



CASE STUDY

Crayfish (spiny lobster)
monitoring project: fisheries
management, transitioning to low
impact fishing and conserving
endangered and protected species





Monitoring of the crayfish fishery off the south west coast of Ireland by the Marine Institute from 2018 to 2025 has deepened our understanding of the fishery and interactions between the fishery, wildlife and endangered species.





Fishing for crayfish with tangle nets off the south west coast of Ireland was identified, from historical data, as a fishery where the risk of bycatch of critically endangered and protected species was significant. There was also very little data available for this fishery for stock assessment.





Protecting biodiversity in the marine environment from the impacts of human activity is more important than ever, and is articulated in EU and national policies and directives.



The Fisheries Ecosystems Advisory Services team at the Marine Institute initiated a project to obtain evidence of bycatch in this fishery, to study how endangered species use the sea area where the fishery occurs, to develop methods for monitoring endangered species using underwater baited video surveys, to understand how crayfish use reef habitat in the area, to gather data on crayfish for stock assessment, to see how interactions between the fishery and grey seals could be reduced and to undertake trials with low impact fishing gears.





The team tagged several endangered species to monitor how they overlap with the fishery and to identify when they migrate to and from Tralee Bay.

Underwater video surveys were carried out to provide information for future management and to map diversity in different habitats.





Thousands of crayfish were tagged during the project. The data showed crayfish are resident on local reef habitats but also 'walk in' to coastal reefs from offshore sandy habitats. The data also shows connection between Irish and French crayfish populations.





A transition to low impact fishing methods is the best outcome for both wildlife and fisheries if such fishing gears can be shown to be economically viable. The economic viability of fishing with low impact fishing gears of various design was trialled between 2021–2026 and compared to incomes from equivalent amounts of fishing effort in pot fisheries for lobster and crab and in the tangle net fishery for crayfish.





The Marine Institute's crayfish monitoring project shows how co-operation between science and the fishing industry can really enhance data provision for the protection of biodiversity and to design future sustainable fisheries.



Want to learn more about
the impact of this project?



Read the Marine Institute's **Annual Impact Report**
to see how monitoring projects are benefitting
endangered and protected species.