



HOW DOES SCIENCE INFORM THE UK PARLIAMENT?

The British Ecological Society (BES) is committed to making the best ecological evidence accessible to decision-makers. Policymaking processes are rarely straightforward, however, and understanding how best to share their expertise with decision-makers can be challenging for scientists. Our Policy Guides aim to improve communication between our members and policymakers, increase the impact of ecological research and support evidence-informed policymaking.

INTRODUCTION

This second guide focuses on the structure, function and purpose of the UK Parliament, highlighting the different channels through which science can inform its work. It discusses four main routes: Select Committees, the Parliamentary Office of Science and Technology, All-Party Parliamentary Groups, and the House of Commons and Lords libraries.

WHAT IS PARLIAMENT?

The UK Parliament consists of the House of Commons (HoC), the House of Lords (HoL), and the monarch (in a ceremonial role). The two Houses are responsible for similar work: making legislation, debating relevant issues and scrutinising the work of government. Decisions made in one House usually have to be approved in the other. When there is disagreement between the Houses, the primacy of the HoC is sometimes invoked, based on the elected nature of the House.² Under the 'Salisbury Doctrine', the HoL does not try to vote down any Government Bill mentioned in an election manifesto (see Fact Box on page 2).

HOW ARE LAWS MADE?^{3,4}

A Bill is a draft of a law. Bills can be introduced by Members (MPs and peers) in the HoC or the HoL. The first reading of a Bill is a formality and takes place without a debate. The Bill is then published and a second reading occurs, during which Members can debate the general themes and principles of the Bill. After this comes the committee stage, where detailed examination of the Bill takes place. In the HoL, peers examine the Bill line by line. For Bills that start in the HoC, a Public Bill Committee of MPs is usually formed, which can take evidence from experts outside of Parliament.

After the committee stage, the Bill is reprinted and moves to the report stage, where it can be further debated, amended and scrutinised. Finally, the third reading takes place, with debate focusing on the content of the report (rather than amendments or additions) and a vote is held on whether to approve the third reading. Most Bills then move to the other House to undergo the same process, before returning to its original House for final approval. If the two Houses do not agree

KEY MESSAGES

- Parliament consists of the House of Lords (HoL) the House of Commons (HoC), and the monarch which pass laws, scrutinise the work of government and debate political issues.
- Bills become law through a series of stages. External evidence is usually sought at the committee and report stages. Bills must pass through both houses and are then made into law through Royal Assent.
- Select Committees conduct inquiries and produce reports on a range of issues. They may appoint special advisors, often academics, and usually begin inquiries with a call for written evidence. Oral evidence sessions with relevant experts then follow.
- All-Party Parliamentary Groups allow informal discussion of issues with Parliamentarians.¹
- The Parliamentary Office of Science and Technology provides analysis of public policy issues relating to science and technology, and consults widely with academia, learned societies, government departments, industry, thinktanks and NGOs.
- The HoC and HoL libraries provide research briefings to Members and their staff. They also organise topical talks by subject specialists and external speakers.



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on amendments, the Bill can go back and forth between the two Houses in a process known as Consideration of Amendments or 'ping-pong'⁵, and often the outcome is in the favour of the HoC. Once approved by both the HoC and the HoL, a Bill must be granted Royal Assent by the monarch before becoming an Act of Parliament, i.e. a law.⁶

CHANNELS FOR SCIENCE TO INFORM PARLIAMENT

A number of channels exist through which researchers may engage with Parliament. Policymaking draws upon research literature, as well as from open calls for evidence and briefings submitted by expert individuals and organisations. In addition to formal avenues of consultation, individuals and organisations, such as learned societies, can submit research and evidence to Members unsolicited as a written or oral briefing. Individuals can also write to their local MP to express concerns or make suggestions for a parliamentary question. When submitting evidence informally, it is more likely to be well-received if the issue is timely, makes well-supported recommendations and is related to an existing policy objective.

Formal opportunities for science to inform Parliament arise during the parliamentary scrutiny process,⁷ whereby Parliament examines government legislation and policies, often through Select Committees (SCs). Other channels exist for scientists to engage with Parliament, including the Parliamentary Office of Science and Technology (POST), All Party Parliamentary Groups (APPGs), the HoC and HoL Libraries. SC inquiries and POSTnotes are perhaps the most direct and accessible routes for inputting evidence into the policy process, particularly for individual scientists. APPGs or the HoC and HoL libraries are more diffuse avenues.

SELECT COMMITTEES⁸

SCs exist to investigate policy issues in greater depth and to hold the Government to account. Both Houses establish SCs, which are composed of their Members. SCs use an investigative process to conduct inquiries and produce reports. Committees decide upon a field of inquiry and collect written and oral evidence from experts. Findings are reported in the Commons and published on the Parliament website. Government is required to produce a response to the findings of a SC, but is not compelled to take up any of its recommendations.

Most HoC SCs focus more specifically on shadowing the work of government. There are 19 departmental SCs in the HoC, one for every government department, including the Science and Technology Committee which shadows the Government Office for Science. There are also several cross-departmental SCs, such as the Environmental Audit Committee. There are currently six major HoL SCs (including the HoL Science and Technology Committee) but ad hoc HoL SCs are sometimes set up to look at other issues, such as environmental protection. Joint Committees involve Members of both houses working together in one committee.

After a general election and before the election of committee chairs can begin, the Speaker of the HoC writes to the newly elected party leaders, indicating the numbers of chairs that might be allotted to each party. Hence, the number of chairs and members of SCs per party reflects the number of seats the party holds in Parliament.

In the HoC, SC chairs are first nominated by MPs and then elected through a secret ballot, then remaining committee members are appointed by their parties. In the HoL, the House decides which

FACT BOX

HOUSE OF COMMONS

- Voters elect a Member of Parliament (MP) for their constituency. Normally, the party (or coalition) who can command the confidence of the House of Commons (HoC) forms the Government. There are currently 650 MPs.
- Ministers are MPs who hold public office in government, while Shadow Ministers are their counterparts in the Opposition. MPs in ministerial positions are known as frontbenchers, those who are not known as backbenchers.³
- MPs debate issues, consider and propose new laws, and scrutinise government policies.
- MPs can examine government policies by asking Ministers questions in the HoC Chamber or during committee inquiries.
- The HoC has sole responsibility for making decisions concerning financial bills, such as proposed new taxes. The House of Lords (HoL) cannot block such a bill, only amend or delay them.

HOUSE OF LORDS

- The HoL is independent of the HoC and currently has around 825 Members (peers).
- The majority of members are appointed for life by the Queen on the advice of the Prime Minister or the HoL Appointments Commission.
- The HoL scrutinises bills that have been proposed by the HoC and often reviews and amends them.
- The HoL has little power to prevent bills passing into law but can delay them and force the HoC to reconsider their decision.
- While most members of the HoL belong to a political party, some do not and are known as 'crossbench peers'. They include a number of prominent scientists, such as Lord May and Lord Krebs.



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members sit on each committee. The number in a committee varies, from about 10 to 18. Typically a committee of 12 members.

HOW CAN SCIENTISTS ENGAGE WITH SELECT COMMITTEES?

Calls for evidence are accessible online, with an option to receive email notifications for new calls. Specific invitations to submit evidence may be issued to potential witnesses, typically experts. Oral evidence sessions are accessible to the public, with the committee putting questions to witnesses. These sessions are available online through Parliament TV.⁹ Committees can also appoint specialist advisers, often academics, either generally or to assist with specific inquiries.

A report is then written, published and made publicly available on the SC's website. Academics and other researchers are increasingly interacting with SCs, as highlighted in the microplastics case study on the back page, and engagement with them has been cited in Research Excellence Framework Impact case studies.¹⁰

PARLIAMENTARY OFFICE OF SCIENCE AND TECHNOLOGY¹¹

POST provides in-house analysis of public policy issues relating to science and technology. POST aims to deliver accessible overviews of relevant scientific evidence from across the natural and social sciences, placing the research findings in a policy context. These overviews are published as four page summaries, known as POSTnotes. These are usually produced proactively, giving Members clear and concise information about issues before they reach the top of the political agenda and to support evidence-informed parliamentary scrutiny. This horizon-scanning role is intended to identify key emerging issues with a basis in science and policy of interest to Members in a timely manner.

Ideas for POSTnotes are currently gathered by POST staff from external organisations and researchers. Staff then propose these ideas to the POST board, which consists mainly of Members, who choose which should become POSTnotes. POST is assessing how the transparency of this process can be improved.

Most POSTnotes are written by Fellows, who are PhD students funded by Research Councils, learned societies (BES funds a POST Fellowship) or charities. In the process of producing

a POSTnote, Fellows consult widely inside and outside of Parliament with academia, learned societies, government departments, industry, thinktanks and NGOs typically through interviews. Each briefing is reviewed in-house and peer reviewed by the external experts that were consulted prior to publication. Recent examples include POSTnotes on environmentally sustainable agriculture and environmental crime.

HOW CAN SCIENTISTS ENGAGE WITH POST?

There are a range of ways for scientists to engage with POST, such as:

- Submitting ideas for future POSTnotes.
- Applying for a POST fellowship.
- Contributing data and evidence for POSTnotes that are currently in progress.
- Reviewing POSTnotes before publication.
- Attending and speaking at POST events in Parliament.

ALL-PARTY PARLIAMENTARY GROUPS¹²

APPGs are informal cross-party groups. Unlike SCs, they have no official status within Parliament. They are run by Members but many involve external stakeholders. APPGs can be country based or subject-based. They allow informal discussion of issues and new developments; they can invite government ministers to speak at their meetings, and help bring together Parliamentarians and interested parties.

HOW CAN SCIENTISTS ENGAGE WITH APPGS?

Channels exist for campaign groups, charities and NGOs to join APPGs. These groups often pay to become members of APPGs or provide a secretariat role. APPGs offer an opportunity for organisations in the field to become active in discussions, present relevant evidence and potentially influence politicians. Members of the public can also attend APPG meetings by asking the Secretariat to join the mailing list.

PARLIAMENT LIBRARIES^{13,14}

The HoC and the HoL Libraries provide information and research services, mainly through a confidential and tailored enquiry service for individual requests from Members, their staff and staff of the House. They also provide reading rooms, face-to-face enquiry points and a library loans service. Both libraries produce briefing papers on specific subjects often related to

FACT BOX

WHAT ARE THE DIFFERENT TYPES OF BILLS?

- The Government's proposed legislative programme is formally announced in the Queen's Speech at the state opening of Parliament.
- Public Bills are usually introduced by Government ministers and change the law as it applies to the general public.
- In contrast, Private Bills are usually promoted by organisations, companies or individuals and change the law as it applies to these specific parties.
- Private Bills rarely pass beyond a second reading, as the Government generally allocates more Parliamentary time to Public Bills. A Private Members' Bill is introduced by an MP who is not in government. Hybrid Bills combine some of the characteristics of Public and Private Bills. The legislative changes proposed would affect the public as well as specific individuals or groups.
- Hybrid Bills often relate to infrastructure projects, which are seen as of national importance but have local consequences, including on the environment. Examples of current Hybrid Bills passing through Parliament are those relating to High Speed Rail 2 (HS2).



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legislation currently passing through Parliament. Briefing papers are usually produced when several enquiries are received about a similar topic or during the second reading of a Bill, but are also produced more proactively when the libraries identify an ongoing issue particularly relevant to Members.

In their briefings, the libraries' research services highlight key scientific evidence and stakeholder views. Both libraries also produce debate packs before any non-legislative Parliamentary debates lasting longer than an hour, collating published documents on the topic in question and adding any relevant updates that have occurred since the documents were published. In addition, the HoC library organises talks by subject specialists and external speakers; it also publishes a blog: www.seconddreading.uk.

HOW CAN SCIENTISTS ENGAGE WITH PARLIAMENTS LIBRARIES?

The mechanisms of briefing papers and debate packs demonstrate the need for researchers and other stakeholders to publish evidence and on key policy-relevant scientific questions in a public domain, for example through peer reviewed articles, press releases and public fora. By ensuring that their research outputs are publicly available, scientists increase the chances of the HoL and HoC library finding, using and citing their work. HoC unlike HoL employs specialists, including science and environment specialists to develop briefings such as the bees and neonicotinoids briefing.¹⁵

CASE STUDY

MICROPLASTICS BAN: A CASE STUDY OF HOW SCIENTIFIC RESEARCH INFORMED POLICY DECISION MAKING

Microplastics – plastic fragments less than 5mm in size – are a widespread form of ocean waste that come from a variety of sources including industry, cosmetics and synthetic textiles. The plastics and their additives can harm wildlife and accumulate in seafood.

A research group at Exeter University, led by Professor Tamara Galloway, had researched the distribution of microplastics in the ocean, their impact

on the marine environment and how they posed a risk to human health through their accumulation in fish and seafood. Besides publishing scientific articles, the research group made efforts to communicate their work through non-academic publications such as reports by NGOs. These articles brought the issue closer to the public and other interested stakeholders. The media picked up on their work and a campaign against microplastics began. The researchers, however, remained focussed on establishing the scientific evidence base.

Their research findings helped a large collaborative attempt to get microplastics included in a 2013 HoC Science and Technology Committee inquiry into water quality, and their work was later cited in two POSTnotes: 'Trends in the Environment' and 'Marine Microplastics', published in 2016.

Around the same time a public petition of over 300,000 signatures was delivered to the Government, calling for a ban on microplastics in cosmetics. The HoC Environmental Audit Committee (EAC) also started an inquiry into the 'Environmental Impacts of Microplastics'. In addition, the NERC fellow that drafted the Marine Microplastics POSTnote privately briefed the EAC at the start of the inquiry.

During the EAC inquiry MPs received written and oral evidence submissions from a range of experts and stakeholders. Professor Galloway gave evidence at one of the hearings. Her experience of shadowing a parliamentarian, through the Royal Society's 'Week in Westminster' scheme, along with media training from the Science Media Centre, allowed her to understand the needs of her audience and how to deliver the message effectively.

Professor Galloway also presented evidence to the United Nations to help formulate international guidance on preventing and reducing microplastic pollution and its effects. Soon afterwards, the Government proposed a ban and launched a consultation looking at both the implications of this decision as well as what more could be done to prevent other sources of plastics entering the marine environment.

FACT BOX

WHAT ARE PARLIAMENTARY QUESTIONS?

- Parliamentary questions are one of the principal methods by which Members hold the Government to account. Members can ask questions either to seek information from a government department, or to press a Secretary of State to take a particular action.
- Members can submit questions for answer either orally or in writing. Unlike the HoC, oral questions in the HoL are addressed to the Government as a whole, not to particular government departments or ministers. Submitted questions must conform to certain rules and follow specific processes and Ministers are given time to collate information before they are required to respond.
- Members must declare any relevant interests when submitting a question, whether or not they have been declared in the Register of Members' Financial Interests. All parliamentary questions are printed in the official Report of proceedings (Hansard) and are available on Parliament's website at www.parliament.uk.

REFERENCES

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- [All-Party Parliamentary Group on Science and Technology in Agriculture](#)
- [House of Commons Library](#)
- [House of Lords Library](#)
- [HoC Briefing on Bees and Neonics](#)

BRITISH ECOLOGICAL SOCIETY POLICY GUIDES

Policy Guides will provide an information resource for BES members, focusing on the policymaking process in the UK and the various avenues through which scientific evidence can be used to inform policy.

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