

Fisheries Intelligence Report

13 July 2022

Vessel Report - LUQINGYUANYU290 / LURONGYUANYU197 (MMSI 150402949 / 412331281)

Report number	JAC-001c
Report type	Risk Alert
Report subject	MMSI 150402949 - LUQINGYUANYU290 / LURONGYUANYU197 - squid fishing vessel that systematically changes its name on AIS and is assessed as highly likely linked to the NPFC IUU listed vessel LU RONG YUAN YU 197.
Issue date	13 July 2022
Security notes	No confidential information

Updates to previous version (JAC-001a - date: 06/07/2022)

p. 2	Summary and figure 1 updated to reflect transmissions over an additional unofficial MMSI; and a switch to transmitting over MMSI 412331281 (current transmitting MMSI). Update to last known position.
p. 3 - 4	Update to analysis to reflect the fact that the vessel is currently transmitting over an official Chinese MMSI, has transmitted over an additional unofficial MMSI, and is travelling with two others, transmitting over MMSIs in the official Chinese series
p. 9	Recommendation updated to reflect the fact the vessel is travelling in a group

Summary

A fishing vessel transiting east through the Indian Ocean is currently transmitting on MMSI 412331281, but was until recently transmitting on AIS using an unofficial MMSI that is not associated with any flag State (MMSI 150402949). The vessel is assessed as highly likely transiting to port in Shidaozhen (Weihai), China, but could seek to enter port en route. Based on previous vessel activity the vessel is then highly likely to conduct fishing activities in the north western and/or south eastern Pacific Ocean.

The vessel has recently been operating in the Atlantic, transmitting the name LUQINGYUANYU290 over MMSI 150402949, however on 05 July 2022, just before entering the South African EEZ, the vessel changed the name transmitted on AIS to LURONGYUANYU197. It subsequently switched to transmitting on another unofficial MMSI (150402940) before switching to the official, Chinese MMSI associated with LU RONG YUAN YU 197 on 8 July 2022 (412331281). These name and MMSI changes on AIS reflect a broader pattern of behaviour. A number of different names have been transmitted over MMSI 150402949 - including two associated with Chinese-flagged, RFMO authorised vessels, and several that are not known from any official sources. Of recently transmitted names, LUQINGYUANYU290 is not known from any RFMO authorised vessel lists or other available sources; LU RONG YUAN YU 197 is authorised in NPFC and SPRFMO.

There are strong indications that during 2020, MMSI 150402949 was transmitting from a vessel using the name LU RONG YUAN YU 197 that was IUU listed by NPFC in 2021. The vessel was sighted in the North West Pacific by the Japanese Coast Guard as part of a group of unauthorised vessels that were operating in the NPFC area in July 2020.

The vessel position, as of 2022-07-12 16:11:29 UTC and reported on MMSI 412331281, is Lat: -29.48279 Long: 40.236117 COG: 59.5° SOG: 8.6kts - in the high seas to the east of the South African EEZ.

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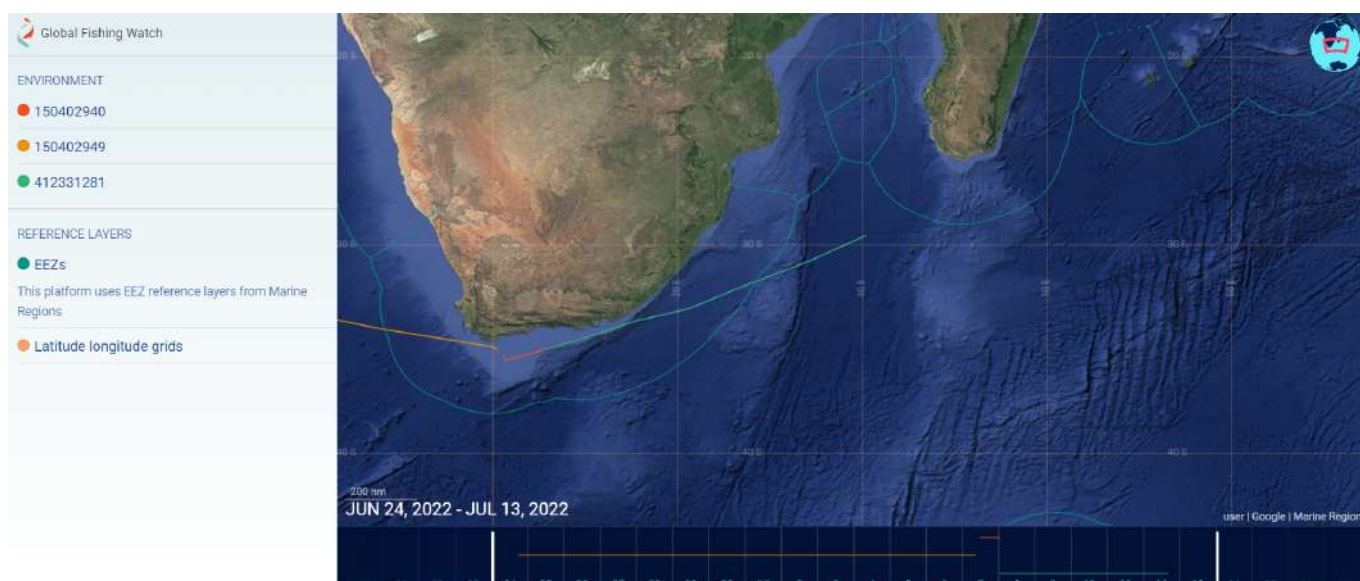


Figure 1: Latest AIS positions from MMSI 150402949 (orange) as it crosses the South Atlantic and enters South Africa EEZ and switches to MMSI 150402940 (red) and finally switching again to MMSI 412331281 (green)

Analysis

A fishing vessel transiting east through the Indian Ocean is currently transmitting on an official MMSI in the Chinese series - 412331281 - but until recently was transmitting on AIS using an unofficial MMSI that is not associated with any flag State (MMSI 150402949). The vessel identity transmitted by MMSI 150402949 has regularly changed - from 29 December 2021, the name transmitted was LUQINGYUANYU290, which is not found on any RFMO authorised vessel list; on 5 July 2022, upon entering the South African EEZ, the transmitted name changed to LURONGYUANYU197. Transmissions from this MMSI ceased on 7 July 2022 and the vessel subsequently began transmitting on another unofficial MMSI (see below) and then the official MMSI 412331281 (which is associated with Chinese flagged LU RONG YUAN YU 197 / IMO 8786557). The vessel is assessed as almost certain to be Chinese operated and controlled, based on the current MMSI and vessel names broadcast, ports visited and the build type found in the analysed vessel images. Based on the identities transmitted and the areas of operation (fishing grounds in the South Atlantic, Eastern Pacific and North Pacific), this is highly likely to be a vessel engaged in squid fisheries.

During the transit of the South African EEZ, the vessel appears to have transmitted over three different MMSIs (see figure 1), all transmitting the vessel name LURONGYUANYU197. The vessel entered the South African EEZ transmitting on MMSI 150402949, but switched transmissions to another unofficial MMSI, 150402940, on 7 July 2022, before commencing transmissions on the official MMSI for LURONGYUANYU197 (412331281) on 8 July 2022. These positions are highly likely to have originated from the same vessel, due to the pattern of reporting, and the positions being transmitted in sequence rather than simultaneously.



Figure 2: AIS positions history for MMSI 150402949 showing fishing operations in SW Atlantic, SPRFMO RFMO and NPFC RFMO since 2017.

The vessel appears to be travelling with two other fishing vessels that are transmitting over MMSIs in the official Chinese series. These are:

412331285 / LURONGYUANYU717 / 8786595 / BCLN5 (nb. it appears that this vessel was transmitting on MMSI 412221070 until 7 July 2022, when it switched to 412331285)

412336962 / LURONGYUANYU581 (presumed IMO 9871971 / BZYM6)

These vessels are also assessed as likely to have transmitted over, or operated in close association with, unofficial MMSIs previously. Also of note, the vessel of interest (currently transmitting on MMSI 412331281), is also presently transmitting the IRCS BCLN5, which is the official IRCS for the vessel LURONGYUANYU717 - see above.

150402949 Vessel identity

There are strong indications that from 2021 to present, MMSI 150402949 has been transmitted by a vessel that was also transmitting the MMSI 412331281, presumed to be the Chinese flagged LU RONG YUAN YU 197 / IMO 8786557 (see full vessel details in Annex). Through the second half of 2021, both MMSIs 150402949 and 412331281 were transmitting intermittent positions from the eastern Pacific Ocean consistent with being transmitted from a single vessel (in terms of position, speed and course). In early December 2021, both MMSIs then transited to the South Atlantic, via a port stop of matching duration and location in Punta Arenas, Chile. The MMSIs then display very similar patterns in the South Atlantic squid fishery, albeit with some intermittent reporting, before the MMSI 412331281 ceased transmitting positional data in early January 2022. As outlined above, 412331281 then recommenced transmissions on 8 July 2022 in the South African EEZ approximately 15 hours after the last known transmission from 150402949, at a time and location consistent with both transmissions originating from the same vessel.

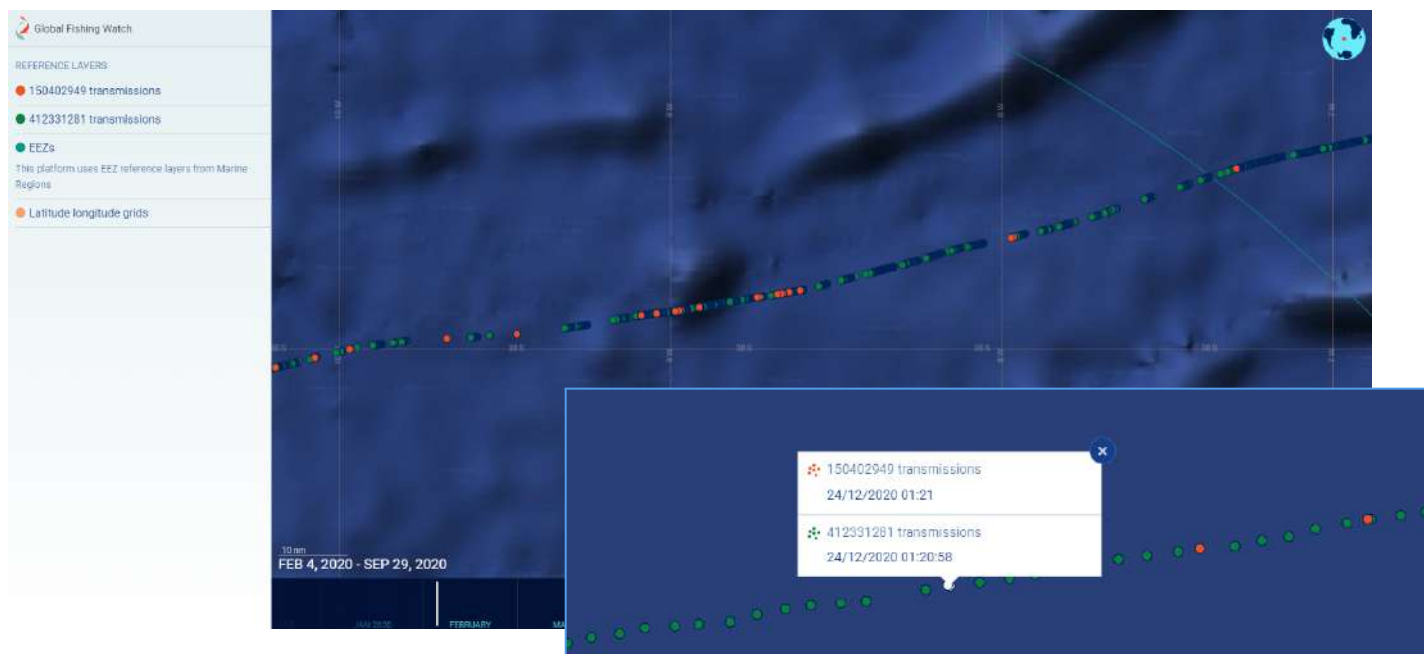


Figure 3: AIS positions from MMSI 150402949 and MMSI 412331281 crossing the South Atlantic showing consistent transmissions from both MMSIs at the same time and within 5 metres of one another, suggesting both transmissions are coming from the same vessel.

However, analysis of historic AIS data indicates that these two MMSIs (150402949 and 412331281) have not always been transmitted from the same vessel. During February 2018, both MMSIs were transmitting from the high seas adjacent to the Argentine EEZ boundary. However, comparison of transmissions indicates that they were not, at this time, transmitting from the same vessel. MMSI 412331281 then had a large gap in transmissions from February 2018 to October 2019. When it recommenced transmissions in late October 2019, 412331281 was located in Shidao and subsequently Singapore, whilst 150402949 was transmitting from the eastern Pacific (high seas adjacent to the Peruvian EEZ).

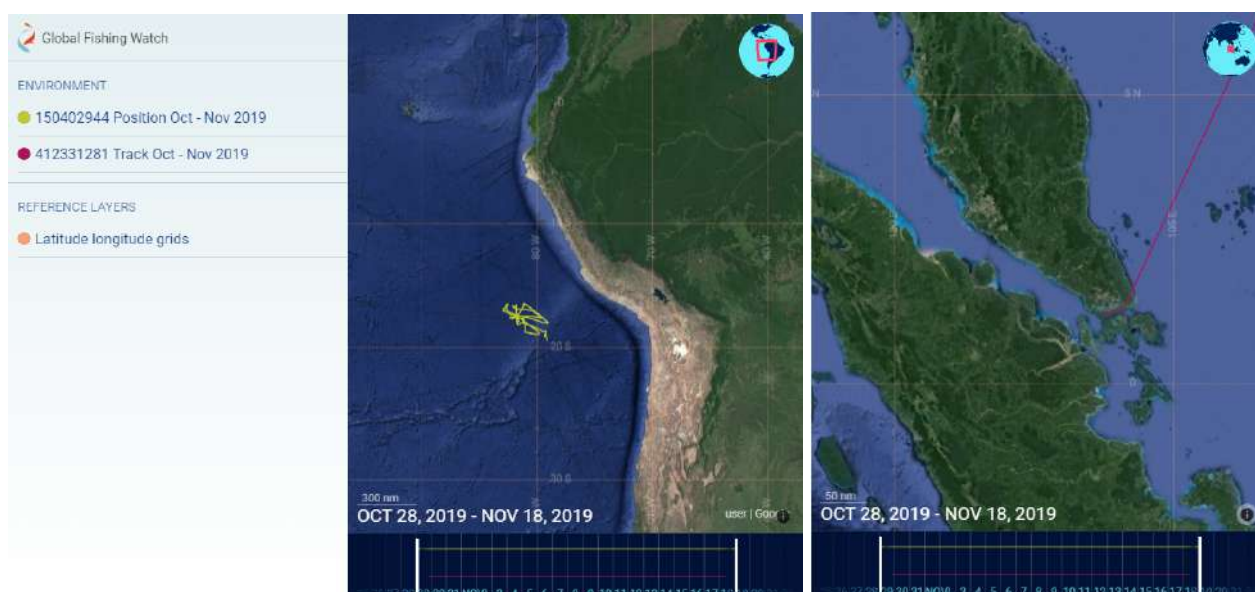


Figure 4: AIS positions from MMSI 150402949 and MMSI 412331281 between 28 October and 18 November 2019. 150402949 is transmitting in the eastern Pacific and 412331281 is transiting the South China Sea and entering the Strait of Malacca with a port stop in Singapore.

This indicates that the MMSI 150402949 has very likely been transmitted from at least two different vessels since the start of 2018¹, although it appears to have been used by no more than one vessel at any given time (ie. there are no indications of ‘spoofing’, which occurs when two or more vessels transmit the same MMSI simultaneously).

Previous identities transmitted by the MMSI 150402949 have alternated between vessel names that are not found on any public vessel registers and names that are authorised on the vessel registers of the North Pacific Fisheries Commission (NPFC) and the South Pacific Regional Fisheries Management Organisation (SPRFMO) - see name broadcast history in report Annex. The MMSI has been transmitted with two names associated with Chinese-flagged, RFMO authorised vessels - LURONGYUANYU197 (most recent transmission) and SHUN HANG 6; as well as several names that were not identified from any RFMO or other vessel databases: SHUN HANG67, LU RONG 6, HAI HANG 6 and LUQINGYUANYU290. The use of authorised vessel names in broadcast AIS data has usually corresponded with port calls that have taken place outside of China or Singapore, and it is notable that the most recent switch to LURONGYUANYU197 occurred on entry to the EEZ of South Africa, which requires vessels to request innocent passage. nb. the name format SHUN HANG XX is frequently broadcast by vessels transmitting over unofficial MMSIs in the 150 series - this is of note because Shenzhen Shunhang Navigation Tech Co. Ltd is a Chinese manufacturer of AIS transponders². This suggests that transmissions of SHUNHANGXX may be a variant of the manufacturers’ name, or a default setting.

¹ Analysis based on data from start 2018

² <http://www.sz-shunhang.com/En/index2.asp>

Links to IUU listed vessel

The MMSI 150402949 is strongly associated with a vessel that was IUU listed by NPFC in 2021. A group of three vessels were sighted by the Japanese Coast Guard on 15 July 2020, operating in the NPFC Convention Area while not displaying an IRCS. The location of the sighting corresponds very closely with the positions reported during daylight hours on 15 July 2020 by the MMSI 150402949. One of the vessels sighted and subsequently IUU listed was displaying the name LU RONG YUAN YU 197 (鲁荣远 渔 197), which was the name transmitted by 150402949 at the time of the sighting.



Figure 5: Track of MMSI 150402949 (red) on 15 July 2020 (UTC) and the position of the sighting (green point) by a Japanese patrol vessel of a fishing vessel subsequently [IUU listed by NPFC](#) (Vessel 36 on the listing). The track of the vessel is at the sighting location during daylight (12:35 h local time and has speeds consistent with drifting that matches the images taken by the Japanese patrol vessel. The only other vessel observed transmitting AIS close to the sighting was MMSI 150402947 which was also likely one of the three sightings that day. [Link to GFW Workspace](#)

LU RONG YUAN YU 197 was authorised to operate in the NPFC convention area, however Chinese authorities stated that the observed vessel was not authorised, licensed nor registered by them as a flag state and the vessel was subsequently IUU listed (no. 36 on the 2021 NPFC IUU list)³.

The MMSI 412331281(associated with LU RONG YUAN YU 197) was not transmitting during the period when 150402949 was active and sighted in the north Pacific, and transmissions from that MMSI did not restart until late October 2020. So there are no transmissions from the MMSI 412331281 to indicate that this vessel was *not* in the area where the IUU listed vessel was sighted. Also, when 412331281 did recommence transmissions on 29 October 2020, it was from a location less than 200m from the position last reported by the MMSI 150402949 following the completion of its

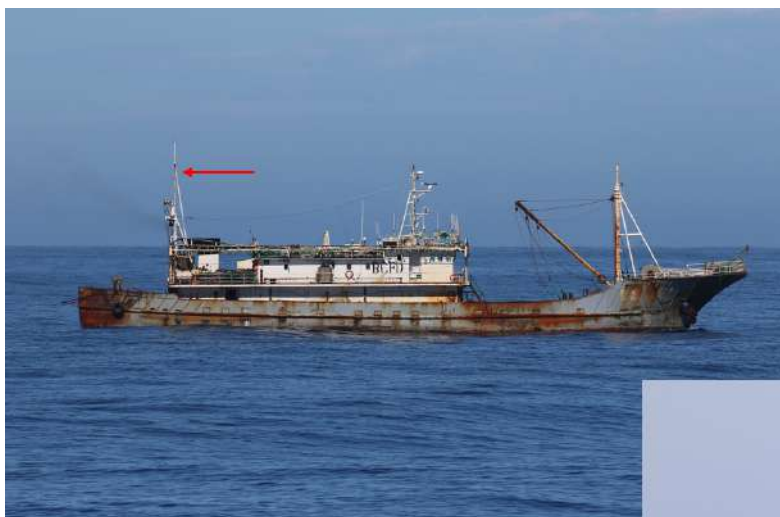
³ <https://www.npfc.int/npfc-iuu-vessel-list-2021>

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voyage around September 2020, in the port of Shidaozhen (Weihai), China. Photo analysis (see below) is inconclusive for determining whether these are the same vessel, but the indications (outlined above) that 150402949 and 412331281 are currently transmitting from the same vessel, raise the likelihood that the vessel currently transiting east through the Indian Ocean is IUU listed by NPFC.

Photo analysis

Photos are available of a vessel that was documented at sea in the South Atlantic early in 2022. At the time of documentation, the vessel was travelling in a group of six vessels in a relatively tight formation, but the purpose of this formation is unclear. The images show a vessel of type very similar to those that were IUU listed by NPFC. Two identifiers are visible on the vessel - a name that is either LU RONG YUAN YU 97 or LU RONG YUAN YU 197 and callsign BCFD. BCFD is the call sign of a Chinese flagged general cargo ship, YUAN CHEN 7, but is also the same as the first four characters of the IRCS of the LU RONG YUAN YU 197 (IRCS BCFD2). The name LU RONG YUAN YU 97 has not been identified from any official sources; LU RONG YUAN YU 197 is the name used by the NPFC IUU listed vessel and that has been transmitted over MMSI 150402949, so it is likely that the vessel in the image is that which is currently transiting east through the Indian Ocean.



A comparison of an image taken in the South Atlantic (top left) with an image of the IUU listed vessel operating under the name LU RONG YUAN YU 197 taken in the North Pacific (bottom right) shows strong similarities, although it is not possible to draw definitive conclusions. It appears that the vessel type is the same, with key details matching - including hull structure and number and placement of windows. There are two clear differences: the vessel in the North Pacific has a framework placed around its superstructure, that may be for suspension of high intensity lights - this is not present in the photo

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from the South Atlantic. The vessel in the South Atlantic also appears to have a considerably taller radio antenna on its stern. Both of these are superficial modifications that do not preclude these images showing the same vessel.

It has been noted in other sources that vessels such as these can be configured to fish with different gear types - suggesting that the vessel may be fishing with a different gear or engaging in other operations in the South Atlantic. Information also suggests that the vessels spotted in the South Atlantic squid fishery were using a type of trawl set up, where they set and hoist the net using the crane at the bow of the vessel. There were also indications that the vessels may have been working in pairs.



A comparison of the image taken in the South Atlantic with images of the RFMO authorised LU RONG YUAN YU 197, taken from the NPFC⁴ and SPRFMO⁵ websites (see above middle and lower left) shows vessels of very similar construction, although clear comparison is challenging as photos are taken from

⁴ <https://www.npfc.int/vessels/1214>

⁵ <https://www.sprfmo.org/web/public/vessel/1636/detail>

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different angles and it appears that the port side (SPRFMO) may be configured slightly differently to the starboard (south Atlantic photo). The most obvious differences are: the hull colour (which may reflect the fact that the RFMO photos do not show the effects of an extended period at sea); there appears to be a different arrangement (possibly an additional cover or screen) at the top of the vessels smoke stack; and a considerably taller radio antenna on the stern of the vessel in the South Atlantic. However these are not significant changes and may have been later additions or alterations to the vessel. The images clearly show either the same vessel or vessels of similar type, but due to the fact that a significant number of identical vessels of this type are assumed to have been built, it is not possible to conclude definitively whether or not these images show the same vessel.

Recommendations

This is considered a high risk vessel, based on its history of transmitting over multiple MMSIs, frequent name changes, transmission of names that are not associated with any known or RFMO authorised vessel, and the fact that it may be IUU listed by NPFC.

On that basis, it is strongly recommended that this vessel, and any vessel identified as transiting or operating alongside this vessel, are inspected should it seek to enter port, with a particular focus on confirming the vessel's identity and nationality, including through verification of vessel documents and confirmation of the AIS transponders onboard.

We encourage any partners that inspect the vessel/s to share with the Joint Analytical Cell any information gained or results of their inspection so that our assessment may be updated. Assistance with the analysis of any inspections findings can also be provided.

Annex

Table 1: Chronology of vessel names broadcast over 150402949

First Broadcast	Name	Identity / Authorisations	Notes
03NOV2017	Broadcasts AIS but no identity information	Not Applicable	
06APR2018	LURONGYUANYUI97	IMO: 8776344 NPFC, SPRFMO	Name changed five days prior to a port call at Punta Arenas, Chile.
21APR2018	Broadcasts AIS with no identity information again.	Not Applicable	
25APR2019	LURONGYUANYUI97	IMO: 8776344 NPFC, SPRFMO	Name changed three days prior to loitering for five days in Bahía Posesión (Possession Bay), Chile.

26MAY2019	SHUN HANG67	No Record	
1MAY2020	LURONGYUANYU197	IMO: 8776344 NPFC, SPRFMO	Name changed six days prior to entering port in Busan, Republic of Korea
29SEP2020	LU RONG 6	No Record	This name is mainly transmitted from within port in Shidaozhen (Weihai), China and Singapore.
20JAN2021	SHUN HANG 6	IMO: 8776588 NPFC, SPRFMO	
8APR2021	HAI HANG 6	No Record	Last broadcast of the vessel name HAI HANG 6 was 18JUN2021.
30NOV2021	LURONGYUANYU197	IMO: 8776344 NPFC, SPRFMO	In port in Punta Arenas in the same location as the official MMSI for LURONGYUANYU197 at the time of the recommencing broadcast of vessel name LURONGYUANYU197.
29DEC2021	LUQINGYUANYU290	No Record	
5JUL2022	LURONGYUANYU197	IMO: 8776344 NPFC, SPRFMO	Name changed to LURONGYUANYU197 just before entering the South African EEZ.

Table 2: LU RONG YUAN YU 197 vessel details

Current Vessel Details: LU RONG YUAN YU 197	
Name	LU RONG YUAN YU 197
Flag	China
IMO	8786557
Call Sign	BCFD2
MMSI	412331281
Vessel Type	Fishing vessel
Gear Type	Handline, Pole and Line
Owner	Shidao Group / Rongcheng Huadong Fishery Co Ltd
Operator	Shidao Group
Authorisations	NPFC: 02/08/2019 - 01/08/2024 - Neon flying squid SPRFMO: 23/04/2019 - 31/03/2099

Source: <https://www.npfc.int/vessels/1214>

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JOINT ANALYTICAL CELL



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