

Strategic Research Theme : Natural Resources and Sustainability

Research Project undertaken within the **Centre for Marine and Freshwater Research**

Project Title: Development of sustainable fisheries for surf clams.

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Project Summary

Development of sustainable fisheries for the surf clam *Spisula solida*. The surf clam *Spisula solida* is relatively common in localised areas around the coast of Ireland.



Although it is a relatively valuable species ($\text{€}6\text{-}12\text{kg}^{-1}$), it has not supported large-scale or highly commercialised fisheries historically. Due to relatively stable high European market prices in recent years however, there is strong potential for the development of well-managed small-scale inshore fisheries. The only regulation currently in force in Irish waters for *Spisula* is the EU minimum landing size of 25mm shell width. In the context of Irish fisheries it is not clear how effective this minimum size regulation is due to the lack of information on size-at-maturity of *Spisula*. Minimum size-at-maturity can vary significantly across the geographical distribution of a species, and localised environmental conditions and population genetics will have an effect on the age-at-maturity of a population. These

parameters are often affected when a population is subjected to fishing pressure for the first time. *Spisula* occur in quite localised stocks that may be quite removed from other populations. As a result recruitment from other nearby metapopulations is unlikely to aid the recovery of a depleted/overexploited stock.

Fishing activity previously directed toward the species in the West and Southeast has been poorly managed and has resulted in rapid depletion of stock biomass. During the course of 2002-2004, fishing by other metiers off the East coast revealed a number of potential beds of the surf clam. These beds have never been subjected to fishing pressure, and their sustainable utilisation may provide a novel resource and source of employment for the east coast.



Objectives

- To conduct fishing trials for *Spisula* in the East and Southeast using variable dredge bar spacing in order to determine the most appropriate design for efficient harvest and stock conservation.
- Determine the extent of *Spisula* beds, and their sensitivity to increased fishing effort.
- Determine and compare the age and maturity profile of specimens from previously depleted, recovering beds in the Southeast with those from novel beds in the East.
- To determine and compare the size/age-at-maturity in each population using histological techniques.
- Make recommendations for the sustainable management of this species in light of findings.