The IWC Extinction Initiative

A Joint Paper from the Conservation and Scientific Committees

The Extinction Initiative has been developed in response to the increasing challenge of delivering on the Commission's mandate to ensure *proper conservation of whale stocks.* Forty-five cetacean species or distinct populations are currently considered to be *critically endangered* or *endangered* (facing an extremely or very high risk of extinction)[1]. Due to a range of factors, including bycatch, pollution, climate change and increased shipping and coastal development, this component of the IWC mandate faces a wider range of challenges than at any point in the last 75 years. Public engagement is essential to successfully address these challenges. The Extinction Initiative aims to explain clearly, factually and publicly why the Scientific Committee is concerned about the extinction of a particular species or population.

A section of the IWC website has been developed to explain the threat of extinction in general terms and to summarise current initiatives and actions that the Commission has endorsed in response to each major threat.

The next step proposed by the SC is to create a mechanism for communicating an *ad hoc* statement of concern for the extinction of a species or extirpation of a unique population[2]. To ensure Commission oversight of such statements, whilst also allowing their release in a timely and effective way, a template has been developed.

The template would enable the Scientific Committee to issue statements intersessionally, by completing a series of pre-agreed sections. The statements would report well-documented factual information on the status and reason(s) for decline where known. They would not call for specific actions to be taken or stray into any other area of policy.

Statements would be generated during SC meetings or, if urgency dictates, by a group of Scientific Committee members appointed by the Committee's Chair and Vice Chair. The Bureau would be notified before any statement is issued and a report on statements released would be provided to the Commission when it next meets. The statements would be posted on the IWC website and made available to relevant media.

Statements would be issued in two specific circumstances:

i. A cetacean species or distinct population is possibly extinct or has gone extinct; and

ii. There is a sudden grave concern about the survival of a cetacean species or a distinct population.

The blank statement template is provided below (Annex A). A completed example for the franciscana dolphin (*Pontoporia blainvillei*) is also attached (Annex B), to illustrate more clearly how the statements would be completed.

[1] See Red List terms as defined by IUCN here
[2] The term "extinction" is generally used only to refer to species, the term "stock" is frequently used within the IWC context to refer to what is elsewhere termed a "distinct population", "demographically independent population", etc.

Annex A

Blank Template

Title a) Extinction of [common name (genus species)]

Title b) There is a sudden grave concern about the survival of [cetacean species] or a distinct population [population description].

Opener a) The International Whaling Commission today reports on the extinction of XXX species.

Opener b) The International Whaling Commission today reports its grave concern about xxx species/population

1. **Introduction**

Introduction to the species/population and what the IWC assessment is based on [e.g. quote taken from IUCN Red List or equivalent authoritative source: status, dates and link to relevant page**]**

Image 2: distribution map or illustration

2. **Population status**

Historical numbers (dates, references)

Trend of decline over time

Relevant dates

3. **Threats**

Major threats/impacts responsible for decline/extinction: **[** e.g. entanglement in fishing gear / ship strikes / pollution / habitat degradation / directed takes / combination / other **]**

4. **Conservation efforts to date**

Successful and unsuccessful or lack thereof conservation efforts made, including recommendations from the IWC, [e.g. alternative fishing gear/ rerouting of shipping lanes /protected area / capture for ex-situ conservation /combination / other]

5. **Lessons Learned:** e.g.

   a): Why this wasn't enough to prevent extinction and what lessons have been learned going forward.

or

b): Why the situation is still deteriorating and what lessons have been learned going forward.

6. The Big Picture

The big picture: meaning/repercussions (ecological, societal) of extinction: various roles of the species/population as **[**predators/ecosystem engineers etc.; loss of biodiversity; cultural significance; loss for economy/tourism/human well-being? **]**

7. Conclusion

Closing statement **– e.g. a)** This extinction… or **b)** This grave concern…. must serve as an impetus for re-assessment of our relationship with our environment. There has never been a more appropriate time to take stock, learn lessons and do things differently in the future.

Annex B

Example of use of the template for the Franciscana

Please note that this text is only provided as an example of what a statement would look like.

It is not proposed that this text would be issued at this time or necessarily in this exact wording.

Franciscana mother and calf in the Río Negro Estuary, Argentina. Photo by L. Russo Lacerna/ Fundación Cethus

Serious concern of extinction raised: Franciscana, *Pontoporia blainvillei*

The International Whaling Commission today warns that extinction is an imminent risk for the franciscana, *Pontoporia blainvillei.*

1. Introduction

The franciscana, *Pontoporia blainvillei*, also known as the La Plata River dolphin or toninha, is only found in the subtropical waters of Brazil, Uruguay and Argentina and usually close to shore. The franciscana is the only living species in the family Pontoporiidae. Its range is from Itaúnas (18°25'S), Espírito Santo State, Brazil, to Golfo San Matias (42°10'S), Chubut, Argentina with two gaps in distribution near the northern range of the species, one between the states of Espírito Santo and Rio de Janeiro and another between Rio de Janeiro and São Paulo, both in Brazil.

Eleven Franciscana Management Areas (FMAs) have been recognised (Figure 1).

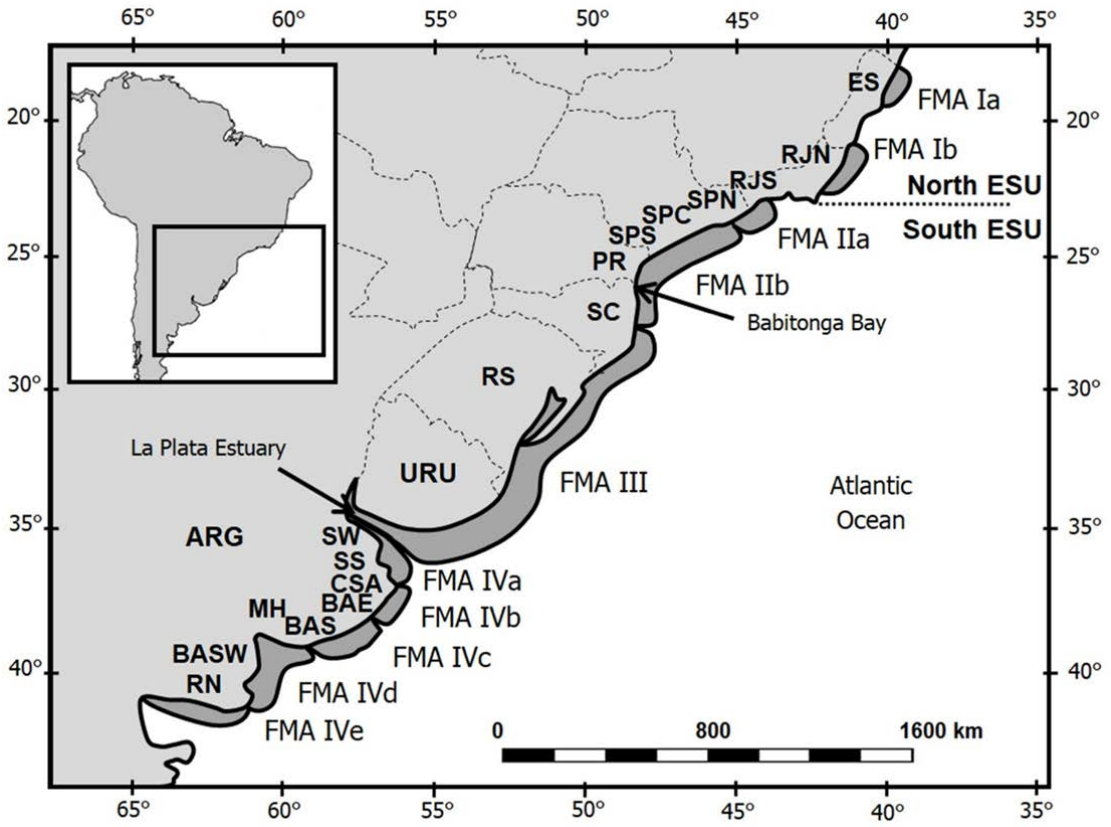

Figure 1. Map showing the 11 management units for franciscana dolphins, including the ten labelled FMA subdivisions and Babitonga Bay (Cunha et al., 2020b; Cunha et al., 2020c).

The biology of the species is generally poorly known but its largely inshore distribution brings it into contact with many human activities, including fisheries.

This IWC statement of concern is based on assessments made by its Scientific Committee using the latest available information, including a new population assessment which will be completed shortly. The species is considered Vulnerable on the IUCN Red List of Threatened Species (Zerbini et al. 2017)[3].

Some franciscana populations (e.g., Babitonga Bay, FMA Ia, FMA Ib) are smallgeographically isolated, and are known or believed to be heavily impacted by human activities, especially fisheries bycatch, which is unlikely to be sustainable.[4] Whilst more research is encouraged, the IWC now sees the situation of the franciscana as critical and calls for urgent conservation actions.

2. Population status

Population estimates are summarised in Table 1.

[3] https://www.iucnredlist.org/species/17978/123792204
[4] See for example: Secchi E.R., Cremer M. J., Danilewicz D., Lailson-Brito J. 2021 A Synthesis of the Ecology, Human-Related Threats and Conservation Perspectives for the Endangered Franciscana Dolphin *Frontiers in Marine Science* 8 DOI=10.3389/fmars.2021.617956 and also

Table 1. Population estimates extracted from the Report of the Workshop on the Review of the Status of the Franciscana 7-9 April 2021 (SC/68C/REP/02).

Stock	Region	Date stamp	Range of years	Estimate	CV	Approx. 95% CI	Reference
FMA Ia	Range wide	2017	2017-2018	595	0.44		Sucunza et al. (2020b), SC/68b/ASI/5
FMA Ib	Range wide	2010		1,692	0.47		Danilewicz et al. (2020), SC/68b/ASI/07_rev1
FMA Ib	Range wide	2017		1,280	0.43		Danilewicz et al. (2020), SC/68b/ASI/07_rev1
FMA II	Range wide	2009	2008-2009	6,827	0.26		Sucunza et al. (2020c), SC/68b/ASI/05
FMA II	Paranaguá Bay		2012-2013	198	0.31		Weyn (2016)
FMA III	Range wide	1996		42,078	0.34		Secchi et al. (2001)
FMA III	Rio Grande do Sul, Brazil	2004		6,839	0.32		Danilewicz et al. (2010)
FMA III	Rio Grande do Sul, Brazil	2010		9,651	0.24		Sucunza et al. (2020d), SC/68b/ASI/06
FMA IV	Buenos Aires Province		1996-1998, 2003-2004	31,350		15,262-47,850	Bordino et al. 2004, SC/56/SM13
FMA IV	Northern area (0-30m)		2003-2004	8,279		4,904-13,960	Crespo et al. 2010
FMA IV	Southern area		2003-2004	5,896		5,896-17,999	Crespo et al. 2010
FMA IV	North offhsore stratum (30-50m)		2003-2004	470			Crespo et al. 2010
FMA IV	Buenos Aires Province	2019		13,356	0.28		Crespo et al. 2020, SC/68b/ASI/03
Babitonga Bay			2001-2003	47	0.3		Cremer and Simões-Lopes, 2008
Babitonga Bay		2011		49	0.23		Sucunza et al. (2020a), SC/68b/ASI/04_rev1

LT –lLine transect, MR – mark-recapture, A – availability, T – perception, GS – group size.

3. Threats

Incidental mortality in fisheries is regarded as the greatest conservation problem for the franciscana across its range[5]. Population viability analysis using data on abundance, bycatch and population growth suggested that levels of bycatch were not sustainable in all FMAs in

[5] A Conservation Management Plan for Franciscana (*Pontoporia blainvillei*). IWC 66/CC11 available here and Sucunza, F, Danilewicz, D, Andriolo, A, Azevedo, AF, Secchi, ER, Zerbini, AN. Distribution, habitat use, and abundance of the endangered franciscana in southeastern and southern Brazil. *Mar Mam Sci*. 2020; 36: 421– 435. https://doi.org/10.1111/mms.12650

the early 2000s, leading to the classification of the franciscana as Vulnerable in the IUCN red list (Zerbini et al. 2017).

Abundance estimates obtained in the late 2000s showed a similar pattern, with bycatch levels ranging from 3-6% of the population size in all FMAs for which information was available.

Other potential threats to the species' survival include depletion of preferred prey due to overfishing, ingestion of plastic and other marine debris, chemical pollution and noise pollution. Although cause-effect evidence of these threats has not been thoroughly documented in franciscanas, their potential long-term synergetic effects together with the proven mortality from fisheries bycatch, may drive the species toward steep decline and/or eventual extinction if measures are not taken to counteract them.

4. Work by the IWC to date:

The 65b Scientific Committee recognized the franciscana as an appropriate candidate for a CMP development and an IWC Task Team for Franciscana Management Area I (FMA I) was assembled in response to the declining population estimates of franciscana in 2015. The Task Team's actions were completed and effectively handed over to the long-term CMP, which was endorsed in 2016. Argentina, Brazil and Uruguay are signatories to the CMP and Argentina was appointed co-ordinator in 2017. The overall objective of the CMP is 'to protect franciscana habitat and minimise anthropogenic threats, in particular by-catch'.

Following the recommendations of the VIII Workshop for the Research and Conservation of the franciscana (IWC/66a/SM/05), the CMP developed seven high priority action focuses outlined in Table 2.

Table 2. CMP Priority Actions

Continue research on Population Structure
Refine population structure and boundaries
Monitor Abundance, Trends and Bycatch.
Conduct a survey to identify fishing villages where bycatch of franciscanas are likely, including fisheries characteristics (e.g. type of nets, season of operation, fishing areas).Estimate bycatch in the artisanal fisheries with observer programs if possible.
Estimate bycatch in the industrial fisheries with observer programs whenever possible.
Beach monitoring to estimate bycatch.
Standardize and re-calculate previous information on CPUE and mortality estimates.
Quantitatively assess the effect of changes in fishing effort on bycatch and the fishermen socio-economics.
Estimate abundance and trends.
Evaluate use of alternate, more economic, methods to assess trends in abundance (e.g. passive acoustics monitoring).
Define the maximum allowable fishery related mortality (e.g. PBR, MALFIRM).
Model population viability analysis.
Mitigate Bycatch
Evaluate methods to reduce bycatch (e.g. development of alternate fishing methods, reduce fishing effort) and organize meetings with stakeholders to evaluate the most practical ways to implement/adjust monitoring and mitigation actions.

Increase enforcement in priority areas for the conservation of the franciscana and no-take zones.

Develop or Implement Protected Areas

Create conservation areas in Baia de Babitonga and Albardãoin, in Brazil

Develop a protection area in Estuário del Río Negro, in Argentina.

Create and implement the Management Plan for existing MPAs in Argentina.

Encourage the Implementation of the National Action Plan to Reduce the Interactions of Marine Mammals with Fisheries in Argentina.

Evaluate and monitoring the implementation of the use of acoustic alarms (pingers) in gillnets.

Evaluate and monitor the replacement of gillnets by alternative current fishing gears by those of lower impact.

Evaluate socio economic impact of the implementation of mitigation measures.

Develop a Strategy to Increase Public Awareness of the Franciscana

Design and implement a public awareness campaign about the franciscana and their conservation problems.

Design an educational program about the franciscana.

Include the Francescana in Bilateral and Multilateral Discussions

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In addition, in 2020, the IWC Scientific Committee (SC) established two intersessional correspondence groups (ICGs) to: (1) review population structure of the franciscana, including the level of support for each of the proposed stock subdivisions based on genetic and other lines of evidence (*e.g.,* morphology and contaminants); (2) review abundance estimates and factors to correct for potential sources of bias in these estimates, and the review of the species continues.

Aerial surveys, partly funded by the SC, were conducted in 2019 and 2022 to estimate the abundance of franciscana dolphins in Buenos Aires Province, Argentina. A total of nine coastal surveys were flown. These allowed for the generation of population estimates for several management areas (see Table 1), but more surveys would be necessary to estimate trends and understand whether population numbers are increasing or decreasing. Another aerial survey that is also partly funded by the SC is expected be conducted in 2022/ 2023 in Uruguay.

An IWC virtual workshop was held from 7-9 April 2021 to advance the review of the status of the franciscana by the IWC Scientific Committee (SC), and address two specific topics: population structure and abundance estimates. A further workshop was held in June 2022 in Curitiba, Brazil, to continue the review of franciscana and update the CMP. The report of this workshop will be presented next year.

An information dissemination campaign "Our Neighbour the Franciscana" is one of the priority actions identified by the CMP and various multi-lingual (English, Portuguese and Spanish) outreach materials (*e.g.,* infographics, videos, and posters) have been produced for use by the three range countries thereby increasing the campaign's reach and impact[6].

[6] This information campaign will be launched at the Commission meeting in October 2022.

The Bycatch Mitigation Initiative of the IWC in its work to address fisheries threats is also potentially highly relevant to franciscana conservation.

5. Lessons Learned

The franciscana remains relatively little studied and our lack of knowledge of its biology adversely affects the development of conservation plans and actions where such knowledge would help develop appropriate responses. This means that more research is needed but, at the same time, the imperilled nature of the species requires that actions cannot wait on more knowledge, and we need to address those threats that are clear now.

Other lessons include~~:~~

- The species' distribution in small and fragmented populations in nearshore habitats over a relatively large range requires action at multiple scales, taking into account regional differences in conservation options for each population~~.~~;
- Regional collaboration between the three countries within the species' range has enhanced the effectiveness of the CMP; and
- Policy decisions and research programmes are often most effectively addressed at national level, while specific activities to mitigate threats need to be carried out on local levels through collaboration with local communities.

6. The Big Picture

The franciscana is a highly distinctive long-beaked dolphin that occupies estuaries and nearshore areas. Its loss would represent not just the loss of a unique species but an entire taxonomic family (the Pontoporiidae), of which it is the only living representative.

Its loss would also mean that

- The ecosystem would lose a marine top predator with all the associated benefits and interconnections within the food web that this would affect;
- Any potential for this rare animal to continue to be a focus of tourism would be lost; and
- Its cultural links to the coastal peoples and communities of the three countries concerned would be destroyed.

7. Conclusion

The situation of the franciscana is deeply concerning and also exemplifies that of other small cetacean populations and species living in coastal waters where high levels of human activities, and in particular bycatch, adversely affect them[7]. Whilst more research would be desirable to underpin the scale of losses and threats for this unique species, the available evidence is sufficient to show that its conservation requires swift precautionary action now.

[7] Brownell, R. L., Reeves, R. R., Read, A. J., Smith, B.D., Thomas, P.O., Ralls, K., et al. (2019). Bycatch in gillnet fisheries threatens critically endangered small cetaceans and other aquatic megafauna. Endanger. Species Res. 40, 285–296. doi: 10.3354/ESR00994

We can no longer simply monitor species and populations as they slide towards extinction as was the case for the Yangtze River dolphin (Baiji), which was assumed to extinct in 2007.[8]. Rather, we should recognise the warning signs to act at an earlier point to avoid this. The IWC's franciscana Conservation Management Plan is now in place and key associated activities are happening, this needs to be further encouraged and supported.

[8] Turvey, S.T., Pitman, R.L., Taylor, B.L., Barlow, J., Akamatsu, T., Barrett, L.A., Zhao, X., Reeves, R.R., Stewart, B.S., Wang, K., et al. (2007). First human-caused extinction of a cetacean species? Biology Letters *3*, 537-540.