



**JNCC STRATEGIC FORWARD LOOK AND IMPLICATIONS FOR CORPORATE
PLANNING**

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JOINT NATURE CONSERVATION COMMITTEE

JNCC STRATEGIC FORWARD LOOK AND IMPLICATIONS FOR CORPORATE PLANNING

1. Background

- 1.1 This paper is a strategic forward look at JNCC's business. It aims to identify any changes in direction that might be required over the next 3-5 years, and to provide a context for discussion with funding bodies about priorities for JNCC's next business plan (2012/13 onwards).
- 1.2 The paper pulls together:
 - i. the headline messages from a review of studies looking at the changes most likely to impact on the natural environment within the next 10-15 years;
 - ii. various strands of work on country, European and global natural environment strategies and frameworks;
 - iii. outputs from a workshop held in March 2011 involving JNCC staff and Joint Committee members.
- 1.3 The paper was discussed by the Joint Committee in June 2011, and has been revised in line with comments made at the meeting.
- 1.4 JNCC's current strategic goals and business objectives are set out in Annex 1.

2. Future changes and challenges for the natural environment

- 2.1 A review of studies looking at the changes most likely to impact on the natural environment within the next 10-15 years has been undertaken by JNCC staff. The headline results suggest that the major transformations likely to have the greatest impact on the natural environment are:
 - i. greater competition between the major uses of land, and major changes in land use, caused by an increased need for energy security (renewables and biofuels), food security and a redistribution of forestry. Multifunctional land use will become a necessity;
 - ii. water management will need to cope with increased demand and novel uses such as algal farms to cope with the increasing competition for land;
 - iii. increasing use of marine areas for land-based activities (renewable energy, aquaculture, algal farms, biomass);

- iv. use of genetically modified organisms and non-native species to increase productivity;
 - v. growing commercial interests caused by the economic value of ecosystem services and biodiversity.
- 2.2 Other shorter-term challenges for JNCC have been identified through considerations of the various requirements and drivers for our business plan objectives. Notably, increased concern over the problems caused by invasive alien species, and the ecosystem impacts of pests/diseases such as *Phytophthora* spp, will require greater attention from JNCC.
- 2.3 The overarching challenge is probably associated with taking a more holistic ecosystem approach to nature conservation and achieving increased awareness, joint working arrangements and multi-scale initiatives with new partners from other government sectors – ‘mainstreaming’. This type of working will be essential in moving nature conservation and sustainable development closer together. Emphasis on ecosystem services and economic valuation, as tools to assist joint working with other sectors, will be important in meeting this overarching challenge. For these reasons, it is inevitable that JNCC’s future work will have less emphasis on the more traditional protected areas network and legislative approach to nature conservation. These traditional areas of nature conservation have served us well, and need to be maintained, but time must be found to develop the essential wider ecosystem-scale approaches that need to work alongside them.
- 2.4 It is very likely that impacts upon biodiversity, in the UK and internationally, will be driven as much, if not more, by policies which are focused upon issues other than biodiversity *per se*. Indeed, the key drivers of change over the forthcoming years, for the UK and for other countries, will be focused upon ensuring security in energy, food and water and resilience to climate change. Linked to these will be the demand for continuing economic growth and strengthening competitive advantage as part of a ‘green economy’. Policies related to these issues will be more difficult to influence, but failure to do so will mean we are unlikely to achieve biodiversity goals.

3. Strategies, frameworks and drivers for nature conservation in the UK

- 3.1 JNCC needs to be responsive to the priorities and requirements of its key stakeholders. Consequently, it will be important to remain aware of work planning activities in all of the country nature conservation bodies and to maintain dialogue with Defra, other relevant government departments and devolved administrations. The continuing process of devolution is likely to increase the range and variety of policies affecting biodiversity within the UK, and JNCC must be attuned to the priorities of each administration so that we can support them in meeting their international and domestic obligations.
- 3.2 The emerging country natural environment frameworks and strategies will be crucial in shaping the nature of JNCC’s work, especially since it has been agreed that the UK contribution to them should be captured and endorsed in a UK framework. A first draft of this framework was discussed by the Joint Committee in June and will be considered by the Four Countries biodiversity group in late July. This framework captures the UK role agreed by Committee in March, outlines a new governance structure for UK work, and strengthens

the links between the proposed UK role and the delivery of the country strategies and frameworks, the EU Biodiversity Strategy and the Aichi Targets.

- 3.3 JNCC will only be able to fulfil the role envisaged in the UK biodiversity framework if it continues to work closely with the country conservation bodies. For example, the inter-agency Chief Scientists Group will be critically important in maintaining links with devolved processes and supporting and advising any new UK governance structure.
- 3.4 The international context for biodiversity conservation in the UK is provided by the 20 global Aichi targets agreed at the 10th Conference of the Parties to the Convention on Biological Diversity and the targets contained in the EU Biodiversity Strategy. These commitments have been fully incorporated into the draft UK Biodiversity Framework.

4. Implications for JNCC's evidence work

- 4.1 The core of JNCC's evidence work will remain relatively unchanged over the next few years. JNCC will still need to deliver species surveillance programmes in partnership with NGOs and others, and will continue to realign these programmes with evolving priorities and seek further efficiency gains. We will also maintain our long-standing role in supporting cost-effective mechanisms for collating, interpreting and disseminating biological data, e.g. through the National Biodiversity Network. In the marine environment, work to develop options for a biodiversity monitoring programme covering all UK waters has at least another two years to run.
- 4.2 The two evidence objectives (objectives 1 and 2 in Annex 1) already accommodate many of the issues raised by the compilation of futures work. The major step changes required are for evidence to:
 - i. detect pressures better;
 - ii. contribute to modelling; and
 - iii. support evaluation of ecosystem services.

The processes necessary to achieve these step changes are already underway and are inherently built into the options being developed for marine monitoring.

- 4.3 A major area of stakeholder interest is in how to implement the ecosystem approach and, in particular, how to quantify and value the role of biodiversity in ecosystem services. A greater focus on functionally important species is anticipated to assist our ability to provide evidence on ecosystem services. This is a crowded work area, with agency and other public body activity, and the precise work needed is not yet fully clear. It is likely that JNCC will have a role in providing evidence and ensuring a minimal level of common understanding and principles across the different emphases being placed by countries in applications of the ecosystem approach.
- 4.4 In the marine environment, the issues of pressures and valuation are built into the Marine Strategy Framework Directive, which will lead to a modification of the overall requirement for marine assessments. Marine assessment is

currently dealt with by the “Charting Progress” activity which also provides the model for country-level assessments. The key issues in creating an effective assessment system are developing marine biodiversity monitoring as an integrated component of overall marine environmental monitoring, and in developing assessment methods so that the multiple reporting requirements can be met from common sources of information and interpretation (i.e. are streamlined). There is also a priority to match the scale of assessment with the scale of management interventions.

- 4.5 It is likely that JNCC’s role in marine nature conservation beyond 12 nautical miles will give rise to additional evidence work. Specifically, JNCC needs to decide the criteria/attributes it will use to assess condition in marine protected areas in offshore waters, and this then needs to be built into the marine monitoring programme. Integration of this requirement might be anticipated to raise the need for site and feature specific information quite significantly.
- 4.6 There are a number of developments over the summer/autumn of 2011 that will help confirm the demand for UK-scale evidence work and provide useful opportunities for JNCC to further define its work, clarify its added value role and set clear deliverables. They include:
 - i. analysis of the EU Biodiversity Strategy and its linkage to work in the UK;
 - ii. the outcomes and recommendations of the National Ecosystem Assessment;
 - iii. the environment/biodiversity strategies and frameworks that have recently been published or are currently being developed by the administrations in different parts of the UK;
 - iv. ongoing implementation of the Marine Strategy Framework Directive;
 - v. establishment and implementation of the International Platform for Biodiversity and Ecosystem Services (IPBES).
- 4.7 Identifying the evidence requirements associated with these developments, and planning how to meet them through existing research and evidence collection activities, will be a major challenge for JNCC but will also set its evidence work on a very firm footing in the medium to long term.

5. Implications for JNCC’s international work

- 5.1 In addition to all of the generic drivers for JNCC’s work covered in sections 2 and 3 of this paper, there are some additional developments more specific to JNCC’s international work (objective 3 in Annex 1). These include:
 - i. the UK Government’s Overseas Territories biodiversity strategy and forthcoming overall strategy for the Overseas Territories;
 - ii. the UN Conference on Sustainable Development in 2012 (‘Rio+20’) which could provide additional goals for a green economy in the context of sustainable development and poverty eradication;

- iii. EU initiatives, including reforms of the Common Agriculture and Fisheries Policies, the Invasive Alien Species strategy, Green Infrastructure and the initiative for a resource-efficient Europe;

5.2 The major changes most likely over the next 5-10 years include:

- i. a continuing shift to ecosystem services as a major driver of nature conservation;
- ii. increasingly frequent stochastic shocks (such as major weather events) associated with climate change. Environmental change in ecosystems or climate often happens abruptly when thresholds are crossed. Whilst hard to predict, the recognition that these thresholds exist and that flipping is possible, may lead to step changes in behaviour. Partly as a consequence, ecological concepts, such as resilience, will increasingly move into discussions of economics and policy-making, and will focus concern on adaptation and resilience, both environmental and economic, coupled with concern for security for energy, food and water;
- iii. resource efficiency will be an important paradigm for the future, seeking to optimise rather than maximise output of a mix of products, recognising the trade-offs. Biodiversity will increasingly be seen as a resource and treated as such;
- iv. the UK's dependence upon ecosystem services overseas will increasingly be recognised and assessed as contributing to the UK's environmental footprint and economic vulnerability;
- v. a trend towards greater efficiency, harmonisation and transparency in governance of international environmental instruments.

5.3 In the next 3-5 years, JNCC needs to:

- i. continue to support Multilateral Environmental Agreements, and advise on the development and implementation of EU directives and policy affecting the environment. We will aim to take a more strategic approach to UK engagement, in support of government, with a clear definition of priorities and goals across the various mechanisms;
- ii. place our advice within the context of the topics that are likely to define nature conservation for the next decade: sustainable development, resource efficiency and ecosystem services. We should aim to ensure that biodiversity conservation is considered in a range of other policy developments, such as payments for ecosystem services and specific mechanisms such as REDD+;
- iii. continue to support nature conservation in the UK's Overseas Territories and Crown Dependencies, with an emphasis on ensuring that biodiversity conservation is supported cross-sectorally;
- iv. place a greater focus on marine issues across all aspects of JNCC's international work (including Overseas Territories). There is likely to be a greater need for international cooperation in implementing our operational role in offshore waters;

- v. exploit more our unique 'pathfinder' role, for example, in looking at the global impact of the UK on biodiversity overseas. This coming year should help define the direction for this work over future years.

6. Implications for JNCC's marine work

- 6.1 Two of JNCC's business objectives (objectives 4 and 5 in Annex 1) are specifically concerned with marine nature conservation (Marine Protected Areas and sustainable management of the offshore marine environment). Marine aspects of JNCC's evidence and international work are covered in sections 4 and 5 of this paper.
- 6.2 Identification of Marine Protected Areas (MPAs) is currently a major component of JNCC's marine work. At around the end of 2012, there will be a shift in emphasis, with work to identify MPAs beginning to draw to a close, and the operational aspects of managing MPAs increasing. This change in emphasis will be gradual (having already started for some Natura sites) and is estimated to span several years. There will be a continuing, but much reduced, demand for site identification work beyond 2012 as sites are reviewed and challenged.
- 6.3 The completion of the MPA identification process is likely to generate an increased demand for management advice (a JNCC statutory duty in offshore waters) as a result of the increased number of MPAs in the network. The scale of this additional advice is at present unclear. Future operational advice on MPAs will also include advice on site monitoring and assessment (see 4.5 above).
- 6.4 One pressing challenge that must be grasped relates to ecological coherence and the need to assess MPAs in terms of their functioning as a network and not just a list of sites. This work is likely to include assessment of the contribution of MPAs to network objectives for OSPAR, the Marine Strategy Framework Directive (MSFD), and possibly at UK or country level.
- 6.5 It is expected that the requirement for advice to marine industries and their regulators will increase over the next few years in line with increasingly complex usage of the marine environment, including the designation of 50 or more offshore protected sites. Advice on oil and gas and aggregates is likely to remain approximately at current levels, with some change as the hydrocarbons industry moves from development to decommissioning. Demand for advice on renewables will increase due to the progression of Round 3 offshore wind developments, which are almost exclusively in the offshore area and which have a more extensive footprint than Rounds 1 and 2. There will likely be an increase in advice in relation to marine spatial planning and for measures and guidance to achieve the objectives of the MSFD.
- 6.6 In the medium to long term, JNCC will need to work with government and others to ensure any potential benefits from the current round of Common Fisheries Policy reform are realised. There will certainly be a considerable increase in demand for advice in relation to fisheries management measures of protected sites.

- 6.7 The MSFD provides a major new policy obligation for Member States and will require significant effort in coming years to develop the necessary policy and technical requirements within the Directive's challenging timescales. The Directive covers all UK waters and has a significant emphasis on protection of biodiversity within its overall aim to achieve good environmental status by 2020. JNCC are currently advising government on implementation of the Directive at UK and European levels, including through the OSPAR Convention. Requirements for assessments of environmental status, monitoring programmes (see section 4) and advice on measures to improve environmental quality can be expected to increase in coming years. MSFD also requires Member States within the same region (i.e. the north-east Atlantic) to work cooperatively to develop consistent approaches to its implementation.

7. Changes to JNCC's business objectives

- 7.1 The analyses presented in the earlier sections of this paper do not indicate any fundamental change in JNCC's role over the next few years, but rather a gradual evolution in response to changing circumstances. Minor amendments to the wording of three of JNCC's business objectives (see Annex 1) may help to clarify the changes:

Objective 1. Could be expanded to mention how JNCC intends to achieve cost-effective solutions by innovation, enhancing citizen science, and sharing of marine monitoring facilities.

Objective 2. The current wording is perhaps too passive and doesn't adequately describe JNCC's active role in streamlining access to and sharing of data to support decision-making at local to international scales.

Objective 3. This is currently too narrowly focused. Whilst it is essential that we continue to support the UK's international obligations, there needs to be some recognition that the main impacts upon biodiversity derive from policies and actions which are not related to biodiversity conservation. The objective should therefore mention integration ('mainstreaming') of biodiversity into the policies and mechanisms of other sectors.

8. Other considerations

- 8.1 The proposed changes to JNCC's work over the next 3-5 years raise a number of generic issues that will need to be addressed:
- i. we will need to ensure that our work continues to align with stakeholder requirements, especially given the changing devolution landscape across the UK. This will require increased attention to managing relationships with key stakeholders and being responsive to their needs;
 - ii. mainstreaming of biodiversity into other sectors will require us to expand our 'portfolio' of customers and partners within UK government and devolved administrations. There may also be a greater demand for biodiversity evidence from the business sector, and opportunities to develop new partnerships, e.g. with NGOs or research institutions working on sustainable development. We may

need to provide information in different ways to meet the needs of different stakeholders;

- iii. as an organisation we need to be agile and proactive so that we can identify and take opportunities as they arise. We must ensure our staff, their skills and our internal ways of working provide us with sufficient flexibility to respond to changing needs;

8.2 The scale of the challenge will also be increased by what are likely to be severe financial constraints over the next few years.

Annex 1. JNCC's strategic goals and business objectives

Strategic goals

Through the provision of evidence, information and advice JNCC will make a distinctive contribution to three inter-related strategic goals:

- i. Decisions affecting the natural environment are informed by a sound UK, EU and global evidence base.
- ii. UK government and devolved administrations meet their international obligations and achieve favourable outcomes for biodiversity in the UK and internationally.
- iii. UK's offshore marine waters are healthy, clean and biologically diverse.

Objectives

Objective 1. Maintain and develop biodiversity surveillance programmes, sufficient to achieve policy and statutory obligations cost-effectively.

Objective 2. Provide access to, and reporting of, information, evidence and knowledge on UK and international biodiversity.

Objective 3. Provide advice to enable UK and devolved governments to meet their EU and international obligations for biodiversity and sustainable development.

Objective 4. Enable UK administrations to substantially complete the UK network of well managed marine protected areas, sufficient to meet national, EU and international requirements.

Objective 5. Provide advice on marine biodiversity to enable sustainable management of the offshore environment.

Objective 6. Manage and develop the organisation to identify and meet changing demands and opportunities, maximise its effectiveness in achieving our strategic goals and improve operational efficiency.