



JOINT NATURE CONSERVATION COMMITTEE

PRIORITIES FOR JNCC'S WORK ON INVASIVE NON-NATIVE SPECIES

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Paper by Jessamy Battersby

1. Background

- 1.1 The spread of non-native species is a growing global problem caused by: increasing movement of humans and increasing trade, with concurrent accidental and deliberate transport and introduction of non-natives; the direct effects of climate change that are likely to favour the spread and establishment of non-natives; the indirect effects of climate change, e.g. the pressure to use renewable energy sources such as biofuels and the use of non-native species to produce fast-growing biomass; and global biodiversity loss, which increases the opportunity for establishment and spread of non-natives in less resilient ecosystems.
- 1.2 Invasive non-native species (INNS) are broadly defined as species whose introduction and/or spread threaten biological diversity or have other unforeseen impacts. Not all non-native species become invasive, but those that do are considered to be a main direct driver of biodiversity loss. INNS have been identified in the Millennium Ecosystem Assessment as having effects at global, European, national and local levels and in all environments. Their impacts are associated with high economic, social and ecological costs. Non-native species can appear to be benign for a period of time before entering an expansion phase that poses a threat to native biodiversity, thus it is important to consider all non-native species and not just those that are observed or otherwise known to become invasive.
- 1.3 Recent years have seen an increased policy focus on INNS within government. Following an in-depth review of policy that was chaired by Defra but which had substantial input from stakeholders, a *Review of non-native species policy* was published in 2003, and an *Invasive Non-Natives Species Framework Strategy for Great Britain* was launched in May 2008. The strategy is concerned with economic, environmental and social impacts of INNS in the terrestrial, freshwater and marine environments.
- 1.4 The INNS Framework Strategy for GB is being implemented through the GB Non-Native Species mechanism (www.nonnativespecies.org). This consists of the GB Programme Board, with representation from a wide range of government organisations, the Non-Native Species Secretariat (based at the Food and Environment Research Agency in York), the Risk Analysis Panel, time-limited Rapid Response and Media and Communications working

groups, and country working groups, with strong involvement from the country conservation bodies (Countryside Council for Wales, Natural England and Scottish Natural Heritage). JNCC represents the country conservation bodies on the GB Programme Board. Similar work is underway to develop an all-Ireland strategy.

- 1.5 Although the GB Programme Board is a government group, it is recognised that the strategy will not be implemented effectively without wide stakeholder involvement, which is achieved through an annual Stakeholder Forum meeting and through a Stakeholder Sounding Board.

2. JNCC priorities

- 2.1 JNCC is probably in a unique position to develop strategic thinking and to link areas of work together in relation to biodiversity conservation and INNS, having an advisory role to the various UK administrations and country conservation bodies, but also working with the Overseas Territories and Crown Dependencies and at European and international levels. Since the country conservation bodies have primacy for terrestrial nature conservation advice and within territorial waters (out to 12 nautical miles), JNCC's operational role is restricted to UK waters beyond 12 nautical miles.

- 2.2 Building on a previous Joint Committee paper on INNS (JNCC 07 P02) and taking into account JNCC's revised strategy, four priorities for JNCC's future work on INNS have been identified. These cover areas where JNCC input will be most useful and effective, and will be carried forward over the next 3-5 years. The priorities are to:

- i. contribute to the development of robust European and global policies and initiatives for INNS;
- ii. provide advice on reducing INNS impacts on biodiversity within the UK Overseas Territories and Crown Dependencies, and raise awareness of INNS issues in these areas;
- iii. assist in the effective implementation of the INNS Framework Strategy for GB and maintain a UK perspective through links with the Northern Ireland Environment Agency;
- iv. promote and develop the evidence base to underpin policies on INNS, including application of analytical tools to quantify environmental, social and economic impacts.

3. Contribute to the development of robust European and global policies and initiatives for INNS

- 3.1 The UK is Party to a number of Multilateral Environmental Agreements (MEAs) in both terrestrial and marine environments that cover INNS, e.g. Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species (CITES), Convention on Wetlands (Ramsar),

Convention on Migratory Species (CMS), Ballast Water Convention. JNCC has a major role in providing technical advice to Government on the development and implementation of these MEAs. In 2008 many of the major MEAs relating to biodiversity held Conferences and Meetings of the Parties. JNCC has provided thematic feedback on the outcomes of these meetings to a range of stakeholders and is now looking forward to how best to inform the UK position at the next round of MEAs in *ca* three years time (see JNCC 09 D02 for details), with INNS being one of the key thematic areas.

- 3.2 At a European level, annual costs in the EU related to INNS issues are estimated to be at least €12.7 billion, and are increasing rapidly due to the expansion of trade. The European Commission adopted, in December 2008, a *Communication presenting policy options for an EU Strategy on Invasive Species*¹, which described various options for a future EU strategy, ranging from business as usual (i.e. no change to existing measures) to having a comprehensive, dedicated EU legal instrument for INNS.
- 3.3 In June 2009, the Environment Council adopted conclusions on developing the EU strategy, planned for 2010. Key points for action include comprehensive risk assessment; effective control of introduction pathways proportional to the risks; a comprehensive EU inventory drawing on existing initiatives as a basis for information sharing; and an early warning system. The Council re-iterated the need for a comprehensive EU framework that works with relevant existing regimes, fills legislative gaps as necessary and establishes a proportionate and cost-effective EU response to INNS.
- 3.4 **JNCC's role**, representing and working with the country conservation bodies, will be to:
 - i. develop the thematic approach across MEAs, and through an action plan, identify targets and future actions that will assist Government to engage more effectively in international INNS issues in both terrestrial and marine environments;
 - ii. through gathering intelligence on policy making in Europe and working with stakeholders (the various UK administrations, European Commission, other Member States, GB Programme Board) assess future actions and provide advice in relation to the development and subsequent implementation of the EU Invasive Species Strategy;
 - iii. incorporate marine non-native species into the assessment of Good Environmental Status under the EU Marine Strategy Framework Directive, firstly for the Initial Assessment in 2012 and subsequently through development of an effective monitoring programme by 2014;

¹Towards an EU Strategy on Invasive Species. Com(2008) 789 final. http://europa.eu/index_en.htm

- iv. wherever possible, work with relevant stakeholders to promote best practice from the GB Non-Native Species Framework Strategy in global and European approaches to INNS.
- 3.5 Challenges to achieving this priority involve gaining consensus on the global actions required regarding INNS and identifying the process to achieve agreement at international level. In the EU the challenge will be to have sufficient influence to obtain an EU strategy on INNS that can operate easily with the GB approach and which is effective throughout the EU.
- 4. Provide advice on reducing INNS impacts on biodiversity within the UK Overseas Territories and Crown Dependencies**
- 4.1 In 2006, JNCC published a first assessment of the occurrence of INNS in the UK's Overseas Territories (OT) and Crown Dependencies (CDs). The report² was accompanied by an associated database which summarised information on species occurrence for each of the territories or dependencies. Update and analysis of the database in 2009 identified high priority actions for control and eradication.
- 4.2 A recent audit highlighted a number of projects involving a wide range of government and non-government organisations working to control or eradicate INNS in OTs and CDs where they have become established. However, information on these projects is scattered, and it is difficult to obtain a complete synthesised view across all the OTs and CDs as to patterns of activity and possible gaps.
- 4.3 A UK Government strategy for the conservation and sustainable use of biodiversity in the UK Overseas Territories has been agreed by ministers, and recognises that work on INNS is a high priority. Defra have agreed to chair a cross-departmental official-level group with responsibility for overseeing and coordinating delivery of the UK Government's objectives.
- 4.4 It is a high priority for all OT and CD governments to have relevant policy on INNS. This particularly applies to the marine environment, which plays a role in providing pathways of invasion for the terrestrial environment, but is also under threat from marine INNS.
- 4.5 **JNCC's role** is to seek support for further measures aimed at eradicating, controlling and, most importantly, preventing the future establishment of INNS in terrestrial and marine environments in the OTs and CDs, where relevant activity or policies are not already in place. This will be achieved by:
- i. providing advice on strategic priorities (e.g. in terms of species and issues requiring attention) to UK government departments, other statutory bodies and more widely, and developing appropriately funded projects to address these priorities;

² Varnham, K. 2006. *Non-native species in UK Overseas Territories: a review*. JNCC Report No. 372. 35 pp.

- ii. facilitating communication and co-ordination between the multiple different organisations involved with this issue, including the exchange of expertise, best practice and networking both between territories and from the UK to the territories;
 - iii. raising the profile of INNS issues through appropriate communication, education and public awareness;
 - iv. identifying potential for, and imaginative use of, funding opportunities to allow continuity of projects and to develop local expertise and activity through a database of relevant funding sources;
 - v. acting as a 'hub' for data and information to support decision making at various scales;
 - vi. encouraging further development of relevant science through the role JNCC plays in advising on a range of research programmes.
- 4.6 One of the main challenges is that the INNS GB Framework Strategy does not apply to the UK's OTs and CDs, which are already suffering major impacts from INNS. Similarly, although the OTs are mentioned in the EU Environment Council conclusions, there is unlikely to be a major focus on OTs in the developing EU strategy. There are regional strategies being developed, e.g. the draft South Atlantic Invasive Species Strategy, but no comprehensive strategic approach covering all the OTs.

5. Assist in the effective implementation of the INNS Framework Strategy for GB

5.1 The INNS Framework Strategy for GB is focussed on:

- i. prevention, involving a robust risk assessment process to identify significant threats in terms of new invasions and critical pathways of invasion;
- ii. early detection, surveillance, monitoring and rapid response, involving detecting newly-arrived non-native species, monitoring new and established INNS and rapidly responding to those that pose most risk at an early stage;
- iii. mitigation, control and eradication, involving risk assessment analysis to identify priority species for control and eradication and carrying out the control;
- iv. building awareness and understanding, involving assessing and influencing public attitudes through information dissemination.

5.2 The country conservation bodies are involved in implementing the GB Strategy at country level through country working groups, representation on the GB Rapid Response Group, and working in the inshore marine

environment, out to 12 nautical miles, where most problems with marine INNS manifest themselves.

- 5.3 **JNCC's role** is to provide a high-level strategic focus on the effects of INNS on biodiversity in terrestrial and marine environments across the UK. JNCC also has a role to ensure delivery of the INNS Framework Strategy for GB in UK offshore waters beyond 12 nautical miles. This will be achieved through:
- i. representing the views and concerns of CCW, Natural England and SNH at the GB Programme Board and liaising with the Northern Ireland Environment Agency to maintain common approaches in the GB and All Ireland Strategies;
 - ii. providing regular information exchange through terrestrial and marine inter-agency networks at GB and UK levels;
 - iii. providing information on behalf of the country conservation bodies and assessing responses from consultees to inform Defra's consultation on Schedule 9 of the Wildlife and Countryside Act in relation to the release offence. In the future JNCC may review the effectiveness of measures adopted;
 - iv. working with the country conservation bodies, ensuring that INNS issues affecting biodiversity in the marine environment are addressed in a coordinated way. This will involve providing representation at relevant fora such as The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), International Council for the Exploration of the Sea (ICES), Healthy and Biologically Diverse Seas Evidence Group (HBDSEG), and ensuring delivery of the INNS Framework Strategy for GB in UK waters beyond 12 nautical miles.
- 5.4 Challenges to achieving this priority particularly involve marine invasive species where prevention is critical as it is extremely difficult to eradicate species in the marine environment once they become established. Therefore, targeting introduction pathways is key to minimising future impact. It is important in this respect to coordinate delivery of the INNS Framework Strategy for GB between inshore and offshore waters, which will require good cooperation between JNCC and the country conservation bodies.

6. Promote and develop the evidence base to underpin policies on INNS

- 6.1 The INNS Framework Strategy for GB recognises that a more strategic approach to research is required and cites the UK Biodiversity Research Advisory Group (BRAG) review of research needs as a primary source for evaluating priorities within the UK. JNCC is a contributing member of BRAG, and provides the group's secretariat, and is therefore well placed to promote the BRAG position more widely and to influence future updates.

- 6.2 Predicting environmental impacts of INNS is complex, and normally requires a custom analysis of the available evidence base. JNCC is in a good position to provide advice on availability of data sources, and to facilitate common analytical procedures.
- 6.3 Substantial research and co-ordination of the evidence base has been undertaken regarding marine INNS, with regular dissemination of the science, initiatives and legislative issues provided through the International Council for the Exploration of the Sea (ICES). JNCC is also contributing to the development of the UK Marine Monitoring and Assessment Strategy and recognises the importance of developing tools to predict and quantify the future impacts of non-native species (including social and economic impacts).
- 6.4 JNCC has developed the UK Terrestrial Biodiversity Surveillance Strategy as a tool for analysing and assessing data needs and comparing these against current surveillance coverage. The strategy identifies gaps and overlaps in the coverage of surveillance schemes in order to enable surveillance in the UK to become more useful and efficient in the future; this includes assessing coverage for INNS.
- 6.5 **JNCC's role** is to promote the availability of sufficient information, integrated research results, surveillance and monitoring data and published materials, to assist JNCC, country conservation bodies and others to meet their biodiversity evidence requirements in both terrestrial and marine environments. This will be achieved by:
- i. promoting the National Biodiversity Network as a key mechanism for providing access to information on INNS, and ensuring that there are no significant technological barriers to efficient data capture and exchange, including through development of the Non-Native Species Information Portal;
 - ii. maintaining an overview of the development of international databases (e.g. Delivering Alien Invasive Species In Europe (DAISIE) and the Global Invasive Species Database);
 - iii. identifying changes to existing surveillance and monitoring that are needed, and promoting these through appropriate fora;
 - iv. advising on appropriate analysis and interpretation of data, both within the UK and internationally, and synthesising current knowledge on a specific issue, when this activity is appropriate to JNCC's functions;
 - v. using the UK BRAG to review research requirements, including socio-economic, and promote the short-term and long-term research agenda for INNS to research funders;
 - vi. maintaining an overview of emerging research needs, by scanning the activities of relevant bodies and developing priorities relevant to JNCC's role;

- vii. facilitating knowledge exchange through contributions to relevant bodies in which JNCC has a role and dissemination of information through the JNCC website.
- 6.6 One of the difficulties in achieving this priority is the need for rapid reporting of interceptions of new species, many of which may not come through the usual species surveillance schemes. Other challenges include having the tools to measure and predict the impact of INNS on native biodiversity, developing innovative and efficient methods to tackle INNS, and mobilising resources for research from research councils or the EU.