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JESS RATTLE

31 AUGUST 2020

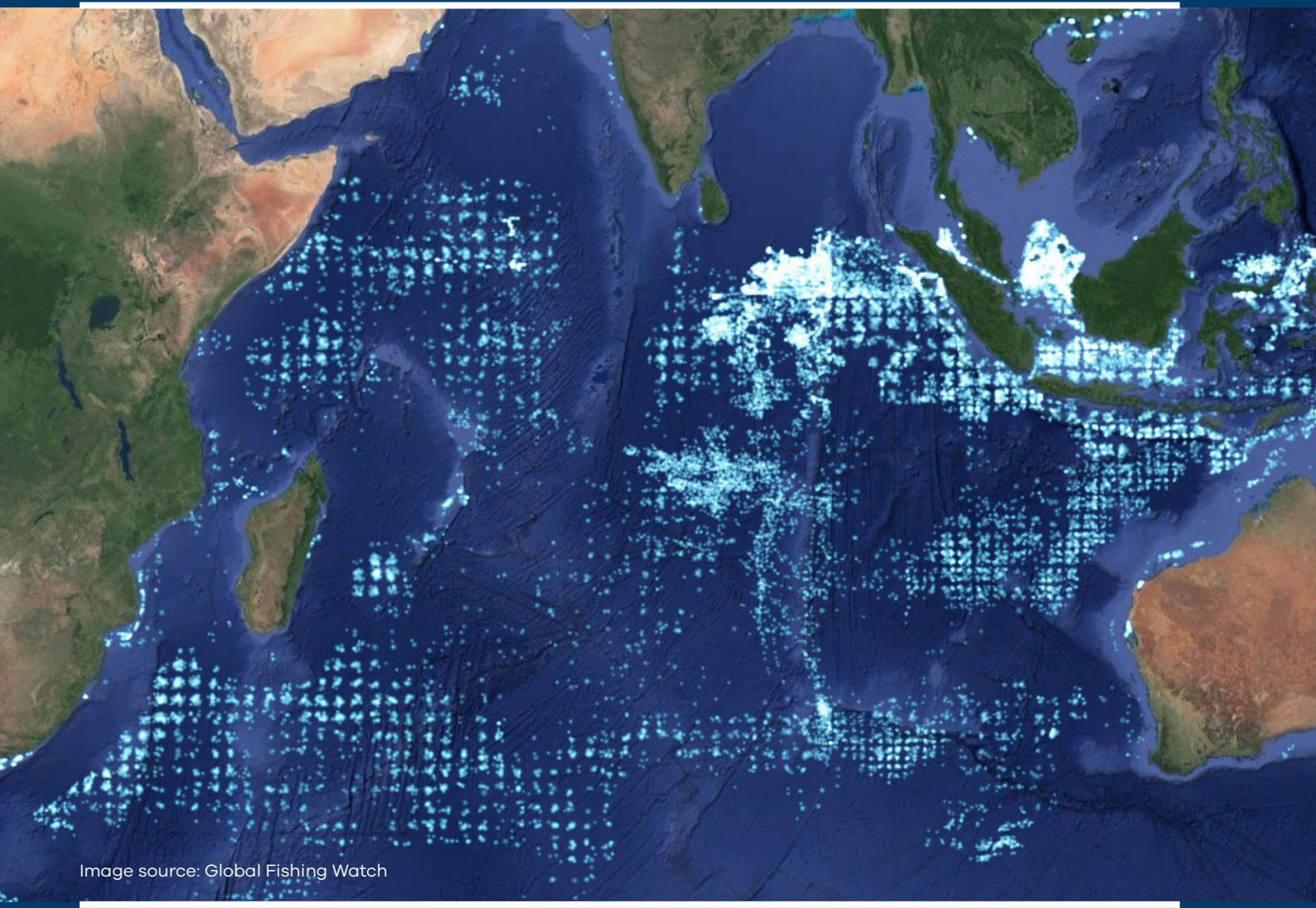

Image source: Global Fishing Watch

Automatic Identification System (AIS) usage by Spanish and French-flagged vessels

Blue Marine Foundation (BLUE)

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Blue Marine Foundation is concerned about the inconsistent usage of Automatic Identification System (AIS) by Spanish and French-flagged tuna purse-seine vessels operating in the Western Indian Ocean.

We append tables and images setting out the results of an analysis of AIS usage by 14 Spanish-flagged and 11 French-flagged vessels over the period 1 January 2017 to 30 April 2019 (i.e. 850 days) in the Western Indian Ocean. The analysis was carried out by OceanMind.

The 14 Spanish-flagged and 11 French-flagged vessels concerned were all on the list of vessels authorised to operate in the Indian Ocean Tuna Commission (IOTC) area of competence during the analysis period. Other Spanish and French-flagged tuna purse-seiners were also on that list, but during the period in question were not operating in the IOTC area of competence.

The International Convention for the Safety of Life at Sea (SOLAS) establishes that (Regulation 19 of SOLAS Chapter V) AIS has to be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages, all cargo ships of 500 gross tonnage and upwards regardless of where they operate and all passenger vessels.

The EU law relating to the fitting of AIS by fishing vessels and its subsequent maintenance in operation is Article 10 of Regulation 1224/2009, as amended, and Article 6a and Annex II, part I, of Directive 2002/59/EC, as amended. That law applies to, among others, the 14 Spanish-flagged and 11 French-flagged tuna purse-seiners concerned.

Blue Marine Foundation submitted the appended tables and images[1] to the European Commission on 19 November 2019. In a letter to Mr Charles Clover, Blue Marine Foundation, on 16 December 2019, Ms Veronika Veits, DG MARE, confirmed:

“In accordance with the provisions of Article 6a of Directive 2002/59/EC1, fishing vessels above 15 meters shall be fitted with AIS. AIS must be maintained in operation at all times. As an exemption from this general rule, the master may switch it off but only in exceptional circumstances when the master considers this necessary in the interest of the safety or security of the vessel (imminent danger). Member States have transposed this Directive into national law and shall ensure its correct implementation. It is therefore their responsibility, as flag States, to monitor its application and take any necessary action in case of breach of the rules.”

Despite assurances from Ms Veits that the European Commission would “follow this up as a matter of urgency with the relevant Member States, given the safety and surveillance implications”, Blue Marine Foundation has not received any explanation of the Spanish and French-flagged vessels’ non-compliance, despite numerous requests over the past nine months.

In the light of the applicable EU law, we are concerned about the low figures for AIS transmission detailed below and, among other things, about the gaps in AIS transmission that started or ended

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(including, as a subset, those that both started and ended) outside of the piracy High Risk Area (HRA).

It is clear to us from the information that follows that the low figures cannot be explained by the existence of the HRA as a significant proportion of non-transmission has been observed outside of the HRA.

Summary analysis of Spanish-flagged vessels' AIS misuse

Because the period concerned amounts to 850 days and the analysis relates to 14 Spanish-flagged vessels, a total of 11,900 vessel-days (i.e. 850 days per vessel x 14 vessels) are involved. Those 11,900 vessel-days will be referred to in the list below as 'the analysis days'.

Some of the points that may be made on the basis of the figures in the appended table are the following:

(a) The 14 vessels, combined, transmitted on AIS for a total of only 2,306 days, which corresponds to only 19.4% of the analysis days (with vessel-specific figures for AIS transmission ranging from 3.4% of 850 days to 33.8% of 850 days).
(b) That means that the 14 vessels, combined, did not transmit on AIS for a total of 9,594 days, which corresponds to 80.6% of the analysis days (with vessel-specific figures for AIS non-transmission ranging from 96.6% of 850 days to 66.2% of 850 days).
(c) Of the total of 2,306 days when the 14 vessels, combined, transmitted on AIS, only 775 (33.6%) of those days were outside of a port (the figure of 775 being the total of vessel-specific figures of 23, 54, 39, 3, 37, 52, 62, 160, 70, 24, 86, 91, 35 and 39 days).
(d) That means that the 14 vessels, combined, transmitted on AIS outside of a port for only 6.5% of the analysis days (with equivalent vessel-specific figures ranging from 0.4% of 850 days to 18.8% of 850 days).
(e) For one of the vessels, the longest single AIS gap length was 519 days; for the other 13 vessels, that figure was 315, 296, 271, 178, 153, 147, 144, 136, 102, 98, 94, 36 and 34 days.
(f) For each of the 14 vessels, figures are presented on AIS gaps that started or ended outside of the piracy HRA. The existence of such gaps, in itself, indicates that each of those 14 vessels was not always transmitting on AIS when operating outside of the HRA.
(g) For those 14 vessels, the figures for the total number of days of 'AIS gaps starting or ending outside of the HRA' add up to a combined total of 3,070 days, which corresponds to 25.8% of the analysis days.
(h) For the same 14 vessels, 278 days of the total of 3,070 days of gaps referred to above were 'AIS gaps starting and ending outside of the HRA'.
(i) Of the 278 days of gaps that were 'AIS gaps starting and ending outside of the HRA', most of those were accrued by eight vessels as single gaps of 53, 38, 34, 28, 22, 17, 11 and 8 days.

Summary analysis of French-flagged vessels' AIS misuse

Because the period concerned amounts to 850 days and the analysis relates to 11 French-flagged vessels, a total of 9,249 vessel-days (i.e. 850 days per vessel x 10 vessels + 749 days for 1 vessel[2]) are involved. Those 9,249 vessel-days will be referred to in the list below as 'the analysis days'.

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Some of the points that may be made on the basis of the figures in the appended table are the following:

(j) The 11 vessels, combined, transmitted on AIS for a total of only 2,938 days, which corresponds to only 31.8% of the analysis days (with vessel-specific figures for AIS transmission ranging from 19.1% of 850 days to 44.2% of 850 days[2]).

(k) That means that the 11 vessels, combined, did not transmit on AIS for a total of 6,311 days, which corresponds to 68.2% of the analysis days (with vessel-specific figures for AIS non-transmission ranging from 80.9% of 850 days to 65.8% of 850 days[2]).

(l) Of the total of 2,938 days when the 11 vessels, combined, transmitted on AIS, only 1,550 (52.8%) of those days were outside of a port (the figure of 1,550 being the total of vessel-specific figures of 83, 89, 315, 101, 91, 183, 158, 88, 163, 99 and 180 days).

(m) That means that the 11 vessels, combined, transmitted on AIS outside of a port for only 16.8% of the analysis days (with equivalent vessel-specific figures ranging from 9.8% of 850 days to 37.1% of 850 days).

(n) For one of the vessels, the longest single AIS gap length was 173 days; for the other 10 vessels, that figure was 150, 119, 94, 85, 49, 46, 39, 37 and 34 days (2 vessels).

(o) For each of the 11 vessels, figures are presented on AIS gaps that started or ended outside of the piracy HRA. The existence of such gaps, in itself, indicates that each of those 11 vessels was not always transmitting on AIS when operating outside of the HRA.

(p) For those 11 vessels, the figures for the total number of days of 'AIS gaps starting or ending outside of the HRA' add up to a combined total of 2,870 days, which corresponds to 31% of the analysis days.

(q) For the same 11 vessels, 750 days of the total of 2,870 days of gaps referred to above were 'AIS gaps starting and ending outside of the HRA'.

(r) Of the 750 days of gaps that were 'AIS gaps starting and ending outside of the HRA', most of those were accrued by nine vessels as single gaps of 119, 46, 30, 29, 20, 18, 15, 15 and 14 days.

The annex to this letter includes definitions, as well as notes on the AIS data on which the appended table and images are based.

[1] Some changes have since been made to the data for the vessel BELOUVE as a result of it reflagging to Mauritius.

[2] 749 days for the vessel BELOUVE as this vessel reflagged to Mauritius on 19th January 2019.

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Annex

1. Definitions

In the appended table and images and in this letter:

(i) the term **'High Risk Area'** / **'HRA'** refers to the high risk area for piracy designated in the north-west of the Indian Ocean and with the following boundaries: 65° east, 5° south, 22° north;

(ii) the term **'AIS gap'** means any break in AIS transmission by a vessel for a period exceeding 24 hours. The length of an AIS gap is calculated as the difference in time, measured in seconds (and expressed in days), between the start and the end of an AIS gap. If an AIS gap started or ended outside of the analysis period, the length of the gap was calculated using the start date or end date of the analysis period. For example, in this analysis, an AIS gap that in fact started on 5 December 2016 would be considered to have started on 1 January 2017;

(iii) for any given vessel, the figure given for '**Total number of days of AIS gaps starting or ending outside of the HRA**' includes the figure given for '**Total number of days of AIS gaps starting and ending outside of the HRA**';

(iv) the location of any given port is that listed, as a latitude/longitude, in the World Port Index.[1] (See table below.) In turn, the term **'port'** means any location within a distance of 3 nautical miles of the port's listed latitude/longitude. The threshold distance of 3 nautical miles was chosen with a view to encompassing all vessel activity associated with port visits, including any anchoring whilst waiting to enter port.

Port Name	Country	Latitude	Longitude
Antsiranana	Madagascar	-12.267	49.283
Durban	South Africa	-29.881	31.027
Port Louis	Mauritius	-20.148	57.494
Victoria	Seychelles	-4.626	55.464
Sharjah	United Arab Emirates	25.448	55.479
Vigo	Spain	42.243	-8.732

2. Notes on the AIS data on which the appended table and images are based

General

The AIS data on which the appended table and images are based are satellite AIS data and include all type 1, 2, 3, 5, 18, 19 and 24 AIS messages. Satellite coverage in the Western Indian Ocean during the period in question demonstrated strong collection capability that is likely to have detected

[1] https://msi.nga.mil/NGAPortal/MSI.portal?_nfpb=true&_pageLabel=msi_portal_page_62&pubCode=0015

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transmissions from any vessel transmitting.

Over-plotting

Because of the scale used in the images, there may be occasions when, in any given image, one data point overlays another data point. This is called 'over-plotting'. Over-plotting may mean that, on an image, (a) a given vessel track is not clearly discernible or is not discernible at all (because it is overlain, partly or wholly, by one or more other vessel tracks) and (b) the start or end point of an AIS gap is not clearly discernible or is not be discernible at all (because it is overlain, partly or wholly, by one or more other start or end points). Over-plotting is most common in ports or in the vicinity of ports or on commonly-used tracks; however, it may also occur elsewhere. Please note that despite any over-plotting of data points in the images, the analysis used to generate the figures provided in the table (and hence too in the bar charts in the images) is based on all relevant data points.

Activities in relation to the boundaries of the images

During the analysis period, there were three incidences where the AIS transmissions of the Spanish-flagged vessels concerned fell outside the geographical boundaries of the images. The three incidences related to port calls by distinct vessels to ports located outside the geographical boundaries of the images. The port calls were made to Durban (ZAF), Sharjah (UAE) and Vigo (ESP) respectively. In each case the vessels transited directly to and from the port whilst transmitting on AIS, the vessel that transited to Vigo went via the Suez Canal.

The analysis for each vessel that operated outside the geographical boundary of the image incorporated the transit to the respective port.

Contribution of AIS data where a vessel was not transmitting at start or end of analysis period

Where a vessel was not transmitting on AIS either (a) at the beginning of the analysis period, i.e. on 1 January 2017 or for any consecutive sequence of days from and including that date or (b) at the end of the analysis period, i.e. on 30 June 2018 or for any consecutive sequence of days up to and including that date, no assumption was made as to where that vessel was located, in relation to the HRA, during those days.

That has consequences for how that period of non-transmission was considered regarding the different categories referred to in the table. If it was long enough to qualify as an AIS gap (as defined – see above), it:

- was always counted towards the figures used to calculate **'Average AIS gap length'**;
- was always considered as a candidate for **'Longest single AIS gap'**;
- counted towards the figures used to calculate **'Total number of days of AIS gaps starting or ending outside of the HRA'** if one known location, i.e. at one end or other of the AIS gap, was outside of the HRA;

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- counted as an 'occasion' referred to in the category **'AIS gaps started or ended outside the HRA'** if one known location, i.e. at one end or other of the AIS gap, was outside of the HRA;
- was considered as a candidate for **'Longest single AIS gap that started or ended outside of the HRA'** if one known location, i.e. at one end or other of the AIS gap, was outside of the HRA;
- was never counted towards figures used to calculate **'Total number of days of AIS gaps starting and ending outside of the HRA'** (because the location of the vessel at one end of the AIS gap was not known);
- was never considered as a candidate for **'Longest single AIS gap that started and ended outside of the HRA'** (because the location of the vessel at one end of the AIS gap was not known).

'Total number of days transmitting on AIS during analysis period'

This figure is calculated based on whether, during any given 24 hour period, there is at least one AIS transmission from the vessel concerned.

AIS transmission anomalies

In the course of the analysis, AIS transmission anomalies (also known as 'bit-flips') were removed from the data set using expert judgment.

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Appendix

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
IZURDIA	Spain (EU)	224698000	Total number of days transmitting on AIS during analysis period: **81 days** (9.5% of 850 days) Number of days transmitting on AIS outside of port: **23 days** (28.4% of 81 days) Average AIS gap length: **97 days** Longest single AIS gap: **519 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **91 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **0 days** Longest single AIS gap that started **or** ended outside of the HRA: **91 days** Longest single AIS gap that started **and** ended outside of the HRA: **N/A** AIS gaps started or ended outside of the HRA on **1 occasion**.
ALAKRANA	Spain (EU)	224702000	Total number of days transmitting on AIS during analysis period: **208 days** (24.5% of 850 days) Number of days transmitting on AIS outside of port: **54 days** (25.9% of 208 days) Average AIS gap length: **24 days** Longest single AIS gap: **102 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **153 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **50 days** Longest single AIS gap that started **or** ended outside of the HRA: **56 days** Longest single AIS gap that started **and** ended outside of the HRA: **17 days** AIS gaps started or ended outside of the HRA on **18 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
ALBACAN	Spain (EU)	224469000	Total number of days transmitting on AIS during analysis period: **111 days** (13.1% of 850 days) Number of days transmitting on AIS outside of port: **39 days** (35.1% of 111 days) Average AIS gap length: **27 days** Longest single AIS gap: **296 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **52 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **0 days** Longest single AIS gap that started **or** ended outside of the HRA: **37 days** Longest single AIS gap that started **and** ended outside of the HRA: **N/A** AIS gaps started or ended outside of the HRA on **2 occasions**.
ALBACORA CUATRO	Spain (EU)	224755000	Total number of days transmitting on AIS during analysis period: **29 days** (3.4% of 850 days) Number of days transmitting on AIS outside of port: **3 days** (10.3% of 29 days) Average AIS gap length: **165 days** Longest single AIS gap: **271 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **427 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **0 days** Longest single AIS gap that started **or** ended outside of the HRA: **271 days** Longest single AIS gap that started **and** ended outside of the HRA: **N/A** AIS gaps started or ended outside of the HRA on **2 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
ALBACORA UNO	Spain (EU)	224782000	Total number of days transmitting on AIS during analysis period: **149 days** (17.5% of 850 days) Number of days transmitting on AIS outside of port: **37 days** (24.8% of 149 days) Average AIS gap length: **45 days** Longest single AIS gap: **147 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **174 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **2 days** Longest single AIS gap that started **or** ended outside of the HRA: **136 days** Longest single AIS gap that started **and** ended outside of the HRA: **2 days** AIS gaps started or ended outside of the HRA on **4 occasions**.
ALBATUN DOS	Spain (EU)	224088000	Total number of days transmitting on AIS during analysis period: **286 days** (33.6% of 850 days) Number of days transmitting on AIS outside of port: **52 days** (18.2% of 286 days) Average AIS gap length: **20 days** Longest single AIS gap: **36 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **111 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **22 days** Longest single AIS gap that started **or** ended outside of the HRA: **22 days** Longest single AIS gap that started **and** ended outside of the HRA: **22 days** AIS gaps started or ended outside of the HRA on **9 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
ALBATUN TRES	Spain (EU)	224680000	Total number of days transmitting on AIS during analysis period: **231 days** (27.1% of 850 days) Number of days transmitting on AIS outside of port: **62 days** (26.8% of 231 days) Average AIS gap length: **33 days** Longest single AIS gap: **153 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **233 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **0 days** Longest single AIS gap that started **or** ended outside of the HRA: **153 days** Longest single AIS gap that started **and** ended outside of the HRA: **N/A** AIS gaps started or ended outside of the HRA on **4 occasions**.
DONIENE	Spain (EU)	224464000	Total number of days transmitting on AIS during analysis period: **288 days** (33.9% of 850 days) Number of days transmitting on AIS outside of port: **156 days** (54.2% of 288 days) Average AIS gap length: **12 days** Longest single AIS gap: **98 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **266 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **44 days** Longest single AIS gap that started **or** ended outside of the HRA: **98 days** Longest single AIS gap that started **and** ended outside of the HRA: **38 days** AIS gaps started or ended outside of the HRA on **19 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
ELAI ALAI	Spain (EU)	224716000	Total number of days transmitting on AIS during analysis period: **190 days** (22.4% of 850 days) Number of days transmitting on AIS outside of port: **70 days** (36.8% of 190 days) Average AIS gap length: **25 days** Longest single AIS gap: **94 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **226 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **53 days** Longest single AIS gap that started **or** ended outside of the HRA: **94 days** Longest single AIS gap that started **and** ended outside of the HRA: **53 days** AIS gaps started or ended outside of the HRA on **7 occasions**.
ITSAS TXORI	Spain (EU)	225455000	Total number of days transmitting on AIS during analysis period: **94 days** (11.1% of 850 days) Number of days transmitting on AIS outside of port: **24 days** (28.6% of 84 days) Average AIS gap length: **59 days** Longest single AIS gap: **178 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **413 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **8 days** Longest single AIS gap that started **or** ended outside of the HRA: **178 days** Longest single AIS gap that started **and** ended outside of the HRA: **8 days** AIS gaps started or ended outside of the HRA on **8 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
PLAYA DE ARITZATXU	Spain (EU)	224922000	Total number of days transmitting on AIS during analysis period: **215 days** (25.3% of 850 days) Number of days transmitting on AIS outside of port: **81 days** (37.6% of 215 days) Average AIS gap length: **19 days** Longest single AIS gap: **136 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **270 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **30 days** Longest single AIS gap that started **or** ended outside of the HRA: **136 days** Longest single AIS gap that started **and** ended outside of the HRA: **11 days** AIS gaps started or ended outside of the HRA on **15 occasions**.
TXORI ARGI	Spain (EU)	224103000	Total number of days transmitting on AIS during analysis period: **214 days** (25.2% of 850 days) Number of days transmitting on AIS outside of port: **91 days** (42.5% of 214 days) Average AIS gap length: **17 days** Longest single AIS gap: **34 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **139 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **34 days** Longest single AIS gap that started **or** ended outside of the HRA: **34 days** Longest single AIS gap that started **and** ended outside of the HRA: **34 days** AIS gaps started or ended outside of the HRA on **10 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
TXORI GORRI	Spain (EU)	225375000	Total number of days transmitting on AIS during analysis period: **149 days** (17.5% of 850 days) Number of days transmitting on AIS outside of port: **35 days** (23.5% of 149 days) Average AIS gap length: **33 days** Longest single AIS gap: **315 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **371 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **7 days** Longest single AIS gap that started **or** ended outside of the HRA: **315 days** Longest single AIS gap that started **and** ended outside of the HRA: **4 days** AIS gaps started or ended outside of the HRA on **8 occasions**.
TXORI ZURI	Spain (EU)	225309000	Total number of days transmitting on AIS during analysis period: **115 days** (13.5% of 850 days) Number of days transmitting on AIS outside of port: **39 days** (33.9% of 115 days) Average AIS gap length: **40 days** Longest single AIS gap: **144 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **235 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **28 days** Longest single AIS gap that started **or** ended outside of the HRA: **144 days** Longest single AIS gap that started **and** ended outside of the HRA: **28 days** AIS gaps started or ended outside of the HRA on **5 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
AVEL VAD	France (EU)	228255000	Total number of days transmitting on AIS during analysis period: **189 days** (22.2% of 850 days) Number of days transmitting on AIS outside of port: **83 days** (43.9% of 189 days) Average AIS gap length: **16 days** Longest single AIS gap: **39 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **166 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **17 days** Longest single AIS gap that started **or** ended outside of the HRA: **34 days** Longest single AIS gap that started **and** ended outside of the HRA: **15 days** AIS gaps started or ended outside of the HRA on **14 occasions**.
BELOUVE	France (EU)	660005100	Total number of days transmitting on AIS during analysis period: **232 days** (30.9% of 749 days*) Number of days transmitting on AIS outside of port: **89 days** (38.4% of 232 days) Average AIS gap length: **18 days** Longest single AIS gap: **34 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **152 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **6 days** Longest single AIS gap that started **or** ended outside of the HRA: **18 days** Longest single AIS gap that started **and** ended outside of the HRA: **5 days** AIS gaps started or ended outside of the HRA on **13 occasions**. **BELOUVE reflagged to Mauritius on 19th January 2019*

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
CAP SAINT VINCENT	France (EU)	226169000	Total number of days transmitting on AIS during analysis period: **374 days** (44.0% of 850 days) Number of days transmitting on AIS outside of port: **315 days** (84.2% of 374 days) Average AIS gap length: **10 days** Longest single AIS gap: **119 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **379 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **211 days** Longest single AIS gap that started **or** ended outside of the HRA: **119 days** Longest single AIS gap that started **and** ended outside of the HRA: **119 days** AIS gaps started or ended outside of the HRA on **53 occasions**.
CAP SAINTE MARIE	France (EU)	228875000	Total number of days transmitting on AIS during analysis period: **204 days** (24.0% of 850 days) Number of days transmitting on AIS outside of port: **101 days** (49.5% of 204 days) Average AIS gap length: **21 days** Longest single AIS gap: **173 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **171 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **77 days** Longest single AIS gap that started **or** ended outside of the HRA: **29 days** Longest single AIS gap that started **and** ended outside of the HRA: **29 days** AIS gaps started or ended outside the HRA on **19 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
DOLOMIEU	France (EU)	660004900	Total number of days transmitting on AIS during analysis period: **162 days** (19.1% of 850 days) Number of days transmitting on AIS outside of port: **91 days** (56.2% of 162 days) Average AIS gap length: **23 days** Longest single AIS gap: **94 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **521 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **92 days** Longest single AIS gap that started **or** ended outside of the HRA: **94 days** Longest single AIS gap that started **and** ended outside of the HRA: **30 days** AIS gaps started or ended outside of the HRA on **24 occasions**.
DRENNEC	France (EU)	660001800	Total number of days transmitting on AIS during analysis period: **267 days** (31.4% of 850 days) Number of days transmitting on AIS outside of port: **183 days** (68.5% of 267 days) Average AIS gap length: **18 days** Longest single AIS gap: **150 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **209 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **11 days** Longest single AIS gap that started **or** ended outside of the HRA: **36 days** Longest single AIS gap that started **and** ended outside of the HRA: **9 days** AIS gaps started or ended outside of the HRA on **19 occasions**.

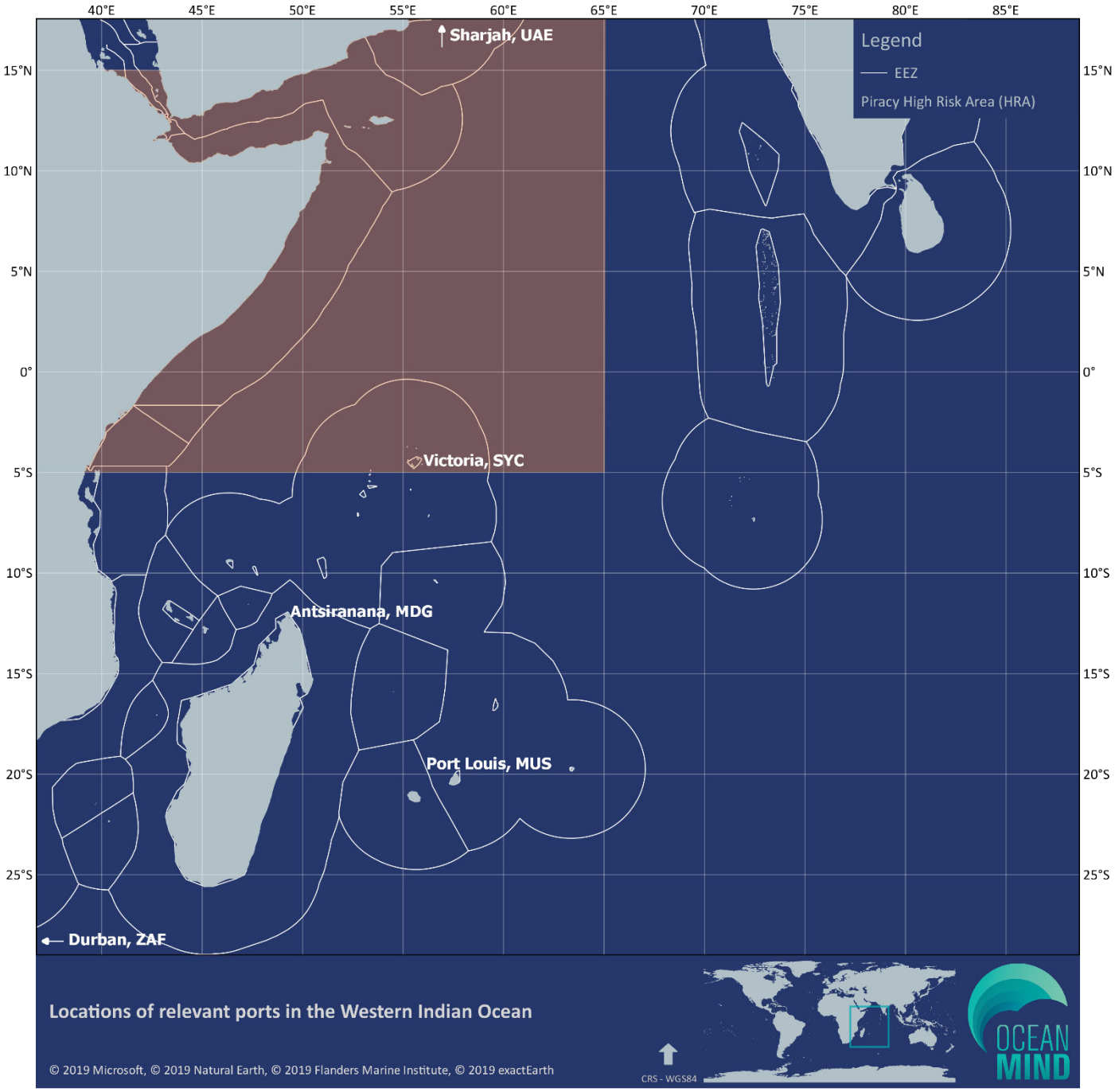
Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
FRANCHE TERRE	France (EU)	660003800	Total number of days transmitting on AIS during analysis period: **323 days** (38.0% of 850 days) Number of days transmitting on AIS outside of port: **158 days** (48.9% of 323 days) Average AIS gap length: **13 days** Longest single AIS gap: **46 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **362 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **130 days** Longest single AIS gap that started **or** ended outside of the HRA: **46 days** Longest single AIS gap that started **and** ended outside of the HRA: **46 days** AIS gaps started or ended outside of the HRA on **35 occasions**.
GLENAN	France (EU)	228231700	Total number of days transmitting on AIS during analysis period: **183 days** (21.5% of 850 days) Number of days transmitting on AIS outside of port: **88 days** (48.1% of 183 days) Average AIS gap length: **20 days** Longest single AIS gap: **85 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **142 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **38 days** Longest single AIS gap that started **or** ended outside of the HRA: **31 days** Longest single AIS gap that started **and** ended outside of the HRA: **18 days** AIS gaps started or ended outside of the HRA on **18 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
MANAPANY	France (EU)	660004300	Total number of days transmitting on AIS during analysis period: **376 days** (44.2% of 850 days) Number of days transmitting on AIS outside of port: **163 days** (43.4% of 376 days) Average AIS gap length: **9 days** Longest single AIS gap: **37 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **259 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **56 days** Longest single AIS gap that started **or** ended outside of the HRA: **26 days** Longest single AIS gap that started **and** ended outside of the HRA: **15 days** AIS gaps started or ended outside of the HRA on **39 occasions**.
TALENDUIC	France (EU)	226240000	Total number of days transmitting on AIS during analysis period: **303 days** (35.6% of 850 days) Number of days transmitting on AIS outside of port: **99 days** (32.6% of 303 days) Average AIS gap length: **15 days** Longest single AIS gap: **34 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **168 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **31 days** Longest single AIS gap that started **or** ended outside of the HRA: **23 days** Longest single AIS gap that started **and** ended outside of the HRA: **14 days** AIS gaps started or ended outside of the HRA on **19 occasions**.

Vessel Name	Flag	MMSI	Description (see also the accompanying images and covering letter)
TREVIGNON	France (EU)	660001900	Total number of days transmitting on AIS during analysis period: **325 days** (38.2% of 850 days) Number of days transmitting on AIS outside of port: **180 days** (55.4% of 325 days) Average AIS gap length: **11 days** Longest single AIS gap: **49 days** Total number of days of AIS gaps starting **or** ending outside of the HRA: **341 days** Total number of days of AIS gaps starting **and** ending outside of the HRA: **81 days** Longest single AIS gap that started **or** ended outside of the HRA: **49 days** Longest single AIS gap that started **and** ended outside of the HRA: **20 days** AIS gaps started or ended outside of the HRA on **44 occasions**.

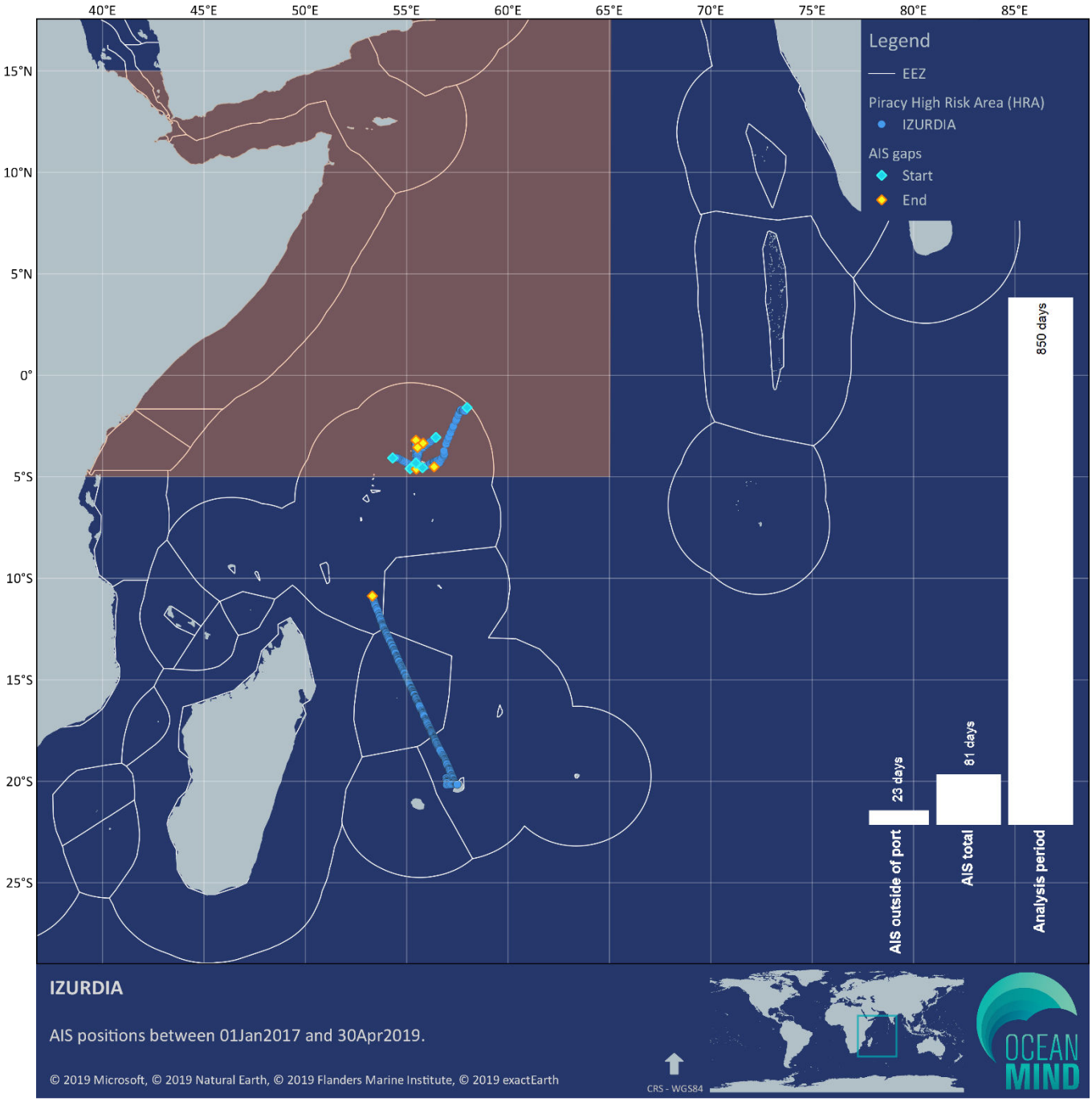
Locations of relevant ports in the Western Indian Ocean

(see also the accompanying covering letter)



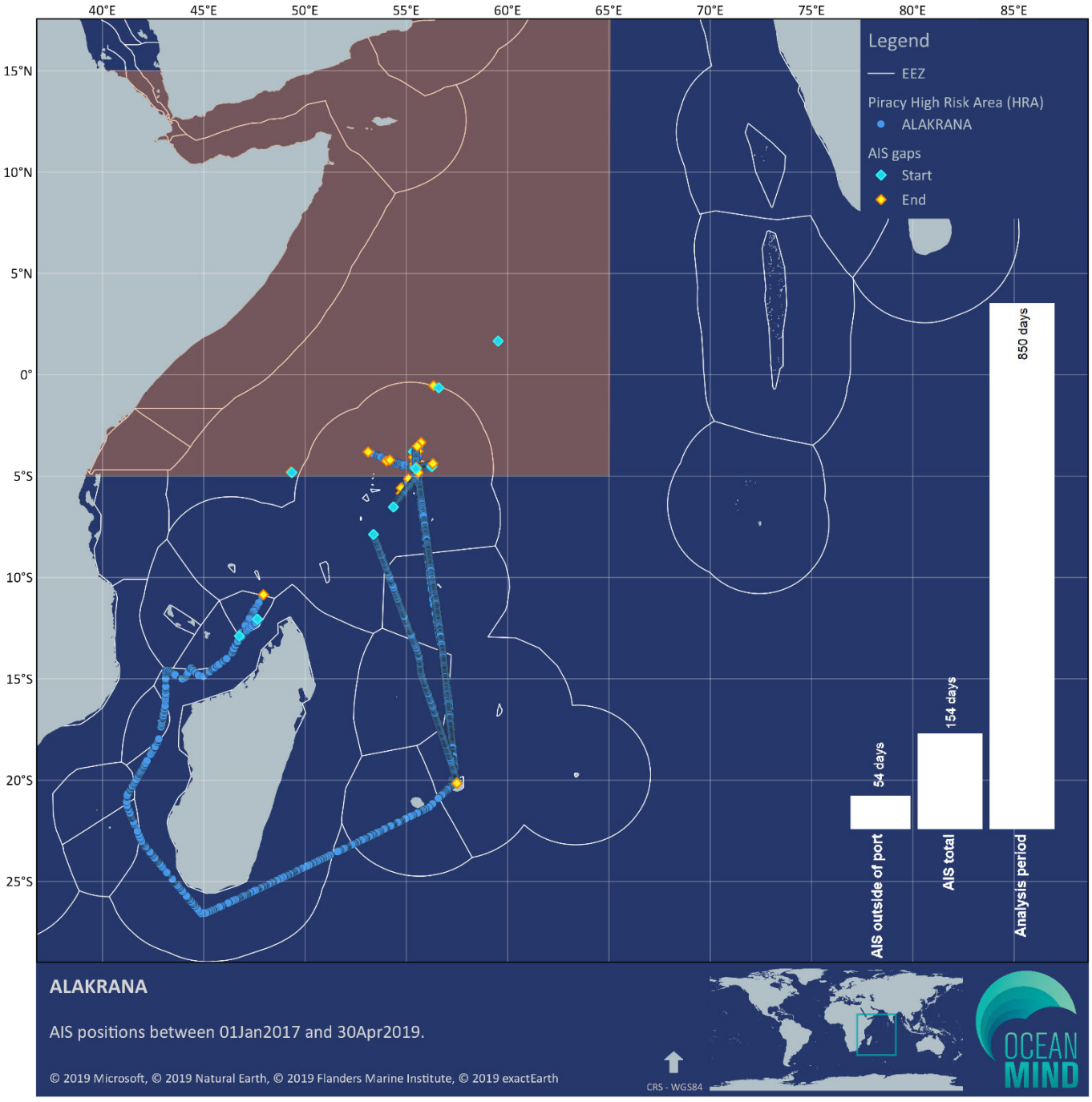
IZURDIA

(see also the accompanying table and covering letter)



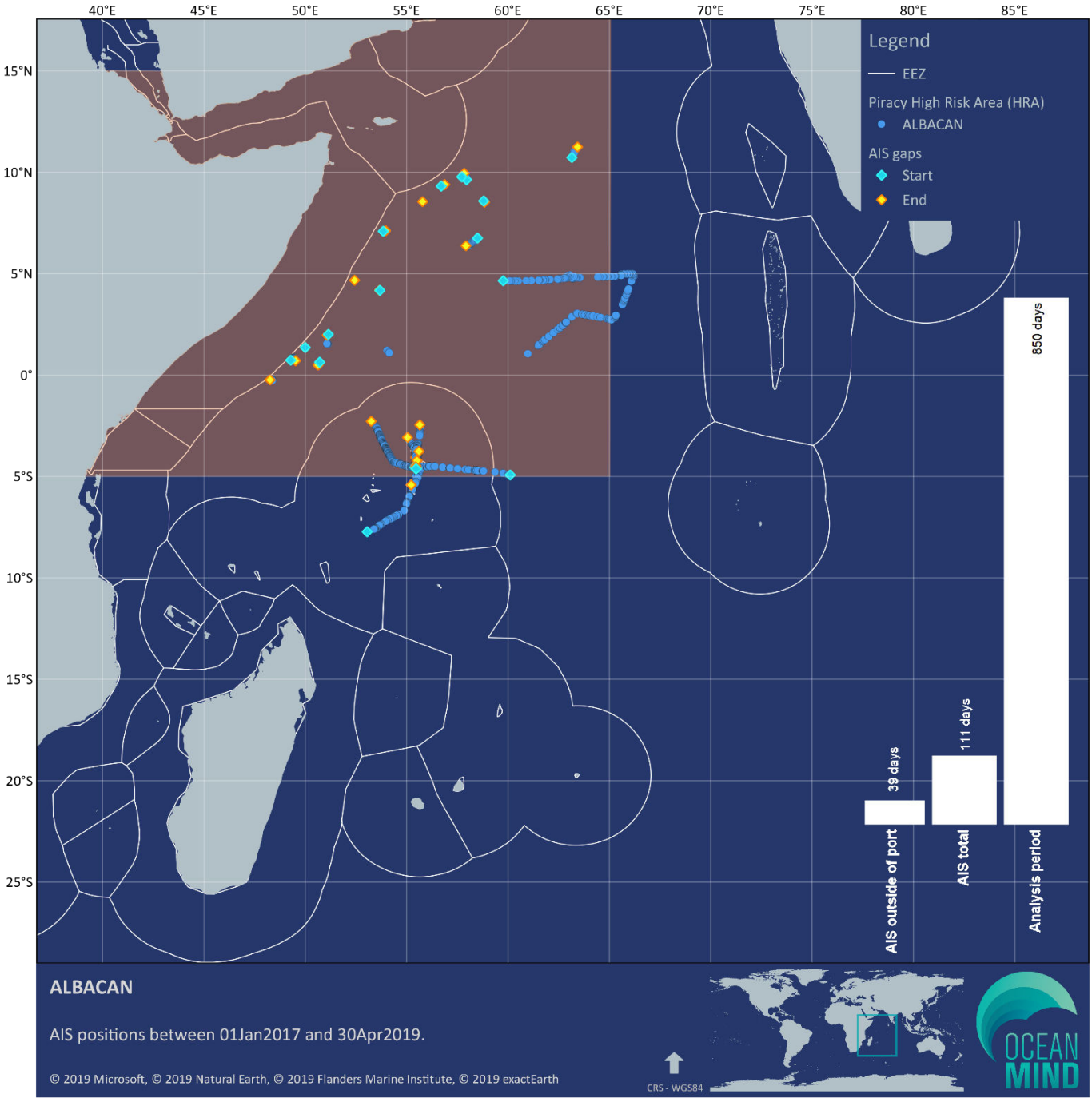
ALAKRANA

(see also the accompanying table and covering letter)



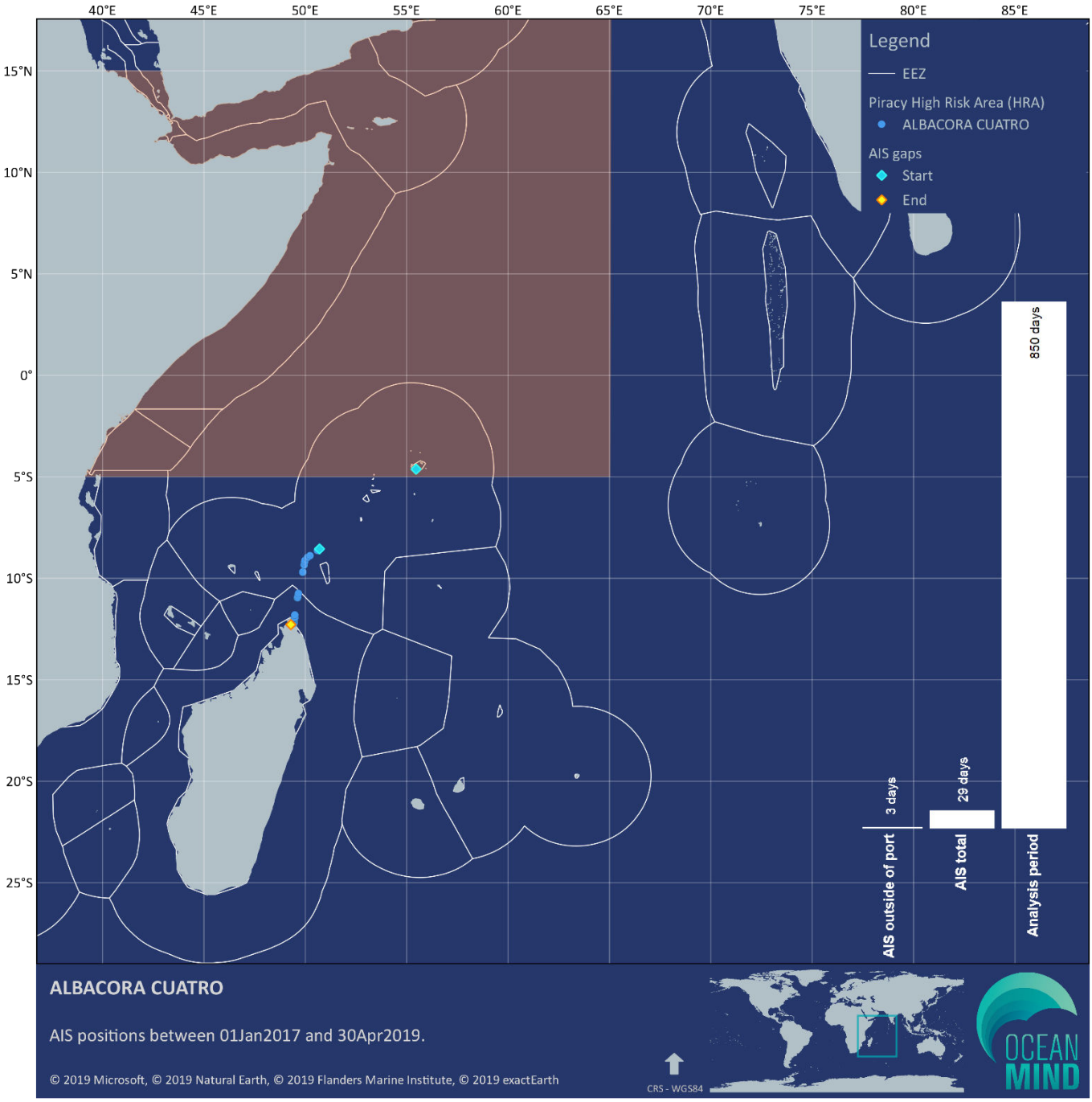
ALBACAN

(see also the accompanying table and covering letter)



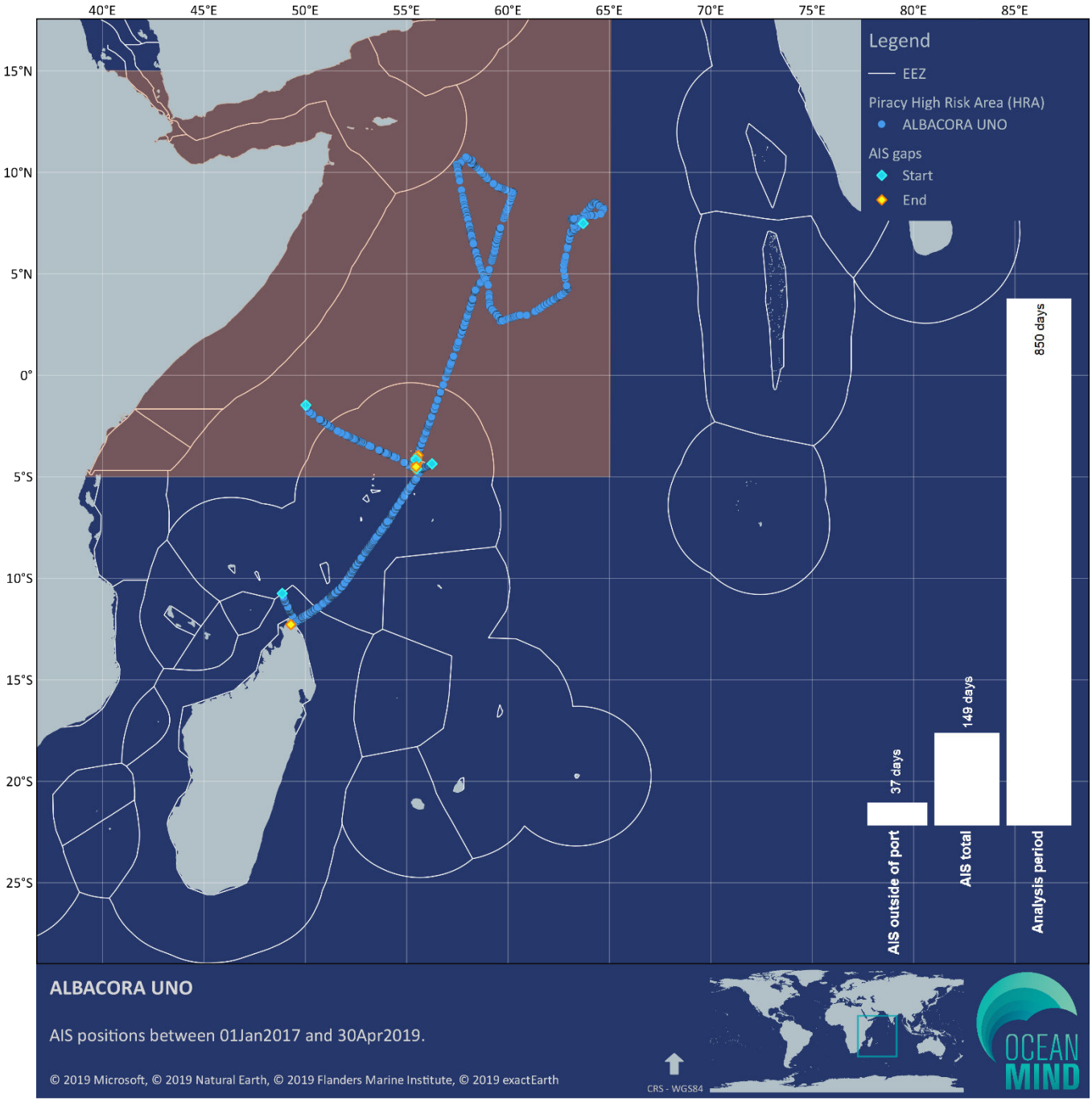
ALBACORA CUATRO

(see also the accompanying table and covering letter)



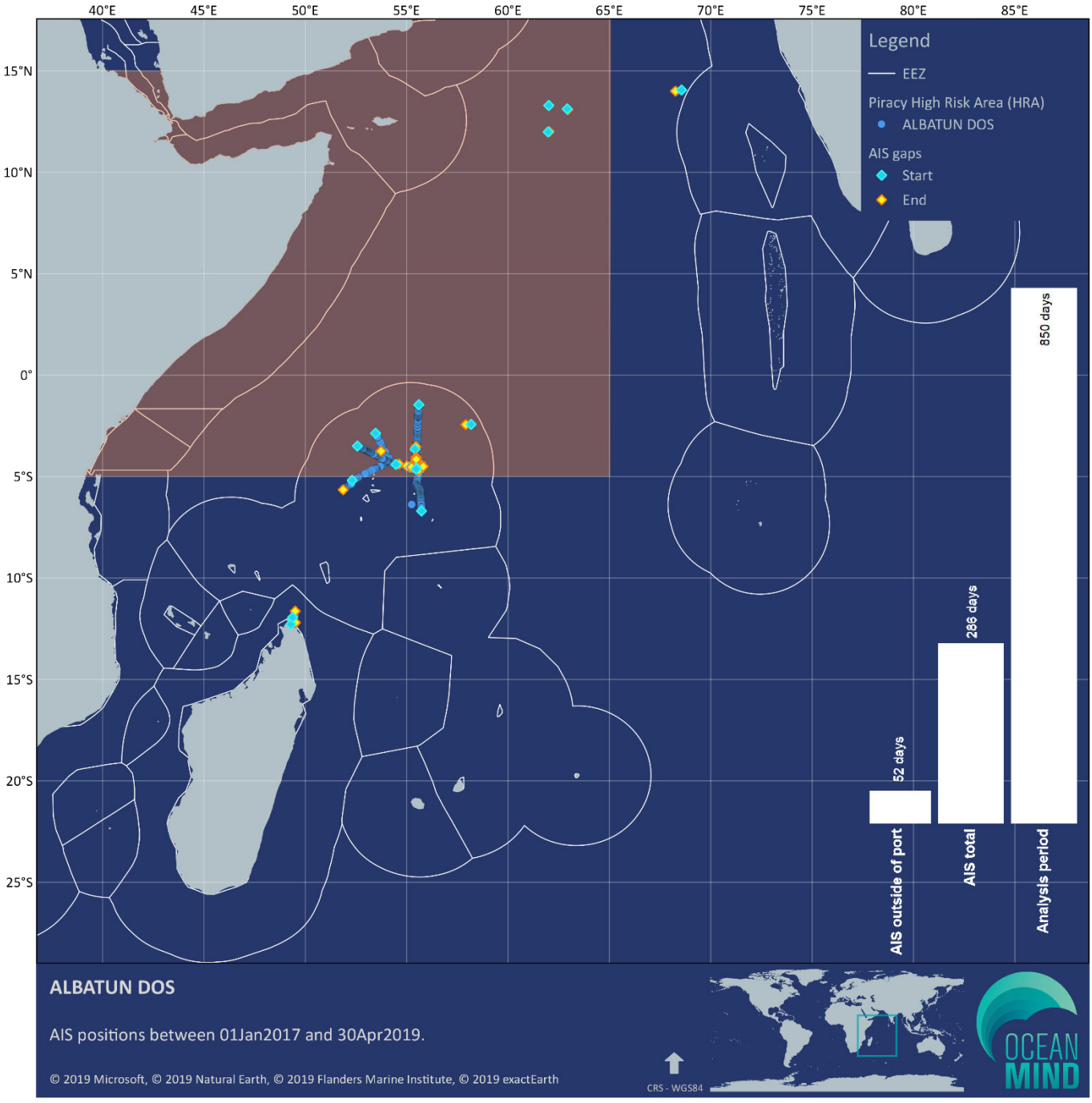
ALBACORA UNO

(see also the accompanying table and covering letter)



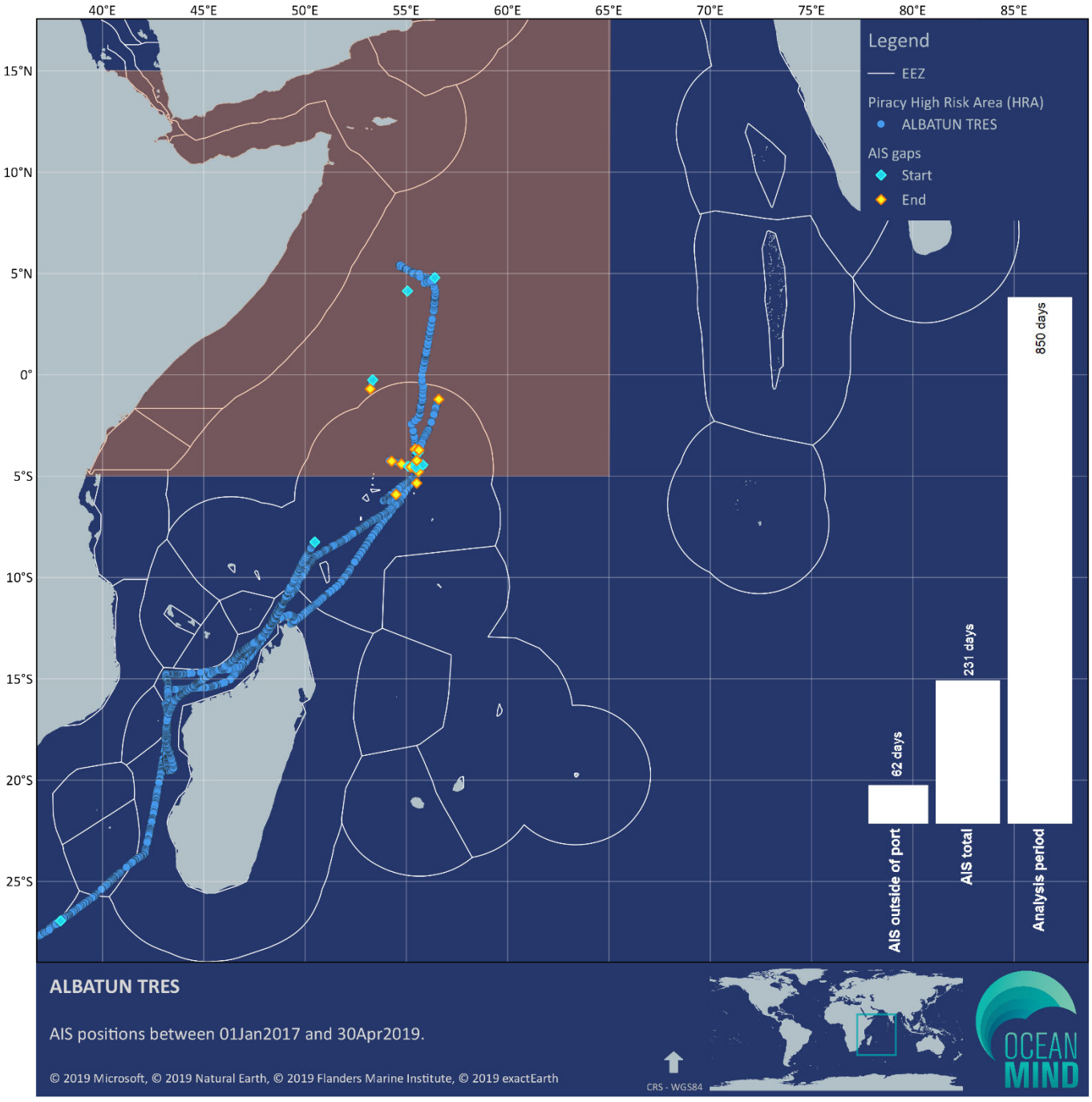
ALBATUN DOS

(see also the accompanying table and covering letter)



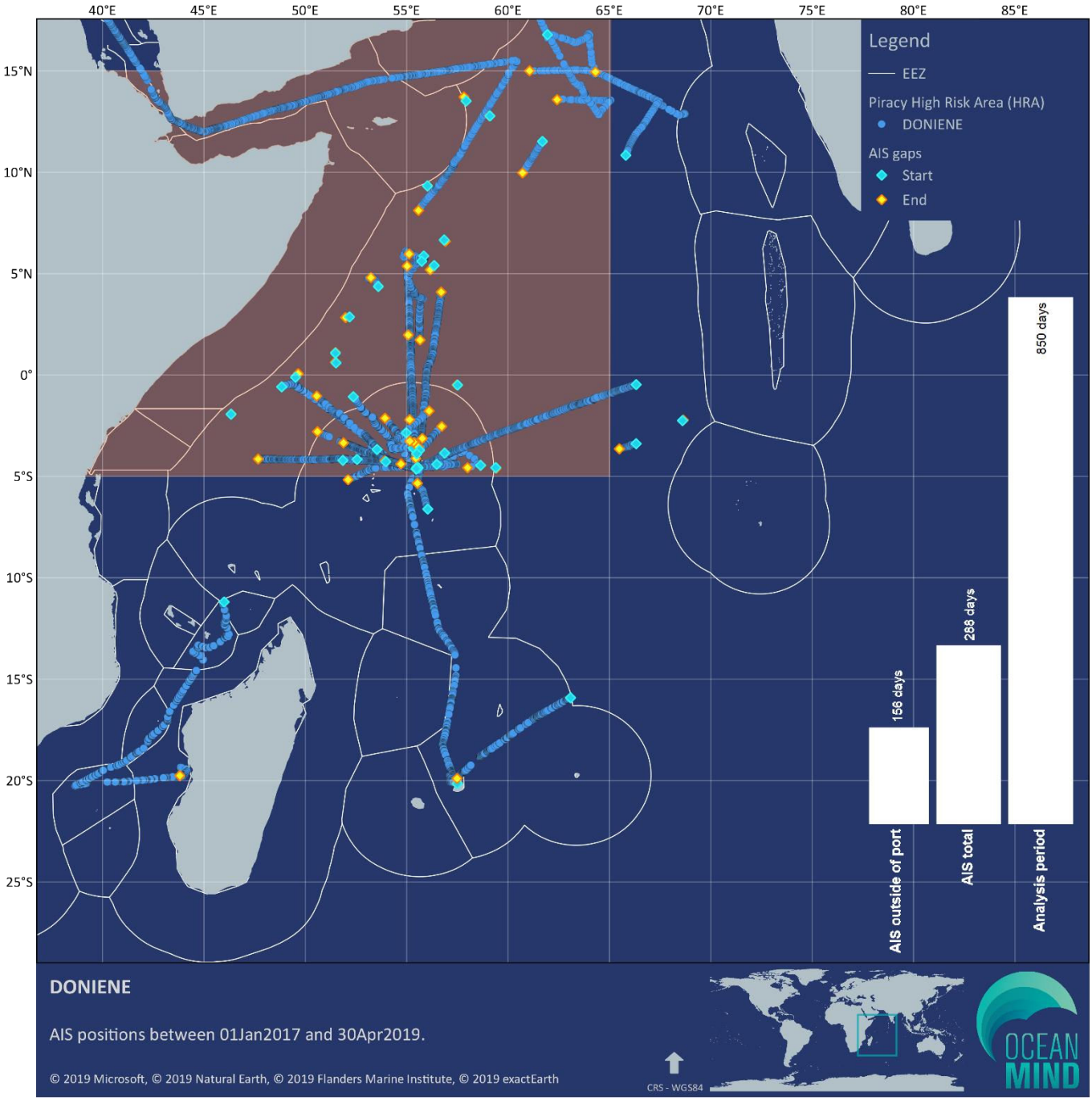
ALBATUN TRES

(see also the accompanying table and covering letter)



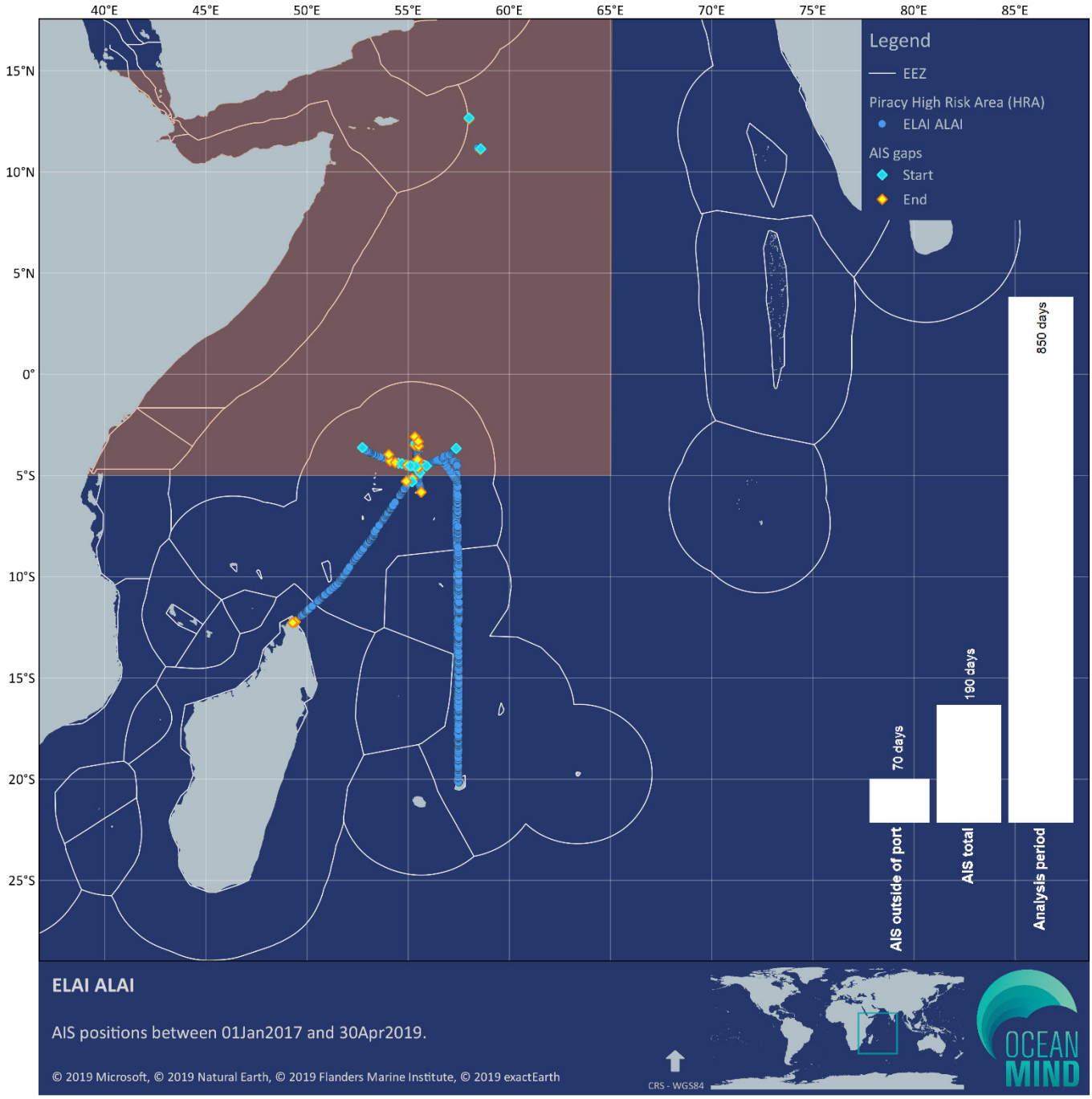
DONIENE

(see also the accompanying table and covering letter)



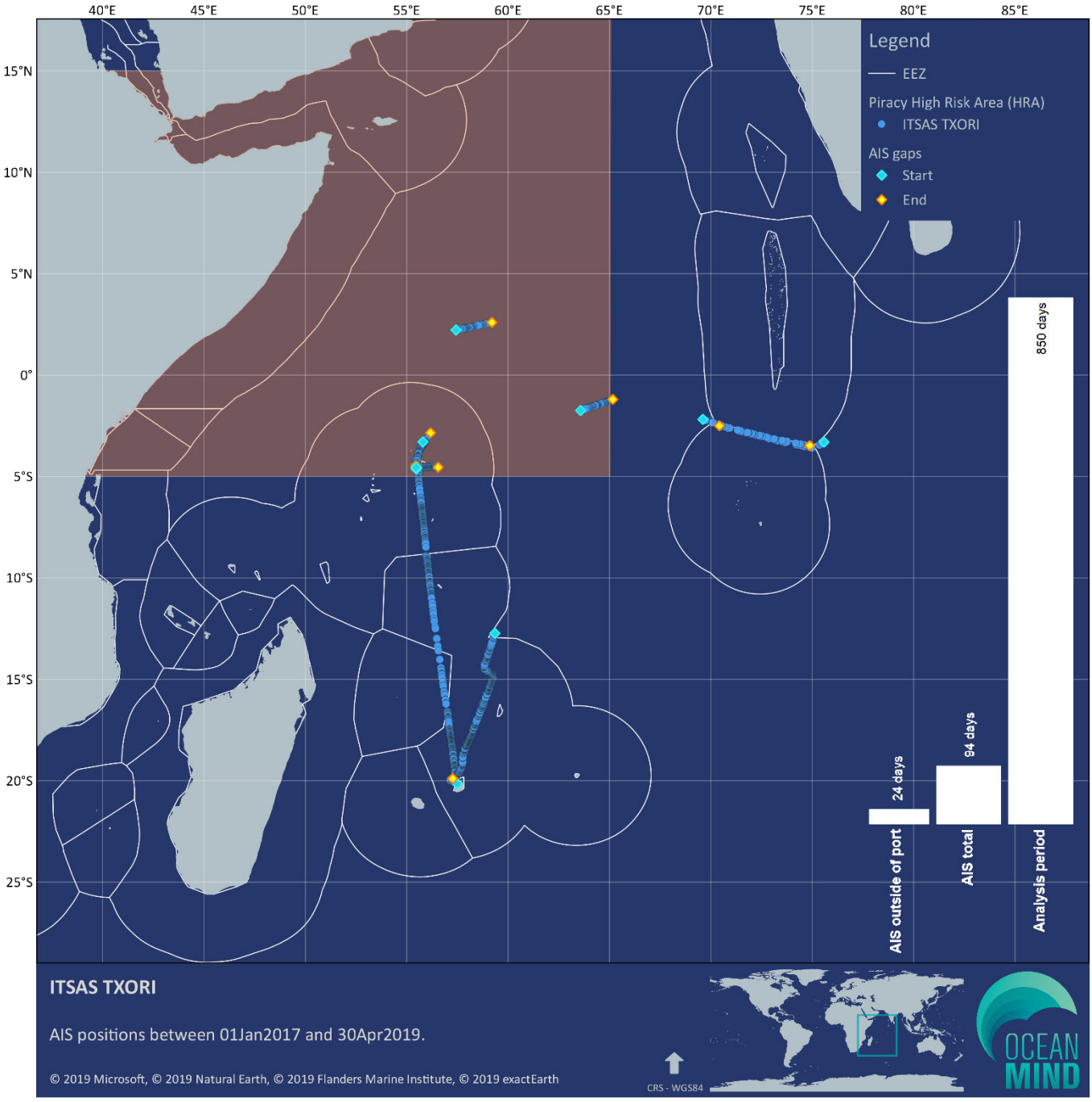
ELAI ALAI

(see also the accompanying table and covering letter)



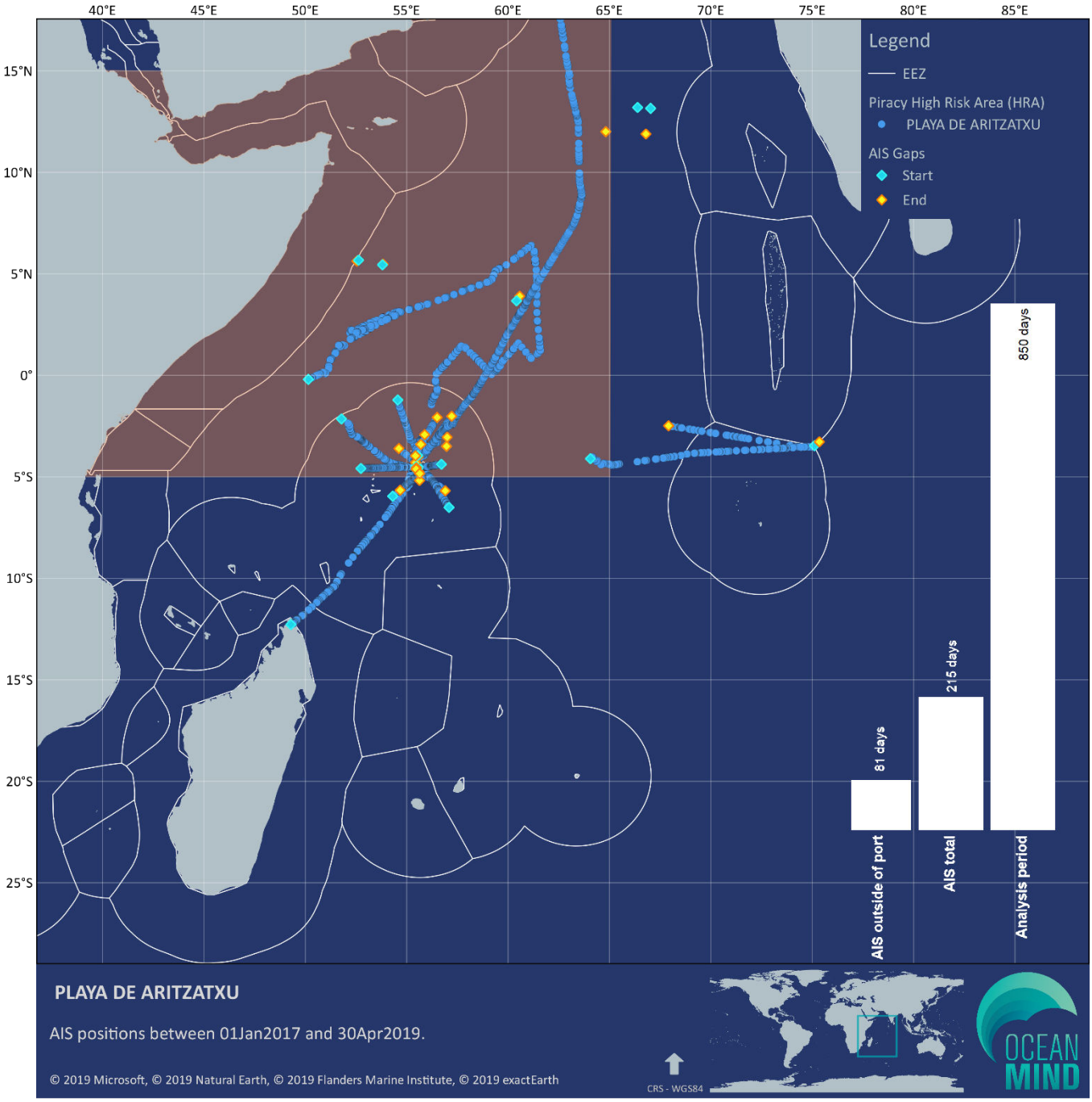
ITSAS TXORI

(see also the accompanying table and covering letter)



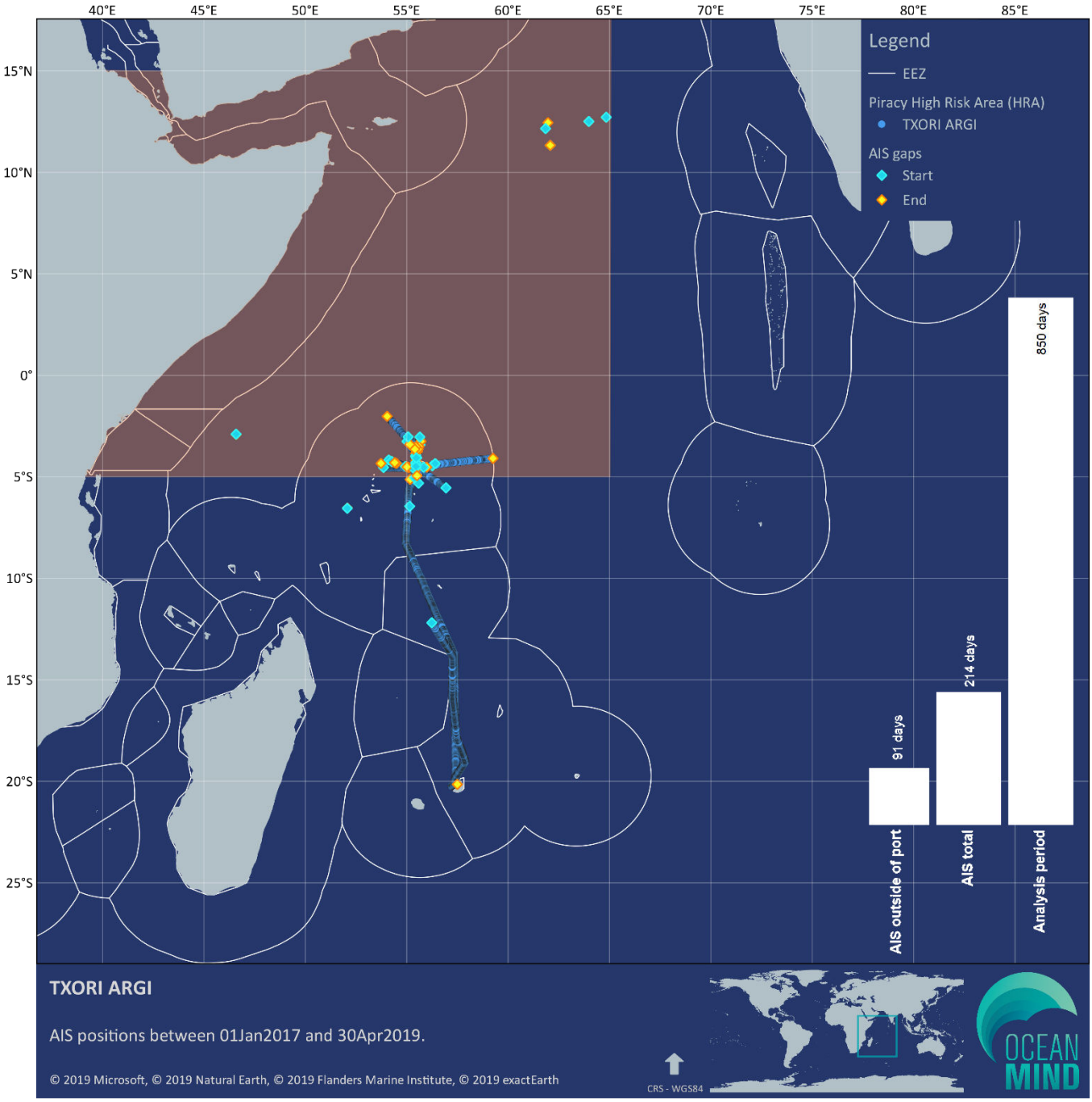
PLAYA DE ARITZATXU

(see also the accompanying table and covering letter)



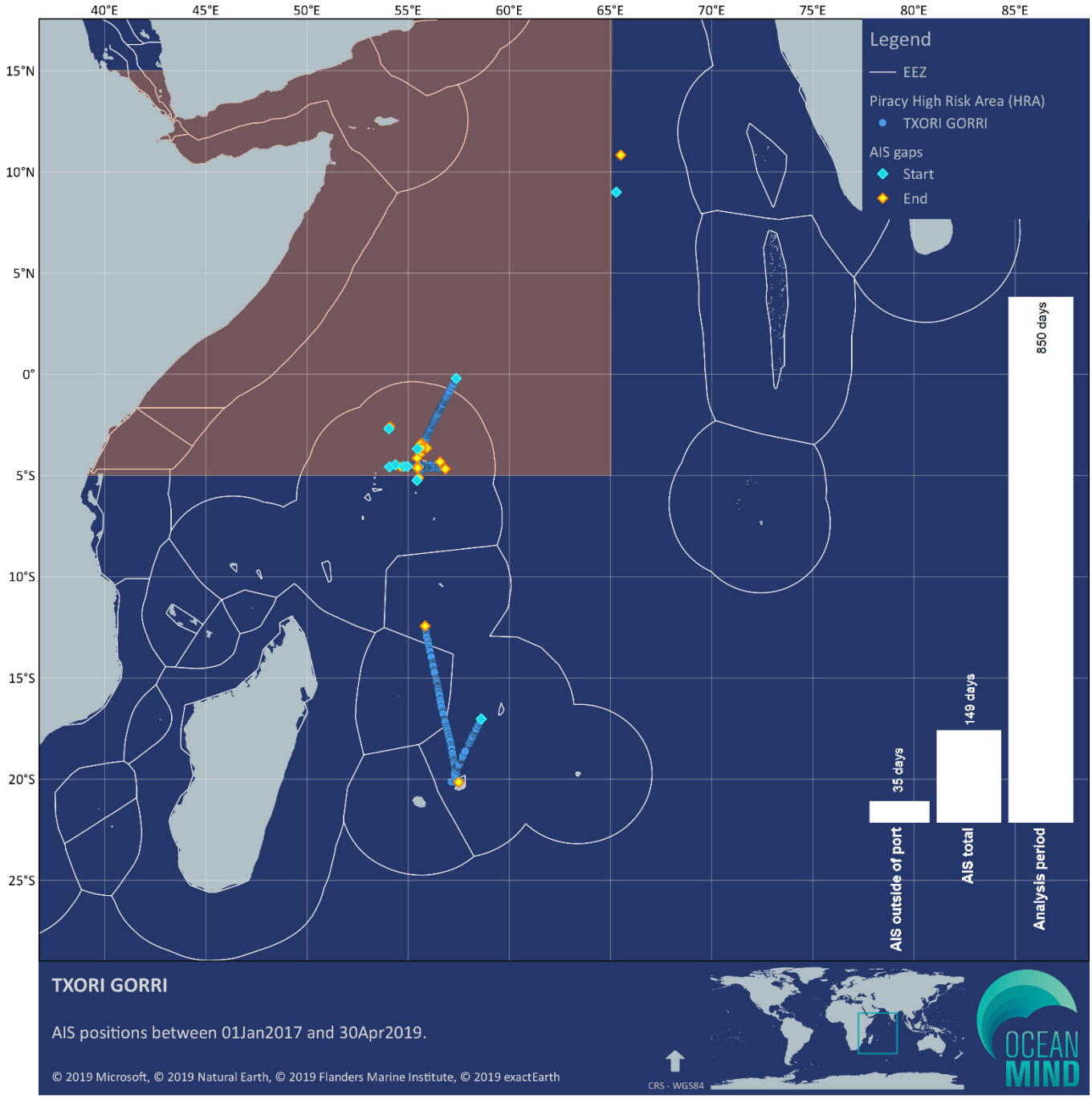
TXORI ARGI

(see also the accompanying table and covering letter)



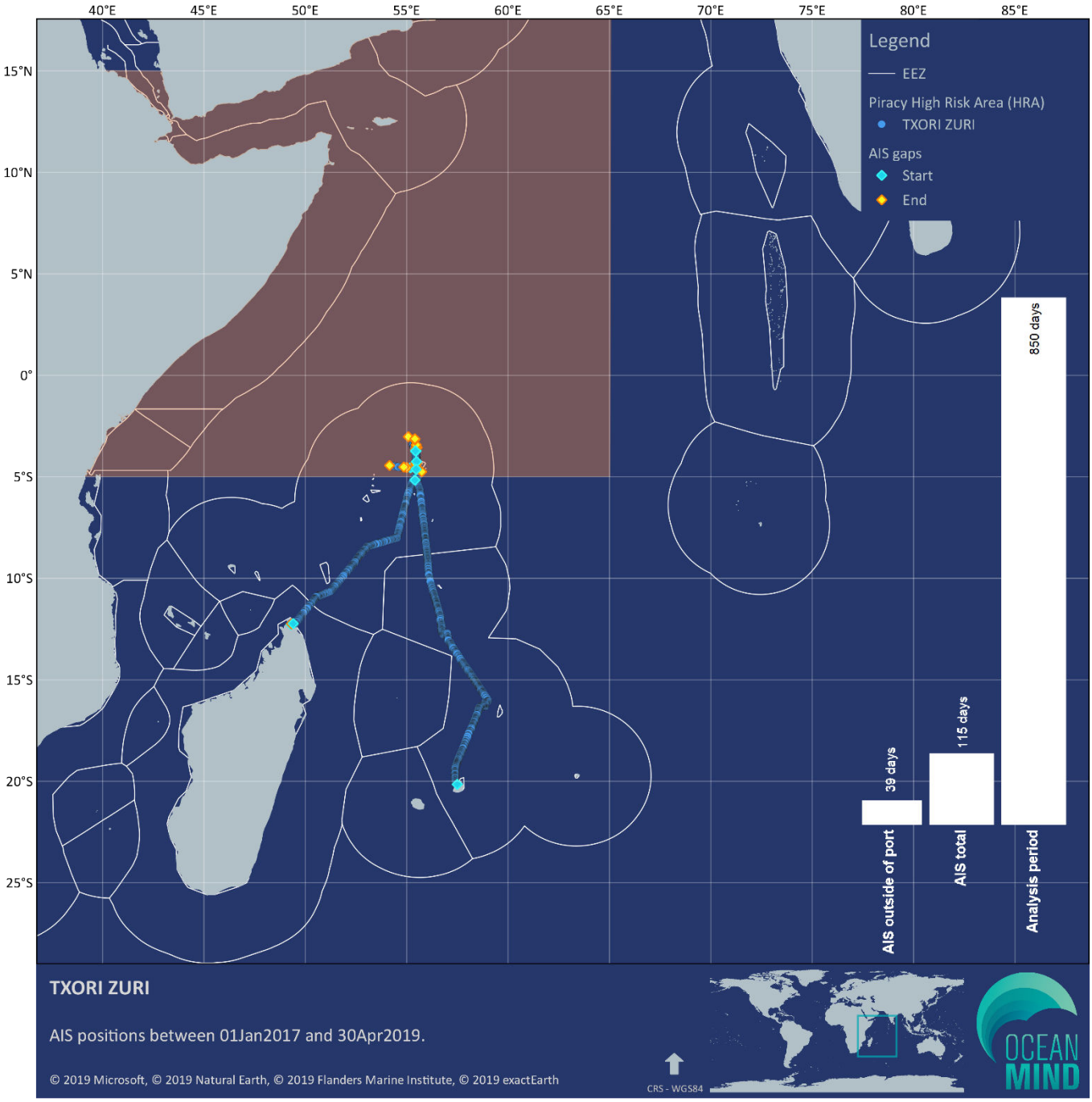
TXORI GORRI

(see also the accompanying table and covering letter)



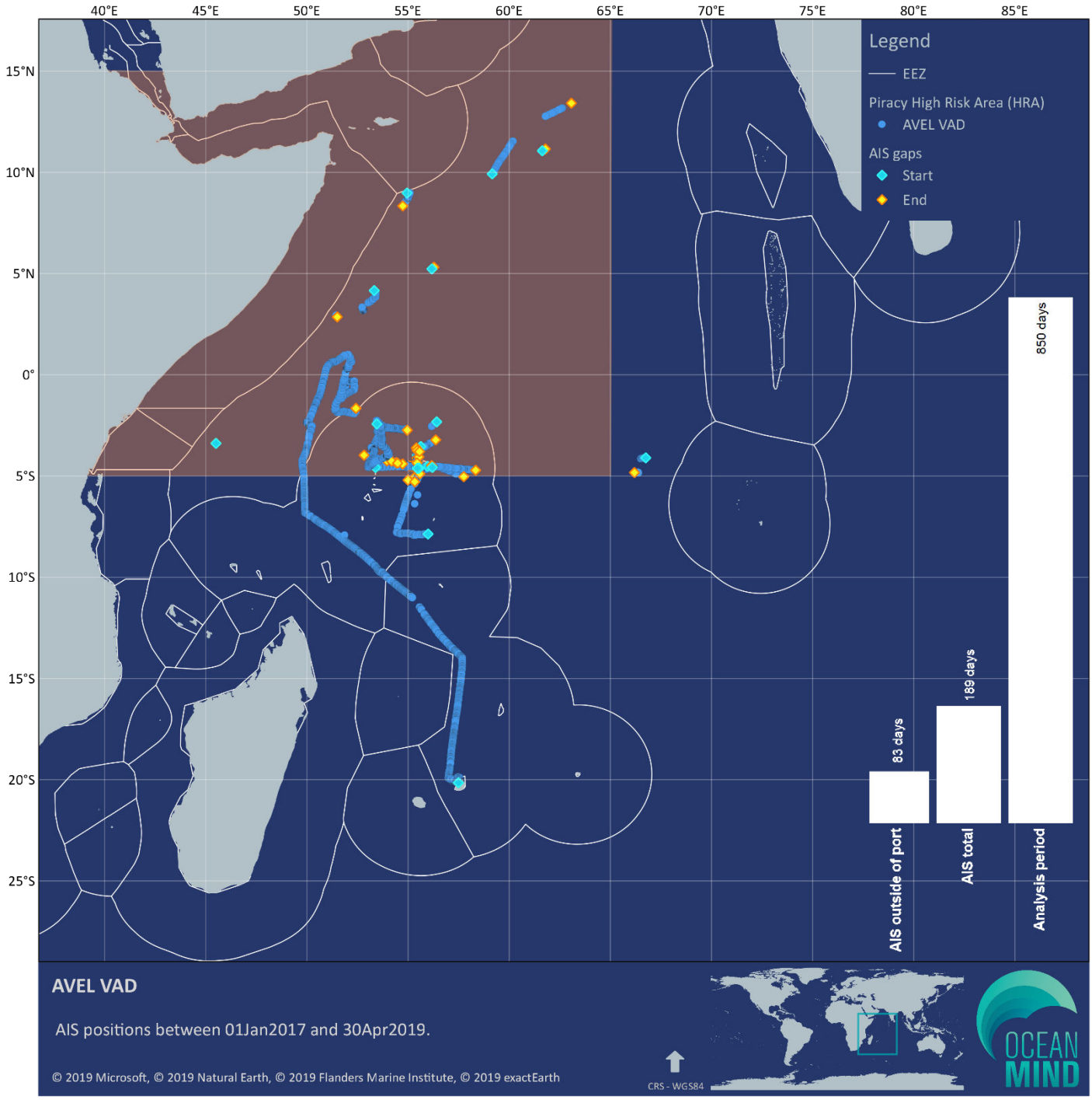
TXORI ZURI

(see also the accompanying table and covering letter)



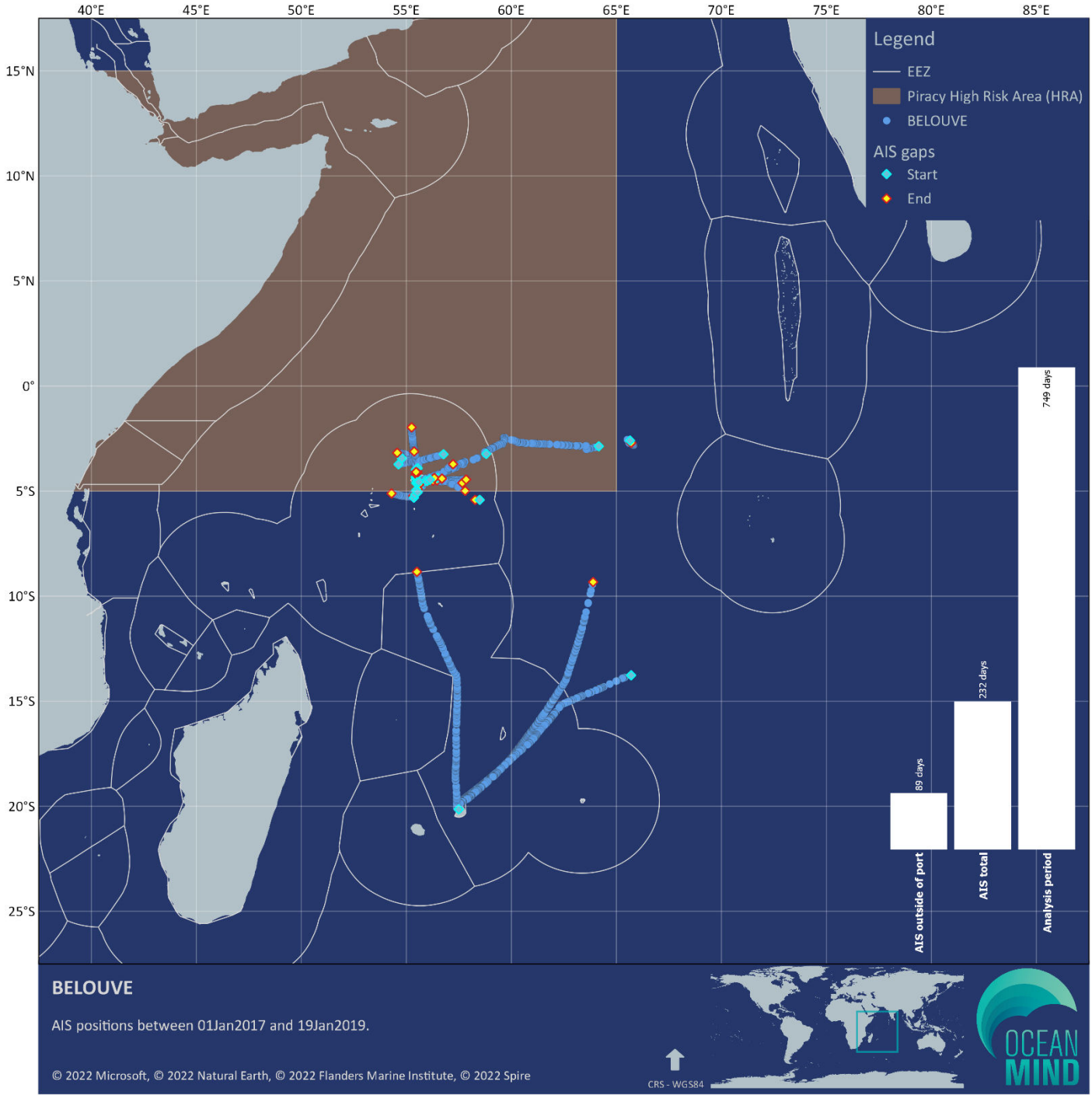
AVEL VAD

(see also the accompanying table and covering letter)



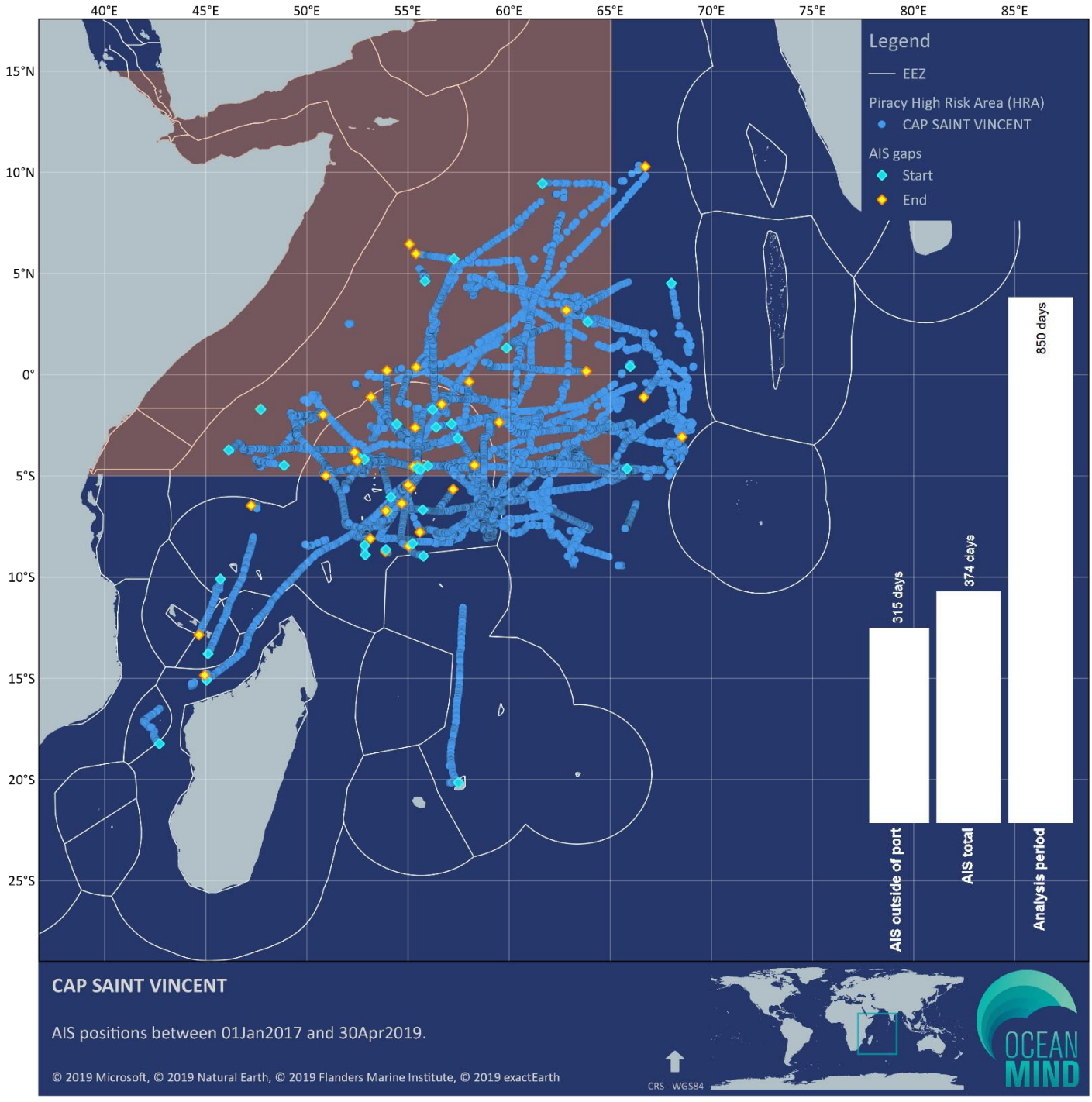
BELOUVE

(see also the accompanying table and covering letter)



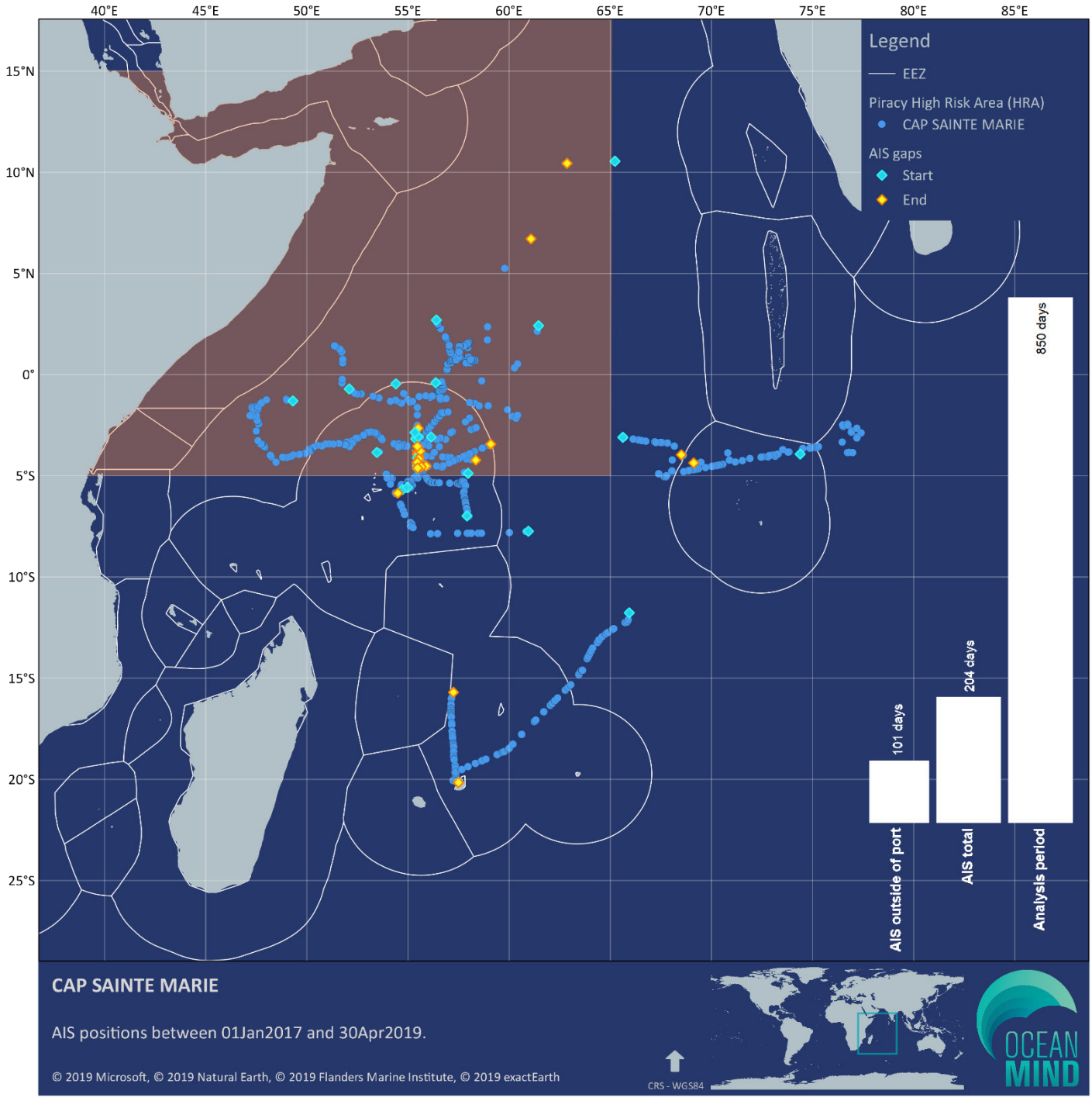
CAP SAINT VINCENT

(see also the accompanying table and covering letter)



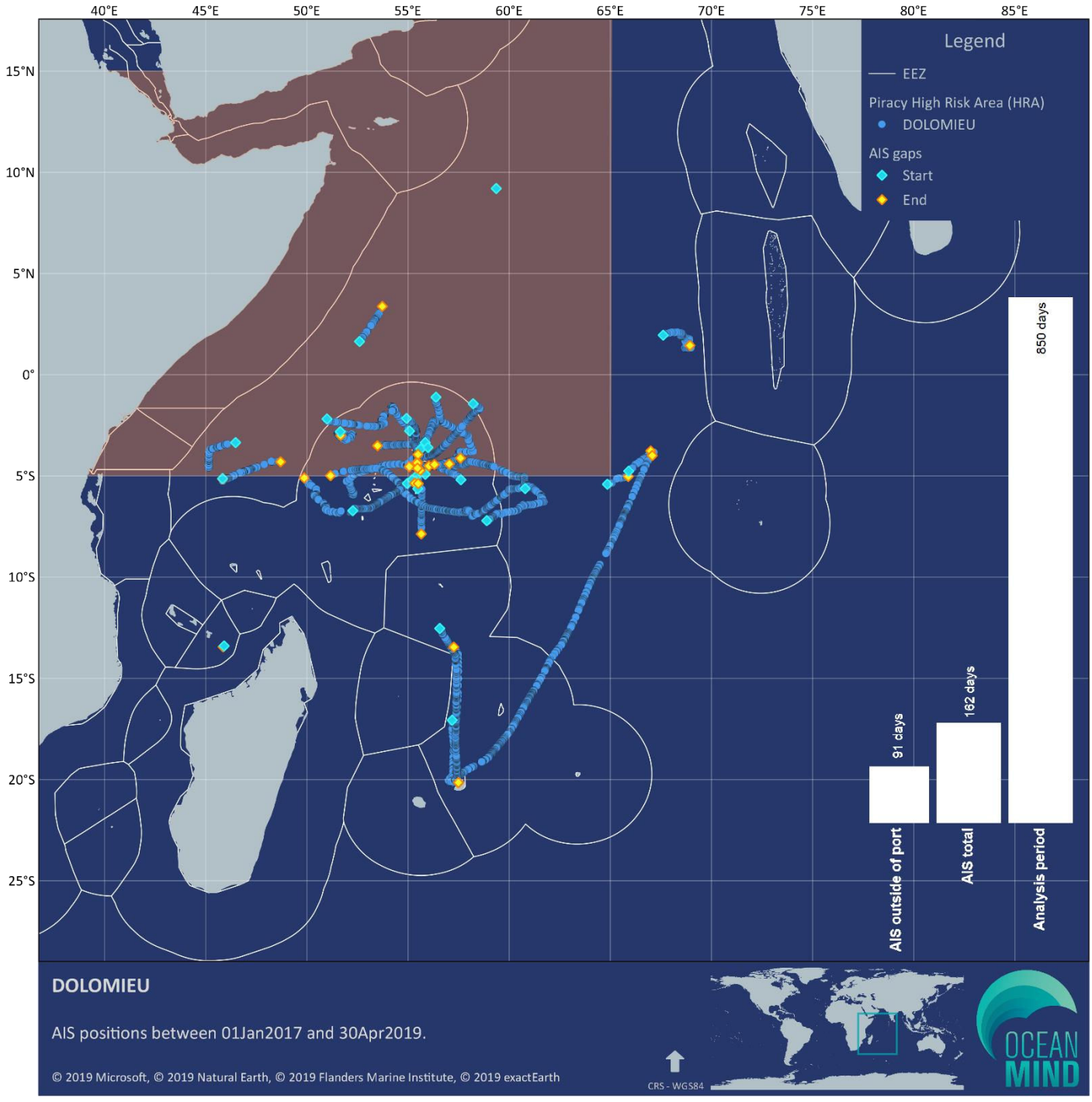
CAP SAINTE MARIE

(see also the accompanying table and covering letter)



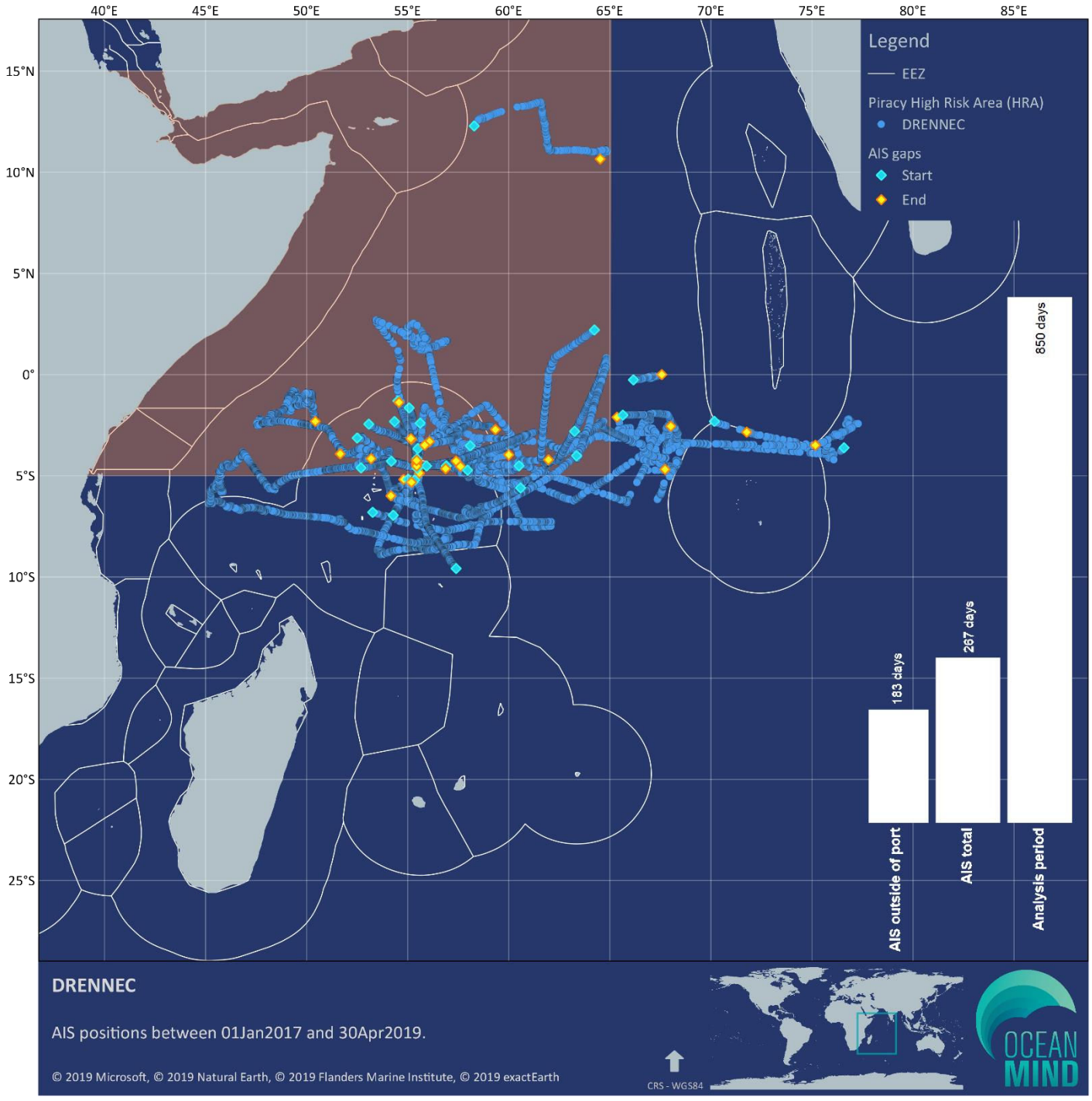
DOLOMIEU

(see also the accompanying table and covering letter)



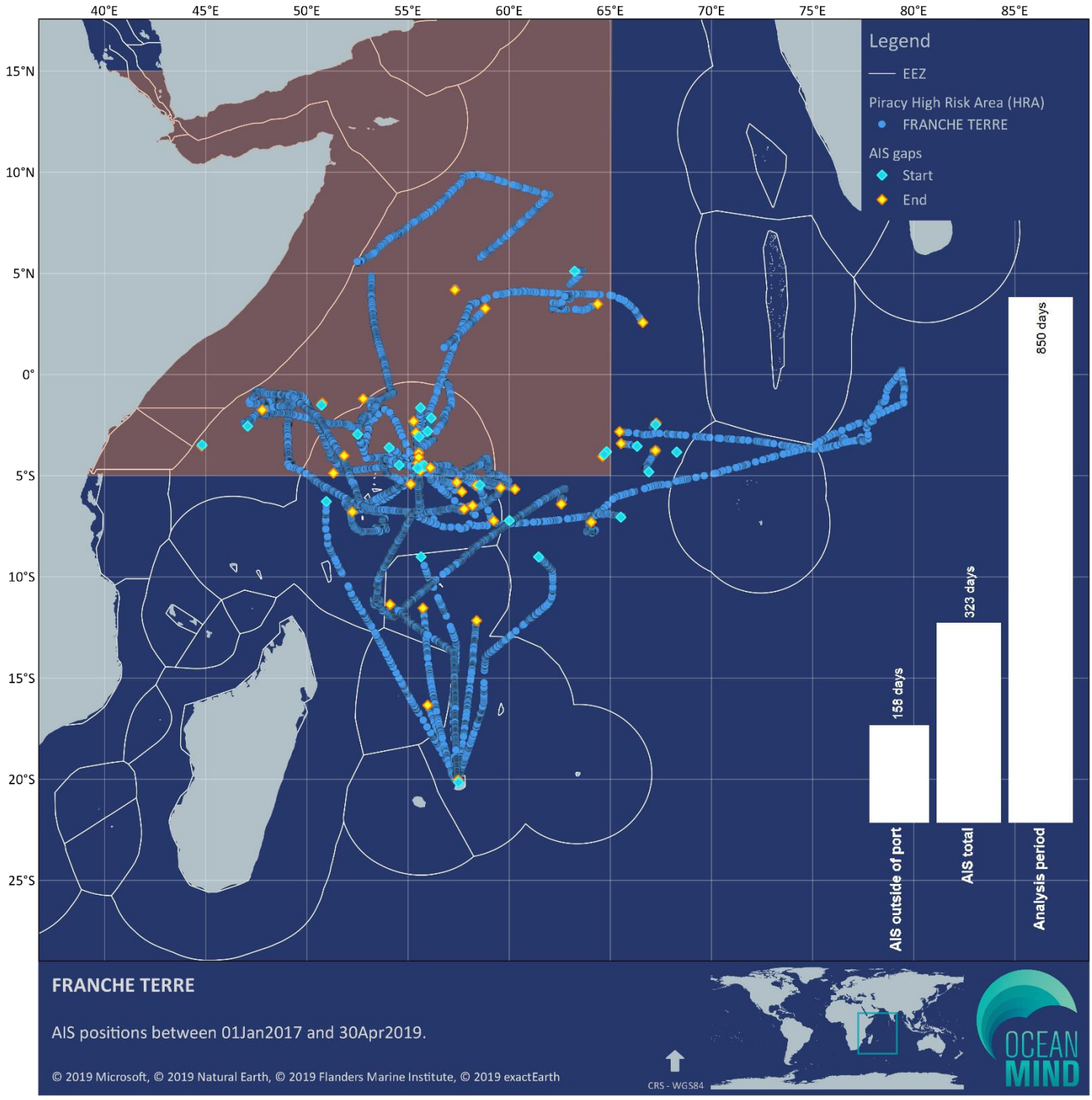
DRENNEC

(see also the accompanying table and covering letter)



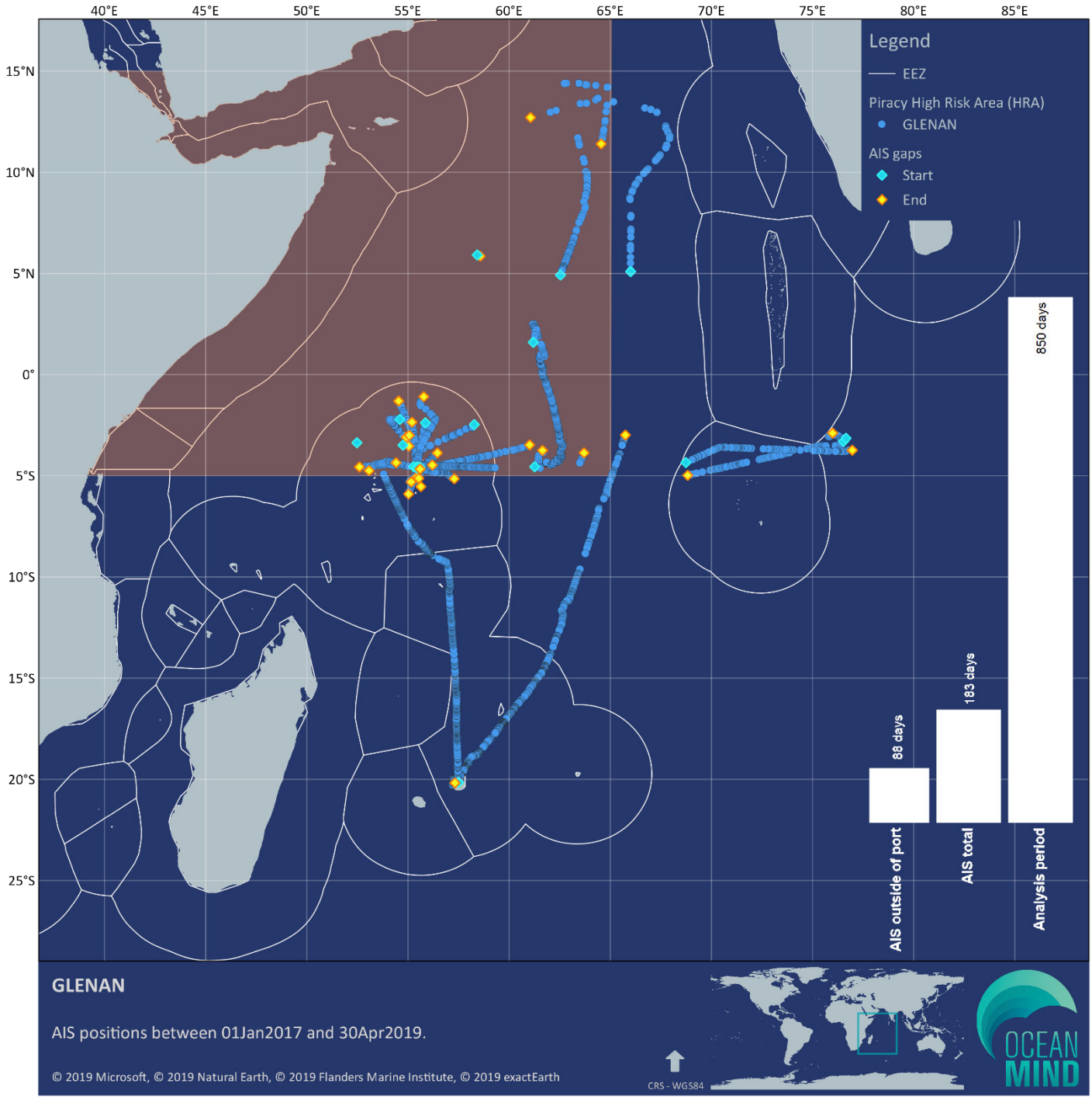
FRANCHE TERRE

(see also the accompanying table and covering letter)



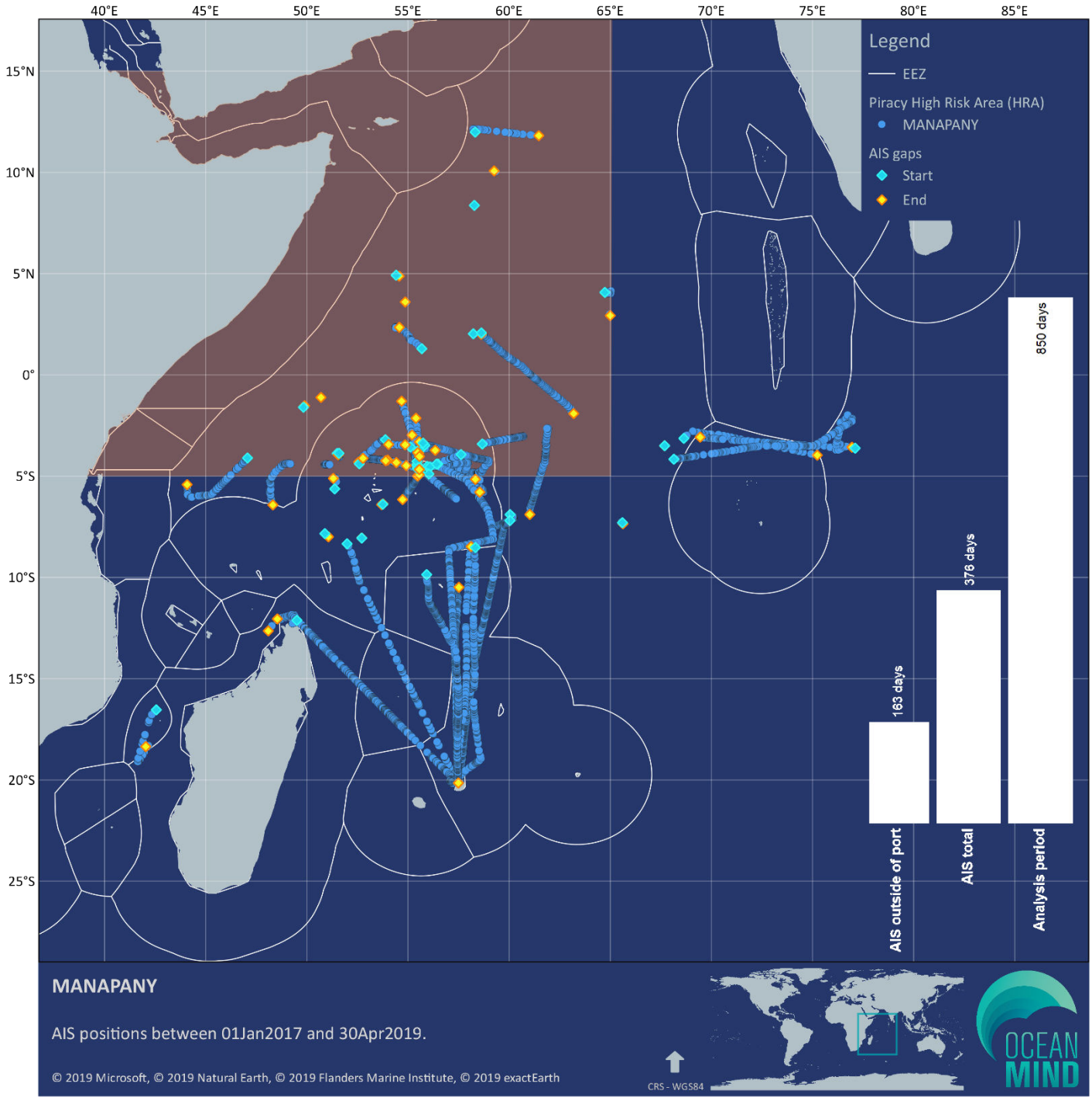
GLENAN

(see also the accompanying table and covering letter)



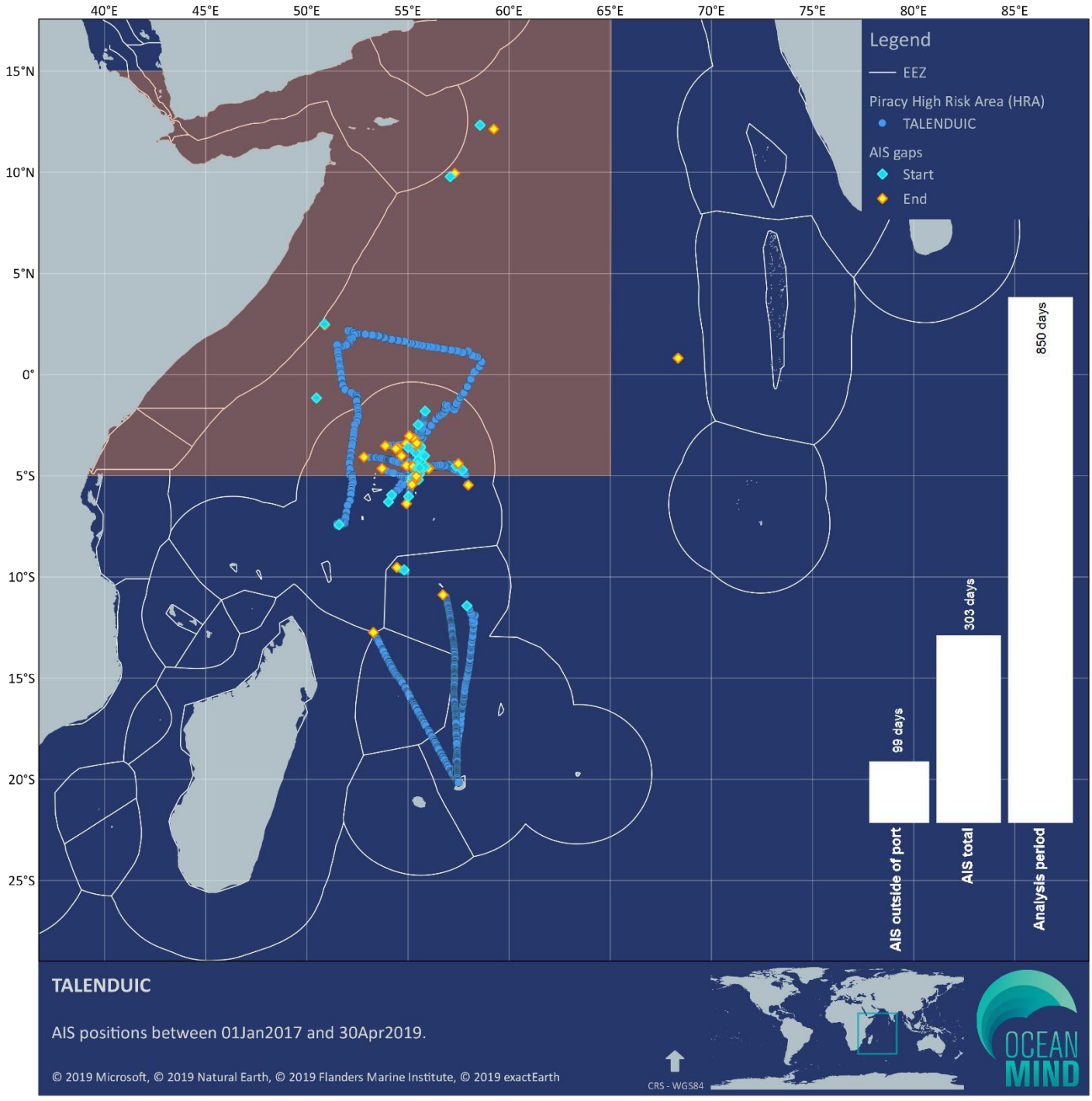
MANAPANY

(see also the accompanying table and covering letter)



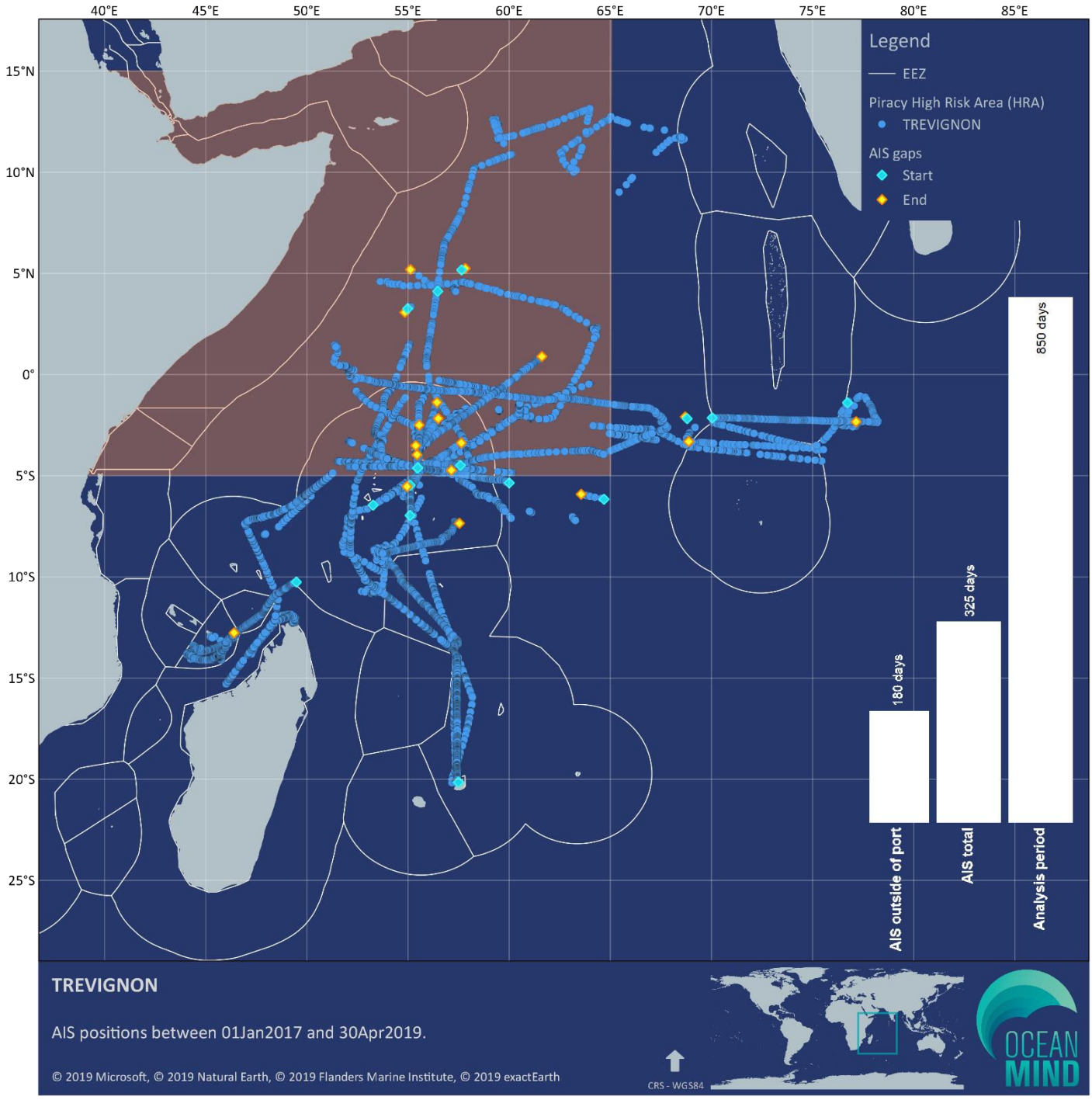
TALENDUIC

(see also the accompanying table and covering letter)



TREVIGNON

(see also the accompanying table and covering letter)



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