
13TH MEETING OF THE COMPLIANCE AND TECHNICAL COMMITTEE (CTC)

Panama City, Panama 24-27 February 2026

CTC 13 – Doc 07

Implementation and Operation Report: Commission VMS

Secretariat

1. Summary and Recommendations

This document submits the annual report on the implementation and operation of the Commission vessel monitoring system (VMS). Much has been done or is in progress, to improve the accuracy, efficiency, and functionality of the Commission VMS, particularly with respect to the day-to-day monitoring. Emphasis for 2026 and beyond will continue to focus on enhancing VMS data analysis and cross-referencing capabilities. This will leverage the extraction of VMS data from THEMIS to the SPRFMO database and build the linkages to carry out, to the extent possible, automated reporting and analysis to support compliance with VMS CMM requirements and other CMMs. This component is part of a broader workplan for the enhancement of the new SPRFMO database.

CTC13 is invited to:

- *note this implementation report and make any recommendations deemed appropriate;*

2. Background

For authorised vessels operating in the SPRFMO Convention Area, Article 27(1)(a) of the Convention requires that the Commission establish appropriate cooperative procedures for "... the reporting of vessel movements and activities by a satellite vessel monitoring system that shall be designed to ensure the integrity and security of near real-time transmissions, including through the possibility of direct and simultaneous transmissions, to the Commission and flag State".

The application of the Commission VMS is specified in paragraph 2 of CMM 06-2023 (VMS). "The Commission VMS shall apply to vessels included in the Commission Record of Vessels Authorised to Fish in the SPRFMO Convention Area. It shall cover the area as defined in Article 5 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean and have a buffer zone of 100 nautical miles outside the Convention Area. The buffer zone shall not apply to vessels flagged to adjacent coastal States fishing in waters under their jurisdiction".

The purpose of the Commission VMS is set out in paragraph 4 of CMM 06-2023 "to continuously monitor the movements and activity of fishing vessels that are on the Commission Record of Vessels and are authorised by Members or CNCPs to fish for fisheries resources in the SPRFMO Convention Area in a cost-effective manner in order to, inter alia, support the implementation of SPRFMO CMMs".

Paragraph 32 of CMM 06-2023 states that: "At each annual meeting of the Commission, the Secretariat shall provide the Commission with a report on the implementation and operation of the Commission VMS".



3. State of Reporting

3.1 Points of Contact

Pursuant to CMM 06-2023 (Annex 2, paragraph 7), each Member and CNCP shall designate a point of contact for the purposes of any communication regarding the VMS system (including data requests). These points of contact are listed in the Compliance-related sections (VMS Points of Contact tab) on the Members area of the SPRFMO website. Contacts are updated when the Secretariat is advised of changes.

3.2 Method of Reporting

As per CMM 06-2023, paragraph 9, each Member and CNCP shall require vessels flying its flag to report VMS data to the Commission VMS automatically either:

- (a) to the Secretariat via their Member or CNCP's FMC; or
- (b) simultaneously¹ to both the Secretariat and its FMC.

The arrangement for the majority of the Members/CNCPs is to have the FMC coordinate the reporting of their vessels' VMS positions. Members and CNCPs are to ensure that VMS position reports are reported by each of their authorised vessels at least once every hour. For those Members and CNCPs that choose to report under option (a) of paragraph 9 then the FMC will automatically forward the VMS reports received to the SPRFMO FMC (Commission VMS) at an interval not less frequent than hourly.

Table 1 identifies the reporting selection for each Member/CNCP, and the corresponding number of unique SPRFMO authorised vessels reflected by name in Commission VMS database with 1 or more positions within the SPRFMO Convention Area during the 2024/25 reporting period². In total 800 unique SPRFMO authorised vessels³ were displayed on Commission VMS as being within the SPRFMO Convention Area at some point during reporting period 2024/25. A full listing of these vessels, by name, for each Member/CNCP can be found in Annex 1.

Table 1: VMS reporting for SPRFMO Authorised Vessels by Member/CNCP

Member/CNCP	Type of Reporting (if applicable)	Unique Vessel Count – SPRFMO Convention Area (2024-25 Reporting Period)
Australia	Simultaneous	4
Belize	Via FMC	1
Chile	Via FMC	1
China	Via FMC	616
Cook Islands	Via FMC	3
Cuba	<i>No authorised vessels</i>	-
Curaçao	Via FMC	-
Ecuador	Simultaneous	-
European Union	Via FMC	5
Faroe Islands	<i>No authorised vessels</i>	-
Korea	Via FMC	12
Liberia	Via FMC	4
New Zealand	Simultaneous	7
Panama	Via FMC	52
Peru	Via FMC	76

¹ Refer to Section 9 regarding changes to the means for direct reporting to Commission VMS.

² SPRFMO authorized vessels must report their VMS positions whenever in SPRFMO or the buffer zone regardless of their activity.

³ Possible minor duplication may occur in situations where a vessel has renamed and/or reflagged during the reporting period.

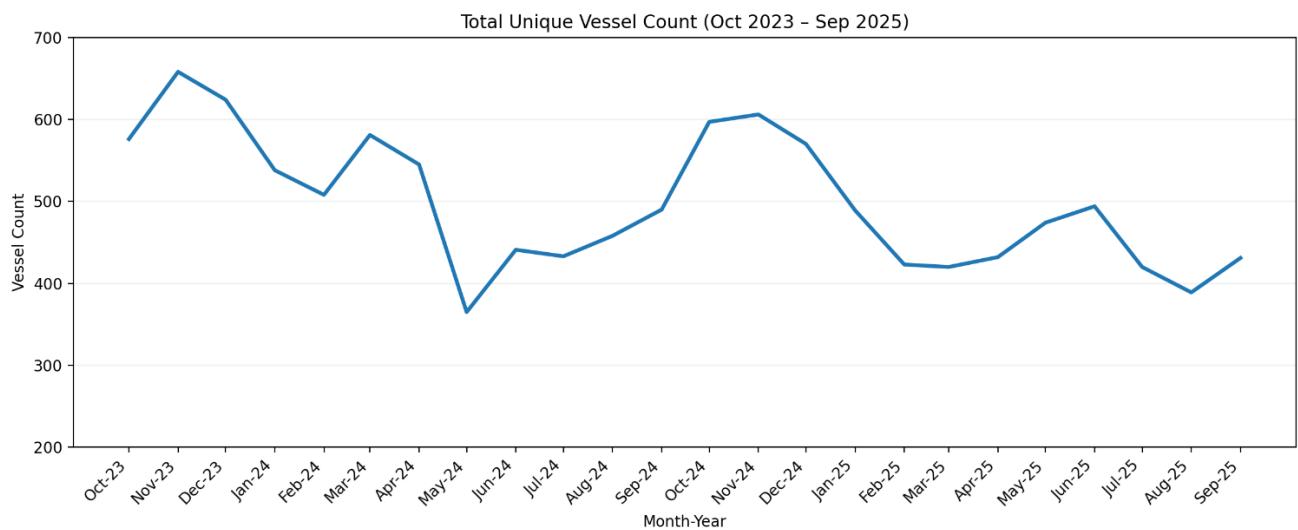


Russian Federation	Via FMC	2
Chinese Taipei	Via FMC	2
United States	<i>No authorised vessels</i>	-
Vanuatu	Via FMC	15
Total		800

3.3 SPRFMO Authorised Vessels – Monthly VMS Unique Vessel Count

Figure 1 graphically depicts the fluctuation and relative distribution by month of the total number of unique vessels authorised on the SPRFMO Record of Vessels displaying on Commission VMS in the Convention Area during the last two reporting periods (RP).

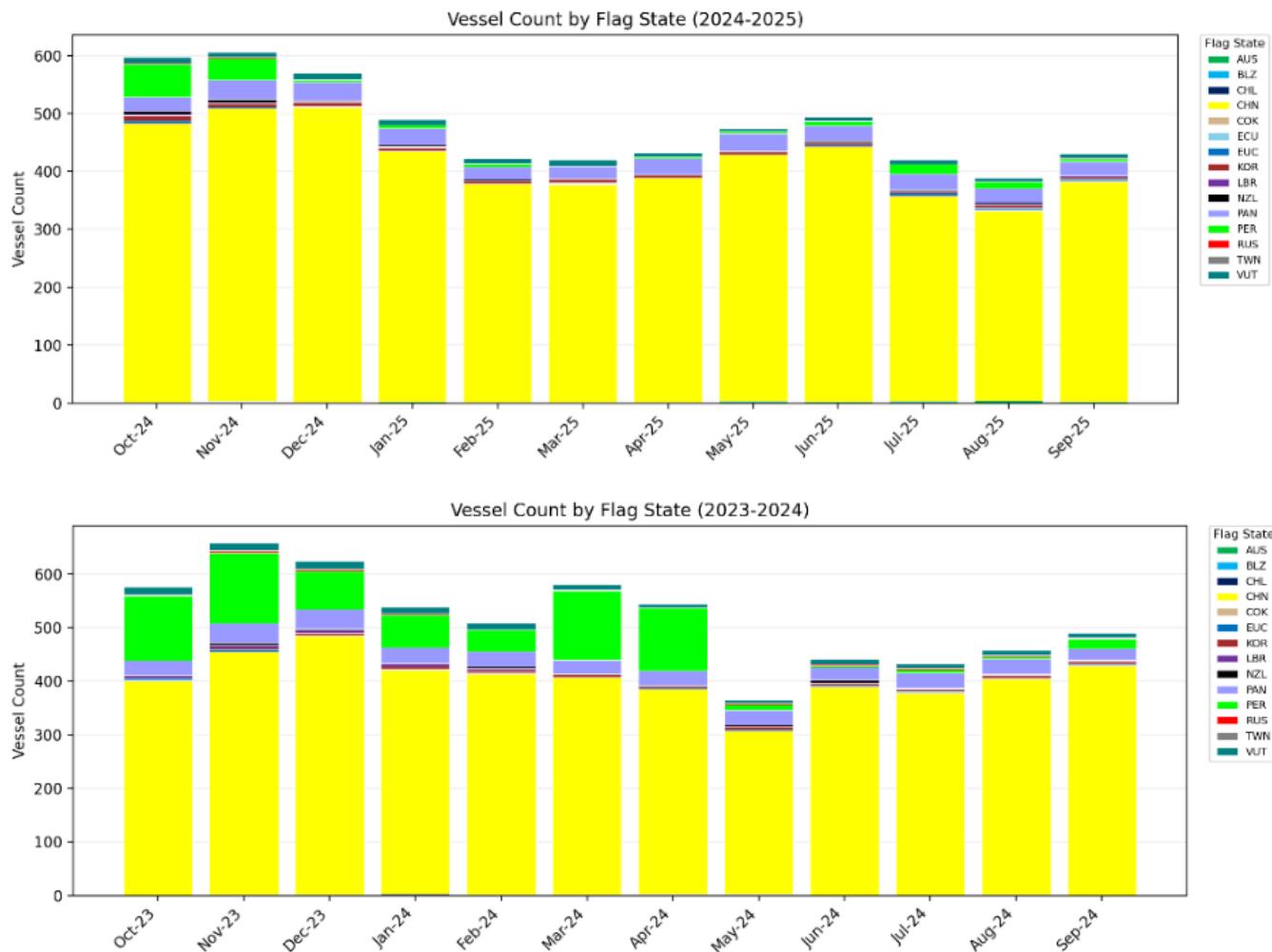
Figure 1: Total Unique Vessel Count – Monthly Fluctuation (RP 2023/24 and 2024/25)



During the last 2 reporting periods the number of unique vessels in SPRFMO Convention Area in any given month fluctuated between ~350-650 vessels. The general trend displayed is that the “Unique Vessel” count in SPRFMO peaks during the October - November periods. The two months with the fewest unique vessels (below 400) in the Convention Area were May 2024 and August 2025. Monthly fluctuations are largely influenced by the monthly vessel movements within the larger fleets (China and Panama) and the spikes of Peruvian vessels entering the Convention Area outside Peru’s area of national jurisdiction. Figure 2 below depicts the relative change in the monthly unique vessel count by Member/CNPC.



Figure 2: Monthly Unique Vessel Count by Member/CNPC (RP 2024/25 vs 2023/24)



4. Requests for VMS data

Pursuant to CMM 06-2023 VMS data may be obtained by a Member/CNPC for their own vessels (*Paragraph 22*). Additionally, the Secretariat can provide VMS data to a requesting Member or CNCP where the VMS data relates to vessels flagged to other Members or CNCPs that have provided prior written consent through their VMS Point of Contact for the data to be shared (*Paragraph 21*). Furthermore, pursuant to paragraph 24, the Secretariat can provide VMS data without the permission of the Member or CNCP, for the exclusive purposes of active surveillance and supporting search and rescue. VMS data may also be used by the Scientific Committee for analysis to support specific scientific advice requested by the Commission (*Paragraph 8*).

During the reporting period, October 2024-September 2025, the Secretariat did not receive any requests to access Commission VMS data.



5. Commission VMS Oversight

5.1. Personnel

The principal contact with VMS service provider (CLS) and the overseer of the day-to-day operations of the Commission VMS is the Compliance Manager. The Data Manager, and the SPRFMO database support team at DRAGONFLY Data Science, assist regarding matters of data integration, data analysis, and report generation.

5.2. Day to day work processes

The Secretariat monitors the VMS system daily, including:

- Monitoring the number and movement of vessels reporting to the Commission VMS.
- Monitoring for data gaps, disruptions, and stoppages to the VMS display on Commission VMS.
- Monitoring VMS for compliance with zone entry requirements and other CMM obligations.
- Investigating system-generated alerts such as:
 - Zone Entry and Exit
 - In-zone VMS cessation
 - Incoherent Data
 - Expired or without authorisation
 - Bottom fishing management area entry/exit
 - New beacon identified, not yet associated with a vessel on the SPRFMO Record of Vessels
- Cross-referencing VMS with data holdings and other positional data.
- Develop and maintain a filing system to document, track, and report on VMS issues.
- Ongoing communications with VMS points of contact to identify and resolve VMS issues as well as any file follow-up or support for issue resolution.
- Regular communications and virtual meetings with the VMS service provider (CLS) to facilitate product development and troubleshoot reporting or display issues.
- Respond to requests for VMS data, geo-fence areas of interest for reporting and appropriate documentation and follow-up with Members and CNCPs.
- Activating and de-activating polling for vessels engaged in simultaneous reporting using Inmarsat-C.
- Reviewing of bi-monthly invoices covering charges for DNID Upload, Polling, Periodic Rate Change and Position Reports for vessels belonging to Members using Inmarsat-C simultaneous reporting.

6. Performance of the Commission VMS Service Provider

The Commission VMS service provider remains the “Collecte Localisation Satellites SAS” (CLS) Group. The corporate headquarters and primary VMS Fisheries Monitoring support team are headquartered in France however the SPRFMO contract is administered by its wholly owned Australian subsidiary, CLS OCEANIA. Invoicing and billing are processed through the Australian office where there are also points of contact to assist with operational SPRFMO VMS issues involving Australia and New Zealand based vessels. This is in addition to the broader Fisheries Monitoring Technical Support team based in France.

For the calculation of the SPRFMO SLA, the monthly rates shall not include the time spent on planned maintenances. The Service Level Agreement (SLA) stipulates that CLS shall provide a 99.7% fault tolerance for front office. This is calculated monthly and summarized for each month of the 6-month period in the 2 Operating (Service) Reports per year. While the monthly uptime is often at or close to 100% there were two months (Feb/Nov) during 2025 where the actual monthly uptime did not achieve the 99.7% threshold.

In terms of identified “major events” impacting availability, CLS identified 2 maintenance operations: the first on 06 May 2025 to apply an application upgrade to version 8.14.46 and the second for an hour on 08 July 2025 for the OS migration Centos. Two unplanned IT related events were also identified as impacting VMS operations. The first was an CLS Network outage on 06 February 2025 from 00h15 to 04hr20 UTC and the second was an acquisition module malfunction from 03 November 14h00 to 08h40 UTC 05 November 2025.



While unplanned outages and technical issues may result in immediate short-term impacts on system usage, there have been no lasting impacts or loss of VMS data. CLS has generally been attentive to SPRFMO queries and providing prompt service and assistance to resolve issues during the reporting period.

7. Operational Performance of the Commission VMS

While there are occasional gaps and/or technical issues temporarily disrupting vessel track displays, the overall performance of Commission VMS is strong. It continues to demonstrate that the Commission VMS system is an effective tool for monitoring the vessels authorized on the Commission Record of Vessels that are active in the SPRFMO Convention Area and buffer zone on a “near real time” basis.

Notwithstanding, there are always opportunities to seek continuous improvements in the utilization of the tool to streamline and improve application in the SPRFMO context. As the SPRFMO data consolidation and database improvements advance, the opportunities for automating the cross-referencing positional data from various other sources increases. Verification of positional data from data holdings will serve to strengthen the confidence in the overall Commission VMS. Additionally, the future development of scripts and automated queries will continue to finetune the diagnosis of, and enable quick response to, any emerging issues, further strengthening Commission VMS.

8. VMS Issues Overview

The purpose of the Commission VMS is to continuously monitor on a “near real-time” basis the movements and activity of vessels authorised by the Members/CNCPs and included on the SPRFMO Record of Vessels. The combination of GPS transponders, satellite receivers, earth receiving stations and automated data forwarding and display programs is quite efficient at tracking vessels at sea and visually displaying a track of vessel positions and movements. However, with millions of VMS positions being transmitted and received over the course of a year it is inevitable that there will be occasional disruptions, gaps, and data abnormalities appearing on the Commission VMS display due to any number of factors.

There continues to be ongoing improvement in the continuity of VMS data displaying on Commission VMS. The number of disruptions and gaps have reduced over the past few years, from 75 issues for 2021-22 to 69 in 2022-23 then 29 for 2023-24 and 27 for the 2024-25 reporting period. Most of the recent disruptions and issues are isolated to individual vessels and for relatively short durations (18 incidents were < 24 hours and another 5 incidents had durations of < 2 days), with data display resuming with minimal intervention from the Secretariat. There is no indication that any of these disruptions were the result of nefarious intent.

While these disruptions require consideration and are referred to CTC as part of the compliance process, in isolation, they have relatively minor impacts on the overall operations and effectiveness of the Commission VMS. While there is need to continue to document issues and follow up with Members/CNCPs in a timely manner, they are of minimal consequence to the overall vessel monitoring program. Alternatively, disruptions of greater duration have greater potential to undermine or impact the overall vessel monitoring program.

For the 2024/25 reporting period, of the issues referred to CTC as part of the compliance assessment process, only 3 situations involved a longer disruption period. The longest duration involved a carrier vessel which operated ~4 months without its VMS positional data displaying on Commission VMS. The positions were being received at the FMC, but an error led to the data not being auto forwarded to Commission VMS. In another case a bunkering vessel experienced issues when its onboard ALC required a software update and was unable to update while at sea. The vessel continued operations for ~ 3 weeks before departing the Convention Area for port. Finally, a Research Vessel was in the Convention Area on 2 separate occasions during the reporting period (~18 days total) without its VMS positional data being provided to Commission VMS. In both cases the



data was transmitted from the ship, but internal procedural errors resulted in the VMS data not being auto forwarded to SPRFMO. Vessel location positional data was subsequently provided in these 3 cases.

These cases again demonstrate the importance of ongoing monitoring for disruptions and cross referencing with other data holdings/sources to identify when SPRFMO vessels are in the Convention Area and confirm that their VMS positional data is actively updating and displaying on Commission VMS. The continuing advancements with the Secretariat's overall data management and analysis will further aid in automating checks and quality control resulting in improved efficiencies and timely analysis to aid in identifying, *inter alia*:

- SPRFMO authorised vessels in the Convention Area without displaying VMS;
- VMS Gaps and discrepancies - Missing and Incomplete VMS data; improbable movement patterns;
- Situations with significant delays in receipt of VMS data or patterns of delays;
- The cause of gaps, delays, disruptions and other VMS reporting related issues;
- VMS system (THEMIS) or Administrative Issues impacting performance or efficiency.

9. Updates and Observations

9.1. Simultaneous Reporting to Commission VMS

Several Members (Table 1 above) have elected to have vessels flying their flag to report VMS data to the Commission VMS automatically to both the Secretariat and its FMC (as per paragraph 9b). At the time of the implementation of Commission VMS, Inmarsat was the prevalent satellite provider for at-sea communications/data services using 3 geostationary satellites. CMM 05 (Record of Vessels) Annex 1 specifically requests the vessel's Inmarsat information. The use of Inmarsat satellite was also how the system was set up to receive positional data directly from the vessels to Commission VMS.

In 2018, the Secretariat entered in a contract amendment with CLS to provide INMARSAT-C VMS positional reporting for SPRFMO authorised vessels of the Australian/New Zealand fleet⁴. It was agreed that CLS would provide SPRFMO with VMS services consisting of two-way data and messaging via INMARSAT-C messaging and communication service. This included the acquisition of two unique INMARSAT-C Data Network Identity (DNID) for use by Australian and New Zealand vessels, the provision of an Inmarsat-C airtime subscription (including position reporting, polling, and commands), and the ongoing provision of INMARSAT-C communication data into the SPRFMO Themis database. This arrangement allowed the Secretariat a degree of flexibility to add or remove vessels to VMS and to establish and manage polling frequencies for these vessels. The ongoing cost of this service from Inmarsat was invoiced to SPRFMO by the service provider (CLS) and in turn the Secretariat cost recovered these fees annually directly from the Member.

Over time more companies entered the satellites services market and there were more options available to the fishing industry. It appeared that some providers, such as Iridium, offered more reliability for global coverage (especially in areas of operations in more extreme latitudes such as the lower Southern Pacific and Antarctic waters) and a switch to Iridium was observed for some of the SPRFMO vessels reporting via simultaneous reporting. Furthermore, New Zealand advised its industry that effective 01 October 2025, Inmarsat-C was removed as an approved Ground Positioning Reporting (GPR) device and that they would no longer pay GPR Inmarsat-C transmission costs. This changed the dynamic and methodology for the simultaneous reporting to Commission VMS and effectively eliminated the previous contractual arrangement for Inmarsat services and the ability of the Secretariat to manage polling.

However, because vessels have largely switched to Iridium satellite service using CLS Triton devices they can continue to report automatically to Commission VMS by planning directly with CLS to include Commission VMS on their VMS data distribution. The Secretariat is not involved or engaged in these arrangements other than to continue to provide oversight of the Commission VMS for the purposes of monitoring compliance with the Member/CNCP VMS obligations. Any costs associated with adding Commission VMS to the vessel's data

⁴ Later there was another contract amendment to provide a unique DNID and associated services for Ecuador vessels.



distribution are assumed directly by industry in a contractual arrangement directly with the service provider. Likewise, it is the responsibility of industry to engage with CLS to notify of any changes in their data distribution arrangements.

In previous implementation reports the issue of vessels wanting to use devices from other satellite service providers to direct report VMS positions was raised. It was previously determined that there was not a mechanism to facilitate receipt of data from units such as Skywave. While the units of other providers may be authorized for use in national waters or for the purposes of reporting to Member FMCs, the only alternative for SPRFMO authorized vessels not reporting via the current contractual arrangement is to use Iridium (CLS Triton devices) while in the Convention Area and make arrangements with CLS to include Commission VMS in the data distribution. Data from any other means would require redistribution from the Member's FMC to Commission VMS.

9.2. NAF Field Code Updating

The CTC12 issue identified regarding the use of specific IM and FR field codes in NAF messages sent to Commission VMS appears to be resolved. A verification again NAF messages sampled during September 2025 indicated that the NAF messages included the IMO number in the IM field and the originating source of the NAF message was included in the FR field. Members/CNCPs without vessels in SPRFMO during that time will need to ensure that the NAF messages for their vessels are include the IM and FR fields before returning to SPRFMO.

9.3. Vessels operating in SPRFMO without being displayed on Commission VMS

There have again been situations detected during the reporting period where authorised SPRFMO vessels, with functioning VMS units onboard, operated within SPRFMO without their VMS positional information displaying on Commission VMS (specific cases are identified in the VMS section of the Compliance report). While none of these incidents appear to be of nefarious intent it does highlight the need to remain vigilant and seek opportunities to detect such occurrences.



ANNEX 1: VMS - UNIQUE VESSELS REPORT (01 Oct 2024 – 30 Sept 2025)

AUSTRALIA	CHINA	CHINA	CHINA
ANTARCTIC DISCOVERY	FU YUAN YU7611	FUYUANYUYUN991	HAIDELI707
DIANA	FU YUAN YU7612	FUYUANYUYUN992	HAIDELI709
INVESTIGATOR	FU YUAN YU7613	GANG TAI 1	HAIFENGLONG 5
PETUNA ENDEAVOUR	FU YUAN YU7614	GANG TAI 8	HAIFENGLONG7
BELIZE	FU YUAN YU7615	GUOHONG5	HAIFENGLONG8
XIANG HAI	FU YUAN YU7616	HAI DE LI 703	HAN YI 21
CHILE	FU YUAN YU7617	HAI DE LI 708	HAN YI 3
CABO DE HORNOS	FU YUAN YU7618	HAI FENG 1	FUYUANYUYUN991
CHINA	FU YUAN YU7619	HAI FENG 2	FUYUANYUYUN992
CHANG SHUN 6	FU YUAN YU7871	HAI FENG 3	GANG TAI 1
CHANG SHUN 7	FU YUAN YU7872	HAI FENG LONG 1	GANG TAI 8
CHANG SHUN 8	FU YUAN YU7888	HAI FENG LONG 2	GUOHONG5
CHANG SHUN 9	FU YUAN YU7889	HAI FENG LONG 6	HAI DE LI 703
CHANG TAI 801	FUYUANYU7631	HAI LI 18	HAI DE LI 708
CHANG TAI 802	FUYUANYU7632	HAI LI 28	HAI FENG 1
CHANG TAI 806	FUYUANYU7633	HAI LI 38	HAI FENG 2
CHANG TAI 809	FUYUANYU7634	HAI LI 8	HAI FENG 3
CHANG TAI 810	FUYUANYU7635	HAI XING 1	HAI FENG LONG 1
CHANG TAI 811	FUYUANYU7636	HAI ZHI XING 801	HAI FENG LONG 2
CHANG TAI 812	FUYUANYU7637	HAIDELI707	HAI FENG LONG 6
DAPINGYUYUN99	FUYUANYU7639	HAIDELI709	HAI LI 18
DONG FANG 101	FUYUANYU7640	HAIFENGLONG 5	HAI LI 28
DONG YU 1519	FUYUANYU7641	HAIFENGLONG7	HAI LI 38
DONG YU 1529	FUYUANYU7642	HAIFENGLONG8	HAI LI 8
DONG ZHOU 21	FUYUANYU7643	HAN YI 21	HAI XING 1
DONG ZHOU 22	FUYUANYU7646	HAN YI 3	HAI ZHI XING 801
DONGZHOU17	FUYUANYU7655	FUYUANYUYUN991	HAIDELI707
ENZE12	FUYUANYU7656	FUYUANYUYUN992	HAIDELI709
ENZE7	FUYUANYU7670	GANG TAI 1	HAIFENGLONG 5
ENZE8	FUYUANYU7671	GANG TAI 8	HAIFENGLONG7
ENZE86	FUYUANYU7700	GUOHONG5	HAIFENGLONG8
FENG CHENG 103	FUYUANYU7701	HAI DE LI 703	HAN YI 21
FENGHUI 9	FUYUANYU7703	HAI DE LI 708	HAN YI 3
FU YUAN YU 198	FUYUANYU7704	HAI FENG 1	HANYI76
FU YUAN YU 7601	FUYUANYU7706	HAI FENG 2	HANYI78
FU YUAN YU 7602	FUYUANYU7707	HAI FENG 3	HANYI799
FU YUAN YU 7603	FUYUANYU7711	HAI FENG LONG 1	HANYI805
FU YUAN YU 7604	FUYUANYU7713	HAI FENG LONG 2	HANYI838
FU YUAN YU 7605	FUYUANYU7717	HAI FENG LONG 6	HANYI85
FU YUAN YU 7606	FUYUANYU7727	HAI LI 18	HANYI86
FU YUAN YU 7882	FUYUANYU7729	HAI LI 28	HANYI877
FU YUAN YU 7883	FUYUANYULENG222	HAI LI 38	HANYI885
FU YUAN YU 7886	FUYUANYUYUN877	HAI LI 8	HE BEI 8588
FU YUAN YU 7887	FUYUANYUYUN878	HAI XING 1	HE BEI 8589
FU YUAN YU YUN 995	FUYUANYUYUN978	HAI ZHI XING 801	HEBEI 8590



CHINA	CHINA	CHINA	CHINA
HEBEI 8598	HUA LI 18	JIN HAI 688	LU RONG YUAN YU 607
HEBEI 8599	HUA LI 19	JIN HAI 701	LU RONG YUAN YU 608
HENG HONG 11	HUA LI 28	JIN HAI 709	LU RONG YUAN YU 609
HENGXIN1	HUA LI 8	JIN HAI 711	LU RONG YUAN YU 610
HENGXIN11	HUA YING 1	JIN HAI 715	LU RONG YUAN YU 667
HENGXIN15	HUA YING 201	JIN HAI 716	LU RONG YUAN YU 668
HENGXIN16	HUA YING 205	JIN HAI 717	LU RONG YUAN YU 669
HENGXIN7	HUA YING 208	JIN HAI 718	LU RONG YUAN YU 678
HENGXIN78	HUA YING 217	JIN HAI 728	LU RONG YUAN YU 688
HONG DA 18	HUA YING 261	JIN HAI 758	LU RONG YUAN YU 696
HONG DA 2	HUA YING 58	JIN HAI 767	LU RONG YUAN YU YUN 678
HONG PU 1	HUA YING 78	JIN HAI 771	LU RONG YUAN YU YUN 888
HONG PU 2	HUA YING 803	JIN HAI 777	LU RONG YUAN YU YUN 999
HONG PU 37	HUA YING 809	JIN HAI 779	LULANYUANYU058
HONG PU 5	HUA YING 811	JIN HAI 788	LULANYUANYU059
HONG PU 57	HUA YING 813	JIN HAI 824	LULANYUANYU068
HONG PU 6	HUA YING 815	JIN HAI 829	LULANYUANYU069
HONG PU 88	HUA YING 817	JIN HAI 856	LULANYUANYU088
HONG RUN 1	HUA YING 818	JIN HAI 858	LURONGYUANYU186
HONG RUN 11	HUA YING 819	JIN HAI 866	LURONGYUANYU187
HONG RUN 16	HUA YING 87	JIN HAI 868	LURONGYUANYU656
HONG RUN 18	HUA YING NO.207	JIN HAI 878	LURONGYUANYU697
HONG RUN 2	HUAHENG11	JIN HAI 886	LURONGYUANYU701
HONG RUN 3	HUAHENG7	JIN HAI 888	LURONGYUANYU708
HONG RUN 55	HUAXIANG6	JINFENG209	LURONGYUANYU709
HONG RUN 57	HUAXIANG8	JINFENG58	LURONGYUANYUYUN 667
HONG RUN 6	HUAYING15	JINFENG767	LURONGYUANYUYUN177
HONG RUN 668	HUAYING218	JINFENG858	LURONGYUANYUYUN668
HONG RUN 75	HUAYING28	JING YUAN 601	LURONGYUANYUYUN669
HONG RUN LENG 2	HUAYING66	JING YUAN 608	LUWEIYUANYUYUN 777
HONGPU16	HUAYING76	JING YUAN 626	MING EN 8
HONGPU17	HUAYING77	JING YUAN 628	MING WANG
HONGPU3	HUAYING821	JINHAI857	MING XIANG 801
HONGPU31	HUAYING868	JU LONG JIA YA 17	MING XIANG 807
HONGPU7	HUAYING90	JU LONG JIA YA 22	MING XIANG 816
HONGPU701	HUAYIXIN5	JU LONG JIA YA 28	MING XIANG 817
HONGPU779	HUIZELENGYUN15	JU RONG YU 11	MING XIANG 818
HONGPU9	JIA DE 1	JU RONG YU 12	MING XIANG 819
HONGRUN107	JIA DE 17	JULONGJIAYA12	MING XIANG 857
HONGRUN108	JIA DE 18	LIAO YU ER HAO	MING XIANG 868
HONGRUN109	JIA DE 21	LIAO YU YI HAO	MING XING
HONGRUN17	JIA DE 56	LU HUANG YUAN YU 105	MING YUAN
HONGRUN21	JIA DE 8	LU HUANG YUAN YU 106	MING ZHOU 622
HONGRUN27	JIA YI 28	LU HUANG YUAN YU 107	MING ZHOU 8
HONGRUN76	JIADE 58	LU HUANG YUAN YU 108	MING ZHOU 839
HONGRUNLENG1	JIADE27	LU RONG YUAN YU 158	MINGEN6
HUA LI 16	JIADE55	LU RONG YUAN YU 188	MINGEN7
HUA LI 17	JIADE68	LU RONG YUAN YU 198	MINGXIANG805



CHINA	CHINA	CHINA	CHINA
MINGXIANG808	NING TAI 83	PU YUAN 855	SHUNZE27
MINGXIANG811	NING TAI 85	PU YUAN 856	SHUNZE28
MINGXIANG821	NING TAI 86	PU YUAN 868	SHUNZE37
MINGXIANG826	NING TAI 87	PU YUAN 885	SHUNZE5
MINGXIANG828	NING TAI 89	PU YUAN 887	SHUNZE58
MINGXIANG858	NING TAI 9	PU YUAN 898	SHUNZE6
MINGXIANG878	NING TAI 97	PUYUAN86	SHUNZE66
MINGXIANG889	NING TAI LENG 5	PUYUAN886	SHUNZE677
MINGXIANG966	NING TAI LENG 8	RONG YUAN YU 168	SHUNZE68
MINGXIANG977	NINGFENGLENG1	RONG YUAN YU 169	SHUNZE688
MINGZE76	NINGTAI 15	RONG ZHOU	SHUNZE689
MINGZE86	NINGTAI51	RONGHUA23	SHUNZE7
MINGZHOU7	NINGTAI601	RONGHUA25	SHUNZE72
NING FENG LENG 2	NINGTAI615	RONGHUA26	SHUNZE726
NING FENG LENG 6	NINGTAI685	RONGHUA27	SHUNZE728
NING TAI 1	NINGTAI717	RONGHUA28	SHUNZE729
NING TAI 11	NINGTAI72	RONGHUA29	SHUNZE75
NING TAI 12	NINGTAI727	RONGHUA30	SHUNZE76
NING TAI 16	NINGTAI815	RUN DA 601	SHUNZE77
NING TAI 17	NINGTAI88	RUN DA 602	SHUNZE777
NING TAI 18	OU YA 17	RUN DA 605	SHUNZE78
NING TAI 19	OU YA 18	RUN DA 607	SHUNZE801
NING TAI 2	OU YA 19	RUN DA 610	SHUNZE805
NING TAI 21	OU YA 28	RUN DA 617	SHUNZE806
NING TAI 22	OU YA 9	RUN DA 618	SHUNZE807
NING TAI 26	PU YUAN 707	RUN DA 677	SHUNZE85
NING TAI 27	PU YUAN 715	RUN DA 806	SHUNZE86
NING TAI 28	PU YUAN 720	RUNDA 18	SHUNZE868
NING TAI 35	PU YUAN 721	RUNDA 216	SHUNZE87
NING TAI 38	PU YUAN 755	RUNDA 25	SHUNZE881
NING TAI 5	PU YUAN 768	RUNDA 603	SHUNZE882
NING TAI 52	PU YUAN 775	RUNDA 613	SHUNZE9
NING TAI 55	PU YUAN 777	RUNDA816	SHUNZE98
NING TAI 58	PU YUAN 801	SHUN XING 16	SHUNZELENGYUN5
NING TAI 6	PU YUAN 802	SHUN XING 17	SHUNZHOU858
NING TAI 61	PU YUAN 803	SHUN XING 18	SU YUAN YU 6
NING TAI 617	PU YUAN 805	SHUN ZE 25	SU YUAN YU 9
NING TAI 62	PU YUAN 807	SHUN ZE 815	TAI XING 1
NING TAI 65	PU YUAN 808	SHUN ZHOU 811	TAO YUAN 605
NING TAI 66	PU YUAN 811	SHUN ZHOU 815	TAO YUAN 607
NING TAI 69	PU YUAN 816	SHUN ZHOU 817	TIAN XIANG
NING TAI 7	PU YUAN 817	SHUNHANG68	TIAN XIANG 58
NING TAI 71	PU YUAN 818	SHUNZE 958	TIAN YUE 1
NING TAI 75	PU YUAN 819	SHUNZE1	WAN XIN 76
NING TAI 76	PU YUAN 820	SHUNZE15	WANXIN32
NING TAI 77	PU YUAN 827	SHUNZE16	WANXIN38
NING TAI 78	PU YUAN 835	SHUNZE17	WANXIN52
NING TAI 8	PU YUAN 837	SHUNZE18	WANXIN87
NING TAI 81	PU YUAN 838	SHUNZE23	WEI YU 19



CHINA	CHINA	KOREA	PANAMA
XIN JI LI 55	ZHOU YU 901	GREENSTAR	HAN XING
XIN JI LI 56	ZHOU YU 902	JOCHOH	HARU
XING BANG 999	ZHOU YU 905	NO.2 JOCHOH	HARVEST 62
XING WANG 111	ZHOU YU 906	NO.5 DONG IL	HE TAI
XING WANG 222	ZHOU YU 907	NOEL	HUI HANG 828
XING WANG 333	ZHOU YU 908	SEIN FRONTIER	KHANA
XINGBANG99	ZHOU YU 915	SEIN HONOR	LIAOYU REEFER 1
XINHAILENG1	ZHOU YU 916	SEIN KASAMA	MYLO
XINHAILENG2	ZHOU YU ER HAO	SEIN PHOENIX	NESTOS REEFER
XINHANG79	ZHOU YU YI HAO	SEIN QUEEN	NEW HARMONY
XINHANG831	ZHOUHONG YUAN 16	SEJONG	NEW SMILE
XINHANG832	ZHOUHONG YUAN 7	SOHOH	NEW TAKATSUKI
YI FENG RUN 6	ZHOUPU818	LIBERIA	NO. 1 BARON
YING HAI 798	ZHOUYU917	HAI GONG YOU 309	NO.1 POHAB
YONG XING 1	ZHOUYU918	HAI XING	OCEAN ACE
YUAN SHENG 6	ZHOUYU919	SANJIN 3025	OCEAN CRYSTAL
YUANJIA1	ZHOUYU920	WEI NING	OCEAN SPLENDID
ZHANHAI004	ZHOUYU921	NEW ZEALAND	PIONEER 38
ZHANHAI016	ZHOUYU922	JANAS	PROSPERITY 12
ZHE PU YUAN 37	ZHOUYU925	MARINE STAR II	RUI SHENG
ZHE PU YUAN 58	ZHOUYU926	SAN AOTEA II	RYOMA
ZHE PU YUAN 67	ZHOUYU927	SAN ASPIRING	SHUN ZE LENG 7
ZHE PU YUAN 68	ZHOUYU928	SANTA MARIA	SUAH
ZHE PU YUAN 77	ZHOUYU929	TANGAROA	TAI JI
ZHE PU YUAN 98	ZHOUYU930	TASMAN VIKING	TRITON REEFER
ZHEN FA 5	ZHOUYU956	PANAMA	TUNA PRINCESS
ZHEN FA 7	ZHOUYU957	ANGARA	ULTRA ENERGY
ZHEPUYUANLENG7	ZHOUYU958	ANGEL 118	ZHONG XIE 8
ZHONG JU 18	ZHOUYU959	ANGEL 38	ZHONG YU MARINE
ZHONGJU1	ZHOUYU969	ANGEL NO.1	PERU
ZHONGJU365	ZHOUYU970	ANGEL NO.2	ALEXANDRA I
ZHONGJU61	ZHOUYU971	AT GLORY	ALEXANDRA X
ZHONGJU7	ZHOUYU972	B. SKY	AMOR DE MADRE
ZHONGJU816	ZHOUYU975	BAO LUCKY	ANTONIOS I
ZHONGJU817	COOK ISLANDS	BOYANG BERING	ASPE I
ZHONGJU819	AKANUI	BOYANG CAPELLA	AVE FENIX I
ZHONGJU821	B PACIFIC	CONCORD BREEZE	AVE FENIX II
ZHONGJU88	HAI SOON 61	CONCORD SERENITY	BENDICIÓN DEL SEÑOR I
ZHONGMINGZHOU 11	EUROPEAN UNION	DINOK	CARACOL
ZHOU HONG YUAN 1	TRONIO (ESP)	FENG YU	CARMENCITA 2
ZHOU HONG YUAN 2	LIBRA (LTU)	FRIOT CARIBIC	CARMENCITA II
ZHOU HONG YUAN 9	MARGIRIS (LTU)	FRIOT GALICIA	CAROLINA I
ZHOU PU 27	ALINA (POL)	FULL KUO SHIN	CAROLINA III
ZHOU PU 5	ANNELIES ILENA (POL)	FUSION ENERGY	CHENNAI
ZHOU PU 668		FUTAGAMI	COSTA DEL SOL
ZHOU PU 806		GENTA MARU	CRISTIAN ANTONIO
ZHOU PU 98		HAI GONG YOU 303	DANIEL ENTRE LOS LEONES
ZHOU YU 7		HAI JI LI	DEVY LLONS
ZHOU YU 8		HAI ZHI RUN 7	DON MOISES III



PERU	PERU	PERU	CHINESE TAIPEI
DON TEODORO IX	KEVIN 2	SAN MARTIN 10	SHUENN MAN NO. 99
DON VENERO	LEO 3	SAN MARTIN 14	SHUN TIAN FA NO.168
DOÑA ELSA	LIAN ADRIAN I	SAN MARTIN 18	VANUATU
EL CANDIRU I	LOITADOR III	SAN MARTIN 3	ANGEL 101
EL REY DE LA VICTORIA	LUZ CRISTINA	SAN MARTIN DE PORRES NRO 2	ANGEL 106
ESTRELLA DE DAVID 5	MANUELITO-I	SAN MARTIN NRO. 6	ANGEL 22
ETEN DIEZ	MANUELITO-II	SAN MATHEO	CHANG SHENG 36
GUIAME ISMAEL II	MANUELITO-III	SAN PEDRO II	HAI FENG 668
HAGEO CON CRISTO	MARIA FELIX II	SEBASTIAN	HAI FENG 678
HOBO I	MARIA FELIX III	SHEKINA II	HAI FENG 688
HOBO III	MARIA FELIX VI	UZIEL	HAI FENG 718
JEHOVA ES MI PASTOR	MATHEO ISAIAS	VICTORIA DE JESUCRISTO	HUA YANG
JEHOVA ES MI PROVEEDOR	MEGAN	VICTORIA DE UN GUERRERO	MING HANG 5
JESUS NAZARENO	MELISSA	VIRGEN DEL CISNE VI	MING HANG 7
JHONNY RAFAEL IV	MI FIEL AMIGO	VIRGEN DEL CISNE X	QI HANG
JORGE ANTONIO I	MI LUZ DIVINA	VIRGEN DEL CISNE XII	RONG JIN ZHI LU
JUANA ROSA IX	PARAISO	YOSSY I	SHEN JU
JUANA ROSA VI	PODEROSO SEÑOR JESUS 4	RUSSIAN FEDERATION	YONG XIANG 9
JUANA ROSA VIII	SAN JUDAS TADEO	ADMIRAL SHABALIN	End of Listing
JUANA ROSA X	SAN MARTIN	MAIRONIS	