

Fish in Rivers Factsheet

SWRBD

Owenascaul River Catchment

Factsheet: 2021/11

The Owenascaul River rises near Cnoc Mhaoilionáin on the Dingle Peninsula, Co. Kerry and flows south eastwards through Lough Anascaul before reaching the sea near Anascaul Village.

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess the status of stocks in Ireland's rivers, lakes and estuaries. This factsheet presents the results of an electro fishing survey in the

Owenascaul River catchment in 2021 (Figure 1 and Table 1).

A total of four sites were surveyed by electro-fishing (CEN 2003) in the Owenascaul River catchment from the 7th of September to the 8th of September 2021 (Figure 1 and 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).



Derrygorman River, upstream of Anascaul Bridge (Site 4)

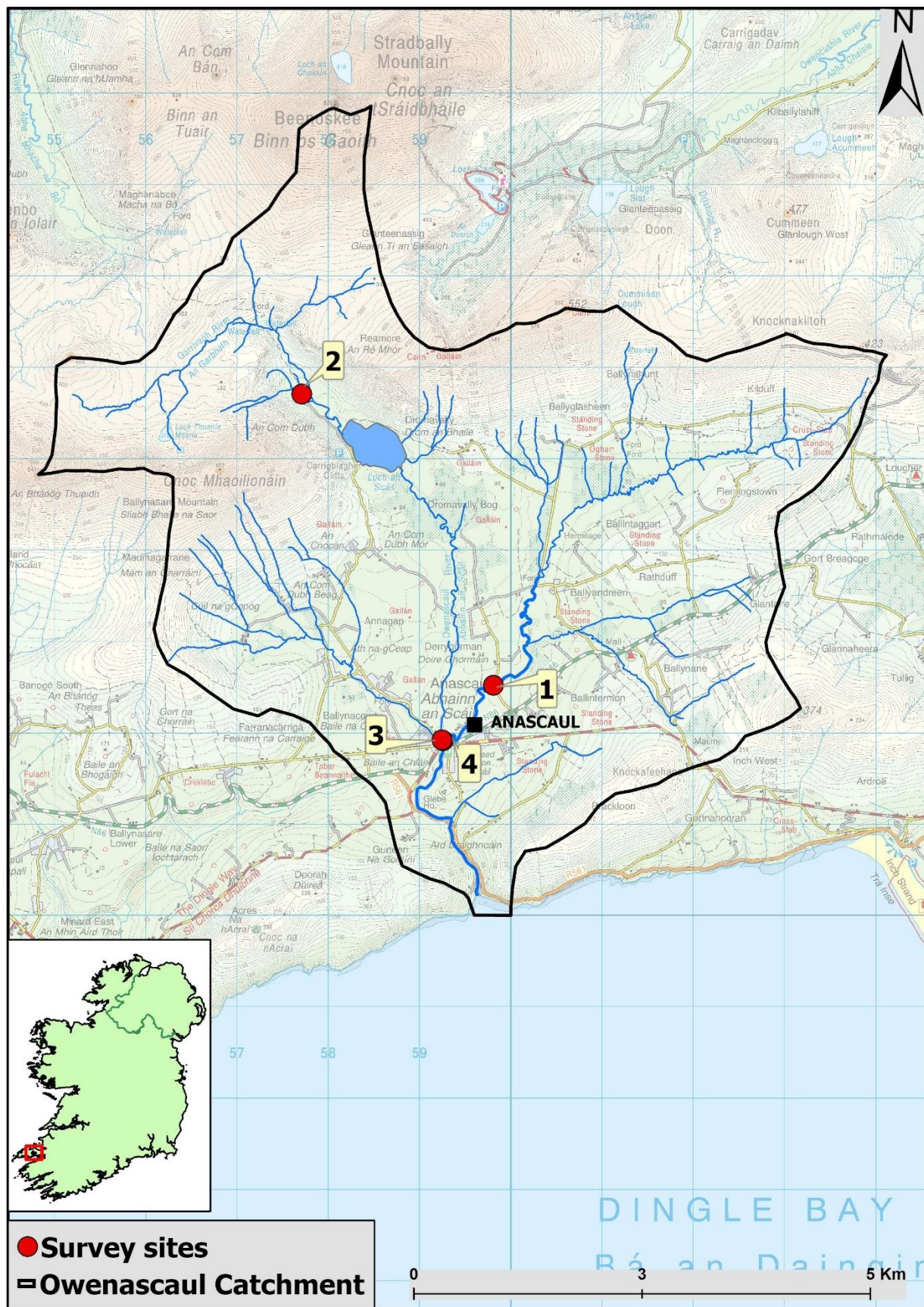


Figure 1. Location of electrofishing survey sites on the Owenascaul River catchment, September 2021

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

| No. | River | Site | Method | WFD | Date |
|-----------------------------|-------------|------------------------|-------------------|-----|------------|
| Owenascaul catchment | | | | | |
| 1 | Derrygorman | NE of Anascaul | TEF ₁₀ | – | 08/09/2021 |
| 2 | Garrivagh | An Com Dubh | TEF ₁₀ | – | 07/09/2021 |
| 3 | Owenascaul | Anascaul village | TEF ₁₀ | – | 07/09/2021 |
| 4 | Derrygorman | U/S of Anascaul Bridge | TEF ₁₀ | – | 07/09/2021 |

Table 2. Minimum density estimates (no. fish/m²) for the Owenascaul River catchment, 2021

| Site no. | 1 | 2 | 3 | 4 |
|------------------------|--------------|--------------|--------------|--------------|
| Species | 2021 | 2021 | 2021 | 2021 |
| Brown trout | 0.190 | 0.095 | 0.272 | 0.073 |
| 0+ brown trout | 0.112 | 0.047 | 0.120 | 0.013 |
| 1+ & older brown trout | 0.078 | 0.047 | 0.152 | 0.060 |
| Salmon | 0.147 | 0.142 | 0.126 | 0.127 |
| 0+ salmon | 0.104 | 0.087 | 0.095 | 0.113 |
| 1+ & older salmon | 0.043 | 0.063 | 0.032 | 0.013 |
| European eel | 0.060 | 0.126 | 0.044 | 0.133 |
| All fish | 0.397 | 0.363 | 0.442 | 0.334 |

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

| Site No. | Brown trout | | | | Site No. | Salmon | |
|-----------------------------------|-------------|----|----|----|----------|------------|----|
| | % of catch | | | | | % of catch | |
| | 0+ | 1+ | 2+ | 3+ | | 0+ | 1+ |
| Owenascaul River Catchment | | | | | | | |
| 1 | 54 | 15 | 31 | – | 1 | 73 | 27 |
| 2 | 43 | 57 | – | – | 2 | 58 | 42 |
| 3 | 40 | 36 | 16 | 8 | 3 | 77 | 23 |
| 4 | 14 | 71 | 14 | – | 4 | 92 | 8 |

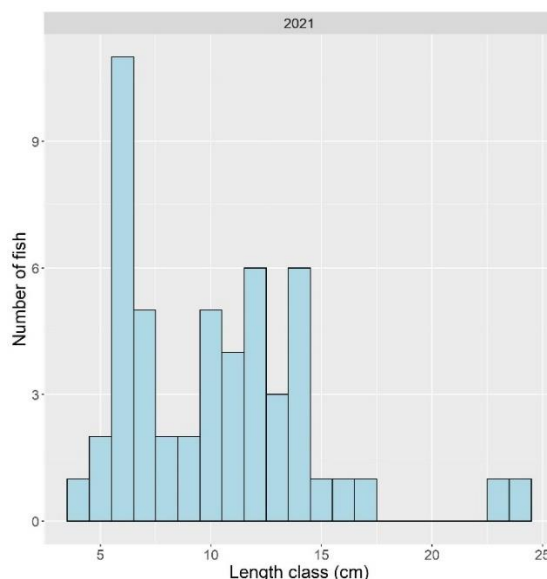
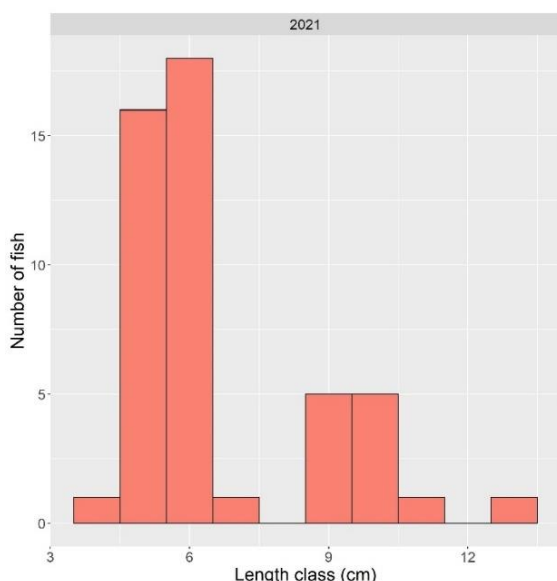


Figure 2. Length frequency distribution of salmon (left, n = 48) and brown trout (right, n= 52), Owenascaul River catchment, 2021

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

| Site No. | 2021 |
|-----------------------------|------|
| Owenascaul Catchment | |
| 1 | G |
| 2 | G |
| 3 | H |
| 4 | M |

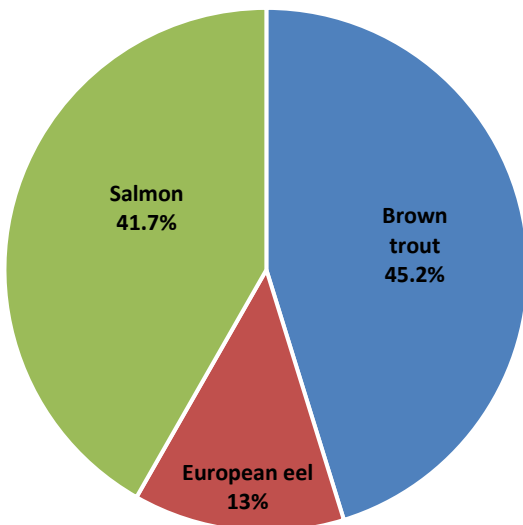


Figure 3. Fish species composition (%), Owenascaul River catchment, 2021

Summary

A total of three fish species were recorded during the Owenascaul River catchment survey in September 2021 (Table 2 and Figure 3). Brown trout was the most abundant species captured with lengths ranging from 4.9 to 24.5cm. Four age classes (0+, 1+, 2+ and 3+) were present with 0+ being the most abundant (Table 3). The highest density (0.272 fish/m²) of brown trout (all age classes) was recorded at Site 3 on the Owenascaul in Anascaul village, with the highest density of 0+ brown trout (0.120 fish/m²) and 1+ & older (0.152 fish/m²) also recorded at this site.

Salmon were captured at all four sites surveyed with lengths ranging from 4.3 to 13cm. Two age classes (0+ and 1+), were present with 0+ being the most abundant cohort. The highest density (0.147 fish/m²) of salmon (all ages classes) was recorded at Site 1

(Derrygorman stream, NE of Anascaul). The highest density of 0+ (0.113 fish/m²) and 1+ & older salmon (0.063 fish/m²) were recorded at Sites 4 and 1 respectively. European eel was also recorded at all four sites (n=15).

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. Fish ecological status will decline if such indicators are absent, are in poor abundance, or if more tolerant species proliferate. Fish ecological status was assigned to four sites surveyed in the Owenascaul River catchment during 2021 (Table 4 and Figure 4). One site achieved High status, two achieved Good status and one site achieved Moderate status.

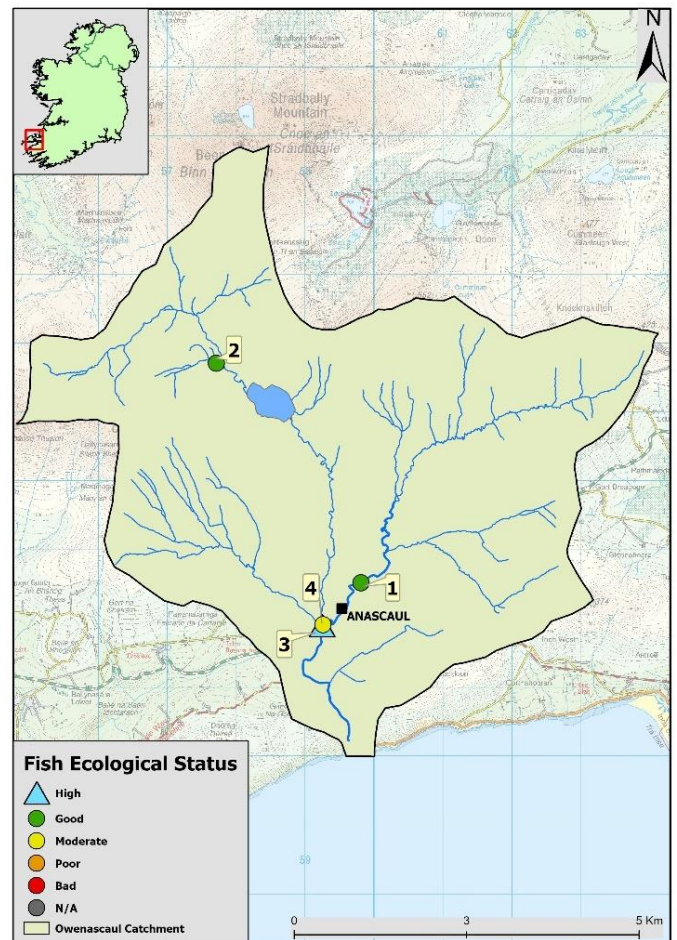


Figure 4. Fish ecological status map for the Owenascaul River catchment, 2021

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.

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