

Fish in Rivers Factsheet

SHIRBD

Camlin River Catchment

Factsheet: 2021/9

The Camlin River is located in the Shannon River Basin District. It rises near Granard, and flows in a westerly direction through Longford, reaching the River Shannon near Newtown Forbes.

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess the status of stocks in Ireland's rivers, lakes and transitional waters. This factsheet presents the results of a catchment-wide survey of the Camlin River catchment undertaken in 2021.

A total of eighteen sites were surveyed by electro-fishing (CEN 2003) in the Camlin River catchment from the 16th to the 19th of August 2021. The survey methods used were 10-minute timed electro-fishing (TEF₁₀) and Area delineated electrofishing (ADEF (boat)). All TEF₁₀ fish count results were converted to minimum population estimates according to Matson et al. (2018).



Camlin River (main channel), Bridge West of Lisnabo (Site 14)

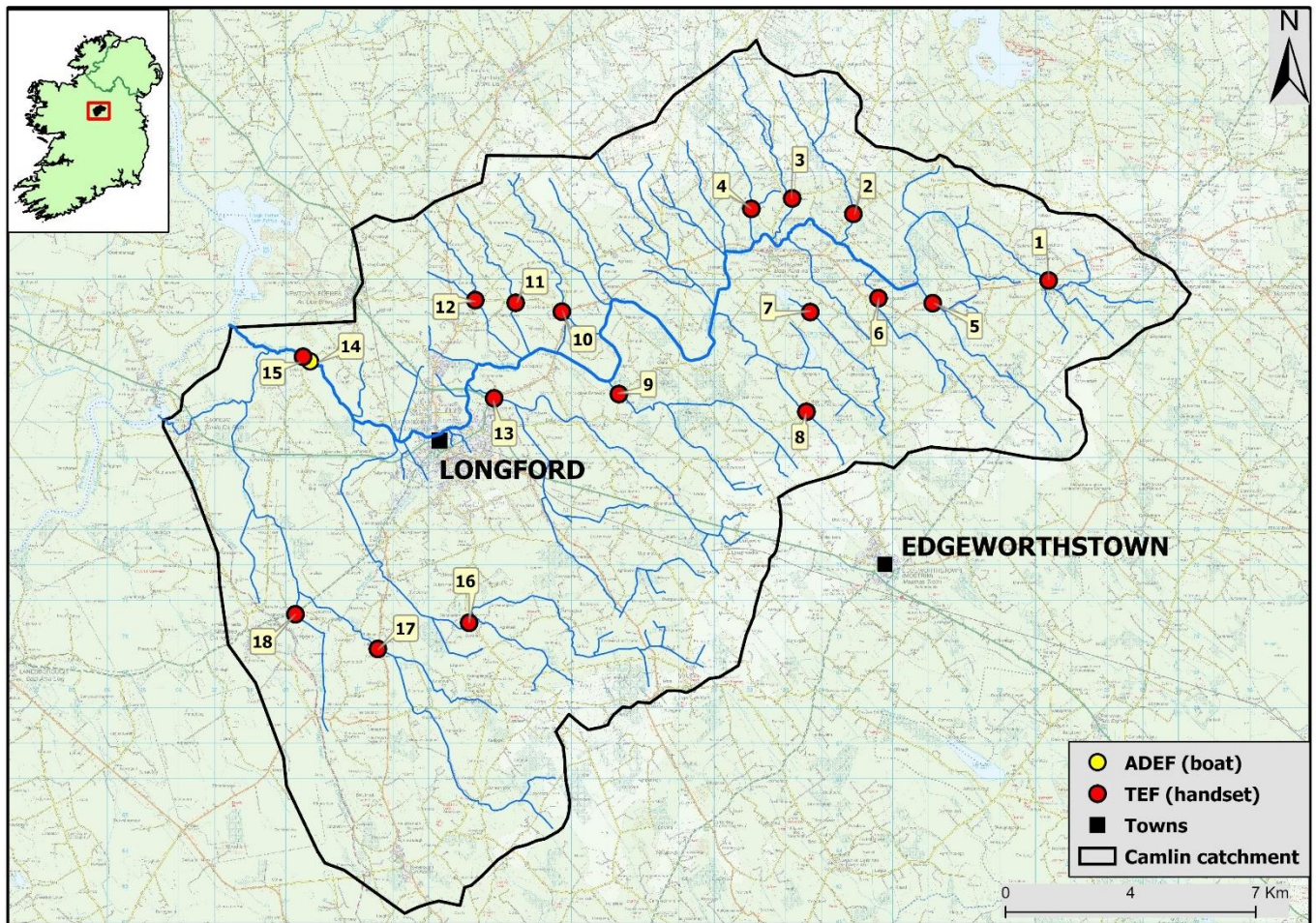


Figure 1. Location of electrofishing survey sites (1-18), Camlin River catchment, August 2021

Table 1. Site survey details for the Camlin River catchment, 2021

No.	River	Site	Method	WFD	Date
Camlin Catchment					
1	Rhine	Ballymacroly	TEF ₁₀	–	19/08/2021
2	Schoolland	Drumnahara	TEF ₁₀	–	19/08/2021
3	Aghnashannagh	Aghaward Br.	TEF ₁₀	–	18/08/2021
4	Soran	Soran Southeast	TEF ₁₀	–	19/08/2021
5	Camlin	Prucklishtown	TEF ₁₀	–	19/08/2021
6	Tullybaun	Ballynascraw	TEF ₁₀	–	19/08/2021
7	Gorteenrevagh	u/s of Gorteen Lough	TEF ₁₀	–	19/08/2021
8	Currygrane Lough	Moat Farrell	TEF ₁₀	–	18/08/2021
9	Lissameen	Creeve	TEF ₁₀	–	19/08/2021
10	Kileenatruan	Kilnatruan Cross Rds	TEF ₁₀	–	16/08/2021
11	Derryharrow	Derryharrow	TEF ₁₀	–	16/08/2021
12	Cloonanny	Creenagh	TEF ₁₀	–	16/08/2021
13	Clooncoose	Lisnamuck	TEF ₁₀	–	17/08/2021
14	Camlin	Br. W. of Lisnabo	ADEF (boat)	YES	17/08/2021
15	Camlin	d/s Ballykenny Br.	TEF ₁₀	–	18/08/2021
16	Cloonkeen	Mount Jessop Br.	TEF ₁₀	–	18/08/2021
17	Fallan	Calfpark	TEF ₁₀	–	17/08/2021
18	Fallan	Ballyclare	TEF ₁₀	–	18/08/2021

Table 2. Minimum density estimates (no. fish/m²) for the Camlin River catchment (Sites 1-18), August 2021.
Previous results are shown where applicable

Site no.	1	2	3	4	5	6	7	8	9	10
Species	2021	2021	2021	2021	2021	2021	2021	2021	2021	2021
Brown trout	-	-	0.651	0.185	0.265	-	-	-	0.609	-
0+ brown trout	-	-	0.635	0.185	0.229	-	-	-	0.263	-
1+ & older brown trout	-	-	0.016	-	0.036	-	-	-	0.346	-
Pike	-	-	-	-	-	-	-	-	0.014	-
Lamprey sp.	-	-	-	-	-	0.014	-	-	-	-
Stone loach	-	-	-	-	0.085	-	-	-	0.125	-
Nine-spined stickleback	0.062	-	-	-	-	-	0.011	-	-	-
Three-spined stickleback	0.472	1.617	0.095	0.270	-	0.127	0.378	0.899	-	0.512
Minnow	-	-	-	-	-	-	-	-	-	0.047
All fish	0.533	1.617	0.746	0.472	0.350	0.141	0.389	0.899	0.747	0.558
Site no.	11	12	13	14	15	16	17	18		
Species	2021	2021	2021	2011	2015	2021	2021	2021	2021	2021
Brown trout	0.041	0.109	0.376	0.002	0.004	0.001	0.002	0.296	0.593	0.173
0+ brown trout	0.041	0.109	0.230	-	0.004	-	0.001	0.200	0.593	0.051
1+ & older brown trout	-	-	0.145	0.002	-	0.001	0.001	0.096	-	0.123
Pike	-	-	-	0.003	0.004	0.001	0.003	-	-	-
Lamprey sp.	-	-	-	0.001	-	-	-	-	-	-
Stone loach	-	-	0.137	0.004	0.001	-	-	0.017	-	-
Nine-spined stickleback	-	-	-	0.001	-	-	-	-	-	-
Three-spined stickleback	0.494	0.304	-	-	0.003	0.001	0.001	0.017	0.083	-
Gudgeon	-	-	-	0.011	0.013	0.005	0.003	-	-	-
Roach	-	-	-	0.232	0.093	0.004	0.031	-	-	-
Perch	-	-	-	0.010	0.008	0.002	-	-	-	-
Roach x bream hybrid	-	-	-	-	0.001	-	-	-	-	-
All fish		0.412	0.512	0.262	0.126	0.013	0.039	0.331	0.676	0.173

Table 3. Salmonid % age class structure (where recorded) for the Camlin River catchment, August 2021

Brown trout				
Site No.	% of catch			
	0+	1+	2+	3+
Camlin River Catchment				
3	98	2	-	-
4	100	-	-	-
5	86	14	-	-
9	43	54	4	-
11	100	-	-	-
12	100	-	-	-
13	54	38	8	-
14	-	-	100	-
15	-	100	-	-
16	63	37	-	-
17	100	-	-	-
18	27	67	-	7

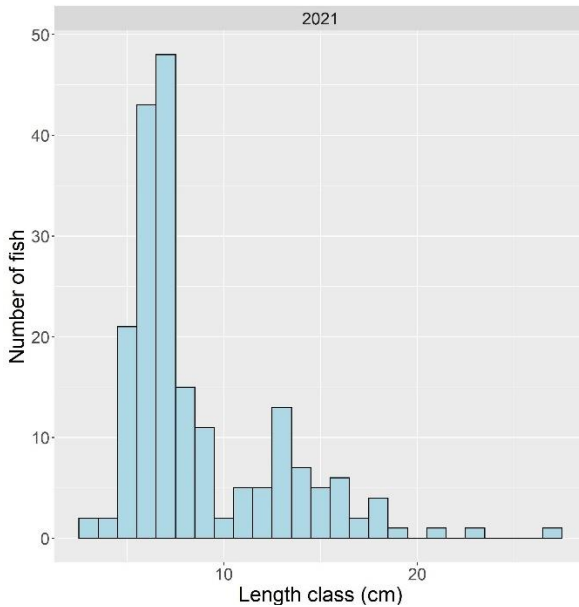


Figure 2. Brown trout length frequency distribution (n = 195), Camlin River catchment 2021

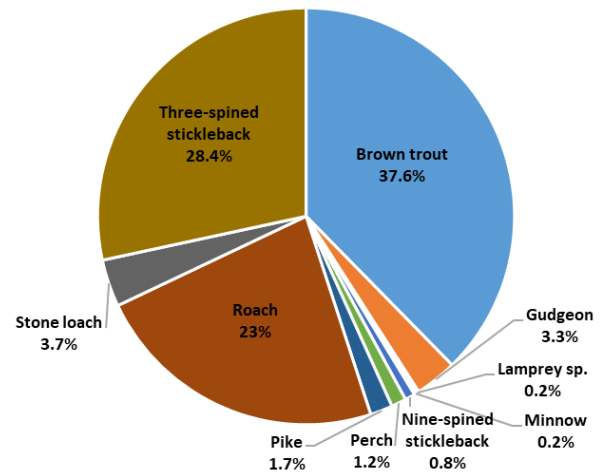


Figure 3. Fish species composition (%), Camlin River catchment, 2021

Table 4. Fish ecological status, Camlin Catchment, 2021. Previous results are shown where applicable. (H=High, G=Good, M=Moderate, P=Poor and B=Bad).

Site No.	2008	2011	2015	2021
Camlin Catchment				
1	-	-	-	P
2	-	-	-	P
3	-	-	-	G
4	-	-	-	M
5	-	-	-	M
6	-	-	-	P
7	-	-	-	P
8	-	-	-	P
9	-	-	-	G
10	-	-	-	P
11	-	-	-	P
12	-	-	-	P
13	-	-	-	G
14	M	M	P	P
15	-	-	-	P
16	-	-	-	M
17	-	-	-	M
18	-	-	-	M

Summary

A total of ten fish species were recorded during the Camlin survey in August 2021. Three-spined stickleback were the most common species, captured at 14 (78%) sites across the catchment. This was followed by brown trout, recorded at 12 (67%) sites with lengths ranging from 3.6 to 27.1cm. Four age classes (0+, 1+, 2+ and 3+) were present, with 0+ the most abundant age class recorded (Table 3). Stone loach were recorded at four sites (n=19), pike at three sites (n=9), roach (n=119), gudgeon (n=17) and nine-spined stickleback (n=4) at two sites each and perch (n=6), lamprey (n=1) and minnow (n=1) at one site each.

The highest density (0.651 fish/m²) of brown trout was recorded at Site 3 (Aghaward Bridge), with the highest density of 0+ brown trout (0.635 fish/m²) also recorded at this site. The highest density of 1+ and older brown trout (0.346 fish/m²) was recorded at Site 9 (Creeve).

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 type specific

indicator species are present and in expected numbers. Status will decline if such indicators are absent, are in poor abundance, or if more tolerant species proliferate.

Fish ecological status was assigned to 18 sites surveyed in the Camlin River catchment during 2021 (Table 4 & Figure 4). Three sites achieved Good status, five achieved Moderate status, and 10 were assigned Poor status.

Three-spined stickleback were the dominant species at several sites (Table 2), many of which achieved Poor ecological status. This species is more tolerant of pollution than brown trout and salmon and when

dominant at a site can be an indication of poor water quality.

The reasons for the failures in fish ecological status were due to lower-than-expected abundance of type specific indicator species (e.g., brown trout), absence of certain age cohorts indicating recruitment failures and/or the presence of a relatively high abundance of tolerant fish species (e.g. three-spined stickleback). Failures and deteriorations in fish ecological status were likely caused by pressures such as nutrient enrichment, habitat modification and fish passage issues.

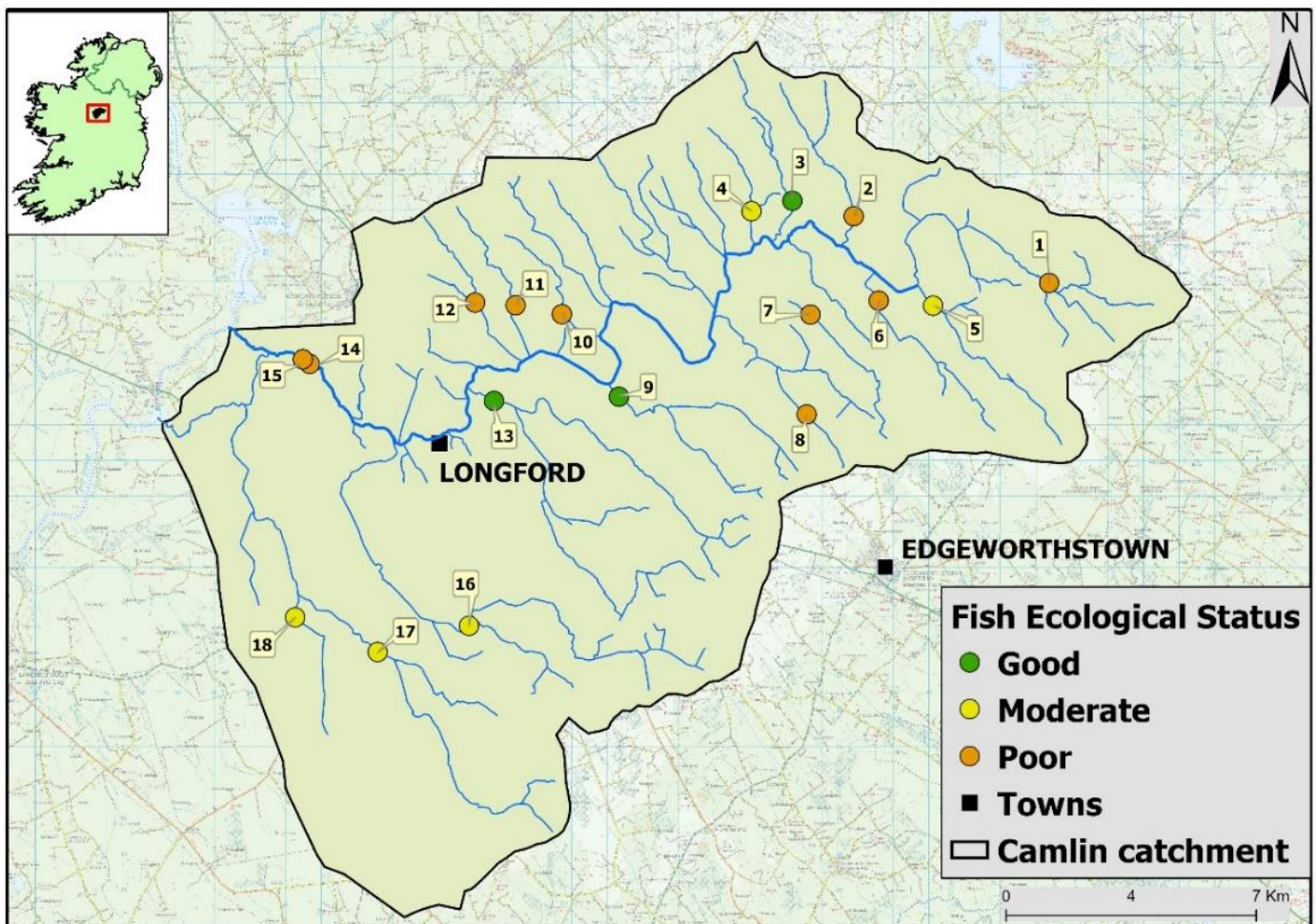


Figure 4. Fish ecological status map for the Camlin River catchment, 2021

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 River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.

Inland Fisheries Ireland: 3044 Lake Drive, Citywest Business Campus, Dublin, D24 Y265, Ireland

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