Report of the Non-native Species Training Working Group for Great Britain

FINAL (21-05-12)

Executive Summary

1. The Training Working sub Group was established in October 2010 to provide recommendations for improving non-native species training provision in GB.

2. The working group met five times and drafted this document which identifies training priorities and makes recommendations for improvement.

3. The group found that existing training provision does not meet current and expected future need and is not well aligned with the priorities of the Invasive Non-native Species Framework Strategy for Great Britain (hereafter referred to as the GB Strategy). For example, the GB Strategy emphasises the importance of prevention, early detection and rapid response to new species, but the existing training provision is mainly focussed on the widespread and well established species such as Japanese Knotweed.

4. The following recommendations of the group are provided to help focus provision towards more strategic objectives:

   a. Priorities:
      1. Training should focus on three priority areas: 1) biosecurity, 2) identification & surveillance (particularly for new and emerging threats) and 3) management (particularly strategic management).
      2. Key stakeholders to target for training include field workers (particularly within the government family), local action groups, key industries (particularly those involved in the movement and sale of non-native species) and training providers themselves.
      3. Specific training requirements should be identified in Invasive Species Action Plans and Pathway Management Plans.

   b. Information provision:
      4. A barrier to training is a lack of easily accessible technical information in a format that can be used by providers. Information packs and additional training resources should be developed for the priority areas: general introduction to non-native species, biosecurity, identification & surveillance and management.
      5. A list of technical experts that can help with information development and assist in training delivery should be centrally maintained.

   c. Delivery:
      6. Non-native species information should be integrated into other types of training already provided. To facilitate this, stand alone non-native species modules should be developed that can be easily used and adopted by training providers.
      7. The Non-native Species Secretariat website should be developed to provide a central place to find information about non-native species training in GB, including: training resources and information, online training, space to share good training practice, as well as space for providers to advertise and users to find training,

8. Online training modules should be developed and hosted on the Non-native Species Secretariat website providing: a general introduction to non-native species and covering relevant aspects of biosecurity, identification & surveillance and legislation.

9. A national coordinating group should be established to encourage uptake of training, improve coordination and help overcome barriers to training.

d. Assessment, qualifications and influencing standards:

10. Question banks should be developed for priority subjects to facilitate assessment.

11. An accredited basic biosecurity course should be developed for GB, with training providers encouraged to develop qualifications /accreditation for other subjects.

12. Standards and qualifications should be reviewed to identify those most relevant to non-native species. Those that are relevant should be encouraged to integrate requirements relating to non-native species.

e. Encouraging uptake:

13. All managers within government bodies should be required to provide relevant non-native species training for their staff, particularly biosecurity for field staff.

14. Contractors should be required to demonstrate appropriate competencies (e.g. through training) to undertake work in relation to non-natives.

15. Stakeholders should encourage their staff to undertake relevant non-native species training, particularly biosecurity for field staff.

Annex 1 provides further guidance on the priority and cost of these recommendations.

1. Introduction

In 2010 the non-native species Media and Communications Working Group for Great Britain published its Strategic Communications Plan (Non-native Species Secretariat, 2010[1]). This plan identified that training was key to delivering certain aspects of the Invasive Non-native Species Framework Strategy for Great Britain (hereafter referred to as the GB Strategy) and that there was a need for better targeted and coordinated non-native species training. It concluded that a focussed sub-group should be established to review training and provide recommendations for strategic improvement. As a result, the Training Working sub Group (TWG) was established in October 2010. Its composition is set out in Annex 2 and its Terms of Reference in Annex 3.

2. Purpose

This document sets out the findings and recommendations of the TWG for the enhancement of non-native species training in GB. The intended outcome is to increase the capacity of stakeholders in GB to deliver against the aims of the GB Strategy by improving access to relevant training of suitable quality.

The objectives are to:
- identify training priorities (including gaps in existing provision),
- provide specific recommendations in relation to priority subjects; and
- provide recommendations on the enhancement of training across the board.

Recommendations are provided as advice to be considered by the Media and Communications Working Group on non-native species and, ultimately, the GB Programme Board for non-native species.

Training in this context is considered wider knowledge transfer. The TWG notes the close relationship between training, awareness raising and education, but have made an effort to focus strictly on training. Where issues are raised which relate better to awareness raising or education, they have been included as suggestions for the Media & Communications group to consider.

3. Method of working

The TWG is a start-and-finish group comprising of experts in non-native species, stakeholder requirements and training provision. It has met 5 times in the production of this report.

In addition to the standard meetings of the TWG, a workshop was held in October 2011 with a wider range of training stakeholders (Annex 2). This was used to discuss the ideas of the group and benefit from a wider range of experience. The participants have continued to be included in the development of this report.

In developing their recommendations, the TWG have followed some key principles:

- Attending training costs money both in direct cost and in downtime while spent training. The relevance and quality of training is critical to avoid wastage and encourage uptake.

---

[1] https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=327

- Better coordination and sharing of good practice / training materials is required to avoid duplication of effort.

- Training information and resources should be centrally available to all providers / users and regularly updated.

- Quality and consistency of training should be maintained through the use of assessment and accreditation.

- Training should be provided at the right level for the user, for example: basic (everyone), intermediate (stakeholders with environmental interests) and advanced (those with a requirement for non-native species knowledge at active management or professional advisory levels).

4. Priorities

4.1 Review of existing provision

A short review was undertaken to establish the level of existing training provision. This consisted of an internet trawl to establish what training was advertised online (Annex 4), supplemented by the TWGs existing knowledge of courses and other resources.

In summary, the TWG found that existing provision does not meet expected future need and is not well aligned with the priorities of the GB Strategy.

The following points were considered key limitations:
- In general, there is little training specific to non-native species available in GB. The short review identified 58 events with some relevance to training and non-native species, however much these were conferences / discussion days (i.e. with little structured training), or commercial briefings geared towards promoting a particular product or service (for example client focussed awareness raising days about the problems caused by Japanese Knotweed).
- Almost all training provision is focussed on well established widespread species such as Japanese Knotweed, Giant Hogweed, Himalayan Balsam, Rhododendron, Mink and Signal Crayfish. There is a lack of training in relation to new or recently established species.
- There is very little training in relation to non-native species biosecurity.
- Existing provision generally consists of sporadic one-off training events on a particular topic in a particular part of GB. There is little structured training available across GB and little coordination of training.
- It is hard to know where to look for training and hard to find training that is available.
- The TWG could find no accredited courses specific to invasive non-native species, although accredited courses are available in more broadly relevant areas such as herbicide application.
- While training resources (e.g. information sheets, manuals, websites) for identification appeared to be improving, there are relatively few resources available in good practice management and almost none in relation to biosecurity.

4.2 Priority subjects

A full range of subjects and topics that were considered relevant to the GB Strategy were identified (Annex 5). These are categorised according to anticipated stakeholder requirement under the GB Strategy (Table 4.1 below).

Table 4.1. Training subjects ranked according to stakeholder relevance

Subject	Environmental Professionals	Voluntary Sector	Non-environmental Professionals
Biosecurity	High	High	High
Identification, surveillance and monitoring	High	High	High
Management	High	High	Medium
Legislation	High	Medium	Medium
Biology and ecology	Medium	Medium	Medium
Awareness raising	Medium	Medium	Low
Impacts	Medium	Medium	Low
Risk analysis	Medium	Medium	Low
Handy skills	Medium	Medium	Low

From these the working group identified that the most important priority for training was biosecurity, followed by identification and surveillance (particularly in relation to new and recently established species) and management (particularly in relation to strategic management). In addition, the working group identified that a basic introduction to invasive non-native species is required to support training in all areas. The group also identified that ongoing work under the GB Strategy will continue to shape the priorities going forward. In particular, it is important for training to help support Invasive Species Action Plans (ISAPs) and Pathway Action Plans (PAPs) as they are developed.

More detail on the key priority subjects is provided below:

General – Introduction to Invasive Non-native Species

Priority because: Training users need a basic understanding of invasive non-native species and the issues that surround them. This could be particularly useful in helping to improve consistency in the messages provided about non-native species, making clear some of the aspects that are easily confused (e.g. around definitions, roles and responsibilities in GB) and encouraging people to understand the importance of the issue.

Should cover: Basic explanation of the invasive process, definitions, issues (including clear examples of impact), the three tiered approach and GB Strategy.

Priority 1 – Biosecurity

Priority because: Biosecurity is an essential part of preventing the introduction and spread of non-native species and is critical to the GB Strategy. There is very little existing training provision in this area and yet it is relevant to almost all stakeholders.

Should cover: All aspects of non-native biosecurity, particularly in the freshwater and marine environment. For example:
- Basic principles of biosecurity for everyone. Include within this: why biosecurity is important, the kind of activities that could move INNS around, principles of biosecurity (e.g. avoid contamination where possible, reduce the risk where not).
- Activity or site based biosecurity assessment. Guidance for how to think about biosecurity in relation to a given activity or area (e.g. water body). Could follow risk assessment procedure of identifying hazard, likelihood, overall risk and mitigating actions. This would be a generic process for any activity or site, but would benefit from a freshwater, marine and terrestrial case study.
- Biosecurity techniques. Techniques such as reducing contamination, cleaning, disinfection, etc. related to specific activities, for example:
    - Surveying in the aquatic environment
    - Angling
    - Boating
    - Other water sports
    - Engineering in water

Priority 2 – Identification and surveillance

Priority because: Identification and surveillance underpins much of the work carried out under the GB Strategy, particularly early detection, rapid response, biosecurity and pathway management. While there is existing provision in this area, it is not well focussed on new and emerging threats.

Should cover: In particular, identification of existing rapid response species (either on a regional or national scale) and new and emerging species as identified by horizon scanning and pathways assessment. In addition training should cover: the importance of reporting records quickly, what information to provide with a biological record, how to gather data systematically so that it can be used to provide comparable results and where to send non-native species records.

Priority 3 – Management

Priority because: It is important to raise our capacity for management in GB to support national and regional rapid responses. In addition, there is a growing need to support local communities (e.g. Local Action Groups) undertaking management of non-native species in their areas. There is existing provision in some generic areas, such as herbicide use, and in some cases in relation to specific non-native species (e.g. lever and mulch for Rhododendron, volunteer training for Himalayan Balsam, and some technical training for Japanese Knotweed). However, in general there is relatively little training for species specific management and sharing of good management practice. A key gap is a lack of training in strategic management (e.g. prioritising management within a water catchment, preparing contingency plans, delivery rapid responses, managing pathways, etc).

Should cover: In particular, strategic management at relatively large scales (e.g. catchments, counties). As well as training in the management (e.g. eradication, long term control, disposal) of national / regional rapid response species and new and emerging threats, particularly freshwater and riparian species. Facilitating the sharing of good practice management practices is also important.

4.3 Priority stakeholders

The TWG identified that different groups of stakeholders access training in different ways and have different understanding of their own training needs. Stakeholders were categorised into the following broad groups that reflect their different approaches to training:
1. Environmental professionals (including government staff)
   - Know some of their training needs, but could be provided with additional direction in relation to the GB Strategy.
   - Have existing training processes to link in with.
   - Has the ability to provide some (but not all) of their own training.
   - Have a range of active organisations that help provide training, e.g. IEEM, FSC, LANTRA, etc.
2. Location Action Group / Voluntary
   - Know some of their training needs, but could be provided with additional direction in relation to the GB Strategy. Have a range of processes at different levels with which to engage.
   - Have a range of active organisations that help provide training, e.g. BTCV, Wildlife Trusts, etc.
   - Have a range of abilities to provide training, but unlikely to be able to provide a full range and likely to be focussed in particular areas.
3. Non-environmental professionals
   - Very diverse group.
   - Less likely to be aware of exactly what they require.
   - Need to have some information in order to do their job / improve how they do their job.
   - Many different processes / organisations with which to link to, but quite dispersed.

The TWG reviewed the relevance / importance of the training subjects against the three stakeholder groups identified (Table 4.1). Biosecurity and identification & surveillance were considered high relevance to all stakeholders, with other subjects of varying relevance to other groups.

More specific stakeholder groups were also considered by the TWG, their priority for training and key mechanisms that could be used to encourage further uptake of non-native species training (Table 4.2).

Table 4.2. Key stakeholders and mechanisms for encouraging training uptake

Type	Priority	For example	Specific mechanisms for encouraging training uptake
Government family field staff	High	Staff involved in environmental protection, nature conservation,	Make relevant training a requirement.

		wildlife management, animal / plant health, etc.	
Other professional field staff	Medium	Consultant ecologists, environmental surveyors, Rivers Trusts, Wildlife Trusts, etc.	Include non-native species in standards (e.g. national occupational standards). Provide off the shelf training materials that can be incorporated into existing training, toolbox talks, etc. Encourage sharing of good practice.
Local Action Groups / volunteers	High	Local groups involved in ground clearance, river maintenance, non-native species monitoring and management, etc.	Provide dedicated annual training events for LAGs on key subjects. Provide off the shelf information that can be used to train staff / volunteers. Encourage sharing of good practice.
Industries involved in managing land / infrastructure	Medium	Large land owners, site managers, construction industry, infrastructure industry, etc.	Include non-native species in standards (e.g. national occupational standards). Provide off the shelf information that can be integrated into existing training provision. Engage with relevant representative bodies (e.g associations).
Industries that sell / move non-native species	High	Horticulture trade, pet trade, transport industries, etc	Include non-native species in standards (e.g. national occupational standards). Provide off the shelf information that can be integrated into existing training provision. Engage with relevant representative bodies (e.g associations).
Training providers	High	FSC, LANTRA, IEEM, applied colleges, etc.	Include non-native species in standards (e.g. national occupational standards). Provide off the shelf information that can be integrated into existing training provision.

Recommendation 1 – *Training should focus on: biosecurity, identification & surveillance (particularly for new and emerging threats) and management (particularly strategic management), but a general introduction to non-native species is also required.*

Recommendation 2 – *Key stakeholders to target for training include field workers (particularly within the government family), local action groups, key industries (particularly those involved in the movement / trade of non-native species) and training providers themselves.*

Recommendation 3 – *Specific training requirements should be identified in Invasive Species Action Plans and Pathway Management Plans.*

5. Delivery

5.1. Developing resources that can be used by all – support training at different scales

Non-native species training is provided by a wide range of organisations at different levels across GB. Providing a pool of resources for providers will help encourage more training, reduce duplication of effort and improve consistency and quality. Resources to support training should be developed for key subjects and made freely available to all training providers. The anticipation is that these will be adapted where necessary by training providers to fit their specific audience.

Training resources will need to:
- Capture the best up-to-date knowledge on the subject and direct people where to look / who to speak to for more information.
- Provide consistent guidance in line with the GB Strategy.
- Be appropriate to the intended audience, in most cases it will be appropriate to develop different levels of information for the same subject (e.g. beginner, intermediate and advanced).
- Make clear any gaps in our knowledge.
- Be regularly reviewed and updated to keep up with advances in knowledge and good practice.

For some subjects suitable up-to-date information is relatively easy to find (e.g. identification). For others information is difficult to find or additional research may be required (e.g. biosecurity). The TWG recommend that key information is gathered for priority subjects in a suitable format to support training. Once information has been gathered it can be developed into materials to support training providers.

There are a range of different types of training materials that could be developed, for example:
- Training manuals, i.e. booklets or other documents for training users to work through
- Teaching books / plans
- Model presentations
- Training videos
- Teaching props / aids (e.g. voucher specimens, stuffed animals)
- Question banks (to be used as part of an assessment or as teaching prompts)

Recommendation 4 – *Develop information packs and additional training resources for the priority areas: general understanding of invasive non-native species, biosecurity, identification & surveillance and management.*

5.2. Providing a network of technical non-native species experts

Training providers may need to consult relevant non-native species experts or use them to help deliver training. The TWG recommends maintaining a list of relevant experts and their expertise to make it easier for those wishing to provide training to contact them. It may be possible to combine this with the work of the Non-native Species Information Portal which also intends to compile a database of species experts.

Recommendation 5 – *In association with the NNSIP project, a list of technical experts that can help with information development and assist in training delivery should be centrally maintained.*

5.3. Integrating non-native species in other types of training

An effective way to increase the amount of training provision in GB is to encourage providers to include non-native species modules in other types of relevant training already being delivered. Various training providers have already indicated they would be willing to include non-native species in other types of training if given sufficient information.

To facilitate training providers, short modules in relevant subjects should be developed and providers encouraged to use them. Priority modules to develop include: understanding invasive non-native species, basic biosecurity and basic identification (including the need to report priority species).

Annex 6 provides examples of environmental training (and organisations that provide training) into which non-native species modules could be integrated.

Recommendation 6 – *Develop non-native species modules that can be integrated into other types of training provision.*

5.4. Providing a central platform

Access to training can be improved by providing a central place for users to find training and providers to list their services. The Non-native Species Secretariat website should provide a central platform for:
- Training courses / events being offered across GB with relevant details
- Details of training providers / organisations that may be able to provide bespoke training or support those developing their own training
- Training resources, e.g. question banks, information on which to base training
- Online training

Those providing training should be encouraged to share good practice and training materials (e.g. through the Non-native Species Secretariat website) to help avoid duplication of effort.

Recommendation 7 – *The Non-native Species Secretariat website should be developed to provide a central place to find information about non-native species training in GB, including:*

training resources and information, online training, space to share good training practice, as well as space for providers to advertise and users to find training.

5.5. Online training

Online training (also known as e-learning) can range from the provision of simple content on web-pages to a highly designed learning environment with a selection of modules, training media and assessments. Training media often includes pictures and diagrams, video, animation, case studies and other methods to make material more engaging. The way in which online training is used can be monitored, for example to understand how many people are undertaking training and the level of competency achieved. Online training is often used within organisations to reach a large number of staff quickly, for example with health and safety or data management training.

Developing online training for certain non-native species topics is recommended as it is highly accessible by most stakeholders. Some training could be done almost entirely online (e.g. training in non-native species legislation); but it is recognised that online training will sometimes not be appropriate (e.g. practical management in the field), or would provide only a basic level of training (e.g. an introduction to the identification of some species). Pros and cons are summarised in Box 5.1.

The TWG recommend that online training modules be developed for:
- General introduction to invasive species (and the GB Strategy)
- Biosecurity at various levels
- Basic identification
- Legislation (while this is not identified as highest priority for training it is considered particularly appropriate for online training)

Box 5.1. Pros and cons of online training

Benefits:
- Easily accessible to most stakeholders
- Quality and consistency can be controlled
- Able to include assessment to ensure a standard level of competency is achieved
- Can monitor uptake
- Link to other types of training

Drawbacks:
- Cannot be used to deliver all types of training, particularly practical field-based skills.
- Provides only a basic level of training in most instances, which would need to be supplemented for more advanced users.

The first stage for delivering online training is to develop the relevant information, including photos, diagrams etc. and appropriate question banks for assessment (as per the recommendations in Section 5.1).

The next stage would be to find or develop an appropriate online platform on which to host the content. The working group recommend that the platform should be:
- Available across GB (Non-native Species Secretariat website suggested as an appropriate host for training)
- Free to access

- Designed to include various types of media
- Be able to be monitored for use
- Able to be expanded beyond the four recommended modules

There are many examples of online training within and outside government (e.g. Civil Service Learning, LANTRA online). These organisations may be able to help deliver the platform.

Recommendation 8 – *Develop an online training environment, including assessment, on the Non-native Species Secretariat website with four modules covering: understanding non-native species, biosecurity, identification and legislation.*

5.6. Providing GB level coordination

Increasing training provision for non-native species and embedding it more widely (for example within general environmental training) will be a gradual process. The TWG recommend that an advisory group of government and non-government stakeholders be established to help oversee the process.

Examples of activities the group could undertake:
- Help the Media and Communications group to implement the recommendations in this report.
- Actively encourage non-native species training, both new stand alone training and non-native species modules included in other types of training.
- Help support training providers dealing with issue or questions they may have and helping to coordinate the development of training materials.
- Provide a link between training providers, training users, non-native species technical experts, the GB Strategy and priorities therein.
- The commissioning of pieces of work to deliver the recommendations of the report

Options for providing this role are suggested below:
1. Media and Communications group take on the role, which is already established, has a GB remit and meets at intervals through the year.
2. Non-native Species Secretariat take on the role, overseen by the Media and Communications group and / or the Programme Board. Additional resources would be required.
3. TWG could be maintained to provide the role (reporting to the Media and Communications group), either on an ad-hoc basis or with regular meetings.
4. A new group could be established.

Recommendation 9 – *Establish a national coordinating group to encourage uptake of training, improve coordination and help overcome barriers to training.*

---

6. Assessment, Accreditation, Standards and Qualifications

6.1. Assessment and accreditation

Testing is generally encouraged as it helps to assess the effectiveness of training, provides constructive feedback for both student and provider, maintains industry credibility and sets a benchmark for quality.

Options for testing include:
- Informal testing. Provides useful feedback for training providers and users. Expected to be developed as necessary by the training providers, but could be supported by developing a central bank of questions made available to providers.
- Formal assessment. Provides a recognised standard / qualification. GB wide assessments should be developed centrally to test basic competencies in key subjects, particularly biosecurity. Training providers should be encouraged to develop their own accredited courses, usually in conjunction with a university or other awarding organisation. ,
- Online assessment. Undertaken online following training (the training itself need not be online). Provides a useful central platform for assessment. Could be developed and managed by a training organisation responsible for the credibility of the assessment and awarding any qualifications.

Accreditation is a way of certifying a given competency or understanding following training and provides credibility. It can help improve standards and encourage uptake as training users feel more confident in the material provided. No accredited courses specific to non-native species were identified by the TWG. While in many cases accreditation is not necessary, the TWG consider that more accredited courses in this area would encourage uptake and provide greater confidence in quality.

Many other environmental courses are already accredited, for example by BASIS, the Mammal Society, Institute of Ecology and Environmental Management (IEEM), etc (Annex 6 provides additional examples). Training providers should be encouraged to approach relevant organisations to seek accreditation.

In addition, the TWG recommends that accreditation should be sought for GB wide basic training in non-native species biosecurity. In this case, accreditation could be sought from a variety of organisations such as umbrella training bodies, universities or professional association.

Accreditation by a government body, for example the Non-native Species Secretary or Environment Agency, was discussed; however was not considered appropriate.

Recommendation 10 – *Question banks should be developed for priority subjects (introduction to non-native species, biosecurity, identification and management) to facilitate assessment.*

Recommendation 11 – *An accredited basic biosecurity course should be developed for GB, with training providers encouraged to develop qualifications / assessments for other subjects.*

6.2. Standards and qualifications

Standards describe what users need to do, know and understand in a job to carry out their role in a consistent and competent way. They range from formal national standards, such as the National Occupational Standards, to codes of practice, standard operating procedures

and policies adopted by individual organisations. Training providers will usually seek to map their provision against standards and so they are a useful tool for encouraging non-native species training. There are a number of standards that could, but currently do not, include relevant information about non-native species.

Organisations responsible for developing and reviewing standards should be encouraged to include non-native species where relevant. The need for biosecurity is a particularly relevant subject to include in many standards.

A review of standards and qualifications should be undertaken to determine which are most relevant and how they are reviewed. Government and stakeholders should then engage to encourage those producing standards to include competencies relevant to non-native species.

Examples of standards and qualifications that could be considered include:
- Environmental Conservation (National Occupational Standard being reviewed by Lantra)
- Amenity Horticulture (National Occupational Standard being reviewed by Lantra)
- International Organisation for Standardisation (ISO)

Recommendation 12 – *Review standards and qualifications to identify those most relevant to non-native species. Encourage, for example through the review process, those producing relevant standards / providing qualifications to integrate requirements relating to non-native species.*

---

7. Promoting uptake

Awareness raising is a key part of encouraging uptake. The Media and Communications working group has already made significant progress in raising the awareness of non-native species in general, and in particular aquatic biosecurity. Training should be developed to support existing awareness raising campaigns and then promoted, where relevant, through the work of the Media and Communications Group. For example, Be Plant Wise and Check Clean Dry. Volunteer groups are also important partners in helping to raise awareness of the need for and availability of training.

The need for training in biosecurity and identification is particularly important for field staff. Relevant organisations, both government and non-government, should use their existing mechanisms to raise awareness among field staff of the need for training and where it can be obtained. In some cases it may be appropriate to require relevant staff to undertake a particular piece of training (e.g. an online biosecurity assessment) before undertaking work. Contractors should also be required to demonstrate relevant competencies (e.g. through training) when tendering for contracts.

Managers play an important role in encouraging staff to undertake training. Awareness raising efforts should encourage senior management to understand the important of non-native species training and the need for their staff to be suitably trained. Appropriate training should be built into staff objectives and work plans.

Recommendation 13 – *All managers within government bodies should be required to provide relevant non-native species training for their staff, particularly biosecurity for field staff.*

Recommendation 14 – *Contractors should be required to demonstrate appropriate competencies (e.g. through training) to undertake work in relation to non-natives.*

Recommendation 15 – *Stakeholders should encourage their staff to undertake relevant non-native species training, particularly biosecurity for field staff.*

Annexes

1. Priority and cost of recommendations

No.	Recommendation	Priority	Comments on delivery
1	*Training should focus on: biosecurity, identification & surveillance (particularly for new and emerging threats) and management (particularly strategic management), but a general introduction to non-native species is also required.*	NA	*Cost: none*
2	*Key stakeholders to target for training include field workers (particularly within the government family), local action groups, key industries (particularly those involved in the movement / trade of non-native species) and training providers themselves.*	NA	*Cost: none*
3	*Specific training requirements should be identified in Invasive Species Action Plans and Pathway Management Plans.*	NA	*Cost: none*
4	*Develop information packs and additional training resources for the priority areas: general understanding of invasive non-native species, biosecurity, identification & surveillance and management.*	HIGH	*Cost: moderate* Much information already exists and needs to be collated. Some (e.g. on biosecurity) still to be developed.
5	*In association with the NNSIP project, a list of technical experts that can help with information development and assist in training delivery should be centrally maintained.*	MEDIUM	*Cost: low* Already part of the NNSIP project (though some additional work may be required).
6	*Develop non-native species modules that can be integrated into other types of training provision.*	HIGH	*Cost: low* Relatively straightforward once recommendation 4 has been progressed.
7	*The Non-native Species Secretariat website should be developed to provide a central place to find information about non-native species training in GB, including: training resources and information, online training, space to share good training practice, as well as space for providers to advertise and users to find training.*	MEDIUM	*Cost: low* Basic space is relatively easy to provide, more complicated functionality would be more expensive.
8	*Develop an online training environment, including assessment, on the Non-native Species Secretariat website with four modules covering: understanding non-native species, biosecurity, identification and legislation.*	HIGH	*Cost: moderate* Relatively straightforward once recommendation 4 has been progressed. Could use existing government online learning schemes to deliver.
9	*Establish a national coordinating group to encourage uptake of training, improve coordination and help overcome barriers to*	MEDIUM	*Cost: low* Depends on desired option, if

	training.	MEDIUM	held within the M&C group's role likely to be inexpensive.
10	*Question banks should be developed for priority subjects (introduction to non-native species, biosecurity, identification and management) to facilitate assessment.*	MEDIUM	*Cost: low* Could be developed alongside recommendation 4.
11	*An accredited basic biosecurity course should be developed for GB, with training providers encouraged to develop qualifications / assessments for other subjects.*	MEDIUM	*Cost: high* Depends on approach, but likely to be relatively expensive.
12	*Review standards and qualifications to identify those most relevant to non-native species. Encourage, for example through the review process, those producing relevant standards / providing qualifications to integrate requirements relating to non-native species.*	MEDIUM	*Cost: low* An ongoing role for the group established under recommendation 9.
13	*All managers within government bodies should be required to provide relevant non-native species training for their staff, particularly biosecurity for field staff.*	MEDIUM	*Cost: none* No direct development costs.
14	*Contractors should be required to demonstrate appropriate competencies (e.g. through training) to undertake work in relation to non-natives.*	MEDIUM	*Cost: none* No direct development costs.
15	*Stakeholders should encourage their staff to undertake relevant non-native species training, particularly biosecurity for field staff.*	LOW	*Cost: none* No direct development costs.

2. <u>Membership of the TWG and additional workshop attendees</u>

Membership of the TWG:
- Olaf Booy, Non-native Species Secretariat (chair)
- Alison Smith, Welsh Government
- Chris Horrill, Rivers and Fisheries Trusts Scotland
- David Gilchrist, Horticultural Trade Association
- Jack Sewell, Marine Biological Association
- Jonathan Newman, Centre for Ecology and Hydrology
- Kevin Patrick, LANTRA
- Max Wade, RPS
- Mike McCabe, Countryside Council for Wales
- Niall Moore, Non-native Species Secretariat
- Robin Payne, Scottish Natural Heritage
- Sophie Thomas, Plantlife
- Trevor Renals, Environment Agency

Workshop Attendees (October 2011) additional to the TWG:
- Adam Slater, British Trust for Conservation Volunteers
- Jo Long, Scottish Environment Protection Agency
- Neil Huck, Ground Control
- Becky May, Institute of Ecological and Environmental Management
- Nicola Randall, Harper Adams UC
- Tracy McCollin, Marine Scotland Science
- Peter McGregor, Cornwall College
- Henry Penner, Highways Agency
- Sue Townsend, Field Studies Council

3. <u>Terms of reference of the TWG</u>

The Training Working Group (TWG) is a subgroup of and reports to the Non-native Species Media and Communications Working Group (established by the GB Programme Board). Its main role is to provide recommendations for the improvement of non-native species training in GB.

The TWG is a task and finish working group and is expected to complete its work within a 12-month period (approximately 4 meetings). The output of the group is expected to be a report outlining their investigation and key recommendations.

The group notes the difference between training and awareness raising. Where issues are raised which relate better to awareness raising, they will be highlighted and passed on to the media & communications group for consideration.

Terms of Reference:

1. To identify the main groups that require training and their training needs.

2. To identify key subjects / areas which should be covered by training (possibly developing a GB training programme).

3. To recommend methods to support and enhance existing training (including increasing awareness of and access to existing training).

4. To identify the highest priority / highest impact training needs and opportunities and mechanisms to deliver these.

5. To consider whether there is a need for:
    a. web-based / online training;
    b. better understanding of both employers and employees of the need for training;
    c. guidance for good quality training;
    d. an accreditation mechanism; and
    e. interacting with and providing support for applied colleges.

4. List of non-native species relevant training courses in GB (2010-2011)

Date	Date detail	Provider	Name of Course	Contact Details	Location	Cost
Jan-10	21/01/2010	Wester Ross Fisheries Trust	Lever & Mulch/Stem Injection Demonstration and Training Workshop for Rhododendron ponticum.	Peter Cunningham 01445 712899; www.wrft.org.uk	NTS Inverewe Gardens	?
May-10	06/05/2010	NNS Sectretariat	Stakeholder forum on NNS	https://secure.fera.defra.gov.uk/nonnativespecies/news/events.cfm?archive=true	IET London: Savoy Place	?
Jul-10	Tuesday 20th July 2010 & Tuesday 27th July 2010 (2 day course) AND additional appointment made directly by the NPTC for the assessment	SLIC	NPTC Certificate of competence in the safe use of Pesticides PA1 PA6a	01246 505144 james.annerson@slictraining.org.uk http://www.thederbyshirenetwork.org/?q=news/stem-injection-japanese-knotweed-amp-pa1-pa6-course-dates	SLIC Training Limited, Bradbury House, Goytside Road, Chesterfield, Derbyshire, S40 2PH	£390
Jul-10	22/07/2010	IEEM	Working with Crayfish Stage 1: Ecology, Survey and Conservation	www.ieem.net	Malham Tarn FC, Yorkshire	£296 members; £456 non-members
Jul-10	24/07/2010	IEEM	Working with Crayfish Stage 2: Development Works, Crayfish Plague and Non-natives	www.ieem.net	Malham Tarn FC, Yorkshire	£296 members; £456 non-members
Sep-10	06/09/2010	SLIC	EDI accredited training course for Japanese Knotweed Awareness & Control	01246 505144 james.annerson@slictraining.org.uk	SLIC Training Limited, Bradbury House, Goytside Road, Chesterfield, Derbyshire, S40 2PH	£63 for Japanese knotweed course. £94 for stem injection course

Sep-10	29/09/2010	CIRIA	Environmental good practice on site	www.ciria.org	London; (delivered by Bureau Veritas)	£285
Oct-10	07/10/2010	Environmental Trainers Network (part of BTCV)	Retaining and recruiting young volunteers	www2.btcv.org.uk; 0121 359 2113	Doncaster	£114-£168 +VAT
Oct-10	19/10/2010	Dialogue Matters	Good practice stakeholder participation with a focus on the environment	www.dialoguematters.co.uk; Diana Pound	Wye	£931.78 or £1169.13 corporate
Oct-10	19/10/2010	Environmental Trainers Network (part of BTCV)	Managing volunteers	www2.btcv.org.uk; 0121 359 2113	Doncaster	£114-£168 +VAT
Nov-10	01/11/2010	IEEM	Invasive Weeds: Environmental Catastrophe or Manageable Nuisance?	01962 868626; www.ieem.net	High Wycombe	£80 members; £160 non-members
Nov-10	04/11/2010	ETN	How to attract and keep under-represented volunteers	as above	Bristol	£114-£168 +VAT
Nov-10	06/11/2010	Acorn Ecology Ltd	Invasive Species	www.acornecology.co.uk		From £65
Nov-10	06/11/2010	Bournemouth University	Aquatic Invasive Species	www.bournemouth.ac.uk; 08456 501501	Bournemouth Univ, Bournemouth	£600
Nov-10	08/11/2010	IEEM	Practical Action for Water Voles	01962 868626; www.ieem.net	Hoddesdon	£80 members; £160 non-members
Nov-10	24/11/2010	RPS, CIRIA, CIEF	NON-NATIVE SPECIES: RESPONDING TO THE CHALLENGES	Sue Stewart, RPS, Willow Mere House, Compass Point, Stocks Bridge Way, St Ives. PE27 5JL. sue.stewart@rpsgroup.com +44 (0)1480 302753	Birmingham Botanical gardens	£99.88 (incl. vat)

Dec-10	Dec-10	Association of applied biologists	What makes an alien invasive?	https://secure.fera.defra.gov.uk/nonnativespecies/news/events.cfm?archive=true	Edingburugh	?
Feb-11	10-Feb-2011	Marlin	Invasive Marine Aliens of Britain and Ireland	Guy Baker email: guba@mba.ac.uk Tel: 01752 633244 https://secure.fera.defra.gov.uk/nonnativespecies/news/events.cfm?archive=true http://www.marlin.ac.uk/marine_aliens/latest_news.php	Linnaean Society, London	?
Feb-11	16-Feb-2011	WBP, CCW	Non-Native Marine Species Awareness Training (South Wales)	Jack Edgerton (info@marine-ecosol.com) suebalkwill@hotmail.com or tel: 01646 651173 https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=518	Dale, Haverfordwest, Pembrokeshire SA62 3RD	free. 0900 to 1600 (lunch provided)
Feb-11	Wednesday 24 February, 10am – 12 noon.	Llangattock green valleys	HIMALAYAN BALSAM CONTROL PLANNING SESSION	http://www.llangattockgreenvalleys.org/index.php?option=com_content&view=article&id=56&Itemid=63 Rachel Palmer, Tel 029 2072 6990, Mobile 07717 497 442	Wyeside Arts Centre, Builth Wells	
Mar-11	01/03/2011	ETN	Motivating your staff and volunteers	as above	Doncaster	£114-£168 +VAT
Mar-11	03-Mar-2011	WBP, CCW	Non-Native Marine Species Awareness Training (North Wales)	info@marine-ecosol.com or call 01248 712277 (suebalkwill@hotmail.com) https://secure.fera.defra.gov.uk/nonnativespecies/downloadDocument.cfm?id=518	Dennis Crisp Suite, School of Ocean Sciences, Menai Bridge, Anglesey. LL59 5AB.	free. 0900 to 1600 (lunch provided)

Mar-11	07/03/2011	Peak District NPA	Working with volunteers	www.peakdistrict.gov.uk	Losehill Hall, Peak Dist NP	?
Apr-11	04/04/2011	The Hampshire & Isle of Wight Wildlife Trust	INNS identification	http://www.hwt.org.uk/news.php/441/would-you-recognise-a-non-native-invasive Catherine Chatters, catherinec@hwt.org.uk , 02380 424205	Brockenhurst, New Forest	free (informal training)
May-11	24 dates from beginning of May to mid-July 2011. http://www.hwt.org.uk/pages/himalayan-balsam-pulling.html	Hampshire and Isle of Wight Wildlife Trust	Himalayan balsam pulling	Contact: Catherine Chatters, New Forest Non-Native Plants Officer, 023 8042 4205. Mobile 07770 923315.	Various sites around Hampshire	volunteering
May-11	17/05/2011	The Hampshire & Isle of Wight Wildlife Trust	Non-native invasive plant identification	http://www.hwt.org.uk/events.php/1448/non-native-invasive-plant-identification Joanne Gore (New Forest Non-Native Plants Project Officer) 023 8042 4205 joanneg@hwt.org.uk	East Room, Avonway Community Centre, 36, Shaftesbury Street, Fordingbridge, Hants SP6 1JF.	Free but donations towards refreshments and the hire of the hall would be appreciated.
Jun-11	unspecified dates 'in summer'	Eden rivers trust	INNS demonstration sites.	Alison Reed, 01768 866788 http://trust.edenriverstrust.org.uk/invasive-species.html	Carlisle, Lazonby, Armathwaite and Ullswater	free - volunteer
Jun-11	Work parites from may to sept. summer. 6 dates in june, 5 dates in July, 6 in August and 4 in September. Weekdays, weekends, mornings or afternoons.	River Kent Invasive plants action group	Volunteering	Bekka Close, 01539 816311	Kent	free - volunteer

Jun-11	Tuesday 7th June 2011 from 10.00am to 5.00pm	Association of Rivers Trusts, Rivers and Fisheries Trusts of Scotland, The Fishmongers' Company.	Third Sector GB Invasive Non Native Species & Biosecurity Conference	http://www.associationofriverstrusts.org.uk/news/seminars/index.htm	Fishmongers' Hall, Londo	£40 for delegates
Jun-11	16-Jun-2011	BES	Emerging issues in invasive species science and management	http://www.britishecologicalsociety.org/getting_involved/special_interest_groups/invasive_species.php Invasive@BritishEcologicalSociety.org Rob Francis (Secretary)	Harper Adams University College	The standard delegate rate is £35 (incl. lunches)
Jul-11	Friday 1st July. 10:30am to 4:30pm approx	Acorn Ecolgoy	Invasive Species Course'	http://www.ecologytraining.co.uk/page/invasive_species_course	The Granary, Westpoint, Sidmouth Road, Clyst St Mary, Exeter, EX5 1DJ	£100 (standard fee); £80 for unemployed/full time students/full time volunteers; and £125 if your organisation is paying. This fee covers tuition only.
Jul-11	July/August	BTCV	clearing invasive plants from the Thames riverbank	http://www.environmenttrust.co.uk/documents/Corporate_Volunteering.pdf Environment Trust on 020 8891 5455 or e-mail office@environmenttrust.co.uk	London?	volunteering

Jul-11	06/07/2011	IEEM	Invasive and Non Native Flora, intermediate	IEEM, http://www.ieem.net/20110706invasiveflora.asp	Swansea, Wales	IEEM members: £80 Non-members: £160 (£70 and £140 respectively if booked before 6th May).
Sep-11	sep - oct	BTCV	rhododendron clearance in Richmond Park	http://www.environmenttrust.co.uk/documents/Corporate_Volunteering.pdf Environment Trust on 020 8891 5455 or e-mail office@environmenttrust.co.uk	Richmond Park	volunteering
unknown		RPS group	No further details	http://www.rpsgroup.com/Group/Specialist-Capabilities/J/Japanese-Knotweed-Giant-Hogweed-and-Other-Invasiv.aspx		
unknown		Midwest Natural Group Resources	Interagency Invasive Species Training	http://www.mnrg.gov/committees/gltisc/is-training-handout20070207.pdf	?	?
unknown		Derwent Invasive Plants Group	Volunteer management opportunities	Bekka Close, 01539 816311	Derwent	free - volunteer
on request		Japanese Knotweed Solutions	Japanese Knotweed Training	0161 723 2000; helen.todd@sltd.co.uk	JKS'sManchester/London/Scotland office or client's premises	£75 (group reductions)
on request		WYG Training	Working with Invasive Species	0 800 028 3340; www.wygtraining.com	Half-day; WYG Belfast or client's premises UK/NI (also cover RoI)	£95 +VAT
on request		SLIC Training (franchises available)	ASET Accredited Cert in Awareness of Japanese Knotweed	Jenny Nicol 07912 514863; www.slictraining.org.uk	Half-day; multi GB and Europe	£52 (group discounts)

on request		SLIC Training (franchises available)	ASET Accredited Cert in Herbicide Update Training	Jenny Nicol 07912 514863; www.slictraining.org.uk	Two days; multi GB and Europe	£173 (group discounts)
on request		SLIC Training (franchises available)	ASET Accredited Cert in Stem Injection of Non-native Invasive Species	Jenny Nicol 07912 514863; www.slictraining.org.uk	One day; multi GB and Europe	£86.50 (group discounts)
on request		TCM	CPD Seminar on invasive weeds	www.t-c-m.co.uk	Lunchtime c.45 mins; venue to suit	Free
on request		Britt Vegetation Management	Training workshops	www.bvm-vegetation.co.uk	To suit client	
on request		Ecology Services	Training courses	www.ecologyservices.co.uk	To suit client	
on request		Ecocontrol Services	Invasive Weed and Japanese Knotweed Removal CPD Certified Training	www.ecocontrol.co.uk; 0113 224 9555; Peter Doove	Various; c.3 hours	Free
on request		Environmental Trainers Network (part of BTCV)	Various	www2.btcv.org.uk; 0121 359 2113	Various	
on request		Wreford	Powerpoint presentation and talk	01794 521582	uk wide?	?
on request		Weed Free'	Pesticide application/ competence training and assessment	http://www.weedfree.co.uk/2010/03/japanese-knotweed-defra-psyllid-weed-control.html 08000 680878 spraying@weedfree.co.uk	on site, uk wide	PA1: £256. PA1+PA6A: £515. PA1,PA6A+PA2A: £804 *(correct as of 2008, discounts available for 6+ people)*

on request		Japanese knotweed solutions	Japanese knotweed training	0161 723 2000 Helen.todd@sltd.co.uk http://www.jksl.com/UserFiles/File/Training%20Leaflet%20with%20CPD.pdf	Sessions available at their Manchester, London or Scotland office. Or from your office if desired.	£75 per head (reductions are avaialble based on group bookings)
on request		SLIC	PA1, PA6 and Stem injection course	01246 505144 james.annerson@slictraining.org.uk	?	£390
on request		WYG training	Japanese knotweed Operational Control on Site. Hlaf day	http://www.wygtraining.com/index.pl?c=1100&s=course	WYG Belfast	??
on request		Construction and landscape training Co. Ltd.	Pesticide training: PA1 - Foundation Module PA2 - Ground Crop Sprayer- mounted or trailed PA6A - Handheld applicator PA6AW - Handheld applicator in or near water	http://www.cltraining.co.uk/training-pesticide.html	?	?
on request	Seminar presented at a date convient to your organisation	Thurlow Countryside Management	Free CPD seminars. Identify JK and giant hogweed. Legislation info and management solutions	01440 760170 http://www.t-c-m.co.uk/CPD-seminars/inf_35.html info@t-c-m.co.uk	uk wide?	free (45mins lunchtime presentation by 'expert local to your area'.)

5. <u>List of training subjects</u>

Subject	Topics
Biology and ecology of INNS	Principles of invasion biology (e.g. predator release hypothesis etc.) The invasion process (entry, establishment, spread, impact) Invasion pathways Understanding invasive species in GB (numbers of invasive species, patterns, causes of invasion, etc).
Biosecurity	General principles Basic biosecurity for all Environment based biosecurity (e.g. freshwater, terrestrial, marine) Advanced biosecurity Site based assessments
Identification	Species / taxon specific (e.g. freshwater invertebrates, birds) Environment / habitat specific (e.g. freshwater, marine, forests) Sector specific (e.g. water industry, SSSIs) Reporting and monitoring
Impacts	Understanding the types of impacts Measuring / assessing impacts (basic to advanced) Reporting impacts Cost benefit analysis
Legislation	Basic legislation for all Species specific legislation Legislation relevant to management (e.g. licensing, applications etc.)
Management	Species specific training Environment / habitat specific training (e.g. freshwater, marine) Technique specific training (e.g. herbicide use, trapping, shooting) Strategic management Rapid response Carrying out management risk assessment
Risk analysis	Principles of risk analysis Site based risk assessment Large scale risk assessment (e.g. catchment, region) National risk assessment
Surveillance and monitoring	How to do basic recording of INNS Detailed, GIS level, surveillance
Handy skills (not specific to INNS)	Managing volunteers Setting up local community initiatives Restoration?

6. Examples of environmental training (and organisations that provide training) into which non-native species modules could be integrated

Training providers
- Field Studies Council (FSC)
- LANTRA
- Landex Colleges
- Duchy College / Sparsholt College
- Open University

Membership bodies
- Institute of Ecological and Environmental Managers (IEEM)
- Royal Institute of Chartered Surveyors
- The Chartered Institution of Water and Environmental Management
- Royal Horticultural Society

NGOs
- Wildlife Trusts
- Voluntary Schemes and Societies (BSBI for example)
- British Waterways

Government bodies
- Fish / Plant / Animal / Bee Health Inspectors
- Local Authorities
- Parks and Green Space managers
- Local Government Association

Standards
- National Occupational Standards
- National Building Specification
- Construction Design and Management Regulations
- ISO Standards
- Industry Standards (Environmental Conservation and Amenity Horticulture)

Other
- ISPOT