

# Breaking the Ice with International Research Mobility

RESEARCHconnect dives into the Arctic as it explores how international mobility is making an impact on the world of research



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**Mobility and collaboration are an essential part of today’s research landscape. International mobility – researchers travelling to other countries as part of their research – continues to impact our global knowledge.**

In a prime example of international research mobility in action, fifteen partners from thirteen countries, including two North American partners from USA and Canada, have joined forces to improve the capacities for marine-based research in the ice-covered Arctic Ocean.

The ARICE (Arctic Research Icebreaker Consortium) project aims to better coordinate the existing polar research fleet, offer scientists access to six research icebreakers and to collaborate closely with the maritime industry.

“Research icebreakers are a crucial infrastructure and tool for conducting scientific investigations in the ice-covered areas of the Arctic Ocean – those regions that urgently need to be explored before they disappear,” says Dr Veronica Willmott, Project Manager of ARICE, International Cooperation Unit at the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI), in Germany. “The lack of availability of icebreakers in Europe and beyond and a weakly-coordinated polar research fleet impedes Europe’s capacity to investigate this region. There is thus an urgent need for providing polar scientists with better research icebreaker capacities for the Arctic.”

Given the strategic importance of ARICE, the European Commission (EC) is funding the project through its Horizon 2020 Work Programme. Over a project lifespan of four years, the EC invests €6 million in the consortium, of which 50% will be used for giving researchers access to the research icebreakers.

“Arctic marine research is technologically challenging and cost intensive, so it is often beyond the capacities of one single nation,” Willmott tells RESEARCHconnect. “Science in the ice-covered parts of the Arctic Ocean can thus only be carried out in close scientific and operational international cooperation.”

The project kicked off at a meeting at the German Maritime Museum in Bremerhaven in February 2018.

According to Willmott, retreating sea ice and warming waters create opportunities and challenges that have given rise to an unprecedented political and economic interest in the Arctic Ocean over the past decade, necessitating a project of this nature even more.



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“The recent changes and the resulting increased economic activity in the region have triggered a societal demand for accurate sea-ice and weather predictions, information on the status of the Arctic Ocean and its marine life, and complex predictions of future scenarios,” Willmott explains. “Even if European Arctic research has contributed critical knowledge to identifying the processes behind these rapid changes, datasets from the Arctic Ocean are still insufficient to fully understand and more effectively predict the effects of climate change.”

The largest gaps in our knowledge and understanding of the Arctic system processes are outside the summer season, when the Arctic Ocean is logistically and technologically extremely difficult to reach.

To address these knowledge gaps and to develop policy recommendations for a sustainable usage of the Arctic Ocean and its resources, it’s imperative that the international Arctic science community have access to world-class research icebreakers to study the Arctic Ocean.



CCGS Amundsen, Canada  
Photo: CNW Group/ArcticNet

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## Keeping excellent research afloat

By making the Arctic Ocean more accessible to excellent research, through international research mobility, the project is set to make an impact on various levels.

“The project will significantly increase the urgently needed ship-time for Arctic research through an improved coordination of Polar Research Vessel (PRV) operations, a merging of scientific priorities and a better networking/coordination of heavy research icebreakers with ice-strengthened vessels,” says Willmott. “This will avoid duplication, minimise fragmentation and foster international cooperation, ensuring a coherent and more cost-effective use of these infrastructures.”

Willmott says that by providing research opportunities outside the summer season, ARICE will also deliver key data for understanding climate change, fostering Europe’s intellectual capacity to investigate the urgent scientific questions that are critical for understanding the Earth’s system.

“ARICE will also help stimulate the involvement of industry representatives in appropriate Arctic research, facilitating cross-disciplinary cooperation and development of new technologies,” Willmott explains.

In the long run, ARICE wants to implement a sustained International Arctic Research Icebreaker Consortium, which jointly manages and funds ship-time in the Arctic. This would ensure cost-effective use of the existing research icebreakers and streamline polar research programmes across national borders to jointly address the global challenges imposed by Arctic change.

## Keep it flowing – 5 things to consider when setting up an international research project

- » Draw on existing relationships and networks to seek out partners. (Trust is a crucial element, particularly when collaborating at a distance, and it can take time to grow. Friendships and other professional relationships provide a shortcut to shared understandings and expectations when working together.)
- » Seek opportunities to spend time together in person in formal (work) and informal situations with collaborators and teams. Again, this contributes to the development of trust and shared understandings.
- » Be prepared for differences: cultures and communication styles, ways of working, professional and personal agendas, national patterns of work (holidays etc). These are part and parcel of any working relationship, but working internationally magnifies the differences.
- » Question and reflect on your assumptions at every stage (see above).
- » In terms of mobility in practice, be prepared for partners who will need no support in managing their mobility (highly independent travellers), and others who will need everything done for them from transport to hotels etc.

*Source: Courtesy of Dr Chris Coey, Research Development Support Officer, Division of Research and Knowledge Exchange, University of Salford*

## Navigating the international mobility funding landscape

Arctic change is but one of many global challenges that are currently being tackled by international researchers. Most of the international funding landscape is nowadays directed specifically to topics that are setting the policy agenda.

“International funding, through the European Commission for example, tends, with exceptions, to be very directed towards specific themes and problems identified as priorities by policy makers,” comments Dr Chris Coey, Research Development Support Officer, Division of Research and Knowledge Exchange, University of Salford. “So rather than researchers pursuing their research in that ‘pure’ sense, they are required to be more flexible and agile.”

Coey, the author of a recently published paper, ‘International researcher mobility and knowledge transfer in the social sciences and humanities’, believes that when one sets up an international research mobility project, the starting point should be the networking and relationship building between researchers.

“Funders like to see evidence of existing collaboration in many cases,” Coey tells RESEARCHconnect. “Networks are established across a career and can be enduring, if dormant, for many years. Beyond this, there is the notion of ‘weak ties’, of extended networks and potential collaborators who may be known only vaguely or by proxy. Trust and networks are really important.”

Coey says that going from a relationship to a project requires a lot of work, and patience, on the part of the collaborators.

“It can be really difficult working across languages and cultures, not to mention disciplinary, professional and personal agendas,” says Coey. “Some institutions will provide funding to allow an element of travel to gather potential collaborators together. This is probably a resource-heavy approach but I suspect it’s well worth it.”

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From a UK perspective, while the EU has been a great source of funding, the tide might be turning for UK researchers in light of Brexit.

“We remain committed to supporting any projects awarded prior to leaving the EU but there does seem to be caution and lots of disheartening anecdote around,” says Coey.

In light of Brexit, there are certainly UK sources which provide an alternative to EU funding for international activity, whether it is for outgoing or incoming fellowships or for the inclusion of international partners.

“In the UK, this isn’t just the Research Councils but also the larger and more prestigious charitable sources such as Wellcome and the British Academy,” Coey points out. “The Research Councils themselves do make it easy to incorporate an international dimension to their funding.”

Coey says that the recent channelling of the aid budget into research (Global Challenges Research Fund, Newton Fund) has offered lots of opportunities, with compliance with Official Development Assistance (ODA) requirements a key.

The Worldwide Universities Network is an example of an international funder in this space, with national funders such as the German Academic Exchange Service (DAAD), Nuffic in The Netherlands, the Swedish Institute and Campus France supporting researcher mobility to and from these countries.



RV Sikuliaq, United States of America  
Photo: Mark Teckenbrock

## Sailing into successful waters

One thing that remains clear is the fact that international research mobility will always bring with it numerous advantages and the chance for success.

“The advantages of international mobility are, for researchers, access to prestige networks, resources and infrastructure not available at home,” says Coey. “Reputations are burnished, arguably in part through mobility itself, collaborations are established or reinforced and, publications and other outputs are achieved. Metrics show that these international collaborations are higher profile and higher quality.”

Coey points out that policy makers see the link between international mobility and the competitiveness of a country’s (or region/city) research base, and the way this feeds into innovation and development.

“I would say that there’s also a kind of halo effect of international mobility for hosts and researchers,” says Coey. “It’s understood, explicitly in some metrics and rankings, to correlate with prestige and excellence. If a researcher is internationally mobile or an institution a host, it speaks to a kind of meritocracy in global science, and this leads to further internationalisation via mobility or networks.”

International research mobility will continue to shape the way forward and play a vital role in the world of research, in the Arctic and beyond.

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## All on board: a UK perspective

Overseas researchers and PhD students help refresh the UK’s research base, facilitating the exchange of ideas and expertise. It is no coincidence that our universities, which attract a high proportion of international academics, are the driving force behind the UK’s world-leading research performance. These academics are at the forefront of research in their fields, as shown by their success in winning highly competitive research funding:

- » Overall, around 45% of European Research Council (ERC) grantees at UK institutions during FP7 (2007-13) were of non-UK nationality.
- » More than 50% of the prestigious ERC Consolidator Grants awarded to UK universities, worth up to £2 million each, were won by EEA academics working in the UK.
- » Selection rates for the Research Excellence Framework 2014 were highest for EU staff at UK universities, a clear indication of the high-quality research they produce and their value to UK universities.

Source: Courtesy of the Russell Group. Russell Group evidence to the Migration Advisory Committee on EEA-workers in the UK labour market (October 2017)

## Keep your funding proposal watertight – 5 top tips to bear in mind when writing it

- » **Read all the guidance (every time—it may change from one call to another):** Whether you're instructed to use a specific font, stick to a particular page limit, or include/not include a CV, make sure you follow the directions given. At best, it can lead to a delay in your proposal being sent for peer review if it has to be returned to you first. At worst, your proposal being rejected.
- » **Understand the assessment criteria/process:** Review any assessment criteria and the reviewer's form(s) to help you understand what your proposal will be evaluated against. Likewise, familiarise yourself with the assessment process so you can take the reader into account. Be understandable and clear to all audiences.
- » **Ask for help:** Proposals don't have to be created in isolation and there are a number of places you can turn to for assistance, including your university's research office. Colleagues can provide their opinion based on their experience as reviewers or as successful applicants. If you are uncertain about whether your project will be within the scope of a call or funding scheme, always ask the funding body before writing the proposal to avoid disappointment.
- » **Have someone read your document:** Following on from this, make sure that at least two people have read through your proposal before submission. Proofreading is always useful, but just as important is having a colleague or two provide a critical assessment. Does the proposal make sense to both sets of people? Is the methodology clear—will a reviewer or panel be able to understand what it is you're going to do and how? Are the Pathways to Impact appropriate? How would your colleague review it? Use this opportunity to find any weaknesses in your proposal and strengthen it before submission.
- » **Write a good PI response:** This final part of the application process is incredibly important: it is your opportunity to answer reviewer questions and rebut any points they have raised. When doing this, make sure your comments are backed up by facts. There are also a number of things to avoid: do not criticise the reviewer or ignore certain questions or criticisms; do not use positive comments from one reviewer to counter negative comments from another; do not repeat all the positive feedback; do not repeat what is in your proposal; and do not try to guess who the reviewer is. As above, have someone read the PI response before you submit it. Does it strike the right tone? PI responses that could be described as angry, arrogant, or dismissive should be avoided at all costs! Likewise, "Trust me, I know what I am doing" or "Trust me, I've been doing this for xx-number of years" will not be considered an appropriate response by the panel.

*Source: Courtesy of Elaine Massung, EPSRC Portfolio Manager, Engineering and Physical Sciences Research Council*



## Our team of consultants can help you at every step of your project



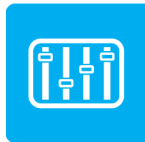
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