

Raising awareness

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The issue

⇒ Invasive non-native species are regarded as the second greatest threat to biodiversity after habitat loss. Once established in the wild, their impact is often profound and usually irreversible (International Union for the Conservation of Nature)

⇒ Prevention is the most cost-effective method of management (Convention for Biological Diversity)

The issue

- ➔ Invasive species currently cost the UK economy at least £1.7 billion per annum (Defra, Dec 2010)
- ➔ Annual cost of invasive species to Europe estimated as at least 19.1 billion EUR per annum (The Institute for European Environmental Policy, 2009)

Raising awareness: what do people need to know?

- ⇒ What species are a problem;
- ⇒ The potential impact they have;
- ⇒ How they are spread;
- ⇒ How their spread can be prevented

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Raising awareness: general audience

- ⇒ Engage media;
- ⇒ Gain public support;
- ⇒ Basis for a more detailed knowledge;
- ⇒ Some public engagement amongst the keen.

Raising awareness: specific audience

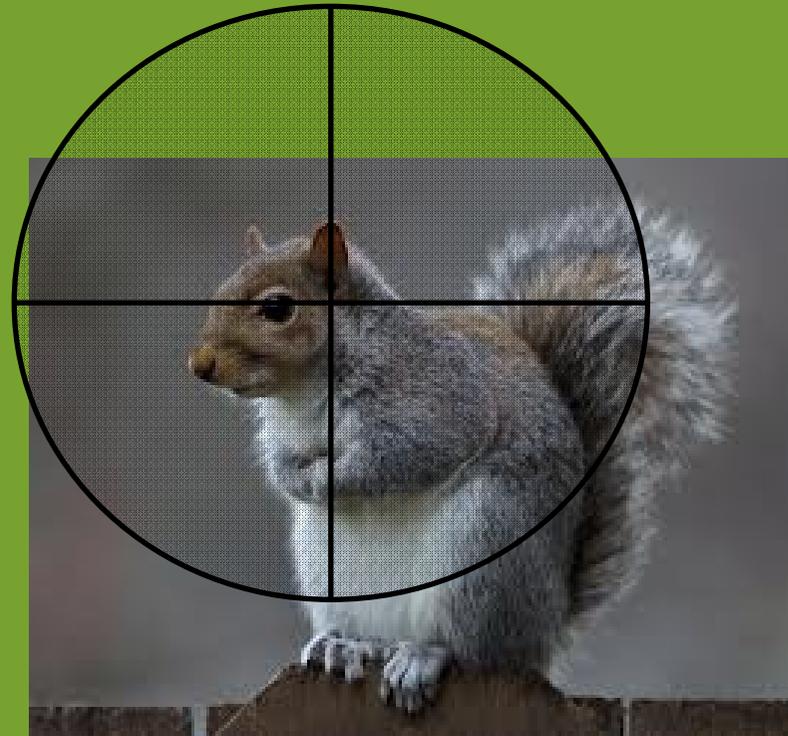
- ⇒ Specific target audience or pathway;
- ⇒ Concise message;
- ⇒ Behavioural change.

Achieving behavioural change

Behavioural change is usually easier if the people involved, or their elected representatives, are engaged in agreeing the new behaviours

Achieving behavioural change

➔ Positive message



Achieving behavioural change

➔ Simple message. Must be:

- ➔ Relevant;
- ➔ Achievable;
- ➔ Justified, or endorsed;
- ➔ Durable.

Achieving behavioural change

⇒ Appeal to their selfish interests:

- ⇒ Will I avoid trouble or potential prosecution?
- ⇒ Will I save time and/or money?
- ⇒ Could this impact my property or recreation?
- ⇒ Will I gain self-worth and recognition?
- ⇒ Will it enable me to help the environment?

plants

Breathing life into your pond

- Mother natures housekeepers • Clearer water
- Create an eco-balance • Absorb nitrates from the water



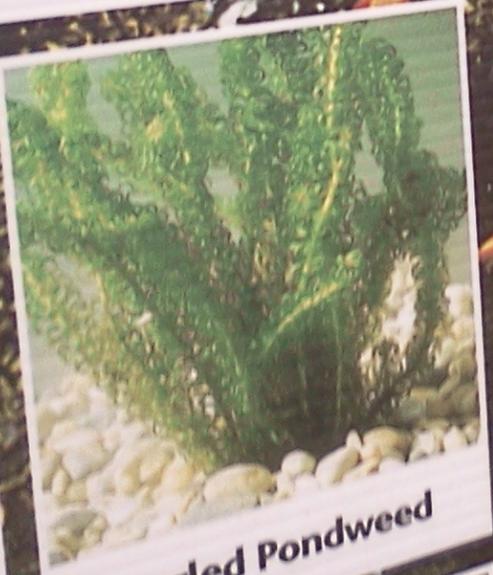
r Grass



New Zealand Pennywort

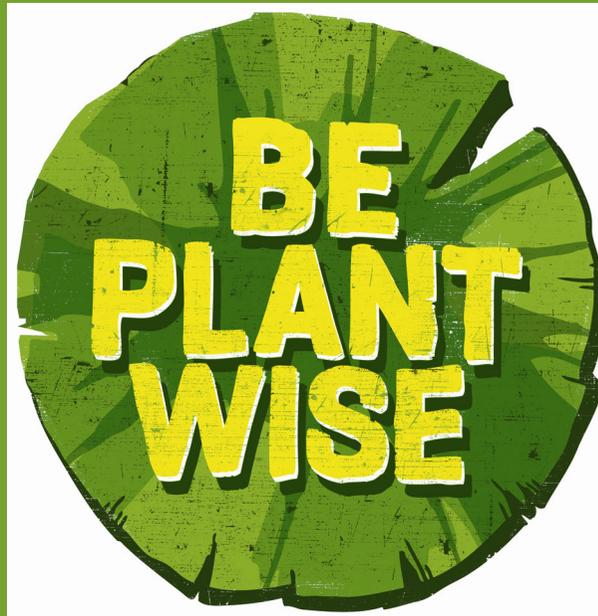


owfoot



Curled Pondweed





<http://www.nonnativespecies.org/beplantwise/>

BE PLANT WISE

DID YOU KNOW

Invasive aquatic plants can damage our ponds, waterways and the environment?
Find out how you can become plant wise today.

**KNOW
WHAT YOU
GROW**

**COMPOST
WITH CARE**

**STOP
THE SPREAD**



Plantlife

www.direct.gov.uk/beplantwise

BE PLANT WISE

Give the best service to our customers by always knowing the facts about aquatic plants

**KNOW
WHAT YOU
GROW**

Help customers identify invasive aquatic plants.

**COMPOST
WITH CARE**

Tell customers how to safely dispose of aquatic plants.

**STOP
THE SPREAD**

Explain to customers the problems with invasive aquatic plants.



England: www.direct.gov.uk/beplantwise
Scotland: www.scotland.gov.uk/beplantwise



Environment
Agency

STOP THE SPREAD



CHECK-CLEAN-DRY

[https://secure.fera.defra.gov.uk/nonnativespecies/
checkcleandry/index.cfm](https://secure.fera.defra.gov.uk/nonnativespecies/checkcleandry/index.cfm)

STOP THE SPREAD



Are you unknowingly spreading invasive species on your water sports equipment and clothing?

Invasive species can affect fish and other wildlife, restrict navigation, clog up propellers and be costly to manage. You can help protect the water sports you love by following three simple steps when you leave the water.



Check your equipment and clothing for live organisms - particularly in areas that are damp or hard to inspect.



Clean and wash all equipment, footwear and clothing thoroughly.

If you do come across any organisms, leave them at the water body where you found them.



Dry all equipment and clothing - some species can live for many days in moist conditions.

Make sure you don't transfer water elsewhere.

For more information go to www.direct.gov.uk and search for Check Clean Dry



Why does the Environment Agency need biosecurity?

- ➔ No other organisation in GB visits and works in as many waterbodies as we do
- ➔ The aquatic environment is particularly vulnerable to the spread of invasive non-native species
- ➔ If we spread invasive species, we are potentially causing irreversible harm and maybe breaking the law.

What is our objective?

'The behaviour of Agency staff and the people we influence will progressively reduce the risk of spreading invasive non-native species, parasites and pathogens'

Environment Agency approach

➔ Inform

➔ **National team explains the risks and potential consequences**

➔ Innovate

➔ **The Area staff performing the task come up with the solutions**

➔ Enthuse

➔ **National team support their ideas and help share them**

To deliver this we must make the risk:

- ➔ Pertinent;
- ➔ 'Measureable';
- ➔ Sufficiently adverse to provoke behavioural change.

The same message, but different messengers

- ⇒ E-learning;
- ⇒ Network of 'biosecurity champions';
- ⇒ Communications campaigns;
- ⇒ Guidance and work instructions;
- ⇒ Trump card games



It's often easier to adopt a number of small changes, instead of a single big change.

It's often more effective, too

Five steps to Biosecurity

- ⇒ Planning
- ⇒ Avoiding
- ⇒ Checking
- ⇒ Cleaning
- ⇒ Drying

Planning

- ➔ Visit the most sensitive sites at the beginning of the day (and sites with known INNS at the end of the day);
- ➔ Use kit that has less refuges for invasive species;
- ➔ Take adequate duplicate kit and wash-down facilities.

Avoiding

- ➔ Access sites away from INNS;
- ➔ Avoid work when propagules are most abundant;
- ➔ Avoid spread by using stop-nets and other containment measures.



Checking

- ⇒ Inspect clothing and equipment before and after you use it;
- ⇒ Nets need particularly careful inspection;
- ⇒ Just because you can't see it, doesn't mean it's not there.



Cleaning

- ➔ Disinfectants such as Virkon Aquatic and FAM 30 effective against micro-organisms, but have limited impact on invasives;
- ➔ Deployed equipment and in-stream structures need thorough defouling;
- ➔ Submersion in hot water for 15 mins is an effective biosecurity measure.

Drying

- ⇒ Ideally, at least 48 hours of thorough drying between uses;
- ⇒ Improve drying times by using drying rooms and duplicate kit;
- ⇒ No good against *Crassula*!



***Biosecurity isn't an optional
extra***

***It's fundamental to how we do
our job professionally***

