Fish in Rivers Factsheet

ERBD **River Nanny Catchment** **Factsheet: 2024/11**

The River Nanny Catchment is located within the Eastern River Basin District and covers an area of approximately 240km^2. It rises near Kentstown and flows east through the town of Duleek and village of Julianstown, before entering the sea at Laytown, just south of Drogheda, Co. Louth. The bedrock geology is primarily limestone. The River Nanny estuary is a Special Protection Area (SPA) under the E.U Birds Directive and is a protected shellfish and bathing water area. Agriculture is the main land use within the catchment (EPA, 2016).

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess and report the status of stocks in Ireland's rivers, lakes and transitional waters.

This report presents the results of a catchment-wide electro-fishing (CEN 2003) survey, carried out in the Nanny Catchment over the 2024 season. Eleven sites were surveyed in catchment from the 10th to 11th of July 2024. A total of five sites were surveyed on the main channel of the River Nanny, four sites were surveyed on the Hurley River, one site was surveyed on the Lunderstown River, and one site was surveyed on the Riverstown River.

The survey methods included 10-minute timed Electro-Fishing (TEF_{10}), and Area Delineated Electro-Fishing (ADEF handset). All TEF_{10} fish count results were converted to minimum population estimates according to Matson *et al.* 2018.

River Nanny at Boolies Little, Co. Meath (Site 4).

Iascach Intíre Éireann
Inland Fisheries Ireland

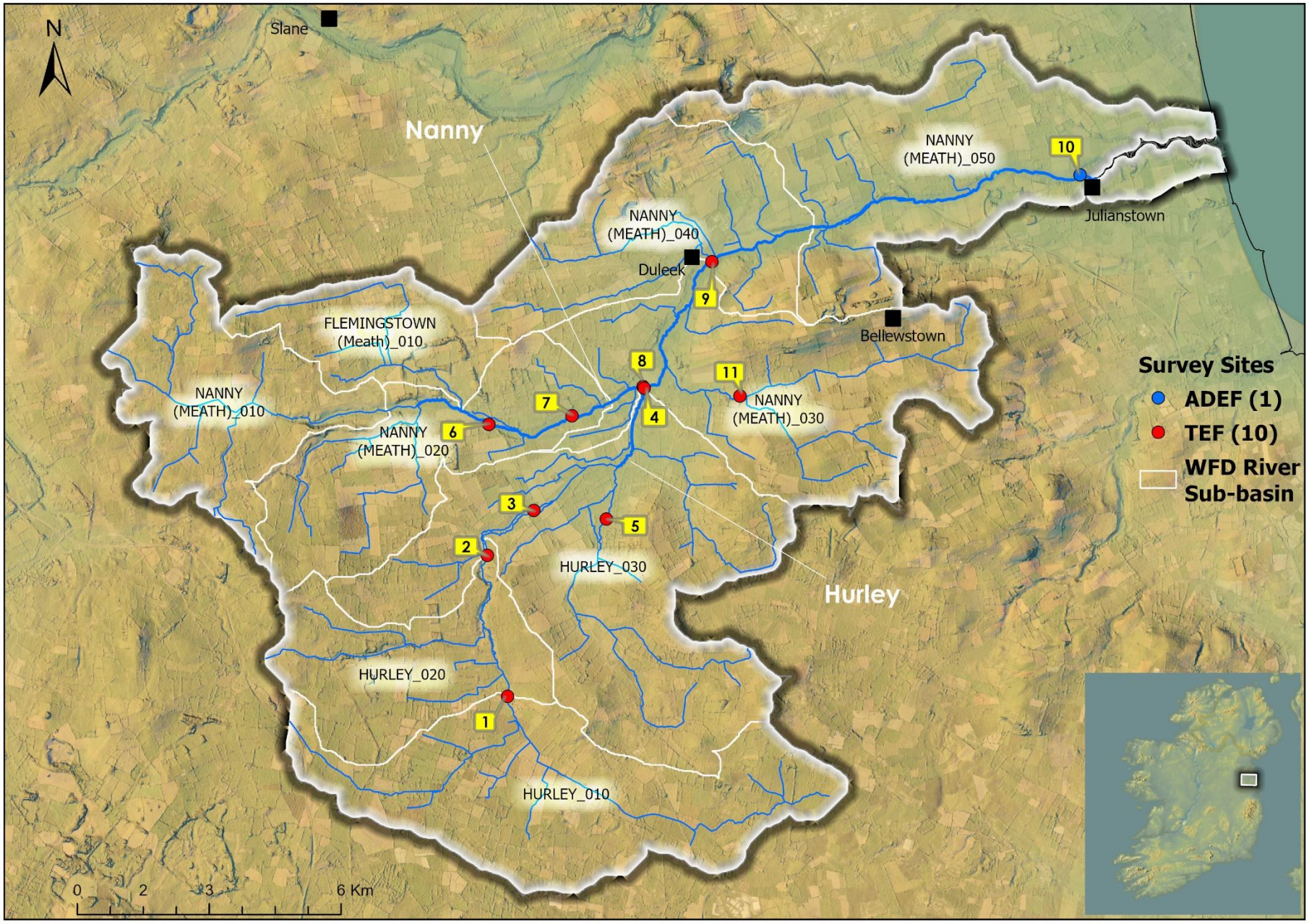

Figure 1. Location of electrofishing survey sites on the River Nanny Catchment, July 2024. Sub-catchments and WFD River Sub-basins are also highlighted.

Table 1. Site survey details, River Nanny catchment, September 2024.

No.	WFD Sub-basin	River	Site	Method	WFD	Date
			Hurley sub-catchment			
1	Hurley_010	Hurley	Painstown	TEF (Handset)	No	10/07/2024
2	Hurley_020	Hurley	Rathfeigh	TEF (Handset)	No	10/07/2024
3	Hurley_030	Hurley	New Bridge (North)	TEF (Handset)	No	10/07/2024
4	Hurley_030	Hurley	Boolies Little	TEF (Handset)	No	10/07/2024
5	Hurley_030	Riverstown	Gilliamstown	TEF (Handset)	No	10/07/2024
			Nanny sub-catchment			
6	Nanny (Meath)_020	Nanny	Ballynagarvey Village	TEF (Handset)	No	10/07/2024
7	Nanny (Meath)_020	Nanny	Balrath Bridge	TEF (Handset)	No	10/07/2024
8	Nanny (Meath)_030	Nanny	Boolies Little East	TEF (Handset)	No	10/07/2024
9	Nanny (Meath)_040	Nanny	Knockisland	TEF (Handset)	No	10/07/2024
10	Nanny (Meath)_050	Nanny	Bridge at Julianstown	ADEF (Handset)	Yes	11/07/2024
11	Nanny (Meath)_030	Lunderstown	Johnstown East	TEF (Handset)	No	10/07/2024

Table 2. Minimum density estimates of fish (no. fish/m^2), Hurley sub-catchment (River Nanny Catchment), July 2024 (previous results are shown where applicable.

Hurley									
Site no.	**1**	**2**		**3**		**4**			**5**
Species	**2024**	**2016**	**2024**	**2016**	**2024**	**2016**	**2020**	**2024**	**2024**
Brown trout	-	0.214	0.131	0.5813	0.49	0.294	0.141	0.044	0.015
0 + brown trout	-	0.032	0.089	0.05055	0.013	0.013	0.038	-	-
1+ & older brown trout	-	0.182	0.042	0.53075	0.476	0.2811	0.103	0.044	0.015
Salmon	-	0.012	-	-	-	-	-	-	-
0+ salmon	-		-	-	-	-	-	-	-
1+ & older salmon	-	0.012	-	-	-	-	-	-	-
European eel	0.023	-	-	-	-	0.02	0.033	-	-
Lamprey sp.	0.008	-	-	-	-	-	-	-	-
Minnow	-	0.012	-	0.017	-	0.468	0.413	0.049	0.230
Stone loach	0.030	0.012	0.021	-	-	0.013	-	-	0.030
Three-spined stickleback	0.046	-	-	-	-	-	0.169	-	-
All fish	**0.106**	**0.247**	**0.151**	**0.598**	**0.490**	**0.795**	**0.756**	**0.093**	**0.275**

Brown trout captured in the Hurley River at New Bridge (North), Co. Meath (Site 3).

Table 3. Minimum density estimates of fish (no. fish/m^2), River Nanny Catchment, July 2024 (previous results are shown where applicable.

Nanny (Meath)					
Site no.	**5**	**6**	**7**	**8**	
Species	**2024**	**2024**	**2024**	**2020**	**2024**
Brown trout	0.015	0.093	0.017	0.054	0.101
0 + brown trout	-	0.07	-	-	-
1+ & older brown trout	0.015	0.023	0.017	0.054	0.101
Salmon	-	-	-	-	-
0+ salmon	-	-	-	-	-
1+ & older salmon	-	-		-	-
European eel	-	-	0.108	-	0.077
Minnow	0.23	0.041	0.05	0.226	0.262
Stone loach	0.03	0.023	0.017	-	-
Three-spined stickleback	-	0.11	0.05	0.171	0.095
All fish	**0.275**	**0.267**	**0.242**	**0.451**	**0.536**

Nanny (Meath)						
Site no.	**9**			**10**	**11**	
Species	**2016**	**2020**	**2024**	**2024**	**2020**	**2024**
Brown trout	0.144	0.006	0.024	0.027	0.299	0.22679
0 + brown trout	0.043	-	-	0.0108	0.181	0.14039
1+ & older brown trout	0.102	0.006	0.024	0.0162	0.118	0.08639
Salmon	0.021	-	-	-	-	-
0+ salmon	0.021	-	-	-	-	-
1+ & older salmon	-	-		-		-
European eel	0.053	0.041	0.012	0.032	0.042	0.0648
Minnow	0.347	0.213	-	0.022	-	-
Stone loach	0.139	0.034	0.083	0.003	-	-
Three-spined stickleback	0.166	0.088	-	-	0.216	0.032
All fish	**0.871**	**0.382**	**0.119**	**0.084**	**0.557**	**0.324**

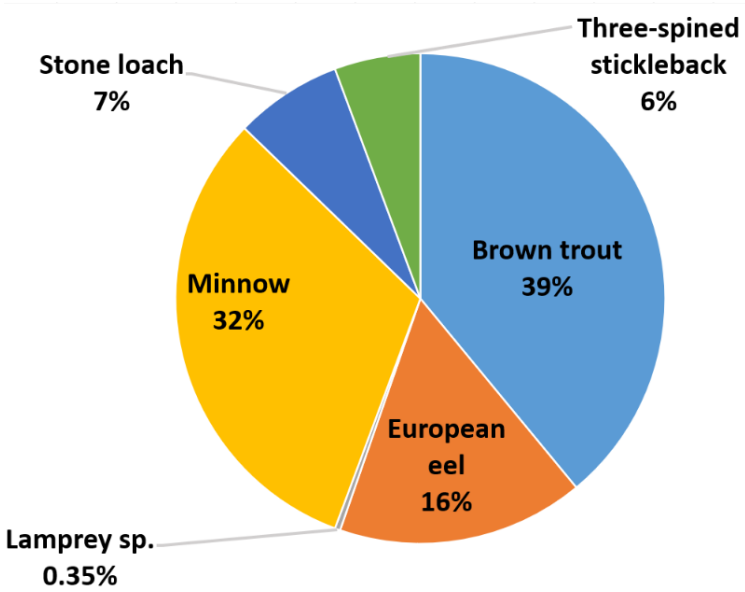

Figure 2. Fish species composition (%), River Nanny Catchment, 2024.

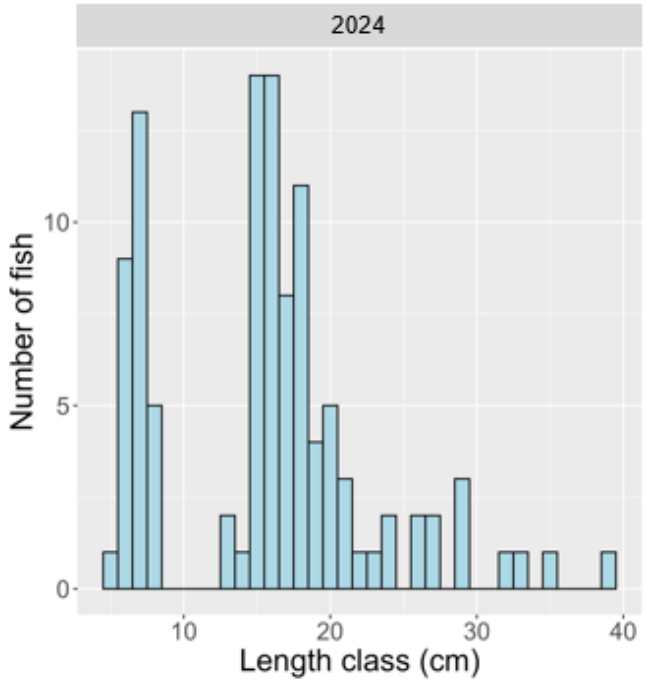

Figure 3. Length frequency distribution for brown trout (n =105), River Nanny Catchment, 2024 (No. sites = 10).

Table 4. Brown trout % age class structure (where recorded), on the River Nanny Catchment 2024.

Site No.	% of catch				
	0+	1+	2+	3+	4+
Hurley					
2	69	15	8	8	-
3	3	46	31	14	6
4	-	82	9	9	-
5	-	-	100	-	-
Nanny					
6	78	-	22	-	-
7	-	100	-	-	-
8	-	25	50	13	12
9	-	-	67	-	33
10	26	42	32	-	-
11	60	40	-	-	-

Table 5. Fish ecological status, River Nanny Catchment, July 2024.

Site No.	WFD Sub-basin code	2016	2020	2024
Hurley sub-catchment				
1	Hurley_010	-	-	P
2	Hurley_020	M	-	M
3	Hurley_030	G	-	M
4	Hurley_030	M	M	P
5	Hurley_030	-	-	P
Nanny sub-catchment				
6	Nanny (Meath)_020	-	-	M
7	Nanny (Meath)_020	-	-	P
8	Nanny (Meath)_030	-	P	M
9	Nanny (Meath)_040	M	P	P
10	Nanny (Meath)_050	-	-	M
11	Nanny (Meath)_030	-	M	M

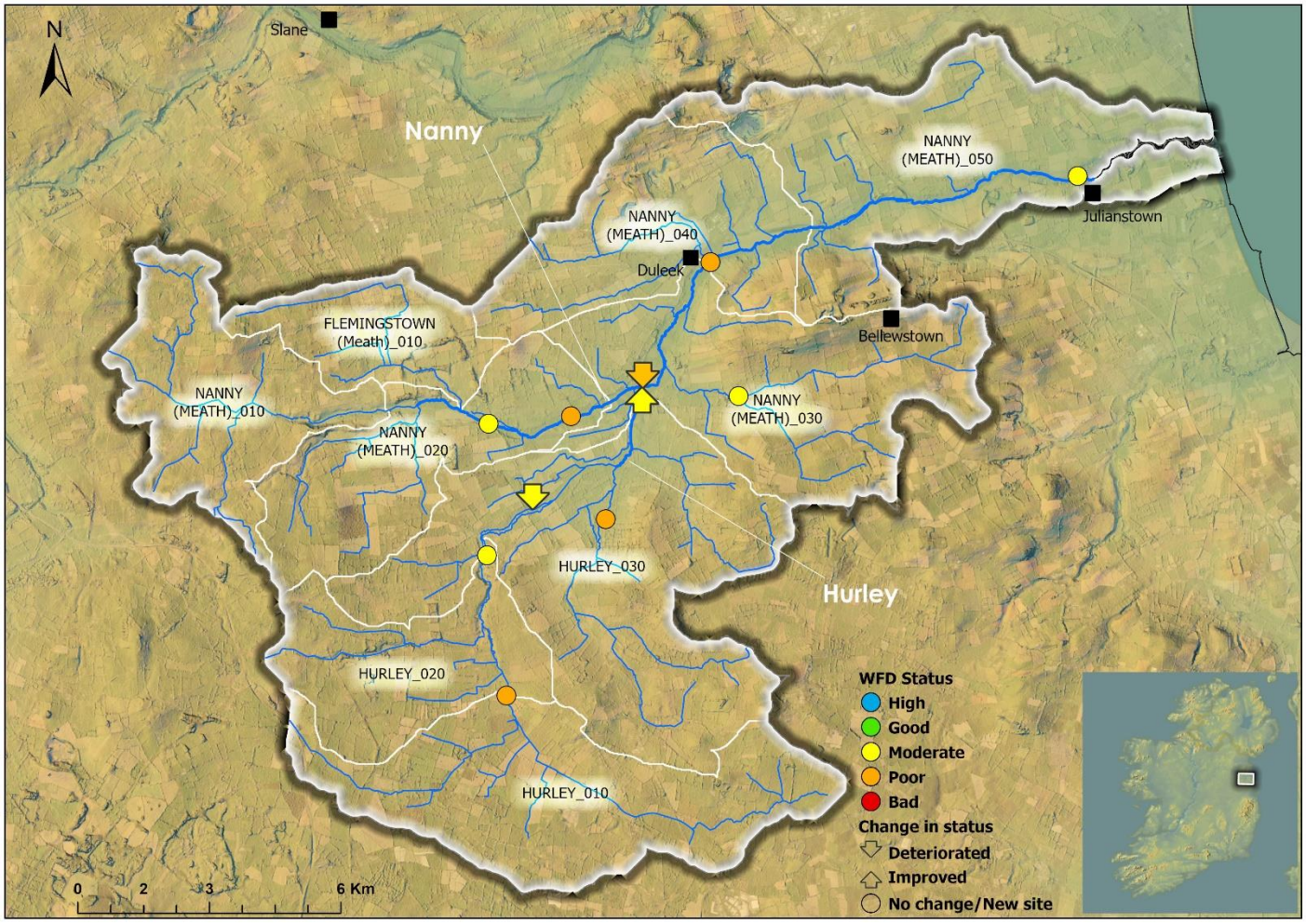

Figure 8. Fish ecological status in the River Nanny Catchment, 2024. Arrows indicate a change in status since previous surveys (where applicable).

Summary

Six fish species were recorded at eleven sites surveyed on the River Nanny Catchment in 2024.

Brown trout was the most common species present (10 sites, 90%) followed by stone loach (7 sites, 64%), European eel and minnow (6 sites each, 54%), three-spined stickleback (5 sites, 45%) and Lamprey spp. (1 site, 9%).

Brown trout was the most abundant species recorded followed by minnow, three-spined stickleback, European eel, stone loach and lamprey spp.(Tables 2 and 3).

Brown trout ranged in length from 5.8 to 39.8cm. Five age classes of brown trout (0+, 1+, 2+, 3+ and 4+) were present with 1+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.490 fish/m^2) was recorded at Site 3 (New Bridge North) on the Hurley River. The highest density of 0+ brown trout (0.140 fish/m^2) was recorded at Site 11 (Johnstown East) on the Lunderstown River. The highest density of 1+ and older brown trout (0.476 fish/m^2) was recorded at Site 3 (New Bridge North).

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 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 eleven sites surveyed in the Nanny Catchment during 2024. Six sites were assigned Moderate status, with five sites Poor. No sites met the minimum ecological standard of Good status. Six sites were surveyed previously on this catchment and assigned fish ecological status. When compared with their most recent previous surveys, one site improved (Site 8), two sites deteriorated (sites 3 and 4) and three sites remained unchanged.

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.

SNIFFER (2011) River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.

EPA (2016) https://gis.epa.ie/EPAMaps/Water Catchments.ie – Catchments.ie Accessed in March/April 2025.

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

CITATION: Corcoran, W., Gordon, P., McCarthy, E., Flynn, E., O Brian, M., Szocs, A., Robson, S., Piaskowy, J., and Kelly, F.L., (2025) Sampling Fish in Rivers 2024 – Nanny River Catchment, Factsheet No. 11. National Research Survey Programme. Inland Fisheries Ireland.

Iascach Intíre Éireann
Inland Fisheries Ireland