

## Working Group on the Biology and Life History of Crabs (WGCRAb)

2016/MA2/SSGEPD08 The Working Group on the Biology and Life History of Crabs (WGCRAb), chaired by Martial Laurans, France, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2017	7–9 November	Brest, France	Interim report by 15 December 2017	
Year 2018	6–8 November	Jersey	Interim report by 10 December	
Year 2019	4–8 November	Tromsø, Norway	Final report by 10 December to SCICOM	

### ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
a	Compile data on landings, discards, effort and catch rates (CPUE) and provide standardised CPUE, size frequency and research survey data for the important crab and lobster (Homarus) fisheries in the ICES area, and Atlantic Canada and Greenland. Maps will be produced to synthesise the data. One part of these data will be provide to the ICES Data Centre.	The fisheries for crabs and lobster are socio-economically important and trans-national in Europe and Canada with the demise of fin fisheries in some regions.		3 years	Landing, discard, effort and catch data on listed species, from each country. WG report chapter
b	Evaluate assessment of the status of crab and lobster (Homarus) stocks including use of indicators, empirical assessment, analytical assessment in relation to data sources and data quality, development and suitability of reference points for management.	Management of stocks in Europe is primarily by technical measures only and in most countries there are generally no management instruments to control fishing effort. Knowledge of the population dynamics of these species is still weak. These stocks may be at risk from over-fishing due to the lack of control of fishing effort, and hence an evaluation of the sustainability of these fisheries is necessary.		3 years	Report on evaluation of alternative assessment methods.
c	Review the impact of climate divers (temperature, ocean acidification, changes associated climate change and disease) on important crab and lobster species within the ICES, Atlantic Canada and West Greenland. Studying the effects resulting from changes in decreasing pH which can be considered under ocean acidification. Specific parts will be	WGCRAb will investigate the relative importance of fishing and environment on crab and lobster recruitment.  Furthermore there is a growing concern in the WG about the consequences of future climate change for important crab species in our region. Observed increases in sea		3 years	Highlight important issues to be basis for research on effect of climate changes on important crab stocks. Each year a specific point will be delivered on the main knowledges and results for the production of

	achieve to work on the different subjects.	water temperatures have already entailed expanded distribution areas of some species in the northeast Atlantic. However, a rise in the seawater pH would probably be the most serious consequences of the climate change on crustaceans such as crabs. These issues will be dealt with by the WGCRAb in future.	WG report chapter (2019). In reflection, a paper on the review of the main results could be expected.
d	Review research and new knowledge on vital crab and lobster population biology parameters;	Several stock parameters are important for analytical assessments. Biological information is therefore required to provide standardised indices and for use in analytical assessments. Crab stock parameters may change due to size selective and single sex fisheries, through by-catch in other fisheries or through the impact of other seabed uses, such as gravel extraction. Since important crab stocks in Europe are managed without fishery independent data it may be an option to investigate any useful stock parameter indicators for assessment purposes.	Updated knowledge on crucial stock parameters for important crab stocks.

### Summary of the Work Plan

Year 1	Annual standard outputs for a, b. Continue analysis for ToR d, e. Tentative plan for ToR c.
Year 2	Annual standard outputs for a, b. Continue analysis for ToR d, e. Complete evaluation of useful assessment methods to assess crab and lobster species in ICES areas. Complete request to ACOM and SCICOM (being both an assessment, advice and working group).
Year 3	Annual standard outputs for a, b. Combine analysis, research and report ToR d and e.

### Supporting information

Priority	High. The fisheries for crabs and lobster are socio-economically important and trans-national in Europe and Canada with the demise of fin fisheries in some regions. Management of stocks in Europe is primarily by technical measures only and in most countries there are generally no management instruments to control fishing effort. Knowledge of the population dynamics of these species is still weak. These stocks may be at risk from over-fishing due to the lack of control on fishing effort, and hence an evaluation of the sustainability of these fisheries is necessary. The activity of the Group is therefore considered to be of high priority in particular if it's activity can move towards resource assessment without losing biological inputs.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible..
Participants	The Group is normally attended by some 10–15 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages today, but if the EG will produce stock assessments in future WGCRAb will have linkages to several EGs under ACOM.

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Linkages to other committees or groups    The EG aims to be able to give advises on how to exploit important crab stocks in the ICES area and is therefore related to EGs such as WGCran and the ICES/NAFO NIPAG.

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Linkages to other organizations

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