



REPORT OF THE STUDY GROUP ON THE ASSESSMENT OF SHELLFISH STOCKS IN THE NORTH ATLANTIC

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1 TERMS OF REFERENCE

Council Resolution 1994/2:47 states that the Study Group on the Assessment of Shellfish Stocks in the North Atlantic will be established under the co-chairmanship of a scientist from Canada and M.B. Mesnil (France) and will meet in La Rochelle for four days in June 1995 to:

- a) identify the needs and priorities for advice on the management of shellfish fisheries in the North Atlantic;
- b) review the data likely to be available for assessing shellfish stocks;
- c) review the available assessment methods, their likely applicability to the different types of shellfish life cycles, and the data required to apply them;
- d) determine the future strategy for ICES shellfish assessments, including the terms of reference for a future meeting on this topic at the Methods Working Group;
- e) report to the Shellfish Committee and ACFM.

Due to seriously conflicting work priorities for key members it proved impossible to hold the Study Group meeting as originally scheduled. The Chairman of the Consultative Committee, Dr R.C.A. Bannister (UK), after consulting with the General Secretary, decided to postpone the Study Group meeting, but to solicit information on the shellfisheries in Member Countries by correspondence. This would go some way towards meeting the first term of reference, and would lay a factual foundation for a 1996 meeting of the Study Group. As a result of the correspondence round, material was contributed by the following countries:

Canada	Communicated by G. Ennis and M. Moriyasu
Denmark	Communicated by P.S. Kristensen and S. Munch Petersen
France	Communicated by D. Latrouite
Germany	Communicated by Th. Neudecker
Iceland	Communicated by U. Skúladóttir
Norway	Communicated by M. Aschen
Spain	Communicated by I. Sobrino
Sweden	Communicated by M. Ulmestrand
UK (England and Wales)	Communicated by C. Bannister
UK (Scotland)	Communicated by N. Bailey

2 RATIONALE FOR HOLDING THE STUDY GROUP

Although in the last decade the Shellfish Committee has provided an increasingly successful forum for discussing papers on shellfish biology and life history, and has established Study Groups to update ICES on the fisheries and fisheries biology of Cephalopods, *Crangon*, and *Majid* crabs, the time has come for ICES to establish its future role regarding the assessment and management of shellfish stocks.

The main demersal and pelagic species are the traditional preoccupation of managers and fisheries ministers, but the shellfisheries are of growing absolute and relative importance, and there are some fisheries, such as those for Cephalopods, which are growing particularly rapidly. Some coastal shellfish populations are also subject to increasing threats from other coastal zone uses such as aggregate extraction, whose impact needs to be assessed alongside the effects of fishing.

Apart from the ongoing Working Group on *Nephrops* stocks (and formerly also *Pandalus*), however, ICES provides no advice on the management of shellfish stocks to ACFM. This may be because many shellfish species are predominantly coastal and are managed only on a national or local basis, but as a result ICES has not created the opportunity to review methodological and analytical standards, or to debate management methods and objectives, both within the shellfish community and also between shellfish and finfish scientists, although there was some dialogue between finfish and shellfish scientists in the stock enhancement context (Anon, 1994). Shellfish species exhibit a variety of short and long life histories, show interesting spatial patterns and metapopulation structures, and their distribution and recruitment patterns may be strongly affected by habitat, temperature, oceanographic, and predator/prey influences. Cephalopods, crabs, shrimps, and scallops, also provide some examples of species which are of world wide interest to biologists outside both the traditional ICES areas and the narrow interest of fisheries.

Against this background the chairmen of the Consultative Committee and ACFM feel that it is timely and beneficial to develop the ICES shellfish assessment and management portfolio, expose it to peer review and the rigour of the ACFM approach to giving advice, but also to insinuate into finfish circles some awareness and respect for the behavioural and life history features characteristic of shellfish studies, and the nature of their management problems. The intention was that this Study Group would be a starting point for the various reviews and discussions implied by this objective.

3 INFORMATION RECEIVED

The correspondence round sought information on a fact sheet comprising questions about the number of species and stocks, type of data collected and parameters measured, types of assessment, the nature of the management regime, and the types of problems outstanding. Returns have been archived for future use by the Study Group, for the species listed by country below, but unfortunately it has not been possible to publish the returns in detail in this report.

3.1 Canada

Homarus americanus, *Chionoecetes opilio*, *Pandalus borealis*, *Placopecten magellanicus*, *Chlamys islandica*, *Spisula polyayma*, and green sea urchin

3.2 Iceland

Nephrops norvegicus, *Pandalus borealis*

3.3 Norway

Pandalus borealis, *Paralithodes* sp., *Chlamys islandica*

3.4 Sweden

Nephrops norvegicus, *Homarus gammarus*, *Pandalus borealis*

3.5 Denmark

Nephrops norvegicus, *Pandalus borealis*, *Mytilus edulis*, *Cerastoderma edule*, *Spisula solida*

3.6 Germany

Homarus gammarus, *Cancer pagurus*, *Crangon crangon*, *Mytilus edulis*, *Spisula solida*

3.7 United Kingdom

Nephrops norvegicus, *Cancer pagurus*, *Maia squinado*, *Palinurus elephas*, *Necora puber*, *Pandalus borealis*, *Crangon crangon*, *Pandalus montagui*, *Pecten maximus*, *Chlamys opercularis*, *Cerastoderma edule*, *Mytilus edulis*, *Littorina* spp., *Ostrea edulis*, *Buccinum undatum*, *Loligo forbesi*, *Illex* sp., *Sepia officinalis*

3.8 France

Nephrops norvegicus, *Cancer pagurus*, *Maia squinado*, *Palinurus elephas*, *Necora puber*

3.9 Spain

Parapenaeus longirostris, *Octopus vulgaris*

The above list is substantial, and gives an overview of the main species of interest to ICES countries, but it is by no means complete. Additional useful information is contained in the Shellfish Committee Report of Activities for 1991 (ICES CM 1992/K:1).

4 RECOMMENDATION

Noting that the incomplete nature of this report arises because of an unexpected conflict of work demands in 1995, the Shellfish Committee and ACFM are invited to recommend that the postponed meeting of this Study Group should take place in 1996, under the same terms of reference, to pursue the original aims. Delegates are invited to note the justification for the Study Group on page 1, and to provide the national resources required for relevant experts to attend the 1996 meeting.