

## Report of the Intersessional Working Group on Cetaceans and Ecosystem Functioning 2020 Virtual Meeting of the Conservation Committee

### Background

The IWC was the first international organization to recognize the importance of cetaceans in the functioning of the ecosystems. In 2016, the Commission adopted the Resolution 2016-3 on Cetaceans and their Contributions to Ecosystem Functioning. The resolution *inter alia* recognizes the need to include consideration of the contributions made by live cetaceans and carcasses present in the ocean to marine ecosystem functioning and resolves to review the ecological, management, environmental, social and economic aspects (IWC, 2016). At the last biennial meeting conducted in Florianopolis, Brazil in 2018, the Commission adopted Resolution 2018-2 on Advancing the Commission's Work on the Role of Cetaceans in the Ecosystem Functioning that further strengthened the IWC work on this topic (IWC, 2018a). During 2017, this topic also reached the interest of the Convention on Migratory Species (CMS), that adopted a resolution on this topic (CMS, 2017) and expressed its interest to cooperate with the IWC Scientific Committee in a joint workshop.

Since 2017, the IWC Scientific Committee established an intersessional working group (IWC, 2018b) and have been planning a Scientific Committee workshop to **review scientific aspects on the role of cetaceans to the ecosystem functioning**. This includes a review of current knowledge regarding **nutrient circulation, ocean fertilization, whale falls, trophic cascades and modelling approached** (IWC 2018c, 2019).

The IWC Conservation Committee established a working group (WG) on Cetaceans and Ecosystem Functioning (IWC, 2018d) and in 2018 the IWC Commission endorsed the proposal to hold a Conservation Committee workshop **to assess the socio-economic values of the contribution of cetaceans to ecosystem functioning** outlined in IWC/67/CC/16 in principle, subject to consideration of budget implications (IWC 2018e, 2018f).

Currently, the WG consists of IWC representatives from the governments of Belgium, Chile, Germany, Kenya, Slovenia, United Kingdom, and United States, as well as the observer organizations Animal Welfare Institute, Centro de Conservacion Cetacea, Fundacion Conservare, Fundacion Promar, Grupo de Estudos de Mamiferos Marinhos da Regiao dos Lagos, Instituto de Conservacion de Ballenas, and Whale and Dolphin Conservation. Membership remains open and any other interested party or observer organization is encouraged to join.

### Recent advances on this topic, within and outside IWC

The IWC SC planned to hold a workshop as a pre-meeting of the 68b annual meeting in Cambridge during May 2020. The preparation of the Workshop proceeded smoothly, but for reasons related to COVID-19, it had to be postponed when it is planned to be held as an in-person meeting, back to back to the next IWC SC 2021 meeting (IWC, 2020). The workshop is focused on research and modeling and it will be conducted in conjunction with CMS.

Scientific aspects have provided scientific evidence for over a decade that the declining of Antarctic krill stocks was related to the decimation of whales and that the effect of whale pump enhanced primary productivity (Smetacek, 2008; Roman and McCarthy, 2010).

In 2019, the economic value of the whales as ocean gardeners and carbon sequestration were firstly explored at the International Monetary Fund and released a publication that was widely

covered in the media, gathering important attention worldwide. The authors considered that each great whale sequesters 33 tons of CO<sub>2</sub> on average equivalent to over 30,000 trees. Using conservative estimates, they value the average of great whale, based on its various activities, at more than \$2 million, and easily over \$1 trillion for the current stock of great whales. Therefore they argue that protecting whales could add significantly to carbon capture because the current population of the largest great whales is only a small fraction of what it once was and promoted that a strategy to protect whales can limit greenhouse gases and global warming (Chami *et al.*, 2019).

The topic also gained momentum during the COP25, held in Spain during December 2019, at a Side event on Traffic maritime, oceans and biodiversity under the Intergovernmental Panel on Climate Change (IPCC)- WMO Science Pavillion, that included *inter alia* the role of cetaceans as carbon sequesters. Discussions were followed during the Outreach Event on the IPCC Role, Activities and Findings held during March 2020 in Chile. Finally, the UNEP Finance Initiative is also considering the role of cetaceans under its Sustainable Blue Economy Finance Initiative.

At the IWC67 biennial meeting, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); International Society for Ecological Economists; United States Society for Ecological Economists; the Association of Environmental and Resource Economists; the European Association of Environmental and Resource Economists; and The Economics of Ecosystems and Biodiversity (TEEB) were also identified as key institutions for work related to the economics and social aspects of the contribution of cetaceans to the ecosystem functioning (IWC, 2018f). However, it seems these organizations and initiatives have not yet incorporated the contribution of cetaceans to ecosystem functioning into their work.

#### **Planning of workshop on socio-economic aspects**

At the 67<sup>th</sup> IWC biennial meeting, the Commission endorsed the proposal to conduct a specialized workshop on the socio-economic values of the contribution of cetaceans to ecosystem functioning.

The workshop aims to assess the scope of economic and social benefits from the contribution of cetaceans to ecosystem functioning, consider possible variables to be measured and ensure is taken into consideration at decision-making processes.

This workshop was expecting to receive inputs from the Scientific Committee workshop, however, this one has been postponed due to Covid-19 until an in-person meeting is possible.

Furthermore, the workshop proposal on socio-economic values had financial implications of GBP25,000 but due to IWC budgetary limitations, it was not possible to confirm the availability of funds from IWC Voluntary Conservation Fund at IWC67 meeting. Possibilities to conduct a CC workshop remotely or as in-person meeting as well as the timing have been discussed.

In this sense, there are some key points that may need further consideration due to Covid-19 and in light of the advances in this topic from other international organizations.

1. It is proposed to advance in the planning of a CC workshop in parallel with the coordination of SC workshop.
2. It is proposed that the CC workshop is hold remotely (Annex 1). This will also help limiting budget impacts and future in-person meeting may also occur.

3. Advance in the planning of the CC workshop/virtual meetings. These includes a) identify experts on social and economic science to participate; b) set-up a preliminary agenda; c) explore/adjust meeting dates, budget and venue (as needed).

Annex 2 shows a preliminary list of potential experts to attend the CC workshop that have been identified at IWC67, updated with new experts that have already started to discuss this topic at international level.

### **Suggestions and Proposed workplan 2020-2021**

In light of new advances on knowledge regarding the role of cetacean in the ecosystem functioning and the increasing interest from different international organizations to include this topic into their decision making process, the following suggestions and workplan for 2020-2021 are put forward for consideration.

- (1) Include the attendance of social scientists and economists, as observers, to the SC workshop since it may be of great value for the CC to better understand the scope of the contributions made by cetaceans and facilitate its inclusion into social and economics concepts. There may still be some extra funding available from SC workshop that could cover the attendance of one or two key experts in these fields.
- (2) Advance in the coordination of the proposed CC virtual workshop for 2020-2021 (invite experts, meeting date, venue, agenda, etc.).
- (3) Request the IWC Secretariat to contact the IMF and UN Framework Convention for Climate Change, as well as the UNEP Finance Initiative to inform them about the work the IWC is conducting and invite these organizations to coordinate actions on this topic, including through the workshop on socio-economic values.
- (4) Contact other key organizations and initiatives previously identified by IWC67 (IPBES, ecological economics associations, etc.), in order to communicate the advances on this topic and evaluate their interest in collaborating.

### **References**

Chami, R., Cosimano, T., Fullenkamp, C. and Oztosun. S. 2019. Nature's Solution to Climate Change. A strategy to protect whales can limit greenhouse gases and global warming". Finance and Development (December 2009) 34-38. International Monetary Fund (IMF)

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Roman J. and McCarthy, J.J. 2010. The whale pump: marine mammals enhance primary productivity in a coastal basin. PLoS ONE. 5(10): e13255.

Smetacek, V. 2008. Are declining Antarctic Krill stocks a result of global warming or decimation of the whales? In: *Impacts of Global Warming on Polar Ecosystems*. Ed. Carlos M. Duarte. pp. 47-83

## **Annex 1. Template for Remotely Conservation Committee Workshop on Socio-Economic Values of the Contribution of Cetaceans to the Ecosystem Functioning**

### **Project Title**

Remotely Workshop on the socio-economic values of the contribution of cetaceans to the ecosystem functioning.

### **Lead Working Group**

*Please note which Working Group has recommended the project be taken forward.*

*Additionally, if other Working Groups or Subcommittees have interests in the work of this project, please list them here.*

- ✓ IWC Conservation Committee and its working group on the cetaceans and ecosystem functioning.
- ✓ IWC Scientific Committee and its working group on ecosystem modeling, as well as the workshop on cetacean and ecosystem functioning.

### **Project Description**

*A very brief overview of the project proposal and its expected outcomes.*

The workshop will be aimed to assess the scope of economic and social benefits from the contribution of cetaceans to ecosystem functioning, identify each potential impact from a social and economic field and consider possible variables to be measured.

Conservation Committee should plan a two to three virtual sessions meetings to address the economic and social values of the contribution of cetaceans to ecosystem functioning. Experts on social science and ecological economics, a workshop chair, a rapporteur, a representative of the IWC Conservation Committee, a representative from the IWC Scientific Committee should also been involved, as well as interested governmental and observers' members.

The workshop should start with a brief presentation of scientific aspects on cetacean and ecosystem functioning, including a list of identified topics on how cetaceans affect ecosystem functions. A workshop should identify for each topic, any potential impact and it extend that could be addressed from the social and economic perspectives. Experts from social science and economists will also be requested on the current knowledge of valuation techniques and considerations to include ecosystem functions and impacts.

The workshop outcomes should identify several possible areas of social and economical research work, propose strategies to advance in the knowledge and review of this emerging issue, propose set of methodological tools to assess them and provide a list of basic studies that could be explored on the short-term to start getting information on this issue from a social and economical perspective.

A workshop steering committee shall be established to prepare the workshop agenda, and to identify and invite relevant experts to participate. The steering committee shall also identify related organizations/groups to make sure that appropriate experts will be invited.

### Project Justification

*Demonstrate connections to relevant recommendations and Resolutions endorsed by the Commission including, where relevant, the Conservation Committee's Strategic Plan.*

In 2016, the Commission adopted the resolution on Cetacean and their Contribution to Ecosystem Functioning (Resolution 2016-3). It directed the Conservation Committee to undertake the review of ecological, management, environmental, social and economic aspects related to the contributions of cetaceans to ecosystem functioning to people and natural systems, as a matter of importance. In 2018, the Commission endorsed a workshop on socio-economic aspects related to the contribution of cetaceans to the ecosystem functioning. However, due to the pandemic to pandemic and the limited budget, it is proposed to conduct the Conservation Committee workshop remotely.

Note that the Scientific Committee will held a workshop with focus on scientific components and this proposal is oriented to the social and economic components of the review on cetaceans and ecosystem functioning.

### Relevant IWC Voluntary Funds

*Please list all relevant IWC Voluntary Funds and which criteria this project meets.*

Voluntary Conservation Fund - Projects addressing emerging issues and new threats to whale populations

### Overview of activities

Activity	Expected Results	Timeline	Budget Implications	
			Type (Salary, Travel, Meeting Services, Equipment, Other)*	Estimated Cost (GB pounds)
TBC				

\*Salary costs should include salaries for additional staff to be recruited but exclude staff time of existing Secretariat staff (core time), which is outlined below. Travel costs should include a breakdown of flights, accommodation and subsistence. Please contact the Secretariat for guidance on subsistence rates.

### Core Secretariat support required

Type	Detailed description	Number of days
IT/database	Create an online repository (dropbox or other) with existing literature and relevant documents for the workshop	0.25
Communications	Web article about the workshop	0.25
Meeting Services	Set up online video conference meeting.	4
Project management		
Other		
<b>Total</b>		

Potential partners or funders

*Please include a list of all potential partners and funders and their role in this project.*

Project requirements/Permits/Insurances

*Please list any constraints or other considerations e.g. field work permits, CITES permits, welfare concerns, security considerations etc*

*Please confirm that all relevant insurances are secured.*

All relevant insurances are secured.

Possible Risks

*This should include all possible risks or uncertain factors that might have a negative impact on the project and their possible consequences. Add mitigation options, if possible.*

✓ Not applicable

## **Annex 2. Preliminary list of potential experts to attend the CC virtual workshop**

**Ralph Chami**, Assistant Director at the International Monetary Fund. Author of “Nature’s Solution to Climate Change. A strategy to protect whales can limit greenhouse gases and global warming” published at IMF, 2019.

**Joan Martinez Allier**, University of Barcelona. He is a practitioner of ecological economics, defining many of its key concepts’ approaches. Author of 2008 TEEB report.

**Beatriz Rodríguez Labajos**, University of Barcelona. Economist especializada in Environmental Sciences. Socioeconomic dimensión of biodiversity, environmental justice and ecosystem services valuation. Author of 2008 TEEB report.

**Stephen Lutz**, GRID-Arendal. Work to advance the concept of blue carbon through national demonstrations and in international treaties. This includes the development and management of the Abu Dhabi Blue Carbon Demonstration Project and the Global Environment Facility’s Blue Forests Project.

**Stephen Polasky**, University of Minnesota. Professor of Ecological/Environmental economics, focuses include the impacts of land use and land management, the provision and value of ecosystem services and natural capital, biodiversity conservation, sustainability, and common property resources, *inter alia*.

**John Loomis**, Colorado State University. Professor in the Dept. of Agricultural and Resource Economics. Author of three books and more than 200 journal articles dealing with economic valuation of non-marketed natural resources in countries ranging from Australia to Vietnam.

**Robert Costanza**, Australian National University. Founder of Ecological Economics journal. His areas of expertise include: ecological economics, ecosystem services, landscape ecology, integrated ecological and socioeconomic modelling

**Rashid Sumaila**, University of British Columbia. Director of the Fisheries Economics Research Unit at UBC Fisheries Centre. He specializes in bioeconomics, marine ecosystem valuation and the analysis of global issues such as fisheries subsidies, IUU (illegal, unreported and unregulated) fishing and the economics of high and deep seas fisheries.