



**GENERAL FISHERIES COMMISSION FOR  
THE MEDITERRANEAN**  
**COMMISSION GÉNÉRALE DES PÊCHES  
POUR LA MÉDITERRANÉE**



**Contribution by the General Fisheries Commission for the Mediterranean  
and the Black Sea to Part I (topic of the Informal Consultative Process) of  
the report by the UNSG on developments and issues relating to oceans  
affairs and the law of the sea**

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The 14<sup>th</sup> meeting of the UN Informal Consultative Process - to be held in NY at the United Nations HQs from 17 to 20 June 2013 - will address the topic "Impacts of ocean acidification on the marine environment". Consistent with the letter by the ASG in charge of the OLA, Mister Stephen Mathias, of 12 December 2012 (ref: LOS/SG report/2013), the General Fisheries Commission for the Mediterranean and the Black Sea ("GFCM") has the pleasure to provide below relevant information on Part I of the upcoming report by the UNSG (topic of the Informal Consultative Process) on developments and issues relating to oceans affairs and the law of the sea.

(i) *Information regarding the activities currently undertaken related to the impacts of ocean acidification on the marine environment:* the GFCM area of competence, namely the Mediterranean Sea, the Black Sea and their connecting waters, is considered as one of the existing worldwide hotspots of biodiversity, hosting roughly 10% of the world's species living in approximately 1% of the world's ocean area. In terms of chemistry, this area can be regarded as a small oligo or ultraoligotrophic ocean being submitted to a high environmental variability and steep physico-chemical gradients within a relatively restricted space.

Although the evidence to date is sparse, it is presumed that ocean acidification may alter the ecology of the Mediterranean and the Black Sea marine environments. Existing findings have inter alia pointed to enhanced photosynthesis in the Mediterranean seagrasses *Posidonia oceanica* and *Cymodocea nodosa* as a result of increased levels of acidification as well as to decreased calcification of Mediterranean encrusting coralline alga *Lithophyllum cabiochae* when elevated pCO<sub>2</sub> 30 conditions were combined with high temperatures. As far as the impacts of ocean acidification on fisheries are concerned, according to the current knowledge increasing temperature is the main impact factor on marine biota in Mediterranean and Black Sea. However, ocean acidification might be a synergetic, cumulative stressor that affects among others mollusc species, especially their early life stages. In addition, some fish species may be also impacted through ocean acidification induced changes in their marine environment, including the loss of critical habitats and changes in the trophic web. More generally speaking, ocean acidification could be expected to impact the ecosystem services and it is known that poor people are more dependent of these services than the rich one. In the Mediterranean and the Black Sea, being the level of development very different across the region, the prospective socio-economic impacts of ocean acidification will be different.

(ii) *Matters which may require further consideration on this issue, with an emphasis on areas where coordination and cooperation at the intergovernmental and inter-agency levels could be enhanced:* the GFCM at its 36<sup>th</sup> Session held at Marrakesh in May 2012 has adopted seven memoranda of understanding with various organizations, including UNEP-MAP and the Black Sea Commission. In order to promote sustainable development in a manner that is expected to ensure adequate respect for the Mediterranean and Black Sea marine environments, close cooperation between the GFCM and these two organizations in particular is expected to occur as of 2013. Thus far, common activities to be jointly developed with both UNEP MAP and the Black Sea Commission have been identified and some joint initiatives are about to be launched.

An area of work will be in particular that relating to the “good environmental status” of the Mediterranean Sea. In this connection the GFCM has recently signed a joint project agreement with the Italian Ministry of the Environment which will enable to enhance coordination at the intergovernmental and inter-agency levels in the region in addressing existing stressors to marine ecosystems and their living resources. Furthermore, always with a view to enhancing better coordination at the intergovernmental and inter-agency levels in the region, the GFCM has actively participated in the “Second International Workshop Bridging the Gap between Ocean Acidification Impacts and Economic Valuation - Ocean Acidification Impacts on Fisheries and Aquaculture” which was held in the Principality of Monaco on 11-13 November 2012. Work is currently ongoing to finalize and disseminate the outcomes of this workshop.



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