



135 Station Road, Impington, Cambridge, UK, CB24 9NP;
Tel: +44 1223 233397 - Fax: +44 1223 232876
E-mail: secretariat@iwc.int

PROJECT PROPOSAL REQUEST

1 . PROPOSAL TITLE

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

Tools to support ASHW conservation in Oman; population status and health assessments, knowledge transfer and science communication of large whale conservation activities.

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.

The research component of this proposal builds on existing funding and planned fieldwork allowing a continuation of body condition assessments of Endangered Arabian Sea humpback whales (ASHW) in Oman to determine the reproductive potential of the population in relation to prey availability and distribution. This proposal describes work that will occur in November 2021 and addresses one of the recommendations made in SC/68C/CMP/04, 'that research includes the use of UAV to assess body condition, and that it be used together with other metrics for evaluating health and foraging success and potential seasonal and annual variation in body condition.

The survey will also provide opportunities to train Omani nationals in whale research techniques (particularly photo-ID) complementing a recently launched [campaign](#) to promote submission of sightings records and photos by public stakeholders to the Environment Society of Oman. These objectives will improve the scientific value of the existing database, and, importantly will also raise the profile of the population within Oman, highlighting conservation concerns for ASHWs and requirements for the adoption of science driven management initiatives. Furthermore, the team will cost-share with a blue-chip film production company to ensure that the conservation profile of the ASHW population is raised internationally through high-level science communication media to promote regional aspirations for conservation management planning.

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.

- CMP Subcommittee – this proposal directly relates to the planned CMP on Arabian Sea humpback whales

4 . TYPE OF PROJECT (PLEASE TICK)

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

Other (<i>please specify below</i>)	X
Skills and knowledge transfer Local and International Science Communication	

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.

Arabian Sea humpback whales (ASHW) have been a standing agenda item at the IWC SC since 2010 when recommendations were first made to form a Comprehensive Management Plan (CMP) for this population (e.g. IWC, 2016). The population is small, genetically isolated, and designated as Endangered on the IUCN Red List (Minton et al., 2008; Pomilla, Amaral et al., 2014). The two core ASHW habitats identified in Oman are the Gulf of Oman and Dhofar coasts, (Corkeron et al., 2011; Minton et al., 2011). Both are affected by vessel traffic associated with ports, oil exploration and intense fishing effort by 25m or larger traditional dhows that are formally classified as artisanal and as such are not required to carry AIS or VMS. SC/68B/CMP16 reported that an estimated 67% of ASHW have scarring consistent with presumed fisheries entanglement, and a number of documented sub-lethal entanglements in Oman and Pakistan involve large-mesh gillnets, such as those deployed by dhows on both sides of the Arabian Sea.

Fieldwork conducted in Oman between 2000 and 2004 included mapping of vessels and fishing effort and crude measures of co-occurrence of human activities with humpback whales (Minton, 2004). However, surveys since have had multiple objectives, including satellite telemetry, which made systematic logging of human activities difficult to include in survey protocols. Although a preliminary analysis of drone images collected in Oman 2017 determined that they were less effective than vessel-based photos for assessing entanglement scarring, newly published research indicates that obtaining higher resolution images from a lower altitude can improve assessment of entanglement rates (Ramp et al. 2021).

SC/68B/CMP23 presented information on the body condition of 9 individual humpback whales, of which 3 were identified as females, assessed through UAV images obtained in the Gulf of Masirah in November 2019. The body condition of the sampled whales, all identified as adults, was comparable to that of newly arrived adult humpback whales from breeding stock D off Western Australia, which suggests that the Omani whales were in good condition. The 3 females were in particularly good condition, similar to that of early lactating females from stock D. To determine the reproductive potential of the ASHW population, additional body condition sampling is needed at other times of year, to quantify the amount of energy that females can accumulate over a year, and hence their potential to recover from reproduction. Multi-year sampling of body condition is also needed to investigate annual variations in body condition resulting from variations in prey availability, which is known to fluctuate substantially in relation to seasonal upwelling (Weigmann, 1970; Smith et al., 1998). Together, this information will help determine the resilience of the ASHW population to anthropogenic disturbance, and the reproductive potential of the population.

SC/68C/CMP/04 presented the results of a 2 week survey in Dhofar, the southern region of Oman, in March 2021. The fieldwork was a continuation of the body condition work from November 2019, with the aim of determining if ASHW exhibit seasonal variations in their body condition, which could be used to quantify the amount of energy that females can accumulate over a year. Despite considerable research effort over 13 consecutive days, which included both visual and acoustic search methods, no ASHWs were detected.

Although the reasons for the absence of ASHWs in the Dhofar area are unknown, it could

be linked to observed warmer water temperatures, which could influence the distribution of favoured prey species. Based on this, we are planning fieldwork in November 2021, this time focusing on the Gulf of Masirah, where the probability of encountering ASHWs should be higher. The aim of the research will be:

- to determine potential differences in the body condition of ASHWs between 2021 and 2019, which could indicate differences in foraging success and hence prey availability between the two years;
- to collect blubber biopsy samples from the measured animals, to determine the main prey species using stable isotope analysis;
- to collect additional vessel-based photo-identification data for use in ongoing monitoring of individual health and scarring as well as abundance and trend estimation ;
- to determine whether drone images can be used to complement or improve assessment of entanglement scarring and disease (Ramp et al. 2021).

We have secured partial funding for the fieldwork. However additional resources are required to ensure that the fieldwork can accommodate the manpower and equipment required to address the main research question above.

The IWC SC has proposed the formation of a regional conservation management plan for ASHWs since 2011 (IWC, 2011), and research activities have been reported to, and endorsed and encouraged by the SC since 2000. The [CMS Concerted Action](#) for this population, upon which a joint IWC-CMS CMP would be built, recognizes the need for greater public awareness and government support for ASWH conservation action. As such, in addition to research to address vital knowledge gaps for this population, this proposal includes more holistic approach to engaging government employees and nationals in data collection, identification of threats and science communication of conservation issues in order to foster increased engagement and support for CMP objectives (CMP 2017). The proposed work would also build on recommendations made by the IWC SC PH ad-hoc working group on photo-identification databases and funding received from the IWC SC in 2016 to expand the functionality of Flukebook.org to accommodate a wider range of cetacean survey and sightings data.

(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.

This project would result in the following specific deliverables/outcomes:

- A second set of measurements to allow assessment of annual variation in ASHW body condition in one of the two core ASHW habitats.
- Training of at least two Omani's in the full process of humpback whale photo-ID data collection, within-day matching and archiving.
- Outreach will include sharing the sighting histories and other field notes with the public about the whales encountered on the survey . In this manner we can demonstrate how the Flukebook platform can be used as a public outreach tool.
- Sharing resources and outputs of blue-chip production team to profile research activities.

(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).

Data collection

Modified line transect surveys will be conducted in core ASHW habitat in the Gulf of Masirah in November 2021, depending on COVID 19 restrictions. Not only will this timing coincide with whale occurrence, but it will enable extended survey time through cost sharing with a blue-chip production company. Systematic transects would be navigated using a 6.5m rigid-hulled inflatable. During encounters with humpback whales, a UAV will be deployed to take vertical aerial photographs of the whales as they surface. A laser range finder, attached to the drone, will be used to measure the altitude of the drone above the whales, allowing scaling of images (convert pixels to meters). Biopsy sampling will also be conducted to determine sex and pregnancy status of the measured whales¹. Further, we aim to use the same biopsy samples to carry out stable isotope analysis to determine the prey preferences of whales in the Gulf of Masirah.

Data analysis

For the body condition assessment, body length and width (at 5% increments) will be measured from the UAV/drone photographs. From these, the body volume will be estimated and the body condition of the whales will be calculated as the residual of the relationship between body volume and length. By comparing the 2021 data with those collected at the same time of year in 2019 we will be able to determine if there are significant annual variations in body condition of ASHWs, which could suggest yearly variation in prey productivity. Although two years of sampling is not enough to determine long-term temporal trends in body condition, it will provide a first step towards understanding the relationship between prey availability and body condition, which ultimately will determine the reproductive rate of the population. Photos of dorsal fins, tail flukes, and the caudal peduncle region will be used to identify individual whales and match them to the Oman humpback whale photo-identification catalogue, as well as to assess scarring and disease (see SC/68B/CMP16, revised and submitted to the JCRM).

Skills and Knowledge Transfer and Outreach

Training will be coordinated with local partners at the Environment Society of Oman and contribute to their national capacity building program. Training will be provided by the proponents of this proposal in areas related to vessel survey planning, vessel-based sightings and photo-ID data collection, data archiving and an introduction to the Flukebook database, where ASHW records are archived. This process will support capacity and complement a recent initiative launched by the Environment Society of Oman requesting members of the public to report sightings and photos for the Oman ASHW photo-ID database. A social media video was produced in April 2021 to launch this initiative: <https://www.facebook.com/watch/?v=552389406150567>.

¹ Note that the PIs hope to work with Susan Bengtson Nash from Griffith University, Australia on hormone analysis, and FC has collaborated with her on previous studies, but we have not yet been able to approach her in relation to this proposal.

(D) SUGGESTION S 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.

The videos and still imagery taken of the vessel surveys (including UAV footage) will be archived as supporting media to accompany social media a press styled write up on the activities, highlighting ASHW status, research activities and the importance of projects funding through the IWC SC.

As the lead institution for cetacean conservation work in Oman the Environment Society of Oman will lead the public communications element of the project.

As detailed above the training will build local capacity and complement a recent initiative launched by the Environment Society of Oman requesting members of the public to report sightings and photos for the Oman ASHW photo-ID database. A social media video was produced in April 2021 to launch this initiative:

<https://www.facebook.com/watch/?v=552389406150567>.

This process will demonstrate the value of the Flukebook platform for public outreach and engagement purposes.

The team will also be combining survey resources with an Oman based multi-media production company, 'In-Focus Oman'. The company is working on national and international projects to document wildlife and conservation activities in Oman. The objective is for wildlife, including ASHW, to be profiled in documentary format. The scientific team believe this approach will be hugely beneficial in raising the profile of cetacean species in Oman, particularly ASHWs within a conservation context.

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)
Fieldwork to conduct body condition assessments	Andrew Willson Fredrik Christiansen Gianna Minton Robert Baldwin Tim Collins	11/2021*	12/2021
Processing of photo-identification data to support body condition assessments	Gianna Minton Trainee support	12/2021	01/2021
Training of local researchers in field survey and photo-identification techniques	Andrew Willson, Fredrik Christiansen, Robert Baldwin Gianna Minton Tim Collins		

- *Note: It is recognised that this proposal request is for the 2022 season, but we plan to take out the work in Nov 2021 to cost share with pre-scheduled field activities with a blue chip production company. If necessary the majority of costs can be advanced to the project by the proponents.

Expected outputs	Completion date (mm/yy)
Preliminary report of body condition assessment work	01/2022
Final report of processed analysis	05/2022
Final report on outcome of skills transfer and science communication initiatives	05/2022
Submission to a peer reviewed journal of body condition assessment work	07/2022

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
Andrew Willson	Future Seas Global SPC	None
Suaad al Harthi	Environment Society of Oman	None
Fredrik Christiansen	Aarhus University	None
Robert Baldwin	Five Oceans Environmental Services, LLC (5OES)	None
Gianna Minton	Megaptera Marine Conservation	Contracts with IWC, but not related to this work
Tim Collins	Wildlife Conservation Society	None



8 . TOTAL BUDGET

Project Budget					Please indicate when funds will be needed			
	Description	Cost per unit	Number of units	Total Cost GBP	2021	2022	Number of units co-funding	Co-funding GBP
(1) Salaries by person	Andrew Willson (mob, project manager & skipper)	342	10	3420		x	10	3420
	Frederic Christiansen (UAV pilot & senior scientist)	342		0		x	28	9576
	Gianna Minton (photo-ID and lead training)	342	8	2736		x		0
	Robert Baldwin	342	5	1710		x		0
	Tim Collins	342		0		x	14	4788
	Trainee 1	250		0		x	8	2000
	Trainee 2	250		0		x	8	2000
(2) Travel/ subsistence (by person est. total for IPs)	Frederic Christiansen Flight (Copenhagen-Muscat)	700	1	700		x		0
	Frederic Christiansen Quarantine Accom	70	9	630		x		0
	Frederic Christiansen Quarantine Food	15	9	135		x		0
	Tim Collins Flight (Nairobi - Muscat)	500	1	500				0
	Gianna Minton Flight (Amsterdam - Muscat)	700					1	500
(3) Services by item	Hire Car	68		0		x	20	1360
	Survey Vessel	200	9	1800		x	9	1800
	COVID-19Test FC	50	4	200		x		0
	Drone permit	350	1	350	x*			0
	Social media and press services	100		0		x	5	500
(4) Re-useable equipment	DJI Inspire 2	4000		0		x	2	8000
(5) Consumables	Hire car fuel	250	1	250	x*			0
	Vessel fuel	70	7	490	x*		7	490
	Field food (3 meals/ day for 5 = 15 meals/ day @ 4gbp/meal)	60	9	540	x*		9	540
	Camping supplies	200	1	200	x*			0

	Vessel and trailer supplies	200		0		x		1	200
(6) Shipping & customs (by items)	Drone shipping	228.5	2	457		x			0
	Drone tax (4%)	320	2	640		x			0
(7) Insurance (by item)	Drone insurance	43.64	2	87.28		x			0
(8) Other				0		x			0
Total		14845.28			0	0			34674

* Expenses requested prior to field survey in November 2021.

Co-funding Memo

Source	Purpose of Funding	Amount	Secured/ Tentative
In-Focus Oman	Andrew Willson -salary- project manager	3420	Tentative - verbal agreement
Aarhus Center for Advanced Studies	Frederic Christiansen - salary - senior scientist	9576	Secured
Wildlife Conservation Society	Tim Collins - salary - senior scientist	4788	Secured
ESO	Trainee 1 & 2 - salary	4000	Secured
ESO	Hire car to mob team to field	1360	Secured
ESO	Social media and press. Agency services.	500	Secured
In Focus	Survey Vessel - cost sharing	1800	Tentative - verbal agreement
In Focus	Field food - cost share	490	Tentative - verbal agreement
In Focus	Car Fuel - cost share	540	Tentative - verbal agreement
Aarhus Center for Advanced Studies	DJI Inspire 2 - For aerial survey work	8000	Secured
ESO	Vessel and trailer supplies	200	Secured
		34674	

Total Value of Project:	GBP
Funds requested from IWC	14845.28
Co-funding	34674
Total	49519.28

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).

All survey data will be archived with the Environment Society of Oman. Access is available by request and according to permitting requirements of the Environment Authority of Oman. Data on body condition can be made publicly available after an agreed period of time for publication of papers.

10 . PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	Proponents and collaborating institutions have been granted permits for field surveys since 2001 and UAV work since 2017.
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	Not required

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

REFERENCES

- Corkeron, P. J., G. M. T. Collins, K. Findlay, A. Willson, and R. Baldwin. 2011. Spatial models of sparse data to inform cetacean conservation planning: an example from Oman. *Endangered Species Research* 15(1):39-52.
- IWC 2011. Report of the International Whaling Commission Scientific Committee 2010. Agadir, Morocco.
- IWC. 2016. Report of the Scientific Committee of the International Whaling Commission 2016, International Whaling Commission, Bled, Slovenia.
- Minton, G. 2004. Ecology and Conservation of Cetaceans in Oman, with particular reference to humpback whales (*Megaptera novaeangliae*). PhD, University of London, University Marine Biological Station, Millport.
- Minton, G., T. J. Q. Collins, K. P. Findlay, P. J. Ersts, H. C. Rosenbaum, P. Berggren, and R. M. Baldwin. 2011. Seasonal distribution, abundance, habitat use and population identity of humpback whales in Oman. *Journal of Cetacean Research and Management Special Issue on Southern Hemisphere Humpback Whales*(3):185–198.
- Minton, G., T. J. Q. Collins, C. Pomilla, K. P. Findlay, H. C. Rosenbaum, R. Baldwin, and R. L. Brownell Jr. 2008. *Megaptera novaeangliae*, Arabian Sea subpopulation. IUCN Red List of Threatened Species <http://www.iucnredlist.org/details/132835>
- Pomilla, C., A. R. Amaral, T. Collins, G. Minton, K. Findlay, M. S. Leslie, L. Ponnampalam, R. Baldwin, and H. Rosenbaum. 2014. The World's Most Isolated and Distinct Whale Population? Humpback Whales of the Arabian Sea. *PLoS ONE* 9(12):e114162. doi: 10.1371/journal.pone.0114162
- Ramp, C. *et al.* Up in the air: drone images reveal underestimation of entanglement rates in large rorqual whales. *Endangered Species Research* **44**, 33-44 (2021).
- Smith, S., M. Roman, I. Prusova, K. Wishner, M. Gowing, L. A. Codispoti, R. Barber, J. Marra, and C. Flagg. 1998. Seasonal response of zooplankton to monsoonal reversals in the Arabian Sea. *Deep-Sea Research Part II* 45(10-11):2369-2403.
- Weigmann, R. 1970. On the ecology and feeding habits of hte euphausiids (Crustacea) in the Arabian Sea (Zur Okologie und Ernährungsbiologie der Euphausiaceen (Crustacea) im Arabischen Meer). 5:11-52.

Willson, A., M. Leslie, R. Baldwin, S. Cerchio, S. Childerhouse, T. Collins, K. Findlay, T. Genova, B. J. Godley, S. Al Harthi, D. W. Macdonald, A. G. Minton, A. Zerbini, and M. J. Witt. 2018. Update on satellite telemetry studies and first unoccupied aerial vehicle assisted health assessment studies of Arabian Sea humpback whales off the coast of Oman., IWC, Bled.

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		
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.				
<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		
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		
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		
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		
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		

Convention on Migratory Species, Concerted Action for humpback whales (*Megaptera novaeangliae*) of the Arabian Sea. Adopted by the Conference of the Parties at its 12th Meeting (Manila, October 2017) 21 pages.