

SC/68C/ASI/09

Sub-committees/working group name: ASI

Research plan for a cetacean sighting survey in coastal waters of western North Africa and proposal for capacity building project

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1 **Draft SC 68C Paper – ASI**

2 **Research plan for a cetacean sighting survey in coastal waters of western North Africa and**
3 **proposal for capacity building project**

4 **Authors:** Samba Diallo¹, Iain Staniland, COMHAFAT

5
6 **Introduction**

7 This paper provides an overview of the research plan for a cetacean sighting survey in the coastal
8 waters of western North Africa, to be conducted in 2021 or 2022, as pandemic conditions allow. The
9 survey is the fourth in a series of surveys in this region and is funded by [COMHAFAT](#). The survey will
10 be conducted on a chartered research vessel flagged to the Republic of Guinea and will sail with
11 scientists from several COMHAFAT member countries. The plan is being presented to SC68C as an
12 update to the initial presentation on this planned cruise made at SC68A in Nairobi in 2019. The
13 purpose of the presentation at SC68C is to review the design and methods, including how these
14 survey results may be combined with those from previous surveys to estimate abundance of
15 cetacean populations. In addition, the African survey team is seeking expressions of interest from SC
16 scientists who may wish to join future in-country training and at-sea capacity building by sharing
17 expertise on survey design, at-sea practices, and abundance estimation techniques.

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19 **Project objectives**

20 The main objective of this project is to conduct a survey of cetaceans in the coastal waters of
21 COMHAFAT member countries.

22 Additional objectives include:

- 23 (1) Train African researchers from COMHAFAT member countries on survey methods to
24 estimate abundance of cetacean populations.
25 (2) Gather data on the species and distribution of cetaceans in the marine ecosystem of the
26 coastal waters of COMHAFAT member countries.
27 (3) Observe the behaviour of the cetaceans on the water surface in order to improve
28 cetacean identification and counts.
29 (4) Take photographs and video footage of cetaceans to further assist in their identification.
30 (5) Collect data on the marine environment and on the sighting activities to be used for
31 cetacean resources assessment.
32 (6) Analyse the data and present the results of the survey at the IWC's SC69A meeting in
33 April/May 2022.
34

35 **Project description**

36 This cetacean survey is the fourth in a series of visual surveys in the waters off the northwest coast
37 of Africa (Fig. 1) reported to the IWC Scientific Committee. Previous surveys were conducted off the
38 coast of:

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- 39 1) Gabon in 2011 ;
- 40 2) Côte d'Ivoire, Ghana, Togo and Bénin 2013 ;
- 41 3) Republic of Guinea, Sierra Leone and Liberia in 2018.

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43 The results of these first three surveys were reported to the IWC SC65A in 2013 in South Korea
44 (SC/65a/IA13 or IA03) and to IWC SC68B in Slovenia (see Cruise report: Report of cetacean sightings
45 survey in the north western African coastal waters of COMHAFAT).

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47 The goal of these surveys is to collect data and information on species occurrence, distribution and
48 abundance of cetaceans. COMHAFAT is planning the next cetacean sighting survey to be conducted
49 in the coastal waters of western North Africa in 2021 or 2022 depending upon the constraints
50 imposed by the pandemic. The survey was originally planned for 2020 as reported in IWC/SC
51 68A/ASI/01 but was delayed. The study area will include offshore waters (> 20m depth) of Guinea
52 Bissau, Republic of Guinea and Sierra Leone, using zigzag track lines of around 900 nm of length (Fig.
53 3). The total at-sea survey period will last approximately 15 days.

54 The research vessel, *General Lansana Conté* (198 tonnes, 29 metres in length, crew capacity of 19;
55 see Figure 2) flagged to the Republic of Guinea will be used as the survey platform. Researchers from
56 COMHAFAT member states will be conducting the survey under the leadership of Samba Diallo of
57 the Guinean Marine Resources Centre. Two scientists from Japan will be joining the survey to
58 provide on-the-ground training and capacity building prior to conducting the survey, during the at-
59 sea work, and in analysing the survey data and information².

60 The survey will be conducted using techniques endorsed by the IWC Scientific Committee and
61 following the protocol used during SOWER campaigns off North Africa. A zigzag line transect method
62 will be used, with operations subject to weather conditions (Beaufort wind scale of 3 or less and
63 greater than 2 nm in visibility). Daily operations will begin a half hour after sunrise (around 8 am)
64 and finish a half hour prior to sunset (around 18h00). Researchers will search the sea surface for
65 cetaceans from the vessel platform, using binoculars as well as the naked eye, following the pre-
66 determined track lines whilst steaming at around 8-10 knots. A standard closing mode survey
67 approach will be used, with the vessel leaving the transect line when a sighting is made in order to
68 observe the group size and species composition.

69

70 ***Expected results***

71 This survey is conducted to increase knowledge of the cetacean species and their abundance off the
72 northwest coast of Africa and to provide for capacity building of African scientists. Expected results
73 are as follows:

- 74 • Increased information on the abundance and distribution of cetaceans in the marine
75 ecosystem in the coastal waters of the COMHAFAT member countries. This information can
76 be shared with the Scientific Committee of IWC and will be reviewed and considered for
77 inclusion in the official IWC abundance estimates.
- 78 • African researchers from COMHAFAT member countries gain knowledge and experience on
79 cetacean survey methods and abundance estimation based on their experience in
80 preparation, at-sea experience and analysis of the data.

² Japanese researchers from the Institute of Cetacean Research and the National Research Institute of Far Seas Fisheries.

- 81 • Descriptions of behaviour of the cetaceans on the water surface will be part of the database
82 of information, along with species identified, counts of individuals and schools.
83 • Additional data will be collected through photographs and videos of cetaceans at sea as well
84 as other environmental observations.

85 ***Future Collaboration COMAHFAT-IWC SC***

86 The COMAHFAT leadership and member countries wish to explore with the IWC SC the possibility of
87 organizing a series of workshops aimed at providing capacity building for West African scientists to
88 plan, design, and conduct cetacean stock assessments. These workshops would be funded by
89 COMAHFAT and conducted at a training site in West Africa (e.g., Conakry training centre). The
90 workshop participants would benefit from the expertise of SC members in designing a long-term
91 cetacean abundance estimation programme for the region, with a plan for frequency and location of
92 the surveys and other practical aspects for ongoing monitoring of cetacean populations. In addition
93 to the overall long-term programme, the workshops could focus on preparing for each individual
94 survey, such as design and protocols for at-sea work and analysing quantitative and qualitative data
95 to generate estimates of abundance. With SC experts serving as trainers, the scientists would benefit
96 from the best possible expertise on assessing cetaceans under a wide variety of conditions.

97 Whilst the workshop costs (participants' travel, lodging and per diem; meeting room costs; etc)
98 would be covered by COMAHFAT, the SC would be asked to provide the funding associated with the
99 participation of SC scientists, including travel costs and any contractual fees. The estimated costs per
100 SC participant would be around £2,500 in travel and subsistence, plus any consultation fees.

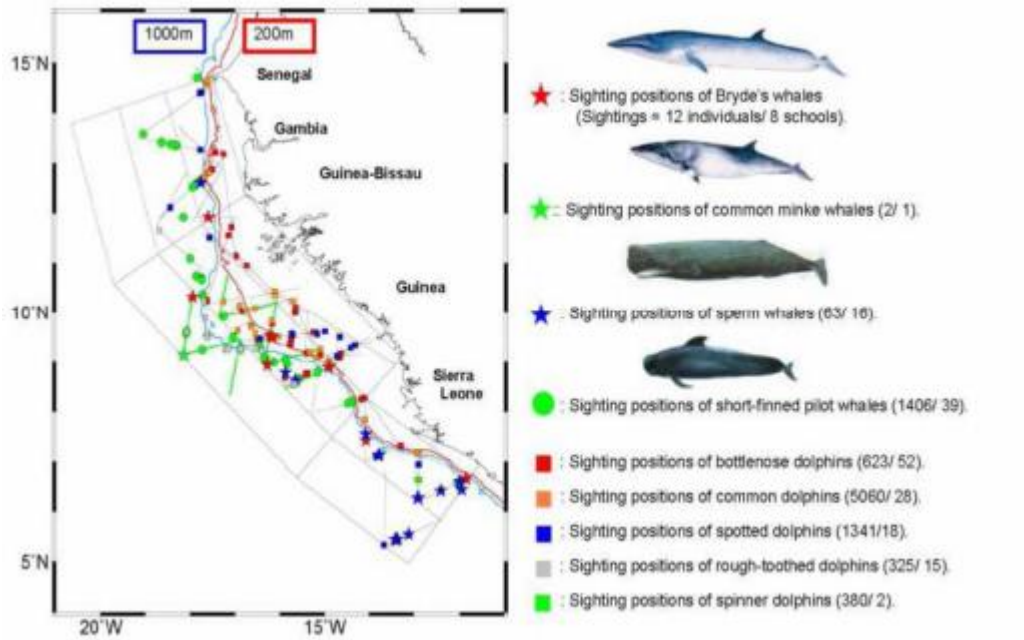
101 Expert training could cover other methods for collecting anecdotal information on cetaceans in the
102 waters off West Africa, such as 'citizen science' from ecotourism boats on the water, whether from
103 operators or clients. In addition, sightings of cetaceans on the water or in fishing gear from the
104 fishing fleet could be recorded in observer records or in fishermen's logbooks. Depending upon the
105 location and local regulations, cetaceans observed in the catches offloaded in port, whether or not
106 these are marketed, provide another possible source of information on species, size, distribution and
107 other data on cetaceans to supplement survey data. These alternative platforms also provide an
108 indication of the possible individual or population-level impacts of interactions between cetaceans
109 and other human activities and can be part of a broader collaborative effort to address threats to
110 healthy cetacean populations off the coast of COMAHFAT countries.

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114 **Figure 1 – results from previous COMHAFAT surveys**



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Figure 8b: N/V “General Lansana Conte”

PRINCIPAL PARTICULARS OF FISHERIES RESEARCH VESSEL

Length (overall) -----	29.93 m
Length (between perpendiculars)-----	25.80 m
Breadth (moulded)-----	7.30 m
Depth (moulded) -----	3.25 m
Draft -----	2.75 m
Gross Tonnage -----	198 t
Complements -----	19 persons
Service Speed -----	10 knots
Main Engin:	
Type -----	Yanmar 6N165-EN Iset
Max. Continuous Rating -----	552kw at 1400rpm
Classification -----	Bureau VERITAS
Completion -----	December, 2002
Delivery Date -----	February, 2003

123 Figure 3 – Trajectory lines for 2021/ 2022 cetacean survey



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