

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

2013/MA2/SSGEF04 The Working Group on the Biology and Life History of Crabs (WGCRAb), chaired by AnnDorte Burmeister, Greenland, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2014	22–24 April	Tromsø, Norway	Interim report by 1 August to SSGEPD	
Year 2015	2–5 November	Brest, France	Interim report by 1 December to SSGEPD	
Year 2016	31 October - 4 November	Aberdeen, UK	Final report by 15 December to SCICOM	

## ToR descriptors

TO R	DESCRIPTION	BACKGROUND	SCIENCE PLAN TOPICS ADDRESSED	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 ( <i>Homarus</i> ) fisheries in the ICES area, and Atlantic Canada and Greenland.	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.	212,321	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 ( <i>Homarus</i> ) 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.	311, 334	3 years	Report on evaluation of alternative assessment methods.
c	WGCRAb wish to produce assessment of the main crab and lobster species in the ICES area in future.	WGCRAb aims to produce assessments on a management unit basis.		3 years	(Year 1) Report on data availability, management units, reference points and

	<p>(Year 1 - 2014) Review prospects for future assessment including data availability, management units, and possible reference points and assessment methods. Initiate preliminary assessment exercises.</p> <p>(Year 2 - 2015) Review management measures applied in crab fisheries and future options. Continue exploratory assessments.</p> <p>(Year 3 - 2016) Preliminary assessments of stock status for relevant crab and lobster species according to MSFD D3</p> <p>WGCRAB will discuss with ACOM, SCICOM, SSGEPD the feasibility of including e assessment within its future ToRs.</p>	<p>Evaluate current assessment methods and identify reference points. Develop assessment methods to identify position with respect to MSY proxies and harvest rules.</p> <p>It would be of great interest to make progress on assessment of stock status and further develop ideas on reference points.</p> <p>WGCRAB will discuss advantages and disadvantages of emphasis advice on a management basis.</p> <p>Secondly WGCRAB will include a workshop at the 2015 or 2016 meeting to look at prospects for future assessment and management.</p> <p>Third step is to consult with ACOM regarding assessment from the WGCRAB.</p>			<p>assessment methods</p> <p>(Year 2) Report on management options for crab fisheries</p> <p>(Year 3) Preliminary report on stock status and management plans for selected species</p>
d	<p>Review the impact of climate divers on important crab and lobster species within the ICES, Atlantic Canada and West Greenland, including increased ocean acidification;</p>	<p>WGCRAB will investigate the relative importance of fishing and environment on crab and lobster recruitment.</p> <p>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 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.</p>	112, 113	3 years	<p>Highlight important issues to be basis for research on effect of climate changes on important crab stocks. WG report chapter (2016)</p>
e	<p>Review research and new knowledge on vital crab and lobster population biology</p>	<p>Several stock parameters are important for analytical assessments. Biological</p>	141		<p>Updated knowledge on crucial stock parameters for</p>

parameters;	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.	important crab stocks.
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## 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 group: 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.
Linkages to other committees c 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 WGCRAb and the ICES/NAFO NIPAG.
Linkages to other organization	