards reduction, Arctic processes, and environmental biology.

2.2. Activities to promote, within the respective research communities, the opportunities provided by this Implementing Arrangement ; e.g. through NSF Program Announcements and the European Commission's calls for proposals ;

2.3 Joint support of collaborative research, observational and related programs ; coordinated support of complementary research, observational and related programs ; supplemental support to existing grants, contracts and agreements ; and funding of other related cooperative activities for mutual benefit and added value ;

2.4 Joint organization of scientific seminars, conferences, symposia, and workshops ;

3. Coordination and Oversight

3.1 A Steering Group should be established to stimulate and coordinate co-operative activities under this Implementing Arrangement. The Steering Group may consist of two representatives from each side. Each side may designate additional participants in Steering Group meetings. The Steering Group may be co-chaired by the Assistant Director for Geosciences of the NSF and by the Director of the Environment Research Programme of the Research Directorate-General of the European Commission, or their respective designees.

3.2 The Steering Group may :

3.2.1 Exchange information on programs, practices, laws, and regulations relevant to cooperation under this Implementing Arrangement ;

3.2.2 Identify objectives and develop implementation plans for cooperative activities for each upcoming year ;

3.2.3 Review and evaluate completed activities ;

3.2.4 Decide on additional areas of cooperative activities ; and

3.2.5 Issue an annual progress report on the cooperation activities.

3.3 It is intended that the Steering Group meet at least once a year, alternately in the European Community and in the United States of America ; the hosting side providing organization and staffing.

4. Funding

4.1 Cooperative activities under this Implementing Arrangement will be subject to the availability of appropriated funds and to the applicable laws and regulations, policies and programs of each side, and to the terms of the Agreement.

4.2 Each side will bear the costs of its participation (e.g., for travel and accommodation) in meetings of the Steering Group. However, other costs directly associated with meetings of the Steering Group will be born by the side hosting the meeting.

5. Duration

Activities under this Implementing Arrangement may commence upon signature by both sides and may continue for the period of the Agreement, as signed or as extended, unless

terminated by either side upon ninety days written notice. This Implementing Arrangement may be amended or extended by written decision of both sides.

Done in duplicate in the English language at the National Science Foundation in Arlington, on the 18th day of October 2001.

For the European Commission

Director, Environment and Sustainable Development

For the National Science Foundation
Of the United States

Coordinator for Environmental Research and Education

U.S. Department of Transportation

IMPLEMENTING ARRANGEMENT

BETWEEN

The European Commission

AND

The Department of Transportation of the United States of America

FOR

Cooperative activities in the field of research on Information and Communication Technologies applications to road transport

Consistent with the Agreement for Scientific and Technological Cooperation between the European Community and the Government of the United States of America, signed December 5, 1997, which entered into force on 14 October 1998 for an initial period of five years, and was renewed for a period of five years, effective as from 14 October 2003 hereinafter referred to as the "Agreement", an Implementing Arrangement to cover cooperative activities in the field of Information and Communication Technologies (ICT) research applied to road transport is hereby established between the European Commission Information Society and Media Directorate-General (EC/DGINFSO) and the Research and Innovative Technology Administration of the United States Department of Transportation (USDOT/RITA), hereinafter referred to as the "Sides".

The purpose of this Implementing Arrangement is to advance cooperation on research in ICT for road transport especially to contribute to a mutual understanding of each other's needs on research actions and results, in order to share results, and collaborate on ICT research applications for road transport. This Implementing Arrangement between the Sides respects differences in institutional and operational arrangements governing their actions. Consequently, this Implementing Arrangement does not create rights and obligations under international law between the United States of America and the European Commission.

The activities within the scope of this Implementing Arrangement will form an integral part of the future overarching agreement on cooperation on ITS policy, implementation and research related aspects to be established between the European Commission and the US Department of Transport.

SECTION 1 - AREAS OF COOPERATION

Cooperative activities may be undertaken in the field of the Intelligent Car Initiative and Challenge 6: "ICT for Mobility, Environmental Sustainability and Energy Efficiency" as set out in the theme "Information and Communication Technologies" (ICT), objectives ICT-2009.6.1 (ICT for Safety and Energy Efficiency in Mobility) and ICT-2009.6.2 (ICT for Mobility of the future) of the European Community's 7th Framework Programme for research technological and demonstration activities, and as set out in the relevant Programmes falling under the competence of RITA, on vehicle infrastructure integration (VII), intersection collision avoidance, vehicle-to-vehicle and autonomous vehicle safety technologies.

The Sides endeavour to cooperate in the following areas:

(1) Research and development, particularly coordination of initiatives and projects in the following areas:

(a) Co-operative vehicle-to-vehicle and vehicle-to-infrastructure systems;

(b) Cost/benefit and impact assessment of Intelligent Transport safety systems both on-board and cooperative, resulting from research projects;

(c) Collision avoidance at intersections;

(d) Architecture for Information and Communication Technologies for road transportation;

(e) Field operational tests for ICT research;

(f) Research of ICT applications on energy and the environment;

(g) ICT for Mobility services for people and goods.

(2) Periodic dialogue to deepen mutual understanding of programme implementation and emerging new challenges through exchange of information on:

(a) On-going research and development projects;

(b) Potential future collaboration on research;

(c) Research results take up and awareness campaigns;

(d) Other related issues.

(3) Sharing of ICT research, demonstrations, and Field Operational Tests (FOT) results.

SECTION 2 - FORMS OF COOPERATION

The activities to be pursued in the context of the areas of cooperation referred to in the Arrangement may include:

(1) Exchanging information and documentation. Each Side is to endeavour to provide the other with all information necessary for the cooperation and the implementation of activities listed under Sections 1. (1) and 1. (2) of this Implementing Arrangement.

(2) Coordinating studies, programmes, and activities.

(3) Conducting joint analyses and evaluations.

(4) Participating in working groups in conformity with rules applicable to such participation.

The Sides are to endeavour to provide equivalent opportunities to the industry from each other's side in terms of contributing to work and access to information and results from the cooperative activities resulting from this Implementing Arrangement, subject to national and international law, policy and other guidance that may apply.

SECTION 3 – COORDINATION AND OVERSIGHT

A Steering Group will be established to stimulate and coordinate co-operative activities under this Implementing Arrangement. The Steering Group may consist of two representatives from each Side. Each Side may designate additional participants in Steering Group Meetings. The steering Group may be co-chaired by the Sides.

It is intended that the Steering Group meet at least once a year, alternately in the European Community and in the United States of America, the hosting Side providing organisation and staffing. At their meetings, the Sides expect to evaluate the status of co-operation under this Implementing Agreement. This evaluation shall include a review of the past year's activities and

accomplishments and of the activities planned for the coming year within each of the areas listed in Section 1, an assessment of the balances of exchanges within each of the areas listed in Section 1, and consideration of measures required to correcting any imbalances. Tasks of the Steering Group are to also include: overseeing and encouraging co-operative activities, exchanging information on programmes, practices, laws and regulations relevant to co-operation on research, suggesting objectives and co-operative activities for each upcoming year and proposing ad hoc activities under this Implementing Arrangement.

SECTION 4 - EXCHANGE OF PERSONNEL

The Sides may, at their own expense, and subject to consent of the other Side, exchange technical/scientific personnel as required to pursue activities identified by this Implementing Arrangement. Such personnel may be from the USDOT, the Commission, or supporting government agencies or contractors, as mutually decided.

SECTION 5 – FUNDING

Cooperative activities under this Implementing Arrangement are subject to the availability of appropriated funds and to the applicable laws and regulations, policies and programmes of each Side, and to the terms of the Arrangement.

Each Side is to bear the costs of participation (e.g., for travel and accommodation) in meetings of the Steering Group. However, other costs directly associated with meetings of the Steering Group are to be borne by the Side hosting the meeting. For DG INFSO the financial implications of the Implementing Arrangement are covered by the 7th Framework Programme legal basis.

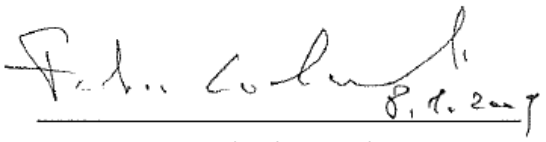
SECTION 6 – INTELLECTUAL PROPERTY

Rights related to any form of intellectual property arising under this Implementing Arrangement should be allocated in conformity with the rules and procedures set out in the Intellectual Property Rights Annex attached to the Agreement.

SECTION 7 – DURATION

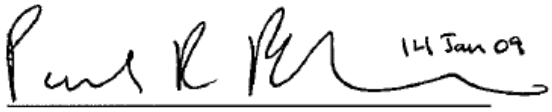
This Implementing Arrangement is to commence upon signature by both Sides. Cooperation under this Arrangement is expected to continue for the period of five years and can be renewed with mutual agreement of both Sides. If a Side decides to cease cooperation under this Arrangement, it should provide ninety days written notice to the other Side.

Signed on



Fabio Colasanti
Director General

Information Society and Media
Directorate General
European Commission



Paul R. Brubaker
Administrator

Research and Innovative Technology Administration
Department of Transportation
United States of America

U.S. Department of Energy

IMPLEMENTING AGREEMENT

between

the Department of Energy of the United States of America

and

the European Commission

for

NON-NUCLEAR ENERGY

SCIENTIFIC AND TECHNOLOGICAL CO-OPERATION

In accordance with the Agreement for Scientific and Technological Co-operation between the United States of America and the European Community signed on December 5, 1997 and entered into force on October 14, 1998, this Implementing Arrangement applies to scientific and technological co-operation between the Department of Energy of the United States of America and the European Commission (hereinafter referred to as "the Sides") in the field of non-nuclear energy.

The objective of this Implementing Arrangement is to establish a framework for collaboration between the Sides in specific areas where the programs of the Sides complement one another as well as those in which comparability exists and is intended to result in an overall balance of mutual benefit based on equitable and fair treatment.

SECTION 1 - AREAS OF COOPERATION

Co-operative activities may be undertaken in the field of non-nuclear energy research, technological development and demonstration as set out in the European Community's fifth Framework Programme for research, technological development and demonstration activities, and as set out by the United States Department of Energy, in particular:

a. Fossil energy resources (including, but not limited to, generation of electricity and mitigation of climate change).

b. New (including, but not limited to, fuel cells and the use of hydrogen) and renewable (e.g., wind, solar, bio-energy, geothermal) energy.

c. Energy efficiency (including, but not limited to, transmission and storage of energy).

d. Sharing of unique R&D facilities.

e. Other areas of co-operation which may be added by mutual written agreement of the Sides.

SECTION 2 - FORMS OF COOPERATION

Co-operation in accordance with this Implementing Arrangement may include, but is not limited to, the following forms:

a. Provision of reciprocal opportunities for entities from the European Community and from the United States of America to participate in the other Side's programs as referred to in Section 1.

b. Exchange and provision of information and data on scientific and technical activities, developments, practices and results, forthcoming calls for proposals, and on program policies and plans including exchange of proprietary information on the terms and conditions in accordance with Section 7.

c. Exchange of scientists, engineers, and other specialists for agreed periods of time in order to participate in experiments, analysis, design and other research and development activities at existing and new research centres, laboratories, engineering offices and other facilities and enterprises of each of the Sides or its associated organisations or contractors.

d. Exchange and provisions of samples, materials and equipment for experiments, testing and evaluation.

e. Meetings of various forms to discuss and exchange information on scientific and technological aspects of general or specific subjects in the areas listed in Section 1, and to identify additional co-operative actions which may be usefully undertaken.

f. Execution of joint studies, projects or experiments (i.e., joint design, construction and operation) including activities in partnership with private industry and non-governmental organisations selected through calls for proposals issued by either Side or through co-ordinated calls by both Sides.

g. Other specific forms of collaboration may be added by mutual written agreement of the Sides.

SECTION 3 - STEERING GROUP

To supervise the execution of this Implementing Arrangement, a Steering Group shall be established to which each Side shall designate two or three persons to serve as Lead Co-ordinators. Lead Co-ordinators shall appoint a Technical Co-ordinator for each of the technical fields or groups of related technical fields as may be necessary. For the European Commission, DG Research, DG Energy and Transport and the Joint Research Centre shall each designate a Lead Co-ordinator.

b. The Lead Co-ordinators shall normally meet each year, alternately in the United States and Europe, the hosting Side providing organisation and secretariat. At their meetings, the Lead Co-ordinators shall evaluate the status of co-operation under this Implementing Arrangement. This evaluation shall include a review of the past year's activities and accomplishments and of the activities planned for the coming year within each of the technical fields or groups of related technical fields listed in Section 1, an assessment of the balances of exchanges within each of the technical fields or groups of technical fields listed in Section 1, and consideration of measures required to correct any imbalances.

c. Tasks of the Steering Group shall also include: overseeing and encouraging co-operative activities, exchanging information on programs, practices, laws and regulations relevant to co-operation, suggesting objectives and co-operative activities for each upcoming year and proposing ad hoc activities under this Implementing Arrangement. In addition, the Lead Co-ordinators shall consider and act on any major new proposals for collaboration. Technical Co-ordinators may, at the discretion of the Lead Co-ordinators, participate in these annual meetings.

SECTION 4 – ASSIGNMENTS AND EXCHANGE OF PERSONNEL

Unless otherwise agreed in writing, the following provisions shall apply concerning assignments and exchanges of personnel under this Implementing Arrangement:

a. Each Side may, at its own expense, and subject to agreement of the other Side, observe test activities and analytical work of the other Side. Such observation may be accomplished by short-term visits or by the assignment of staff, subject to the prior agreement of the receiving Side on each occasion.

b. Whenever an assignment or exchange of staff is contemplated under this Implementing Arrangement, each Side shall select qualified staff for assignment to the other Side to conduct the activities planned under this Implementing Arrangement. Each such exchange of personnel shall be mutually agreed in advance by an exchange of letters between the Sides, referencing this Implementing Arrangement and its pertinent intellectual property provisions.

c. Each Side shall be responsible for the salaries, insurance, and allowances to be paid to its staff or contractors.

d. Each Side shall pay for the travel and living expenses of its staff while on assignment to the host Side, unless otherwise agreed.

e. Each Side shall arrange for accommodation for the other Side's assigned staff or its contractors (and their families) on a mutually agreeable reciprocal basis.

f. The host Side shall provide all necessary assistance to the assigned staff or its contractors (and their families) of the other Side regarding administrative formalities.

g. The staff of each Side and its contractors shall be subject to the general and special rules of work and safety regulations in force at the host establishment.

SECTION 5 – EXCHANGE OF EQUIPMENT

Unless otherwise agreed in writing, the following provisions shall apply to the provision of equipment by one Side to the other Side under this Implementing Arrangement:

a. The sending Side shall supply to the other Side as soon as possible a detailed list of the equipment to be provided, together with the associated specifications and technical and informational documentation.

b. The equipment, spare parts, and documentation supplied by the sending Side shall remain the property of the sending Side and shall be returned to the sending Side upon completion of the mutually agreed upon activity unless otherwise agreed.

c. The host establishment shall provide the necessary premises and shelter for the equipment, and shall provide for electric power, water and gas in accordance with all technical requirements, which shall be as mutually agreed upon by the Sides.

d. The sending Side shall be responsible for expenses, safekeeping and insurance during the transport of the material from the original location in the country of the sending Side to the place of entry in the country of the receiving Side. If the sending Side elects to have the material returned, the sending Side shall be responsible for expenses, safekeeping, and insurance during the transport of the material from the original point of entry in the country of the receiving Side to the final destination in the country of the sending Side.

e. The receiving Side shall be responsible for expenses, safekeeping, and insurance during the transport of the material from the place of entry in the country of the receiving Side to the final destination in the country of the receiving Side. If the sending Side elects to have the material returned, the receiving Side shall be responsible for expenses, safekeeping, and insurance during the transport of the material from the final destination in the country of the receiving Side to the original point of entry in the country of the receiving Side.

f. The equipment provided by the sending Sides for carrying out mutually agreed-upon activities shall be considered to be scientific, not having a commercial character.

SECTION 6 – SAMPLES AND MATERIALS

a. Unless otherwise agreed by the Sides prior to delivery, all samples and materials provided by the sending Side to the receiving Side shall not be returned to the sending Side.

b. Where one Side requests that a sample or material be provided by the other Side, the Side making the request shall bear all costs and expenses associated with the transportation of the sample or material from the location of the sending Side to the final destination.

c. Each Side shall promptly disclose to the other Side all information arising from the examination or testing of samples or materials exchanged under this Implementing Arrangement. The Sides agree that proprietary information, as defined in the Annex to the US-EC S&T Agreement, which was developed prior to or outside the scope of this Implementing Arrangement, shall remain proprietary information even though it is contained in the results of an examination or testing of samples and materials. Such information shall be identified as proprietary by the Side asserting its proprietary nature as soon as possible after disclosure of all information arising from the examination or testing is made to such Side and the other Side shall be immediately advised of that identification. All information identified as proprietary shall be controlled as provided under the Annex to the US-EC S&T Agreement. It is further understood and agreed that one Side providing samples or materials to the other Side may also provide a partial or complete list of the types of information which will arise from the examination or testing of such samples or materials and which is proprietary information as defined in the Annex to the US-EC S&T Agreement and all such proprietary information is to be controlled as set out in the Annex to the US-EC S&T Agreement.

SECTION 7 - INTELLECTUAL PROPERTY

Rights related to any form of intellectual property arising under this Implementing Arrangement shall be allocated in conformity with the rules and procedures set out in the Intellectual Property Rights Annex attached to the Agreement for Scientific and Technological Co-operation between the United States of America and the European Community signed on December 5, 1997 and entered into force on October 14, 1998, which forms an integral part of this Arrangement.

SECTION 8 - GENERAL PROVISION

The provisions of the S&T Agreement shall apply to this Implementing Arrangement.

SECTION 9 – FUNDING

a. Except as otherwise specified in this Implementing Arrangement or when otherwise specifically agreed to in writing by the Sides, all costs resulting from co-operation under this Implementing Arrangement shall be borne by the Side that incurs them. Activities under this Implementing Arrangement shall be subject to the availability of appropriated funds.

b. Each Side shall bear the costs of participation in meetings of the Steering Group. However, costs, other than those for travel and accommodation, which are directly associated with meetings of the Lead Co-ordinators, shall be borne by the hosting Side.

SECTION 10 - DURATION AND TERMINATION

a. This Implementing Arrangement shall enter into force upon signature by both Sides and shall remain in force for the period of the US-EC S&T Agreement.

b. This Implementing Arrangement may be amended by mutual written agreement of the Sides. This Implementing Arrangement may be terminated at any time by either Side upon six (6) months written notice.

c. The expiration or termination of this Implementing Arrangement shall not affect the validity or duration of any specific rights and obligations that have accrued in compliance with Section 7. The expiration or termination of this Implementing Arrangement shall not affect the validity or duration of projects under this Implementing Arrangement that are initiated prior to such expiration or termination, unless mutually agreed, and such projects may be continued until their completion under the terms of this Implementing Arrangement.

Done in duplicate in the English language at Brussels, this 14th day of May, 2001

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

FOR THE EUROPEAN COMMISSION

Member of the Commission

AMENDMENT

TO THE

IMPLEMENTING AGREEMENT BETWEEN THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA AND THE EUROPEAN COMMISSION

FOR

NON-NUCLEAR ENERGY SCIENTIFIC AND TECHNOLOGICAL COOPERATION RELATING TO

COOPERATION IN THE AREA OF FUEL CELLS

Whereas:

The Department of Energy of the United States of America (DOE) and the

European Commission (EC), hereinafter referred to as the "Sides";

Noting that the Agreement for Scientific and Technological Cooperation between the United States of America and the European Commission ("the Sides"), signed on December 5, 1997, (S&T Agreement) supports cooperation in a wide range of areas of research and development;

Having signed an Implementing Agreement for Cooperation in Non-Nuclear Energy Scientific and Technological Cooperation on May 14, 2001, that is subject to, and governed by the S&T Agreement; and

Believing that the Sides continue to have capabilities which can assist each other in their effort to advance the status of research and development;

It is hereby agreed to amend the Implementing Agreement as follows:

1. The Sides agree to designate the existing Section 1 as paragraph 1 and to add the following new paragraphs to Section 1 of the Implementing Agreement, as follows:

The Sides agree to establish a framework for collaboration in the field of fuel cell technology, in transportation and stationary applications. The areas of mutual interest between the Sides are as follows:

"a. Transportation demos, including fueling infrastructure;

b. Auxiliary Power Units (APUs);

c. Codes and standards including fuel infrastructure, vehicles, and APU's;

d. Fuel choice studies and socio-economic and environmental assessment (environmental technology assessment) of critical materials availability for low temperature fuel cells;

e. Solid Oxide Fuel Cells (SOFC) and high temperature fuel cell hybrid systems;

f. Support Studies, including socio-economic assessment of critical rare earth materials for high temperature fuel cells;

g. Direct methanol and Polymer Electrolyte Membrane (PEM) fuel cells for transportation and stationary applications".

2. The sides agree to add the following new paragraphs to Section 3 of the Implementing Arrangement, as follows:

"d . The supervision of the execution of cooperation under Section 1, paragraph 2 will be carried out in accordance with this Section. Lead Coordinators of each Side shall name a Technical Coordinator. The European Commission shall name one Technical Coordinator representing DG Research, DG Energy and Transport and the Joint Research Centre.

e . The Technical Coordinators of both Sides shall meet at least once a year, preferably alternatively in the United States and Europe or at such other times and places as jointly agreed, the hosting Side providing organisation and secretariat of the meetings.

f . At their meetings, the Technical Coordinators shall evaluate the status of co-operation under Section1, paragraph 2. This evaluation shall include a review of the past year's activities and accomplishments, a review of the activities planned for the coming year within each of the areas of cooperation mentioned and consideration of measures required to correct any imbalances.

g . The Technical Coordinators shall provide an annual report on the status of cooperation under Section 1, paragraph 2 to the Lead Coordinators of the Steering Group at the anniversary date of signature of this Amendment".

Done in duplicate in the English language at Brussels this 16 day of June, 2003.

FOR THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

(Signed) Spencer Abraham

FOR THE EUROPEAN COMMISSION

(Signed) Philippe Busquin