

A Conservation Management Plan for Franciscana (*Pontoporia blainvillei*).

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**This Conservation Management Plan was
prepared by Argentina, Brazil and Uruguay**

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Executive summary

Argentina, Brazil and Uruguay submitted a Conservation Management Plan for Franciscana. The overall objective of the CMP is to protect Franciscana (*Pontoporia blainvillei*) habitat and minimise anthropogenic threats, in particular by-catch. Following recommendations of the VIII Workshop for the Research and Conservation of Franciscana (IWC/66a/SM/05), the CMP developed seven high priority actions, ranging from public awareness and capacity building through research to mitigation. Iñíguez had been appointed the coordinator of the programme for a two-year period and a Steering Committee will be established including range state representatives, the Chairs of the Conservation Committee, Scientific Committee and the CMP SWG and the IWC Head of Science.

1. Introduction

The VIII Workshop for the Research and Conservation of the Franciscana (*Pontoporia blainvillei*) was organized by the Franciscana Consortium (www.pontoporia.org) and Projeto Toninhas, Univille, in São Francisco do Sul, Santa Catarina, Brazil, from 6 to 8 October 2015. The report of the Workshop (SC/66b/SM/05) was submitted and endorsed by the 66b IWC Scientific Committee and used in the development of this proposal.

2. Overall Objectives of the CMP

The overall objective of the CMP is to protect Franciscana habitat and minimise anthropogenic threats, in particular by-catch.

3. Legal framework

3.1. International Conventions and Agreements

The IUCN listed the species as *Vulnerable*. CMS classified Franciscana under Appendix I and II and by CITES under Appendix II.

3.2. National Legislation and Management Arrangements

3.2.1. Argentina

Argentina protects all cetacean species under Law 25577/02 and included Franciscana in their Red List as Endangered since 2011.

The Government of Argentina adopted a National Action Plan to Reduce the Interaction of Marine Mammals with fisheries in Argentina (Marine Mammals PAN) in 2015. The Plan was prepared jointly by the Secretariat of Environment and Sustainable Development and the Secretariat of Fisheries and Aquaculture with the cooperation of national and provincial government agencies, scientific and academic institutions, and the civil society.

The Marine Mammals PAN aims to contribute to ecosystem management of fisheries in waters under Argentine jurisdiction, assessing the interactions between them and marine mammals in order to reduce negative impacts on both. This PAN poses actions to mitigate bycatch.

The Workshop **encouraged** the PAN to be implemented. The workshop also **recommended** that actions defined in the Marine Mammal PAN to mitigate franciscana mortality are incorporated in the CMP.

The Provinces of Buenos Aires and Río Negro have, respectively, a system of six and four protected areas which partially overlap with the habitat of the franciscana. In Buenos Aires, management plans for the Bahía Samborombón, Bahía Blanca, Bahía Falsa and Bahía Verde, and Bahía San Blas Protected Areas have already been developed, but not implemented. Legal action taken to allow artisanal fishery operations prevents implementation of these plans in Bahía Blanca, Bahía Falsa and Bahía Verde, and Bahía San Blas. On the other hand, management plans

for the other areas (Arroyo Zabala, Pehuen C6-Monte Hermoso) are yet to be developed. Finally, management plans have also been developed for all areas in R6o Negro, but these have not been fully implemented either.

The Workshop participants **urged** for the development of management plans for the protected areas in Buenos Aires and Rio Negro missing such plans. They also **strongly encouraged** the effective implementation of management plans, whenever applicable.

Balne6rio El Condor, municipality of Viedma (province of R6o Negro) introduced since 2013 a ban on the use of gillnets in summer (Ordinance N6 7326 – Consejo Deliberante de Viedma). This regulation protects franciscanas from bycatch during the peak of reproduction in the Rio Negro Estuary. This region corresponds to the southern range of the species (Failla et al., 2012). Information in Failla et al. (2012) has been used to make recommendations to the Government of the R6o Negro Province for effective management of the franciscana, including a proposal to create the Rio Negro Estuary Protected Area. The workshop **encouraged** the establishment of the proposed natural reserve by the Government of R6o Negro.

Efforts to mitigate bycatch of franciscanas in FMA IV included (1) placing gillnets farther offshore in order to protect females and young individuals, (2) using gillnets as driftnets, (3) using acoustic deterrent devices (pingers), and (4) using reflective and stiff nets (Bordino et al., 2002, 2004, 2013). The pingers have shown to be effective in reducing the bycatch of the species in an experimental setting (Bordino et al., 2002, 2004). However, it is still unclear whether implementation of pingers in a real-scale fishery will have similar results and whether they will lead to habituation and habitat exclusion. Strategies need to be developed and evaluated for timely bycatch mitigation in gillnet fisheries (see item 4.3). An assessment of the effectiveness of switching gillnets by alternative fishing gear and the implementation of pingers in a real-scale fishery is ongoing.

3.2.2. Brazil

An Action Plan for the Conservation of the Franciscana was established by the Government of Brazil in 2010 (ICMBio, 2010) and the IWC Scientific Committee endorsed research and monitoring actions proposed by the plan (IWC, 2013). The plan was designed to be reviewed every 5 years and the next review is expected for 2016.

The Red List of threatened species of Brazil was recently updated according to the IUCN Red List categories and criteria with the publication by the Brazilian government of two legal instruments (Brazil 2014 a, b): (1) Decree MMA 444/2014, which provided a list of the threatened terrestrial and selected marine taxa (including the franciscana and other cetaceans) and (2) Decree MMA 445/2014, which listed exclusively the threatened fish and aquatic invertebrates. This second decree banned the capture of several commercially valuable fish species, including the Brazilian guitarfish (*Rhinobatos horkelli*) and hammerhead sharks (e.g. *Sphyrna lewini*, *S. zigaena*). Because these fish species are targeted by the gillnet fisheries, the protection provided by Decree MMA 445/2015 could contribute to reduce bycatch of franciscanas in this type of fisheries. However, due to the pressure of the industrial fishing sector, this decree was first modified to be less restrictive (e.g. by allowing commercial exploitation of species listed as Vulnerable), and was eventually revoked by a judicial decision of the government of Brazil.

A similar situation was occurred with Red Lists at the regional level. For example, all marine fishes were officially excluded (Decree RS 52.310/2015) from the Red List of threatened fauna species of the state of Rio Grande do Sul (Decree RS 51.797/2014) (Rio Grande do Sul, 2014).

The workshop **recognized** that national and regional Red Lists of Threatened Fauna to be important steps towards improving the conservation of the franciscana and that revoking the decrees that created these lists represented a serious setback towards the sustainable management of fisheries in Brazil (see also, Di Dario et al., 2015, Lees, 2015, Ott et al., 2015).

In 2005, following a civil society request, the Brazilian Ministry of Environment proposed the establishment of the Babitonga Marine Protected Area in southern FMA II in order to protect the franciscana, the Guiana dolphin (*Sotalia guianensis*), other vulnerable species, and their mangrove-dominated habitat from potential threats (e.g. port and urban development, high fishing effort). The Ministry of Environment also proposed the creation of the Marine National Park of Albardão (adjacent to the border between Brazil and Uruguay) based on high bycatch rates of the franciscana (Ferreira et al., 2010) and other threatened species (e.g. marine turtles, Secchi pers. com.). Creation and implementation of both MPAs are currently on hold. The Workshop recognizes that these MPAs are relevant for protecting the franciscana, other vulnerable species, and their habitat and, therefore, **recommended** that these MPAs be created and implemented.

It was noted that other protected areas that could potentially improve the conservation of the franciscana along the coast of Brazil. One example is the Expansion of the Restinga de Jurubatiba National Park limits to incorporate the adjacent marine habitat, which was requested to the Brazilian Environmental Ministry in 2012 by the Secretary of the Environment of Rio de Janeiro. Because the evidence that this expansion would benefit the franciscana is limited, the workshop **recommended** that further research be conducted to better design the boundaries of this area.

A joint Interministerial Regulation of the Ministry of Environment and Ministry of Fisheries and Aquiculture (here after referred to as INI12/2012) was published on the 22 August 2012 aiming at regulating gillnet fisheries in southern and southeastern Brazil, between the States of Rio Grande do Sul to Espírito Santo. This fishery had been carried out unregulated for several decades. The number of boats, the dimension of the nets and the length of the fishing trips increased steadily and with no rules. Therefore, despite the frequent and significant mortality of several endangered species, such as cetaceans, sea turtles, birds and sharks, as well as the decline of some target species, no enforcement could take place. Lack of regulation markedly increased fishing effort and the catch of the already depleted stocks. One of the most affected species is the franciscana.

Although less conservative in several aspects than the recommendations in the Action Plan for the Conservation of the Franciscana (ICMBio 2012), several norms of this INI 12/2012 that establish limits on the gillnet fishing effort include:

Gillnet length was reduced and the maximum length depends on boat size. If the boat length is modified, the net length will follow the smaller previous category. Further reduction is scheduled for 2016.

Halting gillnet fishing permits. New boats are not allowed to have gillnet fishing permits and boats operating with a different gear cannot change to gillnetting.

No gillnet fishing is allowed between 15 May and 15 June, except for the artisanal fishery.

Several levels of no-fishing areas were established along the entire region regulated by INI12/2012: (i) no powered boat can fish within the first nautical mile (ii) only rowing boats can operate within the first nautical mile but with nets no longer than 1000m; (iii) no powered boat can operate within the 5nm between the southern border of Brazil (with Uruguay) to Albardão lighthouse (located approximately 120km further to the north); (iv) to the north of Albardão, no gillnetting is allowed for commercial gillnetting within 4nm up to the northern limit of Rio Grande do Sul state and within 3nm from this point to the remaining area concerned in this Regulation; (v) no gillnetting is allowed within the 15 nm off the Jurubatiba National Park.

All boats longer than 15m are obligated to carry and turn on Virtual Monitoring System (VMS) when at sea so their fishing location can be monitored.

Fishing license will be lost in case of infraction to the Regulation.

Although this Regulation is likely not sufficient to protect the franciscana to a level adequate to ensure sustainability of the species, it is considered an important step towards the conservation of several endangered species and for the recovery of some fish stocks and their habitats.

In discussion, the Workshop **agreed** that INI12/2012 was an important legal framework to stop the increase of effort of a fishery that causes high bycatch of the franciscana and other vulnerable marine vertebrates. However, it is not clear whether regulations within INI12/2012 are effective to protect all franciscana stocks within Brazil and whether compliance by fishermen or enforcement by government authorities have taken place. Therefore the workshop **strongly recommended** that actions towards assessing compliance and effectiveness of INI12/2012 to improve the conservation status of the franciscana be developed. The workshop **agreed** that the main actions to perform this assessment are those listed as MON 1.1-1.4, 1.6, 1.8, 1.11 and MIT 1.2 (Table 1, item 5).

3.3.3. Uruguay

The franciscana is included in the conservation priority species list of Uruguay due to the regional endemism and the impact of incidental capture in fisheries (Soutullo et al., 2013). In addition, a recently approved law N°19128 declared Uruguayan waters as a sanctuary for whales and dolphins. The National System of Protected Areas (SNAP) includes five Marine Protected Areas that partially overlaps with the range of the franciscana in Uruguay: Humedales del Santa Lucía (Montevideo), Laguna Garzón (Rocha), Laguna de Rocha (Rocha), Cabo Polonio (Rocha) y Cerro Verde e islas de La Coronilla (Rocha) (Soutullo et al., 2014). The need to promote the conservation of the franciscana is formally recognized in the latter three areas. In Cabo Polonio National Park, the species was evaluated as a potential focal conservation target during the elaboration of the Protected Area Action Plan, but finally not included because use of the area by the species is poorly understood. However, it was **recommended** to increase the research in order to rapidly reconsider its incorporation as a conservation target for the area (Nin et al., 2010).

At a local level, Canelones Department has recently developed a System of Protected Areas to conserve threatened ecosystems and species. The franciscana is included in the priority list (Article 12) as a species in need of research and conservation (Intendencia Departamental de Canelones, 2014). Two pilot areas have been proposed under this system, one terrestrial and one coastal. The latter, named Jaureguiberry, will partially overlap with the distribution of the franciscana.

4. Governance

4.1. Coordination of a CMP

4.1.1. *Steering Committee*

Each country will nominate candidates for the Steering Committee, whose terms of reference are:

1. Constituted by government representatives from the range states and by representatives from the IWC (Head of Science, the Chairs of the IWC Scientific and Conservation Committees and the Chair of the IWC SWG CMP).
2. The Steering Committee can invite observers to attend its meetings.
3. The Coordinator is an ex-officio member of the Committee.
4. A Chair will be selected by the members for each meeting.

5. Members serve for the duration of the CMP unless replaced by the nominating parties.
6. Provide a focus to, and monitor the delivery of, the CMP.
7. Provide guidance to, and encourage conservation actions by, the range states.
8. Report and respond, as appropriate, to requests from range states, IWC and other international fora regarding the CMP.
9. Facilitate the exchange and sharing of information.
10. Report to the IWC through the Conservation Committee.
11. Oversight the work program of the Coordinator.
12. Manage any funding provided by the IWC to implement the CMP.

The Steering Committee will be implemented soon after the CMP of Franciscana will be adopted by the IWC.

4.1.2. *Coordinator*

Evangelista Coutinho nominated Iñíguez for the position of Coordinator. The nomination was unanimously accepted by the proponents. Iñíguez accepted the nomination.

The proponents considered that on the basis of the task description for the Coordinator (Annex A), the position was equivalent to 60% of a full-time position. Noting that compensation is necessary, it was decided to request advice to the IWC SWG CMP.

The IWC need to approve funding to support the delivery of the CMP Franciscana. Those funds will be allocated as follows:

- Compensation for the coordinator for a 18 months period
- Travel budget and meetings for the Steering Committee.

The Coordinator was tasked with preparing a detailed budget with the expenditures already made and future expenses. The budget will be approved by the Steering Committee.

4.2. **Timeline for a CMP**

Table 1 summarizes priority actions for research and conservation of the Franciscana identified .

5. **Science**

The franciscana dolphin is a small odontocete inhabiting coastal waters of the Southwestern Atlantic Ocean from Itaúnas (18°25'S), Espírito Santo State, Brazil, to Golfo San Matias (42°10'S), Chubut, Argentina (Crespo et al. 1998; Siciliano et al. 2002) (Fig. 2). Two gaps in distribution are found 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 (Siciliano et al. 2002, 2015).

The species distribution range has been divided into four 'Franciscana Management Areas' (FMAs I to IV, Secchi et al. 2003), with FMA I and II located in Brazil, FMA III shared between Brazil and Uruguay and FMA IV located in Argentina. The population structure of the franciscana was discussed by the IWC in 2004 (IWC, 2005) and the Committee recommended further work to refine the boundaries of the FMAs and to assess substructure within the FMAs.

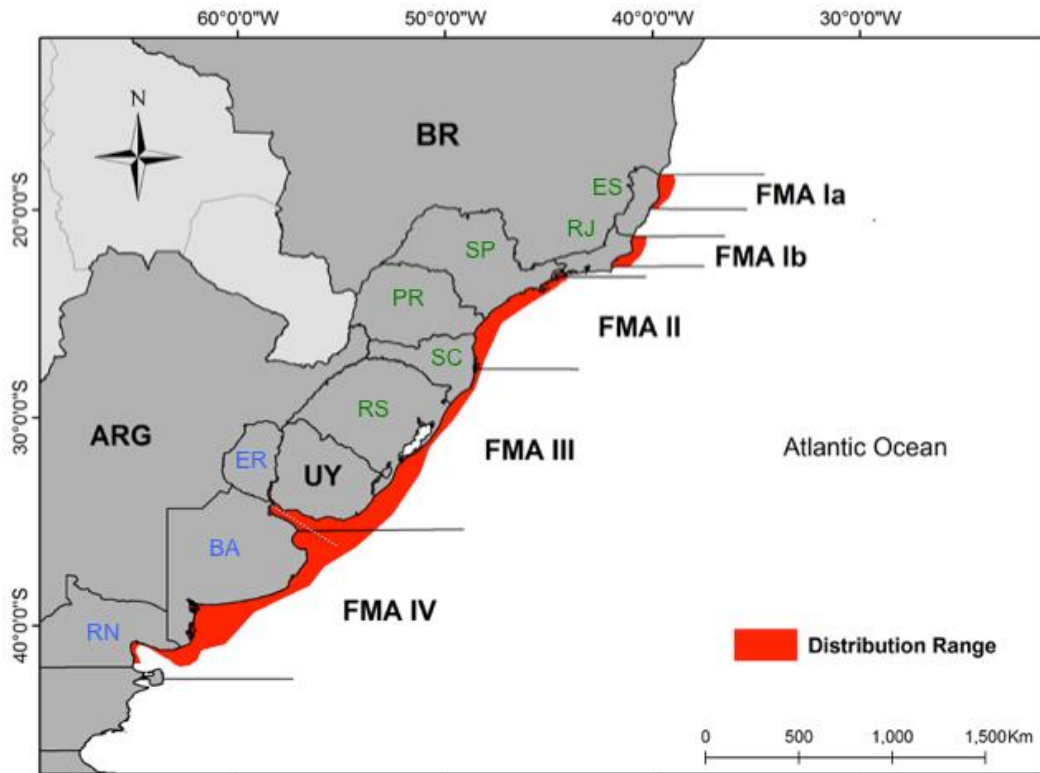


Fig. 1 – Map indicative of the franciscana distribution and the new boundaries of the Franciscana Management Areas along the coast of Brazil (BR), Uruguay (UY) and Argentina (ARG). Acronyms for states in Brazil and provinces in Argentina are indicated in green and blue, respectively (ES = Espírito Santo, RJ = Rio de Janeiro, SP = São Paulo, PR = Paraná, SC = Santa Catarina, RS = Rio Grande do Sul, ER = Entre Ríos, BA = Buenos Aires and RN = Río Negro).

Since then, morphological (Barbato et al., 2012) and molecular studies have been conducted along different areas of the species distribution (e.g. Lázaro et al., 2004; Mendez et al., 2008, 2010; Véras, 2011; Costa-Urrutia et al., 2012; Cunha et al., 2014; Negri et al., 2015a; Gariboldi et al., 2015; Ott et al., 2015). Most of these studies have pointed for a finer subdivision within the FMAs, although the degree of differentiation found is highly variable among the proposed units. Considering these variation, the fact of some studies are based only on mitochondrial data and, mostly, that there is no consensus of the threshold level of gene flow above which the status of management units should be adopted, and only the greatest genetic difference was considered here. In this sense, the FMA I was considered an Evolutionarily Significant Unit and was split into two distinct management units termed FMA Ia and FMA Ib (Cunha et al., 2014). This division was also supported by a well-known gap in the distribution of the species (Siciliano et al., 2002; Danilewicz et al., 2012). In addition, the boundary between the FMAII and FMAIII was moved about 250 Km north to the center coast of the state of Santa Catarina (Ott et al., 2002; Véras, 2011, Cunha et al., 2014). The new proposed population structure is illustrated in Fig. 2.

The workshop **agreed** that for the time being, the stock structure described above should be adopted by the workshop to discuss conservation actions. However, the Workshop recognized the need for and **recommended** that further studies be conducted to better understand population substructure within the existing FMAs and whether they should be treated as management units. The workshop considered such studies a priority action (RES-1 in Table 1, item 5 of SC/66b/SM/05)

Abundance has been estimated for all FMAs, mostly through aerial surveys. Danilewicz et al. (2012) reported that the franciscana population in FMA I in 2011 comprised less than 2000 dolphins (CV=0.46). This estimate applies only for FMA Ib because no on-effort sightings were recorded in FMA Ia. FMA Ib

is the smallest and lowest density of all franciscana populations for which estimates are available. Abundance estimates for FMA Ia are required.

The abundance of franciscanas in FMA II population was estimated through aerial surveys in the summer 2008/9 and comprised 8,500 individuals (CV=0.34) (Zerbini et al., 2010). This estimate corresponds to the coastal range of FMA II, up to the 30m isobaths and may not cover the entire offshore range of the stock. Within FMA II, there are abundance estimates for Baía da Babitonga in Santa Catarina State, where a possibly isolated population of franciscanas occurs (Cremer et al., 2012; Dias et al., 2013). Boat-based surveys were conducted with line transect methods between 2003 and 2008 and estimated an abundance of 50 individuals (95% CI=28-89) (Cremer and Simões-Lopes, 2008). Another estimate of 55 individuals (CV=0.22) for this area was computed in 2011 (Zerbini et al., 2011), suggesting this population remained relatively stable over a period of 10 years. Seasonal abundance of franciscanas in Baía da Babitonga were estimated using mark-recapture methods in 2011 and 2013 and indicated abundances ranging from 52-82 individuals (Sartori, 2014).

The first abundance estimate for FMA III was computed at 42,000 individuals (CV=0.34) with an aerial survey conducted in 1996 (Secchi et al., 2001). While this estimate applies to the range of the species in Uruguay and Rio Grande do Sul, it must be carefully considered because the survey was conducted in a small area in Rio Grande do Sul and extrapolated to a much larger area, which could cause significantly bias in the overall estimate (IWC, 2005). A second survey conducted in Rio Grande do Sul estimated a population of 6,800 (CV=0.32) in 2004 (Danilewicz et al., 2010), but this estimate also did not cover the whole range of FMA III. A new estimate obtained in 2014 covered a similar area and comprised ~10,000 (CV=0.20) (Danilewicz et al., unpublished data). Trends in FMA III cannot be computed from this time series of abundance estimates because surveys are not comparable (e.g. due to use of different aircraft, differences in observer experience, and lack of appropriate correction factors for visibility bias) and because they were only conducted in the Brazilian portion of the stock. Surveys to estimate abundance have never occurred in Uruguay.

The only study to compute abundance of franciscana in Argentina was conducted in 2003-2004. An abundance of nearly 14,000 individuals (CV=0.42) was computed from aerial surveys carried out in coastal waters to depths of up to 30m (Crespo et al., 2010).

After reviewing information on abundance and trends for all FMAs, the workshop **recommended** that new estimates of abundance using comparable methods and appropriate correction factors be conducted in all FMAs in order to estimate trends. Because of high levels of bycatch in FMA III and because estimates of abundance in Uruguay have never been performed, surveys in this country should be considered a priority. In addition, the workshop **recommended** that alternate, more economic methods (e.g. passive acoustic monitoring) be evaluated to obtain estimates of trends in abundance for the franciscana. These recommendations were identified as priority actions in Table 1, Item 5 (SC/66b/SM/05).

6. Threats, Mitigation Measures and Monitoring

Incidental mortality is likely the greatest threat to the franciscana in FMAs Ia and Ib. There are no current estimates of bycatch for FMA Ia. Estimates of bycatch in FMA Ib have not been conducted since the early 2000s when Di Benedetto (2003) monitored one of the largest fishing ports in the region (Atafona) and estimated a fishery-related mortality of 110 individuals in 2001-2002. If bycatch levels are similar to those observed in 2002, fishing related mortality is unsustainable (Secchi, 2006; Danilewicz et al. 2012). More recently, recovery of animals found ashore showing evidence of fisheries interactions in northern Rio de Janeiro and Espírito Santo suggested that bycatch of franciscana is ongoing (Moura et al. 2009a,b; IWC, in press), but current levels and the full extent of the impact of the bycatch to FMA I franciscanas are unknown.

In FMA II, incidental mortality is also likely to represent the greatest threat to the franciscana, however

there are few estimates of bycatch for this area. Small-scale gillnet fisheries (SSGF) is an extensive activity in this area, though their scattered and widespread nature hamper ideal approaches for monitoring and estimating bycatch. Except for São Paulo State, there is no effort data available for SSGF. In this area, bycatch in SSGF was estimated at 372 animals (Bertozzi, 2009) for the year 2004. It is likely that if the other areas in FMA II (States of Paraná and Santa Catarina) have a similar bycatch levels the fishing related mortality is substantially higher.

Incidental mortality in FMA III is the highest among the franciscana distribution: annual estimates vary from a several hundreds to a few thousands (Secchi et al., 1997, 2004; Ott et al., 2002; Franco-Trecu et al., 2009; Prado et al., 2013, Szephegyi, 2015). Nevertheless, those estimates did not include the mortality in the area between northern Rio Grande do Sul and central Santa Catarina States (new northern limit of FMA III). Long-term data on strandings suggest that mortality in this stretch of coasts is not negligible (Simoes-Lopes, pers. com).

Bycatch in the artisanal demersal gillnet fisheries for long has been considered the main threat to franciscana in FMA IV (Corcuera et al., 1994; Crespo et al., 1994; Bordino and Albareda, 2004; Cappozzo et al., 2007; Negri et al., 2012). Annual mortality in small artisanal gillnet fisheries in coastal Buenos Aires was estimated at about 500-800 individuals (Bordino and Albareda, 2004; Cappozzo et al., 2007; Negri et al., 2012).

Population viability analysis using data on abundance, bycatch and population growth suggest that levels of bycatch were not sustainable in all FMAs in the early 2000s (Secchi and Fletcher, 2004; Secchi, 2006). These analyses led to the classification of the franciscana as Vulnerable in the IUCN red list (Reeves et al., 2008). 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 is available (Crespo et al., 2010; Zerbini et al. 2010; Danilewicz et al., 2012).

Other potential threats to the species viability due to habitat degradation include depletion of franciscana preferred prey due to overfishing (Secchi et al., 2003b; Paso Viola et al., 2014); ingestion of synthetic debris (Rodriguez et al., 2002; Denuncio et al, 2011), chemical (e.g. Lailson-Brito et al., 2002, 2007, 2011; Gerpe et al., 2002; Seixas et al. 2007, 2008; Leonel et al., 2010; 2014; Yogui et al., 2010, 2011; Dorneles et al., 2013; De la Torre et al., 2012; Alonso et al., 2012a,b; Gago et al., 2013, Panebianco et al., 2011; 2012; 2014; Polizzi et al., 2013), release of sewage (Gonzales-Vieira et al., 2013) and sound pollution (Di Benedetto and Ramos, 2014; Holz, 2014). Although cause-effect evidence of these threats has not been observed in franciscanas, their potential long-term synergetic effects on franciscana fitness, health and viability should not be overlooked. Some pathogens and chemicals can affect reproductive rates and cause large-scale mortality in cetaceans. The workshop **recommended** that health assessments of the franciscana be considered.

After reviewing information on anthropogenic threats, it was **agreed** that bycatch is the most important conservation problem faced by the franciscana. The workshop identified multiple actions to mitigate bycatch and **strongly recommended** they be implemented. These actions are presented in Table 1, Item 5.

7. Actions

The workshop noted the need to increase public awareness about the franciscana and its conservation needs with the general public. During the last decade, different government and non-government organizations developed public awareness activities, including educational campaigns and capacity building activities.

The workshop **recommended** increasing awareness of the franciscana in partnership with organizations and/or experts in outreach, marketing, education. The workshop recognized this to be a priority action to improve the conservation of the franciscana (Table 1, Item 5).

In light of the most recent information available for the franciscana, the workshop discussed priority actions to improve research, monitoring and conservation of the species (Table 1).

Table 1 – Priority Actions for Research and Conservation of the Franciscana (RES = research, MON = monitoring, MIT = mitigation and PAC = public awareness campaigns)

Actions	Region	Institution	Tentative Timeline
RES-1. Continue to Investigate Population Structure			
RES-1.1. Refine population structure and boundaries	FMA II	UFPR, Projeto Toninhas/Univille, UERJ	2017
	FMA III	FURG, UERGS, Unisinos, GEMARS, UDESC, UFSC, Aquamarina, UDELAR, UERJ, Vida Silvestre Uruguay	2017
	FMA IV	CENPAT, UNMdP, MACN, Aquamarina, others	2016
MON-1. Monitor Abundance, Trends and Bycatch			
MON 1.1. 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).	FMA Ia and Ib	IOC/FIOCRUZ, Instituto Aqualie, Instituto Baleia-Jubarte, UENF, UFES, UFJF	2017
MON 1.2. Estimate bycatch in the artisanal fisheries with observer programs if possible	FMA Ia and Ib	IOC/FIOCRUZ, Instituto Aqualie, Instituto Baleia-Jubarte, UENF, UFES, UFJF	2019
	FMA II	Biopesca/UNESP, IO-USP	2019
	FMA III	FURG, GEMARS, UERGS, UDESC	2019
	FMA IV	CENPAT, UNMdP, MACN, Aquamarina, others	2019
MON 1.3. Estimate bycatch in the industrial fisheries with observer programs whenever possible	FMA Ia and Ib	IOC/FIOCRUZ, Instituto Aqualie, Instituto Baleia-Jubarte, UENF, UFES, UFJF	2018
	FMA II	Biopesca/UNESP, IO-USP	2018
	FMA III	FURG, GEMARS,	2018

		UERGS, UDESC	
	FMA IV	CENPAT, UNMdP, MACN, Aquamarina, others	2018
MON 1.4. - Beach monitoring to estimate bycatch	FMA III	FURG, NEMA, GEMARS, UERGS, UFRGS, UFJF, Unisinos	2018
MON 1.5. Standardize and re-calculate previous information on CPUE and mortality estimates	FMA IV	CENPAT, UNMdP, MACN, Aquamarina, others	2017
MON 1.6. Facilitate access to the Virtual Monitoring System data and the official data of registered vessels held by the Government of Brazil to universities and other research organizations	FMA Ia, Ib, II and III	Government of Brazil	2017
MON 1.7. Quantitatively assess the effect of changes in fishing effort on bycatch and the fishermen socio-economics	All FMAs	Instituto Aqualie, Biopesca/ UNESP, CEM/UFPR, UFJF, Aquamarine, Fundación Vida Silvestre Argentina, FURG, IO-USP, UDELAR, Vida Silvestre Uruguay	2019
MON 1.8. Estimate abundance and trends	FMA Ia and Ib	Instituto Aqualie, Instituto Baleia-Jubarte	2022
	FMA II	Instituto Aqualie, CEM/UFPR, Projeto Toninhas/Univille	2022
	FMA III	Fundación Vida Silvestre, Udelar, Instituto Aqualie, Univille, FURG, UERGS, GEMARS, Vida Silvestre Uruguay	2022
	FMA IV	CENPAT, UNMdP, MACN, others	2017
MON 1.9. Evaluate use of alternate, more economic, methods to assess trends in abundance (e.g. passive acoustics monitoring).	All FMAs	Instituto Aqualie, UFJF, Projeto Toninhas/Univille, Fundación Cethus, Aquamarina, CENPAT, FVSA, UNMDP, MACN, Yaqu Pacha, AL Zoo Kolmarden	2017

MON 1.10. Define the maximum allowable fishery related mortality (e.g. PBR, MALFIRM)	All FMAs	FURG, GEMARS	2018
MON 1.11. Model population viability analysis	All FMAs	CENPAT, UNMdP, MACN, Aquamarina, FURG	2019
MIT-1. Mitigate Bycatch			
MIT 1.1. 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.	FMA Ia and Ib	Instituto Aqualie, Instituto Baleia-Jubarte, UENF	2020
	FMA II	Biopesca/UNESP, CEM/UFPR, IO-USP	2020
	FMA III	FURG, GEMARS, UFJF, Instituto Aqualie, UERGS	2020
	FMA IV	Aquamarina, FVSA	2018
MIT 1.2. Increase enforcement in priority areas for the conservation of the franciscana and no-take zones	All FMAs	Government Organizations	2017
MIT 1.3. Reinstate the list of threatened species in regional and national levels in Brazil	FMA Ia and b, II, III	Government Organizations	2017
MIT 2. - Develop or Implement Protected Areas			
MIT 2.1. Create conservation areas in Baía de Babitonga and Albardão	FMA II and III	Government Organizations	2017
MIT 2.2. Develop a protection area in Estuário del Rio Negro	FMA IV	Government of Rio Negro, Fundación Cethus	2018
MIT 2.3. Create and implement the Management Plan for existing MPAs in Argentina (Bahía Samborombón; Arroyo Zabala; Pehuencó-Monte Hermoso; Bahía Blanca, Falsa y Verde; Bahía San Blas; Punta Bermeja – La Lobería; Caleta de los Loros; Bahía de San Antonio) and Uruguay (Humedales del Santa Lucía, Laguna Garzón, Laguna de Rocha, Cabo Polonio y Cerro Verde e islas de La Coronilla)	FMA III and IV	Governmental authorities	2020
MIT-3. Encourage the Implementation of the National Action Plan to Reduce the Interactions of Marine Mammals with Fisheries (PAN) in Argentina.			
MIT 3.1. - Evaluate and monitoring the implementation of the use of acoustic alarms (pingers) in gillnets	FMA IV	Aquamarina, Government Agencies	2020

MIT 3.2. - Evaluate and monitor the replacement of gillnets by alternative current fishing gears by those of lower impact	FMA IV	Aquamarina, Fundación Vida Silvestre Argentina, Government Agencies	2018
MIT 3.3. - Evaluate socio economic impact of the implementation of mitigation measures	FMA IV	Aquamarina, Universidad Nacional del Sur, Fundación Vida Silvestre Argentina, Government Agencies	2017
PAC-1. Develop a Strategy to Increase Public Awareness of the Franciscana			
PAC 1.1. Design and implement a public awareness campaign about the franciscana and their conservation problems	All FMAs	Government Organizations, Scientific Community, NGOs	2017
PAC 1.2. Design an educational program about the franciscana	All FMAs	Government Organizations, Scientific Community, NGOs	2017
PAC 1.3. Create a steering group to coordinate actions PAC 1.1 and PAC 1.2	All FMAs	Government Organizations, Scientific Community, NGOs	2017
PAC 1.4. Build capacity of specific sectors (e.g. fishermen, park rangers)	All FMAs	Government Organizations, Scientific Community, NGOs	2017
PAC-2. Include the Franciscana in Bilateral and Multilateral Discussions			
PAC 2.1. - Generate discussions within the framework of CMS	All FMAs	Ministry of Foreign Affairs of Argentina, Uruguay and Brazil, Yaqu Pacha, Fundación Cethus	2019
PAC 2.2. - Generate memoranda of understanding among universities and research institutes of Argentina, Uruguay and Brazil within the framework of applicable agreements to establish common research programs	All FMAs	Ministry of Foreign Affairs of Argentina, Uruguay and Brazil, Universities and NGOs	2018

The workshop also reviewed progress towards recommendations made by the IWC Scientific Committee since the Committee's last review of the franciscana status in 2004 (IWC, 2005). A table was produced identifying whether those recommendations were addressed (Annex 3). Information summarized in the table shows that significant progress in franciscana research has been made since the 2004 review. Therefore, the workshop **requested** that the IWC Scientific Committee considers holding a new review of the species. Such a review would be particularly valuable to improve research and refine conservation actions under an IWC CMP.

The Representatives of Argentina, Brazil and Uruguay expressed their support for the conservation of the franciscana and their commitment with the development of a conservation management plan for the species within the framework of the IWC.

An annual report on the progress made by the CMP will be submitted to the IWC Scientific Committee and to the joint SC-CC meeting. The first review will be done in October 2019.

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Annex A

Tasks of co-ordinator in conjunction with steering committee:

- (1) To assess the need for national sub-coordinators in each of the range states,
- (2) To fully specify and determine appropriate budgets for the Actions of the CMP,
- (3) To promote and explain the CMP and progress with its implementation to relevant stakeholders, including:
 - a. International and supranational bodies.
 - b. Range states.
 - c. Managers of local marine protected areas and/or co-ordinators of national plans
 - d. Industry representatives including fisheries, hydrocarbon exploration, shipping etc.
 - e. Local authorities.
 - f. NGOs.
- (4) To raise funds for and manage the CMP funds including, where necessary, assigning contracts to ensure that the Actions of the CMP are undertaken and completed.
- (5) To liaise with relevant authorities to facilitate the obtaining of any permits required to undertake Actions of the CMP.
- (6) To: (1) develop an appropriate data availability agreement that respects the rights of researchers; and (2) facilitate data sharing agreements that ensure that existing and new data are made available in timely fashion to maximise their value for franciscana.
- (7) To develop an appropriate database or databases and co-ordinate the collation in an appropriate electronic format, of data relevant to the implementation of the Conservation Plan including data collected as part of the Actions of the Plan. This should include the facilitation of the use of data on anthropogenic activities, environmental data and whale data in a GIS context.
- (8) To maintain and update the existing list of international and national regulations and guidelines relevant to the conservation and management of franciscana.
- (9) To produce concise Annual Progress reports on the implementation of the CMP.
- (10) To arrange for periodic (3-5 year) expert reviews of the CMP including the development of new actions as appropriate
- (11) To develop a CMP website in co-ordination with the IWC Secretariat as a resource for researchers, stakeholders and the general public.