

**OM23 – 041**

**MAURITIAN PURSE SEINE VESSELS**

**RISK ASSESSMENT**

**01OCT2022 – 31MAR2023**

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Alex Hofford / Greenpeace

## OceanMind 23 – 041 MAURITIAN PURSE SEINE VESSELS RISK ASSESSMENT

<b>Area of interest (AOI)</b>	Indian Ocean
<b>Analysis Period</b>	01Oct2022 – 31Mar2023
<b>Data Sources</b>	AIS data
<b>Submitted to</b>	Blue Marine Foundation
<b>Date Submitted</b>	27 <sup>th</sup> April 2023
<b>Report Number</b>	23-041
<b>Report Compiled By</b>	Intelligence & Compliance (I&C) Team
<b>Quality Control By</b>	Senior I&C Team

### Abbreviations

<b>AIS</b>	Automatic Identification System	<b>IUU</b>	Illegal, Unreported and Unregulated
<b>AOI</b>	Area of Interest	<b>MMSI</b>	Maritime Mobile Service Identity
<b>EEZ</b>	Exclusive Economic Zone	<b>RFMO</b>	Regional Fisheries Management Organisation
<b>IMO</b>	International Maritime Organisation	<b>SOLAS</b>	International Convention for the Safety of Life at Sea
<b>IOTC</b>	Indian Ocean Tuna Commission	<b>VMS</b>	Vessel Monitoring Systems
<b>IRCS</b>	International Radio Call Sign		

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## Summary

According to the International Convention for the Safety of Life at Sea (SOLAS) regulation V/19 all ships of 300 gross tonnage and upwards engaged on international voyages should carry an AIS unit. The regulation requires that Automatic Identification System (AIS) shall ‘provide information - including the ship's identity, type, position, course, speed, navigational status and other safety-related information - automatically to appropriately equipped shore stations, other ships and aircraft.’<sup>1</sup> However, purse seine fishing vessels in the Indian Ocean frequently turn their AIS off when conducting fishing trips.<sup>2</sup> This includes four Mauritian flagged vessels, which were analysed in this risk assessment. For this AIS data from two suppliers were combined for the period 01Oct2022 – 31Mar2023 (182 days). Any fishing activity (a loop or semi-loop track followed by speeds below 5 kts), transmission gap (no transmissions for at least 90 minutes) and port call were identified through machine learning and the verification of an analyst. The results can be summarized as follows:

- ❖ All four vessels demonstrated transmission gaps which were likely related to their fishing activities and at least one gap exceeding two weeks.
- ❖ The [ALBACAN](#) did not transmit on AIS during any fishing event and had gaps within the Exclusive Economic Zone (EEZ) of Comoros and Madagascar.
- ❖ The [BELLE ISLE](#) was unlikely to engage in fishing activities within foreign EEZs but had significant gaps in transmissions.
- ❖ While the [BELLE RIVE](#) transmitted most frequently out of the four vessels, there were three transmission gaps being larger than a day. One transmission gap exceeded 16 days and is likely to be related to a fishing trip.
- ❖ The activity of the BELLE ISLE AND BELLE RIVE conducted in proximity to the Somalia EEZ exhibits that the AIS gaps are not related to piracy risks.
- ❖ After a port call in Port Louise at the beginning of the monitoring period, the [BELOUVE](#) was mainly active in the high seas north of the Seychelles. Large transmission gaps correspond to likely fishing trips.

Overall, it is very likely that transmission gaps of all four vessels relate to fishing activity and that AIS is deliberately turned off during these events. Vessel ownership appears to influence the level of transmission rate and where it is likely that the vessels have been operating. Vessel Monitoring System data of the vessels could significantly increase the confidence in the activity in the gaps and would allow to determine if any Illegal, unreported, and unregulated (IUU) activity was conducted.

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<sup>1</sup> [IMO: Solas Convention](#)

<sup>2</sup> [Automatic Identification System \(AIS\) usage by Spanish and French-flagged vessels](#)

## Risk assessment

An overview of the four vessels AIS transmissions is shown in Table 1. This is followed by the vessel details and activity timeline below. The displayed results of this risk assessment focus on transmission gaps and fishing activity. Such activities were marked in bold and potential IUU fishing threats in red in the activity timeline. Other risks, such as possible at-sea transshipments were not considered in this assessment. Activity gaps in the vessel activity timeline relate to transits with sufficient AIS transmissions.

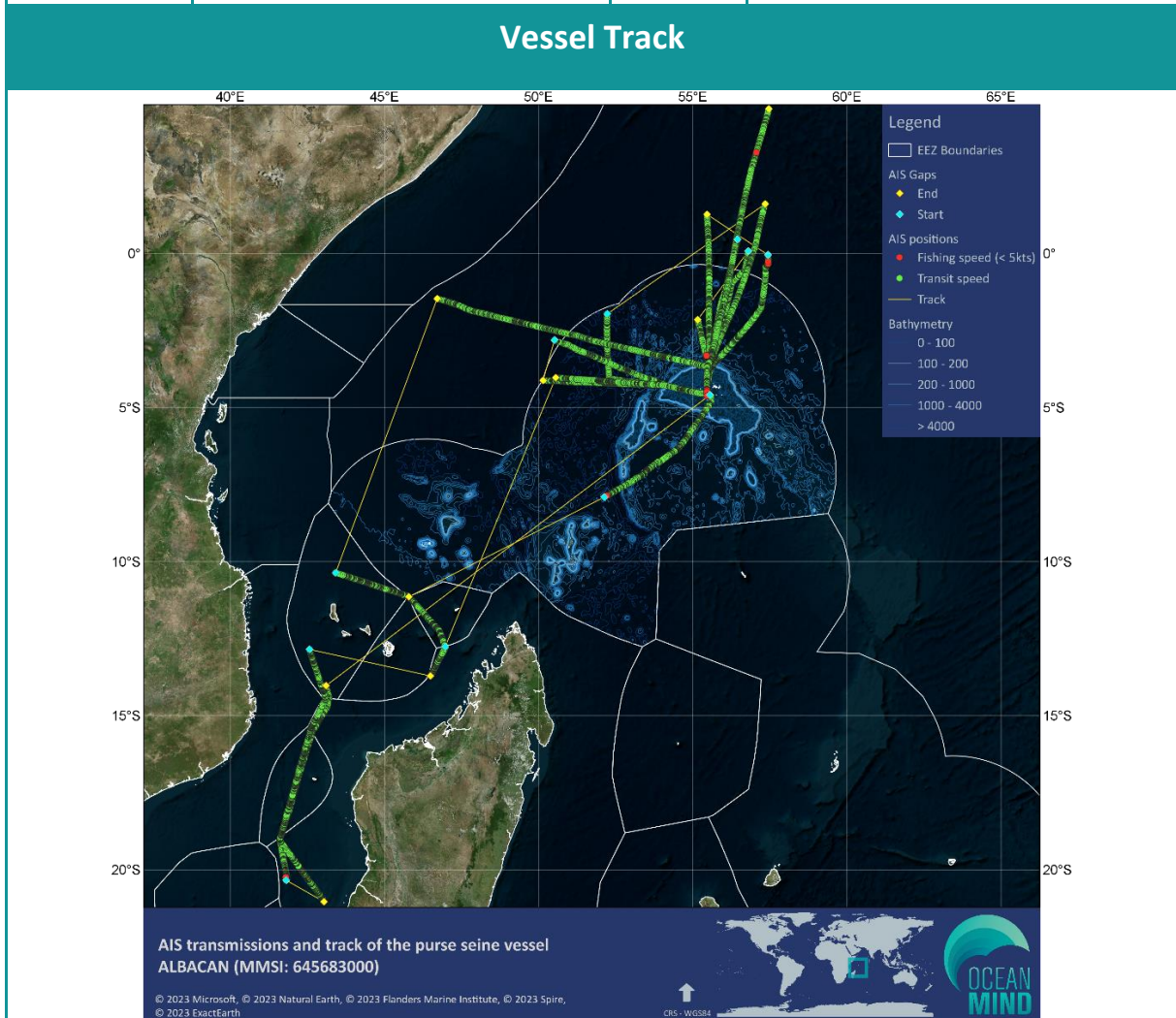
Table 1 | Summary of transmissions of the four purse seine fishing vessels considered in this risk assessment.

Vessel name	IMO	IRCS	MMSI	Total days transmitting on AIS	Percentage of total days spent transmitting	Number of AIS gaps (>90 minutes)	Mean AIS gap length (days)	Shortest AIS gap	Largest AIS gap (days)	Gaps in Port
<b>ALBACAN</b>	8906468	3BUW	645683000	70	38.5	11	11.3	2.2 days	22.7	None
<b>BELLE ISLE</b>	9679634	3BRZ	645374000	124	68.1	15*	4.2*	111 min	17.3	1
<b>BELLE RIVE</b>	9679622	3BRY	645373000	164	90.1	15*	1.7*	102 min	16	1
<b>BELOUVE</b>	9653848	3BTL	645524000	114	62.6	9	8.3	92.6 min.	29.3	2

\*excluding the gap in port

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Vessel details - ALBACAN				
<b>Name</b>	ALBACAN	<b>IMO</b>	8906468	<b>Image*</b> 
<b>IRCS</b>	3BUW	<b>MMSI</b>	645683000	
<b>Confirmed licenses and authorisations</b>	IOTC authorised: 28Sep2022 – 30Apr2023		<b>Operator*</b> Albafrigo SA Calle de Lersundi 9-3, 48009 Bilbao (Bizkaia), Spain. Tel:+34 94 423 2352 E-mail: bilbao@albacora.es	



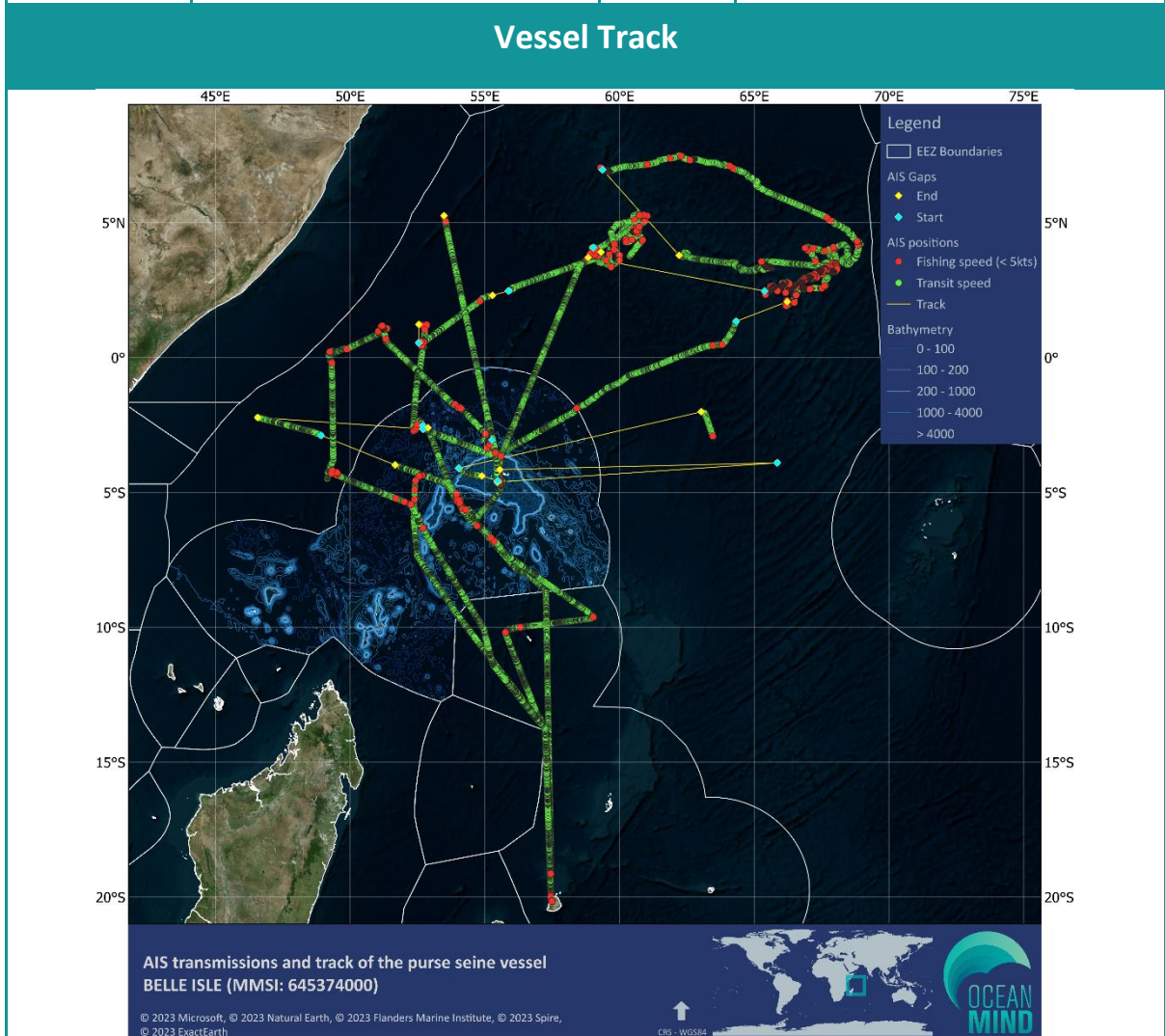
\* Source: IHS Global Limited

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Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
01Oct2022 00:01 – 05Oct2022 07:04	Port Call	Port Victoria		
06Oct2022 06:40 - 20Oct2022 04:02	Transmission Gap	Gap starts in the high seas and ends in the northern Seychelles EEZ	13.9	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
21Oct2022 02:55 – 25Oct2022 13:31	Port Call	Port Victoria		
26Oct2022 13:16 – 07Nov2022 15:10	Transmission Gap	High Seas	12.1	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
09Nov2022 01:44 – 15Nov2022 12:18	Port Call	Port Victoria		
16Nov2022 11:45 – 03Dec2022 15:06	Transmission Gap	Gap starts in northwestern Seychelles EEZ and ends in the high seas.	17.1	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
05Dec2022 01:27 – 09Dec2022 13:33	Port Call	Port Victoria		
10Dec2022 11:21 – 02Jan2023 03:55	Transmission Gap	High Seas	22.7	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
04Jan2023 02:01 – 11Jan2023 03:17	Port Call	Port Victoria		
11Jan2023 03:28 – 18Jan2023 13:47	Transmission Gap	Gap starts when the vessel is exiting Port Victoria and ends in the Comoro EEZ.	7.4	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>

Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
20Jan2023 02:10 – 22Jan2023 05:57	Transmission Gap	Madagascar EEZ	2.2	<b>The vessel could have engaged in fishing activity inside the EEZ.</b>
24Jan2023 02:34 – 31Jan2023 05:08	Transmission Gap	Comoro EEZ and Madagascar EEZ	7.1	<b>The vessel could have engaged in fishing activity inside the EEZ.</b>
01Feb2023 03:32 – 07Feb2023 03:35	Transmission Gap	Gap starts in the Comoro EEZ and ends in the high seas to the southwest of Somalia.	6	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
09Feb2023 05:35 – 15Feb2023 04:54	Port Call	Port Victoria		
16Feb2023 06:26 – 02Mar2023 09:24	Transmission Gap	Gap starts in the High seas and ends in the Seychelles EEZ	14.1	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
03Mar2023 07:51 – 06Mar2023 14:13	Port Call	Port Victoria		
07Mar2023 14:17 – 15Mar2023 18:37	Transmission Gap	Gap starts in the Seychelles EEZ and ends in the Glorioso Islands	8.2	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
16Mar2023 03:51 – 29Mar2023 10:59	Transmission Gap	Gap starts in the Madagascar EEZ and ends in the Seychelles EEZ.	13.3	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
30Mar2023 09:13	Port Call	Port Victoria		Remained in port until the end of the analysis period.

Vessel details – BELLE ISLE				
<b>Name</b>	BELLE ISLE	<b>IMO</b>	9679634	<b>Image*</b> 
<b>IRCS</b>	3BRZ	<b>MMSI</b>	645374000	
<b>Confirmed licenses and authorisations</b>	IOTC authorised: 01Oct2022 – 30Apr2023		<b>Operator*</b>	Indian Ocean Ship Mgmt Serv. IFS Court, Bank Street, 28, Cybercity, Ebene, Mauritius.



\* Source: IHS Global Limited

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Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
01Oct2022 00:04 – 05Oct2022 13:38	Fishing	High Seas		
05Oct2022 13:38 – 06Oct2022 04:29	Transmission Gap	High Seas	0.6	<b>The gap occurred in between fishing events. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
06Oct2022 04:29 – 08Oct2022 09:24	Fishing	High Seas		
09Oct2022 05:17 – 10:47	Transmission Gap	High Seas	0.2	<b>The gap occurred in between fishing events. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
10Oct2022 01:34 – 12:35	Fishing	High Seas		
10Oct2022 12:35 – 11Oct2022 06:26	Transmission Gap	High Seas	0.7	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
12Oct2022 03:07 – 11:23	Fishing	Seychelles EEZ		
12Oct2022 11:23 – 13:43	Transmission Gap	Seychelles EEZ	0.1	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
17Oct2022 03:36 – 23Oct2022 06:21	Port Call	Port Louise		
25Oct2022 00:59 – 26Oct2022 05:35	Fishing	Mauritius EEZ		
01Nov2022 03:30 – 04Nov2022 12:57	Port Call	Port Louise		
07Nov2022 08:46 –	Fishing	Seychelles EEZ		
08Nov2022 02:15 – 11Nov2022 07:24	Fishing	High Seas		

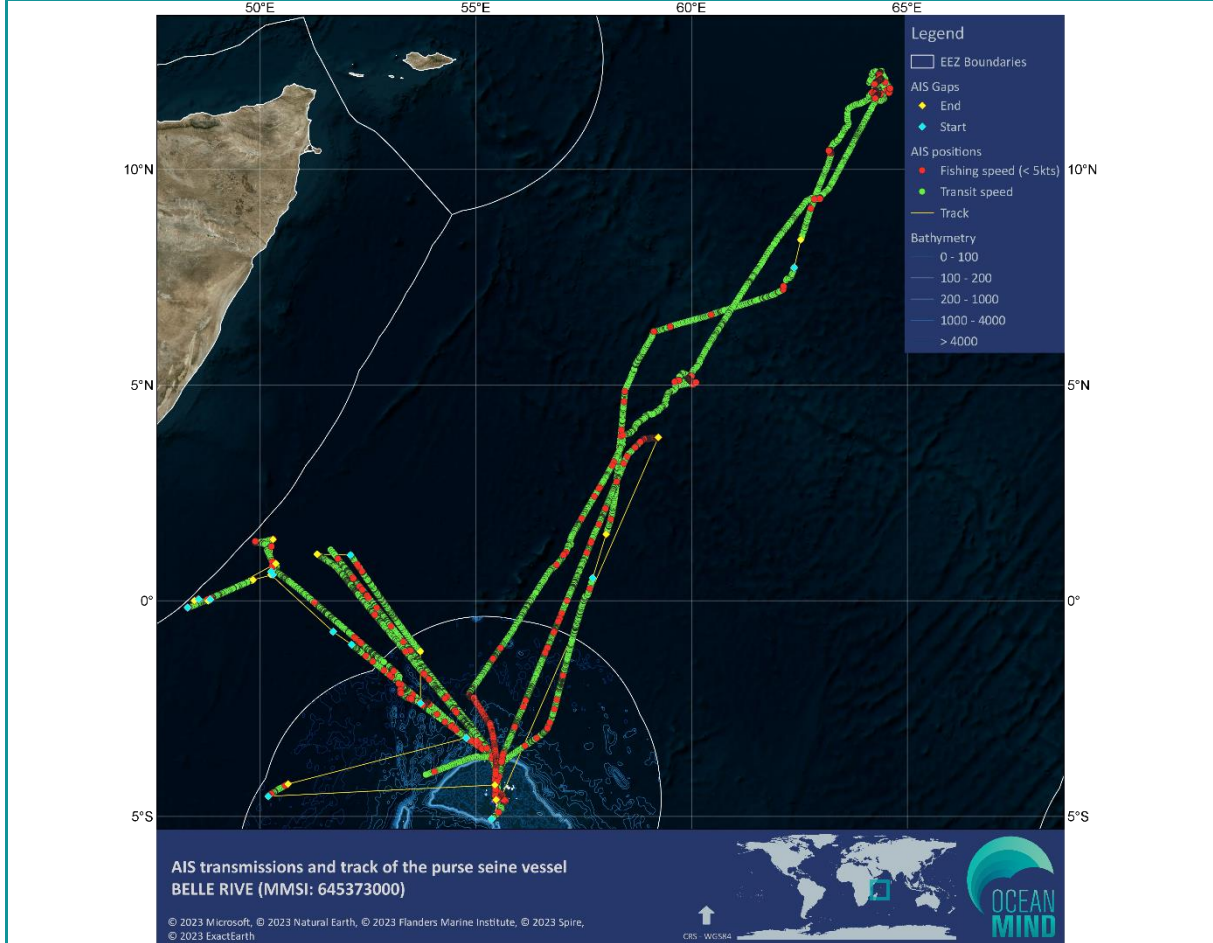
Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
13Nov2022 12:06 – 29Nov2022 05:48	Port Call	Port Victoria		
29Nov2022 05:48 – 07Dec2022 02:48	Transmission Gap	Port Victoria	7.9	It is possible that the vessel did not leave the port during this transmission gap.
07Dec2022 02:48 – 20Dec2022 09:20	Port Call	Port Victoria		
22Dec2022 10:24 – 23Dec2022 01:02	Transmission Gap	High Seas	0.6	<b>The gap occurred in between fishing events. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
23Dec2022 01:02 – 28Dec2022 06:26	Fishing	High Seas		
31Dec2022 02:42 – 02Jan2023 10:37	Transmission Gap	High Seas	2.3	<b>The gap occurred in between fishing events. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
02Jan2023 10:37 – 14Jan2023 03:52	Fishing	High Seas		
14Jan2023 03:52 – 31Jan2023 09:47	Transmission Gap	High Seas	17.2	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
03Feb2023 02:59 – 08Feb2023 08:16	Port Call	Port Victoria		
09Feb2023 02:18 – 04:20	Fishing	Seychelles EEZ		
09Feb2023 04:20 – 19Feb2023 10:02	Transmission Gap	High Seas	10.2	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
21Feb2023 08:18 – 14:06	Port Call	Port Victoria		

Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
21Feb2023 14:06 – 07Mar2023 13:54	Transmission Gap	Gap starts in the Seychelles EEZ and ends in the high seas	14.0	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
07Mar2023 13:54 – 14Mar2023 00:23	Transmission Gap	Gap starts in the high seas and ends in the Seychelles EEZ	6.4	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
14Mar2023 02:48 – 19Mar2023 07:43	Port Call	Port Victoria		
20Mar2023 01:05 – 24Mar2023 15:09	Transmission Gap	Gap starts in the Seychelles EEZ and ends in the high seas	4.6	<b>It is possible that the vessel engaged in fishing activity during the transmission gap.</b>
25Mar2023 03:12 – 17:12	Transmission Gap	Gap starts in the high seas and ends in the Seychelles EEZ	0.6	<b>It is possible that the vessel engaged in fishing activity during the transmission gap.</b>
26Mar2023 04:01 – 05:06	Fishing	Seychelles EEZ		
27Mar2023 02:40 – 27Mar2023 10:04	Port Call	Port Victoria		
2023Mar27 12:29 – 15:35	Transmission Gap	Seychelles EEZ	0.1	
28Mar2023 01:25 – 01Apr2023 14:34	Transmission Gap	Seychelles EEZ	4.5	<b>It is possible that the vessel engaged in fishing activity during the transmission gap.</b>

### Vessel details – BELLE RIVE

<b>Name</b>	BELLE RIVE	<b>IMO</b>	9679622	<b>Image*</b>	
<b>IRCS</b>	3BRY	<b>MMSI</b>	645373000		
<b>Confirmed licenses and authorisations</b>	IOTC authorised: 01Oct2022 – 30Apr2023			<b>Operator*</b>	Indian Ocean Ship Mgmt Serv. IFS Court, Bank Street, 28, Cybercity, Ebene, Mauritius.

### Vessel Track



\* Source: IHS Global Limited

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Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
03Oct2022 03:03 – 04Oct2022 14:39	Port Call	Port Victoria		
05Oct2022 12:32 – 14:44	Transmission Gap	High seas	0.1	Likely to be transiting
05Oct2022 14:44 – 06Oct2022 07:38	Transmission Gap	High seas	0.7	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
06Oct2022 08:20 – 13:51	Transmission Gap	High seas	0.2	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
07Oct2022 01:01 – 08Oct2022 02:11	Transmission Gap	High seas	1.0	<b>The gap occurred before a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
08Oct2022 02:11 – 05:05	Fishing	High seas		East of the Somalia EEZ
08Oct2022 05:05 – 13:33	Transmission Gap	High seas	0.4	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
08Oct2022 13:47 – 09Oct2022 09:09	Transmission Gap	High seas	0.8	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
09Oct2022 10:23 – 11Oct2022 01:11	Transmission Gap	High seas	1.6	<b>The gap occurred before a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
11Oct2022 01:11 – 12Oct2022 11:53	Fishing			
13Oct2022 02:21 – 13:54	Port Call	Port Victoria		
13Oct2022 21:01 – 15Oct2022 01:12	Transmission Gap	Seychelles EEZ	1.2	<b>The vessel was likely transiting to the northwest EEZ. The nature of this gap raises concern, as the fishing</b>
15Oct2022 01:12 – 17Oct2022 01:03	Fishing	Seychelles EEZ		

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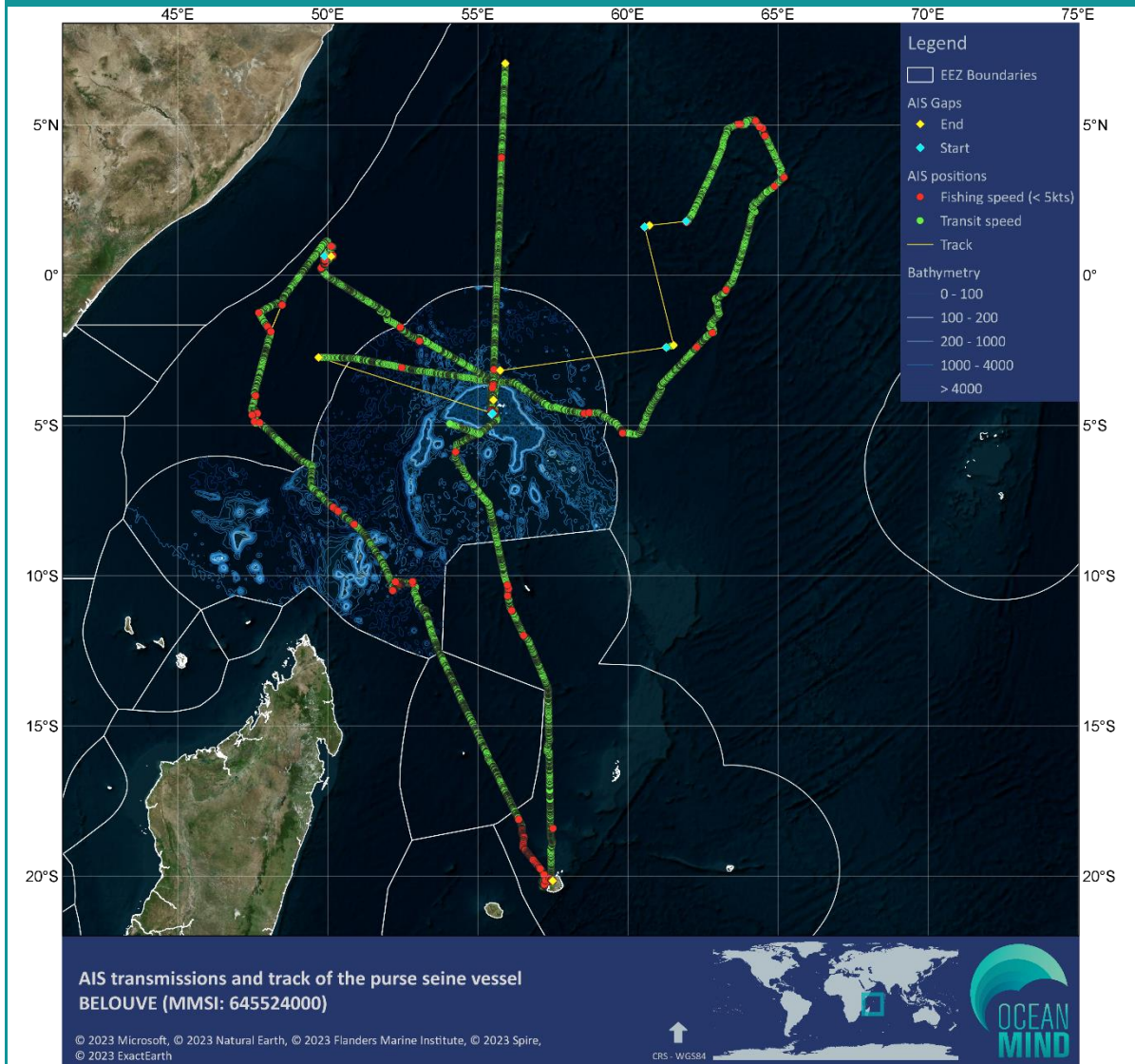
Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
15Oct2022 05:35 – 17Oct2022 01:03	Transmission Gap	Seychelles EEZ	1.8	<b>activity appears to be for a short duration.</b>
17Oct2022 02:39 – 25Oct2022 03:24	Port Call	Port Victoria		
25Oct2022 16:59 – 26Oct2022 05:33	Fishing	Seychelles EEZ		
26Oct2022 05:33 – 26Oct2022 12:45	Transmission Gap	Seychelles EEZ	0.3	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
27Oct2022 00:56 - 11:39	Transmission Gap	High Seas	0.4	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
	Port Call	Port Victoria		
02Nov2022 03:45 – 02Nov2022 11:00	Transmission Gap	High Seas	0.3	
03Nov2022 08:30 – 13:33	Fishing	High Seas		
04Nov2022 05:21 – 08:39	Transmission Gap	High Seas	0.1	<b>The gap occurred in between fishing events. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
04Nov2022 19:15 – 12Nov2022 04:40	Fishing	High Seas		
14Nov2022 00:10 – 14:04	Fishing	Seychelles EEZ		
18Nov2022 04:56 – 06Dec2022 14:18	Port Call	Port Victoria		
06Dec2022 14:18 – 16:19	Transmission Gap		0.1	It is likely that the vessel did not leave the port during this transmission gap.
06Dec2022 16:19 – 14Jan2023 08:41	Port Call	Port Victoria		

Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
14Jan2023 11:42 – 30Jan2023 12:51	Transmission Gap		16.1	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
03Feb2023 03:21 – 19Feb2023 06:24	Port Call	Port Victoria		
14Mar2023 13:25 – 15:08	Transmission Gap		0.1	
22Mar2023 04:53 – 01Apr2023 03:59	Port Call	Port Victoria		

### Vessel details - BELOUVE

<b>Name</b>	BELOUVE	<b>IMO</b>	9653848	<b>Image*</b>	
<b>IRCS</b>	3BTL	<b>MMSI</b>	645524000		
<b>Confirmed licenses and authorisations</b>	IOTC authorised: 01Oct2022 – 30Apr2023			<b>Operator*</b>	Indian Ocean Ship Mgmt Serv. IFS Court, Bank Street, 28, Cybercity, Ebene, Mauritius.

### Vessel Track



\* Source: IHS Global Limited

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Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
01Oct2022 03:09 – 03Oct2022 12:39	Port Call	Port Victoria		
05Oct2022 01:31 – 11Oct2022 11:37	Fishing	Seychelles EEZ		
14Oct2022 05:08 – 14Nov2022 03:58	Port Call	Port Louise		
14Nov2022 03:58 – 05:46	Transmission Gap	Port Louise	0.1	It is likely that the vessel was in port for part or all of this transmission gap.
14Nov2022 05:46 – 21Nov2022 05:43	Port Call	Port Louise		
21Nov2022 05:43 – 23Nov2022 02:59	Transmission Gap	Port Louise	1.9	It is likely that the vessel was in port for part or all of this transmission gap.
23Nov2022 02:59 – 19Dec2022 10:05	Port Call	Port Louise		
23Dec2022 03:19 – 24Dec2022 11:22	Port Call	Port Victoria		
25Dec2022 07:25 – 30Dec2022 07:07	Fishing	Gap starts in the Seychelles EEZ and ends in the high seas		
30Dec2022 07:07 – 14:26	Transmission Gap	High seas	0.3	<b>The gap occurred after a fishing event. It is therefore highly likely that the vessel engaged in fishing activity during the transmission gap.</b>
31Dec2022 01:23 – 04Jan2023 12:16	Transmission Gap	High seas	4.5	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>

Activity timeline				
Date & Time (UTC)	Event	Location	Duration (in days)	Additional Information
04Jan2023 13:34 – 16Jan2023 17:22	Transmission Gap	Gap starts in the high seas and ends in the Seychelles EEZ	12.2	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
17Jan2023 02:58 – 21Jan2022 02:24	Port Call	Port Victoria		
21Jan2022 02:24 – 02Feb2023 01:00	Transmission Gap	Port Victoria	11.9	It is likely that the vessel was in port for part or all of this transmission gap.
02Feb2023 03:47 – 03 Feb 2023 11:56	Port Call	Port Victoria		
03Feb2023 11:56 – 18Feb2023 04:17	Transmission Gap	Gap starts in the Seychelles EEZ and ends in the high seas	14.7	It is likely that the vessel was in port for part or all of this transmission gap.
22Feb2023 06:15 – 23Mar2023 13:55	Transmission Gap	Gap starts in the Seychelles EEZ and ends in the high seas	29.3	<b>It is likely that the vessel engaged in fishing activity during the transmission gap.</b>
25Mar2023 02:37 – 31Mar2023 14:52	Port Call	Port Victoria		