

NEXT STEPS TOWARDS ZIPHIUS CMP

Issue: Conservation Management Plans

1. Action requested

The Scientific Committee is invited to:

- a. **consider** the draft CMP on Ziphius;
- b. **discuss** the next steps to finalise this CMP;
- c. **provide recommendations** to the Parties on this issue.

2. Background

During MOP6 and MOP8, Parties adopted Resolution 6.21 on “Species Conservation Management Plans” (CMPs) and Resolution 8.14 “Conservation Management Plans”, which are key to manage human activities affecting cetaceans in the Mediterranean Sea, and to maintain a favourable conservation status throughout their historical range, based on the best available scientific knowledge. To date, four CMPs are under development, i.e., for fin whales, Risso’s dolphins, common dolphins and bottlenose dolphins.

During the 15th Meeting of the Scientific Committee, The Scientific Committee prioritized drafting future CMP on:

- Ziphius – to be led by Aurelie Moulins; and
- Sperm whale – to be led by Caterina Lanfredi

**DRAFT: ACCOBAMS CMP for
Mediterranean goose beaked whale
(*Ziphius cavirostris*)**

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Executive Summary 3

1.	Why a Conservation Management Plan is needed.....	4
2.	Legal framework	5
3.	Biology and status of the Mediterranean Subpopulation	5
3.1	Population Structure	5
3.2	Habitat and Ecology	5
3.3	Abundance and Trends	5
3.4	Information Gaps/needs	5
3.5	'Attributes' of the population(s) to be monitored.....	5
4.	Conservation Threats.....	7
4.1	Summary about threats	7
4.2	Anthropogenic noise	7
4.3	Habitat degradation	7
4.4	Fishery interactions.....	7
4.5	Marine litter ingestion	7
4.6	Chemical contaminants.....	7
4.7	Physical disturbance	8
4.8	Climate change.....	8
4.9	Cumulative effects	8
4.10	Monitoring	8
5.	Mitigation measures.....	9
5.1	Anthropogenic Noise	9
5.2	Fishery interactions.....	9
5.3	Habitat degradation	9
5.4	Micro and nano plastic ingestion.....	9
5.5	Chemical contaminants.....	9
5.6	Physical disturbance	9
6.	PUBLIC AWARENESS, EDUCATION and capacity building.....	10
7.	EXECUTIVE SUMMARY OF ACTIONS	10
7.1	Dealing with inadequate data	10
7.2	Monitoring	10
7.3	Life of the CMP.....	10
7.4	Implementation of the CMP; co-ordination, involvement of stakeholders	10
7.5	Table of actions	10
8.	Actions	11
●	Action:.....	11
o	Description of action.....	11
o	Initial budget items to be considered by ISC	11
o	Actors	11
o	Action evaluation	11
o	Priority.....	11
9.	REFERENCES.....	12

TO BE FINALISED WHEN THE PLAN IS READY

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1. Why a Conservation Management Plan is needed

Rationales for the development of CMP

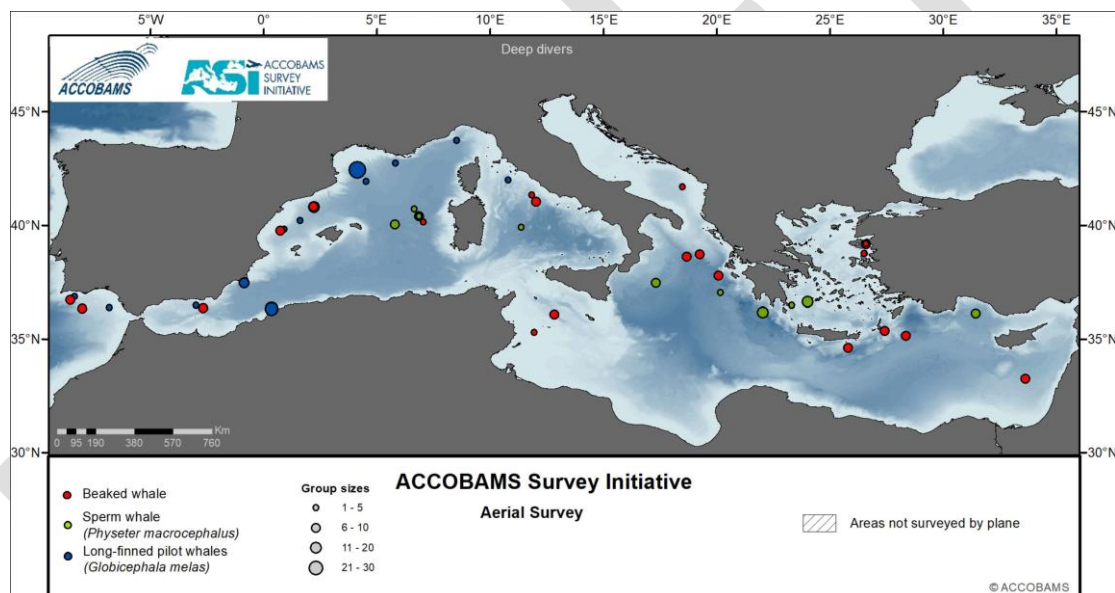
Main point to develop that warrant conservation concern over this population includes:

- Goose beaked whales qualify as a subpopulation based on genetic data.
- The Mediterranean subpopulation is listed as Vulnerable [C2a(ii)] according to the IUCN assessment (Cañadas and Notarbartolo di Sciara 2018)
 - The subpopulation contains fewer than 10,000 mature individuals.
 - The subpopulation experiences an inferred continuing decline
 - ...

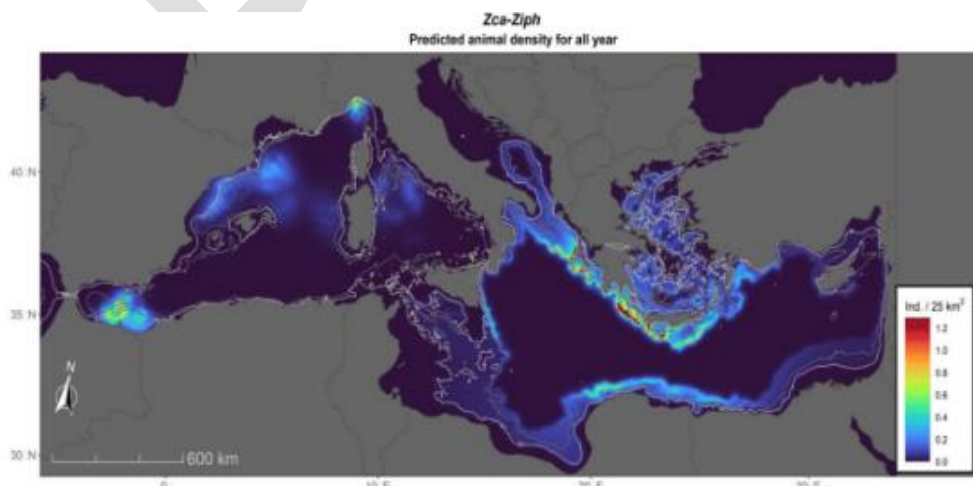
Atypical mass strandings of goose beaked whale have been linked to high-powered naval sonar and seismic exploration. Main threats to the species regard to vulnerability to anthropogenic noise (detailed in chapter 4).

Map of Geographical Range

- Cañadas, A., Pierantonio, N., Araujo, H., David, L., Di Meglio, N., Doremus, G., Gonzalvo, J., Holcer, D., Laran, S., Lauriano, G. and Perri, M., **2023**. Distribution patterns of marine megafauna density in the Mediterranean Sea assessed through the ACCOBAMS Survey Initiative (ASI). *Frontiers in Marine Science*, 10 p.1270917. <https://doi.org/10.3389/fmars.2023.1270917>



- [Not published, Canadas *et al.*, 2024]



Recognition Range by countries

Recent IUCN Assessment (Mediterranean and European)

ACCOBAMS documents

Literature

2. LEGAL FRAMEWORK

3. BIOLOGY AND STATUS OF THE MEDITERRANEAN SUBPOPULATION

3.1 POPULATION STRUCTURE

- Photo-id data

Coomber, F.G., Falcone, E.A., Keene, E.L. *et al.* **2022**. Multi-regional comparison of scarring and pigmentation patterns in Cuvier's beaked whales. *Mamm Biol* 102, 733–750. <https://doi.org/10.1007/s42991-022-00226-6>

- Genetic analyses

Tonay AM, Karaman K, Dede A, *et al.* **2024**. Genetic investigation of Cuvier's beaked whale, *Ziphius cavirostris*, along the coast of Türkiye and Northern Cyprus, based on mtDNA sequences. *Journal of the Marine Biological Association of the United Kingdom*;104:e14. doi:10.1017/S0025315424000079

Aubrie B. Onoufriou *et al.* **2022**. Biogeography in the deep: Hierarchical population genomic structure of two beaked whale species *Global Ecology and Conservation*, 40 e02308.

- Group size
- Social organization
- Information gaps/needs

3.2 HABITAT AND ECOLOGY

- Distribution and movements (Key habitats, Diving behavior, Individual movements)
Boldrocchi, Conte, Galli, Bettinetti, Valsecchi. **2024**. Cuvier's beaked whale (*Ziphius cavirostris*) detection through surface-sourced eDNA: A promising approach for monitoring deep-diving cetaceans. *Ecological Indicators*. 161.

- Diet
- Life history?
- Information gaps/needs

3.3 ABUNDANCE AND TRENDS

- Strandings

Karaa, S., Jerbi, H., Marouani, S. *et al.* **2021**. First records of Cuvier's beaked whale (*Ziphius cavirostris*, G. Cuvier 1823) strandings along the Tunisian coast. *Mar Biodivers Rec* 14, 2. <https://doi.org/10.1186/s41200-020-00197-y>

- Photo-id data
- Acoustic data?
- Sighting data

<https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2023.1270513/full>

3.4 INFORMATION GAPS/NEEDS

3.5 'ATTRIBUTES' OF THE POPULATION(S) TO BE MONITORED

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4. CONSERVATION THREATS

4.1 SUMMARY ABOUT THREATS

Threats to such species include anthropogenic noise, habitat degradation, chemical pollution, bycatch and ingestion of marine litter.

Table 1

Initial draft summary of information on actual and potential threats

Actual/potential threat	Human activity	Strength of evidence	Possible impact	Priority for action	Relevant actions
Major threats (lethal or sub-lethal)					
Other threats					

4.2 ANTHROPOGENIC NOISE

- Impulsive noise

Military sonars and possibly high-energy sounds

Curtis KA, Falcone EA, Schorr GS, Moore JE, Moretti DJ, Barlow J, Keene E **2020**. Abundance, survival, and annual rate of change of Cuvier's beaked whales (*Ziphius cavirostris*) on a Navy sonar range.

Seismic surveys for oil and gas exploration

- Continuous sound

Marine traffic

4.3 HABITAT DEGRADATION

4.4 FISHERY INTERACTIONS

4.5 MARINE LITTER INGESTION

Đuras, M.; Galov, A.; Korpes, K.; Kolenc, M.; Baburić, M.; Gudan Kurilj, A.; Gomerčić, T. **2021**. Cetacean Mortality Due to Interactions with Fisheries and Marine Litter Ingestion in the Croatian Part of the Adriatic Sea from 1990 to 2019. *Vet. Arh.*, *91*, 189–206.

4.6 CHEMICAL CONTAMINANTS

Baini, M., Panti, C., Fossi, M.C. et al. **2020**. First assessment of POPs and cytochrome P450 expression in Cuvier's beaked whales (*Ziphius cavirostris*) skin biopsies from the Mediterranean Sea. *Sci Rep* *10*, 21891. <https://doi.org/10.1038/s41598-020-78962-3>

Delgado-Suarez, I., Lozano-Bilbao, E., Hardisson, A., Paz, S., & Gutiérrez, Á. J. **2023**. Metal and trace element concentrations in cetaceans worldwide: A review. *Marine Pollution Bulletin*, 192, 115010.

4.7 PHYSICAL DISTURBANCE

4.8 CLIMATE CHANGE

4.9 CUMULATIVE EFFECTS

4.10 MONITORING

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5. MITIGATION MEASURES

5.1 ANTHROPOGENIC NOISE

5.2 FISHERY INTERACTIONS

5.3 HABITAT DEGRADATION

5.4 MICRO AND NANO PLASTIC INGESTION

5.5 CHEMICAL CONTAMINANTS

5.6 PHYSICAL DISTURBANCE

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6. PUBLIC AWARENESS, EDUCATION AND CAPACITY BUILDING

7. EXECUTIVE SUMMARY OF ACTIONS

7.1 DEALING WITH INADEQUATE DATA

7.2 MONITORING

7.3 LIFE OF THE CMP

7.4 IMPLEMENTATION OF THE CMP; CO-ORDINATION, INVOLVEMENT OF STAKEHOLDERS

7.5 TABLE OF ACTIONS

Coordination actions

Nr.	Action	Importance	Feasibility	Crossref.

Capacity building and public awareness actions

Nr.	Action	Importance	Feasibility	Crossref.

Research actions essential for providing adequate management advice

Nr.	Action	Importance	Feasibility	Crossref.

Monitoring actions

Nr.	Action	Importance	Feasibility	Crossref.

Mitigation measure actions

Nr.	Action	Importance	Feasibility	Crossref.

8. ACTIONS

The Actions are described below, with each action beginning on a new page. One of the first tasks for the Coordinator and Steering Committee will be to develop detailed specifications for each action and where appropriate, assign costings and likely sources of funding.

• ACTION:

Coordination Action

Priority:

DESCRIPTION OF ACTION

- **Specific objectives:**

- **Rationale:**

- **Target:**

- **Timeline:**

	WHAT	WHO	WHEN

- **Tasks of Coordinator in conjunction with Steering Committee:**

INITIAL BUDGET ITEMS TO BE CONSIDERED BY ISC

ACTORS

- **Responsible for coordination of the action:**

- **Stakeholders:**

ACTION EVALUATION

PRIORITY

- **Importance:**

- **Feasibility:**

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