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January-May 2025 fishing season for squid (*Dosidicus gigas*) in Chilean waters

Chile

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Fabiola Cabello e Ignacio Payá

Abstract

The preliminary fisheries and biology information of the Chilean jumbo squid fishery for the January–May 2025 period is reported, including landing records of the artisanal and the industrial fleets, and the catch length structures sampled by IFOP scientific observers. The total landing was 77,761 tons, which corresponds to a 9% greater than the one in the same period in year 2024. A total of 77,291 tons was landed by the artisanal fleet, as a targeted species, and 470 tons by the industrial fleet, as a bycatch. Compared to the same period in year 2024, there was an increase in reported activity in the northern (31-32°S) and central areas (33-35°S), while there was a significant decrease in records from the central-south area (36-37°S), an area that historically accounts for the highest percentage of landings. CPUE had a similar trend than in the previous year. The artisanal CPUE showed peak values in March–April, with a decline in CPUE in the final weeks of the series compared to the previous year. The artisanal catch length compositions were similar to the ones registered in the same period in year 2024. The length mode ranged from 70 to 80 cm ML. In 2025, some small landings were recorded to north of the traditional fishery areas (<25°S) were the squid landed were small (30-60 cm ML).

Background

The jumbo squid (*Dosidicus gigas*) is a squid species endemic to the eastern Pacific Ocean, distributed vertically from the surface down to 1,200 meters, and geographically ranging between 40°N and 47°S (Payá and Cabello, 2024). This species is characterized by rapid growth and early maturity, with a life cycle lasting approximately 1 to 2 years. However, these traits are highly variable and strongly influenced by environmental conditions.

In the regional context (FAO Area 87), jumbo squid catches include those within the convention area of the South Pacific Regional Fisheries Management Organization (SPRFMO) and within the Exclusive Economic Zones (EEZs) of Chile, Peru, and Ecuador. In recent years, jumbo squid has become the most important species in terms of catch volume within the SPRFMO area. Currently, there is ongoing analysis and discussion regarding the existence of a single large stock with three phenotypes or morphs (small, medium, and large). In Chile, catches consist predominantly of the large morph.

The Chilean delegation, which includes participation from IFOP, actively engages in scientific discussions and in the workplan led by the SPRFMO Scientific Committee. These efforts focus primarily on fishery monitoring, connectivity studies, and the identification of appropriate stock assessment methodologies.

During 2024, the Squid Working Group discussed stock assessment model results that estimated a healthy squid stock status for the year 2022. Meanwhile, squid catches in 2024 showed a significant decrease in both the Convention Area and Peruvian waters. Due to the two-year delay between current stock conditions and the stock assessment results, in-season monitoring of this squid fishery is necessary. Therefore, the present working paper reports on the January–May 2025 monitoring of the squid fishery in Chilean waters.

The Fishery Fleet

Composition and Available Data

Since 2020, and in accordance with current Chilean regulations, jumbo squid catches are carried out exclusively by the artisanal fleet, while the industrial fleet is limited to incidental catches only.

To update the fishery monitoring, data from January to May 2025 were analyzed. This includes official landing records reported by SERNAPESCA, comprising records from boats and launches (artisanal fleet), as well as declarations of bycatches done by the industrial hake fishery. Additionally, records collected by IFOP scientific observers were included, consisting of biological databases and fishing logbooks.

For reference, data from the same period in 2024 (January–May) were also used. Figure 1 shows the location of IFOP monitoring stations during the 2025 period described.

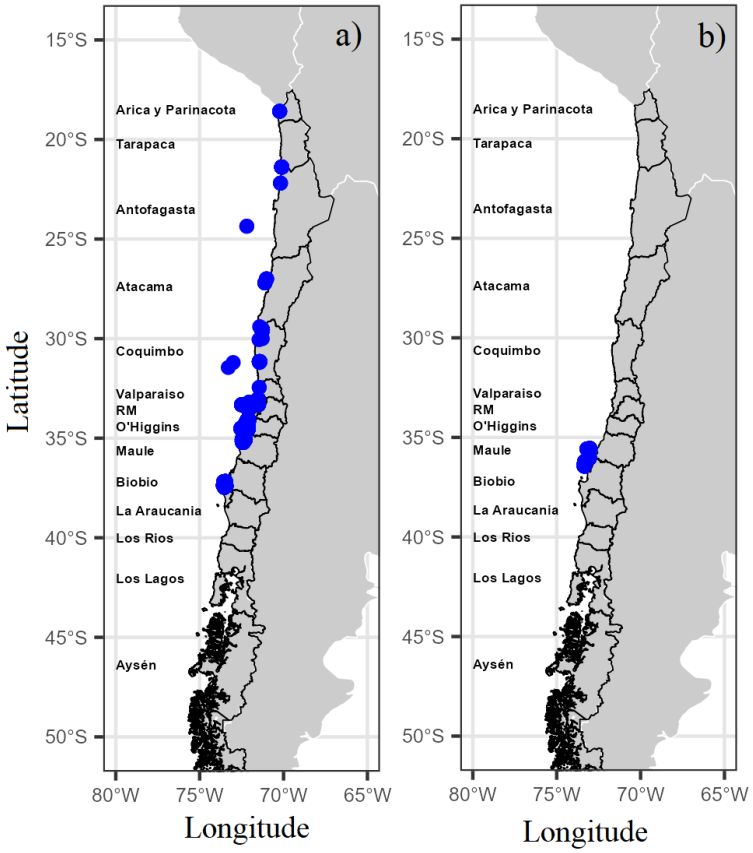

Figure 1. IFOP sampling points for the artisanal fleet (a) and the industrial fleet (b). Source: IFOP 2025. The labels correspond to the region names.

Artisanal Fishery

Reported landings between January and May 2025 totaled 77,291 tons, including both and boats and launches, which together make up the artisanal fleet. When disaggregated by vessel type, landings from boats significantly exceeded those from launches. In both cases, the highest monthly landing occurred in March, with a total of 21,428.6 tons (Table 1).

Table 1. Landings of jumbo squid by the artisanal fleet reported between January and May 2025, in tons. Source: SERNAPESCA.

Month	Boat	Launch	Artesanal total
Junuary	12819.9	814.4	13634.3
February	16261.3	425.0	16686.3
March	19917.4	1511.3	21428.6
April	15857.8	325.6	16183.3
May	8678.3	680.3	9358.6
Total	**73534.6**	**3756.5**	**77291.2**

The 2025 artisanal landings weekly pattern was different than in year 20024. Boats and launches landed more tones during first 12 weeks in year 2025 than in year 2024 (Figure 2).

Regarding weekly cumulative landing sums, the 2025 data for boats shows a higher total compared to the same period in 2024 (~77,000 tons vs. ~70,000 tons, respectively) (Figure 3). The opposite trend was observed for launches, which accumulated lower landings during the current period (~3,800 tons vs. ~5,100 tons, respectively).

Regarding landings by region, jumbo squid catches were mainly landed in the central-southern regions of the country (Figure 1 and 4). The boat landings increased in the northern and central zones relative to 2024, particularly in Coquimbo, Valparaíso and Maule Regions, reaching increases of approximately 130% to 300%. Conversely, the Biobío Region recorded a significant decrease (~80%) in landings in 2025 compared to 2024. Regarding launches, preliminary values are lower in the current period compared to the previous one, concentrated in the central-southern zone (Valparaíso and Biobío Regions).

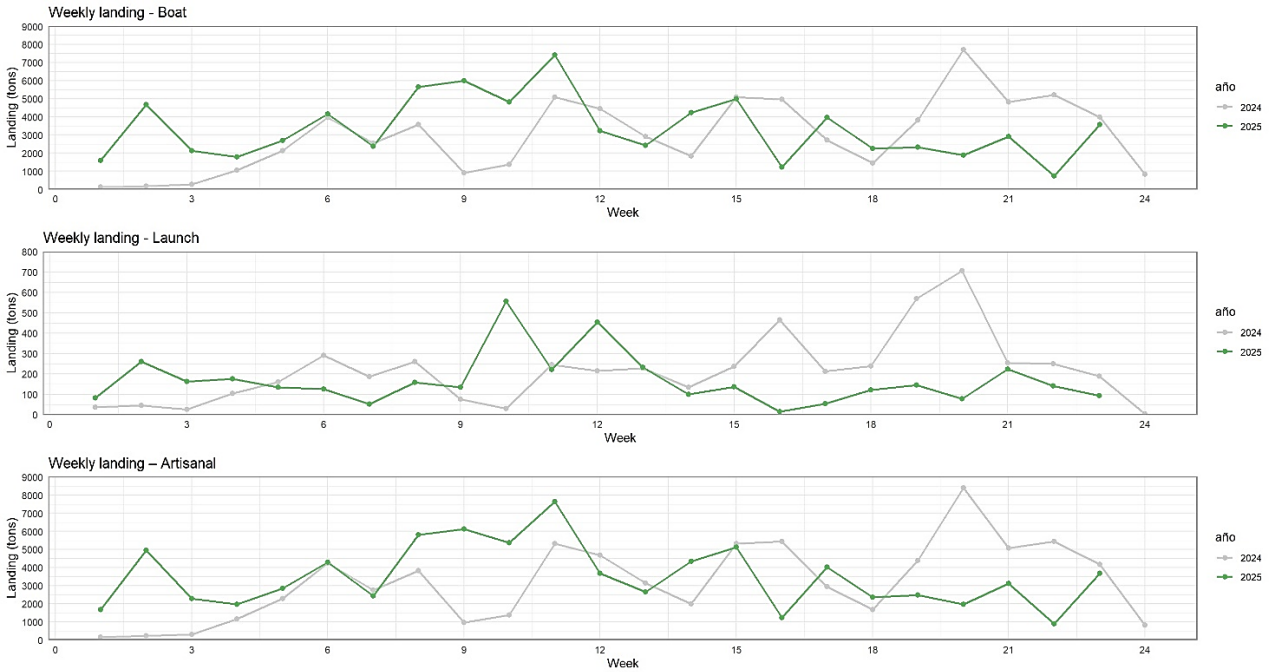

Figure 2. Weekly landing of jumbo squid reported for the artisanal fleet during the January–May 2024–2025 period. Source: SERNAPESCA.

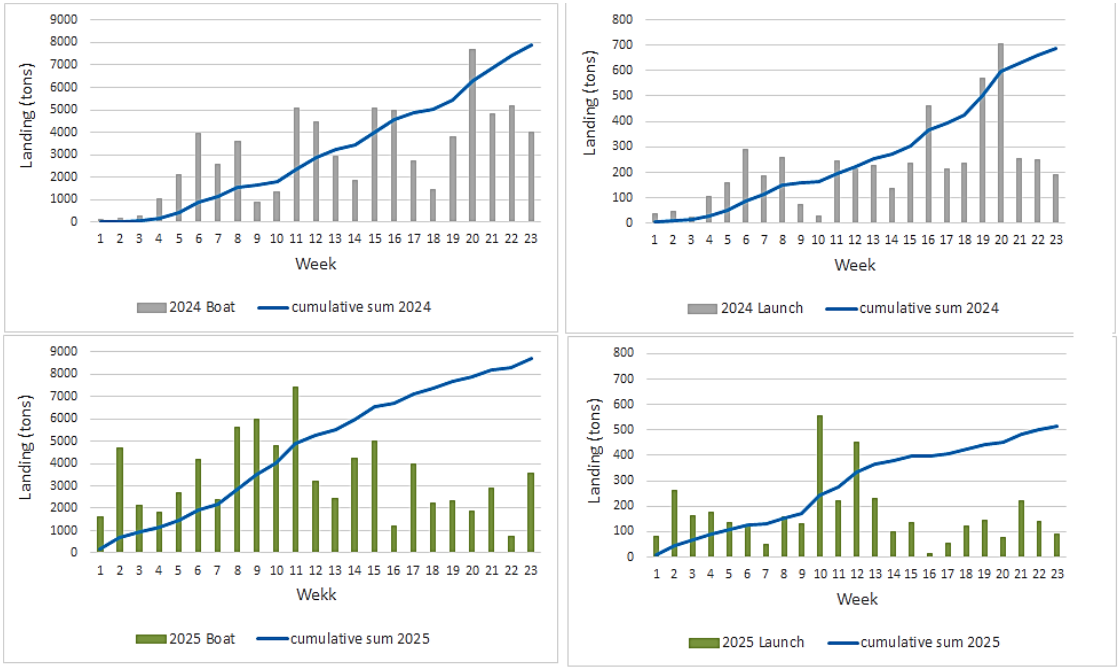

Figure 3. Artisanal weekly and cumulative landings (tons) for January–May in 2024 and 2025. Boats in left panel and launches in the right panel.

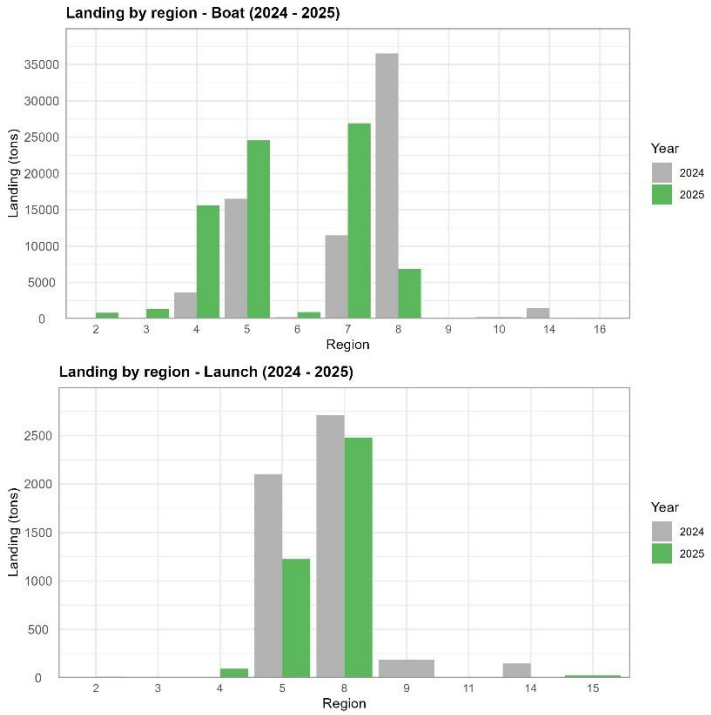

Figure 4. Regional landings of jumbo squid reported for the artisanal fleet during the January–May 2024–2025 period. 2: Antofagasta Region, 3: Atacama Region, 4: Coquimbo Region, 5: Valparaíso Region, 6: O'Higgins Region, 7: Maule Region, 8: Biobío Region, 9: La Araucanía Region, 11: Aysén Region, 14: Los Ríos Region, 15: Arica y Parinacota Region.
Source: SERNAPESCA.

Industrial Fishery

Squid as bycatch of hake fishery in January-May 2025 totaled 469.5 tons (Table 2). As with the artisanal fleet, the highest recorded landings occurred in March (week 10), followed by a significant decrease in May. Weekly landings were variable during the weeks corresponding to January–March 2025, whereas in April-May, the records decreased compared to 2024, with very few landings (Figure 5).

Total squid landings of the bycatch of the hake fishery showed a decrease relative to the previous year (Figure 6). For the current period, a peak was observed in week 10 (105.8 tons); however, from week 19 onward (corresponding to May), landings were scarce. This is reflected in the cumulative landings, which stabilizes at around 80 tons in the final weeks and is visibly lower than during the same period in 2024.

Regarding regional records (Figure 7), during the January–May 2025 period, jumbo squid landings by the industrial fleet were reported mainly in the south-central zone (Biobío Region, Figure 1), with lower volumes compared to the same period in 2024. In contrast, an

increase in incidental catch reports was observed in the northern zone (Tarapacá Region), while no incidental catches have been recorded in the far south of the country.

Table 2. Landings of jumbo squid by the industrial fleet reported between January and May 2025, in tons. Source: SERNAPESCA.

Month	Industrial
Junuary	67.6
February	113.8
March	163.9
April	118.8
May	5.4
Total	**469.4**

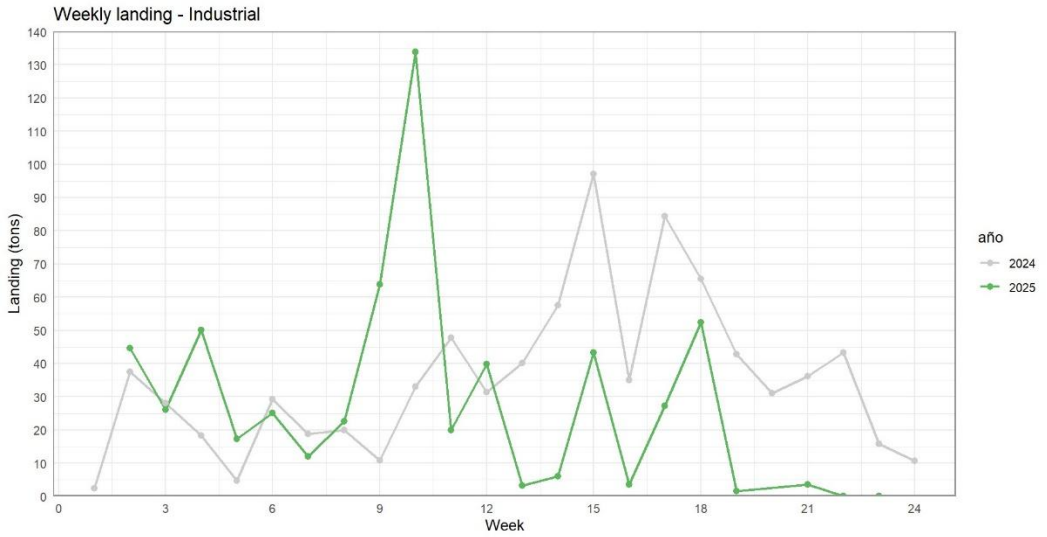

Figure 5. Weekly landing of jumbo squid reported for the industrial fleet during the January–May in year 2024 and year 2025. Source: SERNAPESCA.

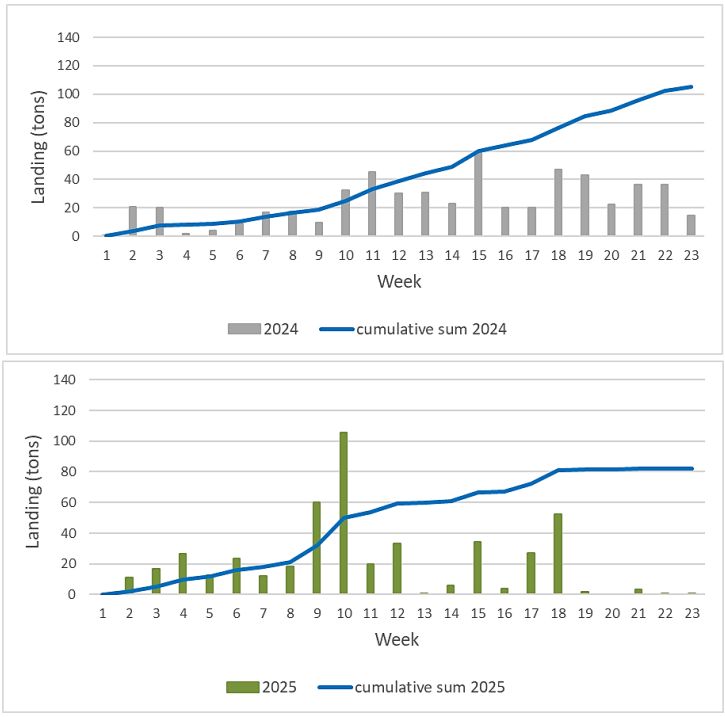

Figure 6. Total landings (tons) and cumulative sum during the January–May 2024 and 2025 period for the industrial fleet.

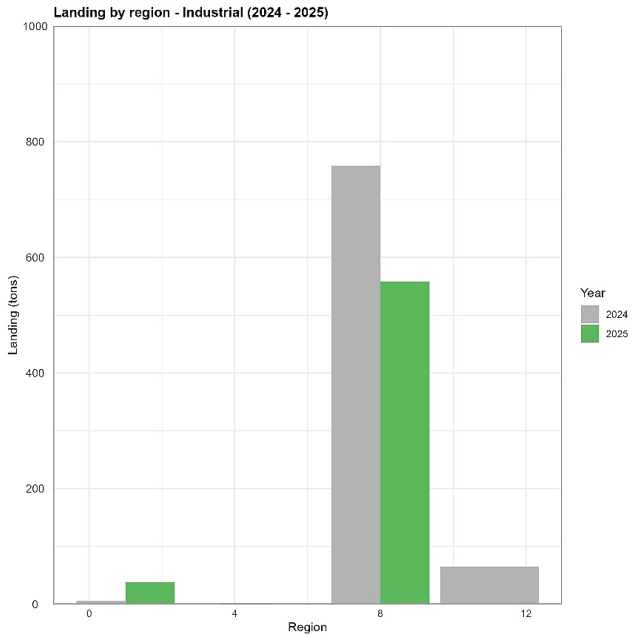

Figure 7. Regional landings of jumbo squid reported for the industrial fleet during January–May in years 2024 and 2025. 1: Tarapacá Region, 5: Valparaiso Region, 8: Biobío Region, 11: Aysén Region. Source: SERNAPESCA.

Catch length composition

The jumbo squid classes by month in 2025 ranged from 0-30 to 90-110 cm ML, both in the artisanal fleet and in the industrial fleet (Figure 8). However, the most representative length class was 60–90 cm, accounting for over 90% of specimens in both fleets (Table 3).

In the artisanal fleet, only the months of February (2) and April (4) recorded lengths under 30 cm, associated with the northern zone of the country (<25°S), although these represented less than 5%. Specimens larger than 90 cm were observed in the central zone (Valparaíso - Maule Regions), with maximum lengths of 106 cm in the artisanal fleet, reaching up to ~14% representation (Table 3).

When comparing the 2025 size structures to those from 2024 (Figure 9), no major differences were found in the northern and central zones (Coquimbo – Maule Regions). However, in Biobío Region, an increase in the proportion of individuals measuring 60–70 cm was observed in 2025.

In the case of the industrial fleet (Figure 10), which is preliminarily composed only of records from the Biobío Region, a clear difference is observed between 2024 and 2025. In 2024, a wide size range was recorded, centered around 50 cm. In contrast, during the January–May 2025 period, the records were centered around 70 cm, indicating that incidental catches of jumbo squid by the industrial fleet have consisted of individuals larger than the maturity size (note that spawners have not been found in Chilean waters).

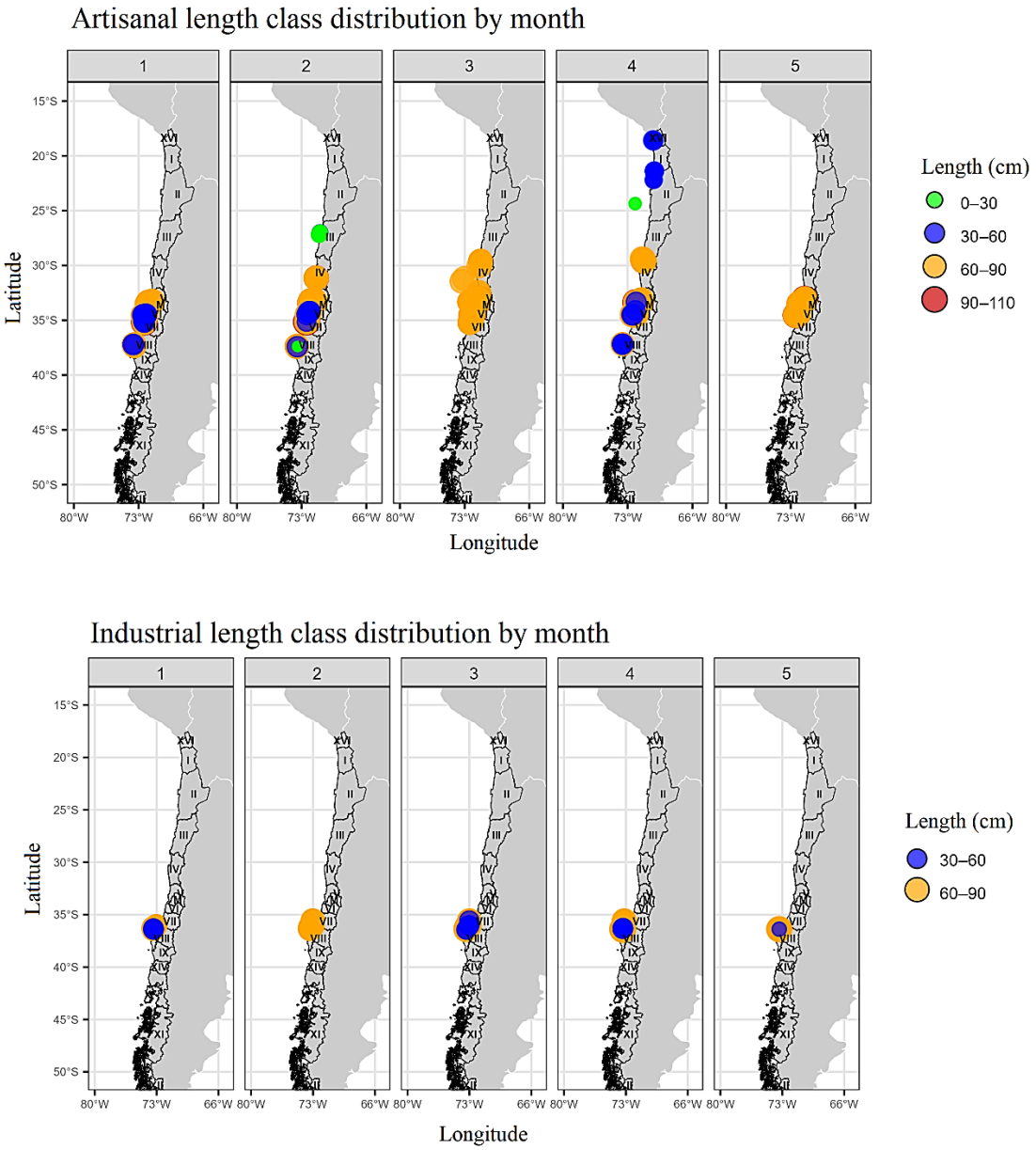

Figure 8. Locations of length classes of jumbo squid by month during 2025 for artisanal fleet (top) and industrial fleet (bottom). 1: January, 2: February, 3: March, 4: April, 5: May. Source: IFOP. The proportions of the different length classes are shown in table 3.

Table 3. Percentage (%) representation of each jumbo squid length class, according to Figure 8.

Artisanal length	Month				
	Junuary	February	March	April	May
0-30	-	4.19	-	0.32	-
30-60	2.48	2.52	-	7.46	-
60-90	**96.5**	**91.7**	**93.8**	**90.6**	**85.6**
90-110	1.06	1.57	6.19	1.59	14.4
Industrial length	Month				
	Junuary	February	March	April	May
0-30	-	-	-	-	-
30-60	4.88		4.03	7.04	10
60-90	**95.1**	**100**	**96**	**93**	**90**
90-110	-	-	-	-	-

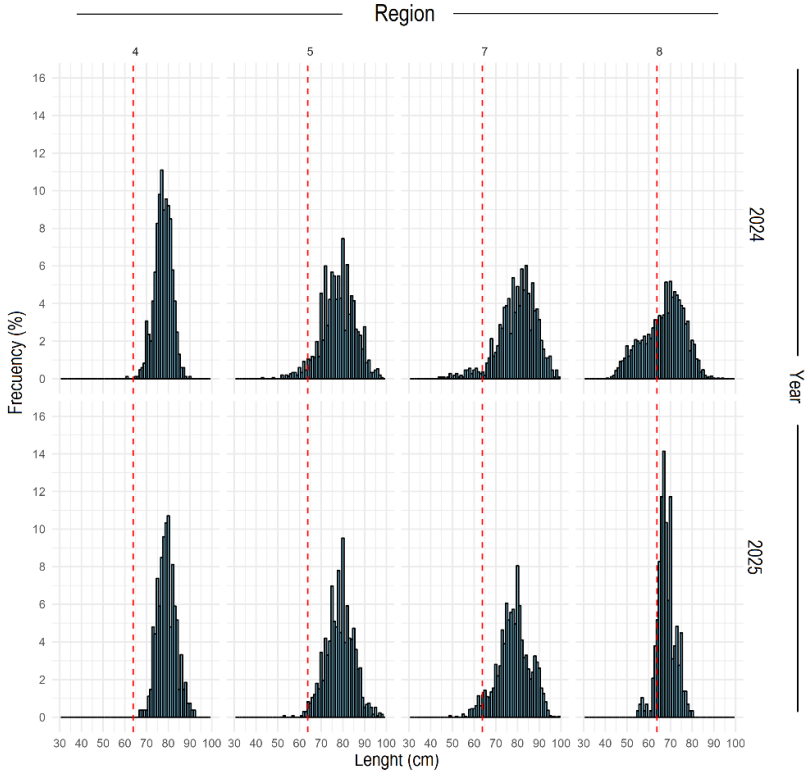

Figure 9. Artisanal catch length composition by region during January–May in year 2024 (top) and year 2025 (bottom). Vertical red line indicates the age at first maturity (Liu *et al*., 2010). 4: Coquimbo Region, 5: Valparaíso Region, 7: Maule Region, 8: Biobío Region. Source: IFOP.

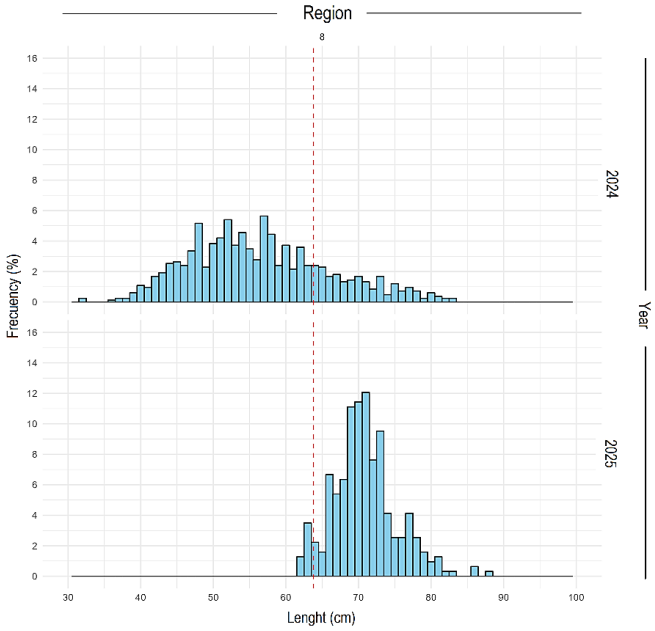

Figure 10. Squid length compositions in bycatch of hake industrial fishery in the Biobío Region during January–May in year 2024 (top) and in year 2025 (bottom). Vertical red line indicates the age at first maturity (Liu *et al*., 2010). Source: IFOP.

CPUE

The preliminary CPUE of the artisanal jumbo squid fleet for the January–March 2025 period showed slight differences compared to the same period of the previous year (Figure 11). Both for boats and launches, an increase in CPUE was observed between weeks 9 and 17, corresponding to March–April, followed by a decrease toward the final weeks (May). In this latter period, the yield in 2025 was lower than in 2024, associated with the decrease in landings during the last weeks of the analysis.

Regarding the preliminary industrial CPUE, greater variability in values was found during the 2025 period, highlighting week 10 (March 3–9), when a peak in landings was observed with lower effort (days out of port) compared to the rest of the period. Similar to the artisanal fleet, a decline in CPUE is observed in the last weeks, although with high variability in values.

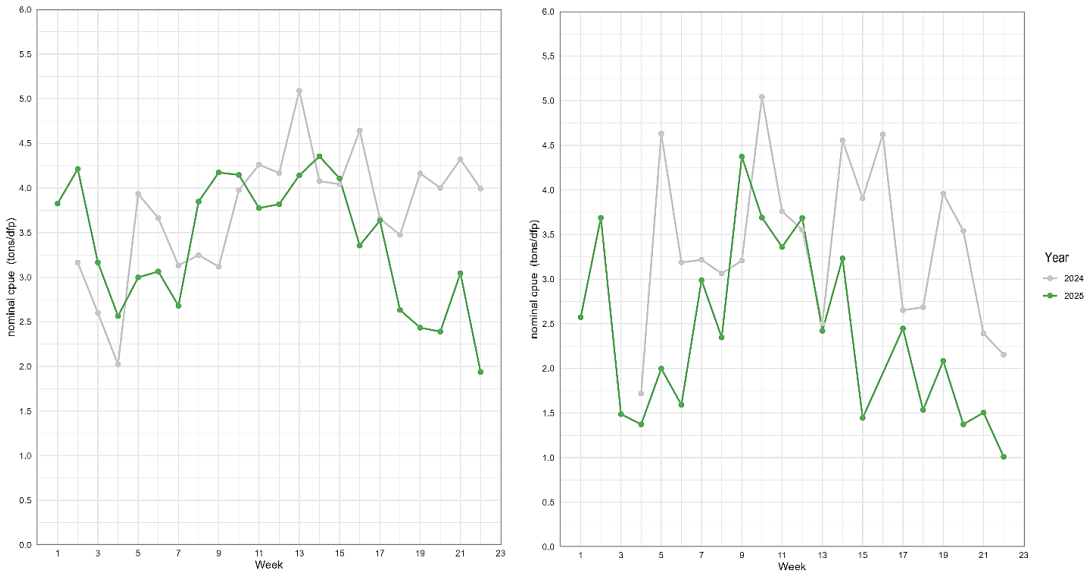

Figure 11. Nominal CPUE of artisanal jumbo squid for the period January–May 2024 and 2025 (tons / days out of port). Boats in left panel and launches in the right panel.

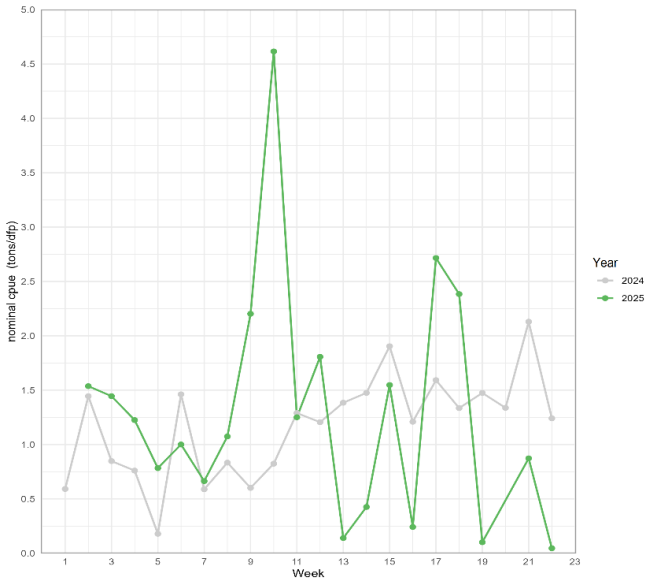

Figure 12. Nominal CPUE of industrial jumbo squid for the period January–May 2024 and 2025 (tons / days out of port).

References

Liu, B., X. Chen, H. Lu, Y. Chen y W. Qian. 2010. Fishery biology of the jumbo flying squid *Dosidicus gigas* off the Exclusive Economic Zone of Chilean waters. Sci. Mar., 74 (4): 687-695.

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