REF.	ACTIONS	PARTNERS (lead partners in bold)
29.1	**Determine extent of spread of invasive plant species.**	**SNH** / **SEPA** DDSFB / Fishing proprietors / NESBReC / CLBAP / NELBAP / ACC / AC / SNH / CNPA
29.1.1	Initiate a programme to help all interested people to be able to identify key invasive species, and to understand the problems caused by them.	ACC / AC / SNH / CNPA / LBAPs
29.1.2	Based on increased awareness, promote a co-ordinated campaign to seek records of the locations of invasive plant species along the water courses of the catchment. The records to come from proprietors, ghillies, recreationalists and, if necessary, commissioned surveys.	ACC / AC / CNPA/ CLBAP/ NESBReC
29.1.3	Collate all records and use them to target control activity.	NESBReC / ACC / AC
29.2	**Control and remove non-native species without detriment to other interests.**	**AC** / **ACC** / **SNH** / **SEPA** / **DDSFB** / Landowners / FWAG / SNW / CNPA
29.2.1	Identify legal and effective control techniques for each species, learning from good practice in other catchment initiatives e.g. Tweed Invasives project	SNH / SEPA / ACC / AC / CNPA
29.2.2	Commission research if no control technique is readily available for enaction. Seek to learn from effective control actions for water crowfoot.	SNH / SEPA
29.2.3	Based on the locational information available, commence a sustained programme to control/eradicate invasive species starting from uppermost reaches of the rivers and moving downstream. Repeat control activities annually until no regeneration is found.	AC / ACC / SEPA
29.3	**Assess the reported spread of *Ranunculus fluitans* in the Dee and implications for ecology of river and other interests.**	**DDSFB** / **SEPA**/ **SNH**
29.3.1	Collate records of the distribution from fishery proprietors and ghillies. Identify techniques for effective control from best practice elsewhere and devise a sustained programme of control working from furthest upstream locations down. Learn from actions taken in other catchment initiatives e.g. Spey project	DDSFB/ SEPA/ SNH
29.4	**Promote awareness and education.**	**ACC** / **AC** / **SEPA** / **NELBAP** / **CLBAP**
29.4.1	Raise awareness amongst the public, pond owners, gardeners, landscape designers and contractors etc of the problems caused by releasing non-native plant species into the environment. Emphasise species that could pose a problem especially those that could be released from ornamental ponds and aquariums.	ACC / AC / SEPA / NELBAP / CLBAP

Acronyms are listed in the centre of this Action Card

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invasive plant species

29 SPECIES

OBJECTIVE 29. Control non-native invasive plant species such as giant hogweed, Japanese knotweed, Himalayan balsam and water crowfoot.

BACKGROUND

In common with the rest of the UK, interest in horticulture over the last few centuries has brought vast numbers of non native plant species into the Dee catchment. Some of these have escaped cultivation and become established as self-sustaining populations in the wild.

While most cause little concern, some are much more invasive and are a potentially significant threat to riparian biodiversity in the Dee catchment. A combination of efficient colonisation by seed or vegetative spread, and dense or robust growth form, enables them to dominate sections of river bank and smother out native species of plant life and their associated wildlife. As well as nature conservation problems, they can cause access difficulty for anglers and recreationalists; there is a significant health risk if giant hogweed is touched.

Encroachment of invasive, non-native species, such as rhododendron and Japanese knotweed, is a common problem in urban areas of the catchment: areas adjacent to gardens or landscaped estates are particularly at risk from becoming dominated by horticultural plant varieties, while in some places cultivated grass species or non-native ornamental species have been planted as an environmental "improvement". Species such as Himalayan balsam, Japanese knotweed and giant hogweed are especially competitive and have the capacity to spread rapidly along rivers and burns if not treated. Although as yet these species do not cover extensive areas of the catchment, they are present and will spread if not controlled at this stage.

In recent years, water crowfoot *Rannunculus fluitans* has become established in the Dee and neighbouring rivers, becoming very dense in parts of the river channel. In its natural state the bed of the Dee is largely free of large plants, with fish and other aquatic wildlife being adapted to these open bright conditions. The invasion of water crowfoot can blanket sections of river, casting dense shade on the bed. It also filters the passing water helping finer sediments to settle in greater concentrations. The decay of heaps of dead plant material after the growing season may also cause localised reductions in water oxygen levels. All these factors can have a detrimental effect on a wide range of species including salmon redds, freshwater pearl mussel beds and lamprey breeding habitat. Dense crowfoot can also entangle fishing lines, inhibiting angling. In standing water, species such as Canadian pondweed and awl wort can dominate the bottom, crowding out native species and greatly reducing biodiversity.

ISSUES

- There is a low general awareness of the problem species and the difficulties that can be caused by releasing non native plants into the wild.
- Garden ponds are very popular and the public may release weeded vegetation into water bodies without understanding potential consequences.
- There is no systematic recording of the location of invasive species.
- There is no individual organisation overseeing a coherent programme for controlling problem species.
- Any missed plants are able to spread themselves downstream very effectively.
- The problem plants are persistent so control activity needs to be repeated over a period of years to be effective.
- The control of some species, especially water crowfoot, are practically difficult with the potential to harm native plants and other species.

EXISTING / RECENT INITIATIVES

- North East Burns and Rivers and Urban Areas Habitat Action Plans have actions to control non native plant species
- Scottish Natural Heritage (SNH) research on water crowfoot and its implications.

WHO IS INVOLVED?

Aberdeenshire Council

Aberdeen City Council

Cairngorms National Park Authority

Cairngorms Local Biodiversity Action Plan

Dee District Salmon Fishery Board

Fishing Proprietors

Farming & Wildlife Advisory Group

Landowners

North East Local Biodiversity Action Plan

North East Scotland Biological Records Centre

Scottish Environment Protection Agency

Scottish Natural Heritage

Scottish Native Woodlands

Further copies can be downloaded at www.theriverdee.org. For further information contact the Dee Catchment Officer c/o The Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH Telephone: 01224 498200 email: info@theriverdee.org

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- Centre for Ecology and Hydrology (CEH) monkey flower study at Tarland.
- Cairngorms Local Biodiversity Action Plan (LBAP) and Cairngorms Park Plan address similar issues
- Cairngorms LBAP poster on non-native species

ACTIONS REQUIRED

- A campaign needs to be established to raise awareness of the problem of non native plant species in the Dee catchment.
- A central system needs to be established to encourage recording, collation and the dissemination of information of the location of all problem species.
- One or two organisations are needed to accept responsibility for responding to information on the location of species and then undertake systematic control.
- Control activity must begin at the upper reaches of distribution and systematically work downstream.
- Resources for a control programme need to be co-ordinated and repeated over a number of years.
- The control process must learn from effective practice elsewhere.

LEGISLATION

See Action Pack Annex for information sources

- Water Environment and Water Services (WEWS) Act
- Wildlife and Countryside Act
- Pesticides legislation (there are restrictions on herbicide applications in the vicinity of watercourses – in terms of what can be used and how close to the water).

GUIDELINES AND INFORMATION

See Action Pack Annex for information sources

- Tweed Invasives Project www.tweedforum.com/projects

BENEFITS TO PROTECTED SPECIES

The following specially protected species will benefit from the Actions:

- Atlantic salmon *Salmo salar*
- Daubenton's bat *Myotis daubentonii*
- Otter *Lutra lutra*
- Water vole *Arvicola terrestris*



RELATED ACTION CARDS

23. Wet and riparian woodlands

24. Bankside grasslands

AC Aberdeenshire Council **ACC** Aberdeen City Council **CNPA** Cairngorms National Park Authority **CLBAP** Cairngorms Local Biodiversity Action Plan **DDSFB** Dee District Salmon Fishery Board **FWAG** Farming & Wildlife Advisory Group **NELBAP** North East Local Biodiversity Action Plan **NESBReC** North East Scotland Biological Records Centre **SEPA** Scottish Environment Protection Agency **SNH** Scottish Natural Heritage **SNW** Scottish Native Woodlands

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