

# SC/67b/RP11

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## CMP - Abundance estimates of the Franciscana dolphin in Buenos Aires Province, Argentina



INTERNATIONAL  
WHALING COMMISSION

## Appendix 1 – PRO FORMA FOR PROJECT PROPOSALS



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### PROJECT PROPOSAL REQUEST

#### 1. PROPOSAL TITLE

**ABUNDANCE ESTIMATES OF THE FRANCISCANA DOLPHIN IN BUENOS AIRES PROVINCE, ARGENTINA**

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

The Ministry of the Environment of Argentina approved the proposal “*Abundance estimates of the franciscana dolphin in Buenos Aires Province, Argentina*” with funds from FAO/GEF. The amount of support compromised by the Ministry is 20,000 US\$ (around 14,200 GBP). The Marine Mammal Laboratory is funding the travel and lodging of the 4 people research team (1500 GBP). Salaries of the team are paid by CONICET (5600 GBP por 1.5 month). However, these funds are not enough to carry out the aerial surveys. Therefore, an additional funding of 7140 GBP is requested to the IWC.

Abundance estimates of franciscanas will be based on a series of aerial surveys along the coast of Buenos Aires Province, with the same survey design of surveys carried out in 2003 and 2004 (Crespo et al., 2010). The new estimation will allow comparing density values with those obtained in the previous surveys. A map of the survey area is provided.

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

This proposal is relevant to the SM subcommittee.

#### 4. TYPE OF PROJECT (PLEASE TICK)

Research project	X
Modelling	
Workshop/meeting	
Database creation/maintenance	X
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:

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

### Background information

The Franciscana, *Pontoporia blainvillei*, is a small cetacean endemic to the western South Atlantic Ocean, ranging from Itaúnas (18°25'S – 30°42'W), Espírito Santo, Brazil (Moreira and Siciliano, 1991) to Golfo Nuevo (42°35'S – 64°48'W), Península Valdés, Argentina (Crespo et al., 1998). Two gaps are found near the northern range of the species, one between Espírito Santo and Rio de Janeiro and another between Rio de Janeiro and São Paulo. The coastal distribution of this species, restricted to waters within the 30 m 2ehaviou makes it more vulnerable to many anthropogenic activities (Brownell, 1975). Due to the continued incidental mortality throughout most of its geographic distribution the Franciscana is believed to be the most threatened small cetacean species in western South Atlantic Ocean (Crespo, 2017).

Although the incidental mortality of this species has been estimated in some areas (Pérez Macri and Crespo, 1989; Crespo et al., 1994), the real impact of these captures was unknown mainly because of the lack of abundance estimates and the uncertainties about stock discreteness. In addition, nothing was known about the ecology and 2ehaviour of individuals in the wild. These approaches have been considered as research priorities for this species by several meetings and workshops carried out since the last decade.

In the last few years some progress in all these priority fields: one survey was carried out in order to obtain abundance estimates for Franciscana, some progress has been gathered in studies about stock discreteness and studies in the wild start to be conducted. A pilot study for abundance estimation, it was conducted in the Rio Grande do Sul State coast, southern Brazil, a region for which there are recent data on annual incidental mortality of the species (Secchi et al., 2001). Abundance estimations need to be replicated somewhere in the area of distribution of the Franciscana. The density was estimated to be 0.657 dolphins per km<sup>2</sup>, with a population estimation of 42,000 individuals in 64,000 km<sup>2</sup> between the coast and the 30-m 2ehaviou. A second survey in southern Brazil estimated 6,800 individuals (CV=0.32) in 2004 (Danilewicz et al., 2010).

Advances in stock identification were gathered using skull characters, parasites and genetic markers (Secchi et al., 2003; Lázaro et al., 2004; Cunha et al., 2014). Nevertheless, they only took into account parts of the distribution of the species in Brazil. Studies in Uruguay and Argentina are scarce or lacking. There is some preliminary evidence that the Rio de la Plata would be dividing two potential stocks, one to the north of Rio de la Plata including Uruguay and southern Brazil, and another one to the south for the coast of Buenos Aires Province (Mendez et al., 2010). If this is true, there would be at least three stocks for this endangered species. In any case several studies would be conducted in this sense.

In Argentina, the second area where the franciscanas were surveyed, density was lower than in southern Brazil (0.304–0.377 dolphins per km<sup>2</sup>) and abundance was estimated to be 15,000 individuals between the coast and the 50-m 2ehaviou in 50,000 km<sup>2</sup> (Crespo et al., 2010). These surveys carried out in Argentina showed that franciscana is also found up to the 50-m 2ehaviou. However, density declines with distance from the coast. In the strip between the 30- and the 50-m isobaths, density is half that between the coast and the 30-m isobaths (Crespo et al., 2010).

### Objectives

Given the disparity in density estimates and mortality rates all along the region there is a need of carry out a new abundance estimation in order to check trends in population trajectory. Therefore, the objective of this proposal is to obtain a new abundance estimate of the franciscana dolphin given the threaten status of the species in the Southwestern Atlantic. In particular, for Argentina (Buenos Aires Province), there is a need to compare densities with those obtained 14 years ago. The new densities will be based on the same survey design performed in 2003-2004.

A proposal for estimating abundance of the franciscana dolphin *Pontoporia blainvillei* in Buenos Aires Province (Argentina) was approved by the Ministry of the Environment with funds from FAO/GEF. We request from the IWC additional funding in order to carry out this proposal.

### Methods

Abundance estimates in two selected areas of the Province of Buenos Aires, Argentina, will be obtained by means of aerial surveys, where incidental mortality continued to occur during the last decade. Surveys will be undertaken by the Marine Mammal Laboratory of the Centro Nacional Patagónico (CENPAT-CONICET) and Fundación Aquamarina.

#### *Study areas*

Abundance estimations will be carried out in two areas selected between the following three places of the Buenos Aires Province coast: 1) Northern coast, close to San Clemente del Tuyú city and Bahía Samborombón. 2) Neighbourhood area close to Necochea – Puerto Quequén cities. Survey designs 1 and 2 of Figure 1. It will also be chosen based on previous studies on strandings and incidental catches which report high indices of Franciscana mortality, indicating that this species is relatively common in the area or so was in recent times.

#### *Survey design*

Several aerial surveys will be carried out in each of the selected areas in order to have replicates and a variance for density estimate. Each survey will consist of an appropriate number of line transects between the shoreline and a variable distance of 5 to 10 nm from the coast. The basic idea is to follow transects in a zig-zag pattern similar to the previous survey. Flights will be undertaken on a calm sea state (less than Beaufort 3). This design has been previously and successfully tested in southern Brazil (Secchi et al., 2001; Crespo et al., 2010). The design was decided on the base of isobaths, distribution of fuel supply and quality of water masses. Declination angles between the horizon and the animals will be recorded. Those angles will be converted into distances by trigonometric calculations. Correction factors for submerged animals will be developed according to wildlife behavioural studies (Bordino et al, 1999). Average speed of the aircraft remains constant around 90 knots and height remains within 500 feet (>180 m). A total of 50 hours is expected to be spent in the two designs with an estimated 3-4 hours per flight and a total of 14 flights.

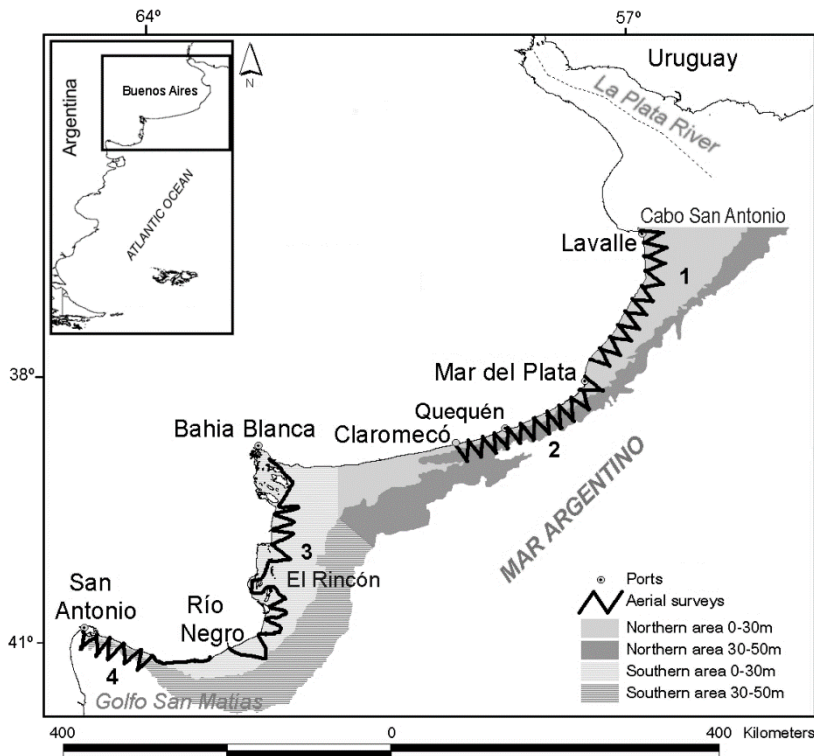
#### *Data analysis*

Line transect methods along with strip transect methods belong to the distance sampling family (Buckland et al, 1993, 2001). In this type of methodology the observer measures distances between the object of interest and the observation platform (see above). The set of distances lead to density calculations fitting the distance distribution to different models of probability density functions. Data analysis will be performed with the program distance (Thomas et al., 2003).

There are three basic assumptions in data gathering for distance sampling methods (Buckland, et al, 1993, 2001): a) objects below the transect line are always detected. Observer ability detecting objects along the transect line is maximum. If the assumption is not achieved density will be underestimated. B) objects are detected in their initial position, previously to any animal reaction to observers. The method assumes that the object is not attracted or rejected as a consequence of the observer presence. In the former case density is overestimated, in the latter is underestimated. C) distances are measured precisely, rounding should be avoided.

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**Deliverables:**

A full report will be produced and presented to the IWC SC meeting in 2019.

<b>I METHODOLOGICAL APPROACH/WORK PLAN/ADMINISTRATIVE DETAILS</b>

**Administrative details:****(D) SUGGESTIONS FOR OUTREACH**

Lay summary for public awareness and material to enrich the IWC website with information on illegal hunting of a small cetacean.

**6. TIMETABLE FOR ACTIVITIES AND OUTPUTS**

<b>Activity to be undertaken</b>	<b>Key person(s)</b>	<b>Start(mm/yy)</b>	<b>Finish (mm/yy)</b>
Researcher CONICET – Team Leader - Aerial Surveys and data analysis, reporting to IWC	Enrique Crespo	02-03/2019	08/2019
Researcher CONICET – Aerial Surveys and data analysis	Mariano Coscarella	02-03/2019	08/2019
Researcher CONICET – Aerial Surveys and data analysis	Rocío Loizaga	02-03/2019	06/2019
Researcher CONICET – Aerial Surveys and data analysis	Nicolas Sueyro	02-03/2019	06/2019

<b>Expected outputs</b>	<b>Completion date</b>
Report with preliminary results to present at the SM Subcommittee in 2019	08/19

## 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
Enrique Crespo	Researcher CONICET	Share projects with Dr. Alex Zerbini
Mariano Coscarella	Researcher CONICET	Share projects with Dr. Alex Zerbini
Rocío Loizaga	Researcher CONICET	---
Nicolás Sueyro	Fellow CONICET	---

## 8. TOTAL BUDGET

Breakdown into: (1) salaries/wages (include name/position of each individual and breakdown of time and duties); (2) travel/subsistence expenses (breakdown by person and justification) unless for lps for workshops where a total estimate based on an average for the total number of lps 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)	In kind contributions (4 people team per 1.5 month) CONICET is providing salaries for the research team (160000 Argentine Pesos = 5600 GBP)	5600
(2) Travel/subsistence for 4 people team on location	Hotel x 10 days, local transportation, per Diem (25GBP/day x10) x 4 people Marine Mammal Laboratory Projects (2000 U\$S = 1500 GBP) for travel/lodging	1500
(3) Services (by item)	Aircraft rental (cost 600 dollars per hour x 50 hours) FAO/GEF Project approved 20000 U\$S (14290 GBP) for aerial	21430
(4) Reusable equipment		
(5) Consumables		
(6) Shipping (by Item)		
(7) Insurance (by item)	Staff from CONICET is insured	0
(9) Other		
<b>Total budget</b>		<b>28530</b>
<b>TOTAL REQUESTED TO IWC</b>		<b>7140</b>

This project has important contributions from GEF/FAO (for aerial surveys), CONICET (for salaries of the research team) and running projects of the Marine Mammal Lab (for travel and lodging).

## 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](mailto: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?	yes
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	Not aplicable

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 -			
TITLE OF THE PROJECT/sub-projects:		ABUNDANCE ESTIMATES OF THE FRANCISCANA DOLPHIN IN BUENOS AIRES PROVINCE, ARGENTINA	
PRINCIPAL INVESTIGATOR:		Enrique A. Crespo	
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	
<b>Note:</b> 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.				
<b>Approach and methodology</b>				
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		
5 a	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		
5 b	Are any proposed intermediary targets timely and achievable?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes		
5 c	Is the proposed time-frame/work necessary (e.g. can the project produce results in a	1 - No or unlikely 2 - Partially 3 - Probably		

	shorter time period)?	4 – Yes		
5 d	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		
6 a	<b>IF YES</b> , are analyses provided on simulations of the effects using different time-frames for the project if applicable?	1 – No 2 – Partially 3 – Yes		
<b>Note:</b> 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.				
<b>Project team and Project management</b>				
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		
<b>Value for Money</b>				
1 0	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		

<p>1 1</p>	<p>Have sufficient links been made to the wider research community/other organisations/capacity building.</p>	<p>1 – No 2 – Some but significant amendments needed 3 – Yes but with some minor additions 4 – Yes or not applicable</p>	<p></p>	<p></p>
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