SUBSECRETARÍA DE TRANSPORTES, MOVILIDAD Y AGENDA URBANA

COMISIÓN PERMANENTE DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES MARÍTIMOS

CIAIM-04/2023 report

Collision between the fishing vessel ZERUKO ERREGIÑA and the recreational vessel CLEM 7 miles east of the lighthouse of La Entallada (Fuerteventura), on March 30, 2022

NOTICE

This report has been elaborated by the Spanish Maritime Accident and Incident Investigation Standing Commission (CIAIM), which is regulated by article 265 of the reformed text of the Law of State Ports and the Merchant Navy, approved by Royal Legislative Decree 2/2011, of 5 September 2011, and by Royal Decree 800/2011, of 10 June 2011.

The aim of the CIAIM when investigating maritime accidents and incidents is to draw conclusions and extract lessons that allow the risk of future maritime accidents to be reduced, and hence contribute to maritime safety and to preventing pollution from shipping. To this end, the CIAIM carries out a technical investigation in each case in which it attempts to establish the causes and circumstances that, directly or indirectly, may have contributed to the accident or incident and, when necessary, to issue the appropriate safety recommendations.

The elaboration of this technical report is not intended in any way to prejudge any judicial decisions that may be produced, nor does it seek to evaluate responsibilities nor to determine guilt.

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Figura 2. Rustler 36, model of the recreational sailing vessel CLEM



Figura 3. Accident site

1. SUMMARY

On 30 March 2022, at 19:52 hours (local Canary Islands time = UTC + 01:00 at the date of the accident) there was a collision between the fishing vessel (FV) ZERUKO ERREGIÑA and the recreational sailing vessel CLEM, seven nautical miles east of the lighthouse of La Entallada, Fuerteventura (Canary Islands). As a result of the collision,

- the sailing vessel suffered serious damage to its hull which caused a leakage of a considerable volume of water, while the fishing vessel suffered no damage affecting its safety.
- The fishing vessel attached a rope to tow the recreational boat and headed towards dry land. The skipper of the CLEM, who was its only crew member, remained on board his vessel until he was obliged to abandon ship due to the progress of the flooding, which became uncontrollable.
- The recreational vessel CLEM sank at 20:06, after being towed for approximately half a nautical mile. The FV ZERUKO ERREGIÑA then headed to the port of Arrecife on the island of Lanzarote, where it arrived after midnight, when the recreational boat skipper duly disembarked.
- No pollution was recorded in the area other than that caused by the sinking of the vessel. No crew member was injured during the accident.

1.1. Investigation

CIAIM was notified of the incident on 31 March 2022. That same day, the case was provisionally classified as an "extremely serious accident" and the decision was made to open an investigation. A CIAIM committee meeting ratified the classification of the incident and the initiation of the safety investigation. This report was reviewed by a CIAIM plenary session on 19 January 2023 and published on XX (month/year) after being approved.

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2. FACTUAL INFORMATION

PARTICULARS OF THE SHIP / VES	SEL				
Name	ZERUKO ERREGIÑA	CLEM			
		(formerly JANET PATRICIA)			
Flag / Port of Registry	Spain	United Kingdom			
Identification	Registration number: 3a-BI-2-2730 Vessel Registration No. (NIB): 24928 IMO Vessel Identification No.: 8799786 MMSI: 224000240 Call sign: EHGZ	Official Registration No.: 730006 MMSI: 232015802 Call sign: MWQP7			
Туре	Fishing vessel with rods and live bait	Recreational sailing boat			
Main details	Wooden hull Length: 29.62 m Width: 7.42 m Tonnage: 162 GT GUASCOR F360TA 640 KW engine GFRP hull Length overall: 10.77 m Width: 3.35 m Depth: 1.92 m Beta Marine 21 KW engine				
Ownership and management	The Spanish limited-liability company De la Cruz e Hijos is registered as the 100% owner of the vessel The vessel is owned by its skipper sailed it in his own right				
Shipbuilding details	Built in 1977, at the Julio Muruaga Built in 1996 at the Rustler shipy shipyard in Bermeo, Spain. Built in 1996 at the Rustler shipy Falmouth, Cornwall, U.K.				
Minimum safe manning	Did not have minimum crew manning	N/A			
VOYAGE PARTICULARS					
Departure / Arrival ports	Departure from the port of Arrecife in Lanzarote and planned arrival at the same port	Departure from the port of Arrecife in Lanzarote and planned arrival at Puerto Rico on the island of Gran Canaria			
Cargo information	Catch weighing 1,600 kg	Provisions and supplies for one person 180 litres of fuel			
Crew	Eleven crew members. See section 2.1	One crew member.			
Documents	The vessel documentation was valid and currently in force. It was licensed in Arrecife on 11 March 2022, with an observation specifying that its voyages should last less than 12 hours (see section 2.1)	Valid and currently in force, but was lost with the vessel.			
INFORMATION ON THE INCIDENT					
Type of incident	Collision				
Date and time	18:52 UTC on 30 March 2022				
Location	28°12,59'N 013°49,3'W. Coastal waters of F	uerteventura			
Vessel's operations	Proceeding at sea at a speed of 7-8 knots	Proceeding at sea at a speed of 5-6 knots			
Location on board	Prow, topside	Bottom hull and topside on the port side			
Ship damage	Minor damage on the hull at the height of the collision zone, without structural damage	The collision caused structural damage and significant leakage that became uncontrollable			
Fatalities / missing / injured on board	No	No			
Pollution	Pollution consistent with a sinking, undetect	ted			
Other non-ship damage	No No				
Other personal injuries	No				
MARINE AND METEOROLOGICAL C	CONDITIONS				
Wind	Force 4 (11-16 knots) north-east wind				
Sea conditions	Rough sea (0.6-1.2-metre waves) 1-metre swell caused by north-east wind				
Visibility	Good				
INTERVENTION OF LAND-BASED A	UTHORITIES AND REACTION OF EMERGENCY SI	ERVICES			
	SASEMAR ¹				

¹ Spanish Maritime Safety and Rescue Society

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Means deployed	Spanish Lifeboat SALVAMAR DIPHDA ¹ Spanish Rescue Helicopter HELIMER 201 ¹
Speed of intervention	Immediate
Measures adopted	Communication with the crew of the fishing vessel, who rescued the skipper of the sailing vessel, together with mobilisation & coordination of rescue measures
Results obtained	All individuals affected disembarked in the port of Arrecife and none required medical assistance

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2.1. Documentation of the fishing vessel and its crew members

- The Fishing Vessel ZERUKO ERREGIÑA was licensed on 11 March 2022. The list of crew members attached to the licensing request included seven crew members: one skipper, one chief engineer, three sailors and two oilers.
- Although the list of crew members only included seven persons, there were eleven persons on board: four persons on board were therefore not registered as crew members on the vessel. The inventory of equipment attached to
- the vessel's certificate of compliance specified that the vessel was fitted with rescue equipment sufficient for a crew of up to 15 members.
- On the other hand, the licensing decision included a note in the section reserved for observations limiting the duration of the vessel's voyages to 12 hours. The vessel had in fact set sail from the port of Arrecife over 24 hours
- before the accident, exceeding the 12-hour limit established in the licensing decision. It had been anchored to the south of the island of Lanzarote between 21:00 hours on 29 March and 03:00 hours on 30 March, and had thus
- been at sea for approximately 17 hours.

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3. DETAILED DESCRIPTION

This description of events is based on the available data, statements and reports. The times given refer to local time.

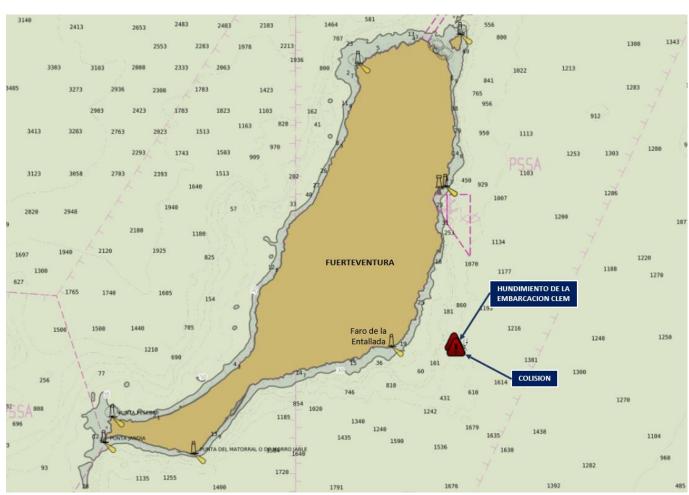


Figura 4. Accident site. (Special data infrastructure viewer of the Hydrographic Institution of the Spanish Navy)

- On 29 March 2022 at 19:05 hours, the FV ZERUKO ERREGIÑA left the port of Arrecife with a crew of 11 members, sailing in parallel to the coast of the island of Lanzarote. Approximately two hours later, the vessel dropped anchor in the vicinity of Punta Gorda, on the south coast of the island, where the crew were able to rest for a few hours, since the boat, used for fishing for tuna with rods, fished exclusively during the day. The boat was anchored until approximately 03:00 hours on 30 March.
- During the early morning of 30 March, the ZERUKO ERREGIÑA resumed its voyage, sailing southwards at a speed of approximately 7 knots. At 12:15 hours, the vessel arrived in the zone where it planned to fish throughout the day, about 12 nautical miles to the east of the island of Fuerteventura. The skipper was on the bridge in charge of the navigational watch, constantly manoeuvring in search of fish while monitoring the side-scan sonars installed on board for this purpose. The rest of the crew were either waiting for the fishing operations to begin or were stowing the cargo in the hold, behind the bridge.
- At 09:30 hours on 30 March, the sailing vessel flying the British flag CLEM left the port of Arrecife with a single crew member, its owner, on board, with the aim of exploring the waters around the Canary Islands. Once the vessel had left the port, the skipper turned off the boat's engine in order to continue under sail in a south-easterly direction, towards Fuerteventura, maintaining a speed of between 5 and 6 knots.
 - The skipper of the CLEM intended to sail towards the south coast of Fuerteventura, where he planned to find a sheltered location in which to spend the night before continuing his voyage.

- At about 14:30 hours, when the sailing vessel was already at one nautical mile from the coast of Fuerteventura, the skipper manoeuvred to turn southwards. The boat continued under sail at an approximate speed of 6 knots.
- 4 At about 19:40 hours, the fishing vessel ZERUKO ERREGIÑA turned westwards, leaving the zone in which it had been fishing throughout the day. At 19:52 hours, the skipper of the ZERUKO ERREGIÑA saw at just a few metres
- from the prow of his boat the mast of a sailing vessel and, realising that he was about to collide with the latter, reversed to try to stop his vessel.
- The skipper did not succeed in stopping the advance of the ZERUKO ERREGIÑA, which collided with the sailing vessel CLEM at 7 nautical miles to the east of the lighthouse of La Entallada, Fuerteventura, at position 28°13.59'N 013°49.3'W.



Figura 5. Courses followed by the fishing vessel ZERUKO ERREGIÑA (in red) and the recreational vessel CLEM (in green) since one hour before the accident. (Special data infrastructure viewer of the Hydrographic Institution of the Spanish Navy)

The prow of the fishing vessel collided with the port side of the sailing vessel, causing structural damage and leading to a significant leakage. On seeing how the area of his boat under the waterline was being inundated, the skipper of the CLEM asked the crew of the fishing vessel for help. The crew members threw a rope to the skipper of the CLEM, who attached it to a cleat hitch.

The fishing vessel proceeded to tow the recreational vessel. However, the water leakage was too large and could not be controlled with the means available on board. The skipper of the sailing vessel, on seeing that his boat was being rapidly inundated and that they were not going to be able to save it, put on his life-jacket, unfolded the life-boat that he carried on board the CLEM and got into the life-boat, abandoning the sailing vessel.

The CLEM sank 0.6 nautical miles north of the location at which the collision took place, and the last signal of the automatic identification system (AIS) was emitted at 20:06 hours. The skipper of the sailing vessel boarded the ZERUKO ERREGIÑA, where he was given dry clothes to change into since his own were wet, despite the fact that he had not fallen into the water.

At 20:06 hours, the skipper of the fishing vessel contacted the Maritime Radio Communications Centre in Las Palmas (CCR Las Palmas), notifying them that he had collided with the CLEM.

CCR Las Palmas then notified the Rescue Coordination Centre in Las Palmas (CCS Las Palmas), which, at 20:10 hours, mobilised the lifeboat SALVAMAR MIZAR and the rescue helicopter HELIMER 201.

In a conversation with CCR Las Palmas, the skipper of the ZERUKO ERREGIÑA detailed the circumstances of the accident and confirmed that he had rescued the sole crew member on board the CLEM, which had sunk. The

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- personnel of CCS Las Palmas, who were listening to the conversation, then cancelled the mobilisation of the HELIMER 201.
- Life Boat (LB) SALVAMAR MIZAR left Gran Tarajal, Fuerteventura, at 20:22 hours and arrived at the accident zone at 21:14. After inspecting the zone, it notified that there were no remains of the shipwreck and no oil pollution
- 6 could be observed.

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- The ZERUKO ERREGIÑA sailed towards Lanzarote, entering the port of Arrecife at 01:30 hours. The skipper of the recreational vessel CLEM disembarked at this point. He did not require medical assistance.
- On 31 March a technician from a boatyard in Arrecife inspected the damage to the fishing vessel ZERUKO ERREGIÑA (see Figura 6). In his report, the technician stated that during his inspection he did not observe any structural damage in the zone affected by the collision, but only a few scratches.



Figura 6. Close-up of the damage suffered by the ZERUKO ERREGIÑA during the accident

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4. ANALYSIS

4.1. The courses followed by the two vessels and the collision

- Table 1 displays the data showing the position, direction and speed of both boats as emitted by their respective automatic identification system (AIS) devices starting from 19:35 hours up to 19:52 hours (just after the time of
- 6 the accident).

Tabla 1. AIS data for both vessels from 19:35 to 19:52 hours

Recreational vessel CLEM				D. W.		Fishing Vessel ZERUKO ERREGIÑA				
Time	Latitude	Length	Speed (knots)	Directi on	Position	Time	Latitude	Length	Speed (knots)	Directi on
19:35:26	28°13.937'N	13°49.165'W	6	182.0	1	19:35:29	28°12.772'N	13°47.292'W	1.3	76.0
19:35:54	28°13.894'N	13°49.169'W	5.8	178.0	2	19:35:59	28°12.772'N	13°47.285'W	0.4	120.0
19:36:27	28°13.850'N	13°49.178'W	5.4	185.0	3	19:36:38	28°12.769'N	13°47.280'W	2.4	185.0
19:36:54	28°13.809'N	13°49.176'W	5.5	186.0	4	19:36:59	28°12.766'N	13°47.280'W	0.9	175.0
19:37:27	28°13.762'N	13°49.178'W	5	179.0	5	19:37:29	28°12.755'N	13°47.272'W	2.4	180.0
19:37:54	28°13.720'N	13°49.173'W	5.8	163.0	6	19:37:59	28°12.726'W	13°47.279'W	4.5	205.0
19:38:27	28°13.666'N	13°49.159'W	5.2	186.0	7	19:38:29	28°12.708'N	13°47.323'W	5.9	264.0
19:38:57	28°13.618'N	13°49.164'W	6.1	186.0	8	19:38:59	28°12.699'N	13°47.386'W	7.2	251.0
19:39:27	28°13.575'N	13°49.164'W	4.6	180.0	9	19:39:29	28°12.691'N	13°47.456'W	7.6	268.0
19:39:57	28°13.532'N	13°49.167'W	5.1	178.0	10	19:39:59	28°12.691'N	13°47.527'W	7.8	264.0
19:40:27	28°13.488'N	13°49.166'W	5.4	182.0	11	19:40:29	28°12.689'N	13°47.604'W	7.8	266.0
19:40:57	28°13.444'N	13°49.170'W	5	186.0	12	19:40:59	28°12.684'N	13°47, 676'W	8.1	259.0
19:41:27	28°13.402'N	13°49.177'W	5.3	173.0	13	19:41:29	28°12.676'N	13°47, 753'W	7.9	268.0
19:41:57	28°13.358'N	13°49.173'W	5.5	175.0	14	19:41:59	28°12.670'N	13°47, 826'W	8	268.0
19:42:26	28°13.314'N	13°49.170'W	4.5	181.0	15	19:42:29	28°12.665'N	13°47, 903'W	8.1	268.0
19:42:57	28°13.275'N	13°49.175'W	4.8	185.0	16	19:42:59	28°12.661'N	13°47, 976'W	7.9	265.0
19:43:26	28°13.236'N	13°49.178'W	4.8	180.0	17	19:43:29	28°12.656'N	13°48.054'W	7.7	255.0
19:43:55	28°13.199'N	13°49,186'W	4.7	193.0	18	19:43:59	28°12.651'N	13°48.126'W	7.7	260.0
19:44:26	28°13.158'N	13°49.190'W	4.3	196.0	19	19:44:28	28°12.647'N	13°48.201'W	7.8	271.0
19:44:55	28°13.121'N	13°49.199'W	5.1	188.0	20	19:44:59	28°12.643'N	13°48.275'W	7.7	264.0
19:45:26	28°13.075'N	13°49.206'W	5.1	189.0	21	19:45:28	28°12.639'N	13°48.349'W	7.8	272.0
19:45:55	28°13.036'N	13°49.213'W	5.2	183.0	22	19:45:59	28°12.634'N	13°48.423'W	7.9	261.0
19:46:26	28°12.994'N	13°49.220'W	4.7	182.0	23	19:46:28	28°12.629'N	13°48.496'W	7.9	274.0
19:46:55	28°12.953'N	13°49.229'W	5.1	175.0	24	19:46:59	28°12.626'N	13°48.571'W	8.2	267.0
19:47:26	28°12.912'N	13°49.238'W	4.7	192.0	25	19:47:28	28°12.622'N	13°48.648'W	8.1	266.0
19:47:56	28°12.871'N	13°49.246'W	4.8	190.0	26	19:47:59	28°12.618'N	13°48.725'W	8.2	272.0
19:48:27	28°12.831'N	13°49.254'W	5	194.0	27	19:48:28	28°12.615'N	13°48.802'W	8	267.0
19:48:56	28°12.795'N	13°49.261'W	4.6	194.0	28	19:48:59	28°12,611'N	13°48.880'W	8.6	267.0
19:49:27	28°12.759'N	13°49,271'W	4.8	201.0	29	19:49:28	28°12.607'N	13°48.957'W	8.3	265.0
19:49:56	28°12.724'N	13°49.278'W	4.7	185.0	30	19:49:59	28°12.603'N	13°49.036'W	8.2	264.0
19:50:27	28°12.686'N	13°49.283'W	5.5	188.0	31	19:50:28	28°12.599'N	13°49.114'W	8.5	266.0
19:50:56	28°12.645'N	13°49.290'W	5.6	200.0	32	19:50:59	28°12.596'N	13°49.192'W	8.4	272.0
19:51:27	28°12.604'N	13°49.300'W	4.5	194.0	33	19:51:28	28°12.592'N	13°49.269'W	8.2	256.0
NO DATA				34	19:51:59	28°12.590'N	13°49.314'W	1.8	293.0	
		NO DATA			35	19:52:28	28°12.594'N	13°49.323'W	1.5	298.0
19:52:59	28°12.576'N	13°49.324'W	1.5	99.0	36	19:52:59	28°12.594'N	13°49,338'W	2.2	235.0

- Each of the 36 rows in Table 1 contains the AIS data of the two vessels emitted almost simultaneously, with an interval between them of less than five seconds. Although more AIS data are available for the intermediate
- 4 positions of the fishing vessels, these have only been included to make the interpretation of the data more easily comprehensible.
- Figura 7 shows the courses followed by the vessels from 18:35 hours up to the moment of the collision, on the basis of the AIS data shown in Table 1 of this section. It should be noted that the positions indicated in the
- representation of the vessels' courses coincide with Rows 1, 5, 10, 15, 20, 25, 30 and 36 of Table 1 showing the positions of both the boats included in Table 1.

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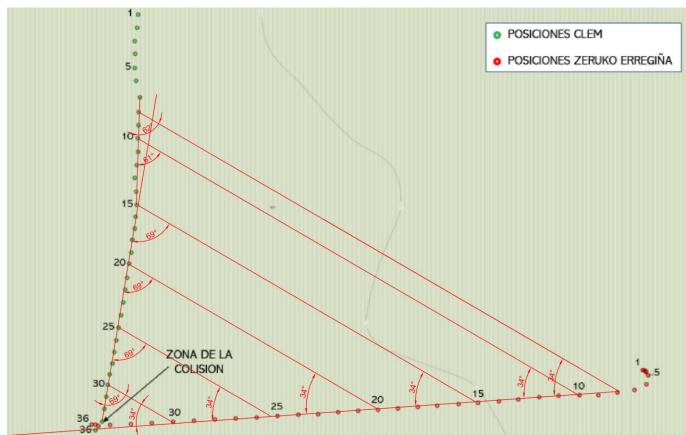


Figura 7. Positions of the fishing vessel ZERUKO ERREGIÑA and the recreational vessel CLEM before the accident

- In Figura 5 of the previous section, which shows the courses of the CLEM and the ZERUKO ERREGIÑA starting from one hour before the accident, no significant changes of direction on the part of the two boats are observed in the moments prior to the accident. This can be seen clearly in the representation shown in Figura 7 and by an analysis of the data in Table 1.
- During the 15 minutes prior to the accident, the distance between the two boats decreased from two and a half nautical miles, the distance between the boats when they were at their initial positions in Figura 7, without the two skippers doing anything to avoid the risk of collision, which increased progressively with the passing of time. The accident occurred at 19:52 hours, near Position 33 in Table 1.

4.2. Concerning the declarations of the skipper of the ZERUKO ERREGIÑA and his actions prior to the accident

- The skipper of the fishing vessel declared that in the moments prior to the accident he was on the bridge performing the navigational watch and monitoring the sonar in search of fish.
- An analysis of Table 1 and of the graph in Figura 7 shows that towards 19:38 hours, near Position 8, the skipper of the fishing vessel set its direction on a course close to 260° and increased its speed to 8 knots. The direction and speed of the boat remained more or less constant until the time of the accident. The variations in the direction of the vessel seen in the table of data are due to the drifting caused by the wind and the swell, and the corresponding corrections made by the automatic pilot to maintain the direction set. The variations in speed may

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- be due to the variations in the resistance of the wind and the swell against the hull as the vessel continues to advance.
- The sun was still above the horizon and the meteorological conditions were good. Despite this, the skipper of the fishing vessel declared that he did not notice the presence of the sailing vessel as it approached crossing his own
- projected course on the starboard side, until he saw the sailing vessel's mast on the fishing vessel's prow just before the collision took place. It was at that moment that the skipper tried to put the engine into reverse, when
- 8 the collision was in fact already inevitable.

The fact that he did not notice the approach of the sailing vessel shows that the skipper, occupied as he was with the navigational watch, was not monitoring his boat's navigation effectively and was not using the navigational aids available to him on board the ZERUKO ERREGIÑA. The Certificate of Radio and Electrical Safety for the fishing vessel includes the following radar and positioning system devices:

- FURUNO 8250 DA SOLAS radar
- FURUNO FR-8111 SOLAS radar
- KODEN MDC-7925 non-SOLAS radar
- KODEN KGP-98 non-SOLAS GPS
- FURUNO GP-50 MARK3 non-SOLAS GPS
- If he had checked the nautical charts viewing screen, which included information about the GPS and AIS systems of other vessels, he would have detected the risk of collision with the sailing vessel, which was equipped with an AIS. In the same way he could have been warned of the risk of collision if he had checked the radar echo viewing screen, for which the alarm was clearly deactivated, given the subsequent development of events.
- These facts constitute a breach of Rule 5 of the COLREGs²:

[...]

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Rule 5. Look-out. Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

[...]

A failure to use the equipment installed on board a vessel constitutes a breach of Rule 7 of the COLREGS:

[...]

- 30 Rule 7. Risk of collision.
 - a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.
 - b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.
- 36 [...]

It could be considered that one of the possible factors that contributed to the lack of vigilance on the part of the skipper may have been a false impression of safety engendered by the performance of a routine duty, in which the skipper had many years of experience without having ever undergone any mishap. To this extent this constitutes an incorrect assessment of the risks on the part of the skipper.

The crew member who was performing the duties of the skipper declared that he was the only crew member who performed the navigational watch during periods of fishing, and that he was on the vessel's bridge controlling the direction and speed of the vessel and monitoring the scanning sonars. Meanwhile, the other crew members were on deck or working in the hold. This shows that on board the vessel there was no established navigational watch shift system to allow for the personnel on watch duty to rest in adequate conditions for safe navigation. Lack of rest leads to fatigue, which may have affected the physical and mental condition of the crew member assigned the duties of skipper, which may have been a contributing factor in causing the accident.

² International Regulations for Preventing Collisions at Sea. See Spanish State Gazette BOE-A-1977-15605. Instrument for the adhesion of Spain to the International Convention authorising the International Regulations for Preventing Collisions at Sea, signed in London on 20 October 1972.

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4.3. Concerning the declarations of the skipper of the CLEM and his actions prior to the accident

- The skipper declared that he had been sailing since he was a teenager, and that he had a long experience in the use of sailing boats, having covered approximately 50,000 nautical miles. He had crossed the Atlantic and Pacific
- 6 Oceans on two occasions and had lived on board a sailing vessel for 2 years.
- The owner and skipper of the CLEM declared that while he was sailing southwards at an approximate speed of 6 knots, towards 19:00 hours, he caught sight on the port bow of a fishing vessel, the ZERUKO ERREGIÑA, sailing in a northward direction.
- Seeing that its trajectory did not represent a risk, he maintained his current course and speed. Minutes later, the skipper of the sailing vessel observed that the fishing vessel was changing direction repeatedly, in what the skipper could only interpret as erratic manoeuvres. He therefore began to monitor attentively the course of the fishing vessel, although he had ascertained that it was not on a collision course and would pass behind the stern of the sailing vessel without any risk. The manoeuvres judged to be erratic by the skipper could be the characteristic manoeuvres made by a rod-using tuna fishing boat during the process of searching for shoals of tuna.
- The skipper of the CLEM declared that he had maintained the same course and speed, and had done so throughout the day, which would have been obvious to any crew member on any boat sailing in his vicinity. Sure enough, an analysis of the data in Table 1 shows that the speed and course of the CLEM did not undergo any significant variation. The speed and course can be considered to have been maintained within an acceptable range of variations, bearing in mind the possible effect of the wind and the ocean swell on a vessel of this size advancing under sail.
- The skipper of the CLEM also declared that a few moments before the accident, when the vessels were at a distance of about 300 metres, the fishing vessel changed course, increasing the risk of collision between the vessels. In addition, he had the impression that the ZERUKO ERREGIÑA must have changed course a few seconds before it collided with the sailing vessel, given that the trajectories of the two boats crossed at an angle of 90°.
- These declarations are incompatible with the AIS data of both vessels. As has been observed in the previous section, the ZERUKO ERREGIÑA did not change course during the time that it advanced 2.4 nautical miles after adopting its new course and up to the moment of the accident.
- Furthermore, at 19:00 hours the skipper of the CLEM was at a distance of approximately 7 nautical miles from the fishing vessel ZERUKO ERREGIÑA. Bearing in mind the dimensions of his vessel, the line of the horizon visible to the skipper was less than 7 nautical miles away, which makes it difficult to imagine that the fishing vessel could have attracted his attention at that time.
- The skipper of the CLEM was certainly aware of the risk of a collision later, despite which he made no manoeuvres of any kind and confined himself to observing each movement of the fishing vessel. In fact, one minute before the accident, the skipper of the CLEM took a photograph (see Figura 8) of the fishing vessel with which his sailing vessel was to collide one minute later. The photograph shows 3 persons on the deck behind the bridge with the fishing rods reeled in, and nobody is to be seen on the bridge. Despite this, apart from this single image it is not possible to affirm that there was nobody on the bridge.
- The skipper of the sailing vessel declared that the sea and wind conditions and the positioning of his sails did not allow him to manoeuvre safely and correctly, and that he did not have enough time to lower the sails and turn on the engine before the collision. Nevertheless, it is probable that any preventive manoeuvre, such as lowering the vessel's main sail, or simply letting out the sheets and turning, would have avoided the accident or, at least, reduced his speed so as to minimise the damage caused by the collision.
- It can only be concluded that the skipper of the sailing vessel, despite his long sailing experience, was overtaken by the events, and did not react when it became obvious that the fishing vessel was not making any kind of manoeuvre.

Collision between the fishing vessel ZERUKO ERREGIÑA and the recreational vessel CLEM 6 miles east of the port of Arrecife (Lanzarote), on March 30, 2022



Figura 8. Photograph of the fishing vessel ZERUKO ERREGIÑA taken by the skipper of the CLEM just before the accident

4.4. Concerning the intersection of vessels' courses and right of way

The skipper of the ZERUKO ERREGIÑA declared that, in the moments prior to the collision, all the crew members apart from himself were on the rear deck or in the hold, and were not fishing. For this reason, the fishing vessel cannot be considered as a boat involved in fishing with regard to any analysis of the rules for setting course and piloting a vessel and for right of way.

Furthermore, in the previous image it can be observed that the ZERUKO ERREGIÑA does not display any indication that can identify it as a fishing vessel, as required by the COLREGs in Rule 26 - Fishing vessels.

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- c) A vessel engaged in fishing, other than trawling shall exhibit:
- (i) two all-round lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other;
- (ii) when there is outlying gear extending more than 150 m horizontally from the vessel, an all-round white light or a cone apex upwards in the direction of the gear;
- (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

[...]

- It must be indicated that although the expression "vessel engaged in fishing" is not applicable to vessels that fish with any method of fishing that does not restrict their manoeuvrability (such as trolling), the method of fishing with rods used by the ZERUKO ERREGIÑA does indeed restrict its manoeuvrability during fishing.
 - However, since the vessel was not fishing at the time, it is clear that, with regard to the application of the COLREGs rules for setting course and piloting a vessel, the ZERUKO ERREGIÑA must be considered as simply a mechanically-powered vessel.

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2	In accordance with COLREGs Rule 18, the fishing vessel was required to keep out of the way of the course of the sail-powered recreational vessel:
4	[]
	Rule 18. Responsibilities between vessels.
6	Except where Rule 9, Rule 10, and Rule 13 otherwise require:
	a) A power-driven vessel underway shall keep out of the way of:
8	(i) a vessel not under command;
	(ii) a vessel restricted in her ability to manoeuvre;
10	(iii) a vessel engaged in fishing;
	(iv) a sailing vessel.
2	[]
14	In addition, the CLEM was approaching on the starboard side of the ZERUKO EREGIÑA, which would have given it priority in the event of an intersection of the vessels' courses, irrespective of the categories of vessel concerned.
16	The sailing vessel maintained the same course and speed before the accident, thus complying with COLREGs Rule 17 by maintaining its course and speed.
	[]
8	Rule 17. Action by stand-on vessel
	a) i) Where one of two vessels is to keep out of the way, the other shall keep her course and speed;
20	[]
22	On the other hand, Section (a) (ii) of Rule 17 leaves open the possibility that the skipper of a sailing vessel may manoeuvre as soon as it becomes clear to him that a collision was going to take place.
	[]
24	ii) The latter vessel may, however, take action to avoid collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action
26	in compliance with these Rules.
?8	b) When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision.
80	[]

5. CONCLUSIONS

- The fishing vessel ZERUKO ERREGIÑA and the recreational vessel CLEM collided in the vicinity of the island of Fuerteventura when the fishing vessel, a rod-using tuna fishing boat, was not fishing and the recreational vessel was advancing under sail.
- The skipper of the fishing vessel should have manoeuvred in order to thus comply with COLREGs Rule 18, which establishes the obligations between categories of vessel.
- The skipper of the recreational vessel CLEM maintained his course and speed as established by COLREGs Rule 17, but once he realised that the fishing vessel was not manoeuvring in accordance with the COLREGs, he did not manoeuvre in his turn in order to avoid the collision.
- From the analysis presented in this report, it is concluded that the collision between the fishing vessel ZERUKO ERREGIÑA and the Sailing Vessel CLEM was the consequence of a lack of effective navigational watch on the part of the crew of the fishing vessel. Thus the skipper of the fishing vessel was not aware of the risk of collision until a few moments before its occurrence.
- The possibility that the skipper of the fishing vessel may have been suffering from fatigue, since he was the only person on board tasked with the navigational watch, may have led to the deterioration of the physical and mental conditions required to carry out his duties on board the vessel, which could be considered as one of the factors contributing to the accident.
- The vessel's licensing authorisation had been issued for voyages of less than 12 hours, whereas the fishing vessel had been at sea for over 24 hours since leaving port, and over 17 hours since leaving its anchorage point.
- Another of the possible factors analysed that may have contributed to the accident is the false perception of safety that may have been experienced by the skipper of the fishing vessel, who had been a seafarer for over twenty years without suffering any sort of mishap.

6. SAFETY RECOMMENDATIONS

26 No safety recommendations have been formulated.

7. SAFETY LESSONS

To the skippers of both vessels:

- 1. They should be aware of the importance of performing an effective navigational watch, complying at all times with the 1972 International Regulations for Preventing Collisions at Sea (COLREGs).
- CIAIM published in 2014 a series of safety recommendations based on the global results of the investigations into collisions carried out to date. The said recommendations continue to be necessary in order to prevent this type of accident, and to this end their widest possible dissemination is recommended. They are available via the following link:
- https://www.mitma.gob.es/recursos_mfom/pdf/A716DCAA-C5F2-4A40-9700-
- 38 181042B3213A/125410/012014_RIPA_accesible.pdf.

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