Invasives affecting Protected Areas in the UK
WORKSHOP n° 17
“working for Biodiversity”

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WORKSHOP n° 17 “invasive species"

- Invasives affecting Protected Areas in the UK.
- Potential impacts of some invasives on the Protected Areas.
- Climate change and effect of invasives.
- Case study - Rhododendron Ponticum (Snowdonia)
- Development of strategies for invasive species.
- Inter-relationship of invasives with environmental land management schemes.
- Potential considerations of how to address invasives in Protected Areas.
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Snowdonia National Park
Invasives affecting Protected Areas in the UK
Invasives affecting Protected Areas in the UK

Types of invasives:

- Terrestrial plants
- Aquatic plants
- Mammals
- Birds
- Invertebrates
Potential impacts of some invasives on the PA
Potential impacts of invasives on the Protected Areas

- Biodiversity
- Economic
- Landscape
- Access & Recreation
Potential impacts of invasives on the Protectd Areas

Rhododendron

Affects:
- Dominant
- Changes vegetation
- Loss of priority habitats
- Economic loss (agriculture and forestry)
- Past tourist attraction
- Loss of access opportunities
- Host for “sudden oak death”
- Red data book species in Bulgaria
Potential impacts of invasives on the Protectd Areas

Feral Goats

Affects:

• Unmanaged
• Selective grazers
• Prevent natural regeneration of woodlands
• Threat to Atlantic Oakwoods
• Tourist attraction
Potential impacts of invasives on the Protectd Areas

Himalayan Balsam

Affects:

• River and stream corridors
• Very dense – excludes other species
• Access to riverbank very difficult
• Rod fishing difficult
Potential impacts of invasives on the Protected Areas

Crassula

Affects:

• Dominates
• Excludes other species
• Covers open water
• Makes navigation difficult
Potential impacts of invasives on the Protectd Areas

American mink

Affects:
- Demise of water voles
- Demise of water birds
- Economic – poultry farmers
- Fishermen concerns
Potential impacts of invasives on the Protected Areas

Coypu Affects:

- Successfully eradicated from Norfolk broads in 1980’s
- Damage agricultural crops
- Undermine river banks
- Biodiversity loss - grazing

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Climate change and the effect of invasives
Climate change and the effect of invasives

- Climate change puts native species under stress.
- Invasives may be a tipping point for such species.
- Alien species not always invasive – until climate change creates the conditions to be invasive.
- Potential for more “domestic species” to be invasives in the future
Climate change and the effect of invasives

• Alien/invasive plants may be more tolerant to climatic factors e.g. Flooding.

• Climate change will favour some species.

• Alien species have evolved under different climatic conditions to native species.

• Current non-invasive alien species may become invasive given different climatic conditions.
Case study - Rhododendron Ponticum (Snowdonia)
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Development of a strategy needed understanding of:

• It’s impact.
• It’s ecology
• It’s distribution
• Techniques and costs of control
Case study - Rhododendron Ponticum (Snowdonia)

IMPACT

- Native plants and animal communities.
- Farming, forestry and tourism.
- Spread of “sudden oak death” - phytophthora
Case study - Rhododendron Ponticum (Snowdonia)

ECOLOGY OF THE PLANT

• Origin & distribution.
• What makes it invasive.
• Limiting factors to invasion.
• Dispersal.
• Soil moisture.
• Seed viability.
• Grazing.
Case study - Rhododendron Ponticum (Snowdonia)

Land abandonment & no grazing

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Case study - Rhododendron Ponticum (Snowdonia)

DISTRIBUTION.

• Survey data.
• Geographical distribution.
• Changes in distribution (20 years).
Case study - Rhododendron Ponticum (Snowdonia)
Case study - Rhododendron Ponticum (Snowdonia)

TECHNIQUES AND COST OF CONTROL

• Physical removal.
• Foliar spray.
• Cutting.
• Stump treatment.
• Stem injection.
• Mechanical flailing.
Case study - Rhododendron Ponticum (Snowdonia)

Physical removal

Foliar spray
Case study - Rhododendron Ponticum (Snowdonia)

Cutting

Stump treatment
Case study - Rhododendron Ponticum (Snowdonia)

Stem injection

Mechanical flailing
Case study - Rhododendron Ponticum (Snowdonia)

DEVELOPMENT OF A STRATEGY:

• Partner and stakeholder involvement.
• Understanding the issues.
• Sharing data.
• Agreeing to work together.
• Agreeing on actions.
Case study - Rhododendron Ponticum (Snowdonia)

Rhododendron strategy - recommendations:
• Partnership to monitor, promote & co-ordinate.
• Long-term aim of controlling rhododendron.
• Resource permitting – employ an officer.
• Maintain & share GIS information.
• Consolidation of areas already invested in.
• Canvas/lobby to ensure that future environmental grants take account of rhododendron.
Case study - Rhododendron Ponticum (Snowdonia)

- Additional funding from National Government for protected areas.
- Each partner to have a clear policy on rhododendron.
- Encourage research on the effect of land management practices on the spread of rhododendron.
- Change in legislation to make rhododendron a notifiable plant??
- Provide publicity & education.
- Advice on planning applications.
Case study - Rhododendron Ponticum (Snowdonia)

• Prior to the strategy the estimated control costs were circa £50 Million.
• After detailed work the true costs were identified at circa £15 Million.
Development of strategies for alien invasives.
Development of strategies for alien invasives.

PRINCIPLES SHOULD BE TRANSFERABLE

Main factors to incorporate are:

• Understand and know the alien
• Identify who are the stakeholders.
• Education and awareness.
• Identifying resources and agreeing priorities.
• Monitoring.
• Political support.
Inter-relationship of invasives with environmental land management schemes.
Inter-relationship of invasives with environmental land management schemes.

- Evidence that environmental management schemes allow aliens to spread.
- National environmental schemes not sensitive to the alien invasive agenda.
- Silo thinking on delivery of environmental schemes.
Potential considerations of how to address invasives in Protected Areas.

- Identification in MANAGEMENT PLANS.
- Biodiversity Action Plans.
- Strategies.
- Understanding ecology and ecosystems.
- Wider land management issues.
- Co-ordination of environmental schemes.
- Local delivery.
- Control Vs Eradication.
- Mainstreaming alien invasive control.
- EUROPEAN DIRECTIVE FOR ALIEN SPECIES MANAGEMENT IN PROTECTED AREAS.
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