

Fish in Rivers Factsheet

WRBD

Ballinglen Catchment

Factsheet: 2021/12

The Ballinglen is a relatively small catchment in the Western River Basin District, located on the northern coast of Co. Mayo, approximately 20km northwest of Ballina. It flows in a northerly direction before reaching the sea near Ballycastle. There are numerous small tributaries discharging into the Ballinglen River, the largest being the Keerglen and Clydagh Rivers.

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 Ballinglen Catchment undertaken during September 2021.

A total of six sites were surveyed by electro-fishing (CEN 2003) in the Ballinglen Catchment on the 15th of September 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).



Clydagh River at Clydagh South (Site 3)



Iascach Iníre Éireann
Inland Fisheries Ireland

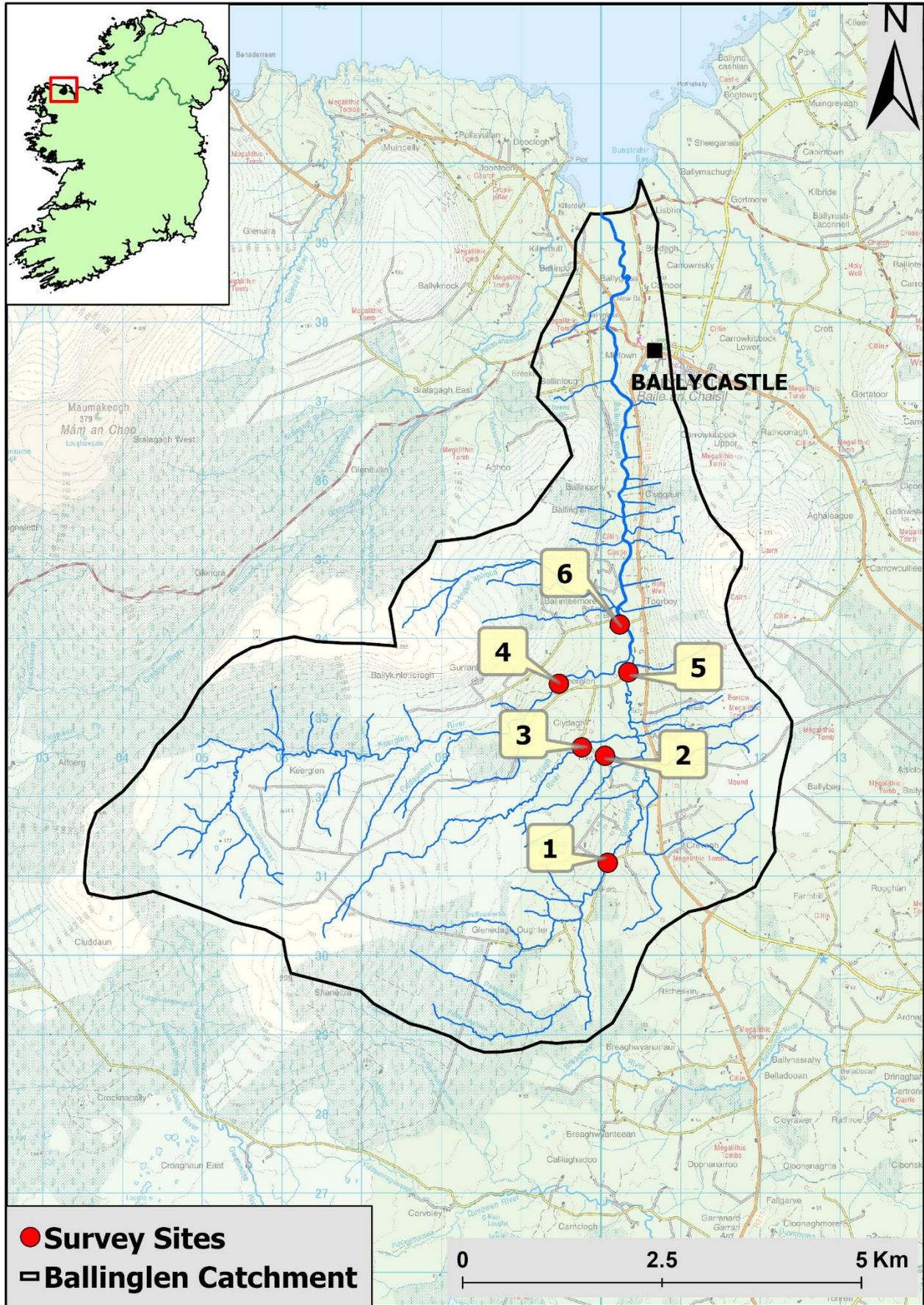


Figure 1. Location of electrofishing survey sites, Ballinglen River catchment, September 2021

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

No.	River	Site	Method	WFD	Date
Ballinglen Catchment					
1	Glenedagh	Glenedagh Eighter	TEF ₁₀	–	15/09/2021
2	Ballinglen	East Ford	TEF ₁₀	–	15/09/2021
3	Clydagh	Clydagh South	TEF ₁₀	–	15/09/2021
4	Keerglen	Kilkeerglen	TEF ₁₀	–	15/09/2021
5	Ballinglen	Kilkeerglen West	TEF ₁₀	–	15/09/2021
6	Ballinglen	Ballinglen Br. (site B)	TEF ₁₀	YES	15/09/2021

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

Site no.	1	2	3	4	5	6			
Species	2021	2021	2021	2021	2021	2008	2011	2015	2021
Brown trout	0.286	0.495	0.057	0.081	0.181	0.107	0.036	0.023	–
0+ brown trout	0.201	0.420	0.022	0.046	0.072	0.010	0.010	0.003	–
1+ & older brown trout	0.085	0.075	0.036	0.035	0.108	0.097	0.026	0.020	–
Salmon	–	–	–	0.069	0.032	0.398	0.402	0.043	0.102
0+ salmon	–	–	–	0.039	0.023	0.158	0.265	0.014	0.076
1+ & older salmon	–	–	–	0.031	0.009	0.240	0.137	0.028	0.025
European eel	–	0.045	0.008	–	0.032	0.026	0.019	0.017	–
Sea trout	–	–	–	–	0.005	–	–	–	–
All fish	0.286	0.540	0.066	0.150	0.248	0.531	0.457	0.082	0.102

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

Brown trout				Salmon		
Site No.	% of catch			Site No.	% of catch	
	0+	1+	2+		0+	1+
Ballinglen Catchment						
1	68	32	–	1	–	–
2	83	11	6	2	–	–
3	38	62	–	3	–	–
4	54	31	15	4	55	45
5	35	48	17	5	75	25
6	–	–	–	6	75	25

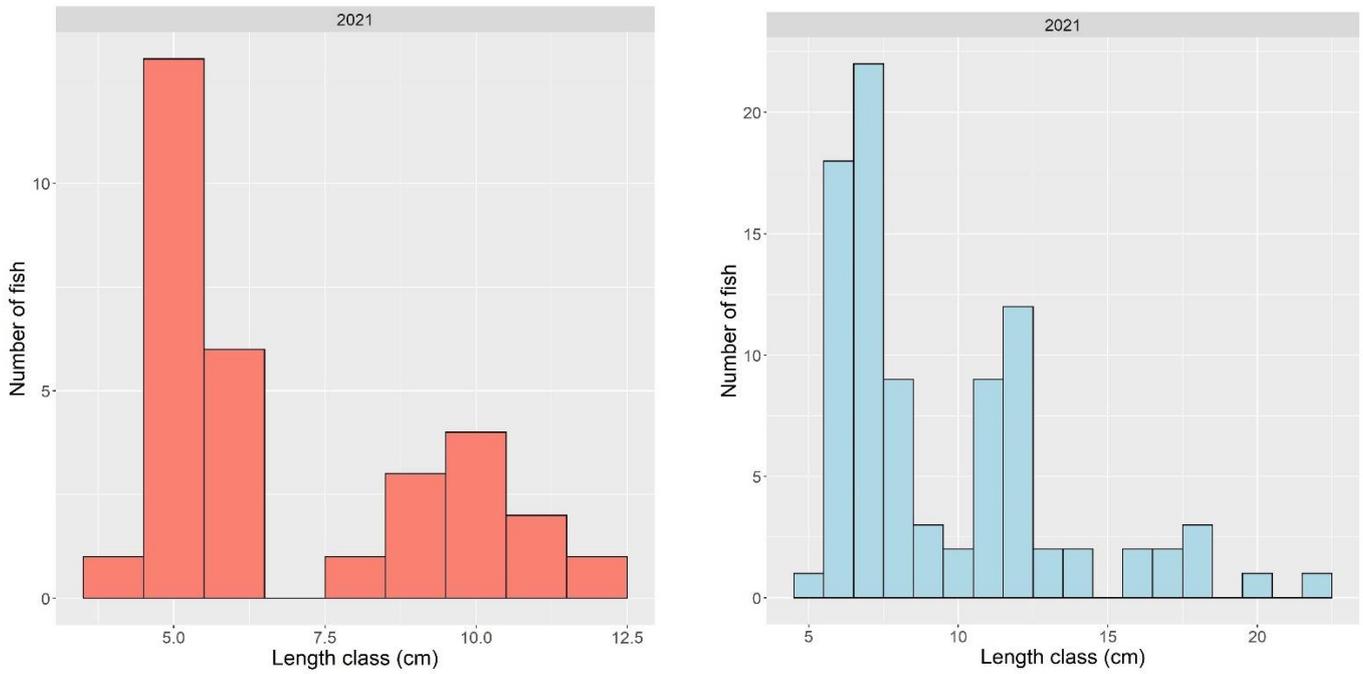


Figure 2. Length frequency distribution for salmon (left, n = 31) and brown trout (right, n = 89) for the Ballinglen River catchment 2021

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

Site No.	2008	2011	2020	2021
Ballinglen River catchment				
1	-	-	-	M
2	-	-	-	G
3	-	-	-	P
4	-	-	-	M
5	-	-	-	G
6	G	G	M	P

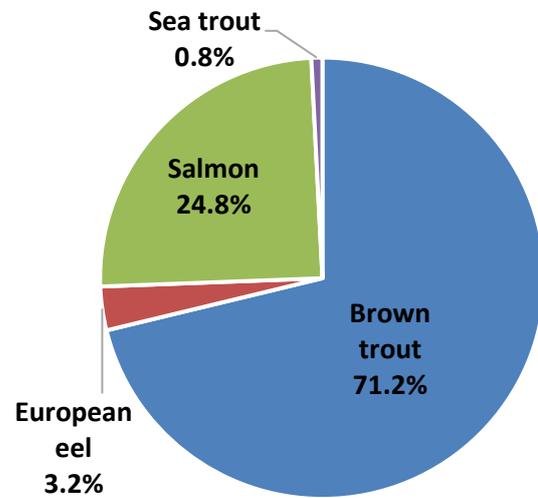


Figure 3. Fish species composition (%), Ballinglen River catchment, 2021

Summary

Three fish species and 'sea trout', a separate variety of trout were recorded at six sites, during the Ballinglen River catchment survey in September 2021 (Table 2 and Figure 3). Brown trout were the most abundant species captured with lengths ranging from 5.8 to 22.1cm. Three age classes (0+, 1+ and 2+) were present with 0+ the most abundant age class (Table 3). The highest density of brown trout (0.495 fish/m²) was recorded at Site 2 (Balinglen River at East Ford). The highest density of 0+ brown trout (0.420 fish/m²) was also recorded at Site 2, while the highest density of 1+ and older brown trout (0.108 fish/m²) was recorded at Site 5 (Ballinglen River at Kilkeerglen West).

Salmon were recorded at three sites with lengths ranging from 4.7 to 12cm. Two age classes (0+ and 1+), were present with 0+ the most abundant cohort. The highest density of salmon (0.102 fish/m) was recorded at Site 6 (Ballinglen River at Ballinglen bridge), with the highest density of 0+ salmon (0.076 fish/m²) also recorded at Site 6. The highest density of salmon 1+ and older (0.031 fish/m²) was recorded at Site 4 (Keerglen River at Kilkeerglen).

European eel were recorded at three sites (n=4), with a single sea trout captured at Site 5 (Ballinglen River at Ballinglen Br.).

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+ & 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 Ballinglen River Catchment during September 2021 (Table 4 and Figure 4). Two sites achieved Good status, two achieved Moderate status, with the remaining two achieving Poor status. Site 6 (Ballinglen Br.) has been surveyed on four occasions, with a decline in ecological status visible since 2011. The reason for the Poor status in 2021 was due to absence of an indicator species (i.e. brown trout) and lower than expected abundance of salmon at the site. Failures in fish ecological status can be caused by pressures such as nutrient enrichment and habitat modification.

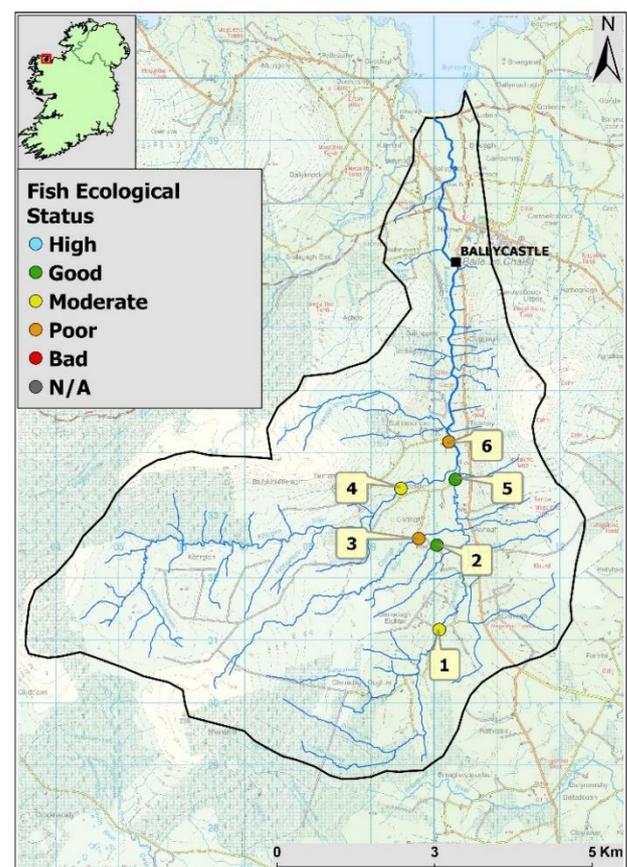


Figure 4. Fish ecological status map, Ballinglen River Catchment, 2021

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

CITATION: Gordon, P., Matson, R., Corcoran, W., Donovan, R., Kelly, K., Duffy, P., Burke, E. and Kelly, F.L. (2021) Sampling Fish in Rivers 2021 –Ballinglen Catchment, Factsheet No. 2021/12. National Research Survey Programme. Inland Fisheries Ireland

The report includes Ordnance Survey Ireland data reproduced under OSI Copyright Permit No. MP 007508. Unauthorised reproduction infringes Ordnance Survey Ireland and Government of Ireland copyright. © Ordnance Survey Ireland, 2022.



Iascach Iníre Éireann
Inland Fisheries Ireland