European and External Relations Committee

The EU referendum and its implications for Scotland

Written submission from the Scottish Association for Marine Science

1. Background

The Scottish Association for Marine Science (SAMS) is a not-for-profit charitable company, originally founded in 1914. It has a unique responsibility in Scotland, that of carrying out independent and long-term research on the marine environment and conveying the results to society through education, outreach and services to business. Within the Scottish Marine Institute (SMI), on the peninsula of Dunstaffnage north of Oban in Argyll, it employs 145 staff (47% with research degrees) and hosts 55 postgraduate students. As a federal partner in the University of the Highlands and Islands (UHI), SAMS teaches about 100 undergraduate students. The table on the next page gives some examples of current research and teaching projects funded from European sources.

2. How the prospect of a withdrawal from the EU is affecting SAMS

SAMS currently turns over about 10 million pounds per year. Of this about 50% comes from UK research councils, 30% from EU sources, 10% from commercial work, and 10% for teaching. Annual salary bill is just under 5 million pounds, representing a substantial injection of spending into north Lorn as well as cash to HMRC. Unlike universities, SAMS has little assured funding, and its viability depends on staff winning 'soft money' - i.e. funding for 1 to 5 years - from mainly UK and EU sources. The main topics of local concern relate to: existing research funding from the EU; the effects of uncertainty on proposing and winning new funding; and the potential effects on the exchange of ideas and people. For the purposes of this response, we assume that the UK invokes article 50 of the Lisbon treaty in January 2017 and that the UK leaves the EU at the end of 2018.

2.1. Funding of on-going research.

Some current SAMS EU-funded projects, such as ACES, GENIALG and ATLAS in Table 1, continue beyond 2018. We welcome the assurances given by the Chancellor that HM Treasury will underwrite payments of such awards beyond UK departure from the EU.1 Our initial concerns are thus replaced by second-order questions about the method and timeliness of such payments, given the multiple demands on the UK civil service arising from negotiations and re-organisations connected with Brexit.

---

1 Letter, David Gauke, HM Treasury, to David Davis, DEEU, 13 August 2016, paragraphs 4 and 5.
| Funding source         | Programme name                                                                                                                                                                                                 | SAMS role/some partners                                                                                                                                       | Duration                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| EU Erasmus Mundus     | Joint Masters in Aquaculture, Environment & Society (ACES) - for EU and international students                                                                                                                  | SAMS leads; taught at SAMS, University of Nantes (France), University of Crete (Greece)                                                             | 2015 - 2019               |
| EU H2020 - Research and Innovation | Making space for aquaculture (AQUASPACE)                                                                                                                                                                           | Project co-ordinator; 21 partners in France, Germany, Greece, Hungary, Italy, ROI, Spain, UK, plus FAO, Australia, Canada, China, US | 2015-2018                 |
| EU H2020 - Blue growth call | GENetic diversity exploitation for Innovative macro-ALGal biorefinery (GENIALG)                                                                                                                                 | WP leader; 18 partners in ROI, France, Netherlands, Norway, Portugal, UK                                                                                | in contract negotiation: 2017-2021 |
| FP7 - REGPOT          | Marine Energy Research Innovation and Knowledge (capacity building) Accelerator (MERIKA)                                                                                                                        | UHI (SAMS, ERI, LCC) leads; 7 partners in Germany, Netherlands, Norway, Portugal, ROI                                                                    | 2014-2017                 |
| EU H2020 - Blue growth call | A Trans-AtLantic Assessment and deep-water ecosystem-based Spatial management plan for Europe (ATLAS)                                                                                                                                 | SAMS is WP leader; 23 partners in Belgium, Denmark, France, Germany, Netherlands, Norway, Portugal, ROI, Spain, UK, plus Canada and US | 2016-2020                 |

**2.2. Effect of uncertainty on new research.**

Writing an major funding proposal is a large task, and joining a successful EU proposal-writing team usually requires years of building links with European universities, research laboratories, and SMEs. The UK funds networking and proposal-building only to a limited extent, and thus effort has to be efficiently targeted. It also has to take place continuously, since few proposals succeed and those that do are often initiated several years before the proposal call. Although we (at SAMS) have so far not experienced any rebuffs from EU partners, we fear a decline in 'animal spirits' (as Keynes called them) given uncertainties about the extent to which UK will buy into EU (marine) research post-Brexit. This uncertainty also impacts on our ability to influence the shape of EU research programmes and projects and to attract or retain scientists who might work on them. The web-site of the Natural Environment Research Council (NERC) suggests looking to links with USA, India and China. SAMS already has collaborations with these countries, but until significant funding becomes available it is unclear if more effort should be invested here. In contrast, existing SAMS membership of the European Marine Biological Resource Centre, funded since 2009 over several EU cycles, enables us
to provide world-class specialised facilities to EU researchers, stimulates intellectual exchange, brings together science and industry, and helps to shape new funding proposals. As an EU infrastructure project, however, its UK continuation depends on as-yet unclear decisions about post-Brexit investment strategies.

2.3. Constraint on free exchange of scientists, students and ideas with EU member states and with associated states such as Norway.

Science is international, and marine science necessarily so because the seas span national borders. SAMS is an associate research institute of the United Nations University, and SAMS scientists have active collaborations with, for example, the US concerning North Atlantic circulation under climate change, and China concerning harmful algal blooms in inshore waters. Nevertheless, our most fruitful collaborations during recent decades have been in Europe, driven by common problems, a common culture, the need to apply common environmental legislation, and easy movement; as well as by the funding pool provided by the EU. Maintaining such collaborations will require funding schemes to be set up with some urgency to replace those supported by the EU; replacing them by extra-EU collaborations is likely to prove more expensive. World-class laboratories need to draw on a global pool of talent. SAMS staff of 145 includes 16 continental EU citizens and 5 from the rest of the world (RoW). \(^2\) Hopefully, Brexit will not shut the doors on the EU pool of well-trained scientists and students, but recruitment experience suggests that any constraints on free movement for work or study will reduce the attractiveness of the UK for potential recruits. Finally, the ACES Master's course, currently funded by EU Erasmus Mundi, brings together equal numbers of EU and RoW students to be taught in Argyll, Brittany and Crete and helps diffuse world-leading Scottish aquacultural-environmental science. Its continuation needs both a European funding source and reliable entry to the UK for both sets of students.

3. How the prospect of a withdrawal from the EU will affect Scotland

We pick out three issues: the impact on research for Blue Growth; the potential effects on protection of the marine environment; and the loss of UK influence on the European research agenda.

3.1. Loss of EU funding will reduce research for the 'Blue Economy'.

The Scottish Government (SG) has identified five maritime economic sectors with growth potential: renewable energy, aquaculture, tourism, mineral resources and biotechnology (including drugs and biofuels). These are proportionately more important to Scotland than to the UK as a whole, and proportionately more important to Argyll, the Highlands, and the Isles, than to Scotland as a whole. Research is important, not only into the relevant technologies, but also into ensuring sustainable use of ecosystem services, minimising environmental impact, and ensuring social acceptability. SAMS is actively engaged in researching 4 of the 5 sectors (all except tourism). Our experience is that funding for the integrated social-ecological research required to underpin sustainable blue growth comes mainly from EU funding, which supports interdisciplinary studies in a way that the discipline-divided UK research councils do not. Because the development of the Blue Economy involves both

\(^2\) Numbers at 31 March 2016
ecological and economic transboundary issues, research is best carried out in collaboration with the EU and associated countries who share our seas and find that a single regulatory framework reduces costs and uncertainties. Our concern is thus that loss of access to EU funding will serious impact the SG’s policies, even if funding to UK research councils is substantially increased. There is also the risk from leaving EU 'best-practice' exchange mechanisms, such as the European Maritime Spatial Planning Implementation Platform or the Ocean Energy Forum.

3.2. Protection and sustainable use of the marine environment.

Almost all UK (including devolved) legislation that helps to conserve marine (or maritime) species and habitats, to prevent pollution and to maintain ecosystem function and resilience, derives from EU directives. As we understand the situation, there are no immediate plans to alter UK (or Scottish) legislation, but Brexit will remove a significant enforcement mechanism. Directives require regular reports to the Commission, with the possibility of infraction proceedings at the European Court of Justice (ECJ) and the imposition of fines for non-compliance. The UK is a signatory to regional conventions such as OSPAR and the international Convention of Biodiversity that also oblige us to maintain protection, and which deal with some of the trans-boundary issues, but these conventions have few teeth. Our concern is that when Scottish environmental monitoring and management proves expensive or inconvenient, it will be scaled back in the absence of the ultimate sanction of the ECJ.

3.3. Loss of UK and Scottish influence on EU research programmes.

Whatever the terms of leaving the EU it is highly likely that the UK and Scotland will remain strongly linked to the continental EU, and associated states such as Norway, through environmental issues such as the management of our shared seas, and on economic grounds because of the need for uniform standards when goods and services are sold into the EU. UK input has shaped both EU directives and EU funded research programmes relevant to these directives. Such shaping is of especial importance to Scotland in areas such as the Blue Economy. From now on, it is hard to see how UK and Scottish interests will be represented in the design of new calls.

4. Scotland’s future relationship with the European Union

It is the view of SAMS as an organisation, and of almost its entire staff, that membership of the EU conferred many intellectual as well as financial benefits. The SG should do its best, both directly and through influencing the UK government in consultation with the other devolved administrations, to retain as many of these benefits as possible during and after Brexit. Since Scotland currently manages the environment in its offshore waters on behalf of the UK, it is from a maritime perspective vital to preserve links with the other countries that adjoin our common

---


4 The OSPAR (Oslo-Paris) Convention for the Protection of the Marine Environment of the North-East Atlantic.
seas east and west of Britain (the ‘Greater North Sea’ and the ‘Celtic Seas’). Perhaps the most important of these is Norway, not itself a member of the Union but an active player in European research and a member of the EEA. The SG could commission policy-related research into common Scottish and Norwegian interests in the northern North Sea and the adjacent Polar seas, including fisheries, environmental protection and the blue economy, and should consider joint research funding schemes with Norway. A similar case can be made with respect to the Republic of Ireland (ROI). Finally, assuming it has the powers, the SG could declare an intent to continue reporting marine environmental information to the European Commission, to have regard to European legal judgements with regard to marine environmental matters, and to transpose any future EU marine environmental directives into Scottish law.

5. Alternatives to EU membership

There are several options or scenarios for post-Brexit relations with the EU and the RoW.\textsuperscript{5} In relation to the concerns raised in this evidence from SAMS, the next best thing to EU membership would be continued UK membership of the European Economic Area (EEA) and a substantial buy-in to EU research, educational and infrastructural funding programmes including H2020, INTERREG, Erasmus Mundus and Marie Curie. However, our understanding is that EAA membership requires free movement of people (which we support because of the benefits outline above), and so may not be compatible with the UK government’s understanding of Brexit. Regional bilateral agreements, such as that suggested above for Scotland and Norway, might be an alternative. Although Norway might not be high up the UK government’s priority list for negotiations, it would seem possible for the SG to build on existing European INTERREG arrangements with our maritime neighbours to achieve a number of benefits. An example of one such arrangement is that currently applying (2014-2020) to research and environmental collaboration between western Scotland (including Argyll, Lochaber and the Hebrides), northern Ireland (as part of the UK) and the adjacent counties of the ROI.\textsuperscript{6}

6. The withdrawal process

Here is a dilemma. On the one hand, an early invocation of article 50 and an early launch of a UK strategy to expand funding for research collaboration with USA, India and China would provide clarity for organisations such as SAMS. On the other hand, a long delay until Brexit would allow time for the detailed policy-related research and negotiations required to preserve as many as possible of what we see as the benefits of EU membership for environment, education and research.

7. The domestic process for dealing with a withdrawal from the EU

Our only comment is that most powers to manage the marine environment are either devolved to the Scottish Government or else given to Scotland to administer, and thus it would seem up to the Scottish Parliament to decide whether the UK's


\textsuperscript{6} See: http://www.seupb.eu/Home.aspx
withdrawal from the EU requires any change to Scottish principle and practice in this area.

8. The position of EU citizens in Scotland

Until Brexit, all UK citizens are of course also EU citizens; even thereafter some will remain EU citizens because of dual nationality and because of special UK provisions for ROI citizens. It’s the others who are of concern. Of SAMS staff, 12% (16 people) are EU citizens who are not citizens of the UK or ROI; some are long-settled and with links into the local (north Lorn) community. They are particularly represented amongst SAMS post-doctoral researchers, the group that does the largest share of hands-on research. It would impact severely on SAMS researching and fund-raising capacity if we lost some of our post-doc or Principal Investigator colleagues as a result of Brexit or of fears of what might happen in association with Brexit. Some may wish to take on British citizenship, but this is an expensive process, and not all will wish to surrender their own citizenship and the possibility of free movement within the EU. We would like to see the UK government guarantee indefinite leave to remain and to work for any such citizen employed in the UK (or at least, in Scotland) before June 23 2016. There are also issues about the transfer of pension and health benefit rights between UK and EU post-Brexit.