

2.3. Canada

2.3.1. *Canada as a partner of the EU*

Canada is one of the EU's long standing and closest partners, diplomatic relations having started formally in 1976. The recent political breakthroughs on the Comprehensive Economic and Trade Agreement (CETA) and the Strategic Partnership Agreement (SPA) will further enhance this strong relationship. The ambitious SPA, which was initialed in September 2014 in Ottawa, will provide an overall upgrade and an umbrella for the bilateral relations. It will replace the 1976 Framework Agreement with a modern Treaty reflecting the major developments within the European Union over the last decades. SPA will reinforce cooperation in such strategic areas as international peace and security, human rights, environment, research, innovation, energy security and education.

The European Union and Canada also cooperate actively on various Arctic issues.

Canada is one of the world's five largest energy producers and has benefitted from the revolution in unconventional oil and gas production. The new Canadian government is putting more emphasis on environment and climate and at the COP 21, Canada was particularly active in helping to secure a robust and ambitious outcome not least by supporting the 1.5°C target.

Canada has a well-established and strong post-secondary education system and benefits from some world-class university research. As a result health and medical research as well as physics and psychology are extremely strong scientific areas. Strengths in industrial research can be found for example in aeronautics, ICT or oil and gas extraction.

The Agreement for Scientific and Technological Cooperation between Canada and the European Union has been in place since 1996.

2.3.2. *Priorities for S&T cooperation*

EU-Canada marine science cooperation is moving from strategic planning to implementation of priority activities in the form of large and concrete research projects since the beginning of Horizon 2020. The trilateral marine working group EU-Canada-US is exploring opportunities to strengthen industry engagement with the Galway initiative on Atlantic Ocean Cooperation¹⁹. It is also working on increasing the coordination with the Canada-EU Arctic Working Group and developing concrete milestones for implementation of the Galway initiative, including alignment of programmes and funding.

The Horizon 2020 WP 2016-17 included an "arctic package" of two project calls for 2016 and one project call for 2017 under the 'Blue Growth' call, inviting all proposers to consider Canadian and US participation. EU funding for this package is in the order of 40 million €.

Big-data, research data and cyber-security have been identified as potential areas for future cooperation under ICT.

Concerning health research, both the EU and Canada continue to be jointly involved in all the multilateral research initiatives that the EU has either started or joined. Some of them are the International Rare Diseases Research Consortium (IRDiRC), the Global Alliance for Chronic Diseases (GACD), the International Human Epigenome Consortium

¹⁹ https://ec.europa.eu/research/iscp/pdf/galway_statement_atlantic_ocean_cooperation.pdf

(IHEC) or the International Initiative for Traumatic Brain Injury Research (InTBIR). Moreover, both Canada and the EU are members of the Human Frontier Science Programme (HFSP). Last but not least, Canada continues to invest in several Joint Programming initiatives such as the Joint Programming on Neurodegenerative Diseases²⁰ and the Joint Programming Initiative on Anti-Microbial Resistance²¹. Furthermore, funding agencies from Canada participate in the E-Rare-3 ERA-NET which coordinates research programmes on rare diseases²².

A specific energy research call in the 2017 WP of H2020 will provide European and North American (both Canada and US) researchers, industry and policymakers with a platform to enhance and deepen transatlantic dialogue on environmental issues related to Carbon Capture and Storage and unconventional hydrocarbons development. It is expected to accelerate learning and provide advanced training. Connecting pilots and projects across the Atlantic should bring the benefits of cross-validation of technologies, sharing results, distributing tasks, bundling expertise and expanding professional networks.

The possibility of launching a second coordinated Horizon 2020 call in the aeronautics area (to follow up the successful one in 2014/15) is being investigated.

Collaboration between Europe and Canada in the domain of Research Infrastructures is highly important. Increased cooperation on marine and Arctic Research Infrastructures (interoperability, data management, better use and access, funding strategy, innovation and links with industry) is planned.

In this context, the EC may facilitate links between the Canadian High Arctic Research Station and the Svalbard Integrated Arctic Earth Observing System²³, a project on the European Roadmap for Research Infrastructure development (the ESFRI roadmap).

2.3.3. *Framework Conditions*

The Canadian government has indicated that Canadian governmental services will explore ways to expand the cooperation fields beyond the areas mentioned above. High on the cooperation agenda are topics like environment and climate change related research as well as energy research.

European and Canadian programme owners and managers are preparing for more programme level cooperation and exploring how Canadians and Europeans may partner under existing frameworks/joint programmes to better align the respective funding streams. This programme level cooperation exchange involves the major Canadian Granting Councils at federal level as well as the relevant provincial authorities.

While there is no federal matching fund in Canada concerning Horizon 2020, there seems to be a growing interest in the provinces to use provincial funding programmes to support Canadian participants in Horizon 2020 projects. For example researchers from Quebec can apply for funding through a programme for international cooperation: "Programme de soutien à la recherche (PSR)- Soutien à des initiatives internationales de recherche et d'innovation (SIIRI)".

Canada has established a strong network of National Contact Points for Horizon 2020 in the main areas for cooperation so the basic information and conditions for cooperation are well known and disseminated.

²⁰ www.neurodegenerationresearch.eu

²¹ www.jpamr.eu

²² <http://www.erare.eu/>

²³ <http://www.sios-svalbard.org/>

Canadian Granting Councils and in particular the Canadian Institute for Health Research (CIHR) are well integrated in the European research landscape. Under the Horizon 2020 Societal Challenge 1 WP 2016-2017, CIHR decided to support the participation of Canadian research groups in one or more EU-funded projects selected under topic SC1-PM-01-2016 “Multi omics for personalised therapies addressing disease of the immune system” by launching a parallel funding opportunity.