

Fish in Rivers Factsheet

NWRBD

Owentocker River Catchment

Factsheet: 2024/06

The Owentocker River Catchment is located within the North Western River Basin District and covers an area of approximately 43km². The river flows in a westerly direction from the Blue Stack Mountains, Co. Donegal, before reaching the sea at Ardara town. The geology of this catchment is mainly composed of marble, quartzite and schist, with the land cover mostly blanket bog and small amounts of forestry and agriculture. A large portion of this catchment falls within the Lough Nilan Bog (Carrickatlieve) Special Area of Conservation, with its mouth at Ardara forming part of the West of Ardara/Maas Road SAC (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 a catchment-wide survey of the Owentocker Catchment in 2024. Eleven sites were surveyed on the Owentocker River Catchment between the 3rd and 5th of September 2024.

The survey methods included 10-minute timed Electro-Fishing (TEF₁₀), and Area Delineated Electro-Fishing (ADEF handset). One long-term Water Framework Directive (WFD) surveillance monitoring (SM) site was surveyed on the Owentocker River, downstream of Ardara (Site 11). All TEF₁₀ fish count results were converted to minimum population estimates according to Matson *et al.* 2018.



Owenroe river at Glenree Field, Co. Donegal (Site 3).



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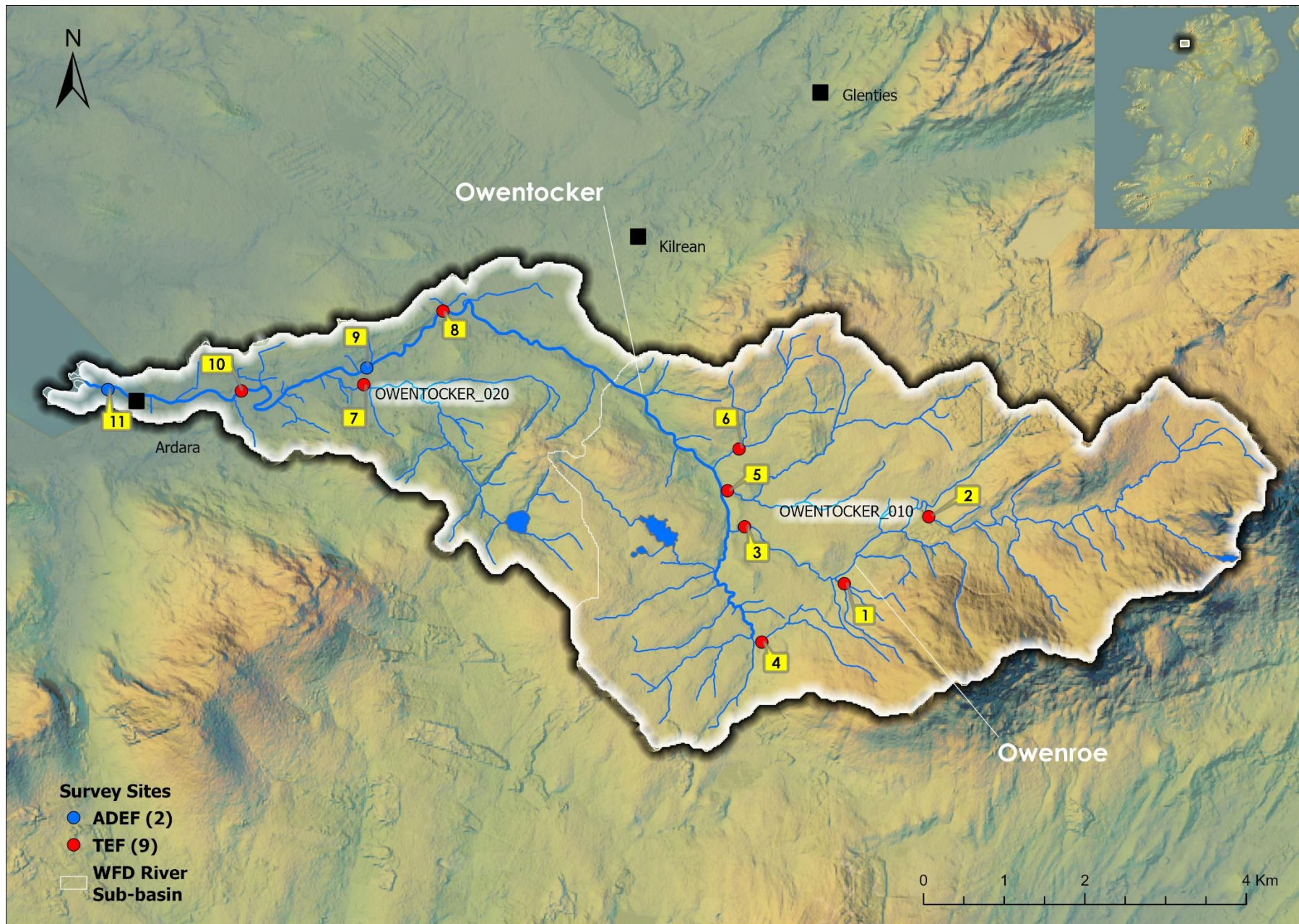


Figure 1. Location of electrofishing survey sites on the Owentocker River catchment, September 2024.

Table 1. Site survey details, Owentocker River Catchment, September 2024.

No.	WFD Sub- Basin	River	Site	Method	WFD	Date
Owenroe sub-catchment						
1	Owentocker_010	Owenroe	Cronaslieve House	TEF (Handset)	No	05/09/24
2	Owentocker_010	Owenroe	Tullybane Bridge	TEF (Handset)	No	05/09/24
3	Owentocker_010	Owenroe	Glenree Field	TEF (Handset)	No	05/09/24
Owentocker sub-catchment						
4	Owentocker_010	Owentocker	Sir Albert's Bridge	TEF (Handset)	No	05/09/24
5	Owentocker_010	Tulaigh na gCloigeann	Tullynaglaggin Bridge	TEF (Handset)	No	05/09/24
6	Owentocker_010	Owentocker tributary	Ivy Bridge	TEF (Handset)	No	04/09/24
7	Owentocker_020	Cuskercraghan	Cashel	TEF (Handset)	No	04/09/24
8	Owentocker_020	Owentocker	Crockaslowra	TEF (Handset)	No	04/09/24
9	Owentocker_020	Owentocker	Cashel School	ADEF (Handset)	No	04/09/24
10	Owentocker_020	Owentocker	Lurganboy	TEF (Handset)	No	04/09/24
11	Owentocker_020	Owentocker	500m d/s Bridge in Ardara	ADEF (Handset)	Yes	03/09/24



Owenroe River at Cronaslieve House (Site 1), Co. Donegal.

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

Owenroe						Owentocker			
Site no.	1		2			3	4		5
Species	2017	2024	2017	2021	2024	2024	2017	2024	2024
Brown trout	0.19	0.283	0.009	0.054	0.133	0.203	-	0.305	0.137
0+ brown trout	0.048	0.202	-	0.030	-	0.056	-	0.305	0.043
1+ & older brown trout	0.143	0.081	0.009	0.024	0.133	0.147	-	-	0.094
Salmon	-	-	-	0.036	0.220	0.182	-	0.061	0.120
0+ salmon	-	-	-	0.036	0.035	0.042	-	0.061	0.052
1+ & older salmon	-	-	-	-	0.185	0.14	-	-	0.069
European eel	-	-	-	-	-	-	-	-	-
All fish	0.19	0.283	0.009	0.089	0.353	0.384	-	0.367	0.257
Owentocker									
Site no.	6	7		8		9		10	
Species	2024	2017	2024	2015	2024	2017*	2024	2017*	2024
Brown trout	0.628	0.559	0.208	0.014	0.036	P	0.021	0.060	0.017
0+ brown trout	0.157	0.417	0.095	0.008	-	P	0.012	0.060	0.017
1+ & older brown trout	0.471	0.142	0.113	0.005	0.036	-	0.009	-	-
Salmon	-	0.152	0.208	0.17	0.335	P	0.181	0.462	0.195
0+ salmon	-	0.133	0.139	0.069	0.192	P	0.132	0.447	0.138
1+ & older salmon	-	0.019	0.069	0.102	0.144	-	0.049	0.015	0.056
European eel	-	-	-	0.003	-	-	-	0.022	-
All fish	0.628	0.710	0.416	0.187	0.371	SPOT*	0.202	0.544	0.212
Owentocker									
Site no.	11								
Species	2008	2011	2015	2021	2024				
Brown trout	0.017	0.034	0.048	0.023	0.032				
0+ brown trout	0.007	0.02	0.017	0.012	0.012				
1+ & older brown trout	0.009	0.014	0.031	0.012	0.02				
Salmon	0.490	0.706	0.222	0.081	0.087				
0+ salmon	0.260	0.362	0.105	0.041	0.035				
1+ & older salmon	0.230	0.345	0.117	0.041	0.052				
European eel	0.007	0.028	0.017	0.058	0.01				
All fish	0.514	0.768	0.287	0.163	0.129				

*SPOT surveys are carried out when a full survey was not possible. Results are not comparable to full survey and are included as a guide to indicate species presence or absence (P=present).

Table 3. Brown trout % age class structure (where recorded), Owentocker River Catchment, September 2024.

Site No.	% of catch			
	0+	1+	2+	3+
Owenroe				
1	75	25	-	-
2	-	91	9	-
3	33	34	33	-
Owentocker				
4	100	-	-	-
5	37	63	-	-
6	30	70	-	-
7	54	38	8	-
8	67	33	-	-
9	57	29	14	-
10	100	-	-	-
11	36	32	27	5

Table 4. Salmon % age class structure (where recorded), Owentocker River Catchment, September 2024.

Site No.	% of catch	
	0+	1+
Owenroe		
2	16	84
3	23	77
Owentocker		
4	100	-
5	43	57
7	69	31
8	57	43
9	73	27
10	71	29
11	40	60

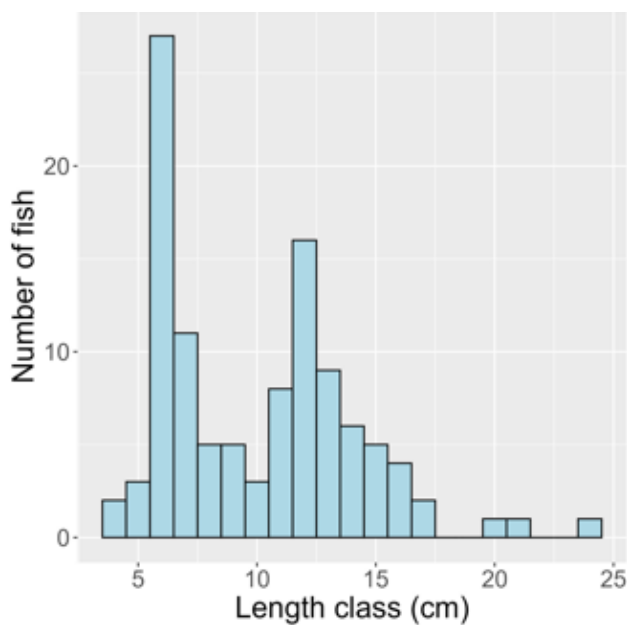


Figure 2. Length frequency distribution for brown trout (n = 109), Owentocker River Catchment, 2024 (No. sites = 11).

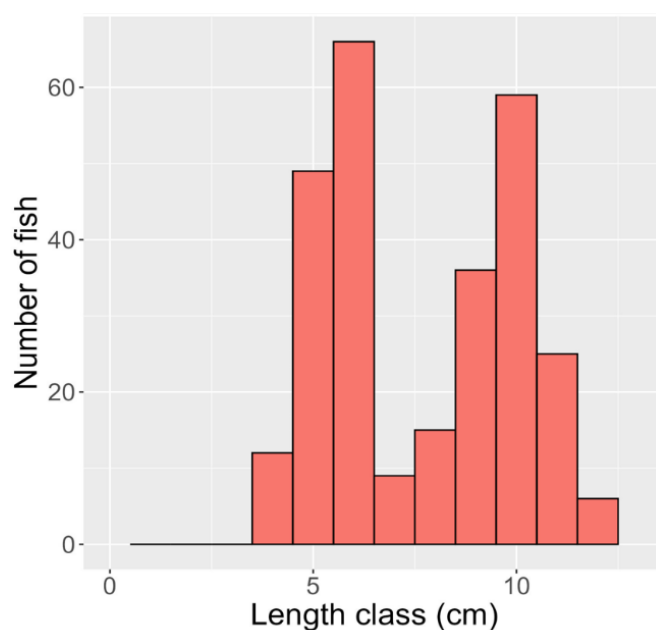


Figure 3. Length frequency distribution for (n = 277), Owentocker River Catchment, 2024 (No. sites = 9).

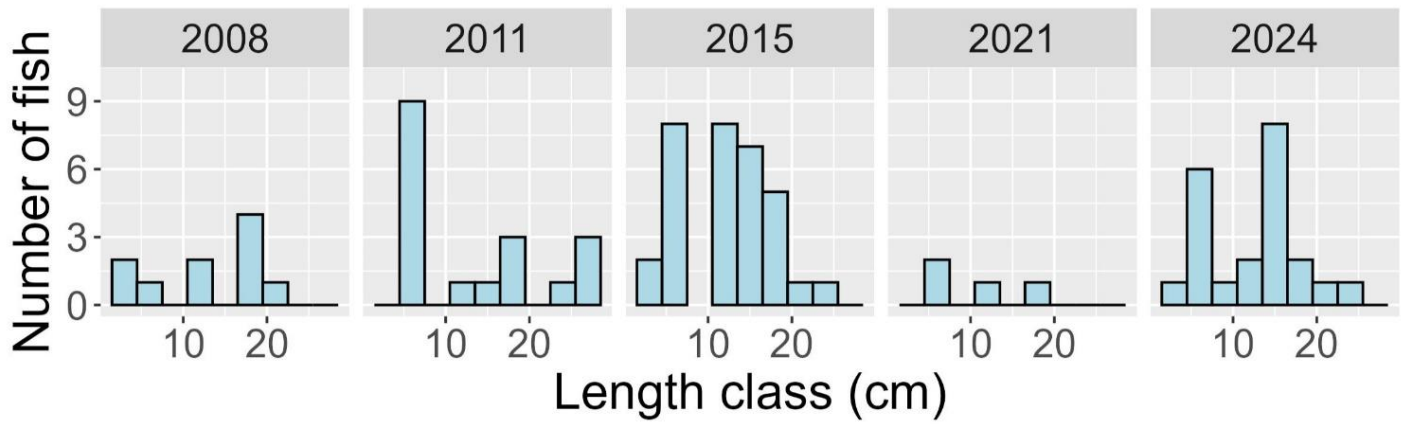


Figure 4. Length frequency distribution of brown trout (2015 n= 43, 2021 n=4, 2024 n=22) at Site 11 (500m d/s Bridge in Ardara), a WFD surveillance monitoring site, in the Owentocker River Catchment.

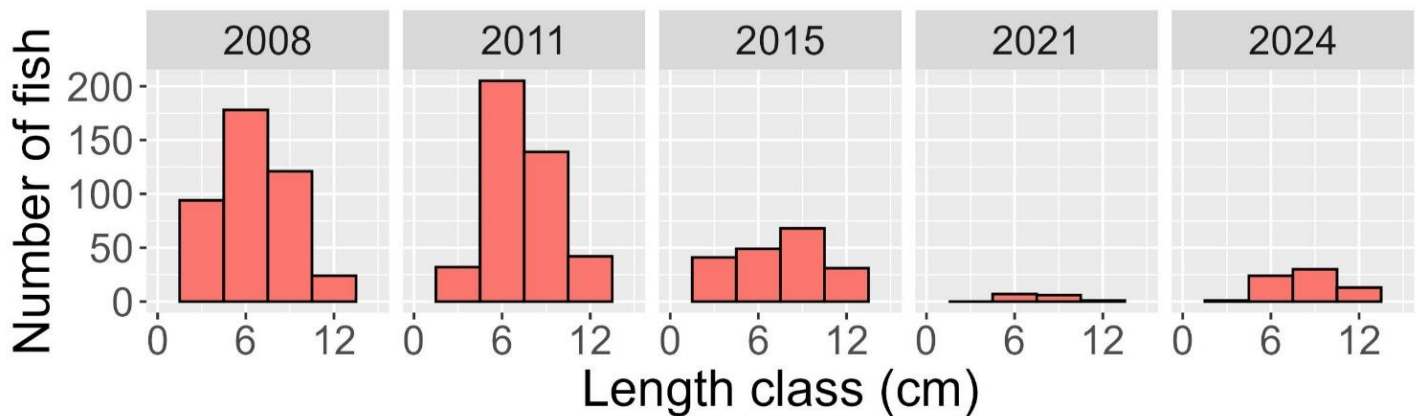


Figure 5. Length frequency distribution of salmon (2015 n= 189, 2021 n= 14, 2024 n= 68) at Site 11 (500m d/s Bridge in Ardara), a WFD surveillance monitoring site, in the Owentocker River Catchment.

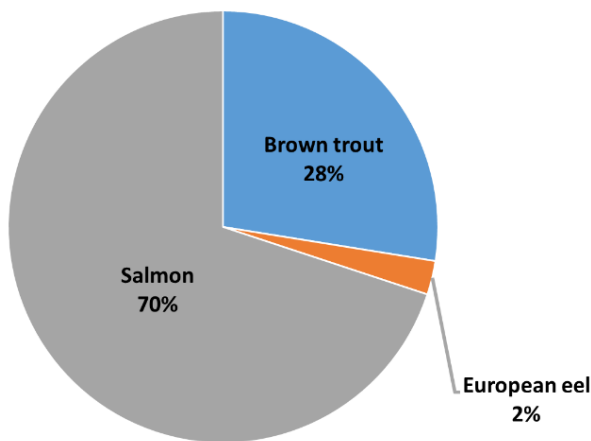


Figure 6. Fish species composition (%), Owentocker River Catchment, 2024.

Table 5. Fish ecological status, Owentocker River Catchment September 2024.

Site No.	2008	2011	2015	2017	2021	2024
Owenroe sub-catchment						
1	-	-	-	N/A	-	G
2	-	-	-	N/A	M	M
3	-	-	-	-	-	G
Owentocker sub-catchment						
4	-	-	-	N/A	-	M
5	-	-	-	-	-	G
6	-	-	-	N/A	-	G
7	-	-	-	G	-	G
8	-	-	G	-	-	M
9	-	-	-	N/A	-	M
10	-	-	-	M	-	M
11	H	H	G	-	M	M

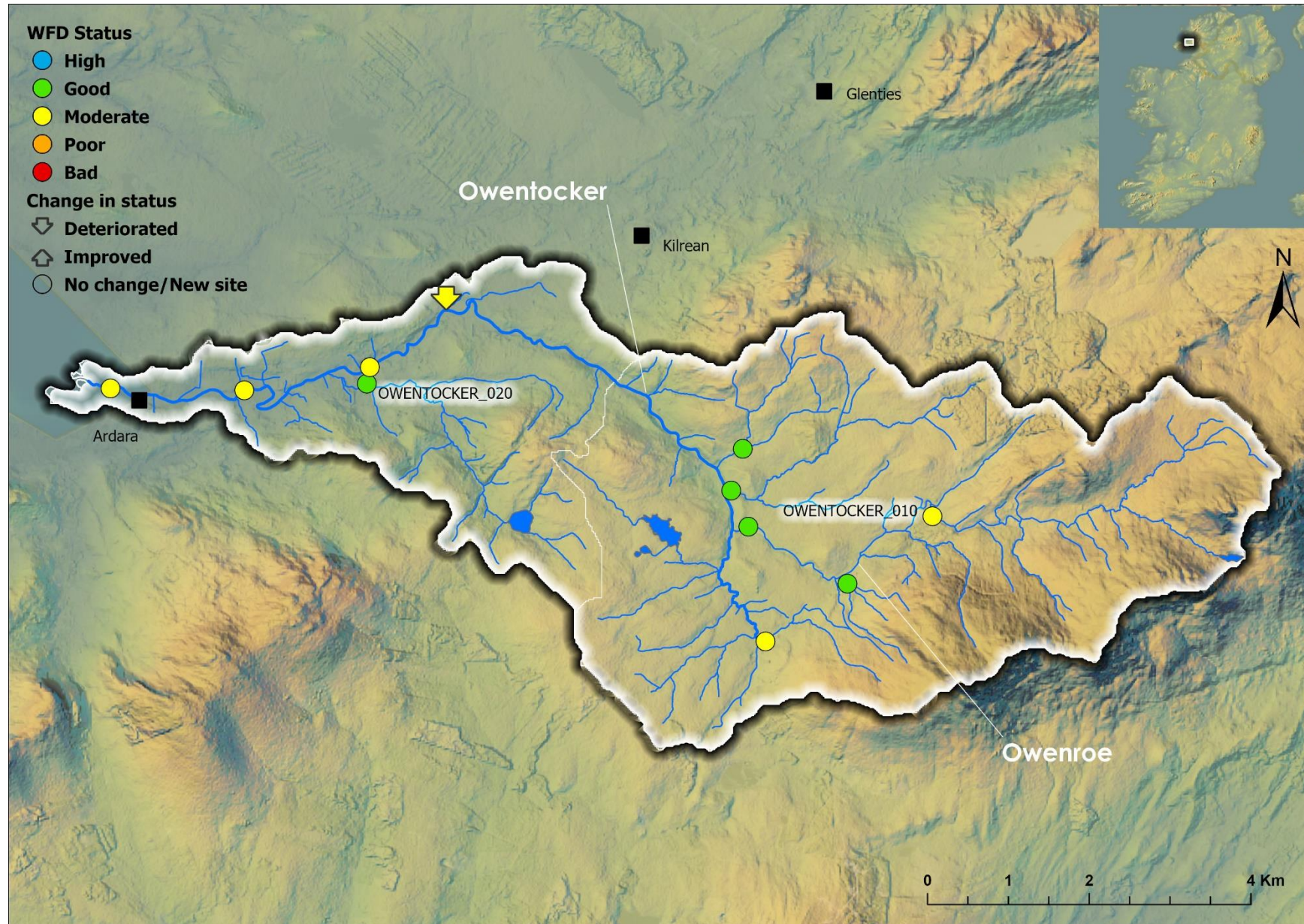


Figure 7. Fish ecological status in the Owentocker River Catchment, 2024. Arrows indicate a change in status since previous surveys (where applicable).

Summary

Three fish species were recorded at eleven sites electrofished on the Owentocker River Catchment in 2024.

Brown trout was the most common species present (11 sites, 100%), followed by salmon (9 sites, 81%) and European eel (1 site, 9%).

Brown trout was also the most abundant species recorded, followed by salmon and European eel (Figure 6).

Brown trout ranged in length from 4 to 24.5cm. Four age classes for brown trout (0+, 1+, 2+ and 3+) were present with 0+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.628 fish/m²) was recorded at Site 6 (Ivy Bridge) on an unnamed Owentocker tributary (Owentocker_010). The highest density of 0+ brown trout (0.305 fish/m²) was recorded at Site 4 (Sir Albert's Bridge) on the Owentocker River. The highest density of 1+ and older brown trout (0.471 fish/m²) was also recorded at Site 6.

Salmon ranged in length from 4.0 to 12.5cm. Two age classes of salmon (0+ and 1+) were present with 0+ being the most abundant cohort. The highest density of salmon (all ages combined) (0.335 fish/m²) was recorded at Site 8 (Crockaslowra) on the Owentocker River. The highest density of 0+ salmon (0.192 fish/m²) was also recorded at Site 8. The highest density of 1+ and older salmon (0.185 fish/m²) was recorded at Site 2 (Tullybane Bridge) on the Owenroe 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 eleven sites surveyed in the Owentocker Catchment during 2024. Five sites were assigned Good status, with six sites Moderate. Nine sites were surveyed previously on this catchment and assigned fish ecological status. When compared with their most recent previous surveys, one site deteriorated in status (Site 8) and all other sites remained 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.



Owentocker River at Cashel School, (Site 9), Co. Donegal.

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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