

Targeting and Prioritisation

This presentation features the top 12 Black List Species from the RINSE Report 'Targeting and Prioritisation for INS in the RINSE Project Area' by B. Gallardo, A. Zieritz and D. C. Aldridge, Cambridge Environmental Consulting Ltd.

For more information on this study and to read the report visit the RINSE website here:

<http://www.rinse-europe.eu/resources>

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Reducing the Impact of
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HORIZON SCANNING

Several national and international institutions have produced lists of invasive non-native species (INS) that are perceived to be having, or have the potential to have, the most negative impacts on biodiversity. Using 16 of such 'worst invader' lists, a metalist of 340 INS was created and divided into two main groups:



ALERT LIST

A total of 79 species which are not yet present in any of the four RINSE countries (Great Britain, France, Belgium and the Netherlands)



BLACK LIST

A total of 261 species which are present in at least one of the four RINSE countries (Great Britain, France, Belgium and the Netherlands)

HORIZON SCANNING

Prioritisation of the Black List

The Black list was prioritised using an online survey. Experts were asked to select 10 INS that they regarded as the 'most concerning' in terms of their current and potential environmental impacts in the RINSE region.

The results of this survey were used to produce a list of the top 12 Black list species. This method, although not as rigorous as the risk scoring system used for the Alert species, proved to be an efficient way of ranking such a large number of species.

This presentation will introduce the top 12 Black List species



New Zealand Pigmyweed



Killer Shrimp



Floating Pennywort



Killer Algae



Green Sea Fingers



Canada Goose



Harlequin Ladybird



American Mink



Grey Squirrel



Japanese Knotweed



Giant Hogweed



Himalayan Balsam

**SPECIES:**

Crassula helmsii

ORIGIN:

Australia, Tasmania, New Zealand

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

COMMON NAME(S):

New Zealand Pigmyweed

HABITAT:

Ponds, lakes, reservoirs and waterways

Pathway(s):

Ornamental use

Ship/boat contaminant

Bird and animal dispersal

Passive dispersal (water currents)

Environmental Impact(s):

Outcompetes all other native plants forming very dense stands

Changes water oxygen, temperature, light and pH creating poor conditions for invertebrates, amphibians and fish

Obstructs water flow

Economic Impact(s):

Affects recreational and commercial activities

Reduces opportunities for angling and interferes with navigation

Clogs waterways and drainages

**SPECIES:**

Dikerogammarus villosus

COMMON NAME(S):

Killer Shrimp

ORIGIN:

Europe (Ponto-Caspian)

HABITAT:

Slow flowing waters with a gravel substrate

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Contaminant of ballast water, boats, fishing gear/bait

Attached to birds/waterfowl

Natural spread

Environmental Impact(s):

Displaces native species

Changes trophic web interactions

Predates on benthic invertebrates reducing biodiversity

Host of parasites

Economic Impact(s):

Predates fish eggs

Affects fishing, recreational use of lakes



SPECIES:

Hydrocotyle ranunculoides

COMMON NAME(S):

Floating Pennywort

ORIGIN:

North America

HABITAT:

Shallow shaded freshwater

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Ornamental plant for garden ponds and aquairums

Animal and bird dispersal

Contaminant of boats and other equipment

Passive dispersal with water currents

Environmental Impact(s):

Decline in native species

Changes in erosion/deposition cycles

Disrupts animal movement

Changes water oxygen, temperature, light and pH creating poor conditions for invertebrates, amphibians and fish

Economic Impact(s):

Obstructs boat movement

Affects recreational use of rivers and lakes

Damage to waterworks by blocking pipes and pumps



SPECIES:

Caulerpa taxifolia

COMMON NAME(S):

Killer Algae

ORIGIN:

Caribbean coasts, Red Sea,
East African Coast, Asia

HABITAT:

Subtidal zone, sheltered
bays

PRESENCE IN EUROPE:

Great Britain, France and The Netherlands

Pathway(s):

Ornamental use in aquaria

Ballast water or stowaway on fishing
gear

Introduced for landscape restoration

Natural spread with currents

Environmental Impact(s):

Alters habitat structure

Displaces native floar/fauna

Outcompetes other sea grassess

Produces toxic caulerpines inedible
to most species

Economic Impact(s):

Affects tourism

Affects fishing, net entanglement and
fish poisoning

High eradication costs



SPECIES:

Codium fragile

ORIGIN:

Pacific Ocean

PRESENCE IN EUROPE:

Great Britain, Belgium and The Netherlands

COMMON NAME(S):

Green Sea Fingers

HABITAT:

Shallow subtidal zone, sheltered bays

Pathway(s):

Ballast water or hull fouling

Aquaculture

Passive dispersal with water currents

Environmental Impact(s):

Competes with native species

Alters community structure

Habitat modification

Attaches to bivalves

Dense fronds impede movement of invertebrates and fish and increases sedimentation

Economic Impact(s):

Nuisance to fisheries and aquaculture

Affects tourism

Fouls boats, jetties and wharfs

**SPECIES:**

Branta canadensis

COMMON NAME(S):

Canada Goose

ORIGIN:

North America

HABITAT:

Urban, suburban and rural sites, freshwater

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Intentional introduction as ornamental/hunting species

Environmental Impact(s):

Droppings can increase nutrient levels causing eutrophication

Aggression to other birds

Hybridisation

Overgrazing and trampling

Economic Impact(s):

Fouls parklands, damaging riverbanks and polluting water

Risk to aviation near airfields

Transmit salmonella to cattle

Damage to grassland and crops

Increases flood risk



SPECIES:

Harmonia axyridis

ORIGIN:

Asia

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

COMMON NAME(S):

Harlequin Ladybird

HABITAT:

Wide range: farmland, orchards, wetlands and forest margins

Pathway(s):

Biocontrol

Accidental as contaminants of fruit, vegetables and other packed commodities

Environmental Impact(s):

Displaces native species, overall native coccinellids through predation and competition

Changes upper trophic levels

Economic Impact(s):

Home and building infestation, damaging furniture, causing bites and allergic reactions

Pest of pear, grapes, raspberry, potato and apple

**SPECIES:**

Mustela vison

COMMON NAME(S):

American Mink

ORIGIN:

North America

HABITAT:

Riparian zones

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Fur farming

Natural spread

Environmental Impact(s):

Reduces populations of prey

Displaces native species

Transmit disease

Affects critically endangered ground nesting birds

Economic Impact(s):

Affects trout and salmon hatcheries, poultry farms and sheep farms

Propagates influenza virus

**SPECIES:**

Sciurus carolinensis

ORIGIN:

North America

PRESENCE IN EUROPE:

Great Britain, Belgium and The Netherlands

COMMON NAME(S):

Grey Squirrel

HABITAT:

Wooded habitats: urban, suburban and rural

Pathway(s):

Pet trade

Environmental Impact(s):

Displaces native species through competitive exclusion leading to local extinctions

Transmit disease

Damage to woodlands through bark stripping

Economic Impact(s):

Garden pest

Damage to forestry

**SPECIES:**

Fallopia japonica

COMMON NAME(S):

Japanese Knotweed

ORIGIN:

Asia

HABITAT:

Urban areas and river banks, disturbed areas

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Ornamental trade

Introduced to stabilise soil in coastal areas

Movement of contaminated machinery and soil

Garden waste

Environmental Impact(s):

Out-shades native vegetation forming dense stands

Reduce species diversity

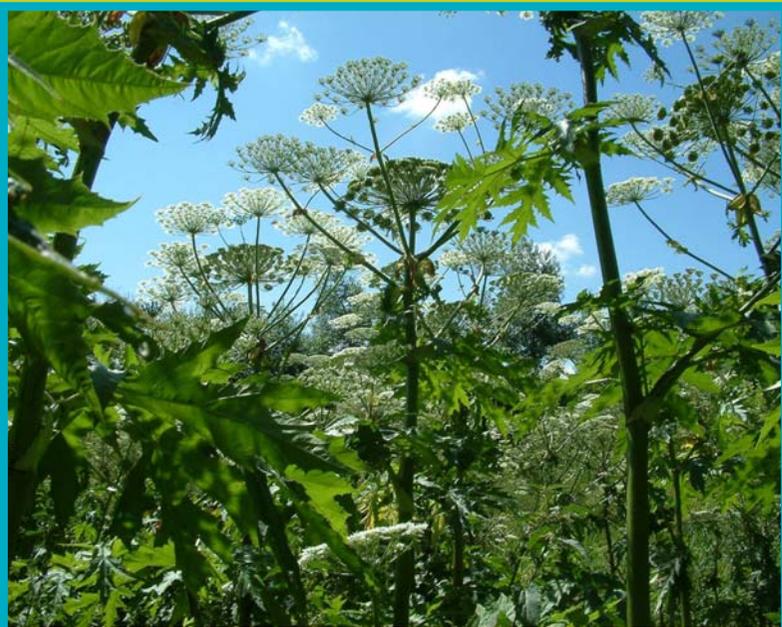
Alters habitat affecting native fauna

Increase flood risk and bank erosion

Economic Impact(s):

Prolific rhizome and shoot growth can damage foundations, walls, pavements and drainage works

Costly eradication



SPECIES:

Heracleum mantegazzianum

COMMON NAME(S):

Giant Hogweed

ORIGIN:

Asia

HABITAT:

Riparian habitats, open grasslands

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Ornamental trade

Environmental Impact(s):

Loss of biodiversity

Forms dense canopy out-shading native vegetation

Increases soil erosion

Hybridises with native species

Economic Impact(s):

Toxic sap harmful to humans

Affects tourism

Problematic weed in agriculture

Increased risk of flooding

**SPECIES:**

Impatiens glandulifera

COMMON NAME(S):

Himalayan Balsam

ORIGIN:

Asia

HABITAT:

Riparian habitat, open grasslands, woodlands

PRESENCE IN EUROPE:

Great Britain, France, Belgium and The Netherlands

Pathway(s):

Ornamental trade

Transport of infested machinery

Passive dispersal with water currents

Natural spread by explosive seed pods

Environmental Impact(s):

Displaces other native species

Promotes erosion

Impedes flow

Economic Impact(s):

Increased risk of flooding

Targeting and Prioritisation

These top 12 Black List Species were identified by the 'Targeting and Prioritisation for Invasive Non-native Species in the RINSE Project Area' by B. Gallardo, A. Zieritz and D. C. Aldridge, Cambridge Environmental Consulting Ltd.

The RINSE Partnership is happy to share the data associated with these species.

If you should require this data please contact the RINSE Lead Partner, Norfolk County Council on + 44(0)1603 228977 or email nnsi@norfolk.gov.uk



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