

SC/68B/RP/24

Climate Change Workshop - Charting a path for the IWC Scientific Committee - a review of available information on effects on cetaceans and recommendations for a way forward

IWC



INTERNATIONAL
WHALING COMMISSION

PROJECT PROPOSAL REQUEST

1 . PROPOSAL TITLE

Please provide the title of the project or the name of the workshop/meeting.

Climate Change Workshop – Charting a path for the IWC Scientific Committee - a review of available information on effects on cetaceans and recommendations for a way forward.

2 . BRIEF OVERVIEW OF THE PROPOSAL AND ITS EXPECTED OUTCOME

The workshop would include representatives from relevant IGOs and selectively review and consolidate the conclusions and recommendations from previous IWC climate change initiatives and workshops in light of recent new information and developments related to:

- (1) climate science and related modelling predictions;
- (2) direct and indirect effects on cetaceans;
- (3) cetacean ecology including select case-studies in the context of habitat changes (climate driven or otherwise); and
- (4) ecological and population modelling incorporating habitat related changes based upon (a) and (b) above and how to work with qualitative as well as quantitative information.

The focus would include advice on (a) how to better integrate this issue into the Scientific Committee's workplan; (b) identification of research programme/areas to fill priority knowledge gaps; and (c) identify areas/issue for which mitigation and management issue are likely to be a priority for the IWC and other international and national authorities (e.g. IMO, RFMOs, CMS). From the outset there will be engagement with the climate modelling community to help evaluate model outputs and meet the workshop's objectives.

Outcomes would include –

- A fully referenced report from the workshop, which would include an overview of the latest findings in this field and a review of the progress of the IWC's earlier recommendations;
- A series of recommendations for the Scientific Committee and the Commission to consider; and potentially
- One or more related peer-reviewed publication(s) in a journal.

Additional benefits would include the opportunity for experts in this field to meet and share their understandings and research which may lead to better understanding and new conservation and research initiatives.

3 . RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

The Scientific Committee has previously accepted that climate change has bearing on its work across its entire agenda given the far-reaching implications to cetaceans of observed and predicted changes in the marine environment and associated changes in human behavior.

The subcommittee on Environmental Concerns has historically been the most concerned with this issue. However, it is clearly of relevance to many if not all sub-groups and an appropriate mechanism to receive the report (e.g. in a special Plenary session) should be considered. Involvement of conveners from several sub-groups in the steering committee will help to ensure an appropriate focus.

4 . TYPE OF PROJECT (PLEASE TICK)

Research project	
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Modelling	
Workshop/meeting	X
Database creation/maintenance	
Compilation work/editing (<i>e.g. on whalewatching regulations, SOCER, etc.</i>)	
Other (<i>please specify below</i>)	

5. BRIEF DESCRIPTION OF THE PROPOSAL AND ITS CONNECTION WITH SCIENTIFIC COMMITTEE RECOMMENDATIONS (DO NOT EXCEED 1500 WORDS)

(A) BACKGROUND, RATIONALE, AND RELEVANCE TO THE PRIORITIES IDENTIFIED BY THE IWC SCIENTIFIC COMMITTEE:

The IWC's early and initial consideration of climate change was via its first climate change workshop in 1995. Among other things, this initial workshop noted that a 'considerable further amount of fundamental research' would be required to accurately predict the impacts of climate change on cetaceans. The IWC returned to this issue in 2007, when a second workshop was proposed following the publication of the fourth IPCC Assessment on Climate Change. Hence, when the second workshop was convened in 2009, it was to a backdrop of growing concern regarding the accelerating rate of global environmental change. From this workshop came recommendations focused on: (i) developing more accurate models to predict cetacean responses to climate change, such as habitat preference and climate envelope models of expected range shifts; (ii) quantifying the level of uncertainty implicit within these models, introduced by any assumptions regarding the relationship between observed cetacean distribution and environmental data, and the accuracy of the climate change model selected; and (iii) improving understanding of the relationship between cetacean distribution and quantifiable climatic indices (such as sea surface temperature) anticipated to change under IPCC predictions.

A third IWC climate change workshop was held in Vienna in 2010. This workshop focused on small cetaceans and from this came particular concerns for those species with habitats restricted through the presence of physical barriers, e.g. riverine species, or populations residing in "ecological cul-de-sacs" such as bays, coves, ocean basins (e.g. northern Indian Ocean) or seas (e.g. Mediterranean) and with limited ability to migrate along isotherms to mitigate localised climate warming. Again, this workshop recognised that an improved understanding of how cetaceans interact with their environment is required to accurately predict responses to climate change. The importance of long-term datasets was stressed. The workshop encouraged further research, building on this 'library' of datasets, and recommended that efforts be made to identify and analyse existing datasets of relevance. The third workshop also called for a global review of 'restricted habitats' and recommended that a list of priority species be drafted in the context of the IUCN Red List, assessing their relative vulnerability or resilience to climate change.

An informal survey of the members of the Scientific Committee's Standing Working Group on Environmental Concerns at its 2014 meeting showed that roughly half of its members were involved in some way in research related to climate change and the Scientific Committee established a Climate Change Steering Group which met in 2014. Its report (available here: <https://iwc.int/climate-change>) took note of the Commission resolution passed by consensus in 2009 and, in particular, that the Commission had specifically endorsed the outcomes of the second workshop and the associated recommendations of the Scientific Committee given in IWC/61/Rep1, including: (i) The need to expand the current international multi-disciplinary efforts and collaborative work with other relevant bodies; (ii) That the Commission had directed the Scientific Committee to continue its work on studies of climate change and the impacts of other environmental changes on cetaceans, as appropriate; and (iii) That it called on Contracting Governments, IGOs and NGOs to support the expansion of this important work.

The 2014 Steering Group meeting was held immediately after the Third International Marine Conservation Congress, which had been attended by most members of the Group and where various relevant papers had been presented. In addition, the Steering Group also took note of the recent workshop on climate change and cetaceans held under the auspices of ACCOBAMS (ACCOBAMS, 2014) and it also prepared a list of key recent publications. The Steering Committee made a series of recommendations that were endorsed by the Scientific Committee but may not have been fully acted on and the new steering committee for the proposed workshop in 2021 will review these in its planning. In summary, these included agreeing multi-year programmes around this topic; working in concert with other international multilateral bodies, including inter alia the Convention for Migratory Species; and a list of recommendations for future research noting particular regional focuses were also suggested, including riverine sites and the Black Sea, Adriatic Sea, Bay of Bengal and Gulf of California and potentially helpful data sources were also identified.

The Steering Group also recommended that in order to expedite research the focus provided by a special edition of a journal on the effects of climate change on cetaceans might be helpful and therefore recommended that efforts were made to find a suitable journal and editor.

Additionally, in 2014, the SC held a workshop looking at the impacts of increased marine activities on cetaceans in the Arctic.

The Scientific Committee has since received various papers that relate to this topic including reviews intended to provide it with an update (e.g. Nunny and Simmonds, 2019 as submitted to the Scientific Committee).

So, it is now six years since the SC last took a serious look at how climate change is being seen to affect (and may reasonably be predicted to affect) cetacean populations and, in fact, it is ten years since a more generally-focused workshop. Much has changed in the interim in terms of understanding and prediction power and many more papers – some with significant findings - have been published. It therefore makes good sense to consider holding a new workshop on this topic – look carefully at previous recommendations, including those from the 2014 steering group meeting, and proceed with a broad focus on all species and all areas, which can be further refined by the appointed steering committee.

The workshop would allow us to gain an updated understanding of what the issue looks like and would also aim to take stock of the IWC's previous recommendations, look at progress and make new recommendations, including around the issue of how the IWC might best engage with this issue.

(B) SPECIFIC OBJECTIVES OR TOR AND DELIVERABLES/OUTCOMES:

The Workshop will review the latest information about the effects and implications of climate change for cetaceans in the light of recommendations from previous IWC initiatives with a view to updating and consolidating them with a special focus on proposing a workplan that is relevant to (a) a better understanding and predicting effects of climate change on cetaceans and their habitats within the work of the Scientific Committee and (b) identifying regions/issues where mitigation and management actions are or are likely to be required by international or national bodies

The review will be as global as possible and encourage the presentation of focused material across as many species groups and habitat types as possible and will also have particular focus on identified case studies and information from experts in climate change, habitat change and effects on other species key to cetacean habitat. These will be further refined by the steering committee but will include –

- Direct and predicted effects and impacts of climate change on cetaceans, their populations and their habitats, including consideration of how impacts on individuals might be scaled up to the population-level;
- The implications to cetaceans from climate change-driven changes in human behaviour, for example in terms of boat-traffic and associated pollution and risk of collisions and changes in fishing activities and possible effects to cetacean prey ; and
- Relations with other international bodies, including *inter alia* IMO, FAO and RFMOs.

The workshop will generate a report that includes recommendations for the Commission concerning, *inter alia* its engagement with this topic going forward.

(C) METHODOLOGICAL APPROACH/WORK PLAN/ADMINISTRATIVE DETAILS

Specify the methods to be applied (novel methods require more explanation than standard ones) and the broad workplan – the detailed timetable appears under Item 5 below.

In the case of workshops and meetings, include the broad work plan including any pre-requisites for the workshop/meeting to take place (apart from funding, e.g. completed analyses, papers etc.) and administrative details (e.g. location, dates, number of participants).

Further to budget approval, a steering group and convener established by the SC will work intersessionally with the Secretariat to finalise the arrangements for the meeting, including its final agenda, mode of meeting (envisaged at this time as being an in-person meeting in the weeks or days ahead of the next meeting of the Scientific Committee).

The Steering Group will work with the Secretariat to –

1. Finalise an agenda for the workshop;
2. Establish a list of participants and issue invitations as appropriate; and
3. Ensure that appropriate materials – including requesting new papers and collation of published and unpublished information - are provided at least two weeks ahead of the workshop for all participants.

(D) SUGGESTIONS FOR OUTREACH

Please, note that successful proponents will be requested to produce ad hoc material that will be used by the IWC Secretariat for dissemination and outreach.

Once the workshop proposal has been agreed and endorsed by the SC it can be advertised to interested parties to solicit contributions, including possible funding.

The report should be shared by the usual mechanisms.

6. TIMETABLE FOR ACTIVITIES AND OUTPUTS

Specify the timetable for project activities and expected outputs separately. For projects with multiple distinct elements please indicate interim goals and timeframes. Add as many rows as you need to the tables below. If publications are an expected output please note whether you will submit the manuscript to the IWC's Journal of Cetacean Research and Management.

Activity to be undertaken	Key person(s)	Start(mm/yy)	Finish (mm/yy)
Establish a steering group and convener	SC	At SC68B	After SC68B
Develop agenda, identify venue, desired papers and list of participants	Convenor and steering group	After SC68B	By August 2020
Issue invitations	"	August 2020	November 2020
Review and revise arrangements, identify dates for the workshop and finalise plans	"	November 2020	December 2020
Hold workshop and submit report to the SC	"	December 2021	May 2021
Publish report in JCRM supplement	"	May 2021	May 2022

Expected outputs	Completion date (mm/yy)
Workshop Report	Ahead of next Scientific Committee

7. RESEARCHERS' (OR STEERING GROUP) NAME(S) AND AFFILIATION

Please, also specify if the project team has any direct connection (e.g. same research group or institute, collaborator on common project) with people involved or likely to be involved in taking the funding decision (e.g. IWC SC heads of delegations, SC convenors, etc.). Add as many rows as you need to the table below.

Name	Affiliation	Connection with decision
Mark Simmonds	University of Bristol, UK	Instigator and convenor of previous workshops
Toshihide Kitakado	Tokyo University of Marine Science and Technology	EM Convenor
Russel Leaper	Independent	HIM Convenor
Greg Donovan	Independent	IST convenor
Debi Palka	NOAA	IA convenor
Fernando Trujillo	Colombia	SM
Iain Staniland	IWC	Lead for Science
Sarah Smith	IWC	Previous workshop organizer
Laetitia Nunny	Independent	Previous workshop organizer and support researcher
Michael Stachowitsch	University of Vienna	Possible host and senior SC member, previous workshop host
Silvia Frey	KYMA sea conservation & research	Environmental scientist
Patricia Holm	Universität Basel	E convenor

8. TOTAL BUDGET

Breakdown into: (1) salaries/wages (include name/position of each individual and breakdown of time and duties i; (2) travel/subsistence expenses (breakdown by person and justification) unless for IPs for workshops where a total estimate based on an average for the total number of IPs is acceptable; (3) services (e.g. aircraft/vessel time, consultancy fees, ARGOS fees, etc.); (4) reusable capital equipment (e.g. reusable equipment such as a hydrophone, cameras, etc. Note that this equipment will have to be registered at the IWC Secretariat and will remain property of the IWC at the end of the project); (5) expendable capital equipment (e.g. consumables, tags, stationery); (6) shipping costs; (7) insurance costs; (8) in kind co-funding (specify whether other funding is available for personnel/name, equipment, venues, etc.). Note that "Overheads" are not admissible. Add as many rows as you need to the table below.

Type	Detailed description	Cost in GB pounds
(1) Salaries (by person)	N/A	
(2) Travel/subsistence (by person or est. total for IPs)	Meeting of c 25 individuals based on subsistence and travel on average of £1,500/individual.	£37,500
(3) Services (by item)	-	0
(4) Reusable equipment	-	0
(5) Consumables	Minor items	£500
(6) Shipping (by item)	-	0
(7) Insurance (by item)	Given current circumstances it may be wise to take our insurance – costs estimated	£1,000
(8) Co-funding	Pending	
(9) Other	Venue related costs – possible venue-related costs e.g. audio visual equipment	£1,000
Total		£40,000 [The steering committee will seek financial support from countries and other sources, but the SC budget should underpin this to at least 50%. A generous offer from Austria means that a suitable cost-free venue is available.]

9. DATA ARCHIVING/SHARING

Please state your plans for data archiving and sharing. Note that data collected primarily under IWC grants are considered publicly available after an agreed period of time for publication of papers, usually about two years. The work of the IWC depends on the voluntary contribution of data to the various databases and catalogues IWC supports. Please consult the Secretariat (secretariat@iwc.int).

10 . PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	N/A
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	N/A

If 'Yes' please provide further details and enclose copies where appropriate:

Appendix 2 – DRAFT SCORING SHEET

If a project presents multiple primary objectives which are achieved using sub-projects, a sheet should be used to evaluate each single sub-project. Note that not all criteria are equally applicable depending on the nature of the project (e.g. field work versus workshops).

IWC SCIENTIFIC COMMITTEE PROPOSALS FOR FUNDING - REVIEW CRITERIA - TEST			
TITLE OF THE PROJECT/sub-projects:			
PRINCIPAL INVESTIGATOR:			
Key criteria	Explanation of scoring	Score	Supporting Remarks
<i>Relevance to Scientific Committee priorities</i>			
1	How well aligned are the scientific outcomes of the project/activity with the current SC priority areas?	1 - Not aligned/poorly aligned (e.g. too vague or generic reference to general SC priorities) 2 - Reasonably aligned (e.g. some aspects may be vague or links are not clear) 3 - Well aligned (e.g. outcomes clearly deliver in the most part on priority areas, may also address longer term or potential future issues). 4 - Closely aligned (e.g. of interest for multiple sub-groups or delivers on specific SC high priority topics/recommendations in the immediate or short term).	
2	To what extent will the outcomes of the project/activity contribute to improvements in the conservation and management of cetaceans?	1 - Not at all 2 - Poorly 3 - Reasonably or over the longer term 4 - Well or over the medium term 5 - Excellently or to almost immediate effect	
<p><u>Note:</u> if in each of the two above key criteria under this section the project does not score singularly at least 2 points, do not proceed in further evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 4 or above.</p>			
<i>Approach and methodology</i>			
3	What degree of scientific merit/value is there in carrying out the work?	1 - Not demonstrated or of low scientific value 2 - Useful/basic scientific value 3 - Very good scientific value 4 - Excellent/innovative scientific value	
4	Is the proposed methodology scientifically sound and feasible in terms of field and analytical methods?	1 - Feasibility unrealistic & poor methodology or not properly addressed 2 - Feasibility & methodology acceptable but would benefit from some substantial amendments	

		3 - Feasibility & methodology good, some small changes beneficial 4 - Feasibility & methodology excellent or a highly promising innovative approach to an important question facing the Committee		
5	What is the likelihood of success based on the proposed overall approach and methodology?	1 - No chance of success 2 - Low chance of success/better approaches available 3 - Medium chance of success/some changes to the approach necessary 4 - High chance of success/little or no changes to the approach necessary		
5a	Are objectives of the research likely to be achieved within the proposed time-frame?	1 - No or unlikely 2 - Partially or potentially ambitious 3 - Yes with some minor suggestions 4 - Yes		
5b	Are any proposed intermediary targets timely and achievable?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes		
5c	Is the proposed time-frame/work necessary (e.g. can the project produce results in a shorter time period)?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes		
5d	Is the sample size adequate to achieve the stated objectives?	1 - Not demonstrated/not properly addressed 2 - No or unlikely (too low/too high) 3 - Probably (additional analysis needed) 4 - Yes		
6	Is the project likely to affect adversely the population(s) involved?	1 - Not properly addressed/ unknown 2 - Yes severely 3 - Possibly at a low level 4 - No		
6a	IF YES, are analyses provided on simulations of the effects using different time-frames for the project if applicable?	1 - No 2 - Partially 3 - Yes		
<p><u>Note:</u> if in each of the above key criteria under this section the project does not score singularly at least 2 points, do not proceed in further evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 3 or above.</p>				
Project team and Project management				

7	To what extent does the team have the relevant expertise, experience, and balance?	1 – Poor or not demonstrated 2 – Sufficient 3 - Very good 4 – Excellent		
8	Contingency plan: To what extent have potential problems/risks been considered and appropriate mitigation proposed?	1 – Poor or not demonstrated 2 – Sufficient but could be improved 3 - Fully or requiring only minor suggestions or not applicable		
<i>Value for Money</i>				
10	Does the project represent good value for money?	1 – No or significant amendments would be needed 2 – Yes but with some minor amendments 3 – Yes		
11	Have sufficient links been made to the wider research community/other organisations/capacity building.	1 – No 2 – Some but significant amendments needed 3 – Yes but with some minor additions 4 – Yes or not applicable		