



INTERNATIONAL
WHALING COMMISSION

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PROJECT PROPOSAL REQUEST

1. . PROPOSAL TITLE

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

MEGARA 2022

2. . BRIEF OVERVIEW OF THE PROPOSAL AND ITS EXPECTED OUTCOME

Give a very brief overview (max 150 words) on your proposal and its expected outcomes. Use bullet point to list outcomes. Be succinct and clear as this may be used to summarise your project for the report.

*MEGAPTERA, French NGO dedicated to marine mammals conservation and research, intends to intensify the effort on humpback whales skin biopsies in the waters of Saint-Barthélemy, Saint Martin and Anguilla (Anguilla Bank) in the North Eastern Caribbean. Since 2014, MEGAPTERA has been involved in the MEGARA project, supported by the National Natural Reserve of Saint- Martin with the scientific collaboration of Prof Heide-Jørgensen team, Greenland Institute of Natural Resources (Denmark). The MEGARA project stands for **MEG**Aptera **R**eproduction **A**reas and uses mainly satellite telemetry. Its main objective is to better understand the movements of the humpbacks whales, equipped with satellites tags, within the vicinity islands and on their migratory routes. Besides the deployments of satellites tags skin biopsies are conducted on target individuals used for telemetry. In MEGARA 2022 we propose to biopsy more individuals even they are not equipped with satellites tags. Those sample aim for a better understanding of the genetic structure of the migrating population on Anguilla Bank.*

Expected outcome : 30 skin biopsies for 2022 migrating season

3. . RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

List all the IWC Scientific Committee groups or sub-groups that the outcomes of this work would be relevant to and provide a brief (1-2 lines) explanation of how it would contribute more widely to their ongoing programmes of work. Where possible, do not simply list only the sub- committee within which or for which the project proposal was generated.

NH Sub Committee. Working group on North Atlantic Humpback whales.

The main goal is to provide more genetic material to be able to better understand the belonging of the individuals of humpback whales migrating to Anguilla Bank to Cluster 1 or Cluster 2 as described in SC_68C_NH_WP_02 (Palsbøl 2017)

4. . TYPE OF PROJECT (PLEASE TICK)

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

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:

Provide a clear explanation of the background and rationale for the proposal and its relevance to Scientific Committee identified priorities. Clearly identify the most relevant and recent Scientific Committee recommendations.

MEGAPTERA has been involved in the Caribbean since 2014, in collaboration with the scientific collaboration of Prof Heide-Jørgensen team, Greenland Institute of Natural Resources (Denmark) in the MEGARA project which main objective is to understand the movements of the humpback whales from the Anguilla Bank during their migrations: connectivity between the vicinity islands of the Caribbean and migrating routes undertaken to the North

Besides those satellite telemetry operations, 18 biopsies have been taken so far during the two missions undertaken with success, as far as satellite tags deployments have been successful, in 2014 and 2019

Per Palsbøl lab received already the 9 biopsies realized in 2014 MEGARA mission and has been able to process and analyze them

The 9 skin biopsies taken during MEGARA 2019 mission and the 5 ones realized so far in 2021 by MEGAPTERA will be send in July 2021 to prof. Per Palsbøl lab

We intend to strengthen our effort to collect skin biopsies on humpback whales on Anguilla bank in 2022 and we aim to take 30 biopsies

This will help to a better understand the genetic flows between Cluster 1 and Cluster 2 described in the Caribbean (Palsbøl 2017)

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

Provide the specific objectives and the expected deliverables. In the case of workshops and meetings, include the Terms of Reference (ToR) and expected outcomes.

The main objective of that action is to provide more genetic material on Humpback whales during the 2022 migrating season on the breeding ground of Anguilla

(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).

30 skin biopsies will be taken on humpback whales through the traditional method of using crossbow, darts and bolts, from an inflatable boat approaching whales. The whales will be approached with the best and recommended ethical manner The biopsies will be put in DMSO and stored before to be send to Prof Per Palsbøl lab in Groningen in the Netherlands

(D) SUGGESTIONS FOR OUTREACH <i>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.</i> MEGAPTERA is happy to provide to IWC all the photos and videos taken during those biospies operations

Expected outputs	Completion date (mm/yy)
Better understanding of the belonging of the 30 sampled individuals to cluster 1 or cluster 2 of humpback whales in the Caribbean (Palsbøl 2017)	12/2022

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)
30 skin biopsies on humpback whales are taken	Michel Vély DVM	02/2022	06/2022
Biopsies samples are sent to Prof Per Palsbøl lab in the Netherlands	Prof Per Palsbøl	07/2022	08/2022

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
Mads Peter Heide Jørgensen	Greenland institute of natural Resources Denmark	
Per Palsbøl	University of Groningen the Netherlands	

8 TOTAL BUDGET

PROJECT BUDGET						Co-funding
	Description	Cost per unit	Number of units	Total Cost £GBP		
(1) Salaries (by person)	Biopsier's expertise fees per day	150	10			1 500
(2) Travel/subsistence (by person or est. total for IPs)	N/A					
(3) Services (by item)	Inflatable boat rental per day	500	10	5 000		
(4) Reusable equipment						
(5) Consumables	Fuel expenses per day	100	10			1 000
(6) Shipping & Customs (by item)	Packing and Shipping of samples to Holland	1 000	1	1 000		
(7) Insurance (by item)						
(8) Other						
				TOTAL	6 000	2 500

Co-funding Memo:

Source	Purpose of Funding	Amount	Secured/Tentative?
IWC	Boat rental and shipping of samples	6 000	
MEGAPTERA	Biopsier 's fees and fuel expenses	2 500	
	TOTAL	8 500	

Total value of project:	£GBP
Funds requested from IWC	6 000
Co-funding	2 500
TOTAL	8 500

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).

MEGAPTERA is willing to share as much as possible the data collected on those samples for a better understanding of humpback whale biology and conservation needs in the Caribbean

10. . PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	We will have them for the 2022 HBW migrating season as we got them for previous years
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	We will have them for the 2022 HBW migrating season as we got them for previous years

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

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				
TITLE OF THE PROJECT/sub-projects:		MEGARA 2022		
PRINCIPAL INVESTIGATOR:		MICHEL VELY		
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).	3	The proposed work will supply new genetic data from a poorly studied area of importance to knowledge of the breeding grounds of N Atlantic humpback whales. This is important to the preparation for a new NA humpback comprehensive assessment. It is critical that the field work include not just Anguilla but also St Barthelemy, as the proponents stated it would during the SC meeting.
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	4	
Note: 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.				
Approach and methodology				
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	3	
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	4	Pretty standard methods, nothing complicated about the sample collection (other than weather issues).

		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	4		Methods are fine; success hinges entirely upon suitable weather for field work, and occurrence of whales.
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	4		Ditto above.
5b	Are any proposed intermediary targets timely and achievable?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes	3		Not really applicable
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	3		Given the likely small sample size, the subsequent genetic analysis should be fast.
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	3		Given the current paucity of samples from this area, any additional genetic material would be important; but 30 is a good target.
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	4		No impact.
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			N/A
Note: 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.					
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	4	The team is adequately experienced with both the species and the study area.
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	3	Not really applicable; if the whales and weather cooperate, this will be successful, but that's beyond their control.
Value for Money				
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	3	
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	3	I would urge them to provide fluke photos to Ted Cheeseman's Happywhale platform, which is fast becoming the standard for humpback whale photo-id collaboration.

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 -			
TITLE OF THE PROJECT/sub-projects:		MEGARA 2022 – Biopsy sampling of humpback whales in the Northeastern Caribbean	
PRINCIPAL INVESTIGATOR:		Michel Vély	
Key criteria		Explanation of scoring	Score
Relevance to Scientific Committee priorities			
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).	4 This funding request responds directly to a need identified by the NH sub-committee to increase the amount of data (particularly including biopsy samples) available for humpback whales breeding in the southeast Caribbean.
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	4 If these samples are obtained in the winter 2022 season, then it is likely that they can factor into the planned in-depth assessment of humpback whales.
Note: 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.			
Approach and methodology			
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	3 The proposed work is standard fieldwork that will generate a sample set that is important to NH, but is not innovative.
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 This proposal only includes field work (not also analysis of the samples), but we understand that it will not adversely impact the likelihood of analyses occurring.

		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	4	The proponent is experienced at conducting research in this area and has previously provided biopsy samples to the research that Palsboll is undertaking. This is a larger sample size than has been generated in the past, but there has not previously been dedicated funding for those efforts.
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	4	The proponent seems to be in a position to be flexible and thereby maximize field effort in relation to weather and other factors. The only issue might be extraordinarily bad weather or other circumstances, but in that event there are no suggestions that would help.
5b	Are any proposed intermediary targets timely and achievable?	1 – No or unlikely 2 – Partially 3 - Probably 4 - Yes	N/A	There are no intermediary targets
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	4	There is not an earlier time frame that is likely feasible given the timing of the breeding season.
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	4	The only objective is to boost sample sizes for the population that breeds in the southeast Caribbean. A sample size of 30 would greatly increase what already is available.
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	4	Biopsy sampling is thought to have only brief behavioral effects on individuals and no population-level impacts.
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	N/A	
Note: 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.				
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	4	The team is experienced at the proposed work (both in terms of prior experience in the area and the methods).
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	1	None provided, but I don't see that as a large problem in this case.
Value for Money				
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	3	
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	4	This work would contribute samples to the group that is leading genetic research for this area.

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IWC SCIENTIFIC COMMITTEE PROPOSALS FOR FUNDING - REVIEW CRITERIA -			
TITLE OF THE PROJECT/sub-projects:		MEGARA 2022 – Biopsy sampling of humpback whales in the Northeastern Caribbean	
PRINCIPAL INVESTIGATOR:		MICHEL VÉLY	
Key criteria		Explanation of scoring	Score
Relevance to Scientific Committee priorities			
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).	4 This is a field sampling project where the aim is to increase sample sizes for investigating stock structure. The sampling area is in the border area between the Greater Antilles and the Southeast Caribbean. Samples may help in clarifying the distinctness of breeding populations and revealing eventual clines in distribution of western and eastern breeding clusters. The efforts made in this field work has secured analyses of the samples through the cooperating researchers.
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	4 Contributes to identification of important small breeding units.
Note: 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.			
Approach and methodology			
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	3
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 This proposal emphasizes that the focus is on sampling biopsies; I think it may be added value if it is also possible to get photo-IDs from the sampled whales

		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	4	Methodology is well known. Maximum outcome to be expected since good weather days will be used for the field work.	
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	4		
5b	Are any proposed intermediary targets timely and achievable?	1 – No or unlikely 2 – Partially 3 - Probably 4 - Yes	n.a.		
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	n.a.		
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	3	Some samples have been collected earlier showing indications. The assumed calculated outcome from the suggested field work of 30 samples will more than double the available sample numbers.	
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	4		
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	-		
Note: 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.					
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	4	
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	n.a.	
Value for Money				
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	3	
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	4	