

## Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM)

2014/MA2/SSGEPI08 The Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM), chaired by Gary R Carvalho, United Kingdom, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2015	6–8 May	Ispira, Italy	Interim report by 31 May to SSGEPI, SCICOM	
Year 2016	11–13 May	Belfast, UK	Interim report by 30 June to SSGEPI	
Year 2017	2–5 May	Algarve, Portugal	Final report by 30 June to SCICOM	

### ToR descriptors

ToR	Description	Background	Science Plan topics addressed	Duration	Expected Deliverables
A	Review and assess the utility of molecular techniques to evaluate disease and parasite spread from transferred seafood into wild populations	There is a science and advise need for knowledge of potential risks of disease and parasite spread from imported seafood, and this ToR reviews the scope for genetic marked based monitoring.		year 1-3	Review paper, May 2015
B	Review and map decision channels for integrating WGAGFM advice into fisheries assessment and management.	It is a scientific aim to integrate genetic monitoring and assessment methods into advise and management. This ToR will identify implementation processes and advise on how potential obstacles can be removed.		3 years	Report, May 2017
C	Review application of quantitative genetic techniques into non-mariculture marine species	There is a science and advise need for providing an integrated understanding of the functional variation within and among marine fish and shellfish populations. This ToR will review the application of quantitative genetic techniques to this end.		3 years	Review paper, May 2017
D	Close-kin mark recapture approaches to estimate abundance and population parameters of deep-sea marine fish species in support of enhance management under the Common Fisheries Policy	According to the European Commission, particular attention is needed to secure the sustainable exploitation of deep-sea stocks in view of their vulnerable nature. For many stocks, knowledge and data remain insufficient for scientific analysis (COM(2007) 30 final), which is also reflected in recent TAC and Quota setting. Moreover, according to the European Commission, the poor state of key deep-sea stocks and the lack of scientific data clearly demonstrates the need for an improved management		2 years	Review, May 2018

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framework for deep-sea fisheries, as proposed by the Commission in 2012 (see IP/12/813). Based on recent research by CSIRO Australia[1], using close-kin analysis, a method that has particular potential for generating abundance for the management of Southern Bluefin Tuna, utility for transfer to deep-sea species will be assessed. In particular a range of genetic techniques and their utility for close-kin mark-recapture applications will be evaluated with respect to feasibility and utility in the context of yielding scientific advice implemented under the remit of the CFP.

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### Summary of the Work Plan

Year 1	Work on ToR a. Work plans for ToRs b and c will be agreed by members and tasks undertaken by specific members will be identified. The need for inclusion of additional expertise from outside the WG will be identified to fulfil the ToR objectives.
Year 2	Work on ToRs a, b and c will continue, focussing on tasks identified in Year 1. Additional ToR d.
Year 3	Work on ToR b, c and d will be finalised and reported to SCICOM.

### Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach. Consequently, these activities are considered to have a very high priority.
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 20–25 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and group under ACOM	ACOM
Linkages to other committees or groups	SIMWG, WGEVO, WGBIODIV, WGAQUA
Linkages to other organization	Linkage with the EC Joint Research Centre at Ispra, Italy.

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[1] Bravington MV, Grewe PG, Davies CR (2014). Fishery-independent estimate of spawning biomass of Southern Bluefin Tuna through identification of close-kin using genetic markers. FRDC Report 2007/034. CSIRO, Australia