The party assumes a positive attitude towards the protection of habitats and biodiversity in Northern Ireland, seemingly following some of the recommendations made by the 2010 Lawton Review of protected areas in England[9]. The Northern Ireland Executive will seek to prevent species decline, and arrest the recent loss of biodiversity by 2020 by investing in habitat improvement. The DUP says it will develop a partnership approach to increase woodland cover, by enlarging existing native woodlands and by creating links between them to encourage connectivity. Tackling water pollution through further implementation of the Water Framework Directive is also high on the DUP's agenda.

The DUP hope to support science and engineering industry in Northern Ireland by encouraging the uptake of STEM subjects and retaining homegrown talent. Since 2007-08, Northern Ireland has not required students to study maths or science after the age of 14.[10] The DUP pledges to increase the number of young people studying STEM (science, technology, engineering and mathematics) subjects, in order to maximise employability. There will be home loans to encourage STEM graduates to live in Northern Ireland, and student loan relief for those proposing to live in the province for the next ten years. The DUP also recognise that business plays a key role in funding research, innovation and development and have proposed a 10% reduction in corporation tax to encourage further investment.

Sinn Fein's manifesto mentions research and development in the context of job creation and initiatives to ensure that Northern Ireland becomes a world leader in green energy. The environment is mentioned briefly, mainly in the context of rural development, with the party advocating an increase in the grant for growing energy crops and promotion of traditional livestock breeds. The party also pledges to negotiate radical reform of the Common Fisheries Policy, ending fish discards.

Conclusion

It is encouraging that nature conservation, climate change, science education and support for scientific research and innovation were highlighted, to greater or lesser extent, in the manifestos of the parties that went on to win the devolved elections. In the wake of the elections, the BES and the Institute of Ecology and Environmental Management wrote to all elected representatives in these nations to highlight the assistance which both organisations could provide in informing evidence-based policy-making. Over the coming months and years we plan to engage with policy developments in these countries to ensure that the many positive manifesto commitments translate into positive action. The assistance of members will be vital to these efforts (Box 1).

BOX 1: Working with the devolved administrations

The BES is currently working to develop the Society's links to Scotland and Wales by establishing a network of people who are keen to be involved with science policy in these countries. We hope that the networks will improve the capacity of the BES, and its members, to respond in an appropriate and timely manner to policy developments within Scotland and Wales.

The networks will be a means of sharing information on relevant policy developments between the Policy Team and members in Scotland and Wales, and for BES members to share information amongst themselves.

If you are interested in becoming involved, please contact the BES Policy Team via email at: **policy@britishecologicalsociety.org**.

'Landscapes of the Future' BES-POST Fellowship

Eleanor Kean

There is an increasing recognition of the value of ecosystem services to the economy and human well-being, which had until recently been taken for granted particularly by non-ecologists. The UK National Ecosystem Assessment, published in June 2011, is the first analysis of the UK's natural

9 Lawton, J.H. et al. (2010) *Making Space for Nature: a review of England's wildlife sites and ecological network*. Report to Defra. http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

10 *Science, Engineering and the Devolved Nations*. CaSE Policy Report, 11 (April 2011).

environment in terms of the services it provides to society and economic prosperity. It also examines how these might change, the effects of these changes and policy options to secure and improve delivery under plausible future scenarios.[1] Patterns of land use have contributed to not meeting UN2010 biodiversity targets and have created food production systems that are unsustainable, due to soil degradation and heavy reliance on fertilisers and fossil fuels. The UK population is expected to increase by 15 million by 2051, creating more demand for houses, infrastructure, water and food. Additionally climate change mitigation will involve using more land for renewable energy as well as changes in land use needed for climate change adaptation such as flood defence.[2]

Using land for multiple purposes is one way to balance these competing demands. Agri-environment schemes are a useful example, where an attempt is made to balance food production and the natural environment. The government has highlighted the need for greater focus on delivering multiple benefits in the next Common Agriculture Policy reform. This may include incentivising the delivery of multiple ecosystem services.

According to the European Landscape Convention, signed and ratified by the UK in 2006, landscape is "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors." Landscape research is dispersed between many disciplines including history, ecology, archaeology, geography, sociology and environmental science. There is limited communication between research sectors and inadequate funding for collaboration. Greater integration would provide a scientific framework better suited for policy, to take practical action on future social and environmental challenges.[3]

Similarly, no single government department is responsible for land use, although most have some impact upon it, for example, Defra, the Department for Communities and Local Government, Transport and even HM Treasury, with planning mentioned in the Budget in March this year. To deliver ecosystem services many call for a more integrated approach across different levels of governance (local, regional and national) and across sectors; water resource management, conservation, agriculture, woodland and forestry, flood management, energy, residential and commercial development, transport, and recreation. The Scottish Government's recently published Land Use Strategy and the Welsh Assembly's Natural Environment Framework are policy examples that attempt to do this and in England the policy framework is set by the Natural Environment White Paper. There are still concerns however from planners and wildlife conservationists about the planning reforms under the Localism Bill. Landscapes and ecosystems cross administrative boundaries and communities are affected by, and affect, other areas. For example, water management in upstream areas can affect flooding and water quality downstream both positively and negatively. The National Planning Policy Framework (NPPF), as the remaining pillar for strategic planning at a large spatial scale, could play an important role in delivering a resilient ecological framework and there are dangers of an NPPF that is economically driven without consideration of the natural environment. [4]

BES-POST Fellowship

At the start of this year I worked at the Parliamentary Office of Science and Technology (POST) for three months, thanks to the BES POST Fellowship; a placement and bursary of £5,000. POST is an office of both Houses of Parliament, providing independent and balanced analysis of public policy issues that have a basis in science and technology.

During my time at POST I researched and wrote a POSTnote, entitled 'Landscapes of the Future'. POSTnotes are four page briefings for Parliamentarians but can be freely downloaded from POST's website and I heard several academics saying they use them when writing lectures! Given the breadth of both 'landscapes' and 'the future' this wasn't an easy topic. It was, however, it was a fantastic insight into the role of ecology in policy making, alongside other sciences as well as social and economic issues.

'Landscapes of the Future' was quite a change from my PhD on otter scent communication and population monitoring at Cardiff University. I was able to draw on research skills and my experience working for a local wildlife trust before I started my PhD.

1 UK National Ecosystem Assessment http://uknea.unep-wcmc.org/
2 Foresight Land Use Futures Project (2010) Final Project Report. The Government Office for Science, London.
3 ESF/COST (2010). Landscapes in a Changing World. Science Policy Briefing.
4 Report available online http://www.rspb.org.uk/Images/RSPB_NPF_report_2_tcm9-270015.pdf
5 POSTnote380, June 2011, Landscapes of the Future: http://www.parliament.uk/documents/post/postpn_380-Landscapes-of-the-Future.pdf