

Fish in Rivers Factsheet

SHIRBD

Caher River Catchment

Factsheet: 2021/7

The Caher River is a small stream located in the Burren, Co. Clare in the Shannon International River Basin District. It flows into the sea at Fanore Beach as the Murrogh River.

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

report presents the results of a catchment-wide survey of the Caher Catchment in 2021.

Four sites were surveyed by electro-fishing (CEN 2003) on the Caher River Catchment on the 9th of August, 2021 (Figure 1 & Table 1). The survey method used was 10-minute Timed Electro-Fishing (TEF₁₀). All fish count results were converted to minimum population estimates according to Matson *et al.* (2018).



River Caher at Fanore Bridge (Site 4)



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Inland Fisheries Ireland

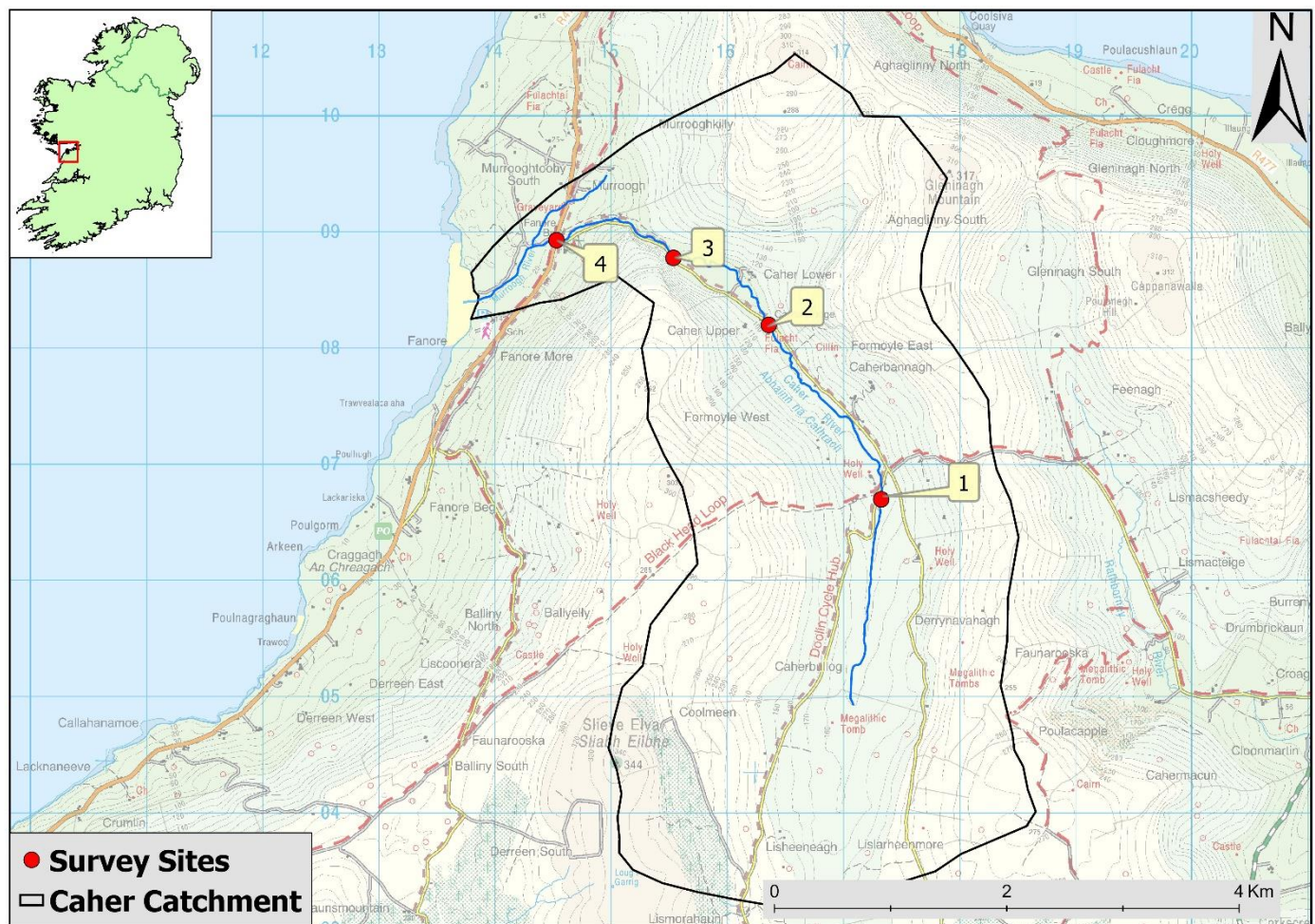


Figure 1. Location of electrofishing sites on the Caher River catchment, August 2021

Table 1. Site survey details for the Caher River Catchment, August 2021

No.	River	Site	Method	WFD	Date
Caher River Catchment					
1	Caher River	Derrynavanagh	TEF ₁₀	–	09/08/2021
2	Caher River	Br. 2 km d/s Formoyle	TEF ₁₀	YES	09/08/2021
3	Caher River	Murroogh	TEF ₁₀	YES	09/08/2021
4	Caher River	Fanore Br.	TEF ₁₀	–	09/08/2021

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

Site no.	1		2		3		4	
Species	2016	2021	2009	2012	2016	2021	2016	2021
Brown trout	0.089	0.193	0.254	0.480	0.433	0.262	0.037	0.009
0+ brown trout	0.030	0.131	0.181	0.422	0.204	0.225	0.010	0.009
1+ & older brown trout	0.059	0.063	0.073	0.058	0.229	0.037	0.027	-
European eel	-	-	0.004	0.004	0.005	-	0.017	0.028
All fish	0.089	0.193	0.259	0.485	0.438	0.262	0.054	0.037
								no fish

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

Site No.	Brown trout		
	% of catch		
	0+	1+	2+
Caher Catchment			
1	67	33	-
2	86	10	5
3	100	-	-

Table 4. Ecological fish status for the Caher River catchment, 2021. Previous results are shown where applicable (H=High, G=Good, M=Moderate, P=Poor and B=Bad).

Site No.	2009	2012	2016	2021
Caher Catchment				
1	-	-	N/A	M
2	G	G	G	M
3	-	-	N/A	P
4	-	-	-	N/A

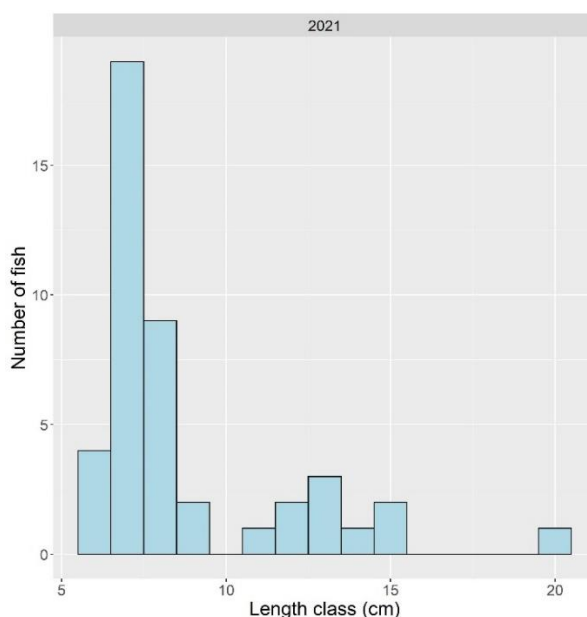


Figure 3. Brown trout (n = 44) length frequency for the Caher River catchment 2021

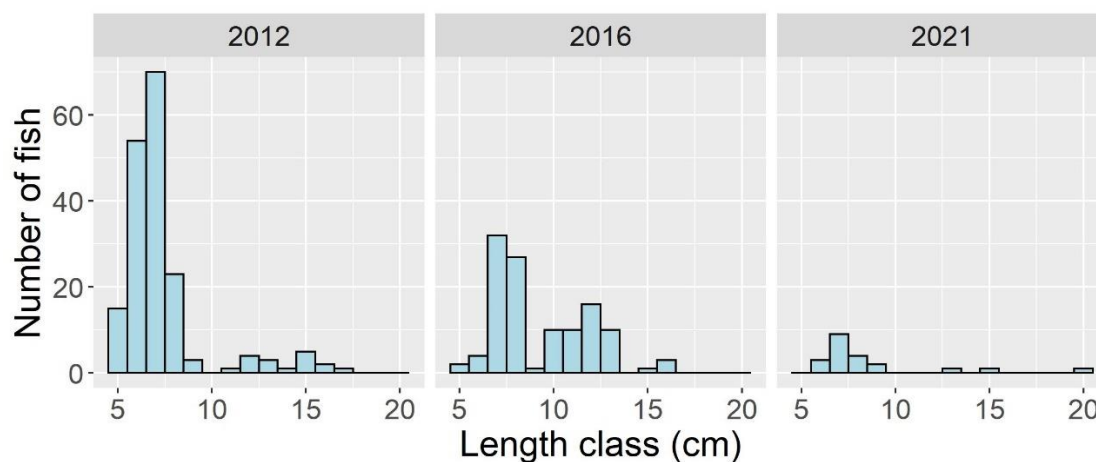


Figure 4. Brown trout (2012, n=182; 2016, n = 150; 2021, n=44) length frequency distribution for the Caher River catchment at Site 2 (Br. 2km d/s Formoyle)

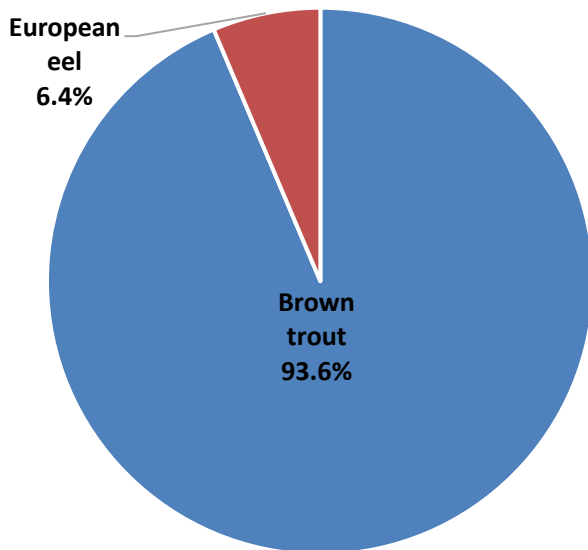


Figure 5. Fish species composition (%), Caher River catchment, 2021

Summary

Two fish species were recorded during the Caher River catchment survey in 2021 (Table 2 and Figure 5). Brown trout was the most abundant species captured ($n=44$) with lengths ranging from 6.2 to 20.3cm. Three age classes (0+, 1+ and 2+) were present with 0+ the most abundant age class. The highest density (0.262 fish/m²) of brown trout was recorded at Site 2 (Bridge 2km d/s Formoyle), with the highest density of 0+ brown trout (0.225 fish/m²) also recorded at this site. The highest density of 1+ and older brown trout (0.063 fish/m²) was recorded at Site 1 (Derrynavanagh). European eel was recorded at one site, Site 3 (Murroogh), ($n=3$).

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 indicator species (e.g. both salmonid cohorts 0+ and 1+ and older) are present and in expected numbers. Fish

ecological status will decline if such cohorts are missing, are in poor abundance, or if more tolerant species proliferate.

Fish ecological status was assigned to four sites surveyed in the Caher Catchment during 2021. Two sites achieved Moderate status, one achieved Poor status and one was unassigned (no fish recorded). Site 2 (Bridge d/s Formoyle) deteriorated from Good to Moderate between 2016 and 2021.

The reasons for the failures and deteriorations 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. Failures and deteriorations in fish ecological status can be caused by pressures such as nutrient enrichment, habitat modification and fish passage issues.

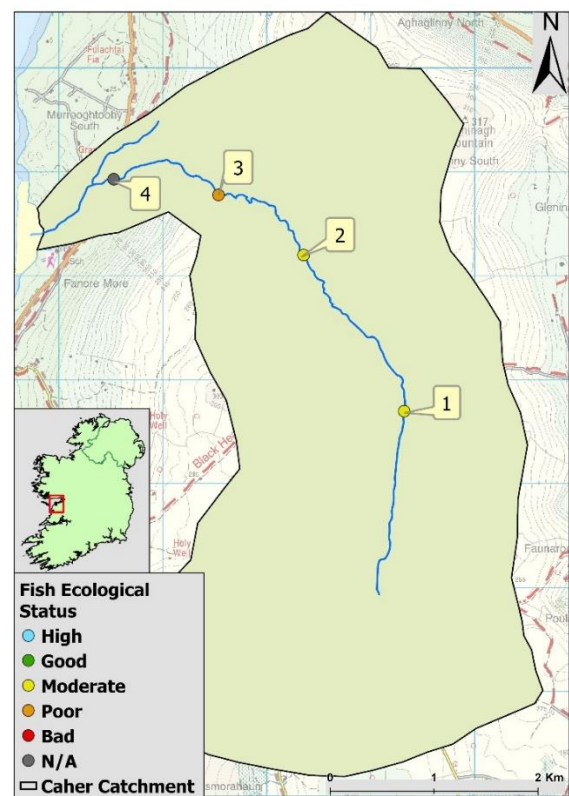


Figure 5. Fish ecological status map for the Caher River catchment, 2021

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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