

Fish in Rivers Factsheet

NBIRBD

Fane River Catchment

Factsheet: 2024/12

The Fane River catchment is located within the Eastern River Basin District and covers a catchment area of approximately 140km². The Fane River rises from tributaries draining into Lough Ross on the border of Counties Monaghan and Armagh. The river flows in a southeasterly direction through Co. Monaghan. The Fane River flows into Lough Muckno and through the town of Castleblayney and village of Inniskeen before entering the sea just south of Dundalk and Blackrock, Co. Louth, within Dundalk Bay SAC.

The Fane River is a popular angling river for salmon, brown trout and sea trout (O' Reilly, 2002).

The underlying geology of this catchment is quite uniform, comprising mostly of mudstone, greywacke and conglomerate. Most of this catchment's land use is agriculture (EPA 2016).

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess and report the status of stocks in Ireland's rivers, lakes and transitional waters.

This report presents the results of an electro-fishing (CEN 2003) survey, carried out in the Fane River Catchment in 2024. Six sites were surveyed on the Fane River from 26th to the 28th of August 2024.

The survey methods included 10-minute timed Electro-Fishing (TEF₁₀), and Area Delineated Electro-Fishing (ADEF handset). All TEF₁₀ fish count results were converted to minimum population estimates according to Matson *et al.* (2018).



Fane River at Castlering, Co. Louth (Site 5).



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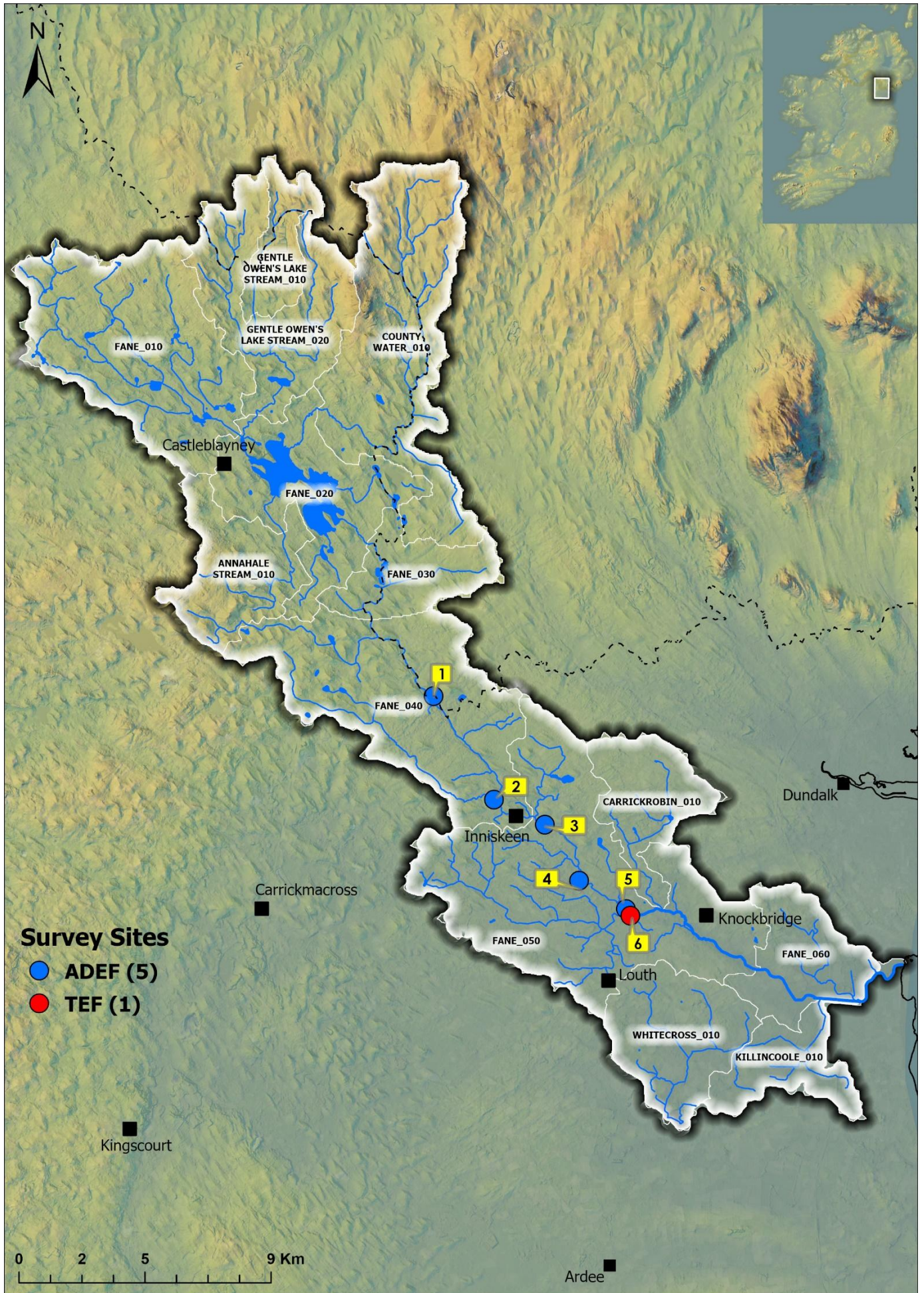


Figure 1. Location of electrofishing survey sites on the Fane River Catchment, August 2024.

Table 1. Site survey details, Fane River catchment, August 2024.

No.	WFD Sub-basin	River	Site	Method	WFD	Date
1	Fane_040	Fane	Kilmurray	ADEF (Handset)	No	27/08/2024
2	Fane_040	Fane	Moyles	ADEF (Handset)	No	27/08/2024
3	Fane_050	Fane	Bridge d/s of Inniskeen	ADEF (Handset)	Yes	26/08/2024
4	Fane_050	Fane	Drumgonnelly	ADEF (Handset)	No	27/08/2024
5	Fane_050	Fane	Castlerring Bridge	ADEF (Handset)	No	27/08/2024
6	Fane_050	Ballykelly	Coolcreedan	TEF (Handset)	No	28/08/2024

Table 2. Minimum density estimates of fish (no. fish/m²), Fane River Catchment, August 2024 (previous results are shown where applicable).

Site no.	1		2		3				
Species	2018	2024	2018	2024	2010	2013	2018	2021	2024
Brown trout	0.101	0.158	0.091	0.154	0.109	0.285	0.211	0.101	0.107
0+ brown trout	0.035	0.069	0.02	0.11	0.013	0.092	0.008	0.077	0.003
1+ & older brown trout	0.066	0.09	0.071	0.043	0.096	0.193	0.203	0.024	0.104
Salmon	0.054	0.064	0.085	0.106	0.637	0.241	0.015	0.041	0.084
0+ salmon	0.028	0.064	0.034	0.101	0.363	0.08	-	0.012	0.026
1+ & older salmon	0.025	-	0.051	0.005	0.275	0.161	0.015	0.029	0.058
European eel	-	0.012	-	0.005	0.037	0.024	0.011	0.007	0.032
Flounder	-	-	-	-	-	-	-	-	-
Lamprey sp.	0.006	-	-	-	0.003	-	-	-	0.003
Roach	0.006	-	-	-	-	-	-	-	-
Stone loach	0.047	0.007	0.017	0.005	0.024	0.015	-	0.045	0.006
Three-spined stickleback	0.009	0.005	-	-	-	0.003	-	0.002	-
All fish	0.224	0.246	0.193	0.269	0.811	0.568	0.237	0.196	0.231
Site no.	4		5		6				
Species	2018	2024	2018	2024	2024				
Brown trout	0.122	0.12	0.027	0.131	0.577				
0+ brown trout	-	0.061	0.021	0.029	0.252				
1+ & older brown trout	0.122	0.058	0.005	0.102	0.325				
Salmon	0.143	0.158	0.016	0.147	-				
0+ salmon	0.007	0.093	0.005	0.057	-				
1+ & older salmon	0.136	0.064	0.011	0.09	-				
European eel	-	0.02	0.053	0.008	-				
Flounder	-	0.003	-	-	-				
Lamprey sp.	-	-	-	0.006	0.024				
Roach	-	0.006	-	-	-				
Stone loach	0.007	0.006	0.045	0.041	0.032				
Three-spined stickleback	-	0.003	-	0.002	-				
All fish	0.272	0.315	0.142	0.335	0.633				

Table 3. Brown trout and salmon % age class structure (where recorded), Fane River Catchment, August 2024.

Species	Site	% of catch				
	No.	0+	1+	2+	3+	4+
Brown trout	1	43	25	28	3	-
	2	72	28	-	-	-
	3	6	48	41	4	1
	4	51	27	15	7	-
	5	22	47	31	-	-
	6	47	39	14	-	-
Salmon	1	100	-	-	-	-
	2	95	5	-	-	-
	3	41	57	2	-	-
	4	59	39	2	-	-
	5	39	61	-	-	-

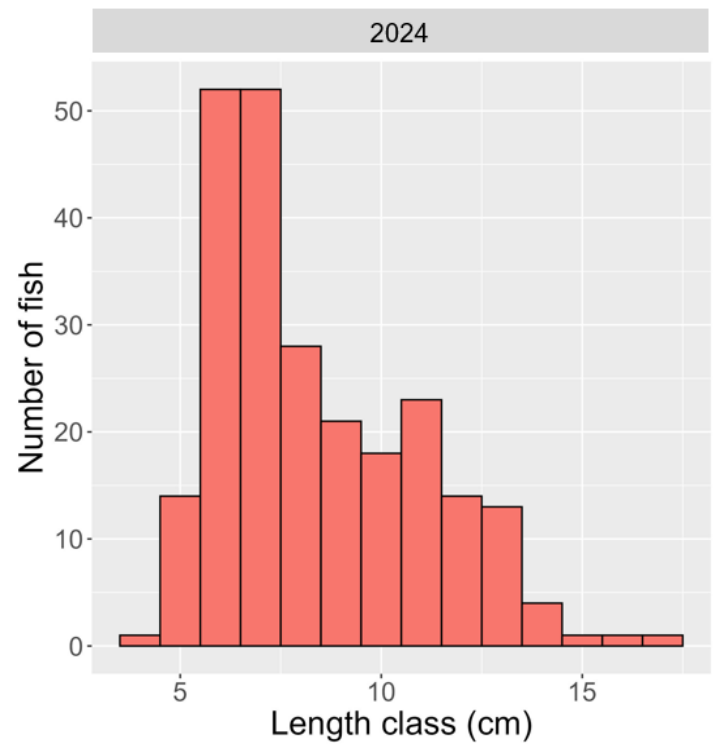
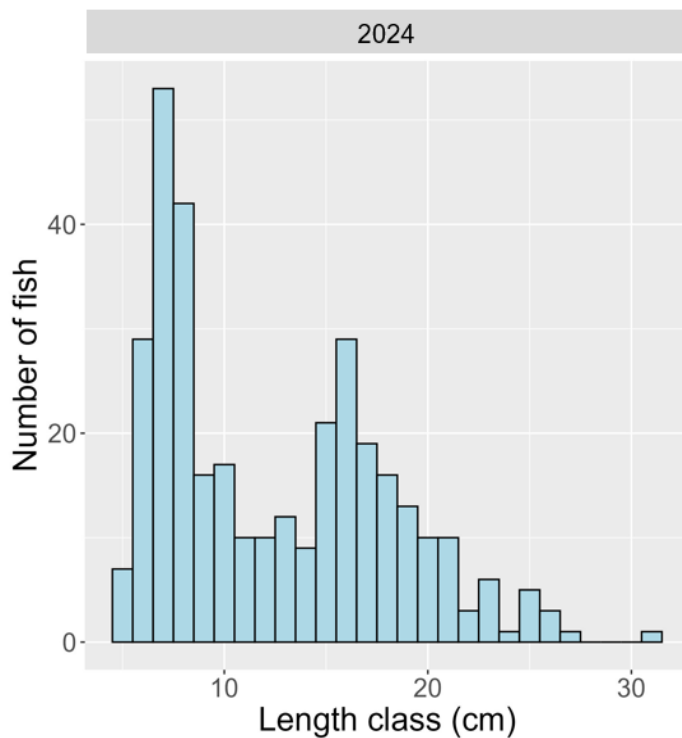


Figure 3. Length frequency distribution for trout (n = 343), Fane River Catchment, 2024 (No. sites =6).

Figure 4. Length frequency distribution for salmon (n = 243), Fane River Catchment, 2024 (No. sites =5)

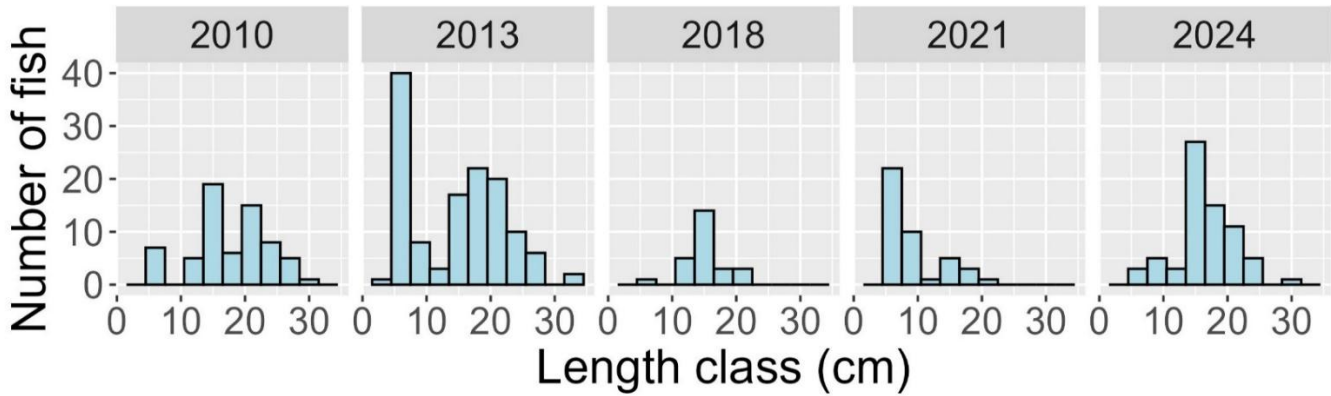


Figure 5. Length frequency distribution of brown trout (2010 n=66, 2013 n= 129, 2018 n= 26, 2021 n= 42, 2024 n= 71) at Site 3 (Bridge d/s of Inniskeen), a WFD Surveillance Monitoring site, Fane River Catchment.

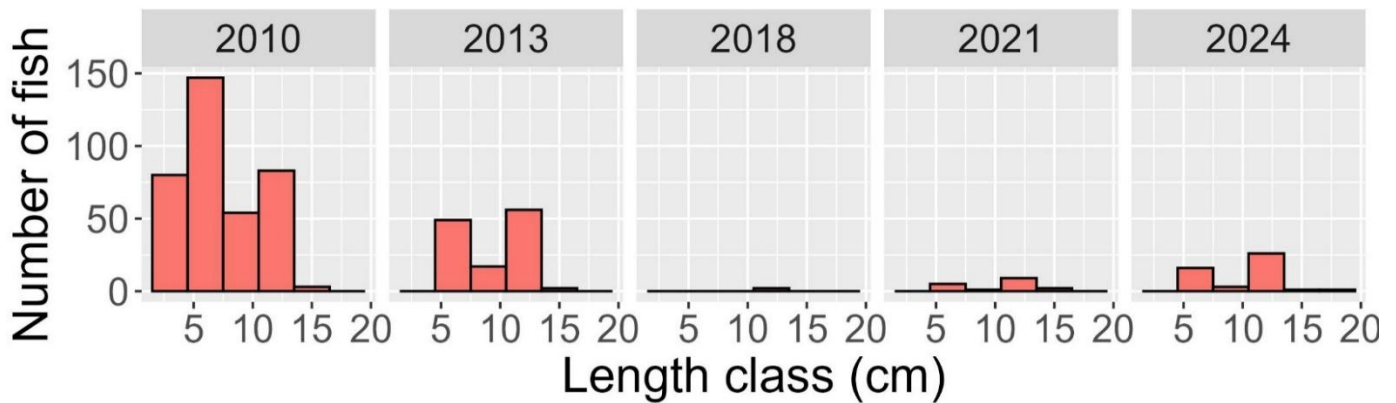


Figure 6. Length frequency distribution of salmon (2010 n=367, 2013 n= 124, 2018 n= 2, 2021 n= 17, 2024 n= 46) at Site 3 (Bridge d/s of Inniskeen), a WFD Surveillance Monitoring site, Fane River Catchment.

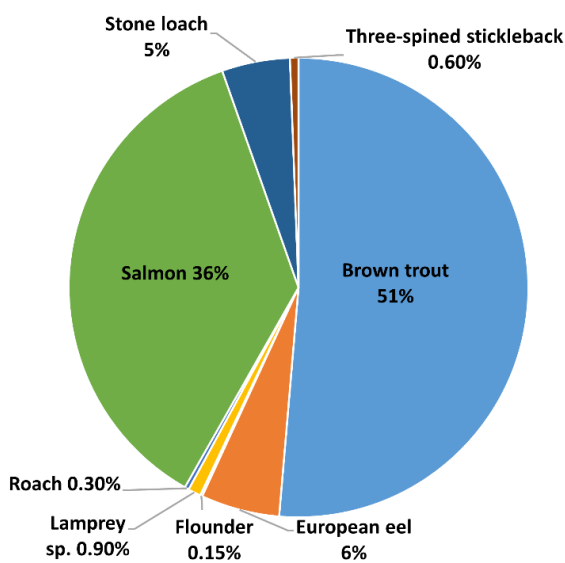


Figure 7. Fish species composition (%), Fane River Catchment, 2024.

Table 4. Fish ecological status, River Fane Catchment, August 2024.

Site No.	2010	2013	2018	2021	2024
1	-	-	N/A	-	G
2	-	-	N/A	-	G
3	G	G	M	G	G
4	-	-	M	-	G
5	-	-	N/A	-	G
6	-	-	-	-	M

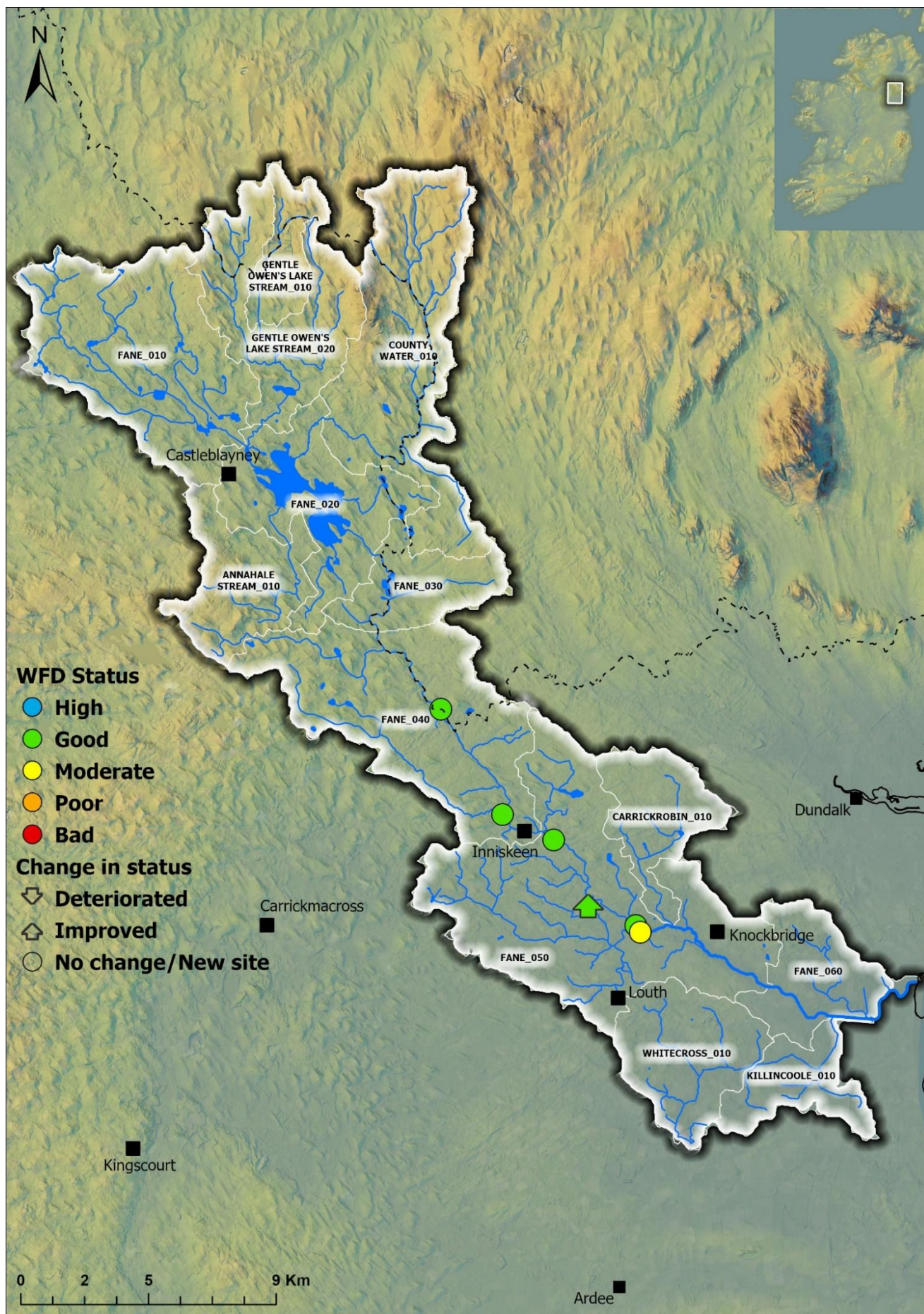


Figure 8. Fish ecological status in the Fane River Catchment, 2024. Arrows indicate a change in status since previous surveys (where applicable). Dashed line indicates the border between Republic of Ireland and Northern Ireland.

Summary

Eight fish species were recorded at six sites electrofished on the Fane River Catchment in 2024.

Brown trout and stone loach were the most common species present (6 sites each, 100%), followed by salmon and European eel (5 sites each, 83%), three-spined stickleback and lamprey spp. (3 sites each, 50%), and roach and flounder (1 site each, 17%).

Brown trout was the most abundant species present, followed by salmon, stone loach, European eel, lamprey spp., three-spined stickleback, roach and flounder (Figure 7, Table 2).

Brown trout ranged in length from 5.4 to 31.2cm. Five ages classes of brown trout (0+, 1+, 2+, 3+, 4+) were present with 0+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.577 fish/m²) was recorded at Site 6 (Coolcreedan) on the Ballykelly River. The highest density of 0+ brown trout (0.252 fish/m²) and 1+ and older brown trout (0.325 fish/m²) was also recorded at Site 6.

Salmon ranged in length from 4.9 to 17cm. Three age classes of salmon (0+, 1+, and 2+) were present with 0+ being the most abundant cohort. The highest density of salmon (all ages combined) (0.158 fish/m²) was recorded at Site 4 (Drumgonnelly) on the Fane River. The highest density of 0+ salmon (0.101 fish/m²) was recorded at Site 2 (Moyles) on the Fane River. The highest density of 1+ and older salmon (0.090 fish/m²) was recorded at Site 5 (Castlerring Bridge) on the Fane River.

A Water Framework Directive fish classification tool (FCS2) was developed for Irish rivers in 2011 (SNIFFER 2011). The tool works by comparing various fish community metric values within a site to those predicted for a site under un-impacted conditions. In

general, a site will achieve High status if all indicator species (e.g. both salmonid cohorts 0+ and 1+ and older) are present and in expected numbers. Status will decline if such cohorts are missing, are in poor abundance, or if more tolerant species proliferate.

Fish ecological status was assigned to six sites surveyed in the Fane Catchment during 2024. Five sites were assigned Good status, with one site Moderate. Five sites were surveyed previously on this catchment and assigned fish ecological status. When compared with their most recent previous surveys, one site (Site 4) improved in status and the remainder were left unchanged.

The reasons for the failures (i.e. moderate status) in fish ecological status were due to lower-than-expected abundance of type specific indicator species (e.g., salmon and trout), absence of certain age cohorts indicating recruitment failures. Failures and deteriorations in fish ecological status can be caused by pressures such as nutrient enrichment, habitat modification and fish passage issues.

References

- CEN (2003) Water Quality Sampling of Fish with Electricity. CEN EN 14011:2000. Brussels. European Committee for Standardization.
- Matson, R., Delanty, K., Shephard, S., Coghlan, B. and Kelly, F. (2018). *Moving from multiple pass depletion to single pass timed electrofishing for fish community assessment in wadeable streams*. Fisheries Research, 198, 99-108.
- SNIFFER (2011) River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.
- EPA (2016) <https://gis.epa.ie/EPAMaps/WaterCatchments.ie> – Catchments.ie Accessed in March/April 2025.

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CITATION: Corcoran, W., Gordon, P., McCarthy, E., Flynn, E., O Brian, M., Szocs, A., Robson, S., Piaskowy, J., and Kelly, F.L., (2025) Sampling Fish in Rivers 2024 – Fane River Catchment, Factsheet No. 11. National Research Survey Programme. Inland Fisheries Ireland.

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