

Fish in Rivers Factsheet

SWRBD

Argideen River Catchment

Factsheet: 2021/8

The Argideen River catchment is located north of Clonakilty, Co. Cork. It flows eastwards to reach the estuary at Timoleague and enters the sea at Courtmacsherry Bay. The Argideen River is an important sea trout fishery, but also gets a small run of salmon during the season.

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 Argideen River catchment in 2021.

A total of twelve sites were surveyed by electro-fishing (CEN 2003) in the Argideen River catchment from the 24th August to the 26th August, 2021. 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).



Argideen River at Argideen Bridge (Site 2)



Iascach Iníre Éireann
Inland Fisheries Ireland

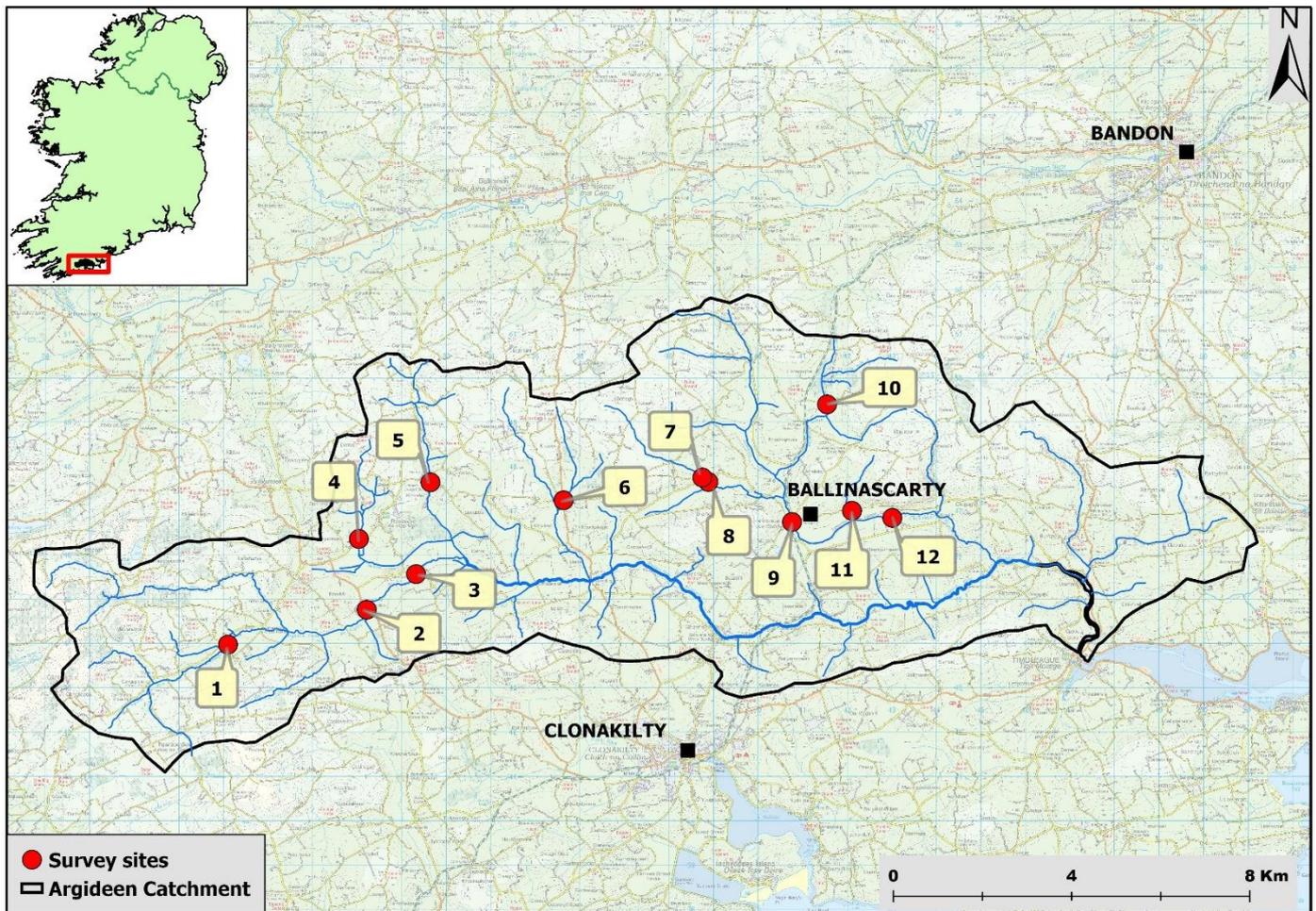


Figure 1. Location of electrofishing survey sites Argideen River Catchment, August 2021

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

No.	River	Site	Method	WFD	Date
Argideen Catchment					
1	Argideen	Glanbrack Southeast	TEF ₁₀	–	25/08/2021
2	Argideen	Argideen Br.	TEF ₁₀	–	25/08/2021
3	Argideen	Gearagh Br.	TEF ₁₀	–	25/08/2021
4	Ihernagh	Rossmore Southwest	TEF ₁₀	–	25/08/2021
5	Ihernagh	Kilmeen Track	TEF ₁₀	–	26/08/2021
6	Lisroe	Mid Lyre	TEF ₁₀	–	25/08/2021
7	Owenkeagh	Kilmoylerane Track	TEF ₁₀	–	24/08/2021
8	Owenkeagh	Dromgarriff North	TEF ₁₀	–	24/08/2021
9	Owenkeagh	Ballinascarty Br.	TEF ₁₀	–	24/08/2021
10	Owenkeagh	Tullymurrihy	TEF ₁₀	–	24/08/2021
11	Owenkeagh	Monteen Southwest	TEF ₁₀	–	24/08/2021
12	Owenkeagh	Monteen Castle	TEF ₁₀	–	24/08/2021

Table 2. Minimum density estimates (no. fish/m²) for the Argideen River Catchment, August 2021

Site no.	1	2	3	4	5	6
Species	2021	2021	2021	2021	2021	2021
Brown trout	0.449	0.049	0.177	0.800	0.601	0.063
0+ brown trout	0.289	-	0.067	0.514	0.572	0.025
1+ & older brown trout	0.160	0.049	0.111	0.286	0.029	0.038
Salmon	0.130	0.094	0.193	-	0.087	0.038
0+ salmon	0.115	0.063	0.120	-	-	-
1+ & older salmon	0.015	0.031	0.073	-	0.087	0.038
European eel	0.015	0.011	-	0.080	0.051	0.127
Minnow	-	0.004	-	-	-	-
Stone loach	0.155	0.007	-	-	-	0.114
All fish	0.748	0.164	0.370	0.880	0.738	0.342
Site no.	7	8	9	10	11	12
Species	2021	2021	2021	2021	2021	2021
Brown trout	0.433	0.432	0.221	0.073	0.229	0.138
0+ brown trout	0.176	0.396	0.124	0.058	0.229	0.061
1+ & older brown trout	0.256	0.036	0.097	0.016	-	0.077
Salmon	-	-	0.267	-	-	0.020
0+ salmon	-	-	0.230	-	-	-
1+ & older salmon	-	-	0.037	-	-	0.020
European eel	0.048	-	0.014	-	-	-
Minnow	-	-	-	-	-	0.012
Stone loach	0.032	-	0.014	-	-	0.008
Three-spined stickleback	-	-	-	0.011	-	-
All fish	0.513	0.432	0.516	0.084	0.229	0.179

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

Site No.	Brown trout				Site No.	Salmon	
	% of catch					% of catch	
	0+	1+	2+	3+	0+	1+	
Argideen Catchment							
1	64	30	5	-	1	88	12
2	-	78	22	-	2	67	33
3	37	40	23	-	3	63	38
4	61	29	10	-	4	-	-
5	94	6	-	-	5	-	100
6	33	67	-	-	6	100	-
7	41	59	-	-	7	-	-
8	93	7	-	-	8	-	-
9	55	31	14	-	9	87	13
10	22	78	-	-	10	-	-
11	100	-	-	-	11	-	-
12	43	38	19	-	12	-	100

Table 4. Fish ecological status, Argideen River Catchment, August 2021 (H=High, G=Good, M=Moderate, P=Poor and B=Bad)

Site No.	2021
Argideen Catchment	
1	G
2	M
3	G
4	G
5	G
6	M
7	G
8	M
9	H
10	M
11	M
12	M

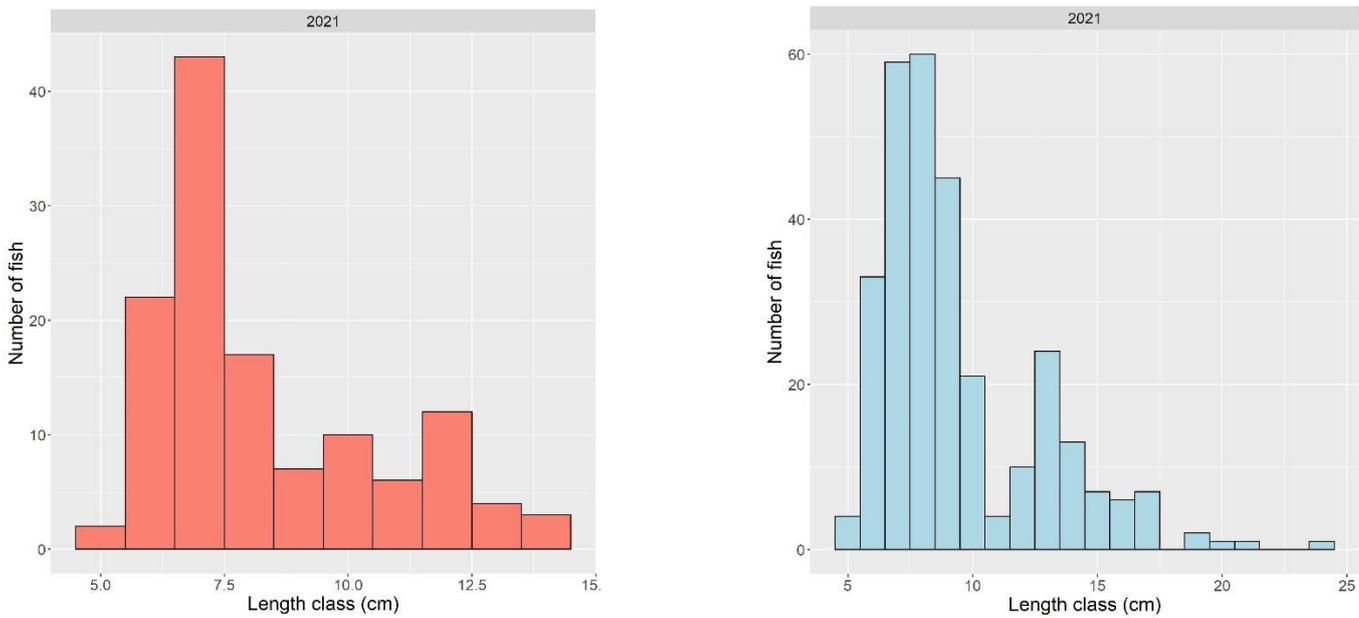


Figure 2. Length frequency distribution for salmon (left, n = 126) and brown trout (right, n = 298) on the Argideen River Catchment 2021

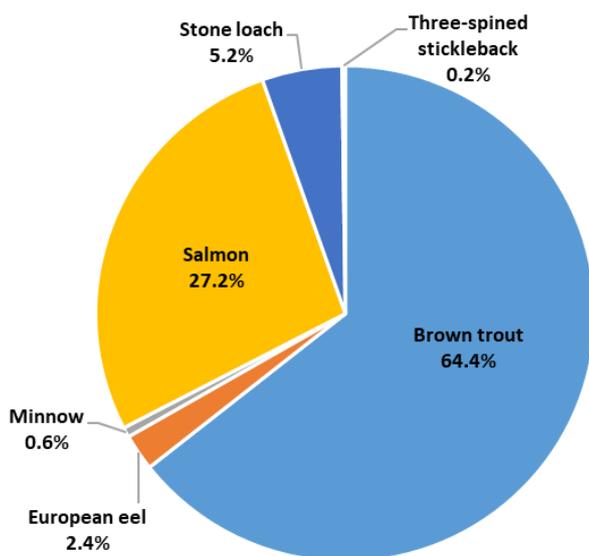


Figure 3. Fish species composition (%), Argideen River Catchment, August 2021

Summary

A total of six fish species were recorded during the Argideen River catchment survey in 2021 (Table 2 and Figure 3). Brown trout was the most abundant species captured with lengths ranging from 5 to 24.2cm. Three age classes (0+, 1+, 2+) were present with 0+ being the most abundant (Table 3). The highest density (0.800

fish/m²) of brown trout (all age classes combined) was recorded at Site 4 (Ihernagh River - Rossmore Southwest). The highest density (0.572 fish/m²) of 0+ brown trout was observed at Site 5. The highest density (0.286 fish/m²) of 1+ and older brown trout was recorded on Site 4.

Salmon were captured at seven sites with lengths ranging from 5 to 14.6cm. Two age classes (0+ and 1+), were present with 0+ being the most abundant cohort. The highest density (0.267 fish/m²) of salmon (all ages combined) was recorded on Site 9 (Owenkeagh River - Ballinascarty Bridge). The highest density (0.230 fish/m²) of 0+ salmon was also observed on Site 9, while the highest density (0.087 fish/m²) of 1+ and older salmon was recorded on Site 5 (Ihernagh River - Kilmeen Track).

European eel were recorded at seven sites (n=11). Minnow were recorded at two sites (n=3), stone loach were recorded at six sites (n=24) and three-spined stickleback at one site (n=1).

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 type-specific 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 12 sites surveyed in the Argideen catchment during 2021 (Table 4 & Figure 4). One site achieved High status (Site 9 – Owenkeagh River at Ballinascarty Bridge), five sites

achieved Good status and six sites achieved Moderate status.

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.

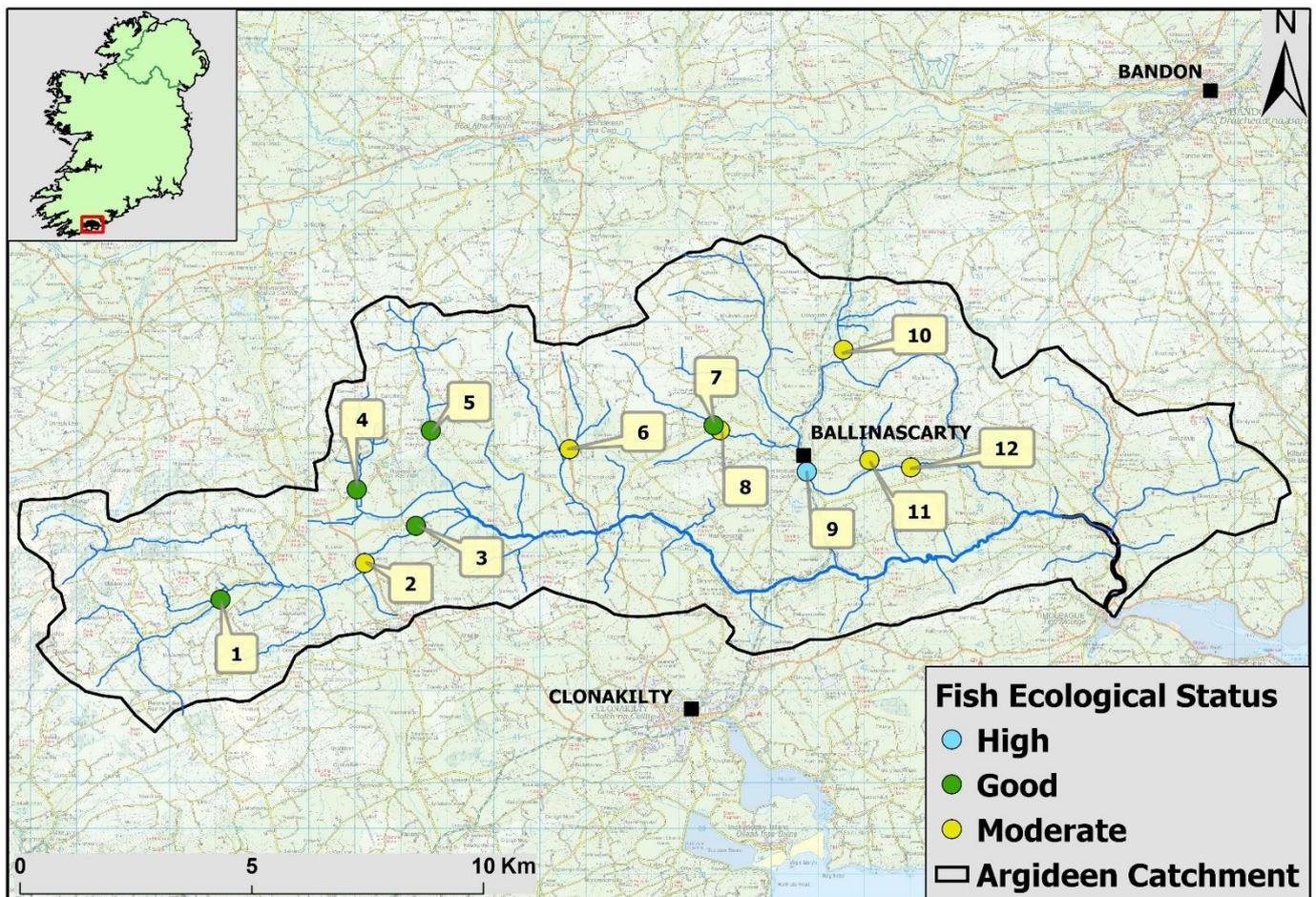


Figure 4. Fish ecological status map for the Argideen River Catchment, August 2021



Argideen River at Glanbrack Southeast (Site 1)



Argideen River at Gearagh Bridge (Site 3)

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 –Argideen Catchment, Factsheet No. 2021/8. 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.

