

Fisheries Conservation in the Dart

Dr Dan Osmond – Westcountry Rivers Trust





Background – What are we talking about?



- Focus on migratory salmonids
- History and value in the Dart
- Current Status

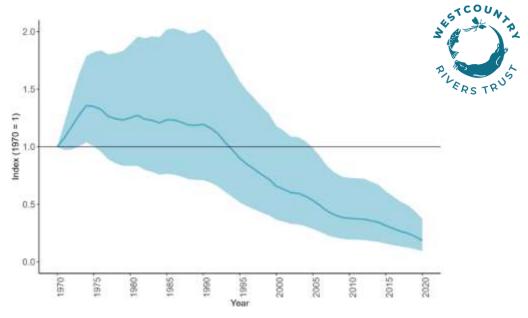
- Important Stressors
- Where do we go from here?



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Status of migratory salmonids

- Life in the Anthropocene.
- Freshwater Migratory Fishes fastest declining vertebrate group.
- 3 million adult Atlantic Salmon (Salmo salar) today. 70% decline from 1970's 9 million.
- Every principal salmon river in Southwest England 'At Risk' or 'Probably at Risk'.



Living Planet Report, Dienet et al., 2022.

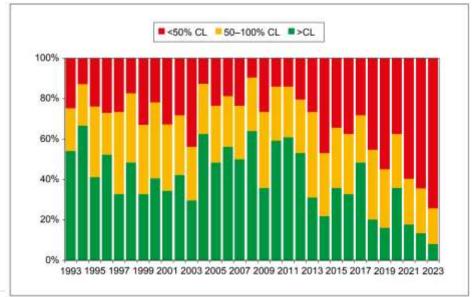
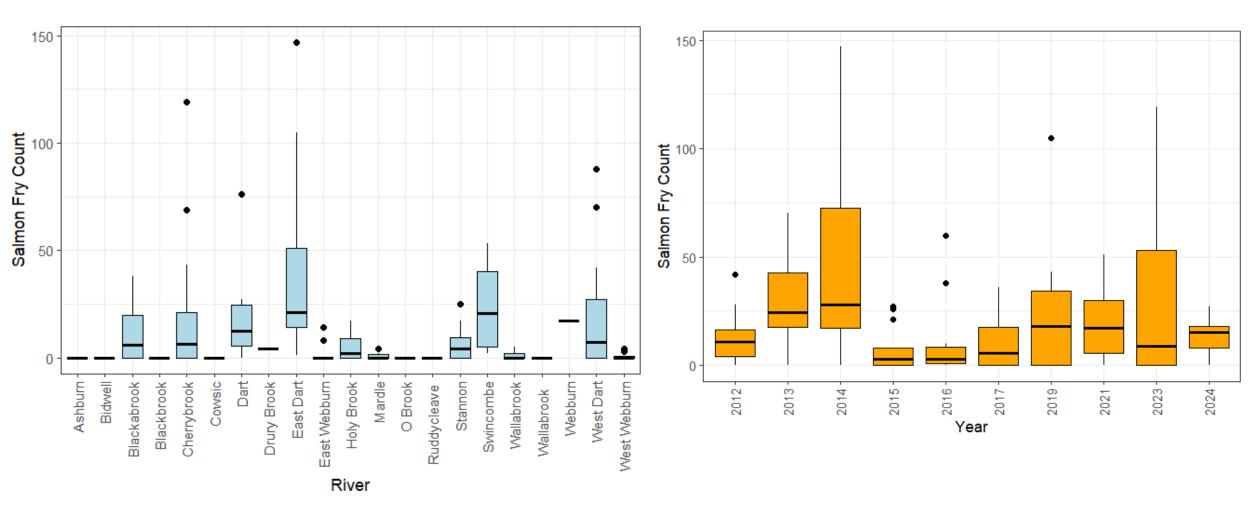


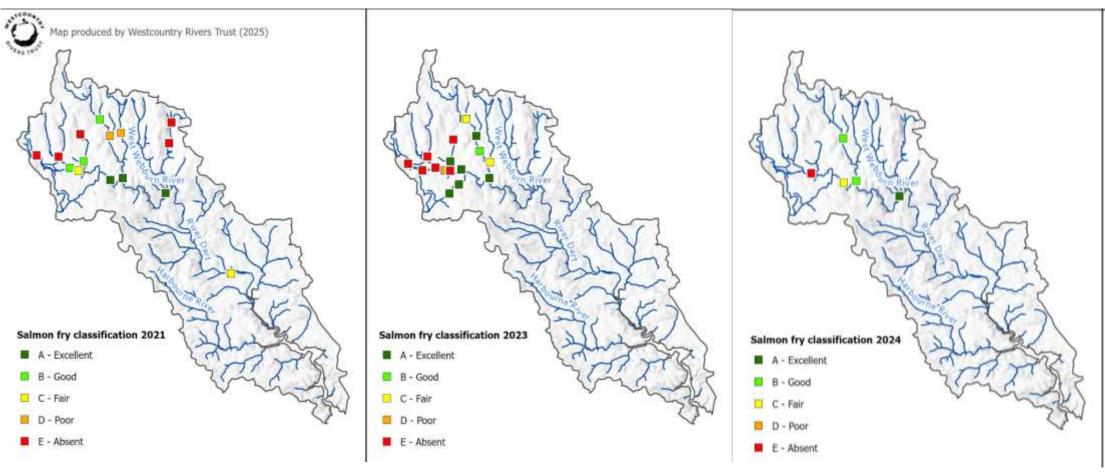
Figure 31. Percentage of salmon river stocks exceeding their Conservation Limit (CL), between 50% and 100% of the CL, and less than 50% of the CL, 1993-2023.

Environment Agency, 2023.

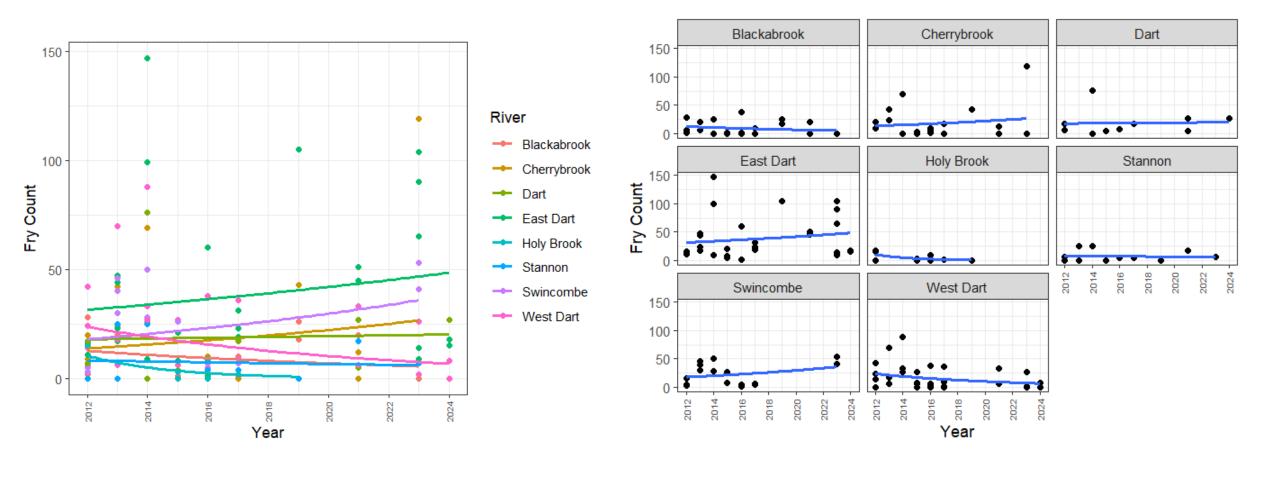








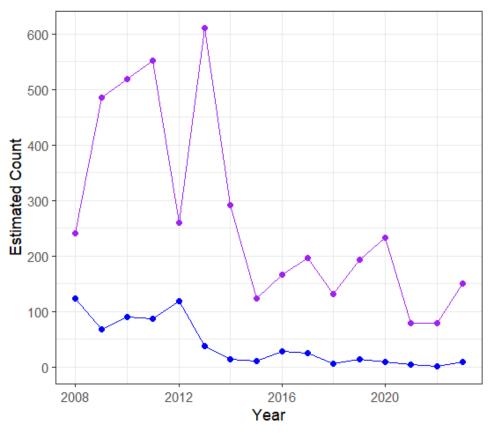




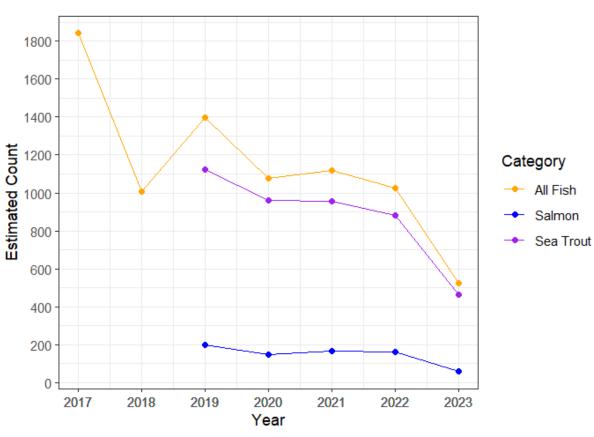
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Rod Catch



Totnes Weir Fish Counter



Environment Agency, 2024. Fishtek, 2024.

Rod Catch

Salmon

Sea Trout

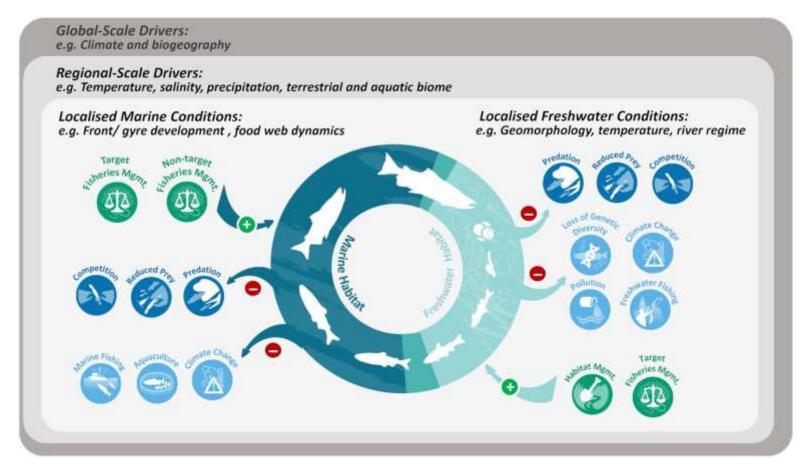
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Likely Suspects



Threats to salmon:

- Climate change
- Disease
- Salmon Stocking
- Invasive species
- Habitat degradation
- Predation
- Migration barriers
- Pollution
- Fisheries exploitation
- Salmon farming



Bull et al., 2022.

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Looking upstream...



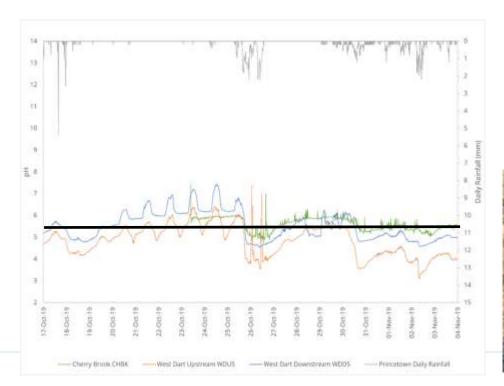


Habitat Restoration

- Dutchy River Management Plan
- Targeted habitat improvements

Liming Phase 2 Trial

- Carbonate sand (900kg) placed at side of Tinners Stream, washes in under high river flow and/or rainfall
- Clear shift in pH upstream vs downstream
- Closer to pH 5.5 threshold









Summary



Salmon are not immune to challenges of Anthropocene.



Declines of salmon and sea trout have been particularly extreme in the Dart.



Further monitoring required to understand drivers of declines.



Addressing stressors and habitat restoration can support fisheries.

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