REF.	ACTIONS	PARTNERS (lead partners in bold)
32.1	**Assess and report on all fish populations.**	**RDT** / **FRS** / **SEPA** / DSFIA / NELBAP / CLBAP / NESBReC / DDSFB
32.1.1	Agree a qualitative data collection programme for all Dee catchment fish species.	**RDT** / **FRS** / **SEPA** / DSFIA
32.1.2	Continue to record details of native fish species found during juvenile fish surveys.	RDT / FRS
32.1.3	Survey populations of fish in standing water and main stem of River Dee	RDT / FRS
32.1.4	Establish systematic catch recording system.	DDSFB / FRS / RDT / NESBReC
32.1.5	Continue to use SFCC protocol on electrofishing.	RDT
32.1.6	Collate formal records of non-native fish species.	RDT / NELBAP / CLBAP / NESBReC
32.2	**Assess and report on numbers of piscivorous predators.**	DDSFB / SNH
32.3	**Identify riparian and instream habitat features, including factors detrimental to fish health.**	**DDSFB** / **RDT** / SNH
32.3.1	Assess existing habitat data: - 3-Dee Vision Project (Davan, Tarland & Elrick burn catchments) - LIFE Atlantic salmon project - SNH hydromorphological survey of River Dee Main Stem	DDSFB / RDT / SNH
32.3.2	Develop systematic programme of surveying habitat in main stem and tributaries.	DDSFB / RDT
32.4	**Establish location of genetically distinct populations of Atlantic salmon.**	**RDT** / **DDSFB** / **FRS**
32.4.1	Take genetic samples from fish from a range of locations across the catchment to examine genetic profile of populations and establish appropriate scale of fisheries management	DDSFB / RDT / FRS
32.4.2	Radio track Atlantic salmon at different times of the year to establish spawning location.	DDSFB / RDT / FRS
32.5	**Monitor health status of fish populations.**	**DDSFB** / **RDT** / **FRS**
32.5.1	Perform annual survey to test different species of fish for notifiable and alien diseases and parasites.	DDSFB / RDT / FRS
32.6	**Increase geographic range of fish counters.**	**RDT** / **FRS**
32.6.1	Install a single VAKI counter in a tributary towards the lower end of the catchment.	RDT / FRS

Acronyms are listed in the centre of this Action Card

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fish data 32 SPECIES

OBJECTIVE 32. Establish and implement a programme for monitoring and reporting on the status of all fish species in the Dee.

BACKGROUND

The River Dee is a world renowned salmon fishery. However, whilst Atlantic salmon is an important species in terms of conservation and economic value, other species of native fish have a crucial role to play in the aquatic ecosystem but little is known about their population status or distribution. For example, eel populations are declining in the Dee but little data are available to inform this.

The Dee is most famous for the numbers of salmon entering the river in spring. However salmon come into the river every month of the year, and are these populations are often genetically discrete. There is therefore a need for structured monitoring throughout the year.

Fish are indicators of a high quality aquatic environment and any problems seen with them will be indicative of wider problems in the catchment. Therefore it is important to have quantitative information on all species, in terms of population dynamics, productivity and impacting pressures.

More quantitative data are needed on non native fish species, in order to understand their impact and help inform the debate on whether to eliminate such species as part of the restoration of natural waterbodies

ISSUES

- Genetically distinct and unique populations of fish will inhabit different parts of the catchment and any monitoring should be on a locally appropriate scale.
- Land use and instream habitat affect the quality of the environment that fish inhabit.
- Obstructions to fish migration, whether chemical, physical or environmental can prevent fish from reaching their spawning grounds and completing their lifecycle.
- Diseases and parasites will influence the well-being of fish stocks.
- Non-native species of fish, parasites and predators can all have a negative impact on fish.



Electrofishing (DDSFB)

WHO IS INVOLVED?

Cairngorms Local Biodiversity Action Plan

Dee District Salmon Fishery Board

Dee Salmon Fishery Improvement Association

Fisheries Research Services

North East Local Biodiversity Action Plan

North East Scotland Biological Records Centre

River Dee Trust

Scottish Environment Protection Agency

Scottish Natural Heritage

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 49820 0 email: info@theriverdee.org

deecatchment partnership

EXISTING / RECENT INITIATIVES

- Historic surveys of juvenile salmon and trout numbers have been performed by the Dee District Salmon fishery Board (DDSFB). The River Dee Trust (RDT) now undertakes these surveys annually and has recently widened their scope to include all fish species.
- Fish counters have been installed on the Beltie, Cattie and Feardar tributaries to monitor fish numbers migrating into these tributaries.
- Fish traps for adult salmon and smolts have been established on the Girnock and Baddoch since the 1960's and 1990's respectively.
- The numbers of spawning fish are monitored in the tributaries on an annual basis.
- Radio tracking programmes have identified the spawning locations of some genetically discrete populations.
- Avian predator numbers are recorded on an annual basis.
- Dee Salmon Action Plan - Scottish Agricultural College (SAC), Scottish Environment Protection Agency (SEPA).
- The Dee Salmon Fishery Improvement Association (DSFIA) recommends that its members use the FishDee website to record catches.
- 'Fish' is covered in the Water Framework directive (WFD) as a biological quality element included when assessing the ecological status of waterbodies, and is an aspect of ecosystems which SEPA will therefore have to report on in future.
- Cairngorms non-native fish project.

ACTIONS REQUIRED

- Monitor catches of all species of fish. Include information on size, weight, age and location and date of capture.
- Monitor all species of fish for notifiable diseases on an annual basis.
- Perform statistically robust survey to quantify populations of all fish species across the catchment at least every five years.
- Perform systematic habitat survey of all tributaries to SFCC standards every five years.
- Monitor presence / absence of alien fish species.
- Increase geographic range of fish counters across the catchment.
- Stakeholders need to reach an agreement on whether there is a need for elimination of non native species as part of river restoration, or whether such species are now accepted.

LEGISLATION

See Action Pack Annex for information sources

- The DDSFB is tasked with protecting and enhancing stocks of Atlantic salmon and sea trout.
- A new fish health directive is currently under consideration by the European community.

GUIDELINES AND INFORMATION

See Action Pack Annex for information sources

All survey techniques should be to accepted Scottish Fisheries Coordination Centre protocols, and participating staff trained and accredited in the techniques.

BENEFITS TO PROTECTED SPECIES

The following specially protected species will benefit from the Actions:

- Freshwater pearl mussel *Margaritifera margaritifera*
- Atlantic salmon *Salmo salar*
- Brook lamprey *Lampetra planeri*
- River lamprey *Lampetra fluviatilis*
- Sea lamprey *Petromyzon marinus*



Lampreys (DDSFB)

32 SPECIES

RELATED ACTION CARDS

26. Atlantic salmon

27. Freshwater pearl mussel

31. Fish pond management

CLBAP Cairngorms Local Biodiversity Action Plan **DDSFB** Dee District Salmon Fishery Board **DSFIA** Dee Salmon Fishery Improvement Association **FRS** Fisheries Research Services **NELBAP** North East Local Biodiversity Action Plan **NESBReC** North East Scotland Biological Records Centre **RDT** River Dee Trust **SEPA** Scottish Environment Protection Agency **SNH** Scottish Natural Heritage

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