REF.	ACTIONS	PARTNERS (lead partners in bold)
21.1	**Maintain and enhance existing upland wetlands.**	**SGRPID** / **FCS** / AC / SNH / **CNPA** / **Land owners** / **Land managers** / **SRPBA**
21.1.1	Discourage any new upland moor and bog drainage by raising awareness of the consequences for water run-off, river flows and habitat quality.	**Land owners** / **Land managers** / **SRPBA**
21.1.2	Promote good muir burn practices to avoid burning of blanket bog areas (promote the uptake of the updated Muirburn code among landmanagers).	**SGRPID** / **CNPA** / Land owners / Land managers / SRPBA / SNH
21.1.3	Manage hill sheep and red deer grazing pressures to prevent damage to blanket bog from excessive grazing, trampling and tracking.	**SGRPID** / **CNPA** / Land owners / Land managers / SRPBA / SNH
21.2	**Restore natural storage capacity of significant blanket bogs and other peatlands.**	**SGRPID** / **CNPA** / Land owners / Land managers / SNH
21.2.1	Extend and promote incentive schemes to cover all designated and non-designated moorlands and blanket bogs in the catchment, with specific measures for the blocking of drainage networks and promoting good muir burn practices.	SNH

Acronyms are listed in the centre of this Action Card



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HABITATS

OBJECTIVE 21. Encourage re-creation of lost upland wetland habitats to 1) enhance habitat diversity for the benefit of otters, bats and other wildlife, and 2) to promote drainage attenuation in order to reduce extremes of spate flow.

BACKGROUND

The upland wetland habitats in the Dee catchment are of national and international nature conservation importance for their communities of birds, invertebrates and plants. They also have an essential role in regulating runoff after rain or snow by absorbing large quantities of water and then releasing it slowly.

- The most extensive wetland habitat type in the uplands of the Dee catchment is blanket bog, which supports important and interesting plant and bird communities. Some of the upland blanket bogs possess remnant populations of water vole which have largely been lost from the lowlands.
- The lochans at high altitudes in the Cairngorms are extremely poor in nutrients and hold specialised communities of flora and fauna of international importance.
- The lochs at intermediate altitude such as Loch Builg and Loch Callater support important populations of Arctic Char.

ISSUES

- Many areas of blanket bog have been affected by the construction of drains in an attempt to make moorlands more productive for grouse. These ditches can result in erosion of the peat causing the formation of hags. The lowering of water table levels reduces the diversity of mosses and liverworts in particular, causing a trend towards domination by heather.
- Poor muir burning practices can also cause damage to blanket bogs. The consequences are similar to those of ditch construction.
- Road/track construction can cause erosion of blanket bogs.
- Erosion can also be set off by trampling from concentrated movements of red deer and occasionally by sheep.
- All these factors reduce the water carrying capacity of blanket bogs so that through-flow increases, speeding up the discharge to streams and rivers. This is thought to have contributed to a greater propensity for spate flows.
- The increase in high volume spates accelerates erosion of the banks and river bed with potentially negative consequences for salmon redds and mussel beds. It also makes the catchment more vulnerable to flooding.
- Deep and long lasting snow beds in the mountains have provided one of the most important runoff regulators in the catchment. The string of mild winters and low snow fall over recent years has reduced the effectiveness of this system, making the role of blanket bogs as flow regulators all the more important.
- High level lochans have minimal buffering capacity so have been vulnerable to air borne pollution, especially acidification. Fortunately the reduction of sulphur in fuels has reduced this risk in recent years.

EXISTING / RECENT INITIATIVES

- Some estates have blocked off drains within blanket bogs to increase their water storage capacity and to provide more habitat diversity of benefit to young grouse (grouse chicks have a diet of invertebrates, and the density of invertebrates is greater in wetlands than in dry heather moor).
- North East Local Biodiversity Action Plan (LBAP) for Wetlands is under development, in association with RSPB Scotland
- Cairngorms LBAP is already involved in delivering some of the actions through the development of a Cairngorms moorland framework.
- The Scottish Environment Protection Agency (SEPA) is leading on a Wetlands inventory to identify areas of existing wetlands degraded and not degraded).
- Cairngorms Park Plan addresses similar issues.
- Aberdeenshire and Cairngorms Local Plans
- Indicative Forestry Strategy

WHO IS INVOLVED?

Aberdeenshire Council

Cairngorms National Park Authority

Forestry Commission Scotland

Landowners

Land managers

Scottish Government Rural Payments & Inspections Directorate

Scottish Natural Heritage

Scottish Rural Property & Business Association

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

deecatchment partnership

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- Rural Development Contracts under the Scottish Rural Development Programme (SRDP)

ACTIONS REQUIRED

- All significant blanket bogs in the Dee catchment need to be protected from any further damage (although it is recognised that some may regenerate with woodland).
- The current moves towards restoring wetlands should be promoted more actively, with positive incentives to block more arterial drains in bogs.
- There is a need for identification of blanket bogs being damaged by livestock and deer movements, and subsequent action to reduce damage.

LEGISLATION

See Action Pack Annex for information sources

- Aberdeenshire Local Plan
- Cairngorms Local Plan
- Environmental Impact Assessment (EIA) regulations for uncultivated land
- Environment Act 1995
- Forestry Act
- Forestry EIA regulations
- Forests and Water Guidelines (Forestry Commission)
- Flood Prevention Act 1961
- Flood Prevention and Land Drainage (Scotland) Act 1997
- Good Agricultural and Environmental Conditions standards (Condition 16 forbids the drainage of ponds)
- Good Farming Practice Guidelines
- Habitats Regulations
- Nature Conservation (Scotland) Act
- Section 17 of Agriculture Act
- Town and Country Planning (Scotland) Act 1997
- Water Environment and Water Services Act (2003)

GUIDELINES AND FURTHER INFORMATION

See Action Pack Annex for information sources

- Good Farming Practice guidelines
- Ditching and dredging leaflet
- Scottish Forestry Grants Scheme
- Forests and Water Guidelines
- Ponds, Pools and Lochans (SEPA)
- Pond Design (Aberdeenshire Council
- Good Farming Practice guidelines
- Environment Act 1995
- Muir Burn Code (Scottish Natural Heritage)
- Good Farming Practice guidelines
- Forestry Commission Nature Conservation guidelines

BENEFITS TO PROTECTED SPECIES

The following specially protected species will benefit from the Actions:

- Common frog *Rana temporaria*
- Otter *Lutra lutra*
- Water vole *Arvicola terrestris*
- Snipe *Gallinago gallinago*



RELATED ACTION CARDS

3. Woodland management

4. Road and access track drainage

15. Effects of land management on river flow

28. Otter