



MSCAdvocacy

Assessment report

R&I cooperation status

Key facts and figures: Australia



MSCAdvocacy – Project No. 101059907
This project has received funding from the
European Union's Horizon Europe.



@mscadvocacy



@mscadvocacy

Table of content

1. Australia: R&I bilateral cooperation policy context.....	3
2. Australia: National policy initiatives of relevance for MSCA.....	4
Policies and strategies in R&I and higher education.....	4
Bilateral agreements and other “competing” mobility programmes for researchers.....	6
National funding opportunities in support of MSCA	7
3. Australia: Participation and mobility patterns of MSCA in H2020	8
MSCA participation in H2020.....	8
Participant organisation in MSCA.....	8
Involvement of private sector in MSCA.....	9
4. Australia: MSCA promotion activities and opportunities.....	10
5. Australia: Other relevant information	12
6. Australia: Key messages	12
7. Australia: Annex.....	14

This country report (as of March 2023) provides an assessment of Australian participation in H2020 MSCA and identifies gaps, challenges, and opportunities for improved and more strategic promotion of MSC Actions in Horizon Europe.

More information on Australia and 19 other countries and 6 other regions are also available on the MSCAdvocacy website.

Author: Sarah Morgenstern (DLR)



1. Australia: R&I bilateral cooperation policy context

The first treaty-level science and technology agreement signed by the EU with an industrialised country was with Australia in 1994. In 1999 the amendment of the Agreement on scientific and technical cooperation between the EU and Australia was signed. The amendment made explicit reference to the stimulation of the training and mobility of researchers in the community¹.

The main fields of bilateral research collaboration between Australia and the EU have been: health, research infrastructures, information and communication technologies; food, agriculture and biotechnology. In addition, there is some collaboration in areas such as energy, environment, social sciences and humanities. At the 15th Australia-EU Joint Science and Technology Cooperation Committee meeting in 2019 in Canberra both sides noted the excellent rates of existing Australia-EU collaboration, due in part to opportunities offered by Horizon 2020 and in particular through its Marie Skłodowska-Curie Actions (MSCA).² Both sides discussed areas for ongoing and potential future collaboration, including research infrastructure, earth observation, hydrogen, open science, mission innovation and opportunities to cooperate across the Pacific.³

Within the framework of the EC's Mission Innovation, the EC and ministers from Australia, Austria, Canada, Chile, China, Germany, India, Italy, Morocco, Norway, Saudi Arabia, Republic of Korea, the UK and the US launched the "Clean Hydrogen Mission" in June 2022.⁴ Mission Innovation is a multilateral initiative working to speed up clean energy innovation.⁵

The engagement of Australia within this framework is in line with the countries' ambitions to become a **world leader for the production of (Green) hydrogen** ("Shipping Sunshine"). On the basis of "Australia's National Hydrogen Strategy" in 2019⁶ and the "Technology Investment Roadmap: First Low Emissions Technology Statement 2020"⁷ investments are being made by the national and regional governments to accelerate development and commercialisation of low emissions technologies such as hydrogen.

The main fields of bilateral research collaboration between the EU and Australia have been: health, research infrastructures, information and communication technologies; food, agriculture and biotechnology. There is some collaboration in areas such as energy, environment, social sciences and humanities. To ensure that the objectives and activities agreed between the EU and its partners such as Australia materialise, the EU develops roadmaps⁸. The latest roadmap for EU-Australia S&T cooperation

¹ Article 164 ex Article 130g(d) of the EC Treaty: https://eur-lex.europa.eu/eli/treaty/tec_1997/art_164/oj

² The next joint meeting is planned for 2023.

³ [Australia \(europa.eu\)](https://europa.eu/australia)

⁴ European Commission, Mission Innovation launches a new global coalition to support the clean hydrogen economy, https://ec.europa.eu/info/news/mission-innovation-launches-new-global-coalition-support-clean-hydrogen-economy-2021-jun-02_en#:~:text=The%20goal%20of%20the%20Clean,scale%20integrated%20hydrogen%20valleys%20worldwide

⁵ European Commission, Communication on the Global Approach to Research and Innovation, p. 8, https://research-and-innovation.ec.europa.eu/system/files/2021-05/ec_rtd_com2021-252.pdf

⁶ Australian Government, Department of Industry, Science and Resources, Australia's National Hydrogen Strategy, <https://www.industry.gov.au/data-and-publications/australias-national-hydrogen-strategy>

⁷ Australian Government, Department of Industry, Science and Resources, "Australia's National Hydrogen Strategy", <https://www.industry.gov.au/data-and-publications/technology-investment-roadmap-first-low-emissions-technology-statement-2020>

⁸ European Commission, "Roadmap for EU – Australia S&T cooperation" (October 2018), https://ec.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/documents/au_roadmap_2018.pdf



was published in October 2018 and reinforces the cooperation framework conditions and thematic research priorities defined during the 2016 Joint Science and Technology Consultation Committee (JSTCC) meeting, including research infrastructures, health, bioeconomy, earth and marine observation, metrology.

2. Australia: National policy initiatives of relevance for MSCA

Policies and strategies in R&I and higher education

In May 2015 the Australian government has published a set of the “**Science and Research Priorities**”. The factsheet lists nine priority areas and corresponding practical research challenges, designed to increase investment in areas of high strategic and geopolitical importance for Australia. The nine priority areas are as follows: **food, soil and water, transport, cybersecurity, energy, resources, advanced manufacturing, environmental change and health**.⁹

Within the framework of the **National Innovation and Science Agenda (NISA)**¹⁰ Australia adopted a ‘**Global Innovation Strategy**’ (GIS) which seeks to align existing and new initiatives, address challenges through international cooperation, support start-ups and move engagements towards multi-partner collaborative projects. GIS leverages existing government initiatives to improve whole-of-government global engagement; build business-research collaboration; attract talent and investment to the country; increase links to global value chains; and enable an innovative open market place for Australian businesses and researchers. The EU and the EU Member States (EU-MS) are recognised as one of the priority economies for cooperation. All EU-MS are eligible to apply with an Australian partner for the GIS Global Innovation Linkages programme and the Global Connections Fund.

There are six challenges that the Commonwealth Scientific and Industrial Research Organisation (CSIRO), an Australian Government corporate entity, is working on, along with the government, universities, industry and the community, to develop and deliver a mission’s programme to bolster Australia’s COVID-19 recovery and build long term resilience. This is a similar approach to what the EU is taking with the Missions in Horizon Europe. **Food Security and Quality:** Achieve sustainable regional food security and grow Australia’s share of premium AgriFood markets. **Health and Wellbeing:** Help enhance health for all through preventative, personalised, biomedical and digital health services. **Resilient and Valuable Environments:** Enhancing the resilience, sustainable use and value of our environments, including by mitigating and adapting the impacts of climate and global change. **Sustainable Energy and Resources:** Build regional energy and resource security and our competitiveness while lowering emissions. **Future Industries:** Help create Australia’s future industries and jobs by collaborating to boost innovation performance and STEM skills. **A Secure Australia and Region:** Help safeguard Australia from risks (war, terrorism, regional instability, pandemics, biosecurity, disasters and cyber-attacks).¹¹

Furthermore, Australia published several **thematic strategies and roadmaps** in recent years, that illustrate Australia’s interests in R&I:

⁹ Australian Government, Department of Industry, Science and Resources, Science and Research Priorities, [Science and Research Priorities | Department of Industry, Science and Resources](#)

¹⁰ Australian Government, Department of Industry, Science and Resources, National Innovation and Science Agenda Report, [National Innovation and Science Agenda Report | Department of Industry, Science and Resources](#)

¹¹ Information provided by EURAXESS Australia/New Zealand via survey, see also: <https://www.csiro.au/en/about/challenges-missions>



CSIRO published a **Critical Energy Minerals Roadmap**¹² that outlines opportunities how Australia can extract new value from Australia's mining and manufacturing sectors. Against the backdrop of increasing global demand for renewable and low emission technologies and the accompanying demand for critical mineral resources required to manufacture these technologies, the roadmap aims to achieve a competitive advantage for Australia.

In 2020, CSIRO developed a **Quantum Roadmap** to support facilitate the creation of a quantum industry in Australia, and to help the research community, government and industry to link-up, cooperate and commercialise.¹³

Australia's **Artificial Intelligence Roadmap**, published by the Australian Government in November 2019, and co-developed by CSIRO, identifies three high potential areas of AI specialisation for Australia based on the opportunity to solve significant problems at home, export the solutions to the world and build on Australia's existing strengths.¹⁴ The **Artificial Intelligence (AI) Action Plan**¹⁵ (2021–2030) sets out a vision for Australia to be an international leader in developing and adopting trusted, secure and responsible AI.

The **Modern Manufacturing Strategy**¹⁶ is a whole-of-government strategy to help Australian manufacturing scale-up, become more competitive and resilient. There are the following national manufacturing priorities: resources technology and critical minerals processing, food and beverage, medical products, recycling and clean energy, defense and space.

The **National Synthetic Biology Roadmap**¹⁷ aims at developing Australia's national synthetic biology ecosystem that could help to identify solutions to uniquely Australian agricultural and environmental challenges, establish cost-effective domestic manufacturing capabilities to enhance supply chain resilience, protect the country from biological threats.

Regarding **digitalisation** Australia has different strategies and policies in place, which have an important impact on the countries' R&D activities, such as the **Digital Economy Strategy 2022 Update**¹⁸, which outlines progress made on Australia becoming a top 10 digital economy and society by 2030. CSIRO Data61 is Australia's leading digital research network. At present, Australia's cyber security sector is small; however, its revenues are forecasted to triple over the coming decade due to increased demand

¹² CSIRO, Resourcing a low emission energy future, <https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/csiro-futures/energy-and-resources/critical-energy-minerals-roadmap>

¹³ CSIRO, "Quantum", <https://www.csiro.au/en/research/technology-space/quantum-technology>

¹⁴ CSIRO, "Artificial Intelligence Roadmap", <https://www.csiro.au/en/research/technology-space/ai/artificial-intelligence-roadmap>

¹⁵ CSIRO, "Artificial Intelligence Roadmap", <https://www.industry.gov.au/data-and-publications/australias-artificial-intelligence-action-plan>

¹⁶ Australian Government, Department of Industry, Science and Resources, "Make it Happen: The Australian Government's Modern Manufacturing Strategy", <https://www.industry.gov.au/data-and-publications/make-it-happen-the-australian-governments-modern-manufacturing-strategy/our-modern-manufacturing-strategy>

¹⁷ CSIRO, "Australia's Synthetic Biology Roadmap", <https://www.csiro.au/syntheticbiologyroadmap>

¹⁸ Australian Government, Department of the Prime Minister and Cabinet, "Digital Economy Strategy 2022 Update Released", <https://www.pmc.gov.au/news-centre/domestic-policy/digital-economy-strategy-2022-update-released>



for cyber security products and services. The **Cyber Security Industry Roadmap**¹⁹ was issued in order to meet this demand.

Bilateral agreements and other “competing” mobility programmes for researchers

According to desk research and the first survey results there are not many mobility programmes of the Australian Government to foster research and innovation mobility with other countries.

At national level there is one programme specifically targeting mobility: The **New Colombo Plan**. This initiative aims to increase knowledge on the Indo-Pacific in Australia by supporting Australian undergraduates to live, study and do an internship and other work-based learning in 40 locations across the region and competing with MSCA. Private sector partnerships are central to the programme’s success, assisting New Colombo Plan scholars and mobility grant recipients to have work-based experiences in the Indo-Pacific region. This programme is exclusively for the exchange of students and researchers with the Indo-Pacific region.²⁰

Australia has a **bilateral agreement** with Germany. The exchange of students and researchers is primarily funded by the German Academic Exchange Service (DAAD). The DAAD has been able to extend its exchange programme with the Group of Eight. This programme was launched in 2008 and has since then been rolled out to more than 30 of the 39 Australian universities, thanks to an agreement with 'Universities Australia', which was signed in December 2014.²¹

Other bilateral agreements including the exchange of students and researchers exist with China²², India²³ and Japan^{24 25}.

Furthermore, the Australian Research Council (ARC) has set up the **ARC Industry Fellowships Programme (IFP)**. This is a suite of three new fellowship schemes under the ARC’s Linkage Programme. These schemes are part of the University Research Commercialisation Action Plan.²⁶ The programme is intended to support researchers from industry as well as university settings. The strategic engagement and alignment between universities and industry shall be strengthened by the programme.

The so-called **“Learned Academies”**²⁷ fund various scholarships and programmes, some of them promote the mobility of researchers but usually in very precisely defined areas. Programmes of the

¹⁹ Australian Cyber Security Growth Network, “Australian Cyber Security Industry Roadmap – Executive Summary”, <https://www.austcyber.com/resources/industryroadmap>

²⁰ Australian Government, Department of Foreign Affairs and Trade, “New Colombo Plan”, <https://www.dfat.gov.au/people-to-people/new-colombo-plan>

²¹ International Bureau, “Australia”, <https://www.internationales-buero.de/en/australia.php>

²² Australian Government, Department of Industry, Science and Resources, “Australia-China Science and Research Fund–Joint Research Centres”, <https://www.industry.gov.au/policies-and-initiatives/increasing-international-collaboration/australia-china-science-and-research-fund-joint-research-centres>

²³ Australian Government, Department of Industry, Science and Resources, “Collaborating with India on science and research”, <https://www.industry.gov.au/policies-and-initiatives/increasing-international-collaboration/collaborating-with-india-on-science-and-research>

²⁴ Australian Government, Department of Foreign Affairs and Trade, “Australia-Japan Foundation Grants”, <https://www.dfat.gov.au/people-to-people/foundations-councils-institutes/australia-japan-foundation/grants>

²⁵ No claim is made to completeness.

²⁶ Australian Government, Australian Research Council, “ARC Industry Fellowships”, www.arc.gov.au/funding-research/funding-schemes/linkage-program/arc-industry-fellowships

²⁷ The Learned Academies are the Australian Academy of Science (AAS), Australian Academy of Technology and Engineering (ATSE), Australian Academy of the Humanities (AAH), Academy of the Social Sciences in Australia



Australian **Academy of Science**²⁸: Falling Walls Lab Australia, France and Europe EMCR Mobility Grants, Geoffrey Frew Fellowship, Graeme Caughley Travelling Fellowship, International Geological Congress Travel Grant Scheme, Japan Society for the Promotion of Science Fellowships, Lindau Nobel Laureate Meetings, Rudi Lemberg Travelling Fellowship, Selby Fellowship. The **Academy of Social Sciences in Australia**²⁹: Australia-France Collaborative Research Programme, Australia-China Joint Action Programme, Australian **Academy of the Humanities**³⁰: Humanities Travelling Fellowships, Ernst & Rosemarie Keller Fund.

At national level, the GIS is one of Australia's competitive grants programmes to support significant levels of international research and innovation collaboration. With regard to international collaboration in science and innovation the “**Global Science and Technology Diplomacy Fund**” (GSTDF) was announced by the Australian Government. The Australian Academy of Technology and Engineering (ATSE) together with the Australian Academy of Science will carry out the Australian Government's \$18,2 million “Global Science and Technology Diplomacy Fund – Strategic Element” over the next four years.³¹ The GSTDF has strategic and bilateral elements. The strategic element is a flexible funding arrangement. It will fund collaborative projects with identified research partners in 4 priority areas. Priority areas and identified partners for 2022 are:

- Advanced manufacturing: USA, Italy, UK, France, Switzerland
- Artificial intelligence and quantum computing: Japan, UK, France, Spain, USA
- Hydrogen production: Germany, Canada, Malaysia, South Korea, Thailand
- RNA (including mRNA) vaccines and therapies: USA, Spain, Japan, Brazil, Singapore.³²

National funding opportunities in support of MSCA

Two implementing arrangements have been signed in order to provide more opportunities for Australian scientists to collaborate with European researchers: one with the National Health and Medical Research Council (NHMRC) in 2018, and one with the ARC in 2019. The access to the Implementing Arrangement with the ARC is restricted to existing Discovery Early Researcher Awards (DECRA) recipients. The Implementing Arrangement with the NHMRC with the European Research Council (ERC) permits researchers funded by NHMRC to carry out research visits or work remotely with the ERC supported European researchers.³³

Furthermore, the Copernicus technical operating Arrangement³⁴ was signed between Australia and the EU in 2016 to improve the performance of ocean models and sea surface temperature analyses, drought monitoring, flood forecasting and agriculture.

(ASSA) and Australian Academy of Health and Medical Sciences (AAHMS). Australian Council of Learned Academies, “Member Academies”, <https://acola.org/about-us/member-academies/>

²⁸ Australian Academy of Science, “Awards and opportunities”, www.science.org.au/supporting-science/awards-and-opportunities

²⁹ Academy of the Social Sciences in Australian, “International Grants”, <https://socialsciences.org.au/international-grants/>

³⁰ Australian Academy of the Humanities, “Awards & grants”, <https://humanities.org.au/grants-and-awards/>

³¹ [Global Science and Technology Diplomacy Fund - Strategic Element | Australian Academy of Science](#)

³² <https://www.industry.gov.au/policies-and-initiatives/increasing-international-collaboration-on-science-and-research>

³³ [complementary-funding-mechanisms-in-third-countries_he_en.pdf \(europa.eu\)](#)

³⁴ [CSC IntIAgreement ESA AUS v1 15 March 2016 FinalSigned](#)



3. Australia: Participation and mobility patterns of MSCA in H2020

MSCA participation in H2020

Australia has participated in 184 MSCA COFUND, ITN, RISE and IF projects within H2020 (2014–2020), funding a total of 242 Australian nationals. The most popular action within MSCA was in the case of Australia are IF, followed by RISE³⁵.

Australia accounts for 0,42% of all MSCA participations under H2020³⁶.

By looking at the success rate of Australia's applicants of applying for funding it is 19.67%. The OCEF average is at 20.14%. This success rate is slightly below average.³⁷

Taking Australia's country potential into account, there is room for improvement in all areas. Within the 20 countries considered, Australia ranks only 11th (RISE, ITN, COFUND). Within the industrialised countries, Australia remains in average position when gross domestic expenditure on research and development (GERD) is considered.

The relatively strong participation in the MSCA of Australia reflects Australia's ranking in the Global Innovation Index which is in position 23.

Looking at disciplines, most of the projects with Australia's participation are in the fields of engineering (26%), Environment (23%) and Life Sciences (20%). At 16%, participation in social sciences is comparatively good. Participation is rather low in the fields of chemistry (7%), Mathematics (4%), Physics and Economy (3%).³⁸ These figures reflect the strengths of Australia and the common thematic priorities, namely in engineering and technology as well as in medical and health sciences.

525 researchers were going to Australian organisations, while only 242 Australian nationals left to the EU or associated countries, highlighting a very unbalanced researcher flow, with nearly half as much researchers incoming than outgoing.

Participant organisation in MSCA

A total of 40 distinct organisations from Australia participated in Horizon 2020 MSCA.

With about 95% nearly all participating organisations in MSCA from Australia come from the academic sector. The non-academic sector occurs for the remaining 5%³⁹.

At current stage 30% of the country's top research excellence organisations are not yet involved in MSCA at all. These organisations, together with the private sector (see following chapter) offer great opportunities for a better placement of MSCA.

Among the top 100 SCImago Institutions Ranking four universities are located in Australia: University of Melbourne (62), University of Sydney (65), University of Queensland (81) and Monash University Melbourne (92). In the Times Higher Education Ranking of the worldwide top 100 universities Australia is represented by five universities: University of Melbourne (32), Australian National University (50),

³⁵ MSCA Dashboard, data status 23/01/2023.

³⁶ <https://webgate.ec.europa.eu/dashboard/extensions/CountryProfile/CountryProfile.html?Country=Australia>

³⁷ Country factsheet Australia EU-Commission

³⁸ The figures have been rounded up or down. Source: Fact Sheet Australia by the European Commission

³⁹ MSCA country profile Australia



University of Sydney (60), University of Queensland (66) and the University of New South Wales Sydney (71).

Based on these rankings, the following table lists those Australian organisations with high potential for future involvement in MSCA:

<ul style="list-style-type: none"> • Melanoma Institute Australia • Walter and Eliza Hall Institute of Medical Research • QIMR Berghofer Medical Research Institute • Garvan Institute of Medical Research • Peter MacCallum Cancer Centre 	<ul style="list-style-type: none"> • University of Melbourne • University of Sydney • University of Queensland • Monash University Melbourne • Australian National University • University of New South Wales Sydney
---	--

Involvement of private sector in MSCA

With 4.67% of **non-academic organisations** and a share of 2.80% of private for-profit organisations Australia is **below the OCEF average**. Among the six top Australian private for-profit entities participation only one enterprise is listed (BRESMEDICAL PTY LTD). No SME from Australia took part in the MSCA programme of H2020. This means that businesses participating in MSCA were mostly large companies. According to the findings of the study large companies’ drivers for participation were the opportunity to expand their collaborative network and to gain access to the most talented brains⁴⁰. In the past Australian fellows tend to go back to work in a company or a university back home after the return phase.⁴¹

From the **non-participation of Australian SMEs**, it can be concluded that, as in other countries, they are particularly reluctant to send their staff away or to commit resources to activities which are not directly related to their core business. So far, SMEs from Australia are more interested in other types of Horizon 2020 programmes than in MSCA. There is a high potential in involving companies in MSCA.

Research outputs from some research institutions, particularly those based in industry, are not often published, in order to protect commercial advantage. The innovation output, as measured by triadic patents, is below the OECD average. Australia has many SMEs and start-ups, which are very active in patenting and are thus, a relevant target group for MSCA.

At national level the main instrument to strengthen incentives to invest in R&D by companies is the **“R&D Tax Incentive”**⁴². The tax incentive reduces company R&D costs by offering tax offsets for eligible R&D expenditure. It is a business assistance programme to encourage and support businesses to undertake R&D activities that they may not otherwise be willing to attempt.

The CSIRO Industry PhD (iPhD) programme is delivered through the industry partner, university researchers and CSIRO researchers working closely together to deliver a training experience that is anchored in an industry-specific application problem. The CSIRO iPhD programme was developed in

⁴⁰ European Commission, Directorate-General for Education, Youth, Sport and Culture, Study on international cooperation in the Marie Skłodowska-Curie actions: final report, Publications Office, 2019.

⁴¹ Gureyev, V.N., Mazov, N.A., Kosyakov, D.V. et al. Review and analysis of publications on scientific mobility: assessment of influence, motivation, and trends. *Scientometrics* 124, 1599–1630 (2020). <https://doi.org/10.1007/s11192-020-03515-4>, p. 1603, <https://link.springer.com/article/10.1007/s11192-020-03515-4>

⁴² Australian Government, Department of Industry, Science and Resources, “Research and Development Tax Incentive”, <https://www.industry.gov.au/policies-and-initiatives/research-and-development-tax-incentive>



2017 with input from university and industry partners and seeks to attract high calibre candidates with the vision of developing Australia's future research leaders. The training experience in this programme is built around specific problems identified by the industry partner. The business partner is closely involved in not just identifying the problem to be tackled, but also in helping to guide the direction of the research during the project, and in giving the research candidate deep experience of working in an industrial research environment.⁴³

4. Australia: MSCA promotion activities and opportunities

The MSCA under Horizon 2020 were recognised by Australia and the EU as a decisive factor for the excellent rates of existing collaboration⁴⁴.

According to the MSCA study⁴⁵ Australia's organisations and especially its universities see MSCA as a way of attracting excellent researchers from Europe primarily through PF action and increasingly through DNs. This is also in line with **the internationalisation strategies of Australia's universities**. Internationalisation to universities tends to lead to an improved overall reputation and visibility worldwide. For Australian universities international collaborations are increasingly seen as integral to a successful academic research career. This is a facet of the broader internationalisation agenda of universities in Australia. In addition, domestic university-ranking systems such as Excellence in Research for Australia (ERA) tend to privilege international productions as indicators of quality. When recruiting academics, Australian universities tend to gather a global pool of applicants, often stressing international connections as part of the required criteria for employment. For example, the "Staff mobility scheme" of the University of Adelaide has its key focus the drive to facilitate international movement of staff between partner institutions.⁴⁶

According to the first results of the survey of July 2022 MSCA is perceived as a good practice for research mobility, at the same time, the visibility of the programme is described as low and needs to be improved. In 2022 the following visible actions took place that likely have increased the awareness of MSCA: EURAXESS Worldwide Australia/New Zealand organised three physical 3-day missions to universities in Western Australia, Queensland and to Victoria providing information on Horizon Europe (incl. MSCA). The audience participating included PhD students, early and mid-career researchers and senior researchers. Four Australian universities invited EURAXESS Australia and New Zealand Regional Coordinator, Mr Nishant Shandilya to provide information primarily on EU Framework Programmes (Horizon 2020 and Horizon Europe), European Research Council (ERC) grants and MSCA during hybrid/online sessions. Furthermore, two virtual meetings dedicated to MSCA dealing how to write a successful application were offered by EURAXESS. These webinars are very well attended. The session

⁴³ Information provided by EURAXESS Australia/New Zealand; see:

<https://www.csiro.au/en/careers/scholarships-student-opportunities/postgraduate-programs-and-scholarships/industry-phd>

⁴⁴ Australian Government & European Commission, "Joint Communiqué: 15th Australia-European Union Joint Science and Technology Cooperation Committee meeting",

https://ec.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/documents/ec_rtd_eu-aus-jstcc-joint-communique_2019.pdf, accessed on 21.07.2022

⁴⁵ European Commission, Directorate-General for Education, Youth, Sport and Culture, *Study on international cooperation in the Marie Skłodowska-Curie actions : final report*, Publications Office, 2019,

<https://data.europa.eu/doi/10.2766/621682>

⁴⁶ Andrew Glover, Yolande Strengers & Tania Lewis (2017), "The unsustainability of academic aeromobility in Australian universities", *Sustainability: Science, Practice and Policy*, 13:1, 1–12,

<https://www.tandfonline.com/doi/full/10.1080/15487733.2017.1388620?cookieSet=1>, accessed on 12.07.2022



on May 5 and June 2 saw interest from more than 400 people.⁴⁷ The webinar recording attracts quite a lot of traffic.⁴⁸ Furthermore, EURAXESS did a presentation on MSCA SE during the European Research Days 2022 – AUS & NZ in November. There seems to be more queries coming in for SE as well.⁴⁹ EURAXESS is the main actor promoting MSCA in Australia.

For Australia one National Contact Point (NCP) is responsible for MSCA. Sarah Brown at the Australian Embassy and Permanent Mission to the European Union in Brussels is mandated by the Australian Government. In her function as NCP Ms Brown has the following functions: NCP Coordinator, Legal and Financial aspects, ERC, MSCA, Research Infrastructures, Health.

Scientists and institutions participating in COST actions are a potential target audience for MSCA. Since 199 Australian organisations and researchers participated in 285 COST actions⁵⁰. One organisation that we have identified with high potential for future MSCA involvement took part in one COST Action: Peter MacCallum Cancer Centre⁵¹.

Australia's participation in the Jean Monnet Actions of ERASMUS + in 2021 is with 5 projects positive. Of the third countries comparatively considered in MSCAdvocacy⁵², only the USA is ahead of Australia with 8 projects. A total of 5 Australian organisations were involved in the Jean Monnet Actions. These could be a possible target group for MSCA.⁵³ ERASMUS+ is outside of EURAXESS Worldwide's mandate. The Erasmus+ queries are handled by the EU Delegation while the Horizon Europe queries are handled by EURAXESS.

In order to promote DN or SE better in Australia promotion events might also be organised with the European Chambers of Commerce in Australia. Furthermore, project recipients of former EU projects or bilateral EU-MS projects⁵⁴ could be targeted for MSCA.

Marie Curie Alumni Association (MCAA) is a very vital stakeholder in promoting MSCA programme in third countries, such as Australia. The MCAA is already working on establishing an Australian chapter.

⁴⁷ No data available who were participating from NZ and who from AUS.

⁴⁸ <https://youtu.be/lzfn2yIfNw>, <https://youtu.be/picp5dsmNU4>

⁴⁹ This statement was made by EURAXESS in relation to both New Zealand and Australia.

⁵⁰ https://www.cost.eu/cost-actions-event/browse-actions/page/29/?search=Australia&start&end&approval_year&country=all&status=all&limit=10&sortBy=cso_approval_date&sort=DESC

⁵¹ <https://www.cost.eu/actions/CM1201/#tabs+Name:Parties>
<https://www.cost.eu/actions/CM1201/#tabs+Name:Parties>

⁵² In the group of industrialised countries are considered: Australia, Canada, Japan, Republic of Korea, New Zealand, Switzerland, United States

⁵³ <https://op.europa.eu/o/opportal-service/download-handler?identifier=757368ca-7b6e-11ed-9887-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=https://op.europa.eu/o/opportal-service/download-handler?identifier=757368ca-7b6e-11ed-9887-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=>

⁵⁴ One example of an EU-MS is Germany's APRA program. Research sites are being established in the partner countries. The financing runs for 5 years. After this period, the staff exchanges could be interesting for the participating institutions. See: https://www.internationales-buero.de/en/german_research_presence_in_apra.php



5. Australia: Other relevant information

The **Cotutelle and Joint PhD programmes of many Australian universities** are of high relevance for MSCA in Australia. This programme is a PhD programme where students are enrolled at both universities for the duration of the programme and must be in residence at each university for a period of time as stipulated in the agreement. A candidate is mutually supervised by staff at both institutions and upon successful completion of the programme. The candidate graduates from both universities with a Doctor of Philosophy. Joint and dual/cotutelle programmes generally fall under institutional agreements between two institutions or individual agreements between the Australian university, the partner institution and an individual student. Participating universities in Australia are for example the Macquarie University, the University of Queensland, Australian National University, the James Cook University and others. As a rule, the financing for this exchange must be organised or allowed by the students themselves.

Best practice examples of MSCA projects could serve as testimonials to promote MSCA.⁵⁵

The MCAA chapter is still being developed and not in place yet.

MSCA Doctoral Network and Staff Exchanges which are not open for Australian institutions to receive EU funding definitely have a high scope if the funding component is resolved. Universities are very interested in Joint Doctorate programmes as well as having their staff go for short term exchanges.

6. Australia: Key messages

Although Australia is represented by several universities in worldwide top rankings and shows great effort to strengthen several research fields by setting up roadmaps and strategies there is quite a low number of mobility programmes of the Australian government to foster research and innovation mobility with other countries. To give a better access to information and consultancy on MSCA it should be discussed at political level whether an NCP could be established on the ground, in order to avoid challenges like time difference and distance.

Based on the number of participating projects and researcher flow in Horizon 2020 Australia was a relatively strong participant in the MSCA. 4 out of 5 top ranked Universities of Australia already participated in MSCA but at current stage 30% of the country's top research excellence organisations are not yet involved in MSCA at all. One reason could be that the resource allocated to the region for dissemination of European funding related activities in general is limited (only one EURAXESS office for Australia and New Zealand). Therefore, it is helpful if the EC could share with EURAXESS up-to-date on the participation in MSCA–country profile that is updated annually at least if not after a result announcement. Also, country specific graphics that can be made available are also very helpful to support the promotion activities by EURAXESS.

Past three physical 3-day missions to universities in Western Australia, Queensland and to Victoria providing information on Horizon Europe (incl. MSCA) organised in 2022 by EURAXESS Worldwide Australia/New Zealand attracted four universities and leading to invitation for EURAXESS Australia and New Zealand Regional Coordinator, Mr Nishant Shandilya to provide information primarily on EU Framework Programmes (Horizon 2020 and Horizon Europe), European Research Council (ERC) grants and Marie Skłodowska-Curie actions (MSCA) during hybrid/online sessions. These webinars were very

⁵⁵ Examples: KEEPFISH – Knowledge Exchange for Efficient Passage of Fishes in the Southern Hemisphere: <https://cordis.europa.eu/project/id/690857>; AffectTech Personal Technologies for Affective Health: <https://cordis.europa.eu/project/id/722022>



well attended. Still the visibility of the programme is described as low and needs to be improved. Therefore, additional constituencies/stakeholders not yet involved or less involved in MSCA could be invited to the events organised by EURAXESS (see above and participating organisations of COST Actions and/or ERASMUS+).

As Australian organisations cannot receive EU funding when participating in MSCA best practice examples of MSCA projects could serve as testimonials to promote MSCA. In addition, the establishment of a MSCAA chapter in Australia should be supported.



7. Australia: Annex

MSCAdvocacy survey

Objective: The objective of this survey is to collect information from key informants on developments in national and bi-lateral/regional R&I joint priorities and level of coordination among cooperation mechanisms (info relays, training, co-funding schemes) relevant to MSCA.

Terminology

R&I: research and innovation

S&T: Science and Technology

MSCA: Marie Skłodowska-Curie Actions- Staff Exchanges, Doctoral Networks, Postdoctoral Fellowships, COFUND, MSCA and Citizens

Cross-sectoral: academic/non-academic

Objective: Acquire information on relevance of bi-lateral/regional R&I cooperation joint priorities towards MSCA
<ol style="list-style-type: none"> 1. Based on your experience/knowledge, can you indicate any developments in bi-lateral/regional R&I cooperation that are of relevance towards MSCA in your country/region? 2. What are the thematic areas (if any) that you consider of strategic national relevance and should be better promoted in R&I joint priorities? In which strategic plans are they reflected? 3. What are the national strategic priorities that are receiving particular attention from funding agencies in your country/region? Where do you see the national funding gaps, if any, in relation to national strategic priorities? Please specify the sources of funding (e.g. local/regional/other bodies, public/private organisations, economic development agencies, etc.) 4. What are the co-funding initiatives in your country that could promote participation in MSCA? Please express if any specific MSC Action should be targeted. 5. Is MSCA perceived in your country R&I cooperation policy as a good practice example for research mobility?
Objective: Acquire information on potential opportunities that improved researcher mobility can bring to MSCA
<ol style="list-style-type: none"> 1. To what extent have recent national and bi-lateral R&I cooperation developments improved mobility framework conditions (e.g. visa application process, excess of bureaucracy, insufficient living allowances, job security uncertainty on return, working conditions, language barriers, etc.) removing some existing barriers to participation in MSCA? 2. Are there, in your country, any competing R&I programmes promoting mobility? Please give details and suggest what kind of synergies you find possible to explore. 3. According to the benefits that internationalization of research, based on mobility, can bring to your country/region through MSCA (e.g. better international networks, more research outputs,



higher-quality outputs and better career outcomes), do you consider that a specific MSC Action can better suit the purpose and be more encouraged/promoted than others? Please, justify your answer.

Objective: Acquire information on potential opportunities for MSCA that can derive from cross-sectoral mobility

1. Have any national incentives for academia-industry interaction been provided?
2. To what extent is cross-sectoral mobility (e.g. joint training programmes are provided for better responding to future employment needs, researchers are provided with entrepreneurship and research management skills, internships are part of academic curricula, etc.) addressed by any national funding? If yes, can any synergies with MSCA be explored? Please give details.

Objective: Acquire information on how national and bi-lateral/regional R&I cooperation instruments promote visibility of MSCA

1. To what extent measures to address coordination of communication activities among National Contact Points, EURAXESS offices, S&T Counsellors and EU Delegations have been developed for MSCA?
2. To what extent has the development of skills related to participation in MSCA (e.g. grant writing, knowledge of Horizon Europe, networking, etc.) been promoted/provided in your country/region?
3. Considering the MSCA participation data of your country, how can information networks, e.g. NCPs, EURACCESS, be improved to increase awareness of MSCA?
4. Have any synergies been promoted in your country/region between MSCA and other EU and/or national funding/programmes (e.g. Erasmus+)? Please give details.

Australia: Country data in H2020 (data status: 2023-01-27)

	Call deadline year	Contracted Projects						Researchers flows: total no including COFUND, ITN, RISE and IF		
		MSCA-COFUND	MSCA-ITN / MSCA-DN	MSCA-RISE/ MSCA-SE	MSCA-IF/ MSCA-PF	TOTAL (IF included)	TOTAL (IF not included)	5a. Number of researchers of nationality 'Australia' coming to EU/AC	5b. Number of researchers recruited from country 'Australia' coming to EU/AC	5c. Number of researchers incoming to country 'Australia'
Horizon 2020	2014	2	5	8	7	22	15	41	32	83
	2015	4	2	19	8	33	25	58	51	200
	2016	1	7	7	5	20	15	36	44	69
	2017		5	7	15	27	12	33	23	47
	2018		5	9	14	28	14	29	19	72
	2019			10	23	33	10	23	12	37
	2020			4	17	21	4	22	6	17
H2020 total		7	24	64	89	184	95	242	187	525
H2020 (2019-20) / H2020 (2014-15)										
TRENDS		-100%	-100%	-52%	100%	-24%	-73%	-55%	-78%	-81%
GERD/GDP to total projects in H2020										
POTENTIAL		0.04	0.13	0.35	0.49	1.01	0.52			
Global Innovation Index										23





Useful Links

For more information & learn how to participate in the [EU and Australia's science and technology cooperation](#)

Visit the [Marie Skłodowska-Curie Actions website](#) to explore all the opportunities offered by the programme

The [Australian MSCA National Contact Point](#) provides information on the programme and help applicants develop their projects

[Euraxess Australia & New Zealand](#) provides support services for professional researchers, including hosting offers, PhD and postdoctoral vacancies funded by the MSCA

Join the [Oceania General Interest Group of the Marie Curie Alumni Association](#) to communicate, to share, to help, and to get help

[Support](#) for existing and future MSCA National Contact Points



www.mscadvocacy.eu



[@mscadvocacy](#)



[@mscadvocacy](#)

The content of this report reflects the views of the authors.
The European Commission is not responsible for any use
that may be made of the information contained therein.

