

## Strategic Research Theme : Natural Resources and Sustainability

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

**Project Title:** Monitoring catch and effort in the developing deep-water red crab (*Chaceon affinis*) fishery: reviewing options for the assessment and management of this novel Irish resource.

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### Project Summary

An attempt to diversify some offshore fishing effort away from *Cancer* fisheries in the NW was made during 2002-03 by fishing for the species in spatially distinct areas and targeting novel species in deep-water. Due to the success of the initial project in locating and harvesting significant quantities of the deepwater red crab *Chaceon affinis*, Irish offshore vivier vessel owners will attempt to exploit this resource from spring 2004. *Chaceon affinis* has been deemed a desirable product for the high quality Japanese markets. It is hoped that high-grade crab can be pre-selected for supply to higher value Asian markets, with low quality and small sized individuals discarded at sea to reduce wastage at processing (as is common in brown crab fisheries). Very little is known of the biology and life cycle of *Chaceon*, and assessments of distribution and abundance are lacking. There are currently no national or EU programmes to monitor or manage the sustainable development of this novel fishery in the North Eastern or Eastern Central Atlantic. It is likely that some form of control may be implemented at EU level as landings of the species continue to dramatically

increase.



## Objectives

- To conduct commercial fishing for the deep-water red crab on the continental shelf edge to the west of Ireland and on the Rockall Bank, with a view to determining the sustainability of these grounds, while satisfying and developing recently established Asian markets.
- To provide independent scientific observer coverage on 50% of all Irish deep-water fishing effort directed toward the species during 2004 (dependant on time spent targeting species), to record length-frequency distributions.
- To examine size composition, condition and mortality of the discard component of the catch and evaluate the use of escape gaps in commercial traps used to fish *Chaceon*.
- To examine seasonal variation in the condition of the species in relation to the timing of the moulting and reproductive cycles.
- Examine small and large-scale temporal and spatial variation in population structure, size-at-maturity and growth with a view to collecting key biological data and robustly evaluating possible minimum landing sizes.
- Determine size specific conversion factors to estimate total landings when only butchered sections are landed to shore. This would be important in the event that a minimum landing size is implemented.
- Research and evaluate potential methods of assessment and management of the resource. In particular this would focus on work conducted in other global *Chaceon* fisheries.

