

Foreign Affairs, Defence and Trade Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600



By email: fadt.sen@aph.gov.au

8 April 2020

Dear Ms Lyn Beverly,

The Australian Academy of Science welcomes the opportunity to provide a submission to the Senate Inquiry into the opportunities for strengthening Australia's relations with the Republic of France. The Academy's submission relates to bilateral science and research relations and the role of science as a diplomatic tool.

The Australian Academy of Science recommends that the Australian government consider the establishment of an Australia-France Research Fund, similar to the current Australia-China Science and Research Fund or the Australia-India Science and Research Fund. This would support a range of bilateral research activities, including support for young researchers to facilitate long-term science, technology and innovation collaboration between Australia and France. Such a fund could be expanded to cover other countries as required.

[Science and France-Australia diplomatic relations](#)

Nations rely on science to identify, understand, solve and act on the unique challenges and opportunities presented in the twenty-first century. Science diplomacy is a powerful mechanism for advancing solutions to global and multi-national problems through innovation and collaboration, and to enhance economic productivity and competitiveness. Australia's national interest depends on maintaining close engagement with other countries on matters of science and innovation.

Australia has the potential to broaden and deepen the role of its scientific sector as a soft power asset. It has an opportunity to build on the high-quality research and strong links it has with traditional powers, and to connect to other established or emerging states. Active and strategic science diplomacy delivers benefits such as influence in international and regional science programs and developing and strengthening geopolitical influence through the provision of science and technology aid to both developed and developing countries.

The Academy interacts with scientists and officials from academies, research organisations and governments of many countries to promote and increase awareness of Australia's capabilities in science and technology, and to create opportunities to influence and contribute to international research agendas and policy development activities. France, like many other countries, recognises the positive contribution that science can make to foreign policy through the

provision of science-based advice, facilitating international cooperation and the improvement of international relations.

In recent years, France has provided strong political support to enhancing diplomatic relations through science:

- A large French delegation comprising more than 50 representatives of French universities and research organisations accompanied Minister Frederique Vidal, Minister of Higher Education, Research and Innovation, in February 2019
- More than 20 agreements were signed during Minister Vidal's visit, such as between the French National Centre for Scientific Research's (CNRS) joint and associated labs, joint Master's degrees and student mobility and research agreements on renewable energy, space and health
- The 2018 French Presidential visit to Australia hosted an important science education component
- A France-Australia roadmap for science and innovation is currently being drafted. Thematic priorities are health, energy, environment, agriculture, Industry 4.0 and space.

[Australia-France science and research relations](#)

The Australian-French Association for Research and Innovation (AFRAN) promotes the development of cooperation between French and Australian research and innovation. Today it has over 600 members. It organises an annual call for projects to support bilateral initiatives and a forum that brings together its members and relevant stakeholders around a particular theme.

Australia-France cooperation in research and higher education is currently very strong, driven broadly by partnerships involving universities and industry partners. Important industry relationships are listed below.

- The first CNRS International Research Lab in Australia will begin in 2020, involving three South Australian universities and the French Naval Group
- Initiatives such as the [Nicolas Baudin internship program](#) continue to development joint research projects and improve student mobility through participation of major French companies such as Thales, Naval Group, Airbus and Dassault Systems.

Several French research organisations have a strong presence in Australia and play a key role in the structure of scientific cooperation between the two countries. CNRS and the French National Institute of Health and Medical Research (Inserm) in particular operate several joint research partnerships, with scientific missions to Australia via CNRS alone at more than 400 per year.

In addition to researcher and industry relations, Australian universities benefit from strategic partnerships between research intensive universities in many disciplines, such as:

- Université Paris Sciences et Lettres collaboration with the Australian National University in astrophysics, film studies and economics
- Université Paris-Saclay collaboration with the University of Queensland in aerospace engineering and hypersonic research
- Sorbonne Université collaboration with the University of Sydney in climate/environment and artificial intelligence.

These university-to-university relationships are strengthened by the popular cotutelle program that enables a student to graduate with a double degree or joint PhD degree from an Australian and a French university. The program was established by France in 1994 and allows a doctoral

candidate to develop knowledge about the research methods and scientific approaches of both countries, opening access to international research collaborations.

An outcome of all these important links is an increasing number of co-publications. In 2019, at least 3,650 publications involved at least one French and one Australian institution, an increase of 8% since 2018 (3,190) and 51% since 2015 (2,400). The main domains of published research collaboration are medical sciences (including oncology, neuroscience and general internal medicine), physics, astrophysics and environmental sciences (ecology and geology).

[The Australian Academy of Science](#)

The Australian Academy of Science provides independent, authoritative and influential scientific advice, promotes international scientific engagement, builds public awareness and understanding of science and champions, celebrates and supports excellence in Australian science. It is a not-for-profit organisation of individuals elected for their outstanding contributions to science and research.

The Academy strives to support and promote science through a range of programs and activities. In particular, the Academy's commitment to fostering scientific excellence in all it does, and its role in providing evidence-based science advice to government and fostering international relations through science collaboration, positions the Academy as a national institution and STEM as soft power asset for Australia.

The Academy represents the Commonwealth of Australia at the International Science Council (an international non-government organisation that acts as the global voice for science), as the national member for 31 international science unions and at various multilateral international science boards, council and partnerships. These platforms allow Australia to input scientific expertise, build strong collaborative relationships and steer global dialogue.

[Third century of science diplomacy and collaboration with France](#)

Australia's strong research collaborations with France are long-standing and highly valued. French scientific interest in the continent pre-dates the Commonwealth of Australia by at least a century. In the late 1700s, French explorers, navigators and naturalists visited Australia, and their names and those of their vessels have been memorialised in the naming of many Australian national parks, islands, capes and the suburbs of our cities. In more modern times, Australia's relationship with France has developed into a friendly and functional one. The relationship is a vital source of inspiration and collaboration across scientific disciplines in both countries.

The Australian Academy of Science and the French Académie des Sciences enjoy a strong relationship that has existed since the mid-1980s. This was instigated by a Fellow of the Australian Academy, Bede Morris, whose scientific contribution to France was recognised by their government awarding him the Chevalier dans l'Ordre Nationale du Mérite. Three past Academy presidents, Suzanne Cory, Kurt Lambeck and Sir Gustav Nossal, are among the Australian Academy Fellows to have been elected to the Académie des Sciences. Sir Gustav Nossal, Bede Morris, Susanne Cory and Kurt Lambeck have all received France's highest honour, the Légion d'Honneur. These appointments demonstrate France's recognition of the strong research links between the two countries.

The Academy has also had a long and fruitful relationship with the Embassy of France in Canberra. The embassy has employed a science attaché for many decades, whose role is to facilitate bilateral scientific and technological cooperation, promote Australian scientific and technological assets in France and French assets in Australia, and strengthen complementary

and common fields of interest. The embassy funds these programs through an annual budget of about AUD350,000. The existence of and support for such an office demonstrates the commitment of the French government to support science and research collaborations between the two countries.

Academy activities with France

The Academy facilitates, promotes and supports international engagement through a wide-ranging program of bilateral, multi-lateral and global activities. Since its establishment more than 60 years ago, the Academy has forged a long and well-established track record of successfully managing international engagements and undertaking dedicated activities for the promotion and development of scientific linkages and relationship building, including on behalf of the Australian government.

The Academy has strong links with the Académie des Sciences and the Embassy of France in Canberra. Until 2015, the Academy managed the France-Australia Science and Innovation Collaboration (FASIC) Program for Early Career Fellowships. FASIC was a joint Australian and French government-funded program that supported high-calibre early career researchers to expand research and innovation activities and initiate substantial research networks and linkages to support both countries' research and innovation priorities. This program ceased in 2015 as Australian government funding was discontinued. In 1990 the Academy established the Bede Morris Fellowship in tribute to Bede Morris's relationship with France. The fellowship supports a small number of outstanding Australian scientists to travel to France in most years to undertake a short-term research project.

The FASIC program and Bede Morris Fellowships are important initiatives that have enabled both Australian and French scientists to access knowledge and innovative technologies to which they would not otherwise have been exposed. They foster creativity in our approaches to research and grow strong collaborations, working relationships and friendships that can last a lifetime.

Summary

The Academy has long been a champion, practitioner and proactive facilitator of science as a soft power asset. The Academy encourages science to be leveraged as a soft power asset and play a much broader, deeper and systematic role in allowing Australia to exercise influence, enhance leadership and build strategic partnerships that will advance Australia's prosperity and security. The Academy strongly believes Australia can be a leader in growing scientific cooperation and encouraging science as a tool for developing informed policy.

Australia and France have demonstrated broad-based research excellence and are at the leading edge in areas such as health and medical research, food and agriculture, marine sciences and the environment, among others. The two nations enjoy a long and outstanding history of good collaboration. Australia should invest in enhancing these relationships and in exploring other research fields to uncover new opportunities for enhancing collaborations between the countries.