

Fish in Rivers Factsheet

WRBD

Glenamoy Catchment

Factsheet: 2023/07

The Glenamoy River rises in northwest Co. Mayo. It is joined by many small tributaries as it flows westwards through Glenamoy Village and into the sea at Sruwaddacon Bay. It is considered to be a good fishing river with substantial numbers of both salmon and sea trout (O' Reilly, 2002).

Inland Fisheries Ireland conducts annual nationwide fish sampling surveys to assess the status of stocks in Ireland's rivers, lakes and estuaries. This report

presents the results of a catchment-wide survey of the Glenamoy River in 2023.

Twelve sites were surveyed by electro-fishing (CEN 2003) on the Glenamoy Catchment from the 29th to the 31st of August 2023.

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).



The Glenamoy River at Glenamoy Village, Co. Mayo (Site 10).



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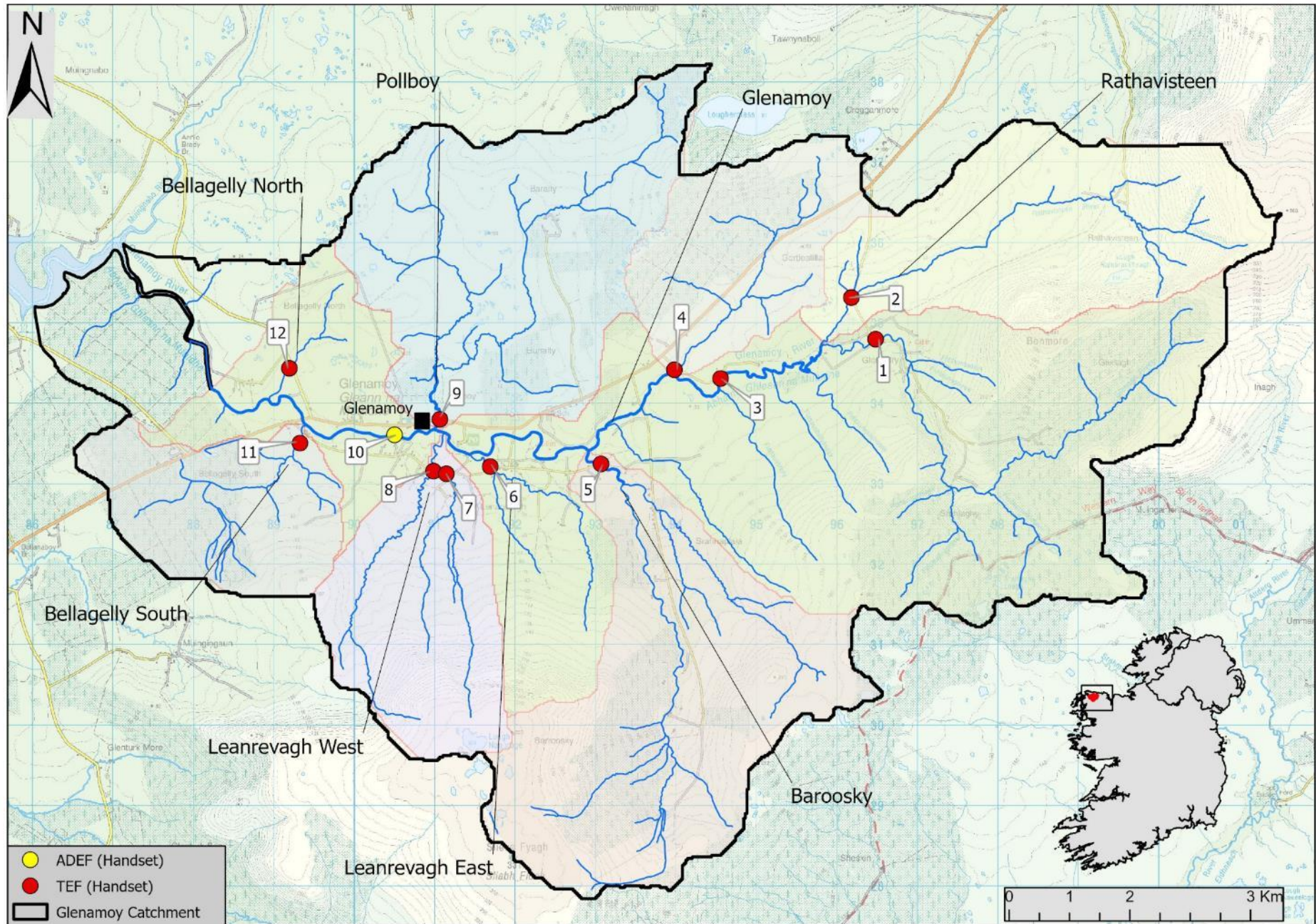


Figure 1. Location of electrofishing survey sites on the Glenamoy Catchment, August 2023.

Table 1. Site survey details, Glenamoy Catchment, August 2023.

No.	River	Site	Method	WFD	Date
1	Glenamoy	Glencalry Upper Schoolhouse	TEF (handset)	No	30/08/2023
2	Rathavisteen	Glencalry Lower	TEF (handset)	No	30/08/2023
3	Glenamoy	Gorthlettilaun East	TEF (handset)	No	31/08/2023
4	Gortleatilla	Gorthlettilaun	TEF (handset)	No	31/08/2023
5	Baroosky	Sharanaploge	TEF (handset)	No	30/08/2023
6	Leanrevagh East	Bunalty	TEF (handset)	No	30/08/2023
7	Leanrevagh West	Glenamoy Bridge Field	TEF (handset)	No	29/08/2023
8	Leanrevagh West	Milltown Field	TEF (handset)	No	29/08/2023
9	Pollboy	Pollboy	TEF (handset)	No	31/08/2023
10	Glenamoy	Glenamoy Village	ADEF (Handset)	Yes	30/08/2023
11	Bellagelly South	Milltown West	TEF (handset)	No	30/08/2023
12	Bellagelly North	Bunowna	TEF (handset)	No	29/08/2023

Table 2. Minimum density estimates of fish (no. fish/m²), Glenamoy Catchment, August 2023 (previous results are shown where applicable).

Site no.	1	2	3	4	5	6	7
Species	2023	2023	2023	2023	2023	2023	2023
Brown trout	0.153	0.621	0.071	0.211	0.100	0.403	0.179
0+ brown trout	0.065	0.495	0.022	0.127	0.043	0.235	0.137
1+ & older brown trout	0.088	0.126	0.049	0.085	0.057	0.168	0.042
Salmon	0.153	0.078	0.097	0.169	0.196	0.045	0.063
0+ salmon	0.082	–	0.079	0.127	0.076	0.022	0.063
1+ & older salmon	0.070	0.078	0.018	0.042	0.119	0.022	–
European eel	–	–	0.013	–	0.174	0.224	0.169
Sea trout	–	–	0.004	–	–	–	–
Three-spined stickleback	0.018	0.602	0.013	–	0.016	0.212	0.232
All fish	0.323	1.301	0.199	0.380	0.489	0.883	0.643
Site no.	8	9	10			11	12
Species	2023	2023	2012	2017	2023	2023	2023
Brown trout	0.334	0.140	0.021	0.014	0.014	0.132	0.064
0+ brown trout	0.202	–	0.000	0.010	0.002	0.018	0.021
1+ & older brown trout	0.131	0.140	0.021	0.004	0.012	0.115	0.042
Salmon	0.101	–	0.224	0.012	0.098	0.088	0.106
0+ salmon	0.061	–	0.129	0.004	0.055	0.035	0.042
1+ & older salmon	0.040	–	0.095	0.008	0.043	0.053	0.064
European eel	0.061	–	0.041	0.014	0.017	0.026	0.212
Sea trout	–	–	–	–	–	–	–
Three-spined stickleback	0.030	0.157	0.002	–	0.005	0.141	–
All fish	0.526	0.297	0.289	0.041	0.133	0.476	0.382

Table 3. Salmonid age class structure Glenamoy Catchment, August 2023.

Species	Site No.	% of catch			
		0+	1+	2+	3+
Brown trout	1	46	38	15	-
	2	81	19	-	-
	3	38	50	12	-
	4	60	40	-	-
	5	45	44	11	-
	6	59	41	-	-
	7	78	22	-	-
	8	65	29	6	-
	9	-	100	-	-
	10	11	56	22	11
	11	14	72	14	-
	12	33	67	-	-
Salmon	1	54	46	-	-
	2	-	100	-	-
	3	82	18	-	-
	4	75	25	-	-
	5	39	61	-	-
	6	50	50	-	-
	7	100	-	-	-
	8	60	40	-	-
	10	60	40	-	-
	11	40	60	-	-
	12	40	60	-	-

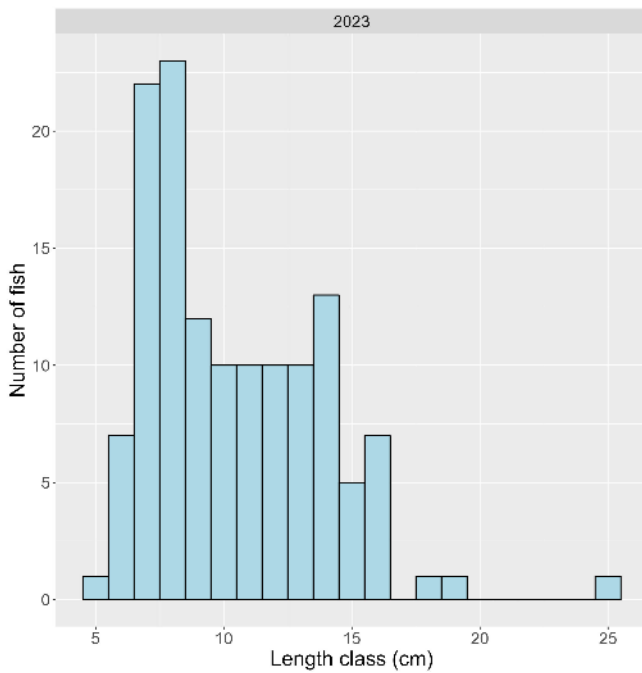


Figure 3. Length frequency distribution for brown trout (N=136) in the Glenamoy Catchment, August 2023 (N=12 sites).

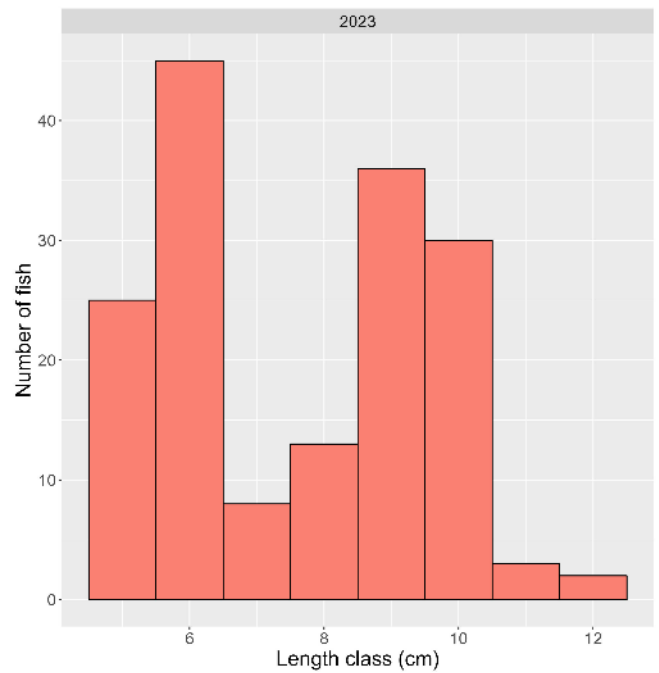


Figure 4. Length frequency distribution for salmon (N=162) in the Glenamoy Catchment, August 2023 (N=11 sites).

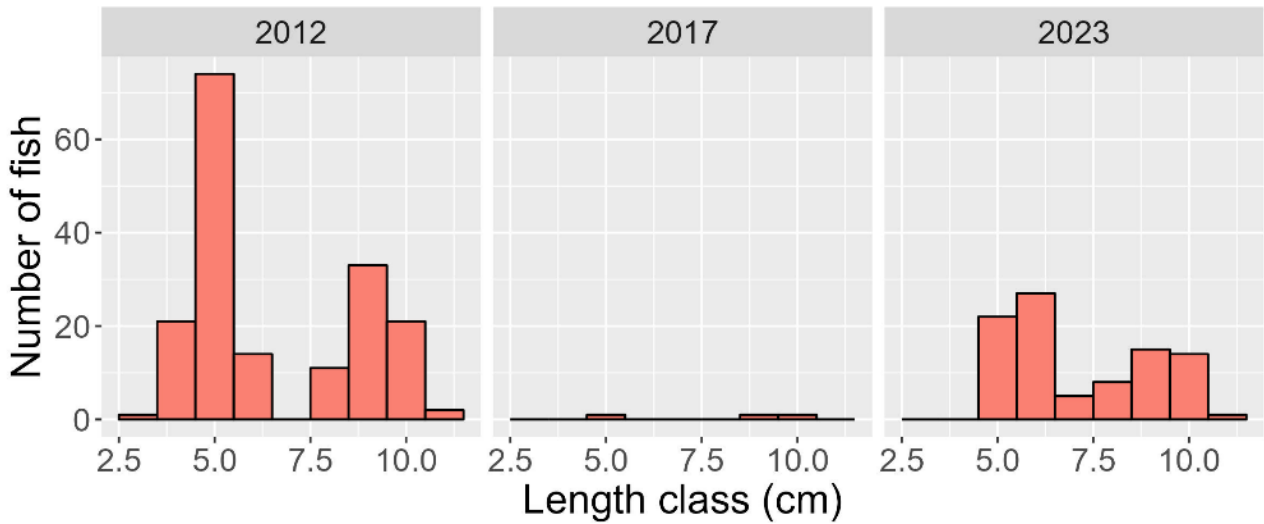


Figure 5. Length frequency distribution of salmon (2012 N= 177; 2017 N=3; 2023 N=92) in the Glenamoy River at Site 10 (Glenamoy Village).

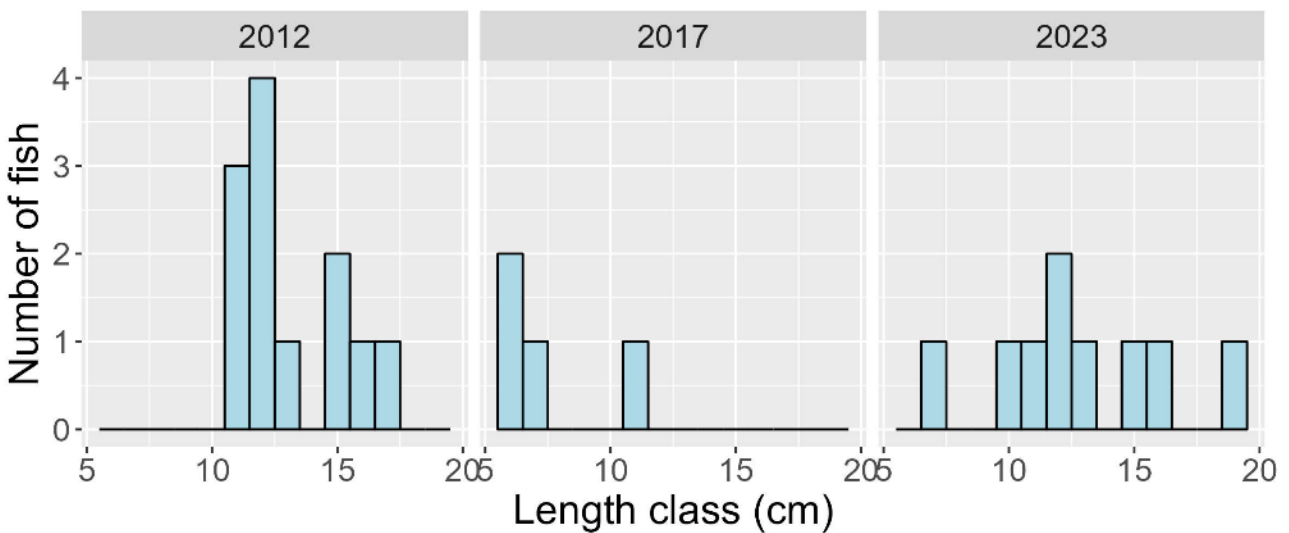


Figure 6. Length frequency distribution of brown trout (2012 N= 12; 2017 N=4; 2023 N=9) in the Glenamoy Catchment at Site 10 (Glenamoy Village).

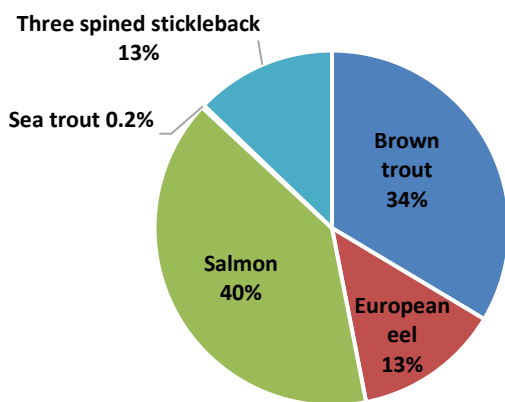


Figure 7. Fish species composition (%), Glenamoy River, 2023.



Barrosky stream at Sharanaploge (Site 5)

Table 4. Fish ecological status for the Glenamoy Catchment, September 2023 (Previous results are shown where applicable).

Site No.	2012	2017	2023
1			Good
2			Good
3			Moderate
4			Good
5			Good
6			Good
7			Moderate
8			Good
9			Poor
10	Good	N/A	Moderate
11			Good
12			Good



Bellagelly South stream at Milltown West (Site 11)



Leanrevagh West at Glenamoy Br. Field (Site 7)



Bellagelly North at Bunowna (Site 12)



Leanrevagh West at Milltown Field (Site 8)

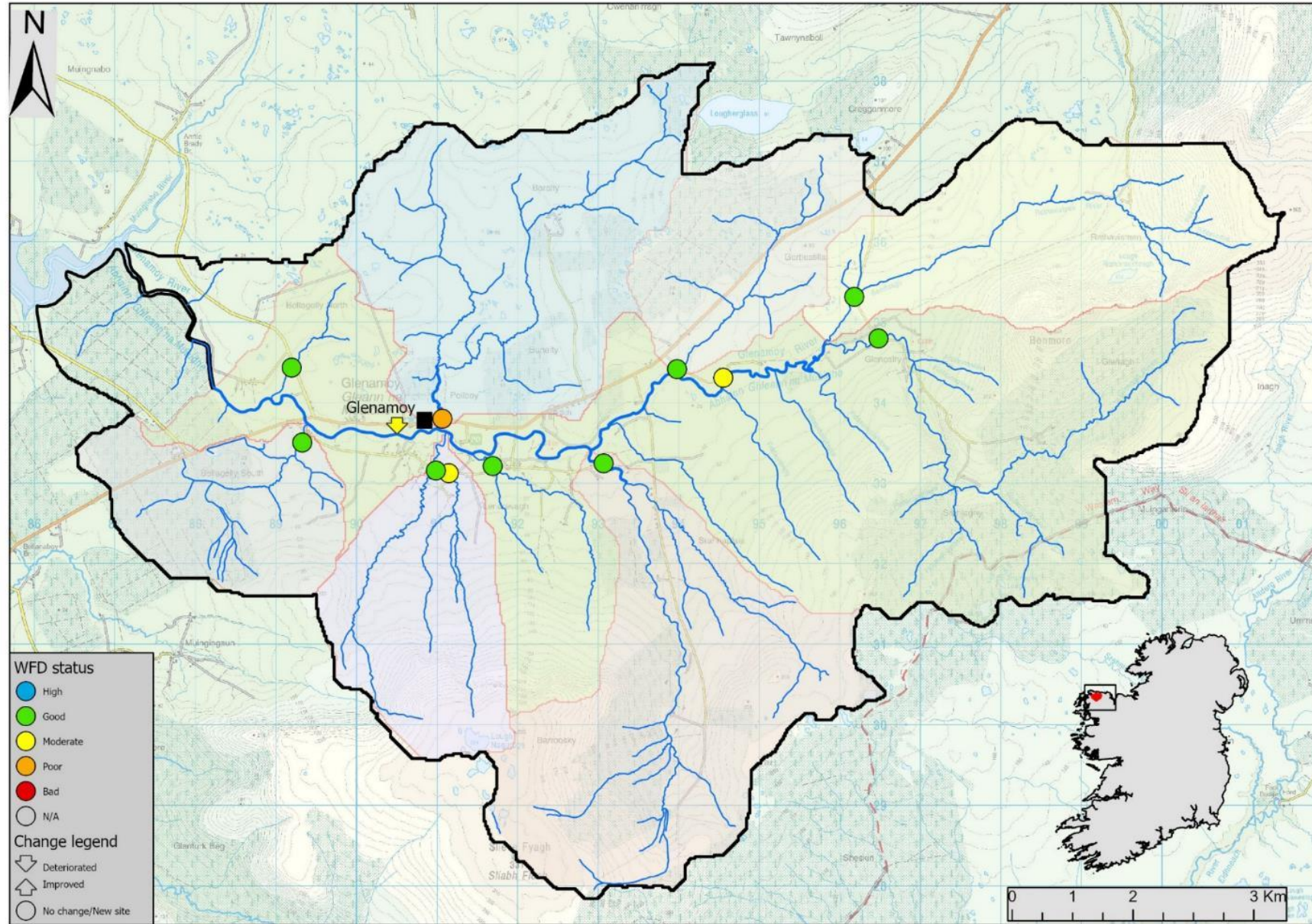


Figure 8. Fish ecological status in the Glenamoy Catchment, 2023. Arrows indicate a change in status since previous surveys (where applicable)

Summary

A total of four fish species and sea trout (a separate 'variety' of trout) were recorded at twelve sites surveyed on the Glenamoy River in 2023.

Brown trout was the most common species present (100% sites), followed by salmon (91%), three-spined stickleback (83%) European eel (66%) and sea trout (8%).

Salmon was the most abundant species recorded (followed by brown trout, European eel, three-spined stickleback and sea trout).

Salmon ranged in length from 4.6 to 12cm. Two age classes were present (0+ and 1+), with 0+ being the most abundant cohort. The highest density of salmon (all ages combined) (0.196 fish/m²) was recorded at Site 5 on the Baroosky River at Sharanaploge, the highest density of 0+ salmon (0.127 fish/m²) was recorded at Site 4 on the Gorthleatilla River at Gorthleatillaun. The highest density of 1+ and older salmon (0.119 fish/m²) was recorded at Site 5 on the Baroosky River at Sharanaploge.

Brown trout ranged in length from 5.9 to 24.7cm. Four age classes were present (0+, 1+, 2+ and 3+), with 0+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.621 fish/m²) was recorded at Site 2 on the Rathavisteen River at Glencalry Lower, with the highest density of 0+ brown trout (0.495 fish/m²) also recorded at Site 2. The highest density of 1+ and older brown trout (0.168 fish/m²) was recorded at Site 6 on the Leanrevagh East River at Bunalty.

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

Fish ecological status was assigned to 12 sites surveyed in the Glenamoy catchment during 2023 (Table 4 and Figure 8). Eight sites achieved Good status, with three

sites Moderate and one Poor. One site was previously assigned fish ecological status. When compared with the most recent previous surveys, the status deteriorated to moderate (Table 4 and Figure 8).

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.
- O' Reilly, P. (2002) *Rivers of Ireland, a Flyfisher's Guide* (5th Edition). Merlin Unwin Books, Shropshire, UK.
- SNIFFER River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.

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