



Proceedings of the Second Annual Invasive Species in Ireland Forum

Wednesday 12th March 2008

National Botanic Gardens, Glasnevin

1. Background

The 2008 Invasive Species in Ireland Forum was hosted by the National Botanic Gardens in Glasnevin. The Forum is a one day event organised by the Invasive Species in Ireland project and funded by the National Parks and Wildlife Service and the Environment and Heritage Service. Registration for the Forum is open to all interested stakeholders and parties.

Presentations were given from government agencies, NGO's and the Invasive Species in Ireland project team. This session and the following open debate, was tailored to provide the audience with information on progress since the last Forum; the role of NGO's and government in tackling invasive species in Ireland; and also to encourage discussion on the best toolkit for tackling invasive alien species (IAS) on the island of Ireland.

2. Programme

10.30 - 11.00	Registration/Coffee
11.00 - 11.15	Welcome and Introduction -Gerry Leckey, NPWS.
11.15 - 11.30	Sectoral perspectives - the role of NGO's in tackling invasive species - Stephen Newton, BirdWatch Ireland
11.30 - 11.45	Sectoral perspectives - the role of Government - Bob Davidson, EHS
11.45 - 12.00	Creating an effective toolkit for invasive species management in Ireland - Cathy Maguire, EnviroCentre
12.00 - 12.45	Panel Q&A and open discussion
12.45 - 2.00	Lunch
2.00 - 2.10	Introduction to the workshops - John Early, EHS
2.10 - 3.30	Workshop Sessions 1. Legislation 2. Biological control 3. Codes of Practice 4. Education and awareness raising 5. Action at a local level 6. Monitoring, surveillance and recording
3.30 - 3.45	Report back from workshops
3.45 - 4.00	Closing remarks - Matthew Jebb, National Botanic Gardens Followed by Tea/Coffee

3. Presentation Abstracts

Invasive Species in Ireland: Overview of 2007-08 – Gerry Leckey, NPWS

The invasive species problem is not static and demands that we adapt to new and emerging threats while tackling existing issues on the island of Ireland. Since the previous forum in Belfast, the Invasive Species in Ireland project has been engaged in delivering education and awareness raising material to inform and thereby reduce the risk of invasion or spread of some of our Most Unwanted Species. This presentation covers some of the highlights from the project and work of the many organisations who are involved in tackling invasive species. Developments in the last year include species alerts and responses, tackling widely established invasive species, tackling new invaders in Ireland, education and awareness initiatives and local action on invasive alien species.

- The muntjac deer has been recorded in the wild in Ireland after a leaflet campaign of gun license holders.
- Sighting of the Harlequin Ladybird in Lisburn, Co. Down has prompted an island wide alert. This species is widely considered one of the most invasive ladybird species on earth.
- Recent action addressing the zebra mussel invasion has developed new signage and education materials.
- Best Practice Management Guidelines are being drafted for some of the most widespread and invasive plant species.
- The NPWS are supporting the *Lagarosiphon* Task Force set up in Galway by funding the purchase of a new weed cutting boat.
- The Invasive Species in Ireland project team are working with Bord lascaigh Mhara and other stakeholders to map the spread of the invasive *Didemnum* species.
- A programme of eradication has begun on the floating pennywort in Northern Ireland.
- The Invasive Species in Ireland website www.invasivespeciesireland.com is now live with a dedicated “Alien Watch” page.
- A new field guide to established invasive alien species is now ready for printing.
- Consultation for the Horticulture Code of Practice has taken place and it will be launched shortly.
- Action on the *Gunnera* invasion of Achill Island, Co. Mayo is ongoing and facilitated by Mayo Co. Council.
- The Wildlife Order (NI) is currently under review as is the Irish Biodiversity Plan.

Invasive Species in Ireland: The role of NGO’s – Stephen Newton, BirdWatch Ireland

Invasive alien species (IAS) represent a significant threat to biodiversity in Ireland. BirdWatch Ireland, a charity dedicated to the protecting Ireland’s wild birds and their habitats, are actively involved in conservation projects for species that have been impacted by non native invasive species. This NGO is currently formulating a specific policy on IAS. The policy will help guide future projects, actions needed to reduce both

actual and potential loss of bird species, government lobbying and also decision making processes within BirdWatch Ireland for more effective management of IAS.

Some Irish bird species have been severely impacted by the invasion of non-native species. Ground, and occasionally, cliff nesting bird colonies are particularly vulnerable to invasion by mammal species. These species predate nest sites and thereby reduce recruitment to the population. Amongst others, species such as Manx Shearwater and European Storm Petrel, with globally important breeding sites in Ireland, can be threatened by non-native mammals. NGO's, like BirdWatch Ireland, must remain vigilant to new developments that could allow easier access to islands, colonies and nest sites by invasive species.

Managing and reducing the impact of IAS should be a priority for government and NGO's alike. NGO's should welcome measures that will encourage government to act in order to protect species and biodiversity. Both the UK and Irish governments face sanctions by the European Court of Justice (ECJ) for failing to control invasive alien species. In Ireland, inland lake nesting sites have been predated by mink and threaten species such as the red listed Common Scoter, Black-headed gull and Corncrakes. The ECJ has recently ruled against Ireland for failing to control mink and protect a vulnerable Sandwich Tern colony on Cross Lough in the west of Ireland.

NGO's can lead the way in protecting Ireland's unique biodiversity heritage by monitoring for high risk and high impact invasive species, identifying sites that have been impacted or are vulnerable to invasion and planning actions that can be taken in partnership with stakeholders and governments. NGO's can help achieve goals such as halting the loss of biodiversity by 2010 and reducing the impact of non natives. NGO's must continue to lobby government for funding and action, especially for research into the impact of IAS and refinement of management protocols for high impact species.

Invasive Species in Ireland: The role of Government – Bob Davidson, EHS

This presentation will touch on the various aspects of the role of Government in tackling invasive species including the benefits of working on an all-island basis, providing a strategic/ regulatory framework, showing leadership, providing support for other organisations, working in partnership with different sectors, promoting education and awareness, the role of other government departments and identifying a way forward.

Both the UK and Irish governments are signing parties to the CBD which recognises that non-native invasive species are, second only to habitat destruction, the greatest threat to biodiversity worldwide. In light of this and EU obligations, both government biodiversity strategies have identified the need to work in partnership to successfully address some of the issues.

Government has various roles and responsibilities in tackling IAS. Once such role is changing and developing policy and/or legislation as required. Government must sometimes react with short notice in order to address rapidly developing situations or alternatively government can be proactive and address identified gaps in legislation under consultation. Within government, we want to provide a leading example on how to tackle the issue of IAS. Government agencies strive to reduce high impact invasive species on their properties and also encourage the propagation of native species where

appropriate. Government also acts to fund and support initiatives such as the Invasive Species in Ireland project and the Invasive Species in Ireland Forum as well as direct control programmes of IAS. Later this year we will be holding a conference to explore future options for managing IAS on the island of Ireland, this will identify a way forward. In the meantime we will continue to provide support to organisations, produce and implement policy and engage with the relevant sectors.

Creating an effective tool-kit for invasive species management in Ireland – Cathy Maguire, EnviroCentre

Invasive species is an issue receiving increasing focus from the European Commission which will drive action across member states and beyond. In Ireland, invasive species are a growing problem, and over the last couple of years the more we look for species, the more we find and the greater the need to have an effective management tool-kit in place. The challenge is to halt impacts on biodiversity and the economy from invasive species and this can only be achieved by preventing new introductions, early detection of new species, controlling and containing existing species, mitigating impacts, building capacity and support and developing the evidence base for policy and decision making.

The Global Invasive Species Programme (GISP) has identified 10 strategic responses and this framework can be adapted to reflect national priorities, constraints and vulnerability. National programmes across the world come in different shapes and sizes but they all include some or all of these responses.

One of the biggest challenges is the complexity, the complexity of the range of actions that need to be undertaken relating to prevention and exclusion; surveillance and response; and management of high impact IAS. The second half of the challenge is who is responsible for delivering these actions, but this challenge is shared by every country and is not unique to Ireland.

So what's an effective tool-kit for managing invasive species and how do we create one? Essential ingredients include a National Strategy, legal and institutional framework, a single lead agency – clear lines of responsibility, risk assessment framework, border control, surveillance, monitoring and recording systems, rapid response mechanism, contingency plans, management plans, Codes of Practice and an education and awareness programme. It not just enough to have the right tools - you need the right supporting actions including building capacity, international engagement, political support and engagement and cross-sectoral and public participation.

In order to successfully formulate and implement an invasive species tool-kit, one of the first things we need to do is create a shared understanding of what we are trying to achieve and why. Our approach is to look to leading international examples to help guide this process as well as actively seeking involvement from as wide a range of stakeholders as possible.

4. Workshop Sessions

4.1 Legislation Workshop Report

Chair: Sharon Turner (QUB)

Rapporteur: Peter Cosgrove (EnviroCentre)

Suggested questions:

- What are the issues that need addressing most urgently via legislation?
- Where does current legislation seem to be ineffective or inadequate and what might the solutions be?
- Are there areas where we could we make more effective use of existing powers and how?
- Given the delays in getting new legislation on the books, what will be the most effective measures to use in the interim?

Legislation in both jurisdictions is not usually drafted with invasive species in mind. There are three levels of law pertaining to invasive species, i.e. International, European, and Domestic legislation. Definitions are very important for each. Some legislation refers to invasive species, some to non-native species, and some to exotic species. The potential for confusion and error in listings and definitions is quite high.

It has been identified that the listing process is heavily weighted (biased) for plant species and against other taxa. This is believed have arisen because of the strict Plant Health Protection measures within current legislation. Having legislation may not necessarily be the most important thing – making it practical and enforceable is key to its success. The implementation and enforcement of existing legislation is preferable to more legislation. It is noted that the forthcoming Environmental Liability Directive might cover invasive species responsibilities and afford government with powers to tackle IAS.

Training is important for judges and lawyers. Despite legislation been in place, many of the judiciary don't see environmental damage as a crime. Awareness raising is needed on impacts on jobs/economy as well as the environment

Efforts on legislation (both new and enforcement of existing) should be directed towards establishing Critical Control Points (CCP), based on objective risk assessments. Attempting to prevent importation, reproduction etc. by directing energies at CCP's for vectors may be effective. Protection of trade is recognised as an important factor and it is understood that no direct or hidden barriers on trade can be established. However, Plant Health Protection measures do provide a good working model of how to deal with harmful diseases and pathogens. The basis of this approach is clear evidence-based and transparent objective risk assessment. The European community recognise this for Plant Health Protection, so could use this approach as a model (European Plant Protection Organisation; Plant Health Directive) to combat power of trade agreements? A similar issue is available for fish health legislation to combat disease.

A European Invasive Species Directive (being discussed) is perhaps best driver to challenge trade powers. However, cannot wait until this may appear.

Key points from workshop

- i. Definitions are very important to support legislation. Definitions should be robust enough to stand up to challenges made in a court of law.
- ii. Legislation, both new & existing, should be practical and enforceable, through effective use of Critical Control Points as dictated by a risk assessment process.
- iii. Take new legislation forward, but be aware of new directives as possible future key drivers of change.

4.2 Biological Control Workshop Report

Chair: Jan-Robert Baars (UCD)

Rapporteur: Joe Caffrey (Central Fisheries Board)

Suggested questions:

- Does biocontrol have a role to play in the tool kit of management options?
- What benefits could it have?
- What drawbacks could it have?
- What issues are there around acceptability?
- Legal/licensing issues?
- How could these be addressed?

The workshop was initiated by the chair providing a brief overview on the use of classical biological control and its potential as a control strategy to target high impact alien invasive aquatic and terrestrial species. An overview of the procedures used in biocontrol and legislative requirements for its implementation was given. The first example of biological control in Ireland was presented showing how *Azolla filliculoides* is being controlled by a frond-feeding weevil *Stenopelmus rufinasus*. A brief strategy for prioritizing the weed species in Ireland was presented giving priority to species with either national importance, few taxonomically related species in Ireland, no/minor conflict of interest (e.g. horticultural sector) and with previously established biocontrol programmes elsewhere in the world.

A discussion with those attending was held to address the following key areas:

1. Scepticism for biocontrol

Although the merits were considered, and although the group considered biocontrol to have good potential there was substantial scepticism for the potential non-target impacts of biological control. There was concern raised about the impacts biocontrol agents would have once the target species had reduced the weed. There was also a significant perception that there is an inherent risk in introducing a potentially new alien invasive species and that new genetic material is being released. However, it must be kept in mind that the track record of biocontrol around the world is very good and that non-target effects of biocontrol agents is minimal and provided the procedures are followed (internationally scrutinized) it can provide a safe control option.

2. Legislative requirements

It was highlighted that there is no established legislative procedure in place for the application of biocontrol in Ireland. There are guidelines recently published on the information required for the various components of biocontrol application which are available for the competent national authorities. However, there is a lack of ownership by

a single government department, and until this is address it was emphasised as a significant obstacle to the application for release of biocontrol agents in Ireland. The current requirements by the Department of Agriculture and the Department of the Environment are sufficient for the research to be conducted on quarantined organisms as part of the testing procedures to determine the potential risk of release. However, procedures would have to be provided by a competent national authority to apply for release and redistribution of agents. Recent application for release of a psyllid bug on Japanese knotweed in the UK highlights the need to progress this legislative problem before releases, if granted, can be considered to be conducted in Ireland.

3. Management tool

It was accepted by the group that in principle biological control would have to be considered as a management option to control our alien invasive weed species. It was raised that other control options for some species are not available and as a result biocontrol should be considered. It was emphasised that biocontrol is routinely applied elsewhere in the world to control conservation weeds and that provided release is granted for the first biocontrol agent in Europe (on Japanese knotweed) biocontrol should become a potential control option. In addition, Ireland has invasive species unique to the island (e.g. *Gunnera*) and we need to develop our own programmes on these species and can not rely on the development of programmes elsewhere.

4.3 Codes of Practice Workshop Report

Chair: John Kelly (Quercus)

Rapporteur: Pat Roberts (Keville & O'Sullivan Associates)

Suggested questions:

- How can we maximise uptake of the Codes of Practice for horticulture and recreational water users?
- Are Codes of Practice an effective alternative to regulation?
- What are the priority actions that need to take place this year?

1. How can we maximise the uptake of the Codes of Practice for the horticulture and recreational water users?

To ensure uptake of CoP's we need to engage with sectors and individuals on a face to face basis. Strategic targeting of stakeholders i.e. the build up to, and time of peak activity, will be important, while target industry on a year round basis. Public awareness is key to the successful implementation of CoP's. To this end the group recommends:

- Celebrity involvement with the CoP's to publicise and promote uptake.
- Continuous advertising of the CoP's in appropriate media.
- Where practical, ensure that all CoP's do not involve extra costs to the end user.
- Must include all relevant information.
- Ease of implementation should be considered when developing the CoP's. All solutions must be practical for the end user.
- Certification of CoP's for industry would ensure uptake.
- Engagement with voluntary bodies.
- Publicity on local, regional and national level will be required.

2. Are Codes of Practice an effective alternative to regulation?

Codes of Practice can be effective but in general they will need to be supported by robust legislation. Recommendation that Local Authorities get accredited on IAS prevention, containment and control.

- The group recognises that fouling organisms may cause issues for any potential accreditation scheme and this should be considered carefully.

3. What are the priority actions that need to take place this year?

- Recommend appropriate actions and examine costs associated with CoP's.
- Recommend appropriate cleaning/removal procedures of IAS and consider cost of disposal of species
- Ensure CoP's are workable by the sector and cost effective to implement.

4. Education, awareness and reporting

Encourage all organisations to place CoP's on their website and publicise in mailing lists and publications, advertise in trade shows and ensure Local Councils uptake and encourage the uptake of CoP's. Training of customs on IAS issues and identification is essential as is legislation to support CoP's.

4.4 Education and awareness Workshop Report

Chair: Sue Christie (NIEL)

Rapporteur: John Early (EHS)

Suggested questions:

- There is capacity to deliver three targeted education and awareness campaigns this year, which species and/or vectors are the priority?
- For each, what will be the most effective actions to undertake?
- Should these be linked to the COPs for horticulture and recreational water users?
- How can the website be further developed as an awareness raising tool?
- How does your organisation see awareness of invasive species being raised amongst staff?

The main points and suggestions that came from the Education and Awareness workshop were:

- There should be care taken when using the term 'non-native' or 'alien' in today's society with any awareness raising programme that
- Care should be taken to remove any confusion by having consistency in terms i.e. either use 'non-native invasive' or 'alien'.
- Start with the basics when highlighting the issue to the public i.e. start with just what is a non-native invasive species and work from there.
- Ensure the issue is included in the schools national curriculum.

Possible educational campaigns

1. Bus stop / bus advertisement rails advertisements.
2. Puppets similar to the 'It's in our nature' puppets.

3. Plant tags advising of threats given with plants e.g. stating information such as do not plant near a waterbody, dispose of in a sealed bag etc produced and circulated around garden centres.
4. A tag could also be produced for native species advising to wash roots etc before planting.
5. Invasive species of the month in newspapers with a native species of the month as well to show the good and the bad species.
6. The 'stop the spread of aquatic invasive species' poster made into the new house style and circulated to garden clubs etc.
7. Adding articles into magazines of various organisations which are widely distributed e.g. 'Irish Hare'
8. Having local training / eradication days such as Ruth Wilson the Antrim LBO 'Guardians of the Six mile water' day this June.
9. Produce identification information for a range of species of concern.
10. Raise awareness at potential vector sector areas e.g. Target ports for education materials / posters to raise awareness.
11. Make native species sound fashionable to have in your garden.

4.5 Action at a local level Workshop Report

Chair: Seamus Burns (Lough Neagh Partnership)

Rapporteur: Christina Armstrong (National Botanic Gardens)

Suggested questions:

- What are the common issues facing local authorities?
- What invasive species are impacting biodiversity in your area?
- What are the key actions for managing invasive species at a local level?
- What information or support do you need from the programme (top 3 priority actions)?
- How can we ensure that local information is fed into the recording and surveillance programme?

1. What are the common issues facing local authorities?
 - There is a lack of awareness from both public and industry (garden centers, quarries, roads etc) on IAS issues. Awareness also needs to reach a higher level such as policy makers.
 - There is the need for education for both adults and children on what is an invasive species, the impacts associated, and why and how to prevent their introduction and/or spread? We should focus on community and specialised groups (e.g. anglers etc). Information needs to be provided in a way that reaches people in each area on how invasives can affect them, giving a personal perspective to the issue.
 - Local Action Plans are in place, but who is reading them? There is the need to get the plans out to a wider public. The plans are in place but there are not enough staff on the ground to implement them.
 - Information needs to be pooled from County Councils, so that work is not being done twice.
 - Budgets are generally on 1 year basis, with no long term commitments. It is recognized that the control of invasive species, and knowledge acquisition on species are long terms projects. This should be addressed.

2. What invasive species are impacting your area?

This question was not answered, but the following is what was talked about in the time allocated for this question:

- Data has just started to be collected on invasive alien species. There is still a lot of work that needs to be done to know more about species.
- Recording of data needs to be done by one central body but how should it to be collected and accessed?
- Local officers need to know what information is valuable to collect.
- There is a need to know what is where, need for accurate and continuously updated maps of species distribution. Information needs to be collected in a uniform way. To that end, should surveys be done for individual species or several?
- Cards been given out on spotting on invasive has not had much feed back.
- Awareness by media, such as articles in the paper, church newsletters are quite effective. Target groups already set up such as Tidy Towns.
- What do people respond to? and target this
- Need for information leaflets for individual species.
- REPS, needs to be more involved including information for the green certificate. Help with mapping etc.

3. What are the key actions for management at local level?

- Research, into species biology, spread, control, eradication.
- Identification surveys. Currently there is lack of confidence in species identification for many invasive alien species.
- Resources: money, staff, information.
- Decisions for each species (control, prevention, eradication) need to communicated to all local staff and offices.
- Target local populations to achieve wider goals. Individual populations are easier to tackle than whole county approach.

4. What information or support do you need from the programme?

- Public awareness with resources readily available to local authority staff including educational training for staff working in the field. Awareness in all sectors in effective way that people respond to.
- Help with funding and resources, knowledge of what and when funds are available, and longer term funds.
- Central coordination or data, surveys, species information, leaflets, resources.

4.6 Monitoring, surveillance and recording Workshop Report

Chair: Una Fitzpatrick (National Biodiversity Data Centre)

Rapporteur: Cathy Maguire (EnviroCentre)

Suggested questions:

If a National Invasive Species Database was established;

- Are there concerns over data sharing, access etc that would need to be addressed?
- What are the measures that need to be in place to ensure that data is provided early enough to inform a rapid response?

- How do we get reports from introduction pathways? Who are the key players?
- Should we focus our efforts on the most unwanted and high impact species?
- What support is needed for a monitoring, recording and surveillance programme?

1. Data sharing

A draft data sharing agreement was circulated along with the structure of a national database. The potential applications and outputs of a national database were outlined, including being able to send out automatic alerts on species e.g. upon inclusion of a new record, send out notification to adjacent landowners/councils/relevant agencies etc.

There was agreement that mapping of invasive species is a key gap and a national database would be a really useful tool both in management and research.

2. Data validation

Different validation needed for different sources of records - records from state agencies compared to records from the public, public records are unlikely to have GPS locations. Validation of reports has to be rapid. Some points for clarification and considering when validating records are are:

- What resources do we need for freshwater, marine and terrestrial species?
- What can be done on a voluntary basis and what can't?
- There are issues with the capacity of state agencies to validate records.
- Is validation through remote technologies a possibility?
- Could set up a validation committee - look at BSBI country recorders structure

3. What species should be included?

Is this a database of all non-native species or invasive species - if it is all non-native then calling it the invasive species database may create problems with public perception of which species are invasive. Need to focus on problematic species and think about how we communicate it.

4. How can we ensure data is provided early enough?

Working with funding agencies/grant awarding bodies to ensure that submission of records to the database is a condition of grants would be effective. Professional bodies such as the IEEM should be consulted to engage with their members to get records. Large landowners such as Forest Service and Coillte have data but time constraints on getting the data in a format for submission is a real hurdle. To aid this process we should look at possibility of student bursaries.

Develop a BSBI recording card and hold a workshop on identification training and data sharing – “bring your records”. A recording technical group maybe appropriate for the Invasive Species in Ireland project?

Feedback for those who submit records is very important as we need to establish a working and productive relationship with them. There are issues with funding for monitoring as grants are usually short term. Building invasive species recording and reporting into monitoring requirements of relevant Directives e.g. Habitats, Birds, WFD etc. LBAP's have reporting obligations and we should try to get local authorities to commission mapping studies.

4. Support

Data centre funding is a big issue and the database needs dedicated staff time. We should work to develop and disseminate standard monitoring methodologies.

- Support materials include CD's, ID cards, images with scale - downloadable to mobile phones and electronic recording devices
- Have days of action focused on specific areas or species - link with local networks, NGO's

Appendix 1: List of registered delegates and their organisation

Surname	Forename	Organisation	Email
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