



INTERNATIONAL
WHALING COMMISSION

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PROJECT PROPOSAL REQUEST

1 . PROPOSAL TITLE

Contaminant Mapping in Cetaceans: Review of spatial and temporal trends in POPs and heavy metals.

2 . BRIEF OVERVIEW OF THE PROPOSAL AND ITS EXPECTED OUTCOME

In response to support and recommendations from the Scientific Subcommittee on Environmental Concerns, the objective of this proposal is to provide funds for updating a global review of PCBs, DDT and mercury in cetaceans. This will result in the documentation and mapping of decadal trends to provide an update of the current status of mercury and key persistent organic pollutants in cetacean populations at a global scale. This proposal builds on previous work that produced a [Contaminant Mapping Tool](#) which displays published data on the concentrations of key persistent organic pollutants and mercury in cetacean tissues from the 1970s to the 2010s. The purpose of this tool is to allow researchers to quickly view, and explore visually, trends in the concentrations of commonly monitored contaminants in different species over time. This proposal will therefore update this mapping tool with the most recently published data from around the world.

3 . RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

This topic is highly relevant to the work of Environmental Concerns SWG, and will be carried out under the Pollution 2025 initiative. Compilation and review of these data will assist the Commission in addressing concerns regarding contaminants that persist at high concentrations in cetacean populations. It will allow us to engage with international expertise to discuss the ongoing issues of POPs and heavy metals in marine food chains, and the ecotoxicological concerns of contaminant exposure in various cetacean species and populations worldwide.

4 . TYPE OF PROJECT (PLEASE TICK)

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

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

<p>(A) BACKGROUND, RATIONALE, AND RELEVANCE TO THE PRIORITIES IDENTIFIED BY THE IWC SCIENTIFIC COMMITTEE:</p>
<p><i>This initiative was discussed at IWC SC68C in Environmental Concerns in 2021, and the Committee reiterated that the Contaminant Map is a tremendously useful tool, not only for research but also as an educational tool for the public at large. Specifically, the Committee “recommends that both the SPoC and the IWC Contaminant Mapping Tool continue to be maintained, and the Contaminant Mapping Tool updated”. Indeed, as new data are included, it will allow the assessment of trends in contaminant levels and allow investigation of impacts on potential separate sub-populations.</i></p> <p><i>It was recognised that a summary of the most up to date knowledge on the presence of POPS and heavy metals (with particular emphasis on mercury compounds) in cetaceans worldwide is needed. The importance of these data was also recognised with respect to better considering the cumulative effects and interactions among various threats and risk factors to cetacean populations. This work will also help to identify areas of ocean health and human health concern, as well as geographic areas where research should be prioritised in this regard, and is thus of importance from a One Health perspective as well. The activities outlined in the proposal will fulfil these recommendations of E, and will be synthesized for presentation at the next SC meeting in 2023.</i></p>
<p>(B) SPECIFIC OBJECTIVES OR TOR AND DELIVERABLES/OUTCOMES:</p>
<p><i>The objectives are to :</i></p> <ol style="list-style-type: none"><i>1. Update the review of the global trends in PCBs, DDT and mercury in cetaceans, providing a summary of the concentrations measured in tissues of various cetacean species by region and decade.</i><i>2. Assimilate the data from the review into the existing Contaminant Mapping Tool that provides a visualisation web interface for plotting the trends in the tissues by year, decade, species and location. This tool is open access and hosted by the University of St Andrews.</i><i>3. Provide a summary report to the SC of temporal and spatial trends in these contaminants of interest to identify data gaps and/or specific areas or species of concern.</i>
<p>(C) METHODOLOGICAL APPROACH/WORK PLAN/ADMINISTRATIVE DETAILS</p>
<p><i>The Pollution 2025 Intersessional Group will support the work to produce the following:</i></p> <ol style="list-style-type: none"><i>1. An updated review of the global trends based on the latest published data in the literature to be carried out by a research assistant intersessionally. This will involve literature searches and compilation of published concentration data measured in various tissues and species into a single database.</i><i>2. The concentrations over time and space will be assimilated into the Contaminant Mapping Tool and open access provided through the IWC website. This will involve liaising with technical support at the University of St Andrews where the map is currently hosted.</i> <p><i>We would also encourage submitted papers, reports and syntheses of data and studies on PCBs, DDT and mercury from scientists of member countries.</i></p>
<p>(D) SUGGESTIONS FOR OUTREACH</p>

There will be various opportunities for outreach for this work. These will include promoting the use of the updated Contaminant Mapping Tool through social media platforms, including Twitter, as well as communicating and liaising with other interested parties and charities such as Whale and Dolphin Conservation, the Marine Conservation Society and the Sea Watch Foundation who can use this as an educational tool.

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)
Global review of PCBs	Joanna Kershaw and a Research Assistant	January 2023	February 2023
Global review of DDT		February 2023	March 2023
Global review of mercury		March 2023	April 2023
Contaminant spatial & temporal analysis		April 2023	June 2023
Assimilation of mercury tissue concentrations into mapping tool		April 2023	June 2023

Expected outputs	Completion date (mm/yy)
Updated Contaminant Mapping Tool	June 2023
Summary Report	July 2023

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
Joanna Kershaw	University of St Andrews	Member of sub-committee E

8 TOTAL BUDGET

PROJECT BUDGET					Please indicate when funds will be needed		Co-funding funds only
	Description	Cost per unit £GBP	Number of units	Total Cost £GBP	2022 £GBP	2023 + £GBP	Co-funding £GBP
(1) Salaries (by person)	<i>Research assistant salary (casual staff at £14.20 / hour) to undertake the review of contaminants, compile data, assimilate into mapping tool</i>	£10,000	1	£10,000		£10,000	
(2) Travel/subsistence (by person or est. total for IPs)							
(3) Services (by item)							
(4) Reusable equipment							
(5) Consumables							
(6) Shipping & Customs (by Item)							
(7) Insurance (by item)							
(8) Other							
TOTAL				£10,000	0	£10,000	

Co-funding Memo:

Source	Purpose of Funding	Cost £GBP	Secured/Tentative?
TOTAL			

Total value of project:	Cost £GBP
Funds requested from IWC	£10,000
Co-funding	
TOTAL	£10,000

9 . DATA ARCHIVING/SHARING

All data used in this initiative will already be in the public domain.

The data will be shared through the web portal and will be downloadable by users of the portal.

10 . PERMITS (PLEASE TICK)

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

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