

Science into policy: taking local steps for global change

Geoscience forms a strong foundation for environmental policy, and geoscientific research can have a major impact on the way we tackle climate change, mitigate natural hazards, manage natural resources and more. But, despite the wealth of policy-relevant findings made each year, getting research from the academic realm and into the political arena isn't always an easy process. Often this is because the information out there – in the form of academic articles – is highly technical and difficult for a non-expert to decipher. And even if policymakers are fortunate enough to find the technical terms familiar, synthesising the available literature to form sound, evidence-based policy is something they don't have time for.

To bridge the gap, organisations like [POST \(the Parliamentary Office for Science and Technology in the UK\)](#) support decision makers by collating and assessing policy-relevant information and briefing policymakers accordingly. Young scientists can help collate this information too. Across the UK, PhD students can take part in a [3-month internship](#) with parliamentary bodies in England (POST), Scotland ([The Scottish Parliament Information Centre](#)) and Wales ([The Research Service](#)) as well as other organisations involved in policymaking. In just three months, students can produce a formal briefing for policymakers, contribute to the development of a policy workshop, or take part in a policy enquiry, all of which bring scientific research skills and expertise to the policy domain. The [Science and Technology Options Assessment](#) unit of the European Parliament (STOA) runs a [similar programme](#) for those who have completed their PhD. Fellows spend six months sharing their expertise with policymakers in either Luxembourg, Strasbourg or Brussels, where they contribute to the evidence base for European policy.

Those beyond their PhD can take part in a number of other fellowships to aid the transfer of science into policy. [NERC \(Natural Environment Research Council\) Policy Placement Fellowships](#), for example, allow environmental science researchers to work closely with UK policymakers in departments aligned with their expertise. Policymakers are also brought into research institutes as part of the scheme. Michelle Cain, a postdoctoral researcher from the University of Cambridge and EGU Atmospheric Sciences Young Scientist Representative, undertook an 18-month-long policy placement fellowship with Defra (the UK government's Department for Environment and Rural Affairs), where she brought her modelling expertise to their Air Quality Evidence Team.

"I was able to devote more time to a particular project than would otherwise have been spent on it and provide recommendations towards developing a new strategy for air quality modelling from an informed standpoint," Cain explains. While she didn't work directly with policymakers during her placement, the evidence team did,



Helping inform policymakers where you are will certainly impact your nation's use of geoscience in environmental policy, but the impact could be even wider. (Credit: [Justin Green](#))

allowing her to help shape air quality policy at a national level. In turn, this will impact both human and environmental health across the country. "Having a good understanding of the science and the policy context (gained through such fellowships) can enable scientists to contribute towards the strategic direction of the government team they are working in," Cain adds.

There are other ways you can share your expertise too, like providing your input in a public call for evidence, or by contacting your local government department regarding issues that fall within their areas of expertise. This evidence is collated to inform local and national policy decisions, which in turn can affect the way more wide-reaching policy is put in place.



Young scientists can work with the European Commission as well as their local government, bringing geoscience into policymaking at the national and the European level. (Credit: [Giampaolo Squarcina](#))

Scientist-policymaker pairing schemes also help bridge the gap between research and policy. [The Royal Society](#) in the UK, [The Academy of Sciences](#) in France and [STOA](#) in Belgium all run pairing schemes that allow scientists to spend a set time in parliament, and parliamentarians to make a reciprocal visit to the scientist's institute. These pairings tend to be aimed at mid-stage researchers, rather than those just starting out, but are an excellent way to find middle ground in the fields of science and policy. These schemes let scientists learn about how policy is formed and what policymakers need from scientists, as well as enabling policymakers to understand more about the way research is carried out.

Scientists can directly contribute to policymaking at the European level by working with the European Commission and the organisations that support it. The European Commission hosts [5-month-long traineeships](#) that immerse scientists in the workings of EU policy. From organising consultations to writing reports and literature research, the positions let scientists bring their expertise to the table and equip them with skills to further channel their science into policy. The [Organisation for Economic Co-operation and Development](#), with headquarters in Paris, France, offers similar internships for students in the environmental, agricultural and social sciences. While these internships are unpaid, they do offer a great insight into policymaking in Europe.

The reach of young scientists in policy can go even further though, with organisations like [Emerging Leaders in Environmental Policy](#) (ELEEP) bringing together young scientists from Europe and North America to exchange ideas, policy solutions and best practices relating to both energy and the environment. ELEEP connects young scientists with an interest in policy on both sides of the Atlantic through [study tours](#), conferences and an online forum for the exchange of information and expertise.

ELEEP member and postdoctoral researcher Edvard Glücksman highlights what the network brings to its members: "ELEEP offers a broad network of contacts and learning opportunities, which in turn allows members to make more informed and measured decisions... Many members will eventually take on policy-making positions in the future. To that end, the ELEEP experience will have offered them vital first-hand experience learning about a range of areas in environment and energy." When forging any career, experience is vital and networks like this are an important way to build it (if you



ELEEP members gather in Rotterdam's port area during a [study tour in the Netherlands](#). (Credit: Edvard Glücksman)

want to get involved in policymaking full-time, *Science* magazine has some [fantastic suggestions to help forge your career](#)).

"I am particularly proud of our ongoing [Arctic outreach fellowships](#), which we created from nothing during an ELEEP summit last year... These fellowships embody the true spirit of ELEEP, harnessing background expertise whilst at the same time offering young professionals a chance to step outside their comfort zone through first-hand experience with a globally important subject matter," Glücksman adds. And there are more exciting initiatives ahead: "the network itself, now three years old, is in the process of developing new and innovative ways of harnessing members' expertise in a more publicly accessible manner," something that will not only benefit policymakers, but the general public too.

The input of young scientists in policy can bring about not just local, national or European change, but change on a global level. Whether you choose to move to policymaking, synthesise information for policymakers or provide evidence in a public call, one thing's for sure: every step you take could lead to a global impact, and change the way science is used in policymaking.

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