RINSE

Activity 2
Training and
Awareness Raising

2 Mers Seas Zeeën
INTERREG IV A
FRANCE - ENGLAND - VLAANDEREN - NEDERLAND

"Investing in your future"
Crossborder cooperation programme
2007-2013 Part-financed by the European Union
(European Regional Development Fund)

Report by CPIS Val d'Authie, Activity Leader

RINSE

Heracleum mantegazzianum
(GB NNSS)

Branta canadensis
(Peter Trimming)

Ludwigia grandiflora
(GB NNSS)

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Activity 2

Training and Awareness Raising

Report by Activity Leader

CPIE Val d'Authie (France),

on behalf of the project partners

Executive Summary

RINSE Activity 2 sought to develop a wide range of tools to increase public and stakeholder awareness of INS, their associated problems and the management options currently recommended. The Activity was comprised of seven sub-actions. Action 2.1 was the establishment of 3 citizen science surveys, designed for different INS, targeting a specific audience. Action 2.2 was the development and evaluation of a smartphone app to identify and record INS in the field. Cross-border cooperation between partners has enabled the development of an app available in three languages allowing users to identify and record 35 INS found in the Two Seas area. Action 2.3 was the creation and dissemination of materials on INS for specific target audiences. Subsequently a range of materials were produced targeting specific INS, such as the management of geese, or targeting a key audience such as recreational boaters. Action 2.4 involved further development of the Q-bank online invasive plants database. This included translation of Q-Bank into French. Through this action, 15 new species were added to the Q-Bank database, and all factsheets and identification keys have been translated into French. Action 2.5 resulted in the development and testing of training materials for key audiences. For this, priority audiences were identified by the RINSE Partnership, with tailored training programmes and materials developed for each. The development of training for road managers was designed and disseminated with a target of cross-border cooperation. Actions 2.6 and 2.7 aimed to facilitate cross-border exchanges in best practice between the four RINSE countries. The first (2.6) was a partner exchange and the second (2.7) a Best Practice Workshop on volunteer engagement and citizen science, attended by delegates from across the Two Seas Area.

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Introduction

Activity 2 within the project 'Reducing the Impact of Non-native Species in Europe', hereafter referred to as RINSE, sought to enhance awareness of INS and the capacity to address them within a range of key cross-border target audiences. It also aimed to promote the consideration of INS in decision making at all levels. The project defined priority audiences and identified the most appropriate and effective means of engaging them. Amongst other measures, it sought to inform and involve the wider public through "citizen science surveys", a process which also generated valuable data on the occurrence of INS. It developed and tested the use of new, smartphone technology to encourage better recording of INS in the field. RINSE developed specially designed communication materials to reach decision makers and other audiences. It also trained key stakeholders who have direct responsibility for INS, including road and land managers, garden centres, pet stores and consumers. RINSE also made Q-bank available in French for the first time. This innovative INS identification tool was developed as part of the Interreg-supported INVEXO project. RINSE thus was contributing considerable added value to Interreg's original investment. Consequently, the work package was structured into seven sub-actions, as described below, where the number refers to the activity action in the RINSE application form:

2.1 Involved the public in surveying and recording non-native species ("citizen science surveys");

2.2 Developed and tested the use of smart phone "apps" to record INS in the field;

2.3 Published specially-designed communications materials for different target audiences (advice leaflets, identification field guides, etc.);

2.4 Further developed and translated Q-bank (a web-based, image-driven identification tool for INS) into French;

2.5 Identified the training needs of different target audiences (e.g. garden centres, builders, municipalities, highway authorities, pet owners, anglers, boaters). Developed and implemented training programs to meet these needs and assess their effectiveness. Produced curricular and training material "packages" that can be shared and used for cross-border training actions;

2.6 Organized and held three partners' workshops in France to enable RINSE partners to identify priority audiences, develop common messages and formats, and share experiences;

2.7 Organized and held a best practice workshop on engaging the public in volunteering and citizen science.

In this report, the work completed within each sub-action is summarized, with the major outputs provided. Each partner involved in a sub-action has completed a report on their contribution, detailing how the work and the benefits of cross-border cooperation helped to realise the project. Further details and information are supplied in the Annexes at the end of this report. The Activity Lead is CPIE Val d'Authie.

Figure 1. Volunteer monitoring American skunk cabbage (© Catherine Chatters - HIWWT)

2.1 Citizen science surveys

2.1.1 Overview

Three citizen science surveys were completed in sub-action 2.1, with the target audience and RINSE partner involved provided in Table 1.

Table 1. Summary of citizen science surveys completed in RINSE sub-action 2.1

Section	Target INS	Target public	RINSE
2.1.2	Japanese knotweed, Giant hogweed, Himalayan balsam, New Zealand pygmyweed, Floating pennywort, Tree of Heaven	People with gardens or ponds, general public	LP
2.1.3	Himalayan balsam, Giant hogweed, Muskrat, Red-eared slider	Residents, general public	PP 4
2.1.4	Japanese knotweed, Himalayan balsam, American skunk cabbage, New Zealand pygmyweed, Giant hogweed	Naturalists, general public	PP 6

These are reported sequentially in the following sub-sections.

2.1.2 Urban Invaders (Norfolk - UK)

Run a 'citizen science' survey across Norfolk, focussing on invasive plants which may be found in peoples' gardens or ponds

Target species:

Japanese knotweed *Fallopia japonica*

Giant hogweed *Heracleum mantegazzianum*

Himalayan balsam *Impatiens glandulifera*

New Zealand pygmyweed *Crassula helmsii*

Floating pennywort *Hydrocotyle ranunculoides*

Tree of Heaven *Ailanthus altissima*

Time frame

January 2014: Development

February - April 2014: Research and leaflet design

May 2014:Printing

June 2014: Survey launched, leaflets distributed

June - September 2014:Data collection and promotion

The original aim or objective

To engage the public in surveying and recording non-native species, raising awareness of six key invasive garden plants.

Target audience

General public

Method or approach adopted and why

- Often introduced as ornamental features, many non-native plants have escaped gardens and established in the wild. Subsequently urban areas are a hotspot for invasive plants due to the high density of gardens and popularity of the horticultural trade. Given this strong association, six charismatic and common invasive plants were chosen as the targets for this citizen science survey: Japanese knotweed, Himalayan balsam, giant hogweed, tree of heaven, floating pennywort and New Zealand pigmyweed.

- These six plants were chosen for a number of key reasons:
  - All are relatively easy to identify with striking characteristics
  - The majority of these plants are already well-known as invasive species and therefore will catch the attention of the general public
  - All are common in urban areas
  - One species, the Tree of Heaven, is lesser known but was chosen as it is an emerging problem and is frequently used in street planting. Therefore it would be useful to start building a database of where these trees are.
  - The setup of the survey comprised the design, production and distribution of paper survey forms and the establishment and maintenance of an online recording system. Participants are given a choice on how to submit records, ensuring no audience was excluded:

    The RINSE App – That's Invasive!

    Submit records online through Norfolk Biological Information Service (NBIS)

    By phone to RINSE

    By post using form included on the leaflet

    By email to Norfolk's Non-native Species Initiative

- All records submitted through the online system are verified by the NNNSI Co-ordinator before being uploaded to the Norfolk Biodiversity Information Service (NBIS) database and the National Biodiversity Network.
- To promote the survey, leaflets were distributed through Libraries across Norfolk as well as at local environmental events attended by the RINSE team at Norfolk County Council. The leaflet was also made available to download from the RINSE website.

Why?

- The Norfolk Non-native Species Initiative (NNNSI) has demonstrated that the above format for the collection of records from the general public can be hugely successful. In 2012, NNNSI launched 'Broads Sweep', a survey which has since collected 100s of records. This survey focussed on INS found in the Broads, but INS in gardens and urban areas are still under recorded. It is hoped the 'Urban Invaders' will help to generate more information about INS in these areas.

Problems/challenges encountered

No problems were encountered to date, although the survey only launched in June 2014.

Deviations including why and how any problems were overcome

There were no deviations from the original method or aims

Results/achievements

Action 2.1 has resulted in:

- The production and distribution of 1000 'Urban Invaders' leaflets (Annex A) and their distribution across Norfolk, raising the awareness of six important invasive garden plants (Figure 2).
- It is anticipated that the survey will generate a significant number of new records of INS, but as it has only just launched it is too early to know if this is the case.
- One radio interview on BBC Radio Norfolk to promote the survey and increase awareness of INS.

Number of volunteers

Numerous members

Number of jobs created or sustained through delivery of this action

Partially supported 3 jobs at Norfolk County Council.

Figure 2. Urban Invaders front cover

Economic or social benefits

The delivery of action 2.1 has resulted in an increased awareness of several key invasive plants. One of the primary vectors of introduction and spread for these plants is through discard of garden and pond waste, allowing the plants to escape and become established in the wild. Urban Invaders has increased the awareness of these plants, and recognition of them, potentially reducing the accidental spread by the public.

Cross-border benefits

The leaflet design and survey format could be replicated in the other RINSE countries.

Any Lessons Learnt

The survey was launched in June 2014, and so it has not yet been running for a sufficient amount of time to learn lessons.

Conclusions and recommendations

There has been significant initial interest in the survey, but as it has only just launched it is too early to have formed any conclusions or recommendations. Our experience in running other similar surveys indicates that it should be popular, but in the past people have been unwilling to report INS from their own gardens, perhaps due to a fear of being forced to remove the species.

2.1.2 INS citizen science (Authie - Fr)

Run a 'citizen science' survey across Norfolk, focussing on invasive plants which may be found in peoples' gardens or ponds

Target species:

Himalayan balsam *Impatiens glandulifera*
Giant hogweed *Heracleum mantegazzianum*
Muskrat *Ondatra zibethicus*
Red-eared slider *Trachemys scripta elegans*

The original aim or objective

To run a questionnaire for the municipalities of the region. This is primarily to assess their knowledge of INS, but also to make initial contact with these stakeholders.

Target audience

Residents
General public

Problems / challenges encountered

After a few exchanges with some municipalities, a direct contact was found to be more constructive and effective, even though the process was time-consuming and therefore did not allow all the municipalities to be reached.

Deviations including why and how any problems were overcome

Due to the low response from the designed questionnaire, the approach was changed to favour direct contact through meetings and face to face exchanges with municipalities. This has allowed us to engage with 20 municipalities and to introduce to them the RINSE project, the problems of INS and the actions recommended or, failing that, the mistakes to avoid in their control and management

Method or approach adopted and why

Where possible direct contact with municipalities was coordinated, introducing the RINSE Project, the problems of INS and the current recommended options for their management and control. These meetings and exchanges with the municipalities have provided the basis for the development of a Resource Centre. In many cases, municipalities have often directed us towards other structures (managers, professionals, associations or private individuals) that were subsequently contacted.

Further engagement was achieved through awareness materials designed with the partners in the framework of RINSE. (*Cf. action 2.3*).

Results / achievements

Action 2.1 has resulted in the implementation of 51 information and awareness-raising meetings, introducing the RINSE project and the INS of the territory concerned to local stakeholders. The organisation of 18 work parties on giant hogweed provided the opportunity to increase awareness of INS further, allowing people to participate in the manual control of INS. However this is an audience already aware of environmental issues. Additionally, numerous materials have been distributed to municipal authorities, including 800 copies of the INS poster (2.3). This poster however has resulted in few contacts. Since the start of this action, there have been 15 INS reports or information requests. Finally, this audience's information via our Resource Centre has involved the attendance of the CPIE Val d'Authie to 11 events (Flower Festival, Hunting Festival), each engaging several hundred people in one day.

BOUBERS-SUR-CANCHE

Un chantier pour lutter contre la Berce du Caucase, plante invasive dangereuse

Dans le cadre du projet RINSE, cofinancé par l'Union européenne pour réduire l'impact des espèces exotiques et qui regroupe différents partenaires européens dont le CPIE (centre permanent d'initiatives pour l'environnement) du Val-d'Authie, ce dernier a proposé la mise en place d'un chantier nature de lutte contre la Berce du Caucase.

Ainsi, après une présentation en salle d'environ une heure, quatre bénévoles du CPIE, dont deux de Berck et un Lillois, encadrés par un salarié, ont réalisé un chantier de lutte contre la Berce du Caucase, le long d'une route communale, à Boubers-sur-Canche.

Sa sève brûle la peau

Il faut savoir que cette plante, en plus d'être invasive et de poser des problèmes à la flore locale, a une sève qui provoque des brûlures sur la peau et induit donc un risque sanitaire pour la population. Pour procéder, les bénévoles étaient donc équipés d'une tenue de protection.

Cela n'a pas été sans interpeller les riverains et promeneurs puisqu'au cours de la journée, plus de vingt-cinq d'entre eux se sont arrêtés pour se renseigner. En effet, de nombreux voisins du site ont déjà observé des pousses de cette plante très invasive dans leur terrain. Ils ont donc pu profiter de conseils de lutte et notamment d'explications sur la coupe de la racine sous le collet avec une bêche.

Samedi, à 14 h au CPIE, 25 rue Vermaelen à Auxi-le-Château : « À la découverte du patrimoine bâti à travers le croquis ». ✆ 03 21 04 05 79 ou sandrine.bernard@cpie-authie.org

Les drôles de combinaisons de protection des participants n'ont pas manqué d'interpeller les passants.

Figure 3. News article (29/05/2012 - Voix du Nord)

Figure 4. « Fête des fleurs de Doullens » (© Céline FONTAINE – CPIE

Cross-border benefits

Exchanges about citizen science with the RINSE partners

Any lessons learnt

It is difficult to involve people even when they are aware about the problems associated with INS. Direct contact was more effective in sparking interaction between CPIE Val d'Authie and stakeholders, compared to indirect methods such as questionnaires and posters.

Conclusions and recommendations

- People often like submitting their records to a person because they need some information;
- Records need to be validated (photo).

2.1.2 Volunteer surveys of INS in key catchments (Hampshire - UK)

Organise surveys using volunteers to identify distribution of invasive non-native species in key catchments in Hampshire. Collate and map data

Target species:

Japanese knotweed *Fallopia japonica*
Himalayan balsam *Impatiens glandulifera*
American skunk cabbage *Lysichiton americanus*
New Zealand pygmyweed *Crassula helmsii*
Giant hogweed *Heracleum mantegazzianum*

Timeframe

On-going. The recording card had been designed for the New Forest Non-Native Plants Project and was already in use at the start of the RINSE project in January 2012. As records are received by the Project Officer from naturalists and the general public they are checked and then added to the records spread-sheet as appropriate. The map showing the distribution of invasive non-native plants in the New Forest area is then up-dated. During 2013 two volunteers (graduates from Southampton University) undertook a detailed survey to map the distribution of giant hogweed *Heracleum mantegazzianum* along the Avon Water.

Figure 5. Volunteer monitoring Non-Native Plants (© Catherine Chatters - HIWWT) Val d'Authie)

The original aim or objective:

Japanese knotweed *Fallopia japonica*
Himalayan balsam *Impatiens glandulifera*
American skunk cabbage *Lysichiton americanus*
New Zealand pygmyweed *Crassula helmsii*
Giant hogweed *Heracleum mantegazzianum*

Target audience

- Naturalists
- General public

Method or approach adopted and why

People can submit records to PP6 of invasive non-native plants in the New Forest area using a recording card or electronically using the Hampshire and Isle of Wight Wildlife Trust website. Many naturalists and members of the public who submit records prefer to use a recording card which they can send in the post, in preference to submitting records electronically. In addition to the records submitted by naturalists and the general public, PP6 has organised surveys of particular species in particular catchments. For example, during 2013 two volunteers (graduates from Southampton University) undertook a detailed survey to map the distribution of giant hogweed *Heracleum mantegazzianum* along the Avon Water.

Problems / challenges encountered

Occasionally people misidentify plants. For example some spurious records for giant hogweed *Heracleum mantegazzianum* have turned out to be the native hogweed *Heracleum sphondylium* when checked by the Project Officer. It is time-consuming to obtaining access permission from relevant landowners on behalf of volunteer surveyors. For example, the project officer had to contact over 40 landowners to seek their permission on behalf of the volunteers who surveyed the distribution of giant hogweed along the Avon Water in 2013.

Deviations including why and how any problems were overcome

No deviations.

Results / achievements

The submission of records using the recording card or the website has enabled the Project Officer to determine priorities for the control of

invasive non-native plants and to focus resources. The giant hogweed survey undertaken by volunteer during 2013 was particularly helpful in assessing the need for further herbicide treatment.

Number of volunteers, if any

Estimated number of volunteers = 30

This figure includes the two volunteers who surveyed the giant hogweed along the Avon Water in 2013, plus all the people who submitted records by post or electronically.

Number of jobs created or sustained through delivery of this action

No jobs have been created or sustained *directly* through delivery of this action. However, *indirectly* three professional contracting companies have been sustained as the submission of records often results in contractors being commissioned to undertake herbicide treatment.

Economic or social benefits

The submission of records of invasive non-native plants has an economic benefit as it enables action to be taken swiftly to control the population. The cost would be greater if the population was un-recorded and allowed to increase.

Cross-border benefits

Exchanges about species with the RINSE partners

Any lessons learnt

It is important to check records unless the identification skills of the person submitting the record are known to be reliable.

Conclusions and recommendations

- People like a choice of methods for submitting their records; some people prefer to submit their records by post whilst others prefer to submit their records electronically;
- Records submitted by naturalists and the general public are very useful as they enable effort to be focussed and resources to be prioritised;
- Records submitted by naturalists and the general public enable a rapid response to be made so that invasive non-native plants can be controlled before the population increases and the costs of

- treatment increases;
- Records need to be validated unless the identification skills of the person submitting the record are reliable;
- Sufficient time needs to be allowed to obtain access permission from landowners on behalf of volunteers undertaking surveys at the catchment scale.

2.2 Smartphone App

2.2.1 Overview

Three partners were involved in sub-action 2.2, with the role of each RINSE partner involved provided in Table 2

Table 2. Summary of the role of each RINSE partner sub-action 2.2

Section	Role	Target public	RINSE Partner
2.2.2	Develop and test	LP	LP
2.2.3	Test	PP 4	PP 4
2.2.4	Test	PP 9	PP 6

These are reported sequentially in the following sub-sections.

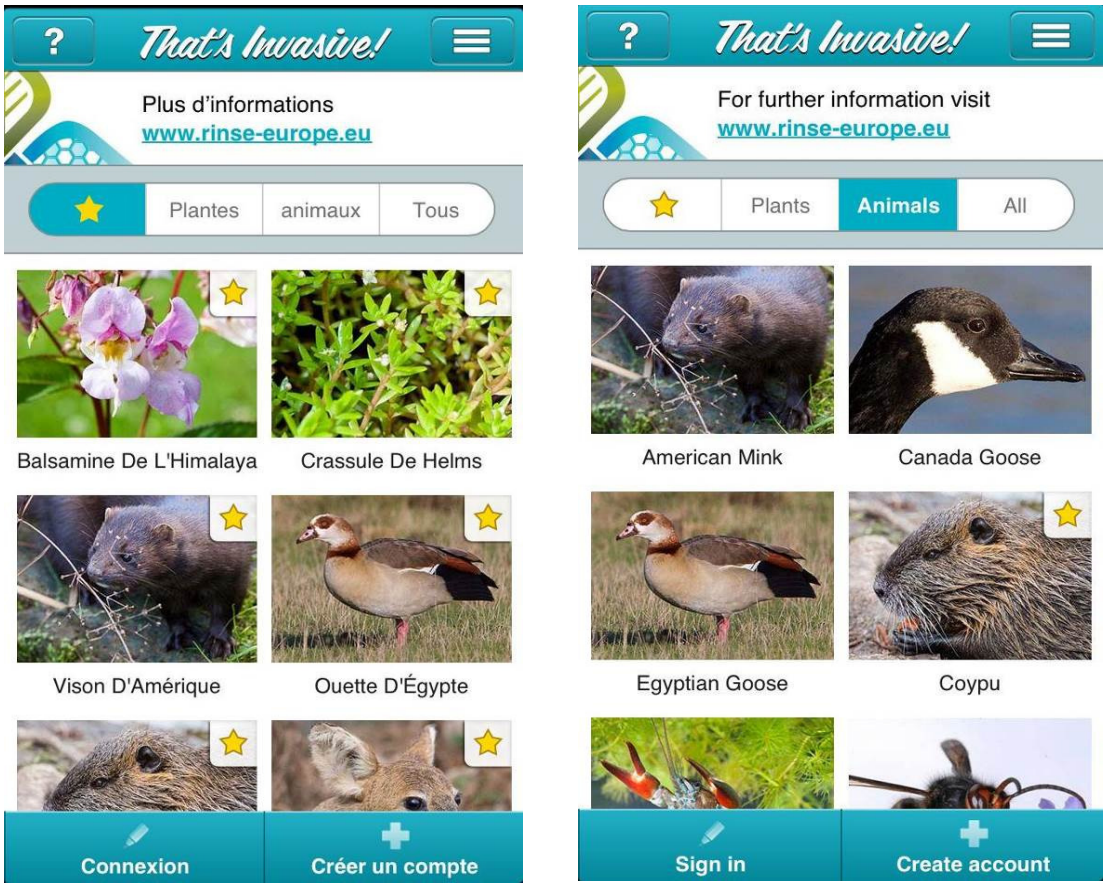


Figure 6. "That's Invasive!" App screenshot of home page (French and English)

2.2.2 Develop and test the use of the App to record INS (UK)

Develop and test the use of smart phone Apps to record IAS

Target species

The smartphone App "That's Invasive!" allows users to identify, photograph and record 35 different invasive non-native species (Table 3).

Table 3. INS included in "That's Invasive!"

Himalayan balsam *Impatiens glandulifera*	Parrot's feather *Myriophyllum aquaticum*	Oregon-grape *Mahonia aquifolium*
Japanese knotweed *Fallopia japonica*	Creeping water-primrose *Ludwigia peploides*	Canadian goldenrod *Solidago canadensis*
Floating pennywort *Hydroctyle ranunculoides*	Piri-piri burr *Acaena novae-zelandiae*	Curly waterweed *Lagarosiphon major*
Water fern *Azolla filiculoides*	American skunk cabbage *Lysichton americanus*	Giant hogweed *Heracleum mantegazzianum*
New Zealand pigmyweed *Crassula helmsii*	Rhododendron *Rhododendron ponticum*	Monkey flower *Mimulus guttatus*
Japanese rose *Rosa rugosa*	Ruddy duck *Oxyura jamaicensis*	Muskrat *Ondatra zibethicus*
Egyptian goose *Alopochen aegyptiacus*	Canada goose *Branta canadensis*	American mink *Mustela vison*
Coypu *Myocastor coypus*	Signal crayfish *Pacifastacus leniusculus*	Asian hornet *Pacifastacus leniusculus*
Zebra mussel *Pacifastacus leniusculus*	Carpert sea squirt *Didemnum vexillum*	Chinese mitten crab *Eriocheir sinensis*
Orange balsam *Impatiens capensis*	American bullfrog *Lithobates catesbeianus*	Chinese water deer *Hydropotes inermis*
Muntjac *Muntiacus reevesi*	Ring-necked parakeet *Psittacula krameri*	Giant goldenrod *Solidago gigantea*
Gunnera species	Tree of heaven *Ailanthus altissima*	

Timeframe

	Development and Tender
March 2013	*Software developers Nature Locator, based at the University of Bristol, were awarded the contract for the development of That's Invasive following the tendering process.*
March 2013 – July 2013	**Content creation** *Profiles created for 35 invasive non-native species (Table 1). Text for the App was translated and images were collected.*
March 2013 – June 2013	**Design** *Nature Locator provided a first version of That's Invasive in July 2014*
July – August 2013	**Testing** *'That's Invasive!' was circulated to partners for testing. Once approved, the App was submitted to iTunes and Google Play.*
August 2013	**Launch** *That's Invasive was launched.*
September 2013	**Update 1** *Following comments from project partners, an update of the App was carried out.*
January 2014	**Update 2** *Following comments from project partners, an update of the App was carried out.*
May 2014 – August 2014	**Evaluation** *An online survey was set up for users to evaluate the effectiveness of That's Invasive as a tool for recording invasive non-native species in the field.*

The original aim or objective:

To engage new audiences in the recording of invasive non-native species using novel technologies.

Target audience(s):

- Surveyors and contractors
- Wildlife managers
- General public

Method or approach adopted and why:

An external contract with Nature Locator (The University of Bristol) was established for the development of the RINSE App. Nature Locator had previously developed "Plant Tracker" - a free App which allows users to record invasive non-native plants. An initial meeting was held with Dave Kilbey, Nature Locator's Project Manager, at Imperial College, London to elaborate on the brief provided for the quotation process. This meeting was attended by the RINSE project team from Norfolk County Council along with Samuel Neal, an expert in biological recording from the Norfolk Biodiversity Information Service. Following some initial work on the App the RINSE project team met with the full Project Team from Nature Locator at the University of Bristol to discuss the design and functionality of the App in more detail. Species profiles were developed for 35 invasive non-native species (Table 1) using a combination of literature studies and expert knowledge from within the RINSE partnership. Species were selected for the App based on their prevalence in the RINSE area, their impact on the environment and their suitability for citizen science. For every INS included on the App, a 'confusion species' section was created, allowing users to distinguish easily between similar non-invasive species. All species profiles and text were then translated into French and Dutch. Following the development of a first version, the App was circulated across the RINSE partnership for testing with all comments incorporated into an update for the App and a final version to be submitted to iTunes and Google Play. To evaluate the App as a tool for recording invasive non-native species, an online survey was published in July 2014 and circulated to both the general public and environmental organisations that could potentially use the App for work purposes. This survey will run until the end of August 2014 when the feedback will be gathered and analysed.

Problems/challenges encountered:

The development of a smartphone App for a variety of different operating devices is difficult and complex. With operating updates becoming available for Smartphones on almost a monthly basis, "That's Invasive!" was designed with the most recent operating systems in mind. This has led to difficulties in the performance of the App running on older handsets. Furthermore the future maintenance of the App is an important consideration, ensuring the App remains compatible with future updates and changes in technology.

Deviations including why and how any problems were overcome

In the original Application Form we anticipated producing two versions of the App, one for professionals and one for the general public. Following further consultations it was decided that it would be better to produce one version of the App, but make it available to two smartphone Operating Systems – Android and iPhone. It was felt that this one version of the App could be designed in such a way that it could be useful for both professionals and the general public.

Results/achievements

The result of this Activity was the successful creation of the smartphone App "That's Invasive"; that turns a smartphone in to a powerful tool to easily record over 35 invasive non-native species commonly found within Europe (Figures 1 & 2). Users can be confident in the accuracy of the records they submit thanks to the in-built library of species profiles, that includes information on ecology, ID features and images.

Key Features of 'That's Invasive!'

- Users can create their own iRecord account.
- Each record is submitted with a photograph, allowing verification.
- Photographs are "geo-tagged" ensuring an accurate location is submitted with each record using the in-built GPS on smartphones.
- Records are stored on the phone when recording in areas with no signal. These can then be uploaded in bulk at a later date.
- Available in three different languages.
- Each species has a detailed profile, highlight key ID features, biology and impacts on the environment.
- Each species has a gallery of images to aid with the identification.
- Each species has a list of potential "confusion species" to help further with the correct identification, including a photo gallery.

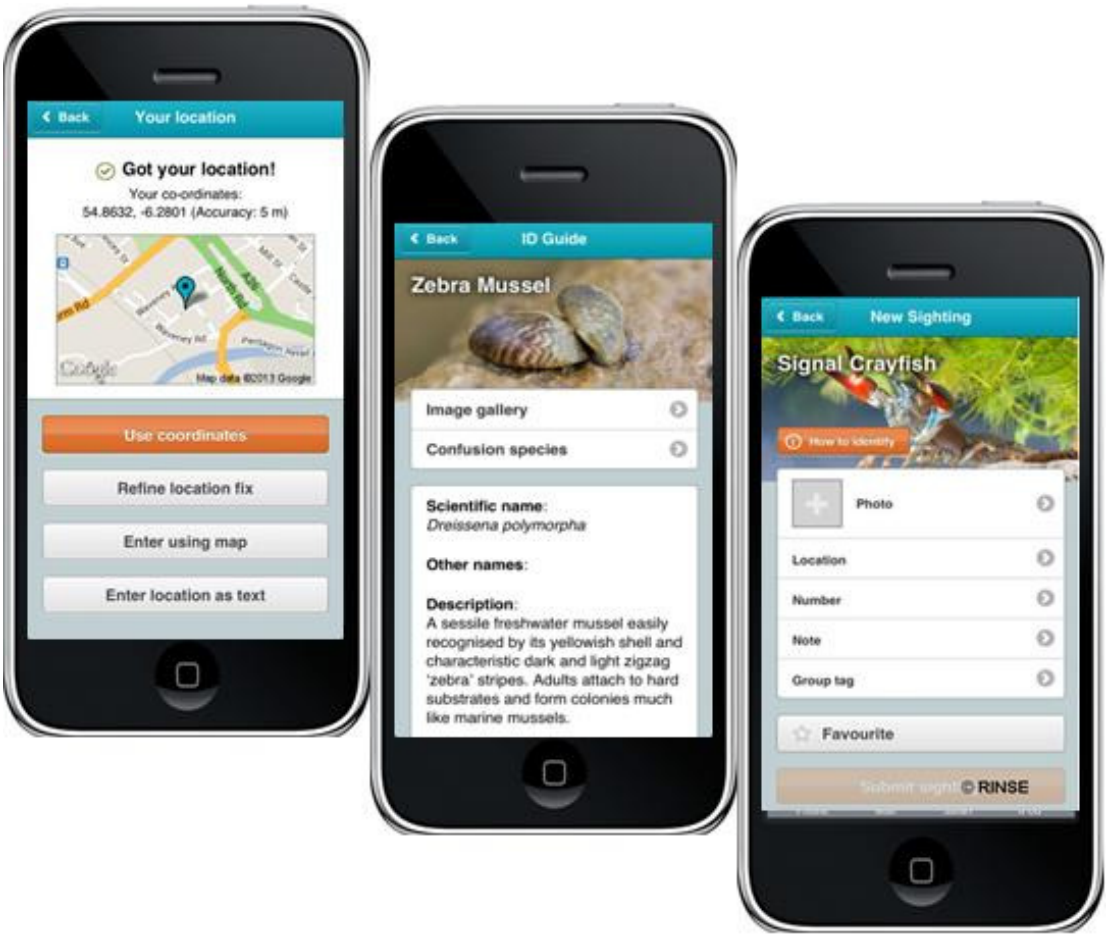


Figure 7. 'That's Invasive!' screenshots (Left to Right): Location page, Zebra mussel species profile and signal crayfish species profile.

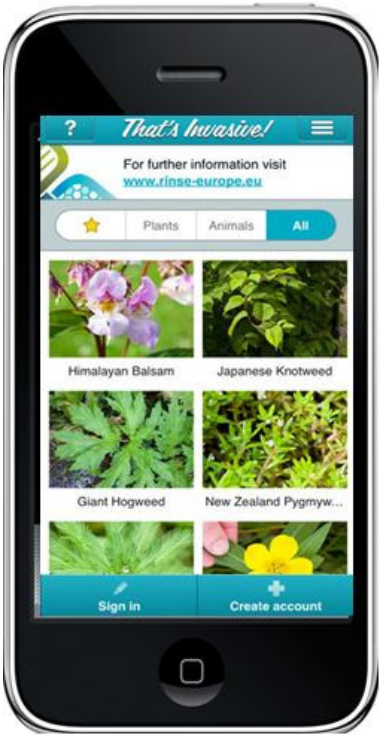


Figure 8. Photo of smartphone with 'That's Invasive!' home page

"That's Invasive!" had been downloaded a total of 405 times by the end of May 2014 (Table 4). The development and launch of "That's Invasive!" generated much positive attention for the RINSE Project (Table 5).

Table 4. "That's Invasive!" downloads

Android	iPhone
178	227

Table 5. Promotional activity for "That's Invasive!"

Press Release	Submitted 8th July 2014 Featured in EDP (12/10/2010), Norfolk Coast Guardian (2014)
Articles	That's Invasive was mentioned in several articles about the RINSE Project Pan European Article Biodiversity News in Norfolk NBIS E-bulletin
Social Media	"That's Invasive!" was regularly promoted through the RINSE Twitter and Facebook accounts.
Leaflets	100 leaflets were printed and distributed to promote the App at local events in Norfolk.
Presentations	"That's Invasive!" was featured in a RINSE Best Practice Workshop Volunteer Engagement and Citizen Science - Brockenhurst 19 March 2013

Number of volunteers

N/A

Number of jobs created or sustained through delivery of this action

- Contract with Nature Locator
- Contribution to the part-time RINSE Project Assistant position
- Contribution to RINSE Technical Coordinator position

Economic or social benefits:

In order to effectively control and eradicate INS it is essential that good quality and up-to-date data is available on their distribution. With recent developments in smart phone technology, and an increasing number of these devices being used across Europe, the RINSE project identified the development of 'That's Invasive!' to be an important strategic outcome.

"That's Invasive!" will allow RINSE to capture accurate and up to date distribution data on 35 invasive non-native species. This data can be used by all RINSE countries in future strategic management plans. Furthermore, by engaging the general public in 'citizen science', the RINSE App will increase public awareness of invasive non-native species, their associated problems and the importance of biological recording.

Cross-border benefits:

"That's Invasive!" has been designed and developed in three different languages (English, French and Dutch) allowing the App to be a truly cross-border tool. The distribution data obtained through the App will be available for the four RINSE countries and could be used in the development of future management strategies.

Any Lessons Learnt:

Belgian partners have been unable to generate significant interest in the App due to problems in the format of the records that are generated. The records are stored on a UK-based online database called iRecord. Data users in Belgium have found it difficult to convert the records in to a format for their own databases for biological records. This problem is currently being investigated, but it has highlighted the current difficulties in using cross-border citizen science tools.

Conclusions and recommendations:

"That's Invasive!" has proved to be a successful tool for recording invasive non-native species in the field. Furthermore, the App has resulted in the RINSE project engaging with a variety of audiences, raising awareness of invasive non-native species more generally.

2.2.2 Test the use of the App to record INS (Fr)

The original aim or objective

To test the use of "That's Invasive" as a survey tool for INS in the field.

Cross-border benefits

Prior to this test, the CPIE and the other project partners have been working together on the textual and graphic elements which need to be included in this app. The CPIE Val d'Authie has worked on the French version of the app in particular.

Problems/challenges encountered

Some CPIE employees have tested the app and have highlighted the problems identified, especially regarding downloading.

Results/achievements

Following this testing and correction phase, the CPIE Val d'Authie has disseminated information related to this app in order to increase its use. This information has been disseminated in particular via their own communication media by the National Federation of "Etablissement Publics Territoriaux de Bassin" (EPTB, a local public authority in charge of catchment areas), as well as by the Pas de Calais Fishing Federation (FDAAPPMA 62) among their various members.

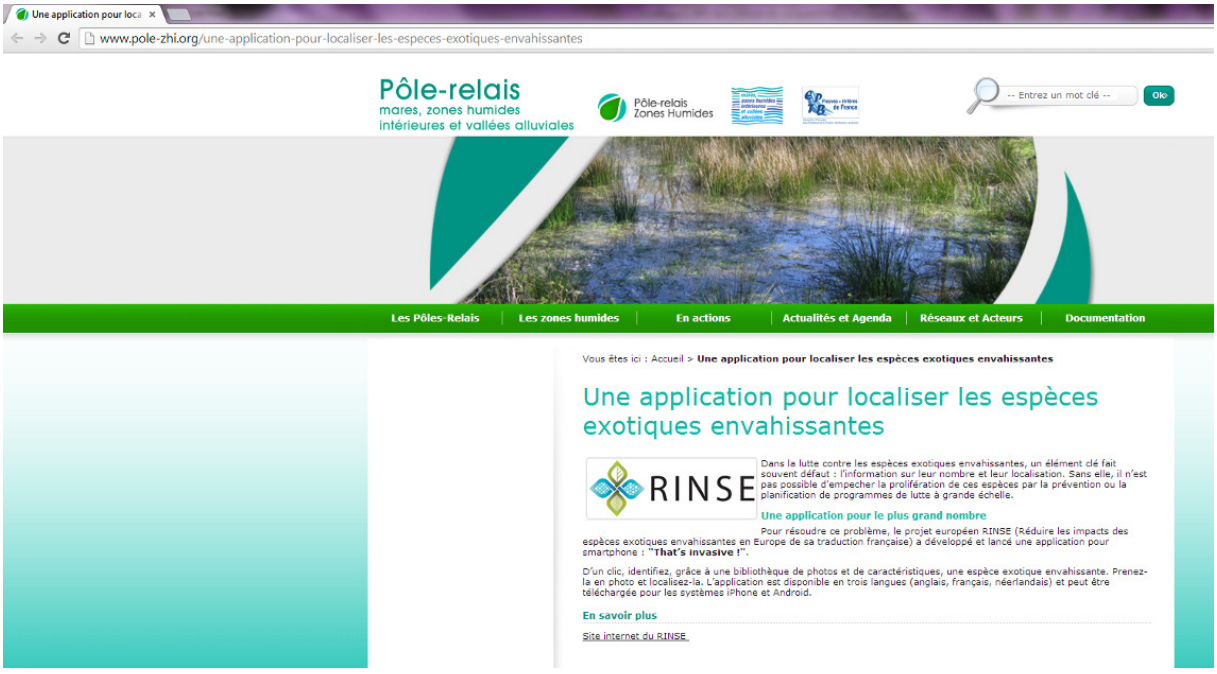


Figure 9. Screenshot from the "pole-relais" website about "That's Invasive!"

Figure 10. Screenshot from the "federation de pêche 62" website about "That's Invasive!"

2.2.2 Test the use of the App to record INS (Be)

The original aim or objective

Test the use of smart phone apps to record INS: RATO fieldworkers will use the smartphone app to record INS while they are in the field, and map and create an inventory of the INS in the East-Flanders region. It will be necessary to give the fieldworkers a short course on the identification of INS. Fieldworkers will also need access to the smart phone application and know how to use it. Records will be uploaded and shared, in order to provide all partners with information about the INS in the region of East Flanders.

Cross-border benefits

We started testing the App in February 2014 and kept the Flemish partners updates on the findings. We looked at a joint press release or press conference to launch the App in Flanders.

Problems/challenges encountered

The mobile phones were provided with a 1G network to start registration of certain INS in the field. However, we did not manage to download the app in the android version.

Until now, due to technical issues, it remains impossible for RATO to work with the App because our smartphones can't download the App.

2.3 Communication materials

2.3.1 Overview

Four partners were involved in sub-action 2.3, with the communication materials and the target public for RINSE partner involved provided in Table 6.

Table 6. Summary of the communication materials and target audience of each RINSE partner in sub-action 2.3

Section	Communication material	Target public	RINSE Partner
2.3.2	Booklet	Recreational boaters, farming	LP
2.3.3	Posters Leaflets	General public Land managers	PP 4
2.3.4	Identification guide	Countryside practitioners	PP 6
2.3.5	Information guide, leaflet	Local authorities, farmers, managers,	PP 8

These are reported sequentially in the following sub-sections.

Figure 11. Extract of "Guidance on the control of invasive non-native animals"

2.3.2. Materials for recreational boaters and farming community (UK)

Develop awareness raising materials for recreational boaters and the farming community.

Target species

The materials produced covered a wide range of invasive non-native species, both terrestrial and riverine however some key species were highlighted to be particularly relevant to the two different audiences.

A. Farmers

Japanese knotweed *Fallopia japonica*
Giant hogweed *Heracleum mantegazzianum*
Himalayan balsam *Impatiens glandulifera*
Grey Squirrel *Sciurus carolinensis*
American Mink *Neovison vison*
Muntjac *Muntiacus reevesi*

B. Recreational Boaters

Killer Shrimp *Dikerogammarus villosus*
Floating pennywort *Hydrocotyle ranunculoides*
Japanese knotweed *Fallopia japonica*
Giant hogweed *Heracleum mantegazzianum*
Himalayan balsam *Impatiens glandulifera*
American Mink *Neovison vison*

Time frame

Recreational boaters

October 2013	Development Initial concept determined.
November 2013 – April 2014	Content creation Meeting with the Broads Authority took place 17th December 2013. Layout, content and text were created for the booklet.
April – July 2014	Design External contract was setup with Tekura Maeva who designed the illustrations and the final design and layout
July 2014	Production Ordered 1000 booklets
July – September 2014	Promotion Press release issued mid-August. Booklet also promoted online using the RINSE website and social media accounts.
August 2014	Launch

Farming community

January – February 2013	Development and research
March – May 2013	Production of presentations Two presentations were created by the RINSE Team highlighting six INS and their control methods based on literature.
June – July 2013	Leaflet design and production Presentations were converted into small pocket guides (Figure 2) and 1000 copies ordered.
July 2013 - present	Promotion and distribution Booklets were promoted through the RINSE website and social media accounts.
March 2014	Invasive species event An Invasive Species Evening was held in Erpingham Arms on the 25th March to engage local landowners.

The original aim or objective

To engage two new audiences in the control of invasive non-native species, increasing general awareness and providing specific guidance on how to control their spread.

Target audience

Two audiences were targeted separately:

Farmers, local landowners and estate managers

Recreational boaters (both resident and visiting), boat hire industry

Method or approach adopted and why

Audiences

Recreational boaters and the farming community are two key audiences for invasive non-native species in Norfolk.

- Home to the Broads, the UK's only wetland National Park, Norfolk has the potential to be a hotspot for freshwater invasive species. Although there are control options for some invasive species, such as the American mink, for others we can only look to prevention such as the Killer Shrimp. Recreational boaters play a key role in preventing the spread of freshwater invasive species, particularly canoeists which transfer their equipment between water bodies, increasing the risk of spread. Additionally, given the large time this audience spends on Norfolk's waterways, increasing their awareness and ID skills could help monitor freshwater invasive species more effectively across the county.

- There are relatively few records of invasive species occurring on farmland despite it dominating the Norfolk landscape and therefore invasive species could be much more of a problem in the farmed environment than previously thought. The farming community would be invaluable to monitoring invasive species in these remote areas which are currently inaccessible to the public.

Farming Community

- Six common invasive species were chosen based upon their distribution in Norfolk, characteristic appearance and relevance to the farming community: Japanese knotweed, Himalayan balsam, giant hogweed, American mink, grey squirrel and muntjac.
- An online survey was setup to determine which species farmers were most interested in, their current understanding of legislation in relation to these species and what management information would be practical for them, including what format they would like to see this in. In addition, a number of posts were added to several online farming forums to stimulate discussion on the subject of invasive species and gather a deeper insight to the current level of knowledge on the subject. The results of this survey highlighted the need for clarification on the legislation and detailed control and management options for the above listed invasive species; to be made available online but also in the form of a small leaflet.
- Two online presentations were created, one for the three plants (Annex B) and one for the three animals (Annex C). Each presentation covered the following information:

  Key ID features of each of the species, including habitat, origin, UK distribution and how it was originally introduced.
  Impact(s) on the environment, relating to farming habitats
  Legislation detailing who is responsible for the control, and when you become liable
  Management options for each species, including detailed advice on herbicides and the restoration of the habitat following successful eradication
  Recording invasive species, highlighting the need for records and how they can submit them to us

- These were published online and promoted through farming forums, Farm Conservation and Natural England.
- The presentations were converted into a small wallet-sized leaflet and distributed at local events.
- An invasive species event was organised for farmers in North Norfolk on the 25th March 2014 held at Erpingham Arms, Erpingham; attended by 18 local farmers and landowners. Speakers included:

  David Hooton (Deer Initiative)
  An update on the status of non-native deer in the Broads and options for their management
  Simon Baker (formerly of the Coypu Research Laboratory)
  Lessons learnt from the coypu eradication programme, and how these influence the new Norfolk Mink Control Strategy
  Mike Sutton-Croft (Norfolk Non-native Species Initiative)
  Invasive plants in the Broads

Recreational Boaters

- With the success of the Check, Clean Dry campaign in the UK, a repetition of similar materials seemed an ineffective option. Instead, it was decided to target visiting families on holiday on the Broads with a children's activity book all about invasive species in the Broads.
- The activity book (Annex D) was designed to introduce children and subsequently their families to several key species found in the Broads: Japanese knotweed, Himalayan balsam, giant hogweed, American mink, killer shrimp and signal crayfish.
- The booklet was created in conjunction with the Broads Authority, whose local Tourist Information Centres would host the activity book and distribute them to local visitors.
- Part of the booklet also included a poster competition, asking children to design a poster on the control of invasive species. The prize for this is to be a free family boat trip on the Broads, courtesy of the Broads Authority. The competition will run to the end of September.

Problems/challenges encountered

No problems were encountered

Deviations including why and how any problems were overcome

There were no deviations from the original method or aims

Results/achievements

Action 2.3 has resulted in the production of 1000 RINSE activity books (Figure 12) being distributed to three popular Broads Authority Information Centres in the Norfolk Broads. These booklets will enable RINSE to target the previously under-represented audience of children and families. Action 2.3 resulted in the production of 1000 small invasive species pocket guides (Figure 13 – Annex E) which have been distributed at local events across Norfolk. The creation of this guidance for farmers on the control of invasive non-native species has enabled RINSE to reach a previously untargeted audience. Given that a large percentage of Norfolk's landscape is farmed, this is an important audience to engage with, increasing awareness of INS and the importance of reporting their presence.

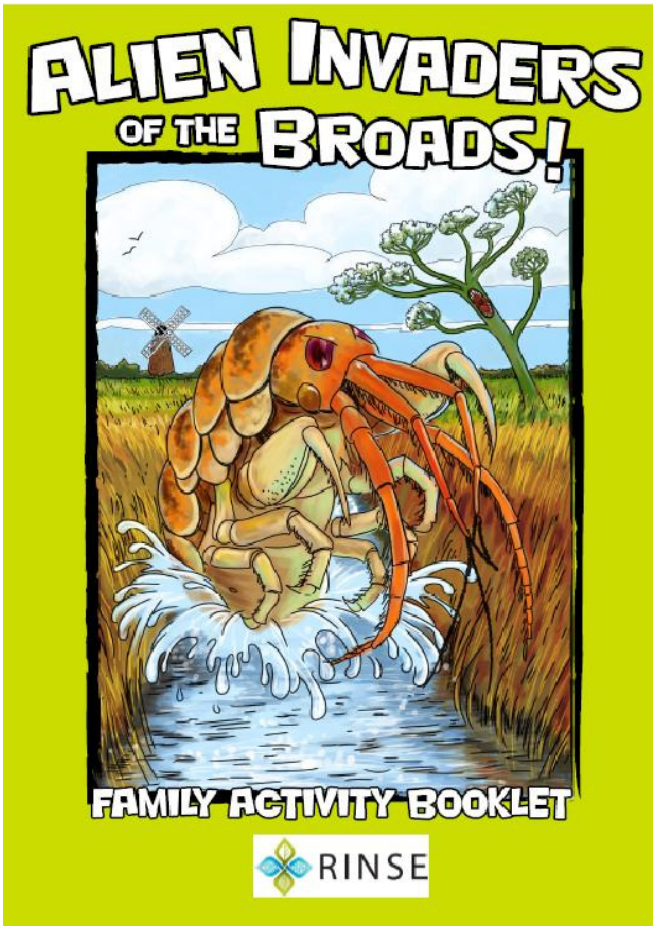


Figure 12. Front cover of 'Alien Invaders in the Broads!'

Figure 13. Example of INS Pocket Guide for Farmers

Number of volunteers

NA

Number of jobs created or sustained through delivery of this action

- Contribution to the part-time RINSE Project Assistant position
- Contribution to RINSE Technical Coordinator position

Economic or social benefits

Recreational boaters are one of the primary vectors in the spread of freshwater invasive non-native species. Given the environmental and recreational importance of the Broads to the UK, this is a key audience to target with messages of biosecurity.

Cross-border benefits

The Activity Booklet and Farmer's ID guide will be made available on the RINSE website, being shared across the other RINSE countries.

Any Lessons Learnt

- Farmers are a key audience in the control and monitoring of INS. Although farmers in general were aware of INS and their associated problems, there was a lack of understanding on who is the responsible party when it comes to their control.

2.3.3. Awareness materials for general public and land managers (Fr)

The original aim or objective

To design informative materials on INS, targeted to a wide audience with a broad understanding and awareness of INS and their associated problems.

Method or approach adopted and why

A set of three posters were designed and distributed to the general public. The first poster encouraged community members to contact the CPIE Val d'Authie about INS for information and to report any sightings (Annex F). To accompany this poster (Annex G), two others were designed to introduce a selection of key INS commonly found within the area; enabling their identification. More technical documents, both for professionals and private individuals, were also created, introducing a target species and how to manage it (Annex H).

Cross-border benefits

This set of posters has been adapted into English; both by modifying the highlighted species and by adapting the texts to the English context. This collaborative work on these posters could not have been realised without the RINSE project.

Figure 14. French and English versions of one poster

More technical documents (Annex I) have been adapted this time by the CPIE Val d'Authie based on documents designed by the Broads Authority. Once again, these documents could not have been produced in France without the Interreg Programme's support.

Figure 15. Technical leaflet on *Heracleum mantegazzianum*

This cross-border work has required many exchanges, both during our meetings and paperless ones, in order to come up with common materials suitable for each of our regions and our audiences.

Results/achievements

1000 flyers and 2 x 5000 posters were printed and distributed in French and 200 copies of the poster set were printed and distributed in English by the Lead Partner.

2.3.4 Identification materials for specific groups (UK)

Design and produce identification materials for specific groups, including: a robust identification guide for countryside practitioners; develop materials for planners, aimed at minimising the transportation of INS from one site to another; publicise national campaigns such as 'Be Plant Wise' and 'Check, Clean, Dry'. Distribute materials for national campaigns and produce display materials.

Target species

Japanese knotweed *Fallopia japonica*
Giant hogweed *Heracleum mantegazzianum*
Himalayan balsam *Impatiens glandulifera*
New Zealand pygmyweed *Crassula helmsii*
American skunk cabbage *Lysichiton americanus*
Parrot's feather *Myriophyllum aquaticum*
Floating pennywort *Hydrocotyle ranunculoides*
Creeping water primrose *Ludwigia grandiflora*
Water fern *Azolla filiculoides*

Time frame

- Develop materials for planners, aimed at minimising the transportation of INS from one site to another – preparation undertaken during meeting with planners on 13 March 2013; preparation continued during 2013 and early 2014. Materials delivered to New Forest National Park Authority on 1 May 2014. Publicise national campaigns such as 'Be Plant Wise' and 'Check, Clean, Dry' – preparation undertaken during 2012, 2013 and 2014. Delivered at training and awareness-raising events on 27 May 2012, 10 July 2012, 23 July 2012, 7 November 2012, 12 February 2013, 20 March 2013, 9 June 2013, 11 September 2013, 15 September 2013, 28 October 2013, 19 March 2014.
- Distribute materials for national campaigns and produce display materials – preparation undertaken during 2012, 2013 and 2014. Information material to publicise the national 'Be Plant Wise' and 'Check, Clean, Dry' campaigns was distributed at training and awareness-raising events on 27 May 2012, 10 July 2012, 23 July 2012, 7 November 2012, 12 February 2013, 20 March 2013, 9 June 2013, 11 September 2013, 15 September 2013, 28 October 2013, 19 March 2014. Displays were mounted at the majority of these events to publicise these national campaigns.

The original aim or objective

To stop the spread of invasive non-native plants by:-

- raising awareness about the problems caused by invasive non-native plants;
- helping people identify invasive non-native plants;
- advising people on appropriate action they can take to stop the spread of invasive non-native plants.

Target audience

- General public
- Gardeners
- Planning staff at New Forest National Park Authority
- Hampshire County Council Highways Department staff
- New Forest District Council staff
- Fishermen
- Countryside managers
- Horticultural trade

Method or approach adopted and why

- Develop materials for planners, aimed at minimising the transportation of INS from one site to another – a meeting was held with staff from New Forest National Park Authority planning department on 13 March 2013 to ascertain their views and determine what would be helpful. An information pack including a guidance note (Annex J) and advisory booklets was prepared and three copies of it were delivered to the New Forest National Park Authority on 1 May 2014. The approach taken by PP6 focussed on advising the planning staff where they can obtain relevant information from other sources as this was considered to be of most benefit.
- Publicise national campaigns such as 'Be Plant Wise' and 'Check, Clean, Dry' – the approach taken by PP6 focussed on a) provision of printed material about these two campaigns in delegates information packs at training and awareness-raising sessions, b) displays mounted at training and awareness-raising sessions, c) provision of 'Be Plant Wise' leaflets and displays mounted at public events such as the Wood Fair on 27 May 2012, 9 June 2013 and the nature reserve event at Keyhaven on 15 September 2013.

- Distribute materials for national campaigns and produce display materials – the approach taken by PP6 focussed on a) provision of printed material about these two campaigns in delegates information packs at training and awareness-raising sessions, b) displays mounted at training and awareness-raising sessions, c) provision of 'Be Plant Wise' leaflets and displays mounted at public events such as the Wood Fair on 27 May 2012, 9 June 2013 and the nature reserve event at Keyhaven on 15 September 2013.

Problems / challenges encountered

Nothing relevant to report.

Deviations including why and how any problems were overcome

Action 2.3 originally included the design and production of 'a robust identification guide for countryside practitioners'. However PP6 recognised that excellent identification guides for invasive non-native plants are already available on the website of the Great Britain Non-Native Species Secretariat. Bob Chapman of PP6 explained during the WP2/WP3 workshop at Arras on 24 April 2014 that no benefit would be gained by PP6 attempting to produce other material aimed at helping countryside practitioners to identify invasive non-native plants. Countryside practitioners can easily download the existing identification guides from the GBNNSS website, laminate them and take them out into the field.

Results / achievements

Action 2.3 has resulted in:-

- increased awareness and understanding within the planning department of New Forest District Council about the availability of guidance to minimise the risk of spreading invasive non-native plants during development or re-development of sites;
- increased awareness and understanding amongst the fishing/ angling community about the 'Be Plant Wise' and 'Check, Clean, Dry' campaigns and the need for biosecurity;
- increased awareness and understanding in the horticultural trade and amongst amateur gardeners about the problems caused by invasive non-native plants and the need to minimise the risk of them spreading, through careful choice of species to be planted and careful disposal of surplus plants;

- increased awareness and understanding amongst countryside management professionals about the problems caused by invasive non-native plants and the need to minimise the risk of them spreading.

Number of volunteers, if any

1 volunteer helped at the event on 27 May 2012
1 volunteer helped at the event on 12 February 2013
4 volunteers helped at the event on 20 March 2013
2 volunteers helped at event on 19 March 2014

This is a total of 6 volunteers, contributing 8 days of voluntary labour.

Number of jobs created or sustained through delivery of this action

No jobs were created or sustained through delivery of this action.

Economic or social benefits

Delivery of action 3.2 resulted in increased awareness about the problems caused by invasive non-native plants and the need for biosecurity. This will result in economic benefits as it will enable organisations, such as Hampshire County Council Highways Department, the Highways Agency's consultants and local planning authorities, to recognise invasive non-native plants and take action to control and eradicate them at an early stage before their populations increase and the cost of control increases accordingly. It will also result in economic benefits as it will enable gardeners to take measures to prevent the spread of invasive non-native plants through careful choice of species to be planted and appropriate methods of disposal of surplus material.

Cross-border benefits

Representatives of RINSE partner organisations attended the events on 20 March 2013 and 19 March 2014 where information about 'Be Plant Wise' and 'Check, Clean, Dry' was available in the delegates' packs and on display boards. These events therefore provided an opportunity for dissemination of information to other European countries.

Any lessons learnt

Awareness and understanding about the problems caused by invasive non-native plants and the need for biosecurity varies greatly between organisations involved in countryside management and among the general public. Planning staff at New Forest Non-Native Plants Project

were appreciative of the approach by PP6 and the provision of guidance material to minimise the risk of spreading invasive non-native plants during development or re-development.

Conclusions and recommendations

The provision of information to planning staff and provision of information about the national campaigns was well received. Since the ban on sale (from 6 April 2014) of the five invasive non-native plants subject to the 'Be Plant Wise' campaign PP6 recommends checks at local garden centres and nurseries to ensure that none of these five plants are still being sold in the New Forest area.

2.3.5 Information guides and leaflets about geese (Be)

Create, publish and disseminate information guides and leaflets to better inform target audiences of problems caused by invasive geese and how to address these. Disseminate contact details of local organisations that can provide assistance.

Target species

The training programmes and communication materials were aimed at several goose species, all of which have resident breeding populations in the project area. Most species are year-round residents in the area, but often make (cross-border) dispersal movements over a wider area (e.g. dispersal from breeding grounds to moulting areas). The communication actions particularly targeted invasive non-native greater Canada goose *Branta Canadensis*, feral domestic goose *Anser anser f. domestica* and a number of other non-native species like invasive non-native Egyptian goose *Alopochen aegyptiacus*, non-native bar-headed goose *A. indicus* and non-native Magellan goose *Chloephaga picta* and some hybrids.

Time frame

Development (nov 2012) of a publication "Draaiboek Ganzenbeheer" (script/user's manual) of best practices for goose management for the local authorities, the administration service of the Provincial Department of Watercourses, farmers, nature organisations and rat catchers. The manual has been tested in 2013, published in Jan 14 and distributed on the local platform meetings 2014. A leaflet 'Herkenningsfiche ganzen' was created and disseminated.

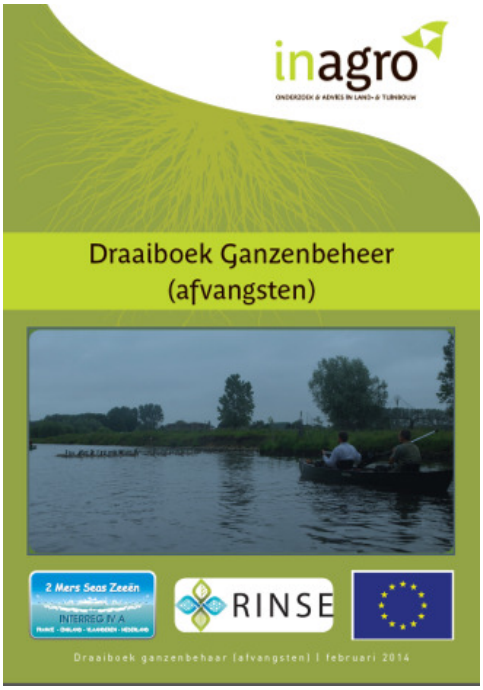


Figure 16. Cover front of the publication "Draaiboek Ganzenbeheer"

Figure 17. Leaflet 'recognition of summer geese'

The original aim or objective

Inagro acts as an agriculture and environment communication platform and as a 'middleman' between local authorities and the Government of West-Flanders. We promote interaction among different stakeholders to develop strategic plans for INS control. Controlling or managing summer geese is not one of our core businesses and after this project; local authorities will have to perform the controlling actions by themselves. The general aim was to develop communication materials for local authorities, nature organisations, rat catchers and farmers to ensure actions undertaken within this project are sustained after the project closes. To communicate the publications and to discuss the local possibilities of the different management methods, we organised several local platform meetings with several stakeholders from nature organisations, agriculture organisations, local authorities, rat catchers and hunters. Our intention was to raise awareness about problems caused by invasive geese, to help farmers, hunters and land-owners to identify and manage summer geese. It also provided feedback on management results and workshops on goose hunting. We also caught up with several rat catcher committees to inform the rat catchers about the communication materials and the managing methods.

Target audience

Local authorities, farmers, conservation managers, hunters, conservationists, rat catchers

Method or approach adopted and why

The general approach was to work towards structured platform meetings in order to create annual integrated platforms where different stakeholders meet each other on a regular base. This investment in awareness raising and gaining public support was essential to the successful execution of the management. Moreover, the publications should stimulate the target audience to perform goose management to ensure actions are sustained after closing of the project.

Problems / challenges encountered

Local platform meetings with people from different organisations (nature, agriculture, authorities, hunt) and with different views were a challenge. The provided managing techniques (pricking eggs, capturing geese, hunting) are most successful if being used together but in several cases, nature organisations, private landowners, hunters and even some local authorities would not perform captures of summer geese because of the general public opinion. A common vision and general management plan for summering non-native geese was lacking. Clear management objectives and consensus amongst different stakeholders is needed for public acceptance.

Deviations including why and how any problems were overcome

No major deviations.

Results / achievements

- leaflet recognizing summer geese
- publication of a best practice for goose management
-6 local platform meetings
-contact person in West-Flanders for farmers, local authorities, nature organisations, hunters and rat catchers about problems caused by invasive geese.
- 6 local platform meetings
- contact person in West-Flanders for farmers, local authorities, nature organisations, hunters and rat catchers about problems caused by invasive geese

Number of volunteers, if any

Volunteer hunters performed shooting actions with considerable numbers of Canada and greylag goose, both game species in Flanders. The exact number of people contributing to this is however not reported and therefore unknown.

The stakeholder forums largely consisted of professional people but quite often also volunteers (conservation practitioners, landowners, farmers, hunters) were active in these platforms.

Number of jobs created or sustained through delivery of this action

0, 15 FTE local project manager

Economic or social benefits

Although difficult to quantify because of the lack of a public consultation into stakeholder acceptance or satisfaction and the lack of accurate data on agricultural damage, all local platform meetings resulted in a general tendency towards satisfaction. This is probably due to consensus building on the management targets and methods attained through the different stakeholder platforms. Moreover, there is an increased awareness about the problems caused by invasive geese and provision of information relating to identification and control.

Any lessons learnt

It is difficult to create a common vision about controlling techniques and widely accepted general management plan. To continue providing information and organising local platform meetings are preferred.

Conclusions and recommendations

Especially in regions were the summer geese damage (nature, agriculture or recreational) is large, local platform meetings are essential to create a larger accepted view about managing summer geese. A continuous effort in communication towards different stakeholders was instrumental in creating support as well as policy initiative for further measures.

2.4 Q-Bank

2.4.1 Overview

Two partners were involved in sub-action 2.4, with the role of each RINSE partner involved provided in Table 7.

Table 7. Summary of the role of each RINSE partner in sub-action 2.4

Section	Role	RINSE Partner
2.4.2	Further develop and translate	PP 5
2.4.3	Translate	PP 4

These are reported sequentially in the following sub-sections.

Figure 18. Screenshot of the home page from "Q-bank invasive plants database"

2.4.2 Further development and translation (NI)

Further develop and translate Q-bank (a web-based, image-driven identification tool for invasive species) into French. This will include: translation of the identification keys and fact sheets; additional of information about new species not previously included in Q-bank; and integration of all translated and new information into the online system.

Target species

Plants species that are non-native to the Interreg IV 2 seas area

Time frame within which the activity was delivered with basic breakdown

- In 2012 the National Botanic Conservatory in Bailleul was contacted to obtain the relevant information concerning occurrence of non-native plant species in the French Interreg IV 2 seas area.
- In 2012 the translation of all terminology of the interactive keys into French was completed and translation of descriptions for 2262 images was initiated.
- Translation in English and French of the existing 53 fact sheets including adaptations to the distribution maps was started in mid-2012 and completed by mid-2013
- French translations of all 5 interactive keys were available by end 2013.
- Full species records of 5 new species (*Artemisia verlotiorum, Cotoneaster dielsianus, Cotoneaster franchetii, Dipsacus strigosus* and *Gunnera tinctoria)* were added to Q-bank database by end 2013. Fact sheets for the 5 new species in all 3 languages became available in the beginning of 2014. In April 2014 the 5 new species were incorporated in the interactive keys and an additional 15 non-native species of Cotoneaster were included.

The original aim or objective

- Translate existing fact sheets in English and French
- Translate existing identification tools in French
- Produce full species records for 5 additional species including fact sheets and integration in identification tools in 3 languages

Target audience

Professionals, land managers and volunteers

Method or approach adopted and why

Translation of existing fact sheets into French and English was rather straightforward, involving assistance by the French partner (PP4) and English lead partner. Acquiring the relevant distribution data was more complicated and was done through our international contacts in Belgium (National Botanic Garden and INBO), France (CPNB Bailleul) and England (BSBI). Incorporation of the data in the interactive keys and work on the Q-bank database was performed by Naturalis Biodiversity Center at Leiden in the Netherlands. Selection of the 5 additional species was performed after a proposal by PP5 in close consultation with experts in the region and after approval by all RINSE project partners after the project partner meeting at Gent in 2013.

Problems/challenges encountered

At some stage a new version of java script did pose problems both with the software of the interactive keys as well as older version of browsers in use by various project partners. Both aspects of the problem have been addressed and resolved.

Deviations including why and how any problems were overcome

None worth mentioning

Results/achievements

All initial goals have been achieved and in addition to the anticipated 5 new species an additional 15 species have been included in the interactive keys. The work on Q-bank including the interactive keys and fact sheets has been promoted in international meetings and symposia without additional costs to the project

Number of jobs created or sustained through delivery of this action

None

Economic or social benefits

Cannot be quantified

Cross-border benefits

Collaboration on the issue of distribution and identification tools of non-native plant species established between Q-bank and National Botanic Conservatory in Bailleul. Promotion of RINSE activities, Q-bank and interactive identification keys at Freshwater Invasives-Networking for

Strategy (FINS) Conference , 8-11 April 2013, Galway Ireland: EPPO/ CoE/IUCN Workshop « How to communicate on pests and invasive alien plants ? »,8-10 October 2013, Oeiras Portugal, and 4th international Symposium on weeds & invasive plants, 18-23 May, Montpellier, France.

Any Lessons Learnt

Creating an information system should never be a goal in itself. The essential thing is that people start using it. For that reason you have to go out and convince people that you have created some useful. Others will have to actually start using it. The essential thing for it is to be user friendly but always based on accurate information on species identity.

Conclusions and recommendations

To make any cross-border effort sustainable you have to go out and meet people in the field. A web site may look very nice but there are millions of website. To make a collaboration something special and lasting people must really get the feeling they can learn from each other and there is an added value in sharing information and knowledge.

Figure 19. 3 RINSE partners speakers at the EPPO workshop

2.4.3 Translation into French (Fr)

The original aim or objective

Q-bank is an online interactive tool which enables to identify an INS on the basis of simple criteria. This tool was available in Flemish and partially in English. The purpose was therefore to translate the whole Q-bank dedicated to INS into the 3 languages. For the CPIE Val d'Authie, that consisted in translating into French the existing factsheets as well as additional ones created for the project.

Method or approach adopted and why

The first step was therefore the translation of 5 identification keys and of captions of the drawings illustrating those keys. Alongside this, the CPIE Val d'Authie has acted as an intermediary between the partner administrating Q-bank and Bailleul Botanical Conservatory during a meeting in their premises in order for Q-bank to make accessible on the Internet a mapping of INS spread, including the data from the North of France.

Results/achievements

Then the factsheets of 53 species have been translated into French and adapted to the local context (spread, colonised habitats ...). This adaptation has been realised in the CPIE Val d'Authie after the translation, followed by a proofreading by the Botanical Conservatory.
The production of 5 additional factsheets had also been planned. These factsheets have also been translated and adapted into French.

Any Lessons Learnt

Finally, even though it was not initially planned, we have also translated the Q-bank presentational elements and the texts displayed on the button icons to facilitate the use of Q-bank by French speakers.

Figure 20. Example of Q-bank factsheet in French

2.5 Training

2.5.1 Overview

Four partners were involved in sub-action 2.5, with the target audience of each RINSE partner involved provided in Table 8.

Table 8. Summary of the target audience of each RINSE partner in sub-action 2.5

Section	Target audience	RINSE Partner
2.5.2	Wildlife conservation managers, volunteers	LP
2.5.3	Road managers, land managers	PP 4
2.5.4	Countryside works practitioners, horticultural trade	PP 6
2.5.5	Stakeholders involved to identify and control INS	PP 8

These are reported sequentially in the following sub-sections.

Figure 21. Front cover of a training presentation for road managers

2.5.2 Training package for a priority audience (UK)

Develop and implement a training package for a priority audience (to be identified at the initial partners' workshop). Assess the effectiveness of this training programme. Produce curricular and training material 'packages' for cross-border training actions.

Target species

Japanese knotweed *Fallopia japonica*
Giant hogweed *Heracleum mantegazzianum*
Himalayan balsam *Impatiens glandulifera*
Floating pennywort *Hydrocotyle ranunculoides*
American mink *Mustela vison*
Signal crayfish *Pacifastacus leniusculus*

Time frame

- May 2014: Development
- 12 June 2014: Trial of training package
- June - September 2014: Revise training package in light of comments from trial
- September 2014: Publish training package on RINSE website

The original aim or objective

To produce a general training package that provides the trainees with the knowledge required to identify and manage a number of key invasive species encountered in the Two Seas area.

Target audience

Wildlife conservation workers and volunteers, although the package has been designed to be sufficiently general so as to be of interest to a wider audience.

Method or approach adopted and why

- The Norfolk Non-native Species Initiative (hosted by Norfolk County Council) has already delivered presentations and training sessions to a number of different audiences prior to the commencement of the RINSE project. This activity will allow Norfolk County Council to construct a training package that will collate key messages from these existing materials and be pieced together to form a 2 hour 'Crash Course' on INS.

- The 'Crash Course' was tested on the 12th June 2014, when staff from Norfolk County Council delivered the training package to a group of wildlife conservation staff and volunteers from the Norfolk Wildlife Trust. Feedback forms were given to attendees at the beginning of the training, and collected as the attendees departed.
- The final version of the training package will be compiled in August and September 2014 taking in to account the comments of the attendees at the initial 'test' runs.

Why?

- Norfolk County Council has a significant amount of expertise in the field of invasive non-native species management, but do not have the resources to train the plethora of groups who require training on this important issue. By producing an online training package and making groups aware of it's presence it is hoped that many groups will be able to provide the training 'in house'.

Problems/challenges encountered

No problems were encountered.

Deviations including why and how any problems were overcome

There were no deviations from the original method or aims.

Results/achievements

One training package for wildlife conservation staff and volunteers, comprising:

- PowerPoint presentation;
- Accompanying notes;
- Quiz.

These resources will be made available via the RINSE website and promoted for use to relevant organisations.

Number of volunteers

None

Number of jobs created or sustained through delivery of this action

Partially supporting 2 jobs at Norfolk County Council.

Economic or social benefits

The delivery of action 2.5 will result in an increased awareness of several key invasive species amongst target groups. These groups will better understand how to identify and control invasive species, which should lead to more cost-effective management and a reduction in the economic and social impacts of these species.

Cross-border benefits

The format and content of the training package could be translated and used in other countries within the Two Seas area, as the species featured are a common problem across the region.

Any Lessons Learnt

Feedback from the trial session of the training package was universally positive, with only a small number of suggestions to improve the materials. This indicates that there is an appetite for this sort of training within the target audience.

Conclusions and recommendations

The final version of the training package is currently being compiled, and will be published in September 2014, but it already clear that there is a need for materials of this type to be produced. The 'test' of the materials in June 2014 was very successful, and minor amendments are currently being made to the package materials in light of the comments received.

2.5.4 Implement training for target audience

The original aim or objective

The purpose of this action was to implement training for target audiences determined at the WP2 partner meeting.

Method or approach adopted and why

Main Messages

Current key messages on INS were summarized in 4 priority messages by identifying synergies:

Messages listed	Main messages identified
Biosecurity ("Check, Clean, Dry")	
Prevent introductions ("Be plant wise")	Early detection is crucial
Look out for new species	
Act quickly to control new species	
Work in a coordinates way	
The longer you delay, the more expensive and difficult control will be	Action must be swift and coordinated
You can make a difference	
Responsibility for INS is responsibility for all	Everyone has a responsibility
INS have negative economic impacts	
INS have negative impacts on biodiversity	INS have negative impacts

Target Audiences

Key stakeholders in the management of INS were combined into 4 key target audiences by identifying synergies

Audiences listed	**Targeted audiences**
Public	General public
Contractors	
Volunteers	
Gardeners	
Policy makers	Authorities
Legislative authorities	
Local authorities	
Planners	
Elected representatives	
Field workers	
Road workers	
Road managers	
Fishing club	Land managers
River managers	
Farmers	
Hunters	
Hikers	
Lumberjacks	
Garden centres	Professionals
Pet shop	
Aquaculturists	

Contents

The content of future RINSE communicative materials was finalised by combining key elements into a draft contents for any publications.

Items listed	**Item to be appearing in RINSE Medias**
Knowledge of local INS	
Key ID features	
Short interesting facts which audience can remember	Facts / Knowledge
Killer facts	
Good images	
Strong images	Images (showing the problem)
Managerial tips	Tips
Good news stories	
Stories of success	Stories
Sources of additional information	Further information

CPIE Val d'Authie identified road managers and maintenance workers to be a priority audience for the area. Road networks act as dispersal corridors for many invasive non-native plants and therefore early detection and increased biosecurity is essential in this working environment. The CPIE Val d'Authie therefore focused on the creation of a training framework for this priority target audience. In order to ensure this, we have been working with the agents of the Pas de Calais General Council in charge of roads maintenance to properly understand their job and their activities, and to define with them their needs and expectations in terms of training on the INS. On the basis of these elements, we have been working on the definition of training main objectives (MO) which were the followings:

- MO1 Being able of defining and explaining what an Invasive Non-Native Species (INS) is and the issues raised.
- MO2 Being able of knowing and understanding the impacts and the challenges of INS management.
- MO3 Being able of recognizing roadsides' main INS.
- MO4 Being able of trying out and applying the management measures adapted to each INS.
- MO5 Being able of communicating on INS with the various users and local residents

Cross-border benefits

This first release of the training framework has then been detailed and discussed during the second working meeting with the partners. After some adjustments, this framework has been translated and adapted so that it fits the local context of roadsides management (Annex K).

Results/achievements

The creation of a general guidance document about INS targeted for road managers and maintenance workers. Alongside working on the framework's conception, the CPIE Val d'Authie has implemented the first series of training events for agents and technicians in charge of roadside management on an experimental basis for 3 groups. The following year, the system has been reinforced to enable the training of 6 groups of about a dozen people. A total of 103 workers have been trained through this programme. In addition to this priority target audience, the CPIE Val d'Authie has implemented training events or information meetings for other audiences. This has represented 12 groups made of hikers, fishermen, farmers, beekeepers, managers of natural environments (watercourses) or anthropized ones (canals), horticulturists and nursery gardeners, volunteers and citizens, local elected representatives. Overall, 232 people took part in one of these training events.

Any Lessons Learnt

Even though we asked the participants at the end of each session for feedbacks on their acquired knowledge, it was instantaneous and not representative of any long term behavioural change. It is very hard to get a feedback after a few months or years to know if this training has changed how they take INS into account and their management methods.

2.5.4 Specialist training courses for countryside works practitioners and horticultural trade (UK)

Organise and deliver seven specialist training courses for countryside works practitioners and the horticultural trade.

Target species

Japanese knotweed *Fallopia japonica*
Giant hogweed *Heracleum mantegazzianum*
Himalayan balsam *Impatiens glandulifera*
New Zealand pygmyweed *Crassula helmsii*
American skunk cabbage *Lysichiton americanus*
Parrot's feather *Myriophyllum aquaticum*
Floating pennywort *Hydrocotyle ranunculoides*
Creeping water primrose *Ludwigia grandiflora*
Water fern *Azolla filiculoides*

Time frame

- Training course for Hampshire County Council Highways Department planned during 2012 and delivered on 10 July 2012
- Training course for Highways Agency consultants (Enterprise Mouchel) planned during 2012 and delivered on 23 July 2012
- Training course for staff working for New Forest District Council planned during 2012 and delivered on 7 November 2012
- Training course for fly fishermen and anglers planned during 2012 and delivered on 12 February 2013
- Training course focussing on control of New Zealand pygmyweed *Crassula helmsii* planned during 2012 and early 2013 and delivered on 20 March 2013
- Training course for horticulturalists planned during 2013 and delivered on 11 September 2013
- Training course for local planning authority countryside managers planned during 2013 and delivered on 28 October 2013

The original aim or objective

To raise awareness about the problems caused by invasive non-native plants, to help people identify invasive non-native plants and to give guidance on how to control invasive non-native plants. The training courses were aimed at particular sectors of countryside practitioners and the horticultural trade.

Target audience

- Hampshire County Council Highways Department staff
- Highways Agency consultants (Enterprise Mouchel)
- New Forest District Council staff
- Fly fishermen and anglers
- Countryside managers who are trying to control of New Zealand pygmyweed *Crassula helmsii*
- People involved in the horticultural trade
- Local planning authority countryside managers

Method or approach adopted and why

In the majority of cases, half-day training sessions were held, comprising a series of presentations from the New Forest Non-Native Plants Officer (on identification of invasive non-native plants, guidance on control of invasive non-native plants and legislation relating to invasive non-native plants) and, in some cases, other colleagues from PP6 to address issues such as the need for biosecurity. Half-day sessions were considered to be long enough for:-

- Hampshire County Council Highways Department staff
- Highways Agency consultants (Enterprise Mouchel)
- New Forest District Council staff
- Fly fishermen and anglers
- Local planning authority countryside managers

Full day sessions were organised for:

- Countryside managers who are trying to control of New Zealand pygmyweed *Crassula helmsii*
- People involved in the horticultural trade

A full day session on control of New Zealand pygmyweed *Crassula helmsii* was considered appropriate due to the numerous methods that have been attempted to control this species. The Project Officer was keen to invite a large number of speakers who could cover a variety of techniques. A full day session for horticulturalists was arranged at the suggestion of the Head Gardener of Exbury Gardens; he had kindly offered to lead a whole day tour of the Gardens, instead of an indoor session involving presentations. This proved very appropriate for those attending.

Problems / challenges encountered

Attracting people involved in the horticultural trade was a challenge. An interesting venue (Exbury Gardens) and an inspirational and knowledgeable trainer (John Anderson, Head Gardener of Exbury Gardens) were selected in the hope that this would attract people involved in the horticultural trade. Advice was sought from the Head Gardener of Exbury Gardens regarding a) which time of year would be most suitable to hold an event to attract professional horticulturalists, nursery owners, garden centre managers and staff working at garden centres and b) which day of the week would be most appropriate to attract people working in the horticultural trade. On the basis of his advice, a Wednesday during September was chosen as the most appropriate day. Letters and e-mails were sent to a large number of garden centres, nurseries, landscape gardeners and landscape architects. Unfortunately this resulted in a disappointingly low level of response.

Deviations including why and how any problems were overcome

Due to the disappointingly low level of response to invitations to people involved in the horticultural trade, invitations were then sent to keen amateur gardeners. This resulted in a good response and an extremely worthwhile day.

Results / achievements

All seven training sessions resulted in increased awareness about the problems caused by invasive non-native plants. Evaluation forms were completed by delegates at each event and the feed-back was positive.

Number of volunteers, if any

1 volunteer helped at the event for fishermen on 12 February 2013.
4 volunteers helped at the event focussing on control of New Zealand pygmyweed *Crassula helmsii* held on 20 March 2013. This is a total of 5 volunteers.

Number of jobs created or sustained through delivery of this action

No jobs were delivered or sustained through delivery of this action

Economic or social benefits

All training sessions resulted in increased awareness about the problems caused by invasive non-native plants and provided information relating to identification and control. This will result in economic benefits as it will

enable organisations such as Hampshire County Council Highways Department, the Highways Agency's consultants and local planning authorities to recognise invasive non-native plants and take action to control and eradicate them at an early stage before their populations increase and the cost of control increases accordingly.

Cross-border benefits

Representatives of RINSE partner organisations attended the training session held on 20 March 2013 focussing on control of New Zealand pygmyweed *Crassula helmsii*. A joint presentation was given by Johan van Valkenburg (PP5) and Luc Denys of INBO (PP7). Presentations were also given by Catherine Chatters (PP6), Sonal Varia, CABI (PP7) and Mike Sutton-Croft of Norfolk County Council (Lead Partner). This training session therefore provided plenty of opportunities for sharing experience across-borders.

Any lessons learnt

Difficult to attract people involved in the horticultural trade to a training session on invasive non-native plants, despite choosing an interesting venue, a well-known, inspirational and knowledgeable trainer and despite holding the event on an appropriate day at a suitable time of the year.

Conclusions and recommendations

The training sessions were well received and increased awareness amongst a wide range of countryside practitioners, keen amateur horticulturalists and a few people involved in the horticultural trade. If other organisations are contemplating training the professional horticultural sector, further consideration needs to be given on how to attract people to a training event.

2.5.5 Training for stakeholders involved to identify a control INS (Be)

Identify the training needs and enhance capacity of different stakeholders to identify and control INS, e.g. hunters, farmers, nature organisations, local authorities and rat catchers. Emphasis will also be placed on informing stakeholders of new INS control approaches and legislation.

Target species

The training programmes and communication materials were aimed at several goose species, all of which have resident breeding populations in the project area. Most species are year-round residents in the area, but often make (cross-border) dispersal movements over a wider area (e.g. dispersal from breeding grounds to moulting areas). The communication actions particularly targeted invasive non-native greater Canada goose *Branta Canadensis*, feral domestic goose *Anser anser f. domestica* and a number of other non-native species like invasive non-native Egyptian goose *Alopochen aegyptiacus*, non-native bar-headed goose *A. indicus* and non-native Magellan goose *Chloephaga picta* and some hybrids.

Time frame

Several local platforms were organised an chaired to inform local authorities:

6/12/12: local platform meeting Zuienkerke
29/01/13: local platform meeting Damme
05/02/13: local rat catcher committee (region Noord-Oost)
06/02/13: local rat catcher committee (region Gistel)
18/02/13: local platform meeting Nieuwpoort – Middelkerke
19/02/13: local platform meeting Zeebrugge – Knokke-Heist
25/02/13: local rat catcher committee (region Blankenberge)
28/02/13: local platform meeting Diksmuide
08/03/13: local platform meeting Oudenburg

Several internal trainings: ArcGIS (nov 2012), waarnemingen.be (nov 2012), app "that's invasive!" (Dec 2013 - Jan 2014) and communication training (nov 2013) in order to inform different stakeholders on the local platform meetings. Multiple local committees and platform meetings were held to improve training, control and capture.

07/02/14: local rat catcher committee (region Ijzer)

10/02/14: local rat catcher committee (region Blankenberge)

18/02/14: local rat catcher committee (region Noord-Oost)

11/03/14: local platform meeting Damme
18/03/14: local platform meeting Oudenburg
21/03/14: local platform meeting Diksmuide
25/03/14: local platform meeting Middelkerke – Nieuwpoort
24/04/14: local platform meeting Knokke-Heist

The original aim or objective

Inagro acts as an agriculture and environment communication platform and as a middleman between local authorities and the Government of West-Flanders. We promote interaction among different stakeholders to develop strategic plans for INS control. Controlling or managing summer geese is not one of our core business and after this project, local authorities will have to perform the controlling actions by themselves. The general aim was to develop communication materials for local authorities, nature organisations, rat catchers and farmers to ensure actions undertaken within this project are sustained after the project closes. To communicate the publications and to discuss the local possibilities of the different management methods, we organised several local platform meetings with several stakeholders from nature organisations, agriculture organisations, local authorities, rat catchers and hunters. Our intention was to raise awareness about problems caused by invasive geese, to help farmers, hunters and land-owners to identify and manage summer geese. It also provided feedback on management results and workshops on goose hunting. We also caught up with several rat catcher committees to inform the rat catchers about the communication materials and the managing methods.

Target audience

Local authorities, farmers, conservation managers, hunters, conservationists, rat catchers

Method or approach adopted and why

The general approach was to work towards structured platform meetings in order to create annual integrated platforms where different stakeholders meet each other on a regular base. This investment in awareness raising and gaining public support was essential to the successful execution of the management.
Moreover, the publications should stimulate the target audience to perform goose management to ensure actions are sustained after closing of the project.

Problems / challenges encountered

Local platform meetings with people from different organisations (nature, agriculture, authorities, hunt) and with different views were a challenge. The provided managing techniques (pricking eggs, capturing geese, hunting) are most successful if being used together but in several cases, nature organisations, private landowners, hunters and even some local authorities would not perform captures of summer geese because of the general public opinion. A common vision and general management plan for summering non-native geese was lacking. Clear management objectives and consensus amongst different stakeholders is needed for public acceptance.

Deviations including why and how any problems were overcome

No major deviations.

Results / achievements

- leaflet recognizing summer geese
- -publication of a best practice for goose management
- -6 local platform meetings
- -contact person in West-Flanders for farmers, local authorities, nature organisations, hunters and rat catchers about problems caused by invasive geese.

Number of volunteers, if any

Volunteer hunters performed shooting actions with considerable numbers of Canada and greylag goose, both game species in Flanders. The exact number of people contributing to this is however not reported and therefore unknown.The stakeholder forums largely consisted of professional people but quite often also volunteers (conservation practitioners, landowners, farmers, hunters) were active in these platforms.

Number of jobs created or sustained through delivery of this action

0, 15 FTE local project manager

Economic or social benefits

Although difficult to quantify because of the lack of a public consultation into stakeholder acceptance or satisfaction and the lack of accurate data on agricultural damage, all local platform meetings resulted in a general tendency towards satisfaction amongst. This is probably due to

consensus building on the management targets and methods attained through the different stakeholder platforms. Moreover, there is an increased awareness about the problems caused by invasive geese and provision of information relating to identification and control.

Any lessons learnt

Difficult to create a common vision about controlling techniques and widely accepted general management plan. To continue providing information and organising local platform meetings is preferred.

Conclusions and recommendations

Especially in regions were the summer geese damage (nature, agriculture or recreational) is large, local platform meetings are essential to create a larger accepted view about managing summer geese.

A continuous effort in communication towards different stakeholders was instrumental in creating support as well as policy initiative for further measures.

2.6 Partner Workshops

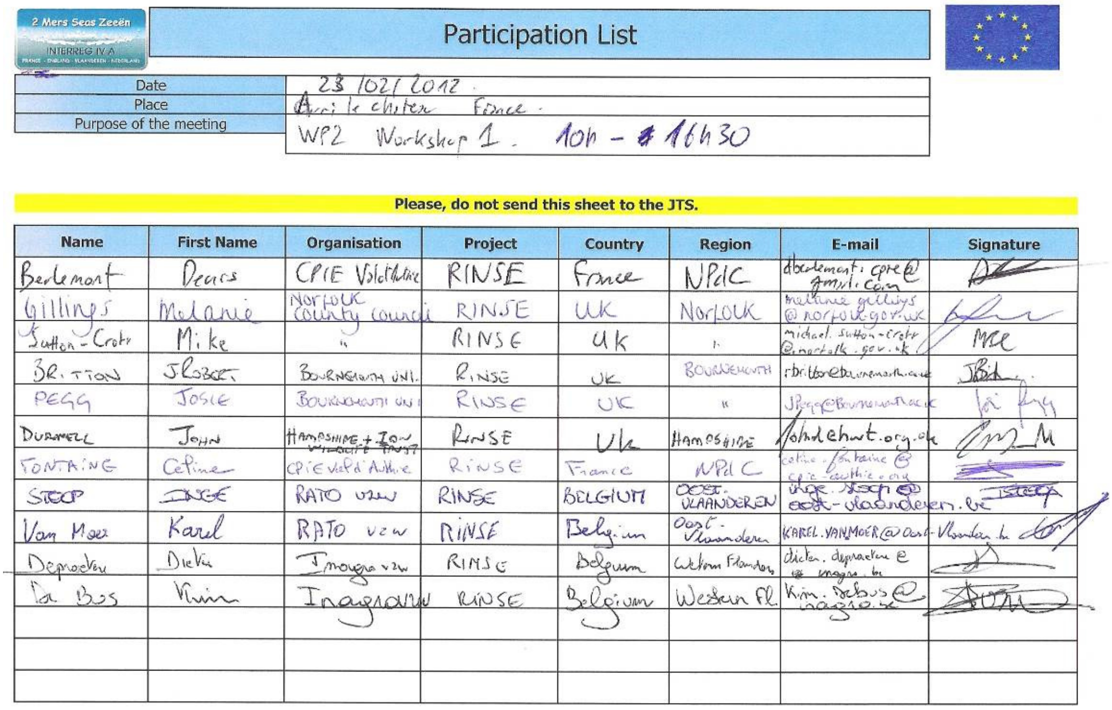
Three partner workshops for the Activity were held over the duration of the project (Table 9).

Table 9. Partner workshops held in RINSE Activity 2

Meeting	Date	Location	RINSE Partner host	Number of participants
1	23/02/2012	Auxi, France	6	11
2	04/12/2012	Lille, France	6	11
3	10/04/2014	Arras, France	6	13

Evidence that the meeting was held is provided in subsequent pages, using the each meeting's sign sheet of delegates per meeting (Fig. 23 to 25). Representatives of all work package partners were present at each meeting. Key outputs of these meetings were that they enabled the joint working by partners in all the activities implementation. The details of the work done at these meetings are set out in annexes where the reports are inserted (Annex L). These exchanges times are important opportunities, strengthening cross-border cooperation through the implementation of the activities.

Figure 22. Photos of the partners workshop in Auxi (left) and in Lille (right)



2 Mers Seas Zeeën — INTERREG IV A

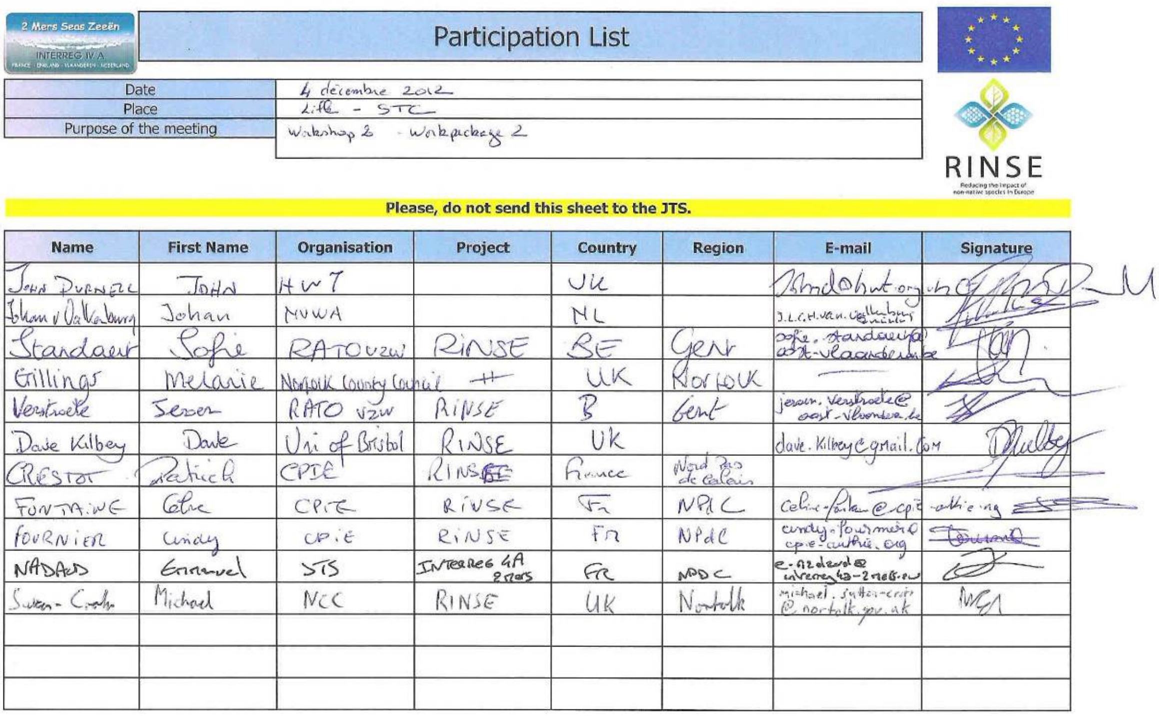
Participation List

Date	23/02/2012
Place	Auxi le château France
Purpose of the meeting	WP2 Workshop 1. 10h – 16h30

Please, do not send this sheet to the JTS.

Name	First Name	Organisation	Project	Country	Region	E-mail	Signature
Berlemont	Denis	CPIE Val d'Authie	RINSE	France	NPdC	dberlemont.cpie@gmail.com	[signature]
Gillings	Melanie	Norfolk County Council	RINSE	UK	Norfolk	melanie.gillings@norfolk.gov.uk	[signature]
Sutton-Croft	Mike	"	RINSE	UK	"	michael.sutton-croft@norfolk.gov.uk	[signature]
Britton	J Robert	Bournemouth Uni.	RINSE	UK	Bournemouth	rbritton@bournemouth.ac.uk	[signature]
Pegg	Josie	Bournemouth Uni	RINSE	UK	"	jpegg@bournemouth.ac.uk	[signature]
Durnell	John	Hampshire + Isle of Wight Wildlife Trust	RINSE	UK	Hampshire	johnd@hwt.org.uk	[signature]
Fontaine	Celine	CPIE Val d'Authie	RINSE	France	NPdC	celine.fontaine@cpie-authie.org	[signature]
Stoop	Inge	RATO vzw	RINSE	Belgium	Oost-Vlaanderen	inge.stoop@oost-vlaanderen.be	[signature]
Van Moer	Karel	RATO vzw	RINSE	Belgium	Oost-Vlaanderen	karel.vanmoer@oost-vlaanderen.be	[signature]
Depraetere	Dieter	Inagro vzw	RINSE	Belgium	West-Vlaanderen	dieter.depraetere@inagro.be	[signature]
De Bus	Kim	Inagro	RINSE	Belgium	Western Fl.	kim.debus@inagro.be	[signature]

Figure 23. Sign sheet of the Activity 2 Workshop 1 in Auxi le Château, 23/02/2012



2 Mers Seas Zeeën — INTERREG IV A

Participation List

Date	4 décembre 2012
Place	Lille – STC
Purpose of the meeting	Workshop 2 – Workpackage 2

RINSE — Reducing the impact of non-native species in Europe

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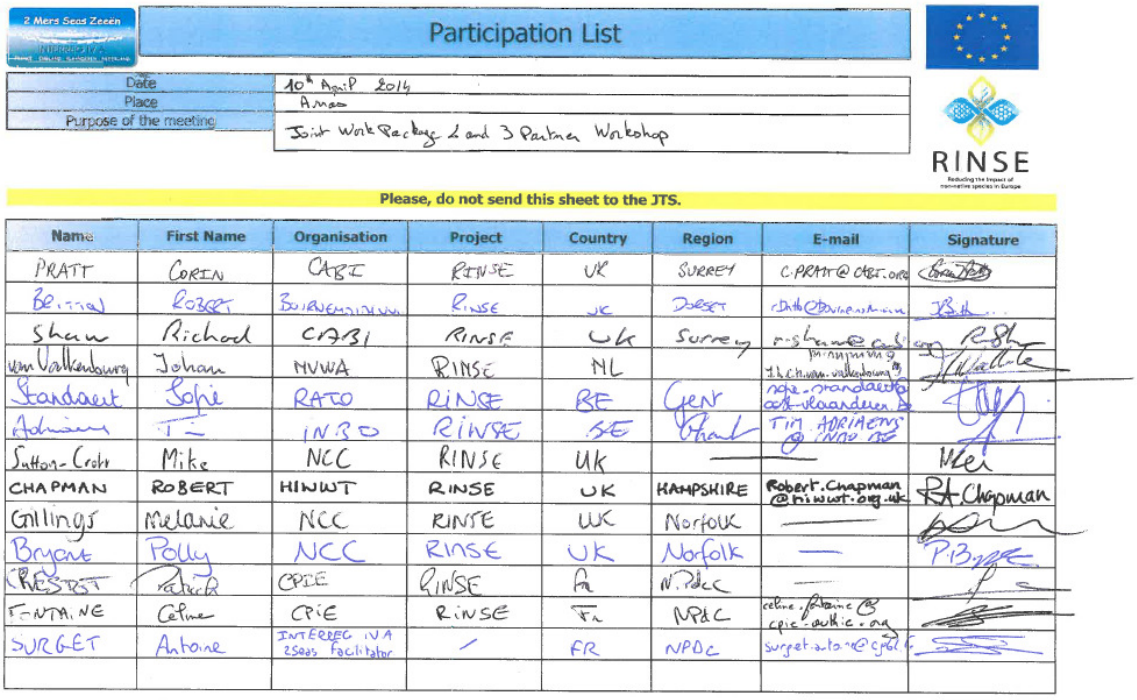
Name	First Name	Organisation	Project	Country	Region	E-mail	Signature
John Durnell	John	HWT		UK		johnd@hwt.org.uk	[signature]
Johan v Valkenburg	Johan	NVWA		NL		j.l.c.h.van.valkenburg@minlnv.nl	[signature]
Standaert	Sofie	RATO vzw	RINSE	BE	Gent	sofie.standaert@oost-vlaanderen.be	[signature]
Gillings	Melanie	Norfolk County Council	"	UK	Norfolk	—	[signature]
Verstraete	Jeroen	RATO vzw	RINSE	B	Gent	jeroen.verstraete@oost-vlaanderen.be	[signature]
Dave Kilbey	Dave	Uni of Bristol	RINSE	UK		dave.kilbey@gmail.com	[signature]
Crestot	Patrick	CPIE	RINSE	France	Nord Pas de Calais		[signature]
Fontaine	Celine	CPIE	RINSE	Fr	NPdC	celine.fontaine@cpie-authie.org	[signature]
Fournier	Cindy	CPIE	RINSE	Fr	NPdC	cindy.fournier@cpie-authie.org	[signature]
Nadaud	Emmanuel	STS	INTERREG 4A 2 Mers	FR	NPDC	e.nadaud@interreg4a-2mers.eu	[signature]
Sutton-Croft	Michael	NCC	RINSE	UK	Norfolk	michael.sutton-croft@norfolk.gov.uk	[signature]

Figure 24. Sign sheet of the Activity 2 Workshop 2 in Lille, 04/12/2012



Participation List

Date	10th April 2014
Place	Arras
Purpose of the meeting	Joint Work Package 2 and 3 Partner Workshop

RINSE

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Name	First Name	Organisation	Project	Country	Region	E-mail	Signature
PRATT	CORIN	CABI	RINSE	UK	SURREY	C.PRATT@CABI.ORG	
[illegible]	ROBERT	[illegible]	RINSE	[illegible]	[illegible]	[illegible]	
Shaw	Richard	CABI	RINSE	UK	Surrey	[illegible]	
van Valkenburg	Johan	NVWA	RINSE	NL		[illegible]	
Standaert	Sofie	RATO	RINSE	BE	Gent	[illegible]	
[illegible]	[illegible]	INBO	RINSE	SE	[illegible]	[illegible]	
Sutton-Croft	Mike	NCC	RINSE	UK			
CHAPMAN	ROBERT	HINWT	RINSE	UK	HAMPSHIRE	Robert.Chapman@hiwwt.org.uk	
Gillings	Melanie	NCC	RINSE	UK	Norfolk		
Bryant	Polly	NCC	RINSE	UK	Norfolk		
PRESTOT	Patrick	CPIE	RINSE	Fr	N.Pdc		
FONTAINE	Céline	CPIE	RINSE	Fr	NPdC	[illegible]	
SURGET	Antoine	INTERREG IVA 2Seas facilitator	/	FR	NPDC	[illegible]	

Figure 25. Sign sheet of the Activity 2 Workshop 3 in Arras, 10/04/2014

2.7 Best practise workshop

2.7.1 Overview

This best practice workshop for the Activity 2 was on Wednesday 19th March 2014 (Table 10).

Table 10. Volunteering and citizen science best practice workshop held in RINSE Activity 2

Meeting	Date	Location	RINSE Partner host	Number of participants
Volunteering and citizen science	19/03/2014	Brockenhurst, UK	4	55

The information about this best practice workshop is reported in the following pages.

Figure 25. RINSE partners at the best practice workshop

2.7.2 Volunteering and citizen science best practice workshop

Host a one-day workshop in the New Forest, to look at ways of encouraging community engagement, volunteering and citizen science relating to INS

Target species

Strong focus on Himalayan balsam *Impatiens glandulifera.*

Time frame

Preparation for this event started during 2013 and continued into 2014. The event was held on 19 March 2014.

The original aim or objective

To consider ways of encouraging community engagement, volunteering and citizen science in the control of invasive non-native species

Target audience

- statutory organisations involved in the control of invasive non-native species
- voluntary organisations involved in the control of invasive non-native species
- land owners
- land managers
- Naturalists
- volunteers

Method or approach adopted and why

The event comprised presentations by eight speakers, with plenty of time for questions and answer sessions following each presentation. The hour-long lunch break provided a useful opportunity for delegates to talk to each other and 'network'. The event was comprised of a series of presentations (followed by questions and answers), rather than sessions involving 'work-shop' type discussions, due to a) the lack of additional rooms at the chosen venue for delegates to be broken up into small discussion groups and b) the desire to give all delegates the opportunity to hear from a wide range of speakers.

Problems / challenges encountered

The event was over-subscribed. Due to the size of the room a limit of 60 delegates was set, to ensure that people could move around the room comfortably. Although it would have been good to have accommodated all the people on the waiting list, it is difficult to predict how popular an

event such as this is likely to be when one is planning the event and booking the venue.

Deviations including why and how any problems were overcome

There were no deviations.

Results / achievements

The event attracted a large number of delegates. 60 people secured places although a few were unwell and unable to attend on the day. Delegates included local landowners, volunteers, students, academics and naturalists, plus people representing a wide range of organisations including conservation charities, local government, statutory organisations and an ecological consultancy. The eight speakers' presentations were well received and each presentation generated plenty of questions and discussion. 39 feed-back forms were completed and submitted at the end of the event and a number of delegates sent e-mails to express their views about the event. The feed-back was very positive.

Number of volunteers, if any

3 volunteers helped by putting out the chairs and clearing away afterwards, welcoming delegates, handing out delegate packs, handing out name badges to delegates and ensuring that delegates had signed-in.

Number of jobs created or sustained through delivery of this action

No jobs were created or sustained through delivery of this action.

Economic or social benefits

The event demonstrated that volunteers play a vital role in the control of particular invasive non-native species, such as Himalayan balsam, thereby contributing a significant amount of effort at relatively small cost, thereby resulting in an economic benefit. The presentations which focussed on the motivation of volunteers clearly showed that volunteers appreciate the social and health-related benefits which can be gained from, for example, being outside with a group of like-minded people pulling up Himalayan balsam.

Cross-border benefits

The event was attended by representatives of RINSE organisations in France and Flanders, so the information obtained from the event can be disseminated beyond the UK.

Any lessons learnt

Some of the delegates found it tiring and difficult to concentrate whilst listening to 8 presentations in a single day. Perhaps 7 presentations are sufficient for such an event. If the venue is appropriate, workshop-style discussion groups would provide variety to such an event and help delegates retain their concentration.

Conclusions and recommendations

Volunteers play a vital role in the control of invasive non-native species through:-

- surveying the distribution and quantity of invasive non-native species
- monitoring the effectiveness of work undertaken to control invasive non-native species
- undertaking practical work to control relevant species such as Himalayan balsam

2.8 Conclusion

After the implementation of the Activity 2 within the project 'Reducing the Impact of Non-native Species in Europe', we can highlight a few figures to give an overall view of the actions implemented and the results achieved:

- 3 citizen science campaigns
- 1 smartphone app developed in three languages and usable in four countries in the area of the 2 Seas, and already download over 400 times
- Dozens of awareness materials developed and disseminated
- 15 additional factsheets added to the Q-bank and its translation into French
- At least, 33 training events carried out
- 3 workshops for partners implemented
- 1 best practice workshop to exchange on volunteering and citizen science with around sixty registered

But beyond this statistical report, already demonstrating the success of RINSE by exceeding its original goals, it is the cross-border cooperation throughout the entire project which has added the most value.

Cross-border discussions on knowledge of species (biology, recognition), on technical skills (management), but also on methodological exchanges (work methods, learning tools) for training, have added value to all actions in Activity 2. Finally, this cooperation resulted in the exchange of contacts and resources needed especially in the organization of workshops.

Although it is not always easy to work together when we are many, a fortiori, with cultural functioning and different languages, it has been overcome by the desire to work together to make a difference in terms of consideration of INS by local stakeholders.

At the end of this project, and at the sight of actions accomplished and the good results obtained for Activity 2, it seems that we have met or exceeded our goals thanks to this mutual enrichment which opened new horizons to pursue this constant awareness needed about INS.

Annex A

Urban Invaders

Invasive Species Survey

Invasive non-native species (**INS**) are plants and animals which have been moved outside of their native range and are causing ecological and/or economic damage.

INS are a global threat, costing the UK alone almost £2 billion each year.

Norfolk needs YOU to help by telling us when and where you see them!

Urban areas are a hotspot for invasive non-native plants. Introduced as ornamental features, many non-native plants have escaped gardens and established in the wild. Here they out-compete our native flora, choke waterways and cost our economy.

Our new survey - **Urban Invaders** - aims to help improve the quality of our data on some of the most damaging invasive plants found in Norfolk including Japanese knotweed, Himalayan balsam and giant hogweed.

Pick up a leaflet from your library and start hunting down these invasive aliens now!

Image Credits: Himalayan balsam (GBNNSS), Japanese knotweed (Mike Sutton-Croft), floating pennywort (Broads Authority) and New Zealand pigmyweed (GBNNSS).

"Investing in your future"

RINSE

Norfolk Non-native Species Initiative


RINSE
Invasive non-native species are one of the most important causes of biodiversity loss worldwide.
Urban Invaders is run by the RINSE Project and aims to reduce the impact of some of the worst non-native species in Norfolk.
RINSE
Room 301, Norfolk County Council
County Hall, Norwich.
twitter.com/RINSE_Europe
facebook.com/RINSE.Europe
"Investing in your future"
(European Regional Development Fund)
Urban Invaders
Invasive Alien Species
Survey

Urban Invaders Invasive Alien Species

Have you seen these aliens in Norfolk?

Himalayan balsam
(Impatiens glandulifera)

Description: An annual herb with bright pink-purple, trumpet-shaped flowers, fleshy stem and explosive seed heads.

Where to look: Prefers to grow in damp areas, and is particularly abundant on river banks where it out-competes native vegetation

Why is it a problem? Die back in winter leaves river banks bare and susceptible to erosion.

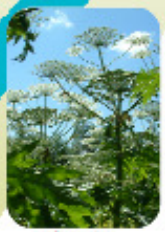
Floating pennywort
(Hydrocotyle ranunculoides)

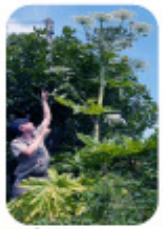
Description: This aquatic plant has characteristic, kidney-shaped leaves which can be free-floating or emergent. It has fleshy stems and fine, white roots.

Where to look: Emergent or floating on the surface of still or slowly moving freshwater.

Why is it a problem? With a peak growth rate of 20cm per day, floating pennywort can rapidly dominate a water body!

Giant hogweed
(Heracleum mantegazzianum)





Description: Large plant with umbrella-shaped flowers and sharply divided leaves, growing up to 5m tall. The stems are usually covered with sharp bristles, and have distinctive purple patches. Each flower can release up to 50,000 seeds!

Where to look: Found in a variety of habitats, but common on riverbanks and roadside verges.

Why is it a problem? The poisonous sap of this plant can blister skin.

New Zealand pigmyweed
(Crassula helmsii)

Description: Aquatic perennial with small yellow-green, succulent leaves and solitary white flowers.

Where to look: Still or slow flowing freshwater. The plant also has a terrestrial phenotype that can be found around ponds and lake margins.

Why is it a problem? Forms very dense mats that can choke waterways, impede drainage and cause flooding.

Japanese knotweed
(Fallopia japonica)

Description: Tall herbaceous perennial with bamboo like stems covered with purple speckles. The shield-shaped leaves are 10-15cm long with a flat base. White flowers in late summer.

Where to look: Widespread throughout the UK. Often found in or adjacent to, brown-field sites and along river banks.

Why is it a problem? The root system and strong growth of this plant can damage foundations. Dense colonies crowd out other herbaceous species.

Tree of heaven
(Ailanthus altissima)

Description: A tree with large pinnate leaves each consisting of around 11-25 pairs of leaflets reaching 7-12cm in length. Flowers are a yellowish green to red in colour. When broken, twigs have a distinctive unpleasant odour.

Where to look: Urban areas such as railway banks, waste ground and parks.

Why is it a problem? Extensive growth can damage sewers, pavements and building foundations. Sap is mildly toxic and can cause inflammation of the skin.

Find out more: www.rinse-europe.eu

Annex B

RINSE

Reducing the impact of
non-native species in Europe

The control and eradication of invasive non-native species

A comprehensive guide on the control and eradication of three invasive non-native plants commonly found on farmland

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Japanese knotweed

Giant hogweed

Himalayan balsam

Japanese knotweed

Fallopia japonica

Species Profile:

Origin: Asia

UK Distribution: Widespread

Habitat: Damp environments, along watercourses

Pathway: Introduced as ornamental plant in 19th century

Reproduction: Solely vegetative, sprouting from fragments of rhizome and stem

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

Environmental Protection Act 1990

Classified Waste

Japanese knotweed and the environment

Japanese knotweed can **rapidly displace native vegetation**, forming **large dense thickets** which are **problematic** and **costly to eradicate**.

Eradication of this species is **required by law** when **developing a site** due to the **destructive nature** of its thick extensive **rhizome** system.

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However, if this species spreads from your land to the wild or a neighbour's property you could be liable.

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Japanese knotweed

Fallopia japonica

Shield-shaped leaves with a flat base

Zig-zag stem

Photo Credit: Snowdonia National Park Authority

Large thick roots

Photo Credit: ivm

Photo Credit: GBNNSS

Purple-speckled bamboo-like stems

Japanese knotweed

Fallopia japonica

You have no obligation to report the presence of Japanese knotweed on your land.

HOWEVER, we recommend that you report the presence of Japanese knotweed to allow us to effectively monitor its distribution and plan larger scale eradication programmes.

It is crucial that we have good data on the distribution of invasive species to understand the extent of the problem across Europe and plan our responses to these threats.

Records of invasive species on farmland are under-represented, yet the farmed landscape is an integral part of the European environment.

You can be our eyes and ears in the vast farming landscape improving our records and helping us to better tackle the threats from invasive species such as Japanese knotweed.

REPORT IT!

CONTROL AND ERADICATION

Japanese knotweed can be problematic and complex to eradicate. If you need to remove the species urgently it is recommended you seek expert help

Licensed professionals can eradicate Japanese knotweed quickly and efficiently. A common professional method in the control of Japanese knotweed is stem injection.

Photo Credit: NNNSI

A small concentrated dose of herbicide is injected into each stem of the infestation. The plant then transports this herbicide around to its root, killing the rhizome and plant.

If there are no time restrictions, Japanese knotweed can be eradicated slowly but at a low cost over several years.

Here is a guide to the recommended methods for its eradication

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CHEMICAL

Japanese knotweed is sensitive to a range of herbicides, including Roundup.

Follow instructions relevant to the herbicide you choose.

Repeat sprayings should be made when new growth starts to appear throughout the year. This will require **regular monitoring**

Continue this process for **three years**

Combining herbicide treatment with **regular cutting** is the **most effective** method **against Japanese knotweed.**

Herbicide	Selectivity	When to apply	Use near water	Persistency
Glyphosate	Non-selective – damages grasses	May to October – late season	APPROVED – refer to guidelines	Non-persistent
2, 4-D Amine	Selective	May to October – early season	APPROVED – refer to guidelines	1 month
Triclopyr	Selective	May to October – early season	NO	6 weeks
Picloram	Selective	All year	NO	2 years

NOTE: IF YOU ARE TREATING JAPANESE KNOTWEED NEAR WATER YOU WILL NEED TO INFORM THE EA OF HERBICIDE USE.

SEE HERE

The rhizomes of this plant can remain viable for up to 20 years underground and therefore the area of soil will likely remain contaminated with Japanese knotweed.

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PHYSICAL

NOTE: DUE TO ITS VEGETATIVE REPRODUCTION STRATEGY, A CUTTING METHOD WHICH PRODUCES MINIMUM FRAGMENTATION IS RECOMMENDED.

TAKE CARE TO ENSURE EQUIPMENT IS CLEANED THOROUGHLY BEFORE USING AT ANOTHER SITE

Cutting the plant will **reduce root growth** and **increase leaf production**. **Digging** the infested soil will bring the **root** system to the **surface** and stimulate the plant to grow a **high density** of **canes**. Both of these leave the plant more **vulnerable** to **herbicide** treatment.

The plant should be **cut cleanly** at the **base of the stem**.

The **cut canes** should be **left to dry** out **on-site** on a **hard surface.**

Once the **stems** turn **deep brown** they are **dead**.

Cultivate the exposed infested ground to **50 cm deep**, **turn** the piled material and then **re-spread** over **exposed area**.

This **cutting** and **digging** combination should take place **four times a year:**

1st cut and dig – when the **first shoots appear**

2nd & 3rd cut and dig – equally spaced out between 1st and 4th

4th cut and dig – before the **plant dies back** in the **autumn**

This method will be **required annually** for **three years**.

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DISPOSAL

CONTAMINATED SOIL

The area of **soil around the infestation** will be **contaminated** with Japanese knotweed **rhizomes.**

To avoid spreading Japanese knotweed you **SHOULD NOT move** this **soil** or use it **anywhere else** on your land.

PLANT WASTE

Plant waste material should be left to **thoroughly dry out** on a **solid surface.**

You can **burn** the **plant waste under controlled conditions. Business burnings** will need to **inform EA.**

WHERE POSSIBLE YOU SHOULD AVOID MOVING JAPANESE KNOTWEED WASTE FROM THE INFESTED SITE.

Burnt plant waste and **contaminated soil** can be **buried on-site.**

The material needs to be buried **5 metres down** and **covered with a root membrane.**

This hole should then be **filled** in with **topsoil** or an **inert filler.**

However, if necessary contact your local authority to find the **nearest waste place which will accept Japanese knotweed** waste. **Bag it** and transport it there carefully.

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INVASION PREVENTION

Once you have successfully eradicated the invasive plant from your land, the area will be exposed and vulnerable to soil erosion and further invasion.

To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Establishing a strong grassland community will **protect** your **land.**

Grass mixtures should be sown at **high densities.**

Mixtures should be **competitive**, create **dense swards** and have good **growth following cutting.**

Some recommended mixtures include:

Dactylis glomerata, Festuca rubra (50:50)

Lolium perenne, Festuca rubra, Poa pratensis (12:35:53)

Photo Credit: othree

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Once you have successfully eradicated the invasive plant from your land, the area will be exposed and vulnerable to soil erosion and further invasion.

To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Alternatively, you could bring the land into **crop rotation.**

Photo Credit: Kate Jewell

Photo Credit: Richard Webb

If the infested area was a **natural area**, building a **strong plant community** is recommended.

Some invasive plants, such as giant hogweed, are intolerant of shade. **Establishing wooded areas** would prevent invasion from such species.

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Himalayan balsam

Impatiens glandulifera

Species Profile:

Origin: West and central Himalayas

UK Distribution: Widespread

Habitat: Damp environments, along slow-moving watercourses

Pathway: Ornamental plant

Reproduction: Spreads by seed, producing numerous explosive seed pods which collectively can hold over 800 seeds.

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

Himalayan balsam and the environment

As with most invasive plants, Himalayan balsam can quickly dominate large areas, excluding the native vegetation. It is a particular problem along watercourses.

Himalayan balsam has become popular wit bee keepers as the purple/pink flowers and nectar are highly desirable to bees. Unfortunately, this bias in pollination will reduce the diversity of the surrounding flora reducing the habitat quality for other seed-eating species.

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However if this species spreads from your land to the wild or a neighbour's property you could be liable.

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Himalayan balsam

Impatiens glandulifera

Bright purple-pink flowers

Trumpet-shaped

Photo Credit: GBNNSS

Hollow brittle stem

Photo Credit: RPS group Plc

Lush green colour

Leaves up to 15cm long

Finely serrated edges

Photo Credit: GBNNSS

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Himalayan balsam

Impatiens glandulifera

You have no obligation to report the presence of Himalayan balsam on your land.

HOWEVER, we recommend that you report the presence of Himalayan balsam to allow us to effectively monitor its distribution and plan larger scale eradication programmes

It is crucial that we have a good understanding of the distribution of invasive species to understand the extent of the problem in Europe and plan our responses to these threats.

Records of invasive species on farmland are under-represented yet the farming landscape is an integral part of the European environment.

You can be our eyes and ears in the vast farming landscape improving our records and helping us to better tackle the threats from invasive species such as Himalayan balsam.

REPORT IT

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CONTROL AND ERADICATION

Controlling and removing Himalayan balsam can be cheap and easy, however the timing of treatment is crucial – you MUST treat the plants before they set seed.

HAND PULLING

MECHANICAL

HERBICIDE

GRAZING

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HAND-PULLING

If your **infestation** is relatively **small**, **hand-pulling** is a **cheap and effective method** for **eradicating** Himalayan balsam.

With such a **shallow root system**, Himalayan balsam can be **entirely pulled out** of the **soil**

Pull the plant **firmly** but **slowly** from the **base of the stem**, trying to **keep** the **root system intact**

You should aim to pull Himalayan balsam before it seeds, in June or July

Pulled plants should be **left** to **decompose** in an **open area** or **compost bin**.

Plant material should not be moved from site in case there is contamination by seeds

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MECHANICAL

Mechanical methods are **less labour-intensive** and are useful for tackling **larger infestations**.

Mechanical control should be carried out **before** the **flowering season**.

TIMING IS CRUCIAL

Too early and **re-growth** will occur producing a **higher number** of **seeds**.

Too late and **seed dispersal** will have taken place, **spreading** the **plant** further.

Plants should be **severed below** the **lowest node** or **joint** to reduce re-growth.

Cut stems can be **left** to **decompose on-site** on a **dry** and **open area**.

Cutting will be **required** for up to **three years**, until no there is **no further re-growth**

Even after Himalayan balsam appears to have been eradicated successfully, it is important to monitor the site for re-growth.

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HERBICIDE

Herbicide should be applied in the **spring BEFORE FLOWERING**.

BUT you must ensure **germinating seedlings** have made **sufficient growth** to be **affected** by the spray.

Herbicide should be **applied** to **all** the **foliage**.

Using a **selective herbicide** such as 2, 4-D Amine will **reduce** the **impact** on **surrounding vegetation**.

Herbicide treatment will be **required** for up to **three years**.

Even after Himalayan balsam appears to have been eradicated successfully, it is **important** to **monitor** the **site** for **re-growth**.

See advice for preventing future invasion.

Herbicide	Selectivity	When to apply	Use near water	Persistency
Glyphosate	Non-selective – damages grasses	May to October – late season	APPROVED – refer to guidelines	Non-persistent
2, 4-D Amine	Selective	May to October – early season	APPROVED – refer to guidelines	1 month
Triclopyr	Selective	May to October – early season	NO	6 weeks
Picloram	Selective	All year	NO	2 years

NOTE: IF YOU ARE TREATING JAPANESE KNOTWEED NEAR WATER YOU WILL NEED TO INFORM THE EA OF HERBICIDE USE.

SEE HERE

Herbicide concentration for **Glyphosate** is recommended at **5 litres per hectare**.

Studies have found **lower concentrations** of **2 litres equally effective**.

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GRAZING

Grazing has similar effects to hand-pulling or cutting methods.

A stocking density of **20-30 sheep per hectare** is recommended. This should be reduced to **5-10 sheep per hectare** at the end of **June**

Sheep or cattle are known to **graze on Himalayan balsam.**

Grazing should be started from **April** and **continue** throughout the **growing season.**

NOTE: IF HIMALAYAN BALSAM IS GROWING ON A WATERCOURSE, GRAZING DENSITY WILL NEED TO BE CONTROLLED TO REDUCE DAMAGE TO THE BANK.

In areas of **dense infestations**, it is **recommended** you carrying out **one cut before** starting **grazing** and **plant alternative food sources** to give your livestock a **varied diet**,

As with the other methods of control, **grazing** will need to be **repeated annually** until **no re-growth appears**.

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INVASION PREVENTION

Once you have successfully eradicated the invasive plant from your land, the area will be exposed and vulnerable to soil erosion and further invasion.

To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Establishing a strong grassland community will **protect** your **land.**

Grass mixtures should be sown at **high densities.**

Mixtures should be **competitive**, create **dense swards** and have good **growth following cutting.**

Some recommended mixtures include:

Dactylis glomerata, Festuca rubra (50:50)

Lolium perenne, Festuca rubra, Poa pratensis (12:35:53)

Photo Credit: othree

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To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Alternatively, you could bring the land into **crop rotation.**

Photo Credit: Kate Jewell

Photo Credit: Richard Webb

If the infested area was a **natural area**, building a **strong plant community** is recommended.

Some invasive plants, such as giant hogweed, are intolerant of shade. **Establishing wooded areas** would prevent invasion from such species.

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Giant hogweed

Heracleum mantegazzianum

Species Profile:

Origin: Russia

UK Distribution: Widespread

Habitat: Any environment but common on river banks

Pathway: Ornamental plant

Reproduction: Reproduces by seed

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

Environmental Protection Act 1990

Classified Waste

Giant hogweed and the environment

Reaching heights of 5 metres tall, giant hogweed displaces and shades-out native vegetation leaving the undergrowth empty and bare. On a river bank, this bare undergrowth can increase bank erosion and flooding risk.

This plant produces a toxic sap which can cause severe blistering of the skin after sun exposure.

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However if this species spreads from your land to the wild or a neighbour's property you could be liable.

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Giant hogweed

Heracleum mantegazzianum

Leaves up to 3 metres across

White umbrella-shaped flower heads up to 80 cm across.

Photo Credit: RPS group Plc

Up to 5 metres tall

Leaves highly serrated and divided

Photo Credit: RPS group Plc

Stem is green, with sharp bristles

Purple-speckled stem

Photo Credit: GBNNSS

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Giant hogweed

Heracleum mantegazzianum

You have no obligation to report the presence of giant hogweed on your land.

HOWEVER, we recommend that you report the presence of giant hogweed to allow us to effectively monitor its distribution and plan larger scale strategic eradication programmes

It is crucial that we have a good understanding of the distribution of invasive species to understand the extent of the problem in Europe and plan our responses to these threats.

Records of invasive species on farmland are under-represented yet the farming landscape is an integral part of the European environment.

You can be our eyes and ears in the vast farming landscape improving our records and helping us to better tackle the threats from invasive species such as giant hogweed.

REPORT IT

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MECHANICAL

When working with giant hogweed you should wear full protective clothing to prevent skin contamination by the sap.

There are three options for the mechanical control of giant hogweed. These are most effective in combination

OPTION ONE: ROOT CUTTING

Ideal for small infestations

Cutting should occur in the **early spring** and **repeated** in **mid-summer**.

Plant should be cut **10 cm below soil level** severing from the taproot.

Areas on **steep inclines**, taproot should be cut **25 cm below ground**

Pulled sections should be **destroyed** or **left to dry out**

Cutting should be **repeated** whenever **re-growth** appears and therefore the site requires **regular monitoring**

Application of herbicide following mechanical removal will further reduce likelihood of re-growth

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MECHANICAL

When working with giant hogweed you should wear full protective clothing to prevent skin contamination by the sap.

There are three options for the mechanical control of giant hogweed. These can be used in combination or alone

OPTION TWO: MOWING

Ideal for large but short infestations

To prevent further spread, **remove all flower heads** and carefully **dispose** of them **prior to mowing**.

Start mowing when plants are **small** and **continue** throughout **growing season**.

This method will require at least **three cuts** throughout a **growing season** for **several years**

Clean equipment before use elsewhere to **avoid spreading** the **seeds** of giant hogweed **off-site**

DO NOT MOW IF THE PLANTS ARE LARGER THAN YOUR MOWER

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MECHANICAL

When working with giant hogweed you should wear full protective clothing to prevent skin contamination by the sap.

There are three options for the mechanical control of giant hogweed. These can be used in combination or alone

OPTION THREE: FLOWER REMOVAL | **To be used in combination with another method.**

Flower heads should be removed **after** the **seeds** have **formed** but **before maturation**.

Place **cut flower heads** in **sturdy bags** and **seal** tightly

If **sap** is found on the outside of the bag, **double bag** for your **protection**

Place in **secure location** where they are **exposed to direct sunlight**. After **two weeks**, flowers and seeds will have been **destroyed** by **sun exposure.**

DO NOT MOW IF THE PLANTS ARE LARGER THAN YOUR MOWER

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HERBICIDE

Herbicide should be applied in the **between late April** and **early June.**

Follow-up treatment in **July** or **August** is recommended

Removing flower heads will **reduce** next year's **re-growth**

Herbicide should be **applied** to **all** the **foliage**.

Using a **selective herbicide** such as triclopyr will **reduce** the **impact** on **surrounding vegetation** and **prevent giant hogweed germination** as it is **intolerant of shade.**

Herbicide treatment will be **required** for **multiple years**.

Regular monitoring for **re-growth** will be **necessary**

Herbicide	Selectivity	When to apply	Use near water	Persistency
Glyphosate	Non-selective – damages grasses	May to October – late season	APPROVED – refer to guidelines	Non-persistent
2, 4-D Amine	Selective	May to October – early season	APPROVED – refer to guidelines	1 month
Triclopyr	Selective	May to October – early season	NO	6 weeks
Picloram	Selective	All year	NO	2 years

NOTE: IF YOU ARE TREATING JAPANESE KNOTWEED NEAR WATER YOU WILL NEED TO INFORM THE EA OF HERBICIDE USE.

SEE HERE

If plants are **tall**, you should **cut** them **down** to the **taproot** or to **waist height** and **spray.**

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GRAZING

Ideal for large stands of hogweed HOWEVER plants must be young to be palatable to grazers

A stocking density of **20-30 sheep per hectare** is recommended. This should be reduced to **5-10 sheep per hectare** at the end of **June**

Sheep, cattle, pigs and goats are known to **graze on giant hogweed**.

Grazing should be **started early** in the growing season when plants are **young and small**.

The grazing area should cover infestation and **surrounding area** to **allow for seed dispersal**.

SAFETY WARNING: Livestock can be affected by the sap, showing symptoms including skin inflammation and blistering.

It is recommended you monitor your livestock for such symptoms.

Selecting livestock which are **hairy** and have **dark pigmentation** where skin is bare will **reduce** the **impact** of the **sap**.

To give your livestock a **varied diet**, it is recommended you carrying out one cut before starting grazing and **plant alternative food sources**.

NOTE: IF GIANT HOGWEED IS GROWING ON A WATERCOURSE, GRAZING DENSITY WILL NEED TO BE CONTROLLED TO REDUCE DAMAGE TO THE BANK.

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INVASION PREVENTION

Once you have successfully eradicated the invasive plant from your land, the area will be exposed and vulnerable to soil erosion and further invasion.

To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Establishing a **strong grassland community** will **protect** your **land.**

Grass mixtures should be sown at **high densities.**

Mixtures should be **competitive**, create **dense swards** and have good **growth following cutting.**

Some recommended mixtures include:

Dactylis glomerata, Festuca rubra (50:50)

Lolium perenne, Festuca rubra, Poa pratensis (12:35:53)

Photo Credit: othree

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INVASION PREVENTION

Once you have successfully eradicated the invasive plant from your land, the area will be exposed and vulnerable to soil erosion and further invasion.

To reduce the likelihood of further invasion it is **recommended** that you **bring the area into regular use.**

Alternatively, you could bring the land into **crop rotation.**

Photo Credit: Kate Jewell

Photo Credit: Richard Webb

If the infested area was a **natural area**, building a **strong plant community** is recommended.

Some invasive plants, such as giant hogweed, are intolerant of shade. **Establishing wooded areas** would prevent invasion from such species.

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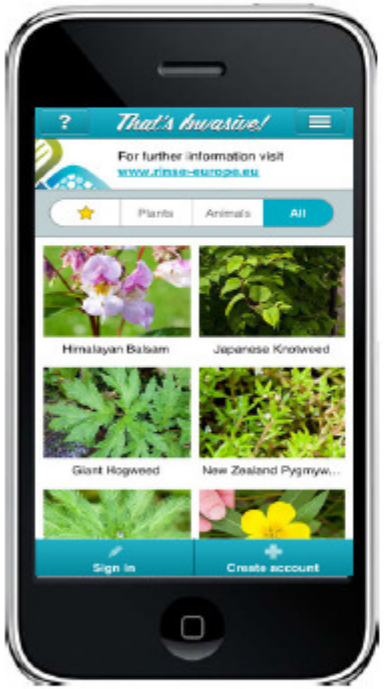
REPORTING

Reporting the presence of any invasive non-native species on your land is of high importance. Without a detailed picture of their distribution, appropriate control and eradication projects are flawed.

Smartphone App



RINSE have created a **free Smartphone app** for **recording invasive species**.

'That's Invasive'

This easy to use app helps you to **identify** and **record invasive species**.

A **library** of **species biology, ecology, identification** and **images** will be **available** at the click of a finger allowing you to **identify, photograph and record** over **35 invasive non-native species** commonly found within Europe.

Available on the App Store

ANDROID APP ON Google play

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Online Recording

iRecord

iRecord – an online environmental database for managing and sharing your wildlife records.

You can **submit your invasive species sightings online**. All you need is: the **species** you saw, **where** you saw it (preferably a grid reference), the **date** you saw it and **your name**.

SUBMIT YOUR RECORD NOW

http://www.brc.ac.uk/irecord/

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RINSE (Reducing the Impact of Non-native Species in Europe) is an exciting new European project seeking to improve the management of invasive non-native species (INS) across four partner countries in western Europe. RINSE will also increase awareness of the threats posed by INS, and the most effective methods to address them. The project has been part-funded by the European Union (European Regional Development Fund) delivered through the Interreg IVA 2 Seas Programme.

www.interreg4a-2mers.eu
www.europa.eu/regional_policy/index_eu.cfm

RINSE Norfolk County Council

Annex C

RINSE

Reducing the impact of
non-native species in Europe

Guidance on the control of invasive non-native animals

A comprehensive guide on the control of three invasive non-native animals commonly found on farmland

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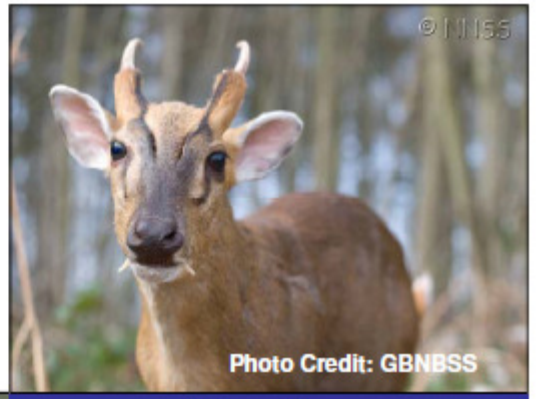
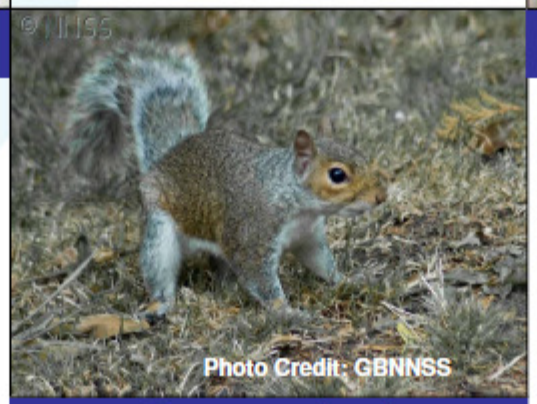
American Mink



Muntjac



Grey squirrel

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American mink

Mustela Vison

Species Profile:

Origin: North America

UK Distribution: Widespread except Northern Scotland

Habitat: Aquatic environments

Pathway: Fur trade

Reproduction: Breeding takes place between late February and early April producing an average of 5.8 young per litter.

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

American mink and the environment

American mink prey on a large variety of species ranging from fish, crayfish, ground-nesting birds and small mammals. With their voracious appetites, mink can quickly reduce the abundance of many native species both through direct predation and indirect effects of competition for food.

Famously, the American mink is responsible for the decline in the native European water vole, which has been lost from 94 % of its range in the UK alone.

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However if you wish to take action against this species there are options available.

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American mink

Mustela Vison

Photo Credit: Peter Trimming

Rich glossy brown coat

White chin

Small – up to 50 cm long

Slender body

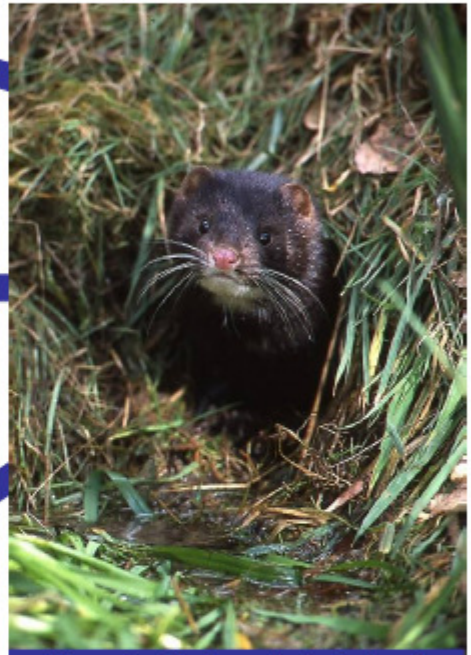

Photo Credit: Snowdonia National Park Authority

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American mink or European Otter?

American mink are often confused with our native European otter however there are some key differences which can be used to distinguish between the two.

Photo Credit: Keven Law

Photo Credit: Peter Trimming

OTTER

- White cheeks, chin and stomach
- Large stocky size, up to 1.2 metres
- Tail is long, sleek and muscly
- Snout is flattened and dog-like

MINK

- White chin only
- Smaller, slender body up to 0.5 metres
- Tail is rounded and furry
- Face is pointed and ferret-like

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American mink or European Otter?

Photo Credit: Sussex Otters & Rivers Project

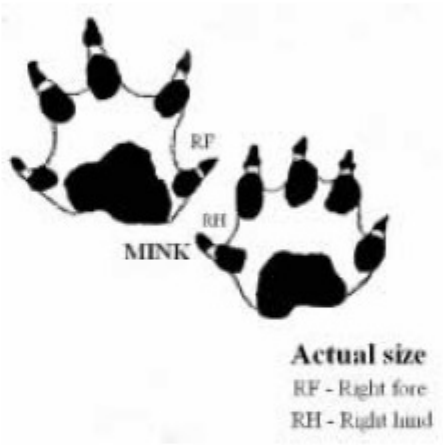

Photo Credit: Sussex Otters & Rivers Project

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CONTROL

You have no obligation to control American mink on your land and there is no lawful requirement to report its presence.

HOWEVER, we recommend that you report the presence of mink to allow us to effectively tackle their invasion on a European scale.

REPORT IT

If you wish to control mink on your land there are options available.

An example of an effective mink control programme can be found in the RINSE area - The Norfolk Mink Control Strategy.

This project was initiated by the Norfolk Biodiversity Partnership in **2003**. The project **aims** to **reduce** the **American mink** to **extremely low densities**, **effectively removed** from much of the **county**.

The project was started in an **effort to conserve** the **European water vole** in **Norfolk**, a **stronghold** for the **UK population**.

Useful Links: Game & Wildlife Conservation Trust Natural England

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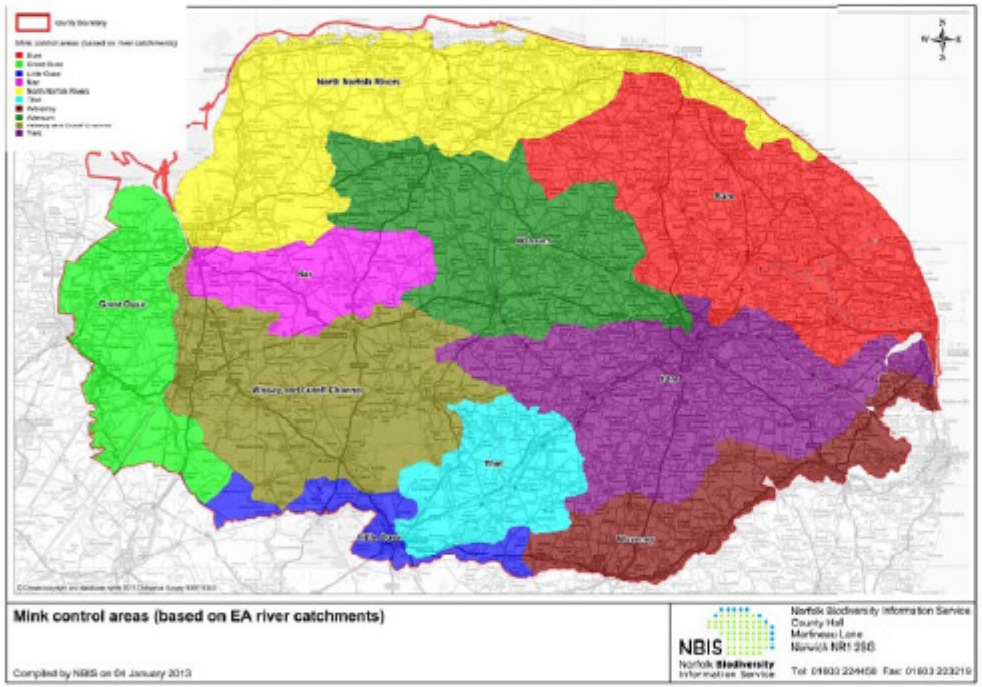
MINK CONTROL IN NORFOLK

The **Norfolk Mink Control Strategy** was started in 2003 in the **River Wensum**. During the last 10 years, **over 500 mink** have been caught from this area and the project has expanded its reach into the Bure, Yare and Waveney.



Thanks to additional European funding from RINSE, the project is now expanding further into North Norfolk and to the rivers Thet and Nar.

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MINK CONTROL IN NORFOLK

Farmers and **landowners volunteer** to **host a mink raft** on their land.

Photo Credit: GWCT

Monitoring: Mink rafts monitor for the presence of mink using a clay pad for footprints and other field signs

Photo Credit: GWCT

Trapping: If mink are found to be present the raft is converted into trapping mode and checked regularly for caught individuals which are dispatched of humanely

If you would like more information on this mink trapping network, or advice on how to start your own, contact the Norfolk RINSE team at nnnsi@norfolk.gov.uk

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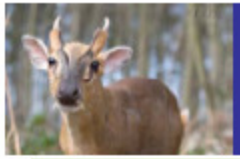
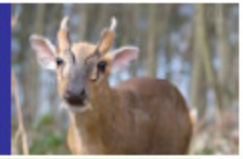


Muntjac

Muntiacus reevesi



Species Profile:

Origin: Asia

UK Distribution: Widespread

Habitat: Wooded habitats, occasionally park lands and urban areas

Pathway: Ornamental park species and zoo collections

Reproduction: Breeding takes place all year round. Females have a gestation period of 7 months after which they give birth to a single kid, within a few days they are ready to mate again.

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

Muntjac and the environment

As with many deer, muntjac can **severely over-grazed** wooded habitats where they occur in sufficiently high numbers. Grazing can reduce the availability of scrub and bracken areas which are relied upon for shelter and food by other woodland species. In some cases, muntjac are known to graze on **agricultural crops.** Deer are also **responsible** for a large number of **road accidents** every year.

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However if you wish to take action against this species there are options available.

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Muntjac

Muntiacus reevesi

Small and stocky

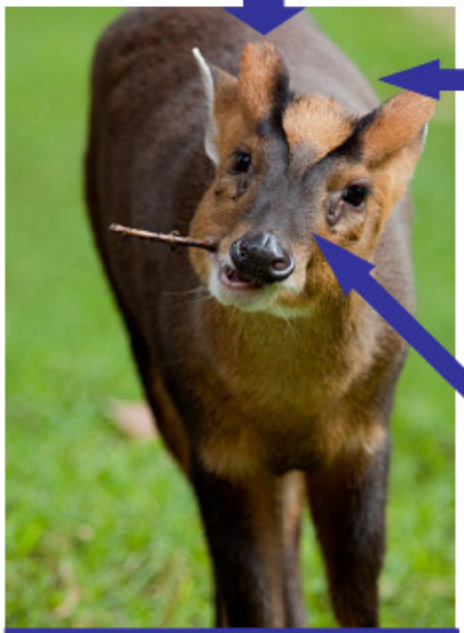

Photo Credit: AnimalFotos

Reddish coat

Short antlers present in males

Black stripes down the face to the muzzle

White underside of tail

Photo Credit: The Scottish Deer Centre

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CONTROL

You have no obligation to control the muntjac on your land and there is no lawful requirement to report its presence.

HOWEVER, we recommend that you report the presence of muntjac to allow us to monitor their populations

REPORT IT

Any **deer** species can cause **damage to woodland habitats** at **high population densities**.

By **reporting your sightings** of muntjac, we can **monitor** the **growth of populations** and **act** to **keep** these **populations** at a sufficiently **low** density to **reduce** their **impact.**

If **you wish to control muntjac on your land** there are **options available**

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SHOOTING AND CULLING

As the muntjac breed all year round there is **no closed season** for this deer species– this means they can be **shot all year round** in **hours** of **daylight** by an **authorised person**.

Alternatively, you can **contact** a **local deer management group** to find out more information on **coordinated culls** in your area.

AUTHORISED PERSON

- The **occupier of land** on **where shooting** is **taking place**
- Any **member** of **occupier household** with **written authority** of **occupier** of land where shooting is taking place
- **Any person** in **ordinary service** of the **occupier** with **written authority** from occupier where shooting is taking place

Co-ordinated culls are more **efficient** at maintaining **deer at low densities** than by individuals on an ad-hoc basis.

The Deer Initiative is a good place to start looking for more information:

Tel 0870 7743677

Email: admin@thedeerinitiative.co.uk
www.thedeerinitiative.co.uk

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Grey Squirrel

Sciurus carolinesis

Species Profile:

Origin: North America

UK Distribution: Widespread

Habitat: Woodland

Pathway: Ornamental species

Reproduction: Females usually have two litters a year, each with between 2 - 8 young. The first between December and February and the second between May and June

Legislation:

Wildlife and Countryside Act 1981

Schedule 9

Grey squirrel and the environment

Grey squirrel populations can have lasting **damage** on **wooded habitats stripping bark** from trees leaving them **vulnerable** to **diseases** and other pests. More famously, the grey squirrel has severely **reduced** populations of our **native red squirrel** through **competitive exclusion**.

Additionally, the grey squirrel is a **host** for the **poxvirus** which is **fatal** to the already threatened **red squirrel**

There is no obligation for you to eradicate this species from your land, or to report its presence to anyone. However if this species spreads from your land to the wild or a neighbour's property you could be liable.

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Grey Squirrel

Sciurus carolinesis

Distinct bushy tail

Grey coat

Slender body

Paler underside

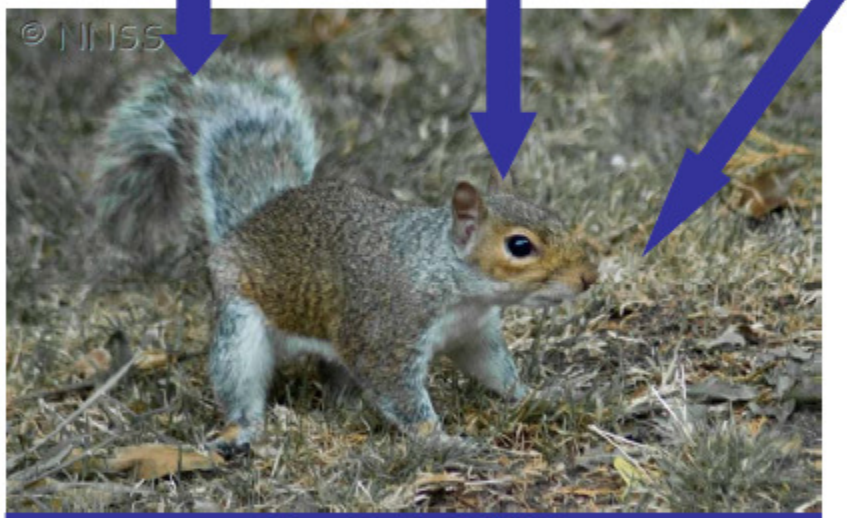

Photo Credit: GBNNSS

Photo Credit: Jonathan Kington

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CONTROL

You have no obligation to control the grey squirrel on your land and there is no lawful requirement to report its presence.

HOWEVER, we recommend that you report the presence of grey squirrel to allow us to effectively monitor their populations.

REPORT IT

If you wish, you have the **right to control** grey squirrel populations **on your land** and you **do not require** a **licence** to do so.

However **squirrels** are **protected** from **ill treatment** by the **Wild Mammal Protection Act 1996** and therefore must be **dispatched with humanely**.

It is **illegal** to use any **bow or crossbow**, any **explosive** other than ammunition for a firearm, or **live decoy** to **control** or **deter squirrels** from your land.

Natural England recommend cage trapping followed by humane dispatch.

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CAGE TRAPPING

Single catch and **live catch** cages can be used

Traps will be **most effective** placed **near closed spaces** such as **brickwork** and the **outside** of **buildings**.

Whole yellow maize, peanuts, wheat or a **mixture** of these are recommended as **bait**.

You should **avoid stocking** any **bird tables** during the caging period

Traps should be inspected once a day for caught squirrels.

Caught squirrels should be dispatched of humanely.

Squirrels can be **run into a sack** and **killed** with a **sharp blow to the head**, or **shot** with a **suitable weapon**.

Shooting should only be carried out by an **experienced** and **competent person**, carefully **avoiding ricochet**

Caught squirrels **should not be drowned** – this is **inhumane**.

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SPRING TRAPPING

A spring trap approved for use on squirrels **should be used:**

- Fenn Mk4 and 6
- Springer Mk4 and 6
- Magnum
- Kania 2000

Traps should be **set in an artificial or natural tunnel** with the **entrance restricted** to **reduce risk** to **non-target species**

Whole yellow maize, peanuts, wheat or a **mixture** of these are recommended as **bait.**

You should **avoid stocking** any **bird tables** during the caging period

Not recommended for use in domestic places.

Carcasses should be **removed** and **disposed of discretely**

This can be done by **burning, burying** or **refuse collection** if **wrapped securely**

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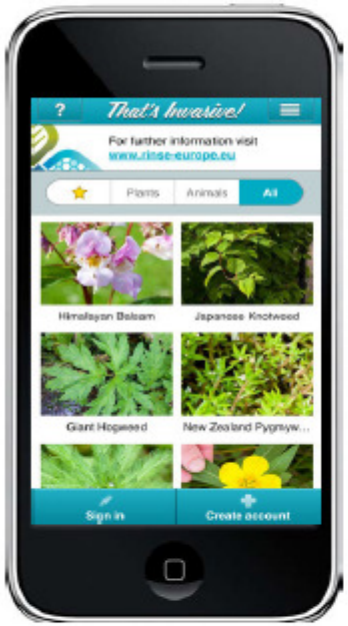
Reporting the presence of any invasive non-native species on your land is of high importance. Without a detailed picture of their distribution, appropriate control and eradication projects are flawed.

Smartphone App



RINSE have created a **free Smartphone app** for **recording invasive species.**

'That's Invasive'

This easy to use app helps you to **identify** and **record invasive species.**

A **library** of **species biology, ecology, identification** and **images** will be **available** at the click of a finger allowing you to **identify, photograph and record** over **35 invasive non-native species** commonly found within Europe.

Available on the App Store

ANDROID APP ON Google play

2 Mers Seas Zeeën
INTERREG IV A

Reducing the Impact of Non-native Species in Europe
www.rinse-europe.eu

"Investing in your future"
Crossborder cooperation programme 2007-2013 Part-financed by the European Union (European Regional Development Fund)

REPORTING

Reporting the presence of any invasive non-native species on your land is of high importance. Without a detailed picture of their distribution, appropriate control and eradication projects are flawed.

Online Recording

iRecord

iRecord – an **online environmental database** for **managing** and **sharing** your **wildlife records.**

You can **submit your invasive species sightings online.** All you need is: the **species** you saw, **where** you saw it (preferably a grid reference), the **date** you saw it and **your name**.

SUBMIT YOUR RECORD NOW

2 Mers Seas Zeeën
INTERREG IV A

Reducing the Impact of
Non-native Species in Europe
www.rinse-europe.eu

"Investing in your future"
Crossborder cooperation programme 2007-2013 Part-financed by the European Union (European Regional Development Fund)

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▪DEFRA (2009). Guidance on section 13 of the Wildlife and Countryside Act, 1981. http://www.defra.gov.uk/wildlife-pets/wildlife/management/non-native/legal.htm

▪Fasham, M & Trumper, K (2001). Revuew of non-native species legislation and guidance. DEFRA

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▪*https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?pageid=147*

▪http://www.norfolkbiodiversity.org/nonnativespecies/publications.aspx

▪ http://www.naturalengland.org.uk/ourwork/regulation/wildlife/species/deer.aspx

▪http://www.thedeerinitiative.co.uk/best_practice/legislation_health_and_safety_and_welfare.php

▪ http://www.thedeerinitiative.co.uk/best_practice/firearms.php

RINSE (Reducing the Impact of Non-native Species in Europe) is an exciting new European project seeking to improve the management of invasive non-native species (INS) across four partner countries in western Europe. RINSE will also increase awareness of the threats posed by INS, and the most effective methods to address them. The project has been part-funded by the European Union (European Regional Development Fund) delivered through the Interreg IVA 2 Seas Programme.

www.interreg4a-2mers.eu
www.europa.eu/regional_policy/index_eu.cfm

RINSE Norfolk County Council

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Annex D

ALIEN INVADERS OF THE BROADS!

FAMILY ACTIVITY BOOKLET

RINSE

Brought to you by:

RINSE – Reducing the Impact of Non-native Species in Europe
www.rinse-europe.eu

We need your help to track down invasive non-native species! With our free 'That's Invasive!' app you can identify and report 35 different invasive species using information on their biology, ecology and impact on the environment – all at the touch of a button!

RINSE

Welcome to this Family Activity Booklet!

By completing these activities, you will discover and learn about the environment in the Broads, while exploring the importance of protecting this wetland from invasive non-native species…… AKA alien invaders!

How does it work?

1. Complete all the activities in this booklet.
2. With the help of an adult check your answers on the back of the booklet.
3. Take your completed booklet to any of the Broads Authority Visitor Centres
4. A list of participating Tourist Information Centres are available on the RINSE website at www.rinse-europe.eu
5. Alternatively, you can send us your answers by post to RINSE at Environment, Transport and Development, Norfolk County Council, County Hall, Martineau Lane, Norwich NR1 2SG or by email at nnnsi@norfolk.gov.uk and we will send the sticker to you!

Image credits: All booklet illustrations by Tekura Maeva (www.tekuramaeva.com)
Puzzle devised and illustrated Ruth Murray (www.ruthmurray.net)

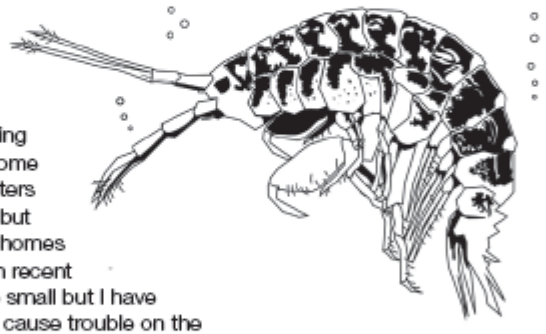
"Investing in your future"
Crossborder cooperation programme
2007-2013 Part-financed by the European Union
(European Regional Development Fund)

What are Invasive and Non-native Species?

Native species are plants or animals that are naturally found in an area. Non-native species have been introduced by people; they come from different regions, countries or even continents and have been moved to our area by accident or on purpose.

While most non-native species are harmless, some of them are damaging and upset the ecological balance because they are bigger, more aggressive and grow faster than our native species. These are invasive non-native species and they are **ALIEN INVADERS!**

In this activity you'll meet one troublesome invasive alien species, one harmless alien species and one threatened native species – which all live in the Broads. See if you can work out which is which!



1. "I am new to the Broads, arriving here in 2010. I come from faraway waters close to Russia, but have made new homes all over Europe in recent years. I might be small but I have a big appetite - I cause trouble on the Broads by eating lots of fish eggs! Everybody is worried that I might spread further because I like to hitch-hike – I'm good at hiding on boats, fishing equipment and clothes – which I plan to do! I am good at breeding, so there are lots of us. If no one stops us we're going to take over the Broads and disrupt local food chains

2. "I am a small round mammal with chestnut-brown fur and a tail. I have lived on the Broads for a very long time, so I am a local celebrity. I became even more famous across Britain after one of the characters in 'The Wind in the Willows' was based on me. They called me 'Ratty' - but I'm not actually a rat! I like to eat native plants, but I make sure I leave enough for everyone to eat so that I don't hurt my local ecosystem. I am a really good swimmer and used to be seen swimming in and out of my burrows all over the Broads. These days my friends and I are not seen very often – our habitat has changed so much and one of our new invasive neighbours the Mink is very unfriendly and sometimes tries to eat us".

3. "I first came to Britain a long time ago and I liked it so much I have stayed. In the spring I like to show off my magnificent white flowers and big green leaves. In autumn my leaves turn golden yellow and red and I grow big beautiful shiny brown seeds which I hide in a spiny green case. I get on well with my native neighbours and especially children because they like to collect my seeds to play a game called conkers".

Problem Plants

Over 840 alien plants species have already arrived in Great Britain! Many have pretty flowers or leaves and are planted in gardens where they cause no harm - but some escape into the wild. Here they become invasive aliens and can cause damage to native wildlife. Invasive plants can cause three different types of harm:

1) Environmental
2) Economic
3) Human health

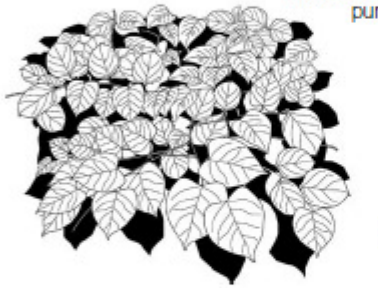
Read the stories about four invasive plants which you can find in the Broads. Label each plant with the type of harm it causes. Watch out – one plant is so bad it has TWO main impacts!

1. "I came to the UK when I was planted in a garden because of my impressive size. I can grow up to 5 metres tall - that's as big as a double-decker bus! I have big jagged leaves and a flower head shaped like an umbrella and I can make nearly 50,000 seeds. If you see me, don't touch me! I have toxic sap which can burn your skin!"

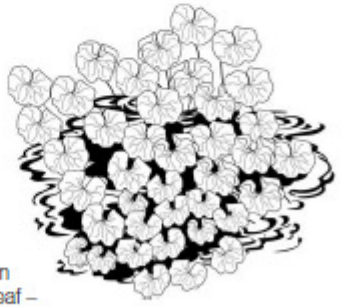
Did you know? The roots of the Japanese knotweed can remain alive underground for up to 20 years!

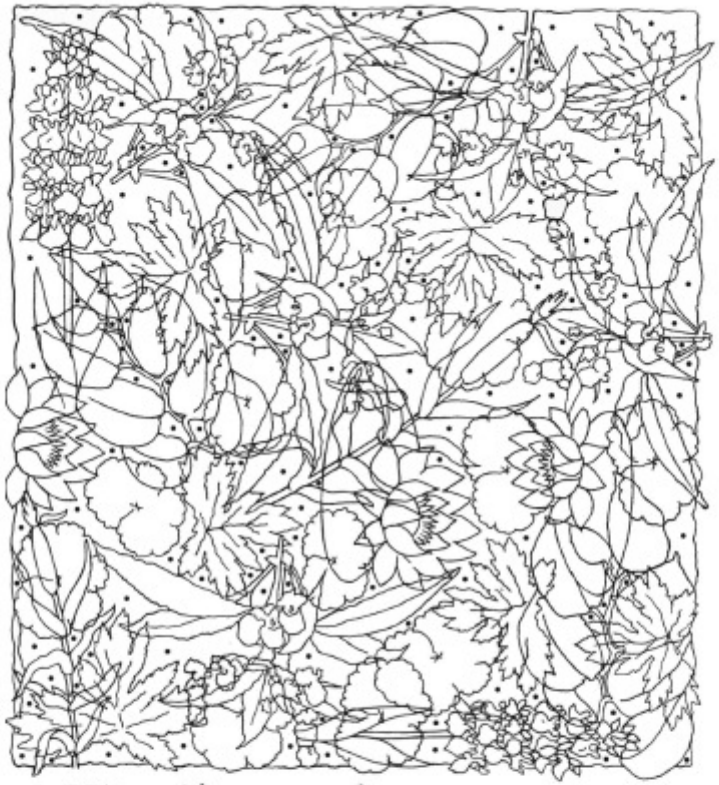
2."I am a beautiful plant, if I may say so myself… I have bright pink and purple trumpet-shaped flowers – no wonder they imported me! Once I escaped from gardens, I quickly took over all the river banks as I have a fondness for damp environments. I bully other plant species away by blocking out sunlight so they can't grow. My roots are not as deep as native plant species so I cause soil to be washed away in winter."

3. "I am a very exotic plant. People often say my purple-speckled stems look like bamboo. My leaves are yellowish green and shaped like a shield with a flat base. I am one of the most aggressive invaders – it is really difficult and VERY expensive to get rid of me – I can cost you a lot of money if you find me near your house! I can spread naturally by my roots or you can help me if you accidentally move a piece of my root to a new area."



4. "I am a troublesome water plant. I grow very quickly – up to 20 cm every day and my kidney-shaped leaves float on water, making a thick blanket. This stops sunlight getting to other plants and makes it difficult for boats to move. I can cause drastic changes to the water quality, damaging the aquatic ecosystem. I am able to re-grow from tiny pieces of a leaf – good luck getting rid of me!"





Find the Troublesome Aliens!

How many of each of these plants can you find amongst the native plants in the jumble picture?

Hint: Colour in the dotted areas first.

▶ Himalayan balsam: I can find .....

Floating pennywort: I can find ▶ .....

◀ Giant hogweed: I can find .....

Japanese knotweed: I can find ▶ .....

Puzzle devised and illustrated by Ruth Murray

Mystery Message

People often help to spread invasive species without knowing – by accidentally moving them from one place to another. In the anagrams below there are six invasive species that could be spread about the broads by anyone!

Complete each of the anagrams to reveal the names of the six invasive species. You can look back through this booklet for clues to help you work them out!

1. NATTERING WOLF PONY

2. EGGHEAD IN TOW

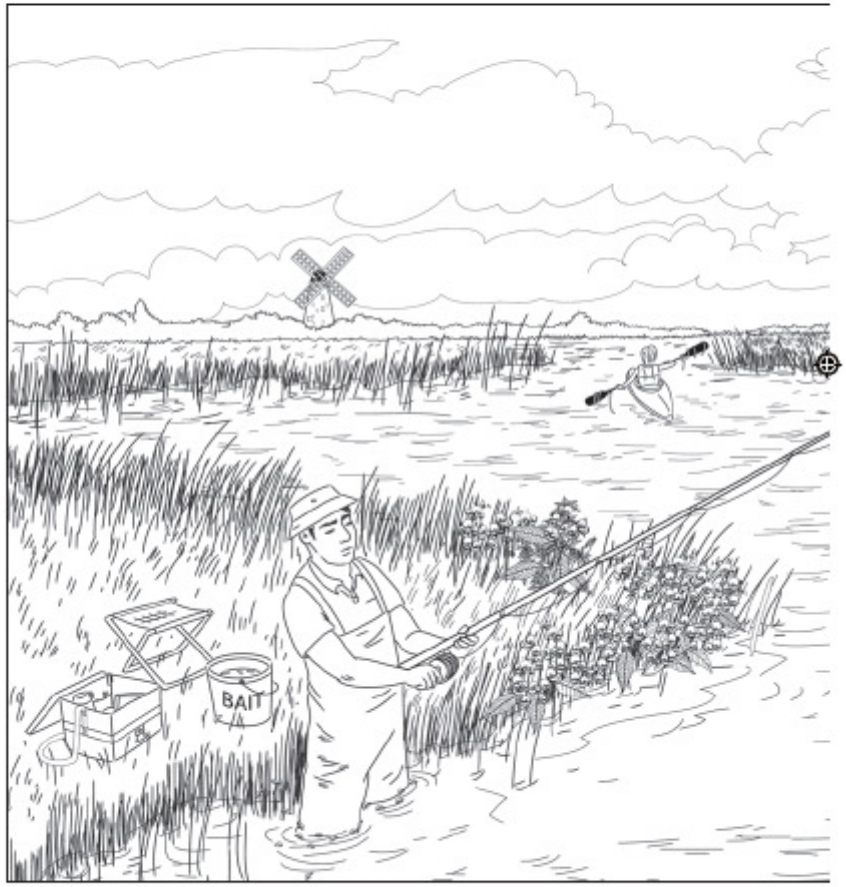
3. AWAKENED JEEP SNOT

4. HER SKILL PRIM

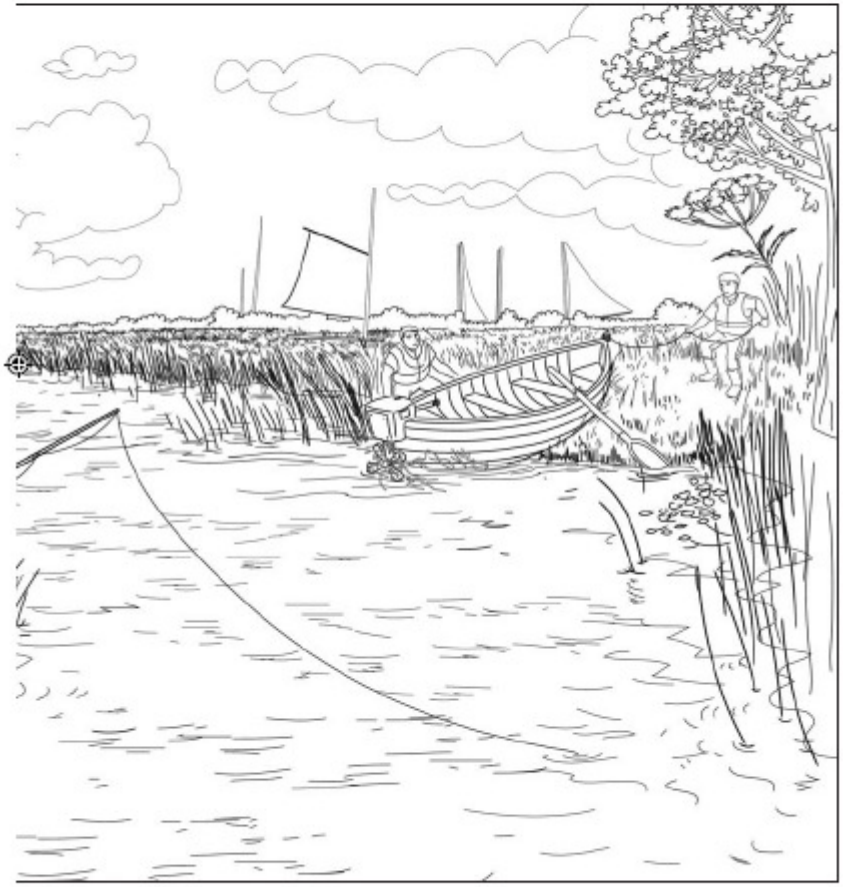
5. BAA ANIMAL HAM SLY

Pathways to Problems

Although some invasive species are deliberately brought to the UK, many are introduced by mistake! We accidentally help to spread invasive species during holiday or weekend activities like walking, fishing, sailing and canoeing.



Use your arty skills to colour in this scene from the Broads. After you've finished colouring, circle the places where you think invasive species might be hiding! DON'T FORGET - aquatic invasive species like the killer shrimp that you met earlier, can hitch-hike and hide on nearly anything!



A Sneaky Spreader

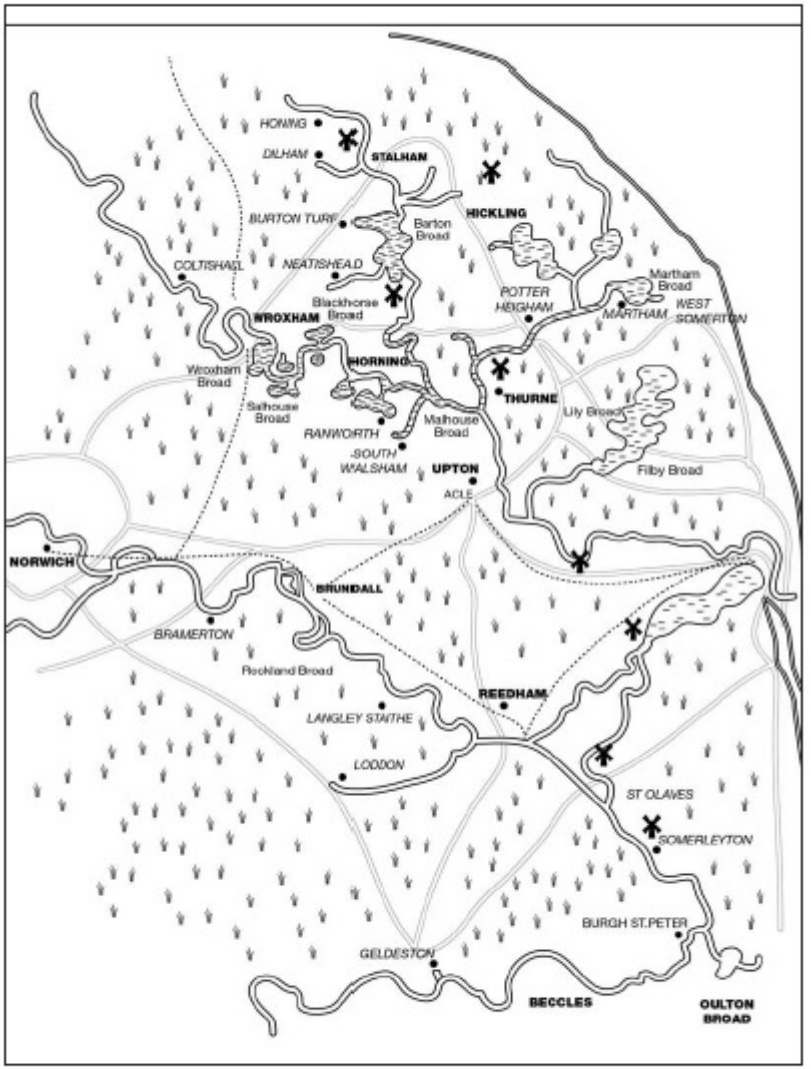
The Broads is a very important landscape for wildlife and the UK's largest protected wetland. There are over 60 man-made broads many connected by over 200 km of waterway. This makes the Broads the perfect place for a boating holiday, but also highly vulnerable to invasion by non-native species!

One invasive alien we don't want to see in the Broads is the topmouth gudgeon. Its home is in East Asia, but the topmouth gudgeon was accidentally introduced to the UK in 1990. This fish may be tiny, but it is a huge threat to our freshwater habitats and the angling industry because it steals food and breeding space from our native species. Even worse, the topmouth gudgeon is host to deadly parasites and diseases which are dangerous to other fish in the Broads

Luckily this fish has not yet arrived here in the Broads – and we want keep it that way! Below you can see a map of the Broads. Now imagine that someone illegally introduced topmouth gudgeon into Lily Broad – can you work out how far would it spread?

Use the map across the page to answer the questions below.

1. How many broads (or lakes) could be invaded by the top mouth gudgeon?
2. How many Broads will be safe from this fishy alien?
3. Which Broad is most likely to be invaded because of its position and river connections?

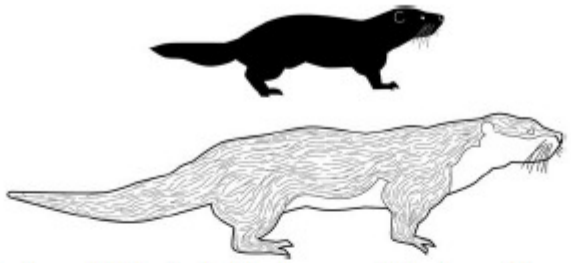


Some invasive species are very sneaky. They like to hide so that you never see them 'in the flesh'. The American mink is one of the sneakiest species on the Broads. This clever semi-aquatic mammal has a soft glossy brown coat, a slender body and a long tail. It might look cute and cuddly – but don't let it fool you! The mink is a top predator and its favourite foods are small birds, fish and small mammals. Thanks to the mink, the harmless little water vole has disappeared from most of the UK but in the broads they are protected from the mink by a volunteer trappers.

The mink might be sly, but we can outsmart it! We can tell where a mink lives because of the clues it leaves behind. American mink leave distinctive footprints, which are often seen in the mud along river banks. Its droppings are also very recognisable! These signs help us to outsmart the mink so that we can tell when they've been sneaking around causing trouble!

American Mink Droppings

Otter Droppings



Use these sketches to identify where a mink has been. Many people confuse the mink with our native otter – but the otter is **much bigger.** If you find a footprint, use the ruler at the edge of this page to measure the size – can you tell the difference?

Otter Foot Print_____cm

American Mink
Foot Print_____cm

Word Search Page

There are already more than 2000 non-native species established in the UK – with many more on their way from countries close by! Unless we act fast, these alien species will soon invade and cause problems for our native wildlife.

In the word search below are the names of 12 invasive species which are on their way…can you find them all?

Racer goby Japanese sea star Asian clam Red fire ant
Blady grass Emerald ash borer Sacred ibis Kudzu
Amur sleeper Nomad jellyfish Sea walnut Asian hornet

j e u c g s q k d v k a r i n
a p j b c v k e r z g s c o s
p t g x y d m f e a q z m a e
a r e p e e l s r u m a q x a
n f q n r c q w o k d w s p w
e k a a r p g w b j o i t n a
s r l s g o r s e q g a n e l
e d g c i g h l s i r c a j n
s j h e d a l n d z a l e g u
e q z m z y n e a c s w r e t
a s h y f i r c y i s g i f u
s t e i f c p k l e s w f z a
t j s t a p p o v a r a d j m
a h r s y d a l b p m u e r q
r a c e r g o b y b k x r r d

Poster Competition!

Now that you've learnt all about invasive non-native species and the damage these aliens can cause, you'll understand why it is so important to prevent them spreading across the Broads. There are lots of things you can do to help stop them – check out our Top Tips for Invasive Species on the back page!

We'd like you to design a poster for one of our Top Tip messages, encouraging people to help to stop the aliens invading! You'll find a poster template on the back of this page – ask an adult to help you cut this out and you can start drawing right away!

DON'T FORGET to take your poster to your local Broads Authority Visitor Centre so we can display it for everyone to see!

Make your poster stand out – You could win Broads Boat Trip for you and your family!

Make sure you write your name and contact details on the back of your poster to be included in the prize draw!

You can also send your finished poster to RINSE at:
Environment, Transport and Development, Norfolk County Council, County Hall, Martineau Lane, Norwich, NR1 2SG to be included in the prize draw.

Participating centres include: *Whitlingham Broad, How Hill and Hoveton*

Thank you for helping protect our native wildlife and we look forward to seeing your posters!

Name:..Age.........................

City/Town...

Terms and Conditions for Poster Competition:

1. Participation in this poster competition is restricted to children under the age of 16.
2. To enter the competition, participants must submit their posters to RINSE, either in person to one of the participating Broads Authority Information Centres listed below, or by post at this address: RINSE, Norfolk County Council, Environment Room 301, County Hall, Martineau Lane, Norwich, NR1 2SG. Entrants will not be accepted by any other means.
3. Entries must be relevant to the RINSE Project, depicting invasive non-native species. Please refer to the suggested key messages in the Family Activity Booklet for guidance.
4. Posters submitted must be the work of the individual.
5. By entering the competition, you grant Norfolk County Council a licence giving the right to use, the winners or any other entrant's work, in any media or publicity in relation to promotion of the RINSE project, including post promotion.
6. The closing date for entries is 30th September 2014. Entries received after this date will not be considered for the prize draw, however may still be displayed at the TIC.
7. The winner shall be awarded a voucher for a family boat ride on one of the Broads Authority's own boats.
8. Winners will be identified by their preferred contact means which they are to specify when submitting their design.
9. The winning entry will be that which is judged to be most visually appealing, informative and contain key messages on the control of invasive non-native species. The winner will be notified 14 days after the competition closes.
10. Prizes are not transferrable, nor can be exchanged for any other goods and there is no cash alternative for winners.
11. If any winners are unable to be contacted after reasonable attempts have been made, Norfolk County Council reserves the right to either offer the prize to a runner up or re-offer the prize in any future competition.
12. Nothing shall bind Norfolk County Council to make any award of the prize and Norfolk County Council reserves the right not to award the prize.
13. UK law applies and the exclusive jurisdiction of the UK courts shall prevail.
14. Norfolk County Council reserves the right to withdraw this competition at any time or alter any of these terms and conditions at any stage, if deemed necessary in its opinion, and if the circumstances arise outside of its control.

Answers

Activity 1: Native, Non-native or Invasive?
1. Killer Shrimp – Invasive 2. Water Vole – Native 3. Horse Chestnut Tree – Non-native

Activity 2: What's my impact?
1. Giant hogweed: Human Health
2. Himalayan balsam: Environmental
3. Japanese knotweed: Economic
4. Floating pennywort: Economic and environmental

Activity 3: Spot the Invasive
1. 5 Himalayan balsam
2. 13 Giant hogweed
3. 8 Japanese knotweed
4. 3 Floating pennywort

Activity 4: Mystery Message
1. Floating pennywort 2. Giant hogweed 3. Japanese knotweed 4. Killer shrimp 5. Himalayan balsam

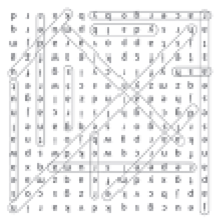
Activity 4: Mystery Message
1. Floating pennywort 2. Giant hogweed 3. Japanese knotweed 4. Killer shrimp 5. Himalayan balsam

Activity 5: Pathways to Problems
Invasive species could have been hiding in these locations: Canoe, fisherman's waders, boat engine propellers, fisherman's bucket.

Activity 6: Sneaker Spreader
1. (10) (2) 2. (8) Fly Bnd

Activity 8: Nature Detectives
Mink footprint: Width: 2-4cm
Otter footprint: Width: 5-6cm
Other differences include: different snout; white chin (mink), white under belly (otter).

Activity 9: Species Search
Completed Wordsearch



Top Tips for Invasive Species

Check Clean Dry! Boats and fishing equipment can hold standing water which helps invasive species to travel between rivers and lakes. Always Check, Clean and Dry your equipment before going to another site.

Be Plant Wise Aquatic plants can be invasive – taking over your pond and damaging the environment. So choose your plants wisely and remember to go for native species!

Know What You Grow Many exotic invasive plant species escaped from peoples gardens. Do your bit and grow native!

Say No to Hitchhikers! Invasive species are sneaky! Check for stowaways in seeds and soil before travelling.

Spot Them to Stop Them! The best way to stop invaders is to spot them early. Keep this booklet to remind you of the worst invasive species and let us know when you see them.

Get Involved! We need YOUR help to make a difference! Volunteer with your local conservation group or report invasive non-native species using our smartphone app "That's Invasive!"

Thank you for helping protect our native wildlife.
We look forward to seeing your posters!

Norfolk Non-native Species Initiative

Broads Authority
The Broads - a member of the National Park family

Norfolk County Council

Annex E


INVASIVE SPECIES
STOP THE SPREAD: CHECK, CLEAN, DRY
JAPANESE KNOTWEED
JAPANESE KNOTWEED
IMPACT
HIMALAYAN BALSAM
HIMALAYAN BALSAM
IMPACT
GIANT HOGWEED
GIANT HOGWEED
IMPACT
MANAGEMENT
CHECK
CLEAN
DRY


AMERICAN MINK
AMERICAN MINK
IMPACT
Biodiversity
Water Vole
MUNTJAC
MUNTJAC
IMPACT
Biodiversity
Economy
Road accidents
GREY SQUIRREL
GREY SQUIRREL
IMPACT
Economy
Red Squirrel
RECORDING
RECORDING
You can help!
Don't have a smartphone?
INVASIVE SPECIES IN NORFOLK
RINSE

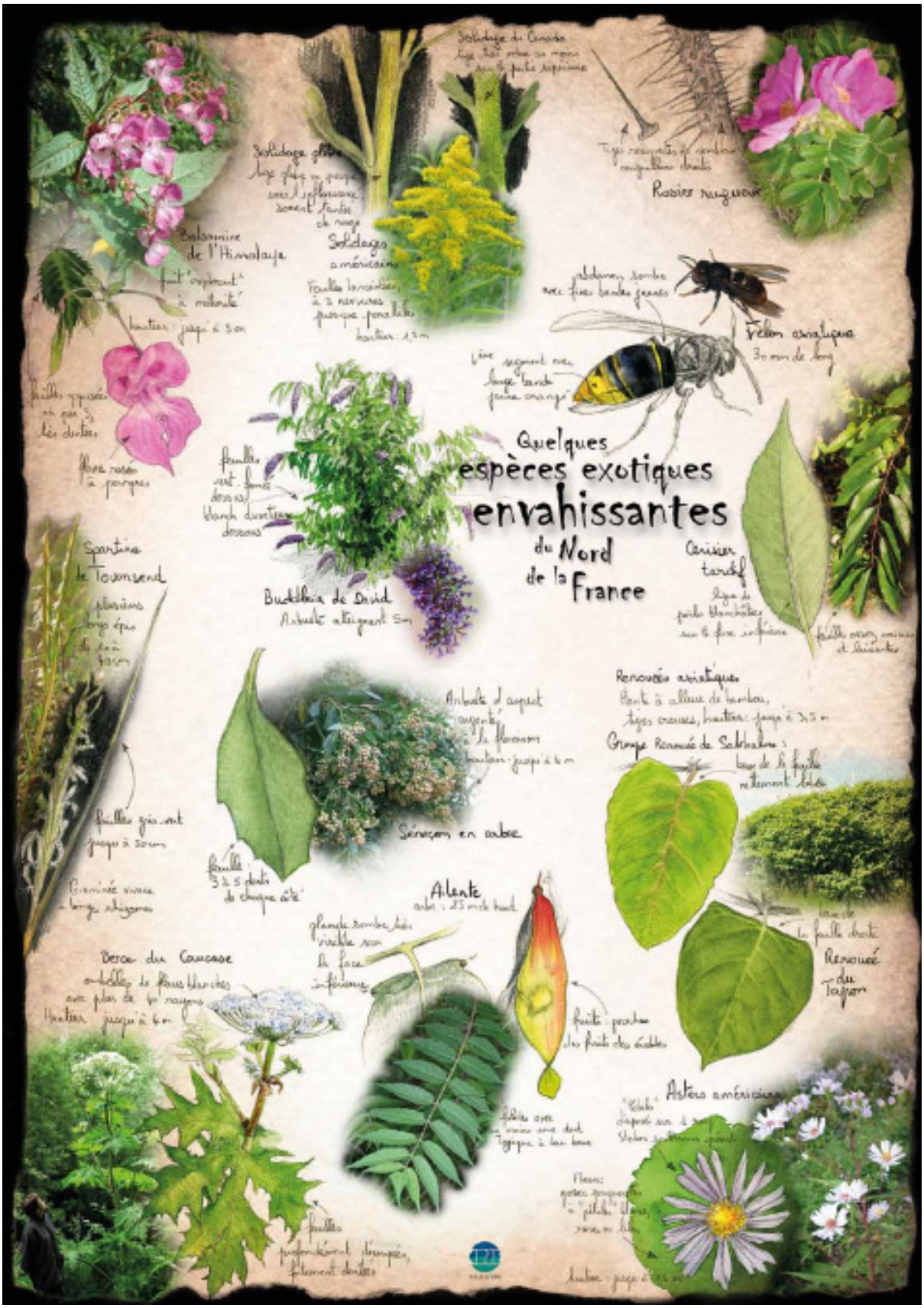
Annex F


Avez-vous vu...?
Une
Espèce Exotique Envahissante ?
Une plante ou un animal qui vient souvent d'un autre continent...
Et qui peut poser des problèmes à nos espèces locales !
Vous voulez préserver
la biodiversité locale ?
Vous pouvez agir !
Vous observez une des espèces ci-dessus dans votre jardin
ou en balade : nous vous invitons à la photographier
et à nous contacter par courriel ou voie postale.
Attention ! Il existe des dizaines d'autres espèces exotiques
envahissantes, en cas de doute ou de question, contactez-nous.
Vous contribuerez ainsi au réseau d'alerte précoce
et à la préservation de nos espèces locales et de nos
paysages typiques.
En retour, un poster présentant les principales espèces
observables dans la région vous sera offert.
Contacts, renseignements :
CPIE Val d'Authie
25, Rue Vermaelen - BP23
62 390 Auxi le Château
03.21.04.05.78
contact@cpie-authie.org
www.cpie-authie.org
VAL D'AUTHIE
RINSE
Pas-de-Calais

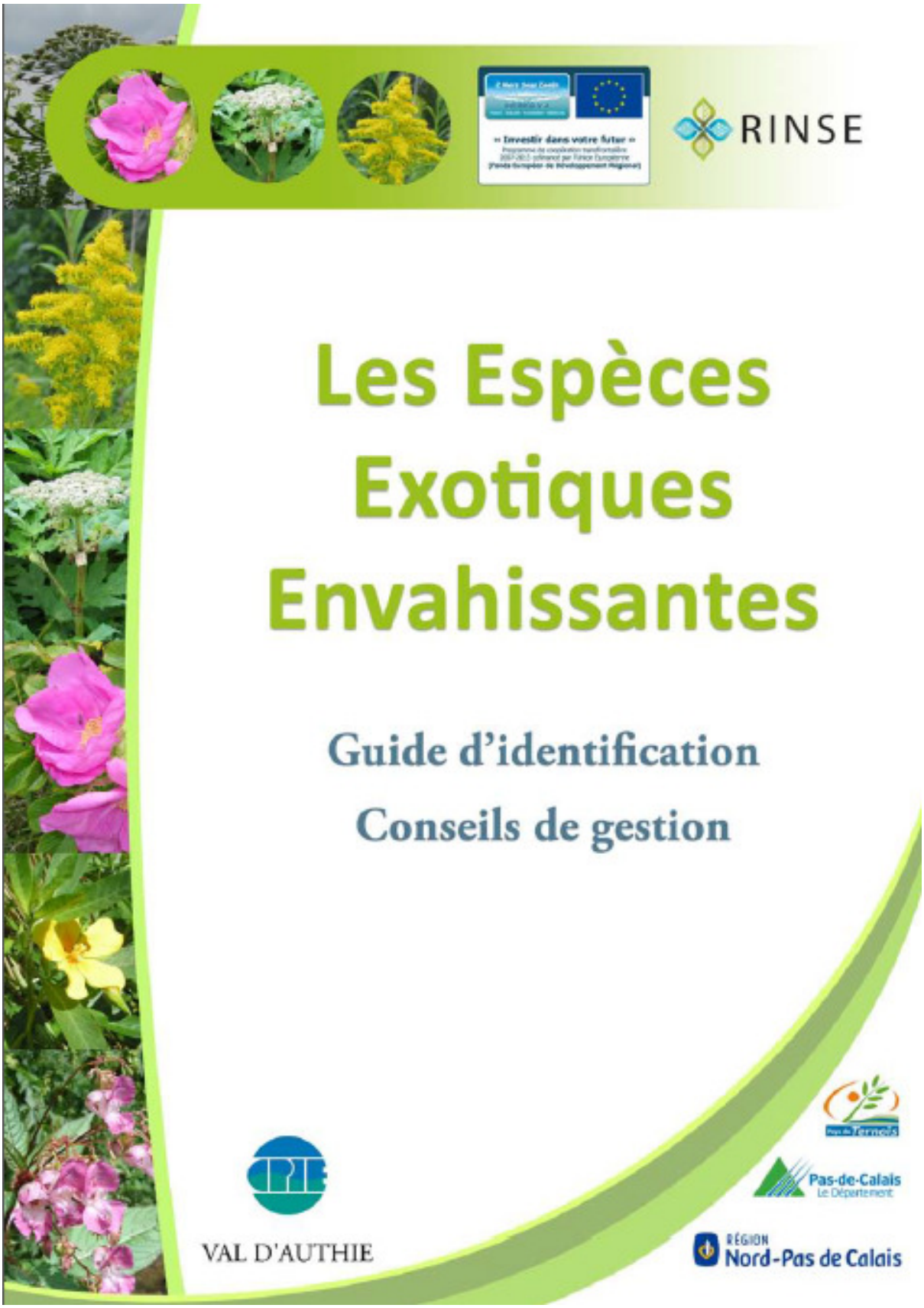
Annex G


Quelques
espèces exotiques
envahissantes
aquatiques et amphibies
du Nord
de la France
Elodé de Nuttall
Hydrocotyle
fausse-renoncule
Ragondin
Grand Lagarosiphon
Myriophylle du Brésil
Crassule
de Helms
Elodé du Canada
Jussies
Jussie
rampante
Jussie à
grandes fleurs
Tortue
de Floride
Azolla
fausse fougère
Rat musqué


Quelques espèces exotiques envahissantes du Nord de la France
LES ENVAHISSEURS
Qu'est qu'une espèce exotique envahissante ?
Pourquoi lutter contre ces espèces ?
Comment sont-elles arrivées chez nous ?
Comment lutter préventivement contre ces espèces exotiques envahissantes ?
Pourquoi deviennent-elles envahissantes chez nous ?
Comment lutter physiquement contre ces espèces exotiques envahissantes ?
Comment vous aider à contrer leur prolifération ?
Des principales techniques de gestion adaptées pour les espèces les plus fréquemment observées
Une question, un doute...
contactez le Centre de ressources territorial sur les espèces exotiques envahissantes du CPIE Val d'Authie :
CPIE Val d'Authie
25 rue Vermaelen – BP 23
62390 AUXI-LE-CHATEAU
Tél : 03 21 04 05 79
Fax : 03 21 04 12 78
E-mail : contact@cpie-authie.org
RINSE


Quelques
espèces exotiques
envahissantes
du Nord
de la France
Balsamine de l'Himalaya
Solidage glabre
Solidage américain
Robinier roux
Frelon asiatique
Buddleia de David
Arbuste atteignant 5m
Spartine de Townsend
Cerisier tardif
Renouée asiatique
Arbuste d'aspect argenté
Séneçon en arbre
Ailante
Renouée du Japon
Berce du Caucase
Aster américain

Annex H


RINSE
« Investir dans votre futur »
Les Espèces Exotiques Envahissantes
Guide d'identification
Conseils de gestion
VAL D'AUTHIE
Pas-de-Calais
Le Département
RÉGION
Nord-Pas de Calais

Sommaire

Qu'est-ce qu'une Espèce Exotique Envahissante ?

Anciennement et encore parfois appelées espèces invasives, elles sont désormais nommées espèces exotiques envahissantes (EEE).

Qu'est-ce qu'une espèce exotique envahissante ?

Une espèce exotique envahissante, quelle soit animale ou végétale, est :

- Originaire d'une autre région géographique comme son nom l'indique souvent (Renouée du Japon, Balsamine de l'Himalaya, Tortue de Floride, Myriophylle du Brésil ...)
- Introduite volontairement ou accidentellement par l'homme (transport de marchandises, plantes ornementales, animalerie ...)
- Une espèce aux impacts importants et fortement dommageables sur les sites colonisés.

BERCE DU CAUCASE

SOLIDAGE GLABRE

L'absence de régulateur naturel de ces espèces, dans leur nouveau milieu, couplé à leur fort pouvoir de compétition leur permettent alors de s'implanter durablement, au détriment des espèces locales. Les espèces se trouvent alors en situation de concurrence pour les ressources. Les espèces nouvellement arrivées peuvent également devenir prédatrices d'espèces locales et provoquer une diminution des effectifs voire l'extinction des populations locales.

Impacts et Enjeux liés aux espèces exotiques envahissantes

Impact écologique :

- **Mise en péril de la biodiversité** : elles peuvent devenir prédatrices des espèces locales et représentent donc une menace pour la diversité biologique, que ce soit au niveau des espèces protégées ou communes ; elles peuvent également entrer en compétition avec les espèces locales pour l'accès à la lumière, à la nourriture, etc ... (les plantes locales disparaissent sous les massifs de Renouée du Japon).

RENOUÉE DU JAPON

BALSAMINE DE L'HIMALAYA

- **Érosion des berges** : des espèces telles que la Renouée du Japon ou la Balsamine de l'Himalaya favorisent l'érosion des berges et peuvent favoriser la formation d'embâcles sur le cours d'eau.

Impact économique : **l'éradication de ces espèces est très onéreuse** et elle induise des coûts liés aux gênes occasionnées. On peut citer l'exemple de la Jussie, lorsqu'elle envahit un linéaire entier de cours d'eau, elle provoque une gêne pour les activités de pêche et de navigation, son éradication est compliquée (très coûteuse et parfois impossible).

Impact sanitaire : **certaines de ces espèces peuvent être urticantes ou allergisantes** ; la Berce du Caucase possède une sève photo-sensible qui peut provoquer des brûlures cutanées au 2nd degré.

RAT MUSQUÉ

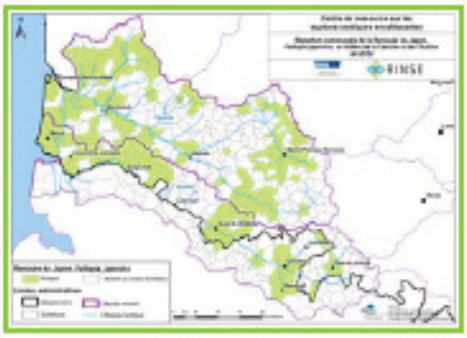
Enjeux et Méthodes de Gestion

Effectuer un état des lieux et élaborer un plan de gestion à l'échelle d'un site ou d'une commune

Il est important pour les communes ou autres collectivités de lutter contre ces espèces le plus tôt possible pour diminuer d'autant les coûts de gestion à venir.

Effectuer un état des lieux de votre territoire

A l'aide d'un inventaire proche de l'exhaustivité, répertorier les espèces exotiques envahissantes et les lieux infestés.



Elaborer un plan de gestion

Cette étude préalable est indispensable pour définir votre stratégie de lutte à moyen terme. Elle comprend principalement les éléments suivants:

- Diagnostic de la zone : liste des espèces invasives, présence d'espèces protégées, accessibilité du lieu, identification des usages et usagers des lieux ;
- Diagnostic des capacités de la commune (technique financière) ;
- Stratégie d'intervention (choix des méthodes de lutte, spécifique à chaque espèce)
- Conseils techniques (mise en application de la technique) des organismes spécialisés dans ces stratégies de lutte.

Ayez bien conscience des priorités selon les espèces et les espaces

Il est souvent difficile de lutter de front contre toutes les espèces sur un site. Des priorités devront être définies selon certains critères comme les exemples cités ci-dessous :

Berce du Caucase en bord de route

- A minima stopper leur dynamique de propagation par une gestion spécifique selon l'espèce (ex: ne plus gyrobroyer les massifs de Renouée du Japon sous peine de multiplier les massifs de place en place par bouturage des tiges...)
- Eradiquer systématiquement les espèces considérées comme prioritaires. Vous pouvez consulter dans un 1er temps les deux posters EEE disponible auprès du CPIE Val d'Authie. La liste de ces espèces peut varier dans le temps (arrivée permanente de nouvelles espèces sur les territoires). Vous pouvez également consulter le CPIE Val d'Authie pour plus d'information, ainsi que le CBNBL et la FREDON.
- Eradiquer les foyers d'espèces quand cela est possible : foyer de petite surface encore maîtrisable, lieu facile d'accès...
- Eradiquer les foyers qui sont à proximité de facteurs majeurs de dispersion (route, chemin, cours d'eau, fossés...)

Gérer et éradiquer une EEE s'inscrit sur le moyen terme !

On rappelle que la gestion de ces espèces n'est pas une action ponctuelle mais sur le moyen terme et doit s'effectuer de manière constante et régulière pour être réellement efficace.

Un suivi obligatoire sur les sites gérés est à effectuer

Après un chantier de lutte, il suffit qu'un seul pied soit oublié pour que la dynamique de colonisation recommence. Passez régulièrement sur les sites pour détruire les pieds oubliés afin de prévenir toute «rechute».

Qu'est-ce que le RINSE ?

RINSE (Réduire les Impacts des Espèces Exotiques Envahissantes en Europe) est un projet européen innovant qui s'est penché sur les meilleurs moyens de gestion des espèces exotiques envahissantes (EEE) dans la zone dite « des 2 mers ». En effet, notre projet a été financé par l'Union européenne via le programme Interreg IVA des 2 Mers. Il a également cherché à améliorer la prise de conscience des menaces posées par les EEE et les méthodes pour y faire face.

Ce projet a été mis en œuvre par 9 partenaires répartis dans les 4 pays de la zone des 2 mers (Angleterre, Pays-Bas, Belgique et France). Ces 9 partenaires comprenaient à la fois des collectivités, des universités, des structures de recherches et des associations :

- Norfolk County Council (UK) www.norfolk.gov.uk
- Bournemouth University (UK) www.bournemouth.ac.uk
- CABI (Centre for Agriculture and Biosciences International) (UK) www.cabi.org
- CPIE Val d'Authie (Centre Permanent d'Intiatives pour l'Environnement) (Fr) www.cpie-authie.org
- National Plant Protection Service (NI) www.vwa.nl
- Hampshire and Isle of Wight Wildlife Trust (UK) www.hwt.org.uk
- INBO (Instituut voor Natuur en Bosonderzoek) (Be) www.inbo.be
- Inagro (Onderzoek en Advies in Land & Tuinbouw) (Be) www.inagro.be
- RATO (Rattenbestrijding Oost-Vlaaderen vzw) (Be) www.oost-vlaanderen.be/rato

Une espèce exotique envahissante est un animal ou une plante non indigène qui a la capacité de se propager causant des dommages à l'environnement, l'économie, notre santé et notre façon de vivre. Beaucoup de ces impacts sont dus au fait que cette EEE a bouleversé l'équilibre naturel dans un écosystème. Une EEE peut provoquer cette perturbation en supplantant les espèces indigènes (par une croissance plus rapide ou plus agressive), en étant un vecteur d'une maladie exotique, grâce à des effets génétiques ou directement par prédation ou pâturage des espèces indigènes qui n'ont pas de défense contre cette nouvelle menace.

Les EEE sont très présentes dans la zone du projet RINSE et continuent d'être importées par une grande diversité de façons, y compris par le biais du commerce horticole et animal, la navigation commerciale et le tourisme. Le manque d'information sur la distribution et la diffusion des EEE a toujours rendu difficile l'établissement de la définition des priorités et des actions à cibler, ce qui conduit à des efforts de contrôle ad hoc. En outre, l'insuffisance des échanges d'informations sur les EEE entre les pays a conduit à une certaine duplication des efforts. La mauvaise prise de conscience générale des menaces posées par les EEE signifie que certaines sont encore disponibles dans le commerce ou sont relâchées dans la nature.

Ainsi, à travers ce projet novateur réunissant des partenaires de tous les pays concernés, les échanges et les actions entreprises ont permis d'améliorer la connaissance sur la répartition des EEE et sur les meilleures pratiques de gestion à mettre en œuvre. L'ensemble de ces informations a été mis à disposition des acteurs locaux à travers différents supports afin de permettre une meilleure prise en compte des EEE dans les politiques locales. Ce livret, à terme du projet, est un exemple supplémentaire des actions de sensibilisation mises en œuvre tout au long du projet et ayant pour objectif de la poursuivre au-delà.

Le Projet RINSE

Le projet RINSE a comporté 3 actions principales présentées ci-après.

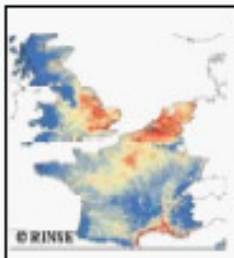
Action 1 : Priorisation des EEE

L'objectif de cette activité était de chercher à s'assurer que les ressources limitées soient dirigées vers les EEE et les sites qui sont source de préoccupation majeure.

Le ciblage et la définition de priorité concernant les ressources, humaines et financière, pour la gestion des EEE peuvent tirer de grands avantages de la collaboration internationale. Les expériences réalisées dans une région pouvant fournir des leçons importantes pour les acteurs d'autres territoires et le partage de données renforce la puissance des modèles qui prévoient la propagation et les impacts des EEE.

La mise en oeuvre de cette activité a, tout d'abord, consisté en la réalisation d'un audit des espèces exotiques envahissantes présentes dans la zone des 2 Mers. Il s'agissait de déterminer par type d'habitat (terrestre, eau douce), les EEE actuellement présentes dans la zone des 2 Mers, leur répartition spatiale et leurs impacts signalés (économiques, sociaux et écologiques). Cela a impliqué la recherche de données bibliographiques et de terrain par les partenaires et intervenants dans les quatre pays. Ainsi, le CPIE Val d'Authie a contribué à transmettre à ses partenaires la bibliographie disponible en langue française. Par ailleurs, le CPIE a procédé à des campagnes d'inventaires de terrain, dans un premier temps sur les habitats terrestres, puis lors de la dernière année de projet, plus spécifiquement sur les cours d'eau de son territoire.

Ensuite, un tour d'horizon des espèces potentiellement invasives susceptibles d'entrer dans la zone des 2 Mers a été mené. Afin de prévoir quelles espèces exotiques pourraient être introduites à partir des régions voisines dans différents types d'habitat (terrestres, eau douce) et leurs voies d'introduction (route, rail, dispersion naturelle, aquaculture, commerce ornemental, etc.), une analyse comparative des EEE déjà présentes dans un territoire en continuité de la zone des 2 mers a été réalisée. **A partir de cette liste d'espèces, il y a eu recours à des méthodes de modélisation bioclimatique et spatiale afin de prévoir si les espèces identifiées peuvent s'implanter dans la zone des 2 Mers.**



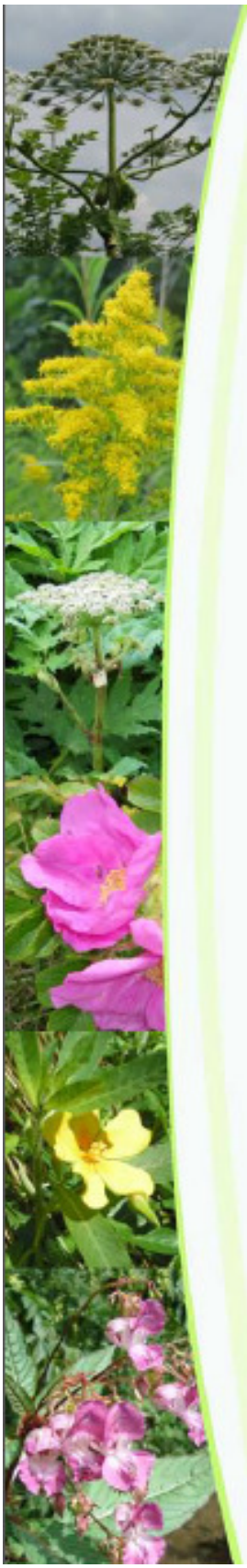
Predicted distribution of the Quagga Mussel – *Dreissena r. bugensis* – a freshwater mussel which can significantly reduce native biodiversity. Its strong filtering ability has the potential to alter whole freshwater ecosystems. This Species Distribution Model shows the East of England and Belgium are at particular risk from this species.

Le CPIE Val d'Authie, au même titre que les autres partenaires du projet, à contribuer à apporter les éléments de connaissance servant de base aux modèles prédictifs.

Enfin, à partir de l'ensemble de ces éléments, il a été défini des priorités de gestion. Nous avons ainsi développé une liste prioritaire des espèces exotiques envahissantes existantes et potentielles pour les interventions de gestion dans la zone des 2 Mers. **Les priorités ont été déterminées en fonction de l'estimation de : la répartition et la vitesse de propagation ; la gravité des impacts ; et la probabilité de réussite de l'éradication/du contrôle.**

Un rapport a été produit afin de spécifier toutes les espèces concernées et leur classification de priorité. Ce rapport est téléchargeable à l'adresse suivante :

http://www.rinse-europe.eu/assets/__files/targeting_and_prioritisation_fr.pdf



Le Projet RINSE

(suite)

Action 2 : Formation et sensibilisation

L'objectif de cette activité était d'améliorer la connaissance des EEE et des problèmes associés, ainsi que d'améliorer la prise en compte des EEE dans les décisions locales et économiques au travers de la conception de supports et outils pédagogiques et de la mise en œuvre d'actions de sensibilisation et de formation.

Ainsi, parmi les nombreuses actions mises en œuvre par les différents partenaires, on peut citer par exemple :

- Des actions de sciences participatives permettant au public de participer au recensement des EEE sur leur territoire, voire pour les plus motivés à participer à la gestion effective au travers de chantier nature.
- Des réunions d'information et de sensibilisation, ainsi que des journées de formation, adaptées pour les différents acteurs locaux concernés (professionnels, gestionnaires de milieux, élus, habitants, usagers).
- La conception et la diffusion d'outils servant de support à cette sensibilisation allant des traditionnels supports papiers (affiche, plaquette, brochure) aux outils numériques (clé de détermination en ligne (Q-Bank), application smartphone).

En plus de la réalisation de ces différentes activités sur son propre territoire, le CPIE Val d'Authie, au sein du partenariat, a animé cette activité.

Action 3 : Essais pratiques et projets de démonstration

Les impacts écologiques et économiques des EEE peuvent être éliminés (éradication) ou réduits (contrôle) par le biais d'interventions de gestion. **Ainsi, le but de cette action était de tester et de démontrer l'efficacité des interventions de gestion contre un éventail d'EEE cibles pertinentes pour la zone des 2 Mers. Les résultats donnent des informations sur les façons dont les EEE peuvent être gérées dans l'environnement.**

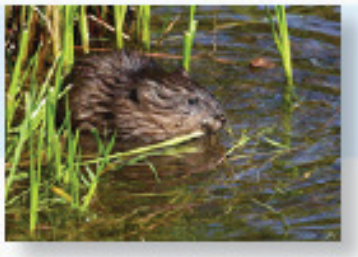
Afin de mener cette action, différents essais pratiques ont été mis en œuvre en utilisant des méthodes contemporaines et originales pour contrôler et éradiquer les EEE. Ces essais pratiques ont testé l'efficacité des méthodes pour éliminer ou réduire la profusion et les impacts nuisibles des EEE cibles, tout en minimisant les impacts des espèces non cibles. A titre d'exemple, cela a concerné la Crassule d'Helms ou le Pseudorasbora.

Pour permettre aussi une sensibilisation transversale, des projets de démonstration ont également été réalisés afin de porter à connaissance du plus grand nombre des actions de gestion efficace. Pour le CPIE Val d'Authie, cela a concerné des espèces telles que la Balsamine de l'Himalaya ou la Berce du Caucase.

Fiches Techniques

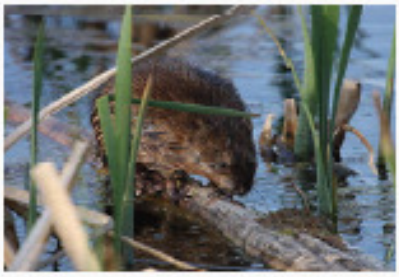
Le Rat musqué

Ondatra zibethicus



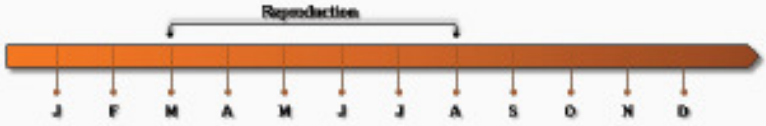
Originaire d'Amérique du Nord et introduit au début du XXème siècle pour sa fourrure, le Rat musqué, invasif, est également classé nuisible, il cause d'innombrables dégâts...

Caractéristiques



Creusant ses terriers sur les berges, il est excellent nageur et peut parcourir 100 mètres sous l'eau sans respirer. Un individu adulte peut atteindre 30 à 40 cm et pesé 1,5kg ; il peut avoir jusqu'à 36 petits par an.

Période de reproduction



Habitats

Le Rat musqué vit à proximité d'eaux courantes ou dormantes, il apprécie les berges aux pentes très douces.

Lutte

Piégeage ; tir.
La lutte chimique est interdite depuis mai 2009 car non sélective.

Nuisances

Provoque des effondrements de berges, attaque les cultures et transmet à l'Homme des maladies (leptospirose).

Fiche 1

La Tortue de Floride

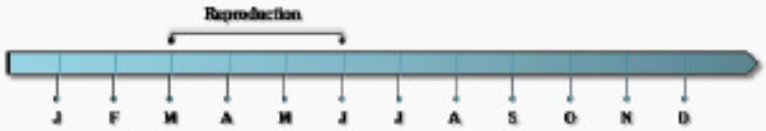
Trachemys scripta elegans

Importée d'Amérique du Nord en Europe depuis les années 70 ; on dénombre 70,4 millions de tortues vendues en France entre 1989 et 1994.

Caractéristiques

La Tortue de Floride est facilement identifiable par les taches de couleur rougeâtre qu'elle présente sur les tempes. On peut noter également, son plastron* de couleur jaune et sa carapace dorsale de couleur verte, marron à brun.

Période de reproduction



Habitats

La Tortue de Floride s'est acclimatée aux étangs, mares ou bassins bien exposés (présence de surfaces planes exposées au soleil).

Lutte

Il existe des centres de refuges pour les tortues récupérées par les particuliers. Des campagnes de tir sont organisées, mais un travail de sensibilisation est également à envisager.

Nuisances

Dévore les Amphibiens, les jeunes oiseaux au sol et les végétaux des mares. Menace la Cistude d'Europe, espèce indigène du Sud de la France.

Fiche 2

Fiche 3

Les Renouées

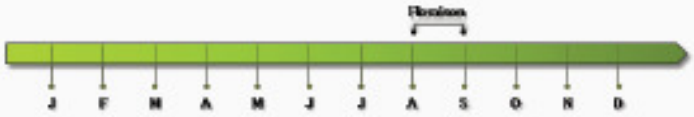
Fallopia japonica, Falloia sachalinensis

Originaire d'Asie orientale et introduite en Europe au XIXème siècle comme plante ornementale, il s'agit certainement de l'espèce invasive la plus présente dans le Nord – Pas-de-Calais. Ces deux renouées ont déjà assez largement colonisé une partie du Cambrésis.

Caractéristiques

Leurs racines, qui produisent des substances toxiques pour les plantes voisines, peuvent atteindre 2 m de profondeur tandis que la plante croît de 1 à 8 cm par jour. Formant de larges fourrés denses, les Renouées sont buissonnantes et présentent de nombreuses tiges de 1 à 2 m. Les feuilles sont abondantes et les tiges sont toujours visibles en hiver.

Période de floraison



Habitats

Grande diversité de milieux modifiés, de préférence bien éclairés pour un développement optimal : rives des cours d'eau, terrain en friche, ponctuellement dans les plaines...

Lutte

Il est très difficile d'éradiquer cette espèce, on peut simplement en limiter sa propagation par fauchage sélectif et répété, arrachage des rhizomes, traitement thermique, bâchage.
Veiller à ne pas broyer les tiges pour éviter sa propagation ; les déchets produits peuvent être incinérés pour éviter le développement sur d'autres sites ; ne pas laisser les résidus de la plante dans des zones de dépôts de déchets verts non hermétiques.

Nuisances

Erosion des berges, perte de biodiversité par concurrence pour la lumière avec les espèces basses, dégradation du paysage, pollution de l'eau, impacts sur la navigation et le tourisme...

La Balsamine de l'Himalaya

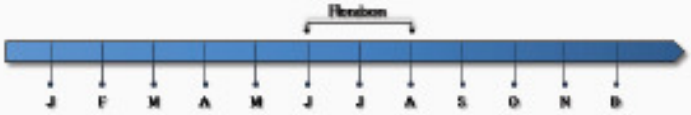
Impatiens glandulifera

Originaire de l'Himalaya, elle s'est naturalisée dans une grande partie de l'Europe et fait partie des espèces invasives présentes en Nord – Pas-de-Calais. La Balsamine a été observée au moins dans 4 communes du Cambrésis.

Caractéristiques

Plante vigoureuse, aux fleurs roses, rouges ou pourpres en grappes lâches, odorantes. Naturalisée dans de nombreux endroits, elle se répand principalement le long des cours d'eau. Elle est considérée comme une plante envahissante dans plusieurs départements français.

Période de floraison



Habitats

La Balsamine géante affectionne les biotopes* moyennement humides à très humides, sur sols riches en azote. Elle envahit les bords de cours d'eau, les friches et exceptionnellement les pannes dunaires boisées.

Lutte

Arrachage ou fauche au début de la floraison et avant la fructification.

Nuisances

Provoque une diminution drastique de la biodiversité par concurrence pour la lumière avec les espèces basses.
Elle implique l'augmentation de l'érosion des berges due à l'absence de couvert végétal en hiver.

Fiche 4

Fiche 5

Les Solidages

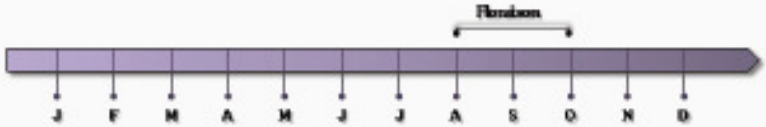
Solidago canadensis, Solidago gigantea

Originaire d'Amérique du Nord, les Solidages sont une espèce très envahissante. Ils sont souvent observés en bord de cours d'eau et zones humides. Le Solidage du Canada (Solidago canadensis) a été observé au moins dans 6 communes du Cambrésis ; le Solidage géant (Solidago gigantea) dans 14 communes.

Caractéristiques

Développant de nombreux rhizomes souterrains, le Solidage du Canada se multiplie prioritairement par ses racines. Appelé également « Verge d'Or », il produit de très belles inflorescences dorées à la fin de l'été.

Période de floraison



Habitats

Ses biotopes* se cantonnent souvent aux friches mais son extension reste à surveiller. Il colonise également les zones alluviales, en bord de cours d'eau.

Lutte

Pour limiter voire stopper l'expansion de cette espèce, il est nécessaire de la faucher avant floraison et d'incinérer les déchets produits. Un bâchage est envisageable afin d'étouffer les plants qui résistent.

Nuisances

Provoque des érosions de berge, dégrade la biodiversité faunistique et floristique locale.

Fiche 6

La Berce du Caucase

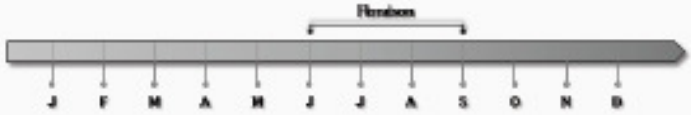
Heracleum mantegazzianum

Localement naturalisée, la Berce du Caucase peut se révéler toxique. Découverte en 1880 dans la vallée de Klioutsch (Caucase) par les botanistes suisse et français Levier et Sommier. La Berce a été observée au moins dans 2 communes du Cambrésis.

Caractéristiques

La Berce du Caucase peut atteindre 4 mètres de haut lorsqu'elle se développe de façon optimale. Sa sève provoque des brûlures extrêmement graves.

Période de floraison



Habitats

L'espèce colonise les talus, les bords de route et les terrains vagues. On la rencontre également en lisières de forêts ou sur des coteaux calcaires. Elle affectionne de façon générale les sols et climats relativement humides.

Lutte

A l'aide de protections adaptées, on peut éliminer de façon manuelle les plants en les coupant sous le collet (limite entre la racine et la tige) et avant floraison. Une surveillance régulière est indispensable.

Nuisances

Elimine la plupart des espèces indigènes*. Le contact de la sève avec la peau suivi d'une exposition au soleil provoque de graves brûlures.

Fiche 7

Les Elodées

Elodea canadensis, Elodea nuttalii

Originaire d'Amérique du Nord, les deux élodées ont été introduites en Europe au XIXème siècle comme plante d'ornementation, elles sont localement invasives dans le Nord – Pas-de-Calais. L'Elodée du Canada (Elodea canadensis) a été observé au moins dans 18 communes du Cambrésis, l'Elodée de Nuttall (Elodea nuttalii) dans 6 communes.

Caractéristiques

En France, l'espèce ne présente que des pieds femelles, elle se reproduit donc de manière essentiellement végétative. Sa floraison est rare et discrète, elle produit des hibernacles (bourgeons spécialisés) lui permettant d'assurer sa survie en hiver ainsi que sa multiplication.

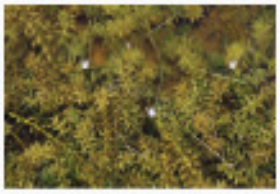
Période de floraison

Habitats

L'Elodée du Canada se retrouve dans des milieux aquatiques variés ; en eau stagnante ou courante.

Lutte

L'arrachage manuel est actuellement la méthode la plus efficace mais il faut être très vigilant lors de la manipulation des pieds arrachés pour éviter de la propager.



Nuisances

Entraine un disfonctionnement des milieux aquatiques. Provoque une absence d'oxygène périodique du milieu. Elle entrave l'écoulement des eaux et perturbe les activités nautiques.

Fiche 8

Le Buddleia de David

Buddleja davidii

Importé de Chine, cette espèce de Buddleia a été découverte par un missionnaire français, Armand David, à la fin du XIXème siècle. Le Buddleia a déjà assez largement colonisé une partie du Cambrésis.

Caractéristiques

Egalement appelé « Arbre à papillons », le Buddleia attire de nombreux insectes. Ses inflorescences produisent, au bas mot, 3 millions de graines par an ! Il forme de larges fourrés extrêmement denses.

Période de floraison

Habitats

Supportant mal l'ombre, il est très adapté au milieu urbain et colonise notamment les voies ferrées, terrains en friches, jardins, terrils, vieux murs...

Lutte

Plantation d'espèces locales, après arrachage ou coupe à la base du plan.

Nuisances

Concurrence la végétation autochtone, provoque des répercussions sur la gestion des voies de chemin de fer...

Les Asters américains

Aster lanceolatus, Aster novi-belgii et Aster salignus

Originaire d'Amérique du nord, ces asters exotiques sont encore fréquemment plantés dans les jardins. De là, dès le début du XIXéme, leurs fortes capacités de fructification et de dissémination, couplées à la présence de longs rhizomes ont conduit à une naturalisation massive en Europe. L'Aster lancéolé a été observé au moins dans 3 communes du Cambrésis, l'Aster novi-belgii dans 1 commune et l'Aster de Salignus dans 2 communes du Cambrésis.

Caractéristiques

C'est une grande plante vivace à tige dressée finie par une fleur de type « grosse pâquerette » pouvant être blanche à bleue. Les feuilles sont assez semblables à celles des Solidages (Solidago canadensis et gigantea) mais les nervures sont disposées en arêtes de poisson.

Habitats

Ces Asters colonisent les sols frais, comme les friches et les accotements routiers, mais leurs populations sont le plus envahissantes dans les zones humides (prairies, mégaphorbiaies*) où elles peuvent devenir très denses.

Lutte

La lutte est difficile contre cette espèce et son éradication demande de gros moyens humains et financiers si les populations sont importantes. Vivace et disséminée par le vent, il est impératif d'effectuer des fauches avant fructification pour limiter son extension et épuiser peu à peu les rhizomes. L'éradication rapide par arrachage des rhizomes n'est envisageable que sur de petites populations pionnières.

Nuisances

La colonisation des zones alluviales par les asters peut former en quelques années des populations presque mono spécifiques. Cet envahissement réduit d'autant la richesse spécifique des prairies et autres mégaphorbiaies* des zones humides.

Fiche 9

L'Hydrocotyle fausse-renoncule

Hydrocotyle ranunculoides

Originaire d'Amérique du nord, cette plante amphibie est encore largement vendue dans le commerce pour agrémenter les plans d'eau. D'introduction récente, elle se naturalise en Nord-Pas-de-Calais après l'an 2000 et montre immédiatement son incroyable capacité de prolifération.... L'Hydrocotyle fausse-renoncule a été observée au moins dans la commune d'Ors.

Caractéristiques

Plante amphibie à longues tiges dressant ses feuilles au-dessus de l'eau, celles-ci sont d'apparence rondes et nettement lobées sur les bords.

Habitats

Cette plante croît à partir des berges des plans d'eau et des cours d'eau à courant lent, dans des eaux mésotrophes* à eutrophes*.

Lutte

La lutte est difficile contre cette espèce et son éradication demande de gros moyens humains et financiers si les populations sont importantes. Les tiges pouvant croître de près de 30 cm par jour au cours des chaudes journées d'été, il est impératif de rapidement l'éradiquer. Un arrachage manuel de toutes les tiges et racines, voire un curage par un engin de terrassement peut éradiquer la population. Et surtout, une veille sanitaire sur plusieurs années est indispensable, des tiges relictuelles pouvant de nouveau recommencer le processus d'envahissement.

Nuisances

Cette espèce peut créer des végétations très denses sur de grandes surfaces (des lacs entiers) recouvrant complètement la surface de l'eau sur plusieurs dizaines de centimètres d'épaisseur. Cette prolifération engendre une accélération du processus de sédimentation, une modification des qualités physico-chimiques de l'eau, un écran parfois total pour la lumière et une régression voire la disparition des plantes aquatiques locales. La plupart des activités de loisirs (pêche, nautisme ...) deviennent impossibles.

Fiche 10

Séneçon du Cap

Senecio inaequidens

Originaire d'Afrique du Sud, il fut introduit en Europe par l'industrie lainière à la fin du XIXème siècle. Le Séneçon du Cap est présent dans au moins 15 communes du Cambrésis.

Caractéristiques

Cette plante est immédiatement reconnaissable au bord des autoroutes et dans les friches par ses pieds de 40-50 cm de haut, son port en boule et ses nombreuses inflorescences jaune citron. Ce séneçon est typique du genre avec ses feuilles étroites bordées de dents courtes et irrégulières.

Habitats

Dans la moitié nord de la France, le Séneçon du Cap est fréquent dans les zones de friches (bords de route et d'autoroutes, voies ferrées) ; il colonise aussi les dunes littorales.

Lutte

Quand cette espèce est bien installée, il est très difficile et coûteux de tenter de l'éradiquer. En cas d'observation de pieds isolés ou de petites populations pionnières, l'arrachage des pieds avant mise à fruit est la méthode la plus efficace. Dans le cas de cultures envahies par de grosses populations, le désherbage ou le labour sont également efficaces.

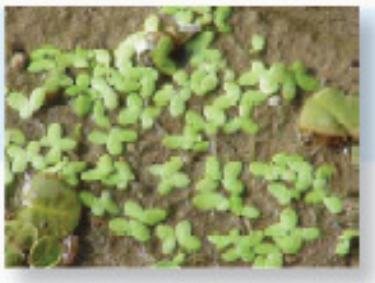
Nuisances

Dans le Nord - Pas-de-Calais, sa prolifération provoque une rudéralisation* des massifs dunaires littoraux.

Fiche 11

Les lentilles d'eau

Lemna minuta et Lemna turionifera



La Lentille d'eau minuscule (Lemna minuta), en provenance d'Amérique (nord et sud), a colonisé très rapidement toute la France depuis sa première observation au milieu du XXème siècle dans le sud-ouest de la France.

La Lentille d'eau turionifère (Lemna turionifera), espèce également américaine, est seulement identifiée en 1992 en France.

Ces deux lentilles ont été observées dans les vallées de la Sensée et de l'Escaut.

Caractéristiques

La Lentille d'eau minuscule (Lemna minuta), très proche morphologiquement de notre Lentille d'eau indigène (Lemna minor) s'identifie grâce à la carène (petite ligne longitudinale saillante sur le dos).

La Lentille d'eau turionifère est généralement teintée de rouge, au moins au point d'insertion de la racine.

Habitats

La Lentille d'eau minuscule colonise les eaux plus ou moins riches en nutriments. Elle recouvre parfois entièrement de grandes surfaces d'eau stagnantes (mares, étangs)

La Lentille d'eau turionifère colonise également les eaux stagnantes riches en nutriments.

Lutte

Seul un moissonnage des tapis de lentilles d'eau peut être effectué mais l'efficacité sera probablement toute relative et provisoire.

Nuisances

Comme pour les autres lentilles d'eau indigènes, les denses tapis à la surface de l'eau forment un écran bloquant la lumière et les échanges gazeux avec le milieu aquatique. Ce phénomène réduit entre autre l'oxygénation de l'eau et défavorise toutes formes de vie dans le plan d'eau.

Fiche 12

Le Bident à fruits noirs

Bidens frondosa

Originaire d'Amérique du nord, le début de la colonisation fut pour la première fois observée en 1920 en France. Le Bident à fruits noirs a été observé dans les vallées de la Sensée, de l'Escaut et de la Selle.

Caractéristiques

Plante annuelle, ses feuilles pennatiséquées* (dont le limbe est penné et divisé en segments séparés par des sinus qui atteignent presque la nervure médiane) à segments nettement pétiolulés (partie rétrécie de certaines feuilles unissant le limbe à la tige) sont des caractères typiques et uniques permettant de les distinguer de Bidents indigènes.

Habitats

Dans la moitié nord de la France, le Bident à fruits noirs est fréquent dans les zones de friches (bords de route et d'autoroutes, voies ferrées) ; il colonise aussi les dunes littorales.

Lutte

Peu d'exemple de luttes contre cette espèce sont connues, mais une fauche avant fructification appauvrirait progressivement la banque de semences du sol.

Nuisances

Cette espèce peut créer des colonies mono spécifiques le long des berges, provoquant une diminution du nombre d'espèces typiques des végétations pionnières des vases exondées.

Fiche 13

Le Robinier faux acacia

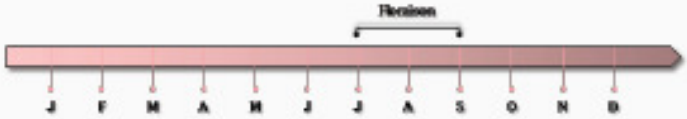
Robinia pseudoacacia

Originaire de la région des Appalaches (à l'Est de l'Amérique du Nord), le Robinier faux acacia est fréquemment planté et naturalisé localement. Le Robinier faux acacia est très largement réparti sur le territoire du Pays du Cambrésis.

Caractéristiques

Le Robinier faux acacia est un arbuste fréquemment planté pour ses qualités ornementales et mellifères. Son bois dur ne nécessite pas de traitement après la coupe. Il forme des fourrés denses et impénétrables (présence d'épines).

Période de floraison



Habitats

On retrouve le Robinier sur le bord des routes, sur les talus ou dans des zones de friches industrielles. Il affectionne également les jardins et terrils et tous les sols faiblement humides.

Lutte

L'éradication de l'espèce passe par l'arrachage des plants. Un suivi des repousses est nécessaire.

Nuisances

Le Robinier entre en concurrence avec la flore locale et modifie les qualités du sol en y incorporant de l'azote.

Fiche 14

Le Lagarosiphon

Lagarosiphon major

Originaire d'Afrique du sud, il est fréquemment planté en aquarium. A partir des années 1940, relâché par des aquariophiles amateurs dans des plans d'eau, il se naturalise rapidement. Il est désormais largement présent dans le sud-ouest de la France. Le Lagarosiphon a été observé au moins dans les vallées de la Sensée et de l'Escaut ; ainsi que dans 6 communes du Pays du Cambrésis.

Caractéristiques

Plante aquatique enracinée formant de longues tiges feuillées plus ou moins ramifiées sous l'eau. Les feuilles linéaires, serrées, sont alternes et disposées en spirale sur la tige. Ces feuilles sont arquées vers le bas.

Habitats

Le Lagarosiphon colonise tous les plans d'eau voire des milieux aquatiques à faible courant (ou zones abritées des cours d'eau) plus ou moins riches en nutriments.

Lutte

La lutte est difficile contre cette espèce et son éradication quasiment impossible en l'état actuel des connaissances, surtout quand la population est importante. La moisson permet seulement de réduire et de contrôler les populations. Seule l'éradication de petites populations récemment installées est possible, d'où l'intérêt d'effectuer une veille régulière des végétations des plans d'eau.

Nuisances

Cette espèce peut créer des herbiers très denses sur de grandes surfaces (des lacs entiers). Cette prolifération engendre une accélération du processus de sédimentation, une modification des qualités physico-chimiques de l'eau et une régression voire la disparition des plantes aquatiques locales. La plupart des activités de loisirs (pêche, nautisme ...) sont impactées négativement.

Fiche 15

Les Jussies

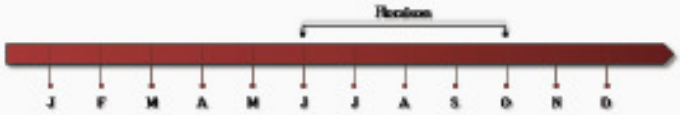
Ludwigia sp

Originaire d'Amérique du Sud et utilisée dans les aquariums d'eau douce, la Jussie a été introduite en Europe au XIXème siècle. Elle a, depuis, colonisé de nombreux étangs et cours d'eau et est aujourd'hui une plante envahissante. A priori encore absente du Pays du Cambrésis, toute observation future devra être suivie d'une éradication immédiate pour préserver notre territoire.

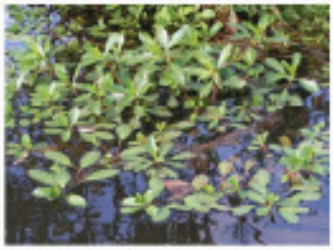
Caractéristiques

La Jussie forme de belles fleurs jaunes, très prisées des amateurs de bassins d'ornement. Lorsqu'elle colonise un milieu, elle prend la forme d'herbiers ; ces tapis végétaux couvrent les cours d'eau et asphyxient le milieu.

Période de floraison



Habitats



La Jussie colonise les étangs, les lacs et les marais, plus exceptionnellement les prairies inondables.

Lutte

Il est difficile de se débarrasser de cette espèce, d'autant plus qu'elle se développe dans des milieux peu accessibles. Les arrachages manuels et sélectifs font parti des solutions pour lutter contre son expansion. L'introduction d'un Coléoptère, prédateur de l'espèce, a par ailleurs été expérimentée.

Nuisances

Modifie les bilans en azote et en phosphore des cours d'eau. Provoque une prolifération de bactéries multiples.

Fiche 16

Le Myriophylle du Brésil

Myriophyllum aquaticum

Originaire d'Amérique tropicale, cette plante amphibie est encore largement vendue dans le commerce pour agrémenter les plans d'eau. Dès 1880, des essais de naturalisation introduisent cette plante près de Bordeaux.
A priori encore absente du Pays du Cambrésis, toute observation future devra être suivie d'une éradication immédiate pour préserver notre territoire.

Caractéristiques

Plante amphibie à longues tiges noueuses dressant l'extrémité de ses tiges feuillées (d'un vert assez pâle) au-dessus de l'eau. Les feuilles pennatiséquées* (dont le limbe est penné et divisé en segments séparés par des sinus qui atteignent presque la nervure médiane)) sont disposées en verticille* par 4 à 6 autour de la tige.

Habitats

Cette plante croît à partir des berges des milieux aquatiques stagnants ou à faible courant.

Lutte

La lutte est difficile contre cette espèce et son éradication demande de gros moyens humains et financiers si les populations sont importantes. Les tiges ayant une croissance très rapide, il est impératif de rapidement l'éradiquer. Un arrachage manuel de toutes les tiges et racines, voire un curage peut éradiquer la population. Et surtout, une veille sanitaire sur plusieurs années est indispensable.

Nuisances

Cette espèce peut créer des végétations très denses sur de grandes surfaces recouvrant complètement la surface de l'eau. Cette prolifération engendre une accélération du processus de sédimentation, une modification des qualités physico-chimiques de l'eau, un écran parfois total pour la lumière et une régression voire la disparition des plantes aquatiques locales. La plupart des activités de loisirs (pêche, nautisme ...) sont impactées négativement.

Fiche 17

Fiche 18

L'Ailante

Ailanthus altissima

Originaire des régions allant du sud de la Chine à l'Australie, cet arbre fut planté à titre ornemental dès 1786 en France. A priori encore absente du Pays du Cambrésis, toute observation future devra être suivie d'une éradication immédiate pour préserver notre territoire.

Caractéristiques

Arbre pouvant atteindre 25 m, il est aisément reconnaissable par ses feuilles divisées en folioles ovales-lancéolés avec une sorte de glande près de leur base. Les fleurs forment de grosses grappes blanches- jaunâtres.

Habitats

Cet arbre peut rapidement coloniser les friches, les anciennes voies ferrées, les bords de route et aussi les bords de milieux aquatiques.

Lutte

L'arrachage manuel des jeunes plants et l'encerclage du tronc sont possibles.

Nuisances

Cette espèce peut induire des formations monospécifiques par l'émission des substances allélopathiques (« herbicides naturels »), dénaturant fortement à complètement la biodiversité forestière locale.

Fiche 19

L'Azolla fausse fougère

Azolla filiculoides

Originaire d'Amérique tropicale et tempérée, cette fougère aquatique se naturalise en Europe au XIXème siècle à partir d'aquariums et de jardins botaniques. A priori encore absente du Pays du Cambrésis, toute observation future devra être suivie d'une éradication immédiate pour préserver notre territoire.

Caractéristiques

Petite plante flottante, ses minuscules feuilles sont imbriquées comme les tuiles d'un toit. Au cours de l'année, sa couleur passera progressivement du vert bleuté au rose rougeâtre en fin de saison.

Habitats

L'Azolle se naturalise de préférence dans les plans d'eau, les fossés voire dans des canaux.

Lutte

Le moissonnage des tapis denses permet de limiter les populations.

Nuisances

Cette espèce peut développer des tapis flottants monospécifiques. Cette prolifération engendre une accélération du processus de sédimentation, une modification des qualités physico-chimiques de l'eau, un écran parfois total pour la lumière et une régression voire la disparition des plantes aquatiques locales.

Techniques de gestion des Espèces Exotiques Envahissantes

Différentes techniques de lutte sont efficaces en fonction des espèces ciblées

Il faut savoir qu'il n'existe pas une technique de lutte généralisable aux espèces exotiques envahissantes. Chaque espèce est particulière et sa gestion sera adaptée à son écologie, son mode de dispersion, etc.

Vos équipes d'entretien devront être formées à bien reconnaître les espèces exotiques envahissantes sur le terrain afin qu'ils utilisent systématiquement la bonne technique de lutte.

Voici les principales techniques de gestion utilisables en fonction des EEE

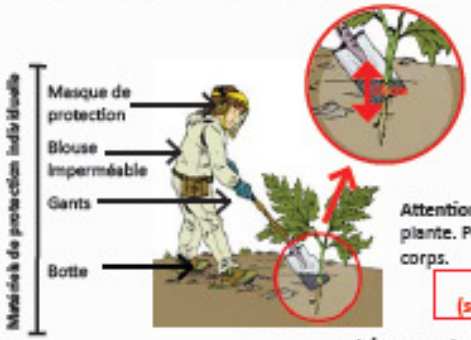
- Fauche exportatrice répétée, avec des fréquences de fauches différentes (fauches intensives contre la Renouée du Japon, ou fauches modérées contre le Solidage glabre et les Asters américains)
- Arrachage ou coupes de la racine tous les ans avant la production de graines (Balsamine de l'Himalaya, Berce du Caucase...)
- Faucardage des plantes aquatiques envahissantes (jussies, Myriophylle du Brésil, Hydrocotyle fausse-renoncule...)
- Plantation de ligneux après fauche (ex : pour limiter l'extension des grands massifs de Renouée du Japon)
- Pâturage par les espèces animales (contre la Renouée du Japon, la Berce du Caucase, Asters américains...)
- Désherbage thermique (seulement efficace contre les jeunes plantules)
- Piégeage des espèces animales (Rat musqué).

Ce choix se fera en fonction de l'espèce à traiter et des caractéristiques du milieu (bords de route, bords de cours d'eau, jardin public...)

IMPORTANT ! Attention à la gestion des déchets verts des EEE

Utilisez les bonnes pratiques de gestion de déchets verts de ces espèces car vous risquez d'accélérer leur dissémination. **Attention à ne pas perdre de fragments d'EEE lors du transport des déchets.** Certaines plantes ne sont pas détruites par le compostage et les épandages de ce compost contaminé risquent d'accélérer l'expansion de ces plantes en créant de nouveaux foyers. Par exemple évitez de mettre dans les déchets verts les tiges et les «racines» de Renouée du Japon, les fleurs (et les fruits) de la Berce du Caucase et de la Balsamine de l'Himalaya.
Pour un risque zéro de dispersion accidentelle, stockez au même endroit ces déchets verts et détruisez-les (enterrez sauf les Renouées, incinérez, brûlez par un feu avec autorisation préfectorale...).

GESTION DE LA BERCE DU CAUCASE



Attention : évitez de rentrer en contact avec la plante. Portez des gants et couvrez toutes les parties du corps.

Avec une bêche coupez la racine (sous le collet) à 10-15cm de profondeur.

Deux modalités de gestion sont possibles

Option 1 : On effectue la section des racines en avril ou en mai lorsque les plantes sont encore de petite taille et plus facile à manipuler.
Option 2 : On réalise la section en juin-juillet sur des individus en début de floraison (avant la production de graines). Attention car la taille de la plante rendra la manipulation plus délicate.

Techniques de gestion des Espèces Exotiques Envahissantes

GESTION DE LA RENOUÉE DU JAPON

Cette plante émet des rhizomes (tiges souterraines) jusqu'à 2m de profondeur, permettant à la plante de résister longtemps à toute agression (pesticides, fauches,...). Seul l'épuisement des rhizomes permet d'en venir à bout sur le long terme.

MODALITÉ DE GESTION

Faucher et exporter les tiges de Renouée tous les mois, d'avril à octobre, pendant 8 ans voire plus jusqu'à disparition de la Renouée.

Faire sécher et brûler si possible les tiges récoltées, car un morceau d'un gramme peut redonner une plante.

ET N'OUBLIEZ PAS QUE LA MEILLEURE TECHNIQUE DE LUTTE, C'EST LA PRÉVENTION

Pour prévenir l'apparition de nouvelles espèces ou de nouveaux foyers, il est primordial de connaître et de lutter contre la source de dissémination. Montrez vous-même l'exemple en n'implantant pas d'EEE dans vos espaces verts. Les habitants prennent souvent pour exemple les végétaux qu'ils ont vus implantés dans la commune pour leur propre jardin.

Informez au maximum vos concitoyens sur les problèmes de ces espèces pour les sensibiliser.

Les habitants sont des acteurs majeurs pour participer à un réseau d'alerte efficace pour intervenir le plus tôt possible. Certains habitants cultivent aussi, sans le savoir, ces espèces. Ce travail d'information les incitera à retirer ces plantes de leurs massifs.

Pour en savoir plus :

CPIE Val d'Authie
25 rue Vermaelen - BP23 - 62390 Auxi-le-Château
Tél : 03.21.04.05.79
Courriel : contact@cpie-authie.org
Site : www.cpie-authie.org

Conservatoire Botanique National de Bailleul
Hameau de Haendries - 59270 Bailleul
Tél : 03.28.49.93.07
Courriel : infos@cbnbl.org
Site: www.cbnbl.org

FREDON
265 rue Becquerel - BP 74 - 62750 Loos-en-Gohelle
Tél : 03.21.08.62.90
Site : www.fredon-npdc.com

Posters EEE du Nord de la France disponibles au CPIE Val d'Authie à Auxi-le-Château.

Petit guide de quelques plantes invasives aquatiques et autres du Nord de la France. *Conservatoire Botanique National de Bailleul. SALIOU, P. & HENDOUX, F. (2008).*

Les espèces végétales invasives des milieux aquatiques et humides du bassin Artois-Picardie. *(Octobre 2005). Agence de l'Eau Artois-Picardie.*

Plantes exotiques envahissantes du Nord-Ouest de la France. *(2012). Conservatoire Botanique National de Bailleul.*

Conclusion

Après 3 ans de vie du projet RINSE, on peut déjà tirer quelques conclusions et enseignements positifs.

Ainsi, chacune des activités mises en œuvre a fait **l'objet d'un document de synthèse** permettant à chacun de pouvoir bénéficier des enseignements de ce projet. Ces documents sont téléchargeables sur le site internet du projet : http://www.rinse-europe.eu/

Par ailleurs, dans le cadre de ce projet, **4 ateliers d'échanges de bonnes pratiques ont eu lieu.** Ces rencontres étaient une excellente occasion pour les principaux acteurs concernés dans la zone des 2 mers de partager des expériences et des connaissances sur la gestion des espèces exotiques envahissantes. **Chacun de ces ateliers présentait un aspect différent de la gestion des espèces exotiques envahissantes : gestion des mammifères et oiseaux, gestion des espèces aquatiques, stratégie de gestion à l'échelle de bassin versant, les sciences citoyennes et le volontariat appliqués aux EEE.**

Enfin, une conférence de clôture du projet a également permis de présenter les principaux résultats du projet, d'échanger avec les participants et d'ouvrir ces échanges sur **les perspectives futures notamment au regard de l'évolution réglementaire au travers de la mise en œuvre de la stratégie européenne de lutte contre les EEE.**

Le projet RINSE a permis d'améliorer la prise en compte des EEE par les acteurs et décideurs locaux sur la zone des 2 mers grâce à la réalisation d'actions d'amélioration de la connaissance en termes de répartition, de risques et de gestion, et par la conception de moyens de sensibilisation et de formation. **La participation du CPIE Val d'Authie à ce projet a donné une opportunité à notre territoire de bénéficier des expériences de nos voisins européens et ainsi de favoriser une montée en compétences locales bénéfique à notre patrimoine naturel et cadre de vie.**

Glossaire

Autochtone : qualifie ce qui habite en son lieu d'origine.

Biotope : milieu favorable à la vie d'un animal ou d'une plante, milieu de vie où les conditions écologiques sont considérées comme homogènes et bien définies.

Eutrophe : qui se développe sur sols fertiles et généralement neutre.

Indigène : qui est originaire du pays.

Mégaphorbiaie : milieu tempéré constitué d'une prairie dense de roseaux et de hautes plantes herbacées vivaces.

Mésotrophe : qui se développe sur sols moyennement fertiles.

Pennatiséqué : limbes à divisions aigues dont le découpage en lobes atteint la nervure médiane, feuille pennée, divisée en plusieurs folioles.

Pétiole (n.m.) : queue d'une feuille, reliant le limbe à la tige.

Pétiolule : petit pétiole de chaque foliole d'une feuille composée.

Plastron : partie ventrale de la carapace de tortue.

Rudéralisation : sol modifié (dépôts de décombres...).

Verticille : ensemble des parties de la fleur ou des organes foliacés disposés, au nombre de deux au moins, autour d'un axe commun et sur un même plan horizontal.

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Pour tout renseignement
merci de contacter le :

VAL D'AUTHIE

25 rue Vermaelen - BP 23
62390 Auxi-le-Château
Tél. : 03 21 04 05 79
Courriel : contact@cpie-authie.org
Site : www.cpie-authie.org

Pas-de-Calais
Le Département

RÉGION Nord-Pas de Calais

Annex I


« Investir dans votre futur »
RINSE
BALSAMINE
DE L'HIMALAYA
Avez-vous cette
plante chez vous ?
Belle et destructrice, elle menace les plantes sauvages des berges des cours d'eau. Aidez nous à l'éradiquer.
VAL D'AUTHIE

Qu'est ce que la Balsamine de l'Himalaya ? Pourquoi devons nous l'éliminer ?

- C'est une plante envahissante qui n'est pas originaire de France.
- Elle pousse très vite jusqu'à 2m de haut, faisant concurrence à la flore sauvage.
- Elle produit jusqu'à 700 graines par plante.
- Les graines sont transportées par l'eau, un seul pied peut avoir un impact négatif sur une très large zone.

Si vous pensez avoir cette plante dans votre jardin, utilisez les photos pour l'identifier et reportez-vous aux schémas pour l'éliminer. Il est encore temps d'agir pour stopper cette menace qui transforme les paysages typiques de nos cours d'eau. C'est ensemble que nous pourrons la combattre.

Pour tout renseignement complémentaire contacter Céline FONTAINE au 03.21.04.05.79 ou par mail : celine.fontaine@cpie-authie.org

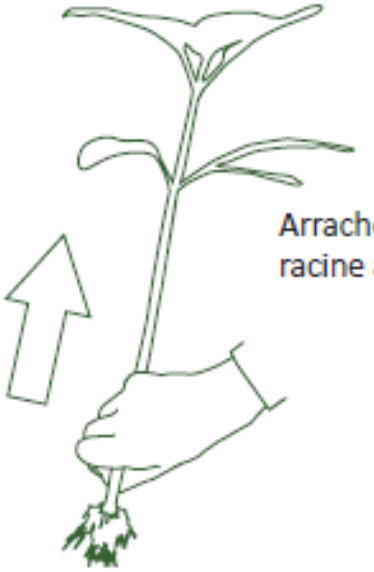
Comment s'en débarrasser ?

Arrachez la plante avec vos mains, obligatoirement en début de saison avant la production de graines (Mai - Juin).

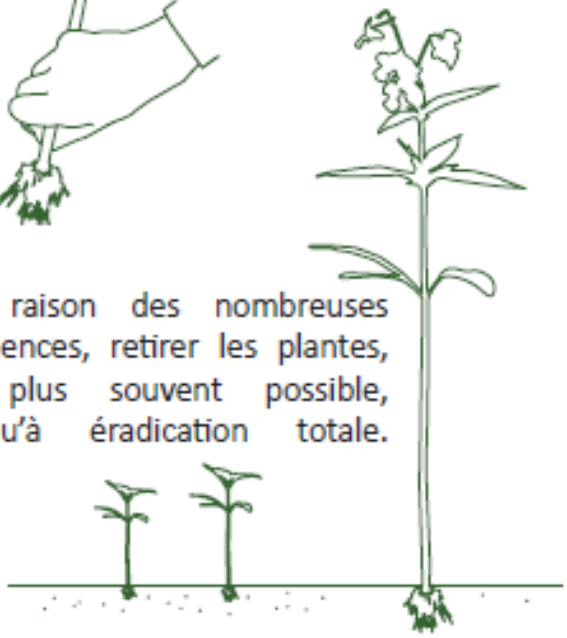
Ne pas composter à l'état frais, les faire sécher loin des zones inondables puis incinérez-les ou compostez-les.

Surveillez la zone infestée et retirez les nouvelles plantes.

Attention quand vous retirez les plantes au bord de l'eau, verifiez qu'aucun fragment ne tombe dans l'eau : risque de boutage.



Arracher la plante et la racine avec vos mains.



En raison des nombreuses semences, retirer les plantes, le plus souvent possible, jusqu'à éradication totale.

Mettre les plantes dans un sac poubelle. Lorsqu'elles auront séché incinérez-les ou compostez-les.

Conception graphique : BROADS AUTHORITY (UK) ; Adaptation : CPIE Val d'Authie ; Crédits photos : N.MARIETTE (SAGE de la Canche), M.FONTAINE, GIBNISS et RPS group Plc

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VAL D'AUTHIE

RINSE


RINSE
LA BERCE
DU CAUCASE
Avez-vous cette plante chez vous ?
Elle paraît inoffensive et pourtant elle présente un grave danger pour la santé et menace notre environnement. Aidez nous à l'éradiquer.
VAL D'AUTHIE

Qu'est ce que la Berce du Caucase ? Pourquoi devons nous l'éliminer ?

ESPÈCE
EXOTIQUE
ENVAHISSANTE

- Elle est originaire du Caucase, on s'en sert pour l'ornement des jardins et comme plante mellifère.
- Elle pousse très vite jusqu'à 4m de haut, faisant concurrence à la flore sauvage.
- Elle produit plus de 10 000 graines par plante.

ATTENTION ! ELLE BRÛLE !

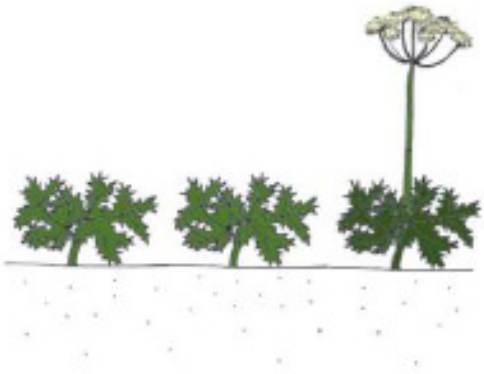
- Au contact de la peau et à la lumière du soleil, la sève provoque de sévères brûlures au second degré.
- Les symptômes apparaissent après quelques heures.
- En cas de brûlure consulter un médecin.

Si vous pensez avoir cette plante dans votre jardin, utilisez les photos pour l'identifier et reportez-vous aux schèmas pour l'éliminer. **En cas de problème contacter Céline Fontaine au 03.21.04.05.79 ou par mail : celine.fontaine@cpie-authie.org**

Comment s'en débarrasser ?

Évitez de rentrer en contact avec la plante. Portez des gants, couvrez toutes les parties du corps avec des vêtements.

Coupez la racine avec une bêche à 10-15 cm de profondeur.



Surveillez la zone infestée et retirez les nouvelles plantes **jusqu'à éradication totale.** Attention les graines peuvent germer pendant plus de 7 ans.

Mettez les fleurs et les graines des ombelles dans un sac poubelle, déposez le sac aux ordures ménagères.

ATTENTION NE PAS LA CONFONDRE AVEC LA **GRANDE BERCE,** ESPÈCE SAUVAGE INDIGÈNE **SANS DANGER.**

CONCEPTION : BROADS AUTHORITY (UK) ; ADAPTATION GRAPHIQUE ET CRÉDITS PHOTOS : A. WATTERLOT, CPIE VAL D' AUTHIE ; ILLUSTRATIONS : M. BELLOCHE

VAL D'AUTHIE

RINSE

« Investir dans votre futur »

RINSE

VAL D'AUTHIE

Attention ! Des fugueuses dans votre mare. Les Espèces Exotiques Envahissent nos mares ! A Haverskerque, la Vieille Lys a été envahie sur 6 km en 2 ans.

Jardiniers en Alerte

Petit guide d'information

Les Espèces Exotiques Envahissantes des mares
Comment prévenir ces risques ?

- Les EEE des mares entrainent la perte de la biodiversité locale : privés de lumière et d'oxygène, les poissons et les plantes aquatiques disparaissent, provoquant la fin des activités de pêche et de nautique.

Connaître ces risques et savoir identifier ces plantes, permet d'éviter des dégats environnementaux parfois irréversibles et toujours très coûteux pour la collectivité ou le propriétaire.

Si vous pensez avoir ces plantes dans votre marais, utilisez les photos pour les identifier. Il est encore temps d'agir pour stopper ces plantes qui menacent nos cours d'eau. Pour tout renseignement complémentaire contacter le CPIE Val d'Authie, (Centre de ressources sur les Espèces Exotiques Envahissantes), au 03.21.04.05.79 ou par mail : celine.fontaine@cpie-authie.org

Vous avez ces plantes dans votre mare
Attention elles menacent nos cours d'eau

Crassule de Helms *(Crassula helmsii)*

Myriophylle du Brésil
(Myriophyllum aquaticum)

Grand lagarosiphon *(Lagarosiphon major)*
et Elodée dense *(Egeria densa)*

Hydrocotyle fausse-renoncule
(Hydrocotyle ranunculoides)

Azolle *(Azolla filiculoides)*

Jussies *(Ludwigia sp)*

LES BONS GESTES DU JARDINIER RESPECTUEUX

Ne les plantez pas !

Ne plus les planter est la méthode la plus simple et la moins coûteuse.

Si vous les avez déjà dans votre mare supprimez -les.
Remplacez-les par d'autres espèces similaires mais sans risque d'envahissement.

Ne les dispersez pas !

Si vous souhaitez les conserver, adoptez les bons gestes.

Ne jetez pas vos plantes aquatiques dans les fossés, étangs et cours d'eau naturels. Mais faites très attention, ces plantes peuvent être dispersées naturellement par la faune ou les inondations.

Devenez les sentinelles de votre commune

Si vous observez ces plantes dans la nature, alertez-nous !
Plus on intervient tôt, moins l'éradication est contraignante et coûteuse.

Devenez le conseiller de vos voisins, de votre commune

Si vos voisins ou la commune en possèdent, informez-les sur les risques encourus et formez-les aux bonnes pratiques.

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25 rue Vermaelen BP-23
62390 Auxi-le-Château
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VAL D'AUTHIE

RINSE

Attention ! Des fugueuses dans vos massifs. Les Espèces Exotiques Envahissent nos bords de route ! Près de Montreuil-sur-Mer, les berges de La Dordogne ont été envahies sur plusieurs kilomètres.

Jardiniers en Alerte

Petit guide d'information

Les Espèces Exotiques Envahissantes des massifs
Comment prévenir ces risques ?

- Les EEE des massifs entrainent la perte de la biodiversité locale en étouffant, les plantes et la faune typiques des rives qui régressent, entrainant l'accès limité aux sentiers de randonnée et l'accumulation de débris.

Buddleia (Buddleja davidii)

Connaître ces risques et savoir identifier ces plantes, permet d'éviter des dégats environnementaux parfois irréversibles et toujours très coûteux pour la collectivité ou le propriétaire.

Si vous pensez avoir ces plantes dans votre jardin, utilisez les photos pour les identifier. Il est encore temps d'agir pour stopper ces plantes qui menacent nos paysages.
Pour tout renseignement complémentaire contacter le CPIE Val d'Authie, (Centre de ressources sur les Espèces Exotiques Envahissantes), au 03.21.04.05.79 ou par mail : celine.fontaine@cpie-authie.org

Annex J

Vous avez ces plantes dans vos massifs
Attention elles menacent nos paysages

Renouée du japon
(Fallopia japonica)

Balsamine de l'Himalaya
(Impatiens glandulifera)

Berce du Caucase
(Heracleum mantegazzianum)

Solidage glabre *(Solidago gigantea)*
Solidage du Canada *(Solidago canadensis)*

Rosier rugueux
(Rosa rugosa)

Conseil spécifique : Ne pas planter le Rosier rugueux sur les communes littorales

Buddleia *(Buddleja davidii)*

LES BONS GESTES DU JARDINIER RESPECTUEUX

Ne les plantez pas !

Ne plus les planter est la méthode la plus simple et la moins coûteuse.

Si vous les avez déjà dans vos massifs supprimez -les.
Remplacez-les par d'autres espèces similaires mais sans risque d'envahissement.

Ne les dispersez pas !

Si vous souhaitez les conserver, adoptez les bons gestes.

Ne jetez pas vos déchets verts au bord des routes et dans les espaces délaissés. Mais faites très attention, ces plantes peuvent être dispersées naturellement par le vent ou la faune.

Devenez les sentinelles de votre commune

Si vous observez ces plantes dans la nature, alertez-nous !
Plus on intervient tôt, moins l'éradication est contraignante et coûteuse.

Devenez le conseiller de vos voisins, de votre commune

Si vos voisins ou la commune en possèdent, informez-les sur les risques encourus et formez-les aux bonnes pratiques.

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25 rue Vermaelen BP-23
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Mail : contact@cpie-authie.org

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RINSE

HELPING TO STOP THE SPREAD OF INVASIVE NON-NATIVE PLANTS THROUGH THE PLANNING SYSTEM

A Guidance Note prepared for the New Forest National Park Authority by Hampshire and Isle of Wight Wildlife Trust

NEW FOREST NATIONAL PARK

Hampshire & Isle of Wight Wildlife Trust
Protecting wildlife. Inspiring people.

Purpose of this document

This document has been prepared by Catherine Chatters, The New Forest Non-Native Plants Officer, on behalf of Hampshire and Isle of Wight Wildlife Trust (HIWWT). It aims to raise awareness about the problems caused by invasive non-native plants; provide guidance to the New Forest National Park Authority to minimise the spread of invasive non-native plants through the planning system; highlight useful sources of information and advice.

What are Invasive non-native plants and why are they a problem?

A species is generally considered to be 'non-native' when it has been introduced by human agency outside its 'natural range'.

Non-native plants have been introduced to the UK by accident or as a consequence of trade or deliberate collection. Many non-native plants have been deliberately introduced into the UK where they contribute to economic and social well-being through, for example, agriculture, forestry and horticulture.

Not all non-native plants become invasive but if they do, they become very difficult and expensive to control. Invasive non-native plants tend to share characteristics that make them successful. These are related to the method of reproduction, growth rate, growth form and persistence and, in particular, the absence of pests and diseases. Many invasive non-native plants are resistant to control.

Where invasive non-native plants become dominant in the environment, they may have a detrimental impact on native species, transform ecosystems and cause environmental harm. Invasive non-native plants that grow in water or on riverbanks can cause flooding.

Invasive non-native species of plants and animals are considered to be the second biggest threat to biodiversity worldwide after habitat loss and destruction. They are a global concern and many governments are committed to tackling them through several international agreements.

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The consequences and costs of invasive non-native species are huge. The annual cost of invasive non-native species to the economy is estimated at £1.3 billion in England and £125 million in Wales. These costs relate to control and eradication, structural damage to infrastructure, or loss of production due to the presence of an invasive non-native species. The annual cost of damage caused and control measures necessitated by invasive non-native species in Europe is estimated as at least 12 billion Euros [1].

The predicted consequences of global warming, including increased temperatures, increased carbon dioxide and stormier weather, make it more likely that additional invasive species will cause problems in the future, as climate change favours their colonisation and rapid growth.

Invasive non-native plants in The New Forest area

Much of the New Forest National Park is recognised as being of high ecological importance through designation as Sites of Special Scientific Interest (SSSI) in accordance with the Wildlife and Countryside Act 1981 (as amended). Many SSSIs in the New Forest National Park are recognised as being of international wildlife importance through designation as Special Areas of Conservation in accordance with the EC Habitats and Species Directive, or Special Protection Areas in accordance with the EC Birds Directive. The international importance of The New Forest's wetlands is reflected in their designation as 'Ramsar Sites' in accordance with the Ramsar Convention.

The New Forest is one of the most important areas for wildlife in Western Europe but is threatened by the spread of invasive non-native plants.

The New Forest Non-Native Plants Project

The New Forest Non-Native Plants Project was set up in 2009 to stop the spread of invasive non-native plants in the New Forest area, particularly along watercourses and in wetland habitats. It is hosted by Hampshire and Isle of Wight Wildlife Trust and supported by a partnership of organisations including the New Forest National Park Authority, Natural England, Forestry Commission and the Environment Agency.

The New Forest Non-Native Plants Project aims to:-

- identify where invasive non-native plants are a problem, particularly within river valleys;
- arrange for work to be carried out by volunteers and contractors to help control them;
- commission research into control methods;
- raise awareness about the need to control these plants and to prevent them spreading into our countryside.

The preparation of this Guidance Note aims to a) raise awareness about the problems caused by invasive non-native plants and b) offer advice on where to find relevant information to help stop the spread of invasive non-native plants through the planning system.

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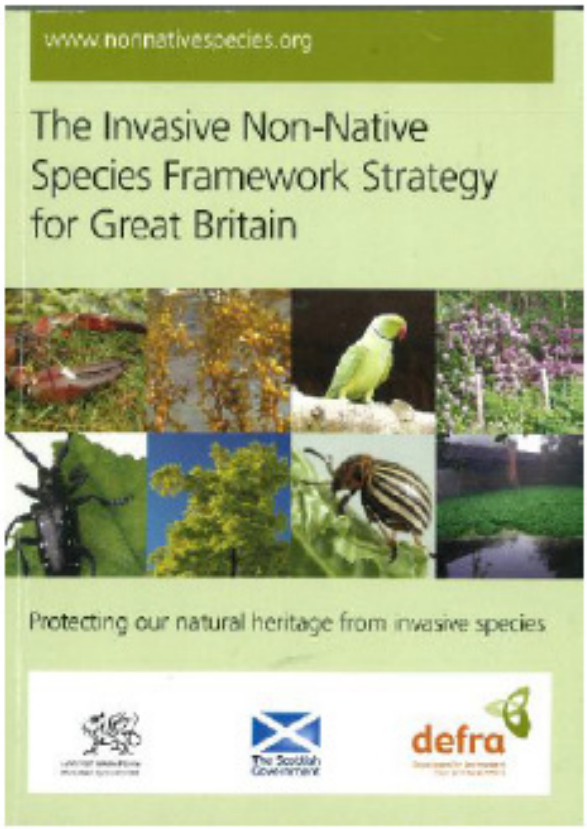
The Invasive Non-Native Species Framework Strategy for Great Britain

Recognising the problems caused by invasive non-native species, the governments of England, Scotland and Wales have developed a comprehensive national policy framework titled 'The Invasive Non-Native Species Framework Strategy for Great Britain'. The Strategy, published in 2008 provides a framework for a more co-ordinated and strategic approach to stop the spread of invasive non-native species. It seeks to create a stronger sense of shared responsibility across government, key organisations, land managers and the public and emphasises that successful implementation of the Strategy will require a strong partnership approach, combined with greater public awareness and understanding.



The Great Britain Non-Native Species Secretariat

The GB Non-Native Species Secretariat has been established to oversee the implementation of The Invasive Non-Native Species Framework Strategy for Great Britain. The website www.nonnativespecies.org provides a wealth of valuable reference material.

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Existing legislation relating to invasive non-native species

The problems caused by invasive non-native species are recognised in several international treaties, European Union Directives and in domestic legislation. The problems caused by some invasive non-native species occur worldwide and international obligations to address them are places on the UK through regional and global agreements. These include the Convention on Biological Diversity (CBD), International Plant Protection Convention (IPPC), the Bern Convention on the Conservation of European Wildlife and Natural Habitats and the EC Habitats and Species Directive.

The Wildlife and Countryside Act 1981 provides the primary controls on the release of non-native species in to the wild in Great Britain. It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II.

Stricter enforcement provisions for wildlife offences were introduced under the Countryside and Rights of Way Act 2000. These include increased penalties available to the courts for offences committed under the Wildlife and Countryside Act 1981.

Other legislation relevant to invasive non-native species control includes:-

- Environmental Protection Act 1990
- Environmental Protection (Duty of Care) Regulations 1991
- Town and Country Planning Act 1990
- Highways Act 1980
- Water Resources Act 1991
- The Environmental Permitting (England and Wales) Regulations 2007
- The Landfill (England and Wales) Regulations 2002

Responsibility for the control of invasive non-native plants

Responsibility for dealing with invasive non-native plants rests with individual landowners. Strategic, widespread control is currently not the sole responsibility of any statutory organisation. However there are opportunities through the planning system for the local planning authority to influence landowners and provide advice to developers.

How the planning system can help to stop the spread of invasive non-native plants

Recognition of invasive non-native plants on proposed development sites

It is important that invasive non-native species are recognised when a site is proposed for (re-)development, so that measures can be taken to stop their spread when the site is being developed.

For example, a new colony of Japanese knotweed can spread from just a tiny piece of rhizome so if this plant is growing on a development site, it is important that it is identified early on in the planning process so that appropriate measures can be taken to ensure it does not spread through contaminated soil being transported from the development site.

/Cont....

Himalayan balsam and giant hogweed are invasive non-native plants which typically grow near watercourses. They produce a large number of seeds which can fall into the water and be carried downstream to form dense colonies further downstream. Such plants therefore pose a threat if they could spread from a development site via a watercourse.

Excellent identification sheets for a wide range of invasive non-native plants have been produced by the GB Non-Native Species Secretariat. They can be downloaded from the GB Non-Native Species Secretariat's website at www.non-nativespecies.org

From the Home Page click on the 'Species Information' tab and this will take you to the 'ID Sheets'.

As an example, the identification sheet for Japanese knotweed is enclosed with this Guidance Note. The first page of this identification sheet is shown below:-

/Cont....

The GB Non-Native Species Secretariat's website also has an excellent gallery of photographs which show a large number of invasive non-native plants at different stages of growth through the year.

From the Home Page, click on the 'Species Information' tab and this will take you to the 'Gallery'.

Examples of photographs of Japanese knotweed and Himalayan balsam taken from the GB Non-Native Species Secretariat's gallery are shown below:-

Japanese knotweed (photos: Great Britain Non-Native Species Secretariat)

Himalayan balsam (photos: Great Britain Non-Native Species Secretariat)

/Cont....

Providing guidance relating to the control of invasive non-native plants on development sites

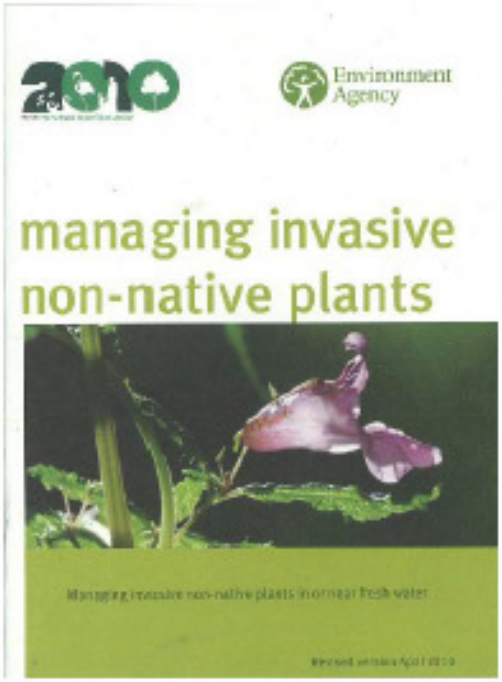
If an invasive non-native plant is growing on a development site, guidance can be provided to the landowner/developer on how to control or eradicate it. The Environment Agency has published a very helpful booklet titled 'Managing invasive non-native plants in or near fresh water' (revised version April 2010).

The booklet gives advice on how to control Japanese knotweed, giant hogweed, Himalayan balsam and four aquatic plants namely Australian swamp stonecrop (also known as New Zealand pygmyweed), parrot's feather, floating pennywort and creeping water primrose.

Although the booklet has been written specifically to provide advice on the control of species growing in or near fresh water, the information it contains is relevant to those species such as Japanese knotweed and giant hogweed which can sometimes be found growing away from water. Furthermore, the booklet contains a lot of very useful general background information on legislation and responsibilities.

A PDF of this booklet can be downloaded from the Environment Agency's website at http://www.environment-agency.gov.uk/homeandleisure/wildlife/31350.aspx

A copy of the booklet is enclosed with this Guidance Note.



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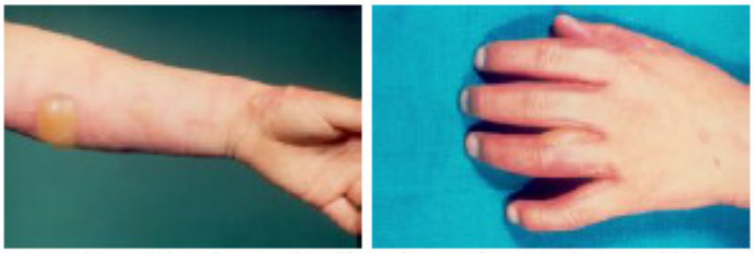
Although the information relating to herbicide treatment in this booklet was correct at the time of publication (April 2010), some of the information relating to, for example, the herbicide 2,4-D amine is now out-of-date, so please check the current situation with the Environment Agency.

For advice on herbicides, please contact David Horne at the Environment Agency:-

David Horne
Environment Officer New Forest and Test Team
Environment Agency
Romsey District Office, Canal Walk, Romsey
SO51 7LP
telephone 01794 832729
e-mail: david.horne@environment-agency.gov.uk

Giant hogweed is an invasive non-native plant, listed in Schedule 9 of the Wildlife and Countryside Act 1981. It can grow to 5 metres tall and each plant is capable of producing 50,000 seeds. In the New Forest National Park it has colonised the banks of the Avon Water as shown above. (Photo: Trevor Renals, Environment Agency)



Giant hogweed is a risk to human health as it contains a toxic sap which reacts with sunlight to form 'burning' blisters on human skin
(Photos: Max Wade, RPS)

/Cont....

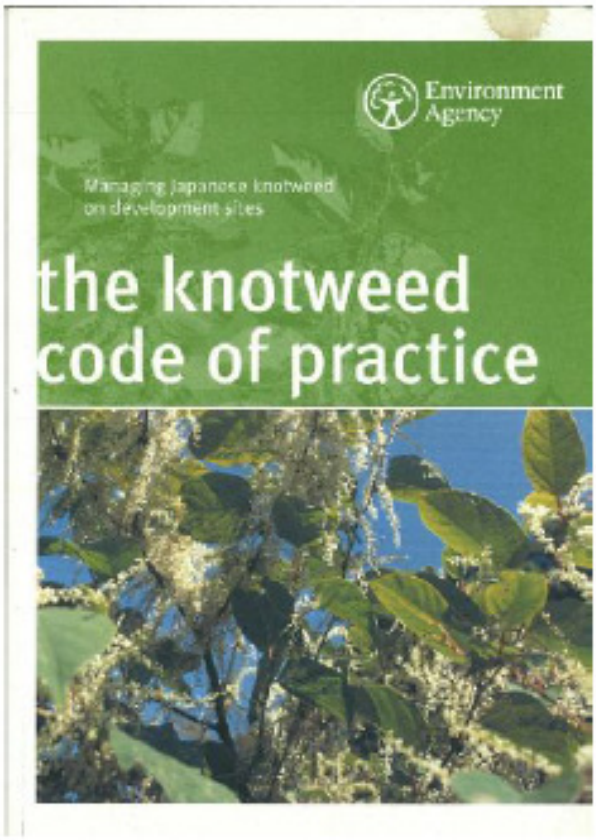
Minimising the risk of spreading invasive non-native plants from a development site
Japanese knotweed is sometimes found growing on (re-)development sites, often as a result of fly-tipping of garden waste.

The Environment Agency has published guidance titled 'Managing Japanese knotweed on development sites : The knotweed code of practice' (September 2006).

The document is aimed at developers and gives advice on *inter alia*:-

- how to prevent the spread of Japanese knotweed;
- how to treat or dispose of Japanese knotweed on site;
- how to dispose of Japanese knotweed off-site;
- how to move soil containing Japanese knotweed.

This document can be downloaded from the Environment Agency's website at http://www.environment-agency.gov.uk/static/documents/Leisure/knotweed_CoP.pdf



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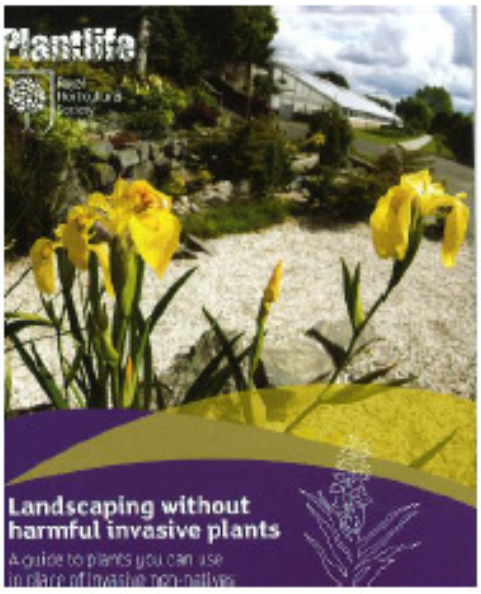
Choice of plants used in landscaping schemes on development sites
By influencing the choice of plants used in landscaping schemes, the planning authority can minimise the risk of invasive non-native species being planted on development sites. From 6 April 2014, five particularly invasive non-native aquatic plants will be banned from sale, namely New Zealand pygmyweed (also known as Australian swamp stonecrop), floating pennywort, water fern, parrot's feather and creeping water primrose. However a large number of other invasive non-native plants will still be available for purchase.

The charity 'Plantlife' has produced three useful advisory booklets in association with the Royal Horticultural Society:-

- Landscaping without harmful invasive plants : A guide to plants you can use in place of invasive non-natives
- Gardening without harmful invasive plants: A guide to plants you can use in place of invasive non-natives
- Keeping ponds and aquaria without harmful invasive plants: A guide to plants you can use in place of invasive non-natives

Plantlife can be contacted at:-
14 Rollestone Street, Salisbury, SP1 1DX
Telephone 01722 342730

Copies of these booklets are enclosed with this Guidance Note.



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Other useful sources of guidance

Department for Environment, Food and Rural Affairs (Defra) has published 'Guidance on section 14 of the Wildlife and Countryside Act, 1981' (published 21 December 2009; amended 21 May 2010). This document is available on the Defra website at http://www.defra.gov.uk/wildlife-pets/wildlife/management/non-native/legal.htm

The Property Care Association (PCA) has published a 'Code of Practice for the Management of Japanese knotweed' (Version 2.6: Last modified on 20 March 2013). This Code of Practice includes advice on the relevant legislation, the control and disposal of Japanese knotweed and the excavation and transport of contaminated material.
www.property-care.org/

Cornwall County Council's website provides useful information on legal issues relating to Japanese knotweed.
http://www.cornwall.gov.uk

Help with the recognition of invasive non-native plants can be found at Q-bank Invasive Plants Database. English language factsheets are available to assist with the identification on a number of plant species, particularly those associated with aquatic habitats.
www.q-bank.eu/Plants

References

1 F Williams and others, *The Economic Cost of Invasive Non-Native Species on Great Britain* (2010) p 11; European Environment Agency 'The impacts of invasive alien species in Europe' *Technical Report No 16/2010* (2012) p 7.

Japanese knotweed in winter
(Photo: Great Britain Non-Native Species Secretariat)

/Cont....

RINSE (Reducing the Impact of Non-native Species in Europe)

Hampshire and Isle of Wight Wildlife Trust is a partner in the European project known as 'RINSE' which brings together nine partner organisations from four European countries (UK, The Netherlands, France and Belgium) to pool resources and knowledge across borders, to share best practice and adopt strategic approaches to tackle the threats posed by invasive non-native species. RINSE has been part-funded by the European Union (European Regional Development Fund) delivered through the Interreg IVA 2 Seas Programme. Part-funding towards the preparation of this Guidance Note has been secured through RINSE. For further information about RINSE please see the website www.rinse-europe.eu

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31 March 2014

Annex K

VAL D'AUTHIE

RINSE

Reducing the impact of non-native species in Europe

Workpackage 2 - Workshop 2 :
4 December 2012
Lille, France

Training

Agent de maîtrise territorial

L'agent de maîtrise territorial rédige des documents et anime des réunions, il propose des actions après analyse de dossiers ou de situations, il rend compte de la conduite des missions dont il est responsable et participe à l'élaboration des projets.

L'agent de maîtrise territorial contrôle et régule l'activité des centres d'exploitations. Il gère le domaine public routier et l'exploitation du réseau. Il assure la surveillance des routes départementales et en particulier le contrôle mensuel du fonctionnement de la surveillance active effectuée par ses équipes.

L'agent de maîtrise territorial établit des propositions de travaux pour le programme pluriannuel d'entretien (renforcement et opérations de voirie non individualisées) et il programme les travaux d'entretien divers, d'aménagements du territoire (documents d'urbanisme, projets urbains,…), définit leur mode d'exécution et en assure le suivi technique et financier.

L'agent de maîtrise territorial hiérarchise les urgences. Il doit connaître et suivre l'évolution de la réglementation. L'agent de maîtrise territorial a une capacité d'écoute, de relationnel et de négociation entre les différents acteurs (techniciens, élus, riverains usagers...).

Le chef d'équipe d'exploitation routier

Le chef d'équipe d'exploitation routier manage une équipe d'agents de terrain réalisant des tâches d'entretien et d'exploitation de la route. Il s'assure du bon déroulement des missions en s'occupant de leur gestion. Il est sous l'autorité hiérarchique du contrôleur chargé de secteur.

Le chef d'équipe d'exploitation routier est en mesure de programmer, organiser et suivre les tâches d'entretien et de viabilité hivernale. Il est capable d'intervenir en urgence sur des événements imprévisibles. Le chef d'équipe assure la gestion de premier niveau des agents d'exploitation (congé, entretien d'évaluation…), il peut participer occasionnellement à l'exécution des tâches d'entretien et d'exploitation de la route.

Le chef d'équipe organise la mutualisation du matériel (dont il a la connaissance du fonctionnement des engins, des équipements et des outillages) entre les différentes antennes avec les autres chefs d'équipe.

Le chef d'équipe possède la connaissance des techniques d'entretien, de déneigement et de traitement, et des procédures internes de surveillance du patrimoine routier ainsi que la connaissance des règles d'hygiène et de sécurité pour les interventions sur le réseau routier (signalisation temporaire, du code de la voirie routière et du règlement départemental de la voirie…).

L'agent d'exploitation de la route
ou
L'agent d'entretien de la voirie

L'agent d'exploitation de la route ou l'agent d'entretien de la voirie a en charge l'exécution de divers travaux d'entretien et de réparation des voies et des espaces publics.

La mission quotidienne de ces agents est de garantir aux usagers la pratique et la sécurité du réseau routier communal ou départemental en toutes circonstances quelle que soit la saison. Afin d'être opérationnel de manière continue, ces métiers sont soumis à un régime d'astreinte qui permet une mobilisation rapide en cas de nécessité (accident de la route, intempéries, manifestations diverses).

Cette activité est fortement conditionnée par les impératifs de la météo et de l'évolution des saisons. La typologie des secteurs d'intervention est également importante.
D'une manière générale, en hiver, l'une des activités principales de ces agents est de rendre praticable la voie publique.
En dehors de cette période (selon les territoires), ils effectuent les travaux de chaussée, de terrassement et de déblaiement indispensables à la bonne tenue du réseau routier.
Les agents d'exploitation interviennent également sur les opérations de curage des fossés, d'élagage et de fauchage de la végétation.
En toutes circonstances, ils entretiennent et réparent les espaces et voies publiques ainsi que leur matériel et leur outillage de chantier.

La spécificité de leur activité implique la notification des actions à conduire. Ainsi, à tout type d'opération correspond une procédure simple à mettre en place. La traçabilité est également un élément important afin de pouvoir justifier des décisions prises en cas de contestation. Ces principes répondent à une démarche qualité.

Les services de la voirie sont aussi associés aux principes de développement durable. Depuis une dizaine d'années, ils mènent des campagnes de limitation de l'utilisation des produits phytosanitaires, du recours massif au sel et de la préservation de la faune et de la flore, notamment avec la lutte contre les espèces invasives.

L'agent d'exploitation de la route ou d'entretien de la voirie dispose d'une certaine autonomie au quotidien dans son organisation de travail. Il doit être capable de se « gérer » et de prendre des initiatives lorsque la situation présente un caractère urgent tout en prévenant son encadrant.

OP1 Etre capable de définir et d'expliquer ce qu'est une Espèce Exotique Envahissante (EEE) et les problématiques posées.

OI 11 Etre capable de définir le terme EEE

OI 12 Etre capable d'expliquer ce qu'est une EEE

OI 13 Etre capable de déterminer les différentes problématiques des EEE
- OI 131 Etre capable de déterminer les problématiques écologiques des EEE
- OI 132 Etre capable de déterminer les problématiques économiques des EEE
- OI 133 Etre capable de déterminer les problématiques sanitaires des EEE

OP2 Etre capable de connaître et comprendre les impacts et les enjeux de la gestion d'une EEE.

OI 21 Etre capable de connaître et comprendre les impacts d'une EEE.

- OI 211 Etre capable de connaître et comprendre les impacts écologiques des EEE
- OI 212 Etre capable de connaître et comprendre les impacts économiques des EEE
- OI 213 Etre capable de connaître et comprendre les impacts sanitaires des EEE

OI 22 Etre capable de connaître et comprendre les enjeux de la gestion d'une EEE.

- OI 221 Etre capable de connaître et comprendre les enjeux écologiques des EEE
  - OI 2211 Etre capable de préserver la biodiversité
  - OI 2212 Etre capable d'éviter l'accroissement de la surface des populations d'EEE existantes
  - OI 2213 Etre capable d'éviter la dissémination des EEE et de ce fait être capable de limiter le développement de nouveaux sites d'EEE.
  - OI 2214 Etre capable d'effectuer un inventaire et un suivi permanent
- OI 222 Etre capable de connaître et comprendre les enjeux économiques des EEE
  - OI 2221 Etre capable de préserver l'activité économique
  - OI 2222 Etre capable d'éradiquer rapidement les nouvelles et les petites populations d'EEE
- OI 223 Etre capable de connaître et comprendre les enjeux sanitaires des EEE
  - OI 2231 Etre capable de s'équiper (d'équiper ses agents) en toute sécurité en fonction de l'EEE
  - OI 2232 Etre capable d'organiser son chantier en préservant les autres

OP3 Etre capable de reconnaître les principales EEE des bords de routes.

OI 31 Etre capable d'identifier les principales EEE.

OI 32 Etre capable de connaître les principales EEE.
- OI 321 Etre capable de connaître les différents modes de reproduction, les périodes de croissance et de propagation des principales EEE.
- OI 322 Etre capable de connaître le biotope des principales EEE.

OP4 Etre capable d'expérimenter et d'appliquer les mesures de gestion adaptées à chaque EEE.

OI 41 Etre capable de connaître les différentes mesures de gestion en fonction des caractéristiques de l'EEE.

OI 42 Etre capable d'adapter et de réaliser les différentes mesures de gestion en fonction des caractéristiques de l'EEE.
- OI 421 Etre capable de programmer une intervention
  - OI 4211 Etre capable d'intervenir à la bonne époque en fonction des EEE ciblées.
  - OI 4212 Etre capable d'utiliser les bonnes techniques et pratiques en fonction des EEE visées.
  - OI 4213 Etre capable de s'équiper et d'utiliser le bon matériel en fonction des EEE à éradiquer.
- OI 422 Etre capable d'adapter son intervention en cas de présence d'une EEE
- OI 423 Etre capable d'effectuer un bilan
  - OI 4231 Etre capable d'analyser
  - OI 4232 Etre capable de réaliser un suivi des EEE
  - OI 4233 Etre capable de mesurer les impacts de gestion des EEE
  - OI 4234a Etre capable d'informer sa hiérarchie sur la gestion d'une EEE suite à la détection d'un nouveau site.
  - OI 4234b Etre capable d'informer ses agents sur les conduites à tenir en présence d'EEE

OP5 Etre capable de communiquer sur les EEE aux différents usagers et riverains

OI 51 Etre capable de définir et expliquer aux différents usagers de la route et aux riverains ce qu'est une EEE

OI 52 Etre capable d'exposer aux différents usagers les différentes problématiques écologiques, économiques, et sanitaires suite à la reconnaissance de l'EEE

OI 53 Etre capable de connaître et comprendre les impacts et les enjeux de la gestion d'une EEE et de communiquer avec sa hiérarchie.

OI 54 Etre capable d'expérimenter et d'appliquer les mesures de gestion adaptées à chaque EEE.

Fiche de formation

Objectif :

Mettre en oeuvre une activité de formation permettant aux agents qui entretiennent le réseau routier de mieux appréhender les modes de gestion des Espèces Exotiques Envahissantes (EEE) en fonction de leurs caractéristiques communes, afin qu'ils soient en mesure d'avoir une gestion exemplaire des EEE pour servir d'exemple aux autres acteurs locaux. Nous, Gestionnaires des routes et accotements et de cours d'eau, Acteurs locaux (pêcheurs …), Particuliers, devons unir nos efforts.

Nombre de stagiaires : entre 10 et 14 personnes
Durée : 10 heures

Organisation Pédagogique

Objectifs	Contenus	Durée Moyenne
EC de définir et d'expliquer ce qu'est une EEE *(OI11 et OI12)*	- tour de table (présentation de son voisin de table) - Echanges en groupe (Blason) - Suite aux retours des groupes (réponses du formateur) - Reprendre les différents points à partir d'un Power Point	45 mn
EC de déterminer les différentes problématiques des EEE et de connaître et comprendre les impacts de celles-ci *(OI13 et OI21)*	- Citer au moins 2 des 3 types de problématiques et donner un exemple pour chacune d'elle (concertation entre les groupes « blason ») - Explications et exemples à partir d'un Power Point	15 mn
EC de connaître et de comprendre les enjeux de la gestion d'une EEE *(OI22)*	- EC de connaître et de comprendre les enjeux écologiques d'une EEE *(OI221)* (Power point) - Quelques définitions (échanges et power point) - Les origines des EEE (idées et power point) - EC de connaître et de comprendre les enjeux économiques d'une EEE *(OI222)* - EC de connaître et de comprendre les enjeux sanitaires d'une EEE *(OI223)*	30 mn
EC de connaître les principales EEE des bords de route *(OI32)*	- Power Point différents modes de reproduction *(OI2212)* - Différentes sources de dissémination (réflexion/débat power point) - échantillons pour certaines EEE	1 heure
EC d'identifier les principales EEE des bords de route *(OI31)*	- Power Point critère de reconnaissances - Clé de détermination - Sortie de terrain - A ne pas confondre…. (power point ou recueil lors de la sortie de terrain)	3 heures

EC d'exprimer et d'appliquer les mesures de gestions adaptées à chaque EEE *(OP4)*	- les pratiques existantes (expérience des stagiaires) - les bonnes techniques (dans l'idéal : réflexion/débat) - les différentes méthodes (réflexion/power point) - étude de cas par groupe débriefing	3 heures
EC de communiquer sur les EEE *(OP5)*	- Mise en situation (à partir d'une photo, jeux de rôles (1 agent/ 2 randonneurs) avec grille d'évaluation)	1 heure
Bilan	- Evaluation du module de formation - Bilan	30 min

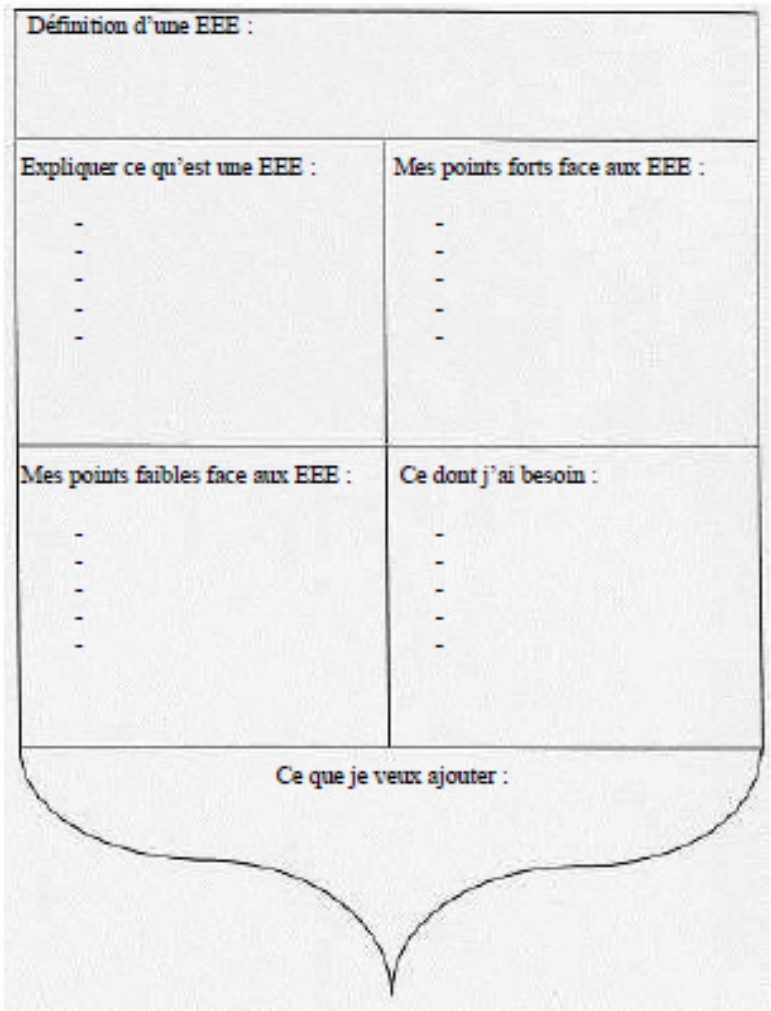
OP1 : Etre capable de définir et d'expliquer ce qu'est une EEE et les problématiques posées.

OI11 : Etre capable de définir le terme EEE.
OI12 : Etre capable d'expliquer ce qu'est une EEE.

Objectif : les représentations des stagiaires sur les EEE et débat à la suite.

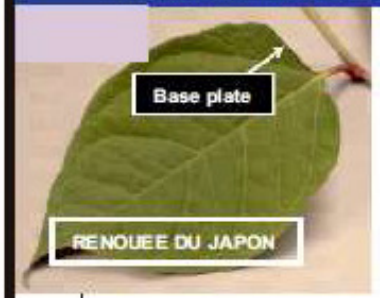
BLASON :

Faire des groupes de 2 ou 3 personnes avec la « feuille Blason » comme support;
Puis les groupes s'assemblent 2 par 2 afin de n'avoir plus que 2, 3 ou 4 ilots à la fin
Chaque équipe doit mettre en commun ses réflexions et le porte parole du groupe rapporte les notes du blason au formateur devant les autres personnes.



RENOUEES ASIATIQUES

DISTINGUER LES 2 ESPECES DE RENOUEES ASIATIQUES



IDENTIFIER LES RENOUEES ASIATIQUES TOUTE L'ANNEE

BERCE DU CAUCASE

Photo : WAERLOP A.

DISTINGUER LES 2 BERCES : GRANDE BERCE (plante indigène très commune au bord des routes) ET LA BERCE DU CAUCASE (exotique)

Feuilles à lobes terminaux très pointus

Feuilles à lobes terminaux arrondis

ALERTE !!!

Tout contact de la plante (feuilles, tiges ...) avec la peau peut causer de graves brûlures après exposition au soleil.

Si vous avez touché une Berce du Caucase, rincez abondamment la zone, et évitez de l'exposer au soleil pendant une semaine.

Si la peau devient rouge ou gonflée, consultez un médecin

Pour tout renseignement complémentaire sur les espèces exotiques envahissantes, vous pouvez contacter Céline FONTAINE au 03 21 04 05 79 (celine.fontaine@cpie-authie.org)

Cette fiche a été réalisée par le CPIE Val d'Authie avec le financement de :

Mise en situation d'information du public

OP5 Etre capable de communiquer sur les EEE aux différents usagers et riverains.

- OI 51 Etre capable de définir et expliquer aux différents usagers de la route et aux riverains ce qu'est une EEE.
- OI 52 Etre capable d'exposer aux différents usagers les différentes problématiques écologiques, économiques, et sanitaires suite à la reconnaissance de l'EEE.
- OI 53 Etre capable de connaître et comprendre les impacts et les enjeux de la gestion d'une EEE et de communiquer avec sa hiérarchie.
- OI 54 Etre capable d'expérimenter et d'appliquer les mesures de gestion adaptées à chaque EEE.

Objectif : Etre capable de communiquer sur les EEE aux différents acteurs grâce à une mise en situation.

Organisation :

Partager le groupe en binômes.
Suite à un tirage au sort d'un sujet « mise en situation » les stagiaires s'assemblent 2 par 2, un groupe étant des agents d'exploitation routier et l'autre binôme le couple de randonneurs. L'équipe « randonneurs » doit évaluer (à partir de la grille d'évaluation) le retour que les agents d'exploitation routier font sur leur étude de cas.

Mise en situation 1:
Un couple de randonneurs vous interpelle afin de comprendre pourquoi vous coupez ces jolies plantes ….

Mise en situation 2:
Des riverains vous demandent pourquoi vous n'avez pas encore fauché l'accotement sur la route départementale à la sortie de leur commune.

Mise en situation 3:
Des riverains vous demandent pourquoi vous n'avez pas encore fauché l'accotement sur la route départementale à la sortie de leur commune.

Mise en situation 4:
Deux piétons viennent vous voir pour vous demander ce qu'est cette plante et ce que vous comptez faire pour la route ?

Mise en situation 5:
Un couple de randonneurs vous interpelle afin de comprendre pourquoi vous coupez ces jolies plantes ….

Mise en situation 6:
Deux riverains vous disent qu'ils veulent aménager leur sortie de garage avec de la terre stockée un peu plus loin…

Grille d'évaluation

Nom :
Prénom :

OP	OI			acquis	à revoir
Etre capable de définir et d'expliquer ce qu'est une Espèce Exotique Envahissante (EEE) et les problématiques posées.	Etre capable de définir le terme EEE	Définir une EEE			
	Etre capable d'expliquer ce qu'est une EEE	Expliquer ce qu'est une EEE			
Etre capable de reconnaître les principales EEE des bords de routes.	Identification de l'EEE	Critères de reconnaissance			
	Connaissance de l'EEE	Mode de reproduction			
		Biotope			
Etre capable de définir et expliquer aux différents usagers de la route et aux riverains ce qu'est une EEE.	Etre capable d'exposer aux différents usagers les différentes problématiques	écologiques			
		économiques			
		sanitaires			
	Etre capable de connaître et comprendre les impacts et les enjeux de la gestion d'une EEE	impacts	écologiques		
			économiques		
			sanitaires		
		enjeux	écologiques		
			économiques		
			sanitaires		

Intitulé de la journée : _____ Date : _____

Nom & prénom du stagiaire : _____

Note

Entourez la note que vous attribuez à chacune des affirmations. (Intersection cercle / axe)

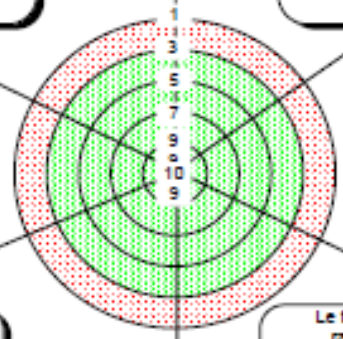
Apportez vos commentaires éventuels dans le cadre des affirmations

10 ⇔ Très bien 1 ⇔ Mauvais

Le niveau du stage et sa durée étaient bien adaptés.

L'animateur a su créer les conditions nécessaires au bon déroulement du stage (Animation, connaissance, sympathie,...)

Le stage m'a apporté de nouvelles connaissances et des éléments pratiques pour mon travail



La logistique du stage était parfaite (Accueil, salle, horaire,....)

Le travail qui nous a été demandé était en rapport avec le contenu et la durée du stage.

Les documents remis lors du stage semblent pratiques et auront certainement une utilité dans mon activité.

Commentaire(s) :

_____

_____

_____

_____

BILAN DU STAGE PAR LE FORMATEUR

												Cellules jaunes à renseigner	Cellules bleues automatiques
	FORMATEUR (structure) >		NOMBRE DE STAGIAIRES	< Inscrits							< Présents	< Volontaires	< Désignés		
	SESSION (mm/aa) >			10							10				
	SUJET TRAITE														
LISEZ MOI	Structure formée >			10	9	8	7	6	5	4	3	2	1		NOTES BILAN SUR 100%
1	Le stage m'a apporté de nouvelles connaissances et des éléments pratiques pour mon travail													CONTENU	0,00
2	Le niveau du stage et la durée étaient bien adaptés														
3	Le travail qui nous a été demandé était en rapport avec le contenu et la durée de stage														
4	L'animateur a su créer les conditions nécessaires au bon déroulement du stage													PEDAGOGIE	0,00
5	Les documents remis lors du stage semblent pratiques et auront certainement une utilité dans mon activité													DOCUMENTATION ET LOGISTIQUE	0,00
6	La logistique du stage était parfaite														
	BILAN GLOBAL DU STAGE (en %) :														0,00

COMMENTAIRES EVENTUELS :

Noter ici les commentaires divers sur la formation

0,00
0,00
0,00
0,00
0,00
0,00

Annex L

Reducing the Impacts of Non-native Species in Europe (RINSE)

Thursday 23 February, 10:00hours
CPIE Val d'Authie (Auxi Le Chateau, France)

Training & Awareness Raising Workshop1

Item No.	Item Present: Michael Sutton-Croft – Norfolk County Council, LP (NCC) Melanie Gillings – Norfolk County Council, LP (NCC) Josie Pegg – Bournemouth University, PP2 (BUni) Rob Britton – Bournemouth University, PP2 (BUni) Celine Fontaine – CPIE Val d'Authie, PP4 (CPIE) Denis Berlemont – CPIE Val d'Authie, PP4 (CPIE) John Durnell – Hampshire & Isle of Wight Wildlife Trust, PP6 (HWT) Dieter Depraetere – Inagro, PP8 Kim De Bus – Inagro, PP8 Inge Stoop – RATO, PP9 Karel van H – RATO, PP9	*Action:*
1.	**Apologies and Introductions; Signing of signature sheet**	*Action:*
	Introductions were made and the signature sheet signed (see attached).	
2.	**Objectives and actions for Work Package 2 – Training and Awareness Raising**	*Action:*
	Celine and Denis introduced the Work Package (WP) which shall be delivered through the following 7 sub-actions; 2.1 – Involve public in surveying – citizen science surveys. *Project Partners involved are NCC, CPIE & HWT* 2.2 – Develop two smartphone 'apps' and test - *Project Partners involved are NCC, CPIE & RATO* 2.3 – Design specific materials for target audiences. *Project Partners involved are NCC, CPIE, HWT, Inagro & BUni to feed into WP3.* 2.4 – Translate Q-bank into French. Currently available in Dutch and English. Primarily just plants, but talk of expanding. Needs profile raising in UK too. *Project Partners involved are CPIE & Dutch Plant Division.*	

	2.5 – Identify the training needs for different audiences, develop and implement programme. *Project Partners involved are NCC, CPIE, HWT, Inagro & BUni to feed into WP3.* 2.6 – Organise three Partner Workshops (today is one) 2.7 – Organise and hold a Best Practice Workshop with NCC & HWT on engaging public in volunteering and citizen science.	
3.	**Exchanges around each partner experiences**	***Action:***
	Celine and Denis asked partners to share their experiences to date (questionnaires were also circulated prior to the meeting). ***Highlighted*** *are documents and/or information that needs to be passed among WP2 partners.* Bournemouth University; Didn't fill in questionnaire as involved in WP2 as an adviser, to **inform WP3 components**. Do have experience in training and awareness raising from an educational perspective, but this is different from communicating with the general public. Happy to input into WP2 where they can. CPIE; Have provided training to different organisations for over 20 years. Mainly to schools in the form of visits and field trips. Also done work with retirement homes – varied audiences. Very general training and awareness raising provided, not just environmental topics but also sports. Provide training on managing land, managing protected and sensitive areas. Provide training for those trying to get back into work. HWT; Been training volunteers in specialist areas for many years. Been delivering specialist training on surveying for invasive species, training for landowners and land managers, those who manage roads/highways, statutory bodies such as the Environment Agency (responsible for rivers in England and Wales) on non-native plant species. Also general public awareness raising through garden centres. Have education centres where children visit. Publish magazines, place articles in general press and do TV interviews. Provide targeted specialist training to volunteers. Primarily focus on plant species but also native crayfish and issues around bio-security.	*BUni*

	Done a lot and **have a lot of materials but these need updating** and revamping. NCC; Started non-native species programme 3 years ago. Have provided **training with roads/highways managers** and have done general public awareness raising. Have produced **leaflets regarding species and specifically about species that might be in the garden.** Attend many public events, shows, place displays in local areas to raise awareness generally and to show how to prevent spreading. Had **workshops for land managers.** Have a citizen science survey currently running aimed at one area of Norfolk regarding 6 species. (leaflets circulated) Encouraging public to tell us where they are as we don't have resources to survey the entire area, useful for getting new sightings. Garden centres have been given leaflets as we don't have too much water primrose *Ludwigia grandiflora* or floating pennywort *Hydrocotyle ranunculoides* and it is still legal for them to sell these species, but we want people to choose native species. Involved in promoting national campaign 'Be Plant Wise' – which is supported by UK government. Beginning to impact, but it's a slow process. Garden centres are responding well. There is also a national bio-security programme (Check, Clean, Dry) that we promote at a local level – this encourages cleaning boats and fishing equipment to stop spread etc. Great Britain has a **Non-native Species Secretariat** at national level that we feed into (www.nonnativespecies.org). Inagro; (Agricultural institute working with farmers). At the end of an Interreg project called INVEXO (www.invexo.eu) on geese that stay during the summer – they eat crop and the grasses before cattle can feed. Coastal sites especially affected in West Flanders. Have **produced material relating to this.** Through this project will freshen up this existing material as legislation has changed a bit and would like to include more species etc. Farmers and use of farmland are main focus, and species they have been looking at are Canadian and Egyptian geese. Have another year to run so would be good to link up with INVEXO. East Flanders has also been involved in this project. Have produced materials that look at dealing with goose eggs, others aimed at hunters etc. For general public and hunters a leaflet has been produced about geese and a pull out guide to the key species being targeted. Inagro, INBO and RATO are also involved in this project. No budget is available to do on the ground work for other species, but can communicate other issues such as plants causing flooding due to blocking ditches or soil erosion etc.	

	NCC noted that Egyptian geese are becoming more of a problem in Norfolk. Inagro and NCC can share experiences. HWT advised on various techniques used locally. RATO; Focus is on the control of musk rats, but worked on geese, water plants such as floating pennywort *Hydrocotyle ranunculoides* and giant hogweed *Heracleum mantegazzianum*. The **materials they have produced are based on these**. Made use of local free newspapers and local communities' booklets. Have also produced **brochure of rodents** – how to control, what they are etc - **flyers** on how to catch musk rats. Attend exhibitions. Focus of communication is local government, such as officers managing areas. Inform so they can recognize, catch and remove. In this project focusing primarily on WP3, but focus for this work package is trialling the smartphone 'App'. Have seen reduction in musk rat in their area. In 2004 the highest level was recorded but now falling. Only catch to control now. Focus now changing from musk rat to brown rat, geese and the floating pennywort *Hydroctyle ranunculoides*. Mike noted that in Norfolk, American mink are trapped - don't have musk rat. HWT have a muntjac problem, as does UK in general. John to let Dieter know what species are problem for agriculture in the UK currently.	*HWT* *HWT*
4.	**Common work time: Actions to implement in WP2**	***Action:***
	Delegates used sheets posted around the room to indicate what outputs they intend to deliver under each of the sub-actions of WP2. 2.1 – Involve public in surveying – citizen science surveys. *Project Partners involved are NCC, CPIE & HWT* **CPIE**; • Set up an alert network with its partners and design awareness interpretation tools. • Disseminate information on new species becoming problematic. • Establish interpretation materials to raise awareness to general public. **HWT**; • Organise volunteer surveys to identify distribution of NNS in New Forest and the River Avon. • Organise volunteers surveys to assess impacts of control works collate data. **NCC**;	

	• Develop citizen science survey for potentially invasive garden plants. This will collate more data. CPIE asked how partners want this information to be fed to them? - Need examples of materials that already have published in order to do the same in France. - In terms of data this will be decided at a later date. Need to ensure a format is agreed to collate data in same manner. Stick with what have already done for forms of data. - CPIE don't have database so if one already exists they will fit their data to the database. - For 'Citizen Science' send summary of finds and then results. <u>2.2 – Develop and test a smartphone 'App'</u> *Project Partners involved are NCC, CPIE & RATO* NCC had a free trial of a Blackberry 'app' and this worked very well, just chose the species, took a picture and hit send. This would be good for mystery plants too – would be an early warning system. **NCC;** • Propose to develop two apps, one for general public for a smartphone use and one for field staff usable on a smartphone or PDA. **RATO;** • Wish to test this too and make sure it is fit for use with professionals. **CPIE;** • Wish to test the app and will use its network to test it in a larger area with various audiences. RATO noted that there is a need to make use of the data but when it is collated, we all use different systems (national or local). CPIE suggested if GPS coordinates are used, these are universal. From it, it will be easier for other partners to create maps with their own systems (local or national systems). Compatibility with common GIS software must be ensured. NCC are going to invite organisations to tender for this and will make sure the factors discussed are included. Tender document will be shared with all partners involved in advance of it being sent out, to allow time for partners to comment. Needs to be strong, easy and fast. HWT noted that lots of cameras have Bluetooth and GPS chips so could possibly make sure that it can handle that data. All concerns raised will be written into the specification. <u>2.3 – Design specific material for target audiences.</u>	*All*

Project Partners involved are NCC, CPIE, HWT, Inagro & BUni to feed into WP3.

NCC;
- Publish for farmers and recreational boaters

BUni;
- Will inform the content of the materials with outputs from WP3.

CPIE;
- Design posters for all audiences and some guides on how to target for specific audiences.

Inagro
- Refresh existing material targeting general public, land managers, policy makers, farmers, electoral reps, hunters and will also be looking to add new species.

HWT;
- Targeted specialist materials for specialist groups and planners.
- Promote national campaigns ("Be Plant Wise"; "Check, Clean, Dry") at a local level.

A list of species that are causing problems with each partner and then which are being looking at through this project should be compiled. Each partner to list species they are interested in. Partners can then team up with those with similar interests.

Mostly in UK the focus is on plants. In the application form more definition was given about audiences than species.

Only need to translate those documents that have Cross Border use. CPIE happy to determine which ones might need translating and might be relevant to another partner. Every partner will be responsible for ensuring it meets the communication guidelines/requirements of the Two Seas Programme, however the Lead Partner will assist in this where appropriate.

2.4 – Q-bank translation into French. Currently available in Dutch and English.
Project Partners involved are CPIE & Dutch Plant Division.

Dutch Plant Division; (*Confirmed on February 24th*)
- Provide files to be translated.

CPIE;
- Co-ordinate the translation of Q-bank into French.

Primarily, Q-bank is just about plants but it may be expanded to encompass other groups. Effort need to be put into raising the profile of Q-bank in the UK.

	2.5 – Identify the training needs for different audiences, develop and implement programme. *Project Partners involved are NCC, CPIE, HWT, Inagro & BUni to feed into WP3.* **BUni**; • Participate through bringing outputs from WP3 into Partners' Workshops. **NCC**; • Develop a training package for an audience that is yet to be decided. **CPIE**; • Co-develop a training package with road managers, land managers, river managers, garden centres, network of reps, hikers **Inagro**; • Coordination and training of local authorities, nature organisations, hunters **HWT**; • Deliver 7 training courses for target groups. Many different audiences that can be targeted so partners need to be prioritise. CPIE have been working with road managers in Pas-de-Calais, as have NCC in Norfolk. Based on common ground, each partner could adapt the package to the specifics of each area. HWT noted that a consistent set of messages are needed (see point 7). 2.6 – Organise three partners' workshops (Workshop on 23rd Feb 2012 is the first) **BUni**; • Participate through bringing outputs from WP3 into workshops. **RATO & NCC**; • Exchange of experiences. **HWT** • Attend and contribute. **CPIE**; • Organise and participate in meetings and workshops. 2.7 – Organise and hold a Best Practice Workshop, with NCC & HWT, on engaging public in volunteering and citizen science. **HWT**; • Organise and run a workshop on volunteering in Hamps.	

<table>
<tr><td></td><td>NCC
• Help organise this, input on citizen science surveys.

A consistent approach is needed.</td><td></td></tr>
<tr><td>5.</td><td>Summarisation</td><td>Action:</td></tr>
<tr><td></td><td>Each partner will develop their actions coordinated by CPIE as WP Lead.
A common ground is to be found in order to develop a consistent set of actions.
Prioritisation of audiences is to be discussed later.</td><td></td></tr>
<tr><td>7.</td><td>Common work time : Contents of common messages and targeted audience</td><td></td></tr>
<tr><td></td><td><u>Main Messages;</u>
Several messages have been listed on sheets, summarized in 4 priority messages by identifying synergies :
<table>
<tr><th>Messages listed</th><th>Main messages identified</th></tr>
<tr><td>Biosecurity ("Check, Clean, Dry")</td><td rowspan="3">Early detection is crucial</td></tr>
<tr><td>Prevent introductions ("Be plant wise")</td></tr>
<tr><td>Look out for new species</td></tr>
<tr><td>Act quickly to control new species</td><td rowspan="3">Action must be swift and coordinated</td></tr>
<tr><td>Work in a coordinates way</td></tr>
<tr><td>The longer you delay, the more expensive and difficult control will be</td></tr>
<tr><td>You can make a difference</td><td rowspan="2">Everyone has a responsibility</td></tr>
<tr><td>Responsibility for INS is responsibility for all</td></tr>
<tr><td>INS have negative economic impacts</td><td rowspan="2">INS have negative impacts</td></tr>
<tr><td>INS have negative impacts on biodiversity</td></tr>
</table>
<u>Target Audiences;</u>
Multiple audiences were listed on sheets. Combining inputs from all partners, 4 key target audiences were identified by identifying synergies in those listed. These were agreed as follows;
<table>
<tr><th>Audiences listed</th><th>Targeted audiences</th></tr>
<tr><td>Public</td><td rowspan="4">General public</td></tr>
<tr><td>Contractors</td></tr>
<tr><td>Volunteers</td></tr>
<tr><td>Gardeners</td></tr>
<tr><td>Policy makers</td><td rowspan="5">Authorities</td></tr>
<tr><td>Legislative authorities</td></tr>
<tr><td>Local authorities</td></tr>
<tr><td>Planners</td></tr>
<tr><td>Elected representatives</td></tr>
<tr><td>Field workers</td><td>Land managers</td></tr>
</table></td><td></td></tr>
</table>

	Road workers Road managers Fishing club River managers Farmers Hunters Hikers Lumberjacks		
	Garden centres Pet shop Aquaculturists	Professionals	

Broadcasters and the printed media were also listed, but have to be considered as means of raising awareness rather than a specific audience.

Contents;
Several 'contents' were listed on sheets and were sorted into main items to be appearing in the upcoming RINSE communication medias.

Item listed	Item to be appearing in RINSE Medias
Knowledge of local INS Key ID features Short interesting facts which audience can remember Killer facts	Facts / Knowledge
Good images Strong images	Images (showing the problem)
Managerial tips	Tips
Good news stories Stories of success	Stories
Sources of additional information	Further information

It was also noted at this point that a toolkit should be developed to assist partners in crisis management/communication. A strong and consistent message is needed so all partners can deal with negative publicity in the same manor, perhaps via one point of contact.

8.	**Summarization**	
	Need to ensure WP2 and WP3 communicate with each other. This will work itself out as we go. Resources should be circulated to each partner involved. Links can eventually be put of the RINSE website.	

9.	**Partners needs analysis**	
	The partners summarised the areas where they lack knowledge, and would benefit from the experience of others in order to effectively complete the activities they have committed to in the application form: **All partners** • ID and behaviour of INS. • Early warnings on new INS sightings. • Common database, or at least a common format of data to implement. **CPIE** • Species knowledge. • Species management. • Team work to define common messages. • Team work to define common means and markers of evaluation reporting. **NCC** • Experiences of engaging with new audiences e.g. farmers. • Better 'science' of impacts INS have on wildlife and flooding and economically to get members thinking *(CABI can share information regarding this?)*. **BUni** • Feed in to WP3. The best course of action has been agreed with all members to exchange data and information through the RINSE website. NCC will ensure that there is an area of the RINSE website where partners can share knowledge and experience.	*NCC*
10.	**Discussing and approving on the deadlines**	
	Regarding the biannual report, NCC indicated that Work Package Leads will collate and then feed back information to them, as Lead Partner of RINSE. The specific deadline is to be decided at the Cross-Border Steering Group on the 24th February. NCC will shortly provide a Calendar showing the dates of all meetings and deadlines scheduled in 2012. CPIE will then contact each partner involved in WP2 to set specific deadlines	*NCC*

	for providing information on their activities, ensuring that this can be incorporated to the main RINSE Progress Report in time. The next two workshops will be held as follows; • December 2012 or January 2013 • Late 2013 The Best Practice Workshop will be held in early 2014.	
11.	**Date and Venue of Next Meeting**	
	December 2012 or January 2013. Location to be arranged possibly Auxi Le Chateau, Lille or Arras	

Participation List

Date	23/02/2012
Place	Arzil le chiten France
Purpose of the meeting	WP2 Workshop 1. 10h – 16h30

Please, do not send this sheet to the JTS.

Name	First Name	Organisation	Project	Country	Region	E-mail	Signature
Belmont	Denis	CPIE Val d'Authie	RINSE	France	NPdC	dbelmont.cpie@gmail.com	[illegible]
Gillings	Melanie	Norfolk County Council	RINSE	UK	Norfolk	melanie.gillings@norfolk.gov.uk	[illegible]
Sutton-Croft	Mike	"	RINSE	UK	"	michael.sutton-croft@norfolk.gov.uk	[illegible]
Britton	J Robert	Bournemouth Uni.	RINSE	UK	Bournemouth	[illegible]@bournemouth.ac.uk	[illegible]
Pegg	Josie	Bournemouth Uni	RINSE	UK	"	[illegible]@bournemouth.ac.uk	[illegible]
Dunnell	John	Hampshire + Isle of Wight Wildlife Trust	RINSE	UK	Hampshire	[illegible]@hwt.org.uk	[illegible]
Fontaine	Céline	CPIE Val d'Authie	RINSE	France	NPdC	celine.fontaine@cpie-authie.org	[illegible]
Steep	Inge	RATO vzw	RINSE	Belgium	Oost-Vlaanderen	inge.steep@oost-vlaanderen.be	[illegible]
Van Meer	Karel	RATO vzw	RINSE	Belgium	Oost-Vlaanderen	karel.vanmeer@oost-vlaanderen.be	[illegible]
Depraetere	Dirk	Inagro vzw	RINSE	Belgium	West Flanders	dirk.depraetere@inagro.be	[illegible]
De Bus	Kim	Inagro vzw	RINSE	Belgium	Western Fl	kim.debus@inagro.be	[illegible]

Reducing the Impacts of Non-native Species in Europe (RINSE)

Tuesday December 4 2012, 10:00 hours
45/D rue de Tournai, Lille

Work Package 2; Workshop 2 - Notes

Item No.		
	Present: MSC - Michael Sutton-Croft – Norfolk County Council, LP MG - Melanie Gillings – Norfolk County Council, LP CF - Celine Fontaine – CPIE Val d'Authie, PP4 CFo - Cindy Fournier – CPIE Val d'Authie, PP4 PC – Patrick Crestot - CPIE Val d'Authie, PP4 JvV - Johan van Valkenburg - Netherlands Food & Consumer Product Safety Authority, PP5 JD - John Durnell – Hampshire & Isle of Wight Wildlife Trust, PP6 SS - Sofie Standaert – RATO, PP9 JV – Jeroen Verstraete – RATO, PP9 DK – Dave Kilbey – Nature Locator at University of Bristol EN – Emmanuel Nadaud – JTS Interreg IVA 2 Seas Programme	
1.	**Sign In and Welcome**	**Action**
	All present signed in.	
2.	**Apologies and Previous Meeting Notes**	
	Apologies given by Rob Britton, Bournemouth University and Kim De Bus, Inagro.	
3.	**Partner WP2 activities – brief round-the-table update**	
	Netherlands Food & Consumer Product Safety Authority; JvV 40 fact sheets have so far been translated from Dutch into English for Q-Bank. CPIE are translating into French; 15 sheets have already been done.. MSC and MG to check English translation and comment. French interactive keys are being integrated. Norfolk County Council; MSC introduced Dave Kilbey and noted that a description of the Smartphone App would be given in a later agenda item. MSC has been speaking with the GB Non Native Species Secretariat (GBNNSS) regarding the development of training material. The material we develop may be made available online through them. This would be a good collaboration and GBNNSS are very keen. Citizen science will commence next year. RATO; SS and colleagues have been considering how the Smartphone App might be used in the field and the type of hardware required.	MG/MSC

	Hampshire and Isle of Wight Wildlife Trust; JD noted that their training sessions have been continuing. 3 events have been held to date including the Highways Authority and Agency and New Forest District Council. 4 further sessions have been scheduled for next year including a *Crassula Helmsii* conference on March 20. Target audiences include Anglers, Horticultural Traders and Fishing Clubs. The Best Practice Workshop on volunteering will be held in late 2013 or early 2014. CF then reviewed outputs based on Work Package sub-actions; The "Power Point" presentation and supporting documents are available on Dropbox. 2.1 – CPIE have produced a general leaflet aimed at communicating with the public regarding INS. MG to make template available on Dropbox. 2.2 – To follow 2.3 - Hampshire and IoW Wildlife Trust will be developing ID card next year. 2.4 - JvV noted that maps will represent the RINSE area and will have logos added. 2.5 – CF noted that 5 training sessions had been held so far. A training framework has been developed (available on Dropbox and online). MSC and MG to review translation and consider for development with GBNNSS for online use. JD to consider framework when delivering remainder of sessions in New Forest.	
4.	**Smartphone 'App' – Presentation by Dave Kilbey, NatureLocator followed by questions**	
	DK gave a presentation demonstrating previous Apps developed and how the RINSE App might operate. This was followed by a discussion about how the Smartphone App for RINSE might be used and developed and the publicity opportunities it will generate. The App will link to iSpot through a web link to encourage use of the site for identifying unknown species. Consideration also needs to be given to future possible development and 'game-ification' of the App. Could possibly allow users to sign-up to an alert list. The App will cache data when no signal is available. iRecord should work well in all partner countries. Will have the ability to search for unverified records. A list of species will be circulated. DK recommended a 10-12 species limit. All partners were asked to think about a name for the App. This should be something that is transnational i.e. translates easily between partner languages. Consideration needs to be given to devices. MSC to speak to Environment Agency as they have similar requirements to RATO. At the next workshop a review could be conducted on the species in the App.	**MSC/MG** **All partners** **MSC**
5.	**Review of outputs and previously agreed targets**	

	Covered during item 3.	
6.	**Review WP1 Priority List of Species and agree additional targets**	
	It was agreed that, in order to encourage the public to make use of the Smartphone App, it would be necessary to ensure that the majority of species in the App were species that they are likely to be able to see and identify easily. These should still be species where data of sightings is useful. A couple of species should then be those that have been identified through Work Package 1 as Alert Species but again should be easily identifiable.	
7.	**Introduction to afternoon session**	
	MG introduced the afternoon session which would review the outputs as listed in the application form and the list of agreed targets audiences from the first workshop. Project Partners will agree which target audiences will be reached through each output.	
8.	**Agree targeted outputs and associated messages**	
	The following outputs and target audiences were agreed during the afternoon activity;	

Project Partner Developing	Project Partners Also Involved	Target Species	Target Audience
2.1 – Citizen Science:			
NCC	Hampshire IOW Wildlife Trust and CPIE	Terrestrial plants including Himalayan balsam	Public/General
Inagro		Geese	Land Managers
NCC	Hampshire IOW Wildlife Trust	Terrestrial garden plants including Himalayan balsam	Professionals
2.2 –Testing smartphone App			
NCC	All	Excellent publicity opportunity	All
2.3 – Communication Material			
NCC		Biosecurity	Public - Boaters
CPIE		12 species	Public
NCC	RATO and Hampshire IOW Wildlife Trust	Deer & Geese	Land Managers
HWT		ID Cards	Land Managers
Inagro		Geese	Land managers - farmers
CPIE		Case Studies/ Experiences	Land Managers
Hampshire IOW Wildlife Trust		Biosecurity and ID Cards	Decision Makers – Planners

	2.4 – Q-Bank			
	All			
	2.5 – Training Material:			
	NCC	Based on CPIE framework		Public/General - Online
	Hampshire IOW Wildlife Trust	CPIE and RATO		Decision Makers – Rights of Ways teams at Councils
	CPIE			Land managers – farmers and rivers
	Hampshire IOW Wildlife Trust			Land Mangers – Fishing clubs
	Hampshire IOW Wildlife Trust		*Crassula helmsii*	Land Managers, Decision Makers and Professionals
	Inagro			Land managers – Hunters, Farmers
	2.7 – Best Practice Workshop			
	- Partners to identify attendees from their region - Agenda to include barriers to utilizing volunteers			
11.	**Q-Bank;**			
	It had been hoped that for Item 11, marked as guest speaker on the agenda, that a representative from the European Commission would come along to discuss the new Directive being put in place next year and Eye On Earth, however they were unable to attend. JvV therefore demonstrated Q-Bank and its interactive functions and answered associated questions.			
12.	**Closing remarks**			
	MG and MSC thanked CPIE for arranging the workshop and thanked all the Project Partners attending.			

Reducing the Impacts of Non-native Species in Europe (RINSE)

Thursday April 10 2014, 10:00
Room "Lys", Conseil Général, Arras

Joint Work Package 2 & 3 Partner Workshop 3 - Notes

Item No.		
	Present: MSC - Michael Sutton-Croft – Norfolk County Council, LP MG - Melanie Gillings – Norfolk County Council, LP PB – Polly Bryant – Norfolk County Council, LP RB - Rob Britton – Bournemouth University, PP2 CP – Corin Pratt – CABI, PP3 DS – Dick Shaw – CABI, PP3 CF - Celine Fontaine – CPIE Val d'Authie, PP4 PC - Patrick Crestot - CPIE Val d'Authie, PP4 JvV - Johan van Valkenburg - Netherlands Food & Consumer Product Safety Authority, PP5 RC – Robert Chapman – Hampshire & Isle of Wight Wildlife Trust, PP6 TA - Tim Adriaens – INBO, PP7 SS - Sofie Standaert – RATO, PP9 AS – Antoine Surget – Interreg IVA Two Seas Secretariat	
1.	**Apologies**	**Action**
	Apologies given by Kim de Bus, Inagro.	
2.	**Project Partner updates on Work Package 3 progress**	
	Update given by RB followed by each partner participating in work package 3. Presentations can be found on dropbox; https://www.dropbox.com/home/RINSE/Work%20Package%202/Workshops/Workshop3_2014-04-10_France	
3.	**Review of outputs against Application - Are we missing any actions?**	
	No actions missing. Some actions were altered but for legitimate reasons which will be noted in Activity Reports by Project Partners concerned. Where there are a few anomalies, MG will contact Project Partners direct.	MG
4 & 5.	**Project Partner updates on Work Package 2 progress**	
	Update given by CF followed by each partner participating in work package 3. Presentations can be found on dropbox; https://www.dropbox.com/home/RINSE/Work%20Package%202/Workshops/Workshop3_2014-04-10_France	
6.	**Review of outputs against Application - Are we missing any actions?**	
	CF recorded actions outstanding. See attached table for details. All actions however are on track for delivery and where some actions were altered, but for	

	legitimate reasons, this will be noted in Activity Reports by Project Partners concerned.	
7.	**Opportunities arising through Work Package 3 actions to assist Work Package 2 outputs**	
	• All horizon scanning species are now in Q-Bank. •	
8.	**Summary from Work Package Leads**	
9.	**Final Best Practice Workshop; 24 April 2014**	
	CF noted that the final best practice workshop will take place on 24 April in Montreuil-sur-mer. Speakers are confirmed and registration is open.	
10.	**Any Other Business**	
	Exchange Visits; PP7 is planning to visit PP1 on an exchange visit to observe muntjac as will as some additional species. This is due to take place on 10 and 11 June in and around Norfolk. Q-Bank; PP5 gave a demonstration and update on Q-bank. All horizon scanning species are now in Q-Bank. JvV to send MG google analytics for Q-bank so traffic of IP can be reviewed. Smartphone App; It was suggested that a simple user guide on the us of the app might be helpful. This will be developed by Lead Partner and placed on website.	MSC/PB

Acknowledgements

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The author would like to thank the authors of the Partner Reports used to support the document, and all the reviewers.

The author would also like to thank all the people within each Partner organisation who have contributed to the success of this ambitious project.

Finally, the author would like to thank all participants in the various actions implemented without whom this project would have been difficult to implement. Their contribution has helped to make this project a success.