



**REPUBLIC OF TURKEY**  
**MINISTRY OF TRANSPORT AND INFRASTRUCTURE**  
**Transport Safety Investigation Board**

**Accident Investigation Report On**  
**The Fatal Man Overboard From The Fishing Vessel**  
**BURHAN KAPTAN 1**

**Off the Rumeli Lighthouse / Istanbul**  
**23<sup>rd</sup> of September 2014**

**22/DNZ-03/2017**

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This report is prepared by the Transport Safety Investigation Board.

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## **PURPOSE**

This marine accident was investigated in accordance with the Bylaw on the Investigation of Marine Accidents and Incidents which came into force after being published at the Official Gazette No.29056 on 10<sup>th</sup> of July 2014.

Investigation procedures and principles are further applied by considering Resolutions of International Maritime Organization concerning International Standards and Recommended Applications for Safety Investigations Directed to MSC 255(84) (Accident Investigation Code) and Resolution A.1075(28) Sea Accidents or Incidents, and European Union Directive 2009/18/EC.

Marine accident investigation shall be inadmissible in any judicial and administrative proceedings whose purpose or one of whose purposes is to attribute or apportion liability or blame.

	<b>PAGE</b>
<b>CONTENTS</b> .....	i
<b>LIST OF FIGURES</b> .....	ii
<b>SUMMARY</b> .....	1
<b>1. FINDINGS</b> .....	2
1.1. Factual Information .....	2
1.2. Environmental Conditions .....	3
1.3. Sequence of Events Leading to Accident .....	3
1.4. Rescue Operations for the Casualty .....	7
1.5. Damage Condition.....	9
1.6. Information Regarding the Crew and the Ship.....	12
1.7. Trawl Fishing .....	13
<b>2. ANALYSIS</b> .....	10
2.1. Life-saving Appliances .....	16
2.2. Training .....	18
2.3. The Status of Workers Onboard Fishing Vessels Other Than Seafarers .....	23
2.4. Manning of Fishing Vessels With Seafarers.....	25
2.5. The Responsibility of the Shipowner and the Master .....	25
2.6. Search and Rescue .....	27
<b>3. CONCLUSIONS</b> .....	29
<b>4. RECOMMENDATIONS</b> .....	30

## LIST OF FIGURES

## PAGE

<i>Figure 1. Location of the Accident .....</i>	<i>1</i>
<i>Figure 2. Fishing Vessel Burhan Kaptan 1 .....</i>	<i>3</i>
<i>Figure 3. Rumeli Lighthouse Fishing Port.....</i>	<i>4</i>
<i>Figure 4. Positions of the Workers Onboard At the Time of the Accident.....</i>	<i>5</i>
<i>Figure 5. Positions of the Crew B and Crew A At the Time of the Accident.....</i>	<i>5</i>
<i>Figure 6. Position of the Crew D on the Upper Deck.....</i>	<i>6</i>
<i>Figure 7. Location Where the Casualty Fell Overboard.....</i>	<i>7</i>
<i>Figure 8. Illustration of the Rising Aft of the Vessel With the Effect of the Waves.....</i>	<i>9</i>
<i>Figure 9. Windlass Used While Pulling the Nets .....</i>	<i>9</i>
<i>Figure 10. Damage on the Windlass .....</i>	<i>10</i>
<i>Figure 11. Damage on the Porthole of the Masters' Cabin.....</i>	<i>11</i>
<i>Figure 12. Damage on the AIS Antenna.....</i>	<i>11</i>
<i>Figure 13. Fishing Vessel Pulling the Trawl.....</i>	<i>13</i>
<i>Figure 14. Aqua Products Registration Certificate.....</i>	<i>22</i>
<i>Figure 15. Snapshot Taken From a Place Close to Rumeli Lighthouse .....</i>	<i>26</i>

## SUMMARY



**Figure 1:** *Location of the Accident*

Note: All times used in this report are local time (GMT +3).

Fishing vessel BURHAN KAPTAN 1 set sail from Rumeli Lighthouse fishing port with its' master and four fisherman on 23<sup>rd</sup> of September 2014 in the morning hours. The master after learning from the radio that the weather conditions would get worse in the region, requested to collect the nets from the fishermen. Meanwhile, two waterspouts, which were formed on the sea approached to them and the ship was trimmed<sup>1</sup> towards the bow dangerously because of the wave generated by these waterspouts. After this motion of the ship, one of the fisherman working on the deck were overboard.

The master informed the vessels around and the Vessel Traffic Services (Sector Turkeli) regarding the man over board over the radio and requested for help. The other three crew and the master struggled in order to rescue the overboard crew both by maneuvering the ship and using life buoy. However, the crew overboard lost from the sight after a while. Search and rescue efforts, which were started by rescue teams after reaching the incident scene did not yield a result. Dead body of the casualty was found one and half years later as got caught into the nets of another fisherman.

As a result of the accident, the overboard crew lost his life and his dead body was found 1,5 years later by another fishing vessel. One of the crew was injured during the accident.

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<sup>1</sup> Trim: Inclining of the ship towards the bow and aft direction

## **SECTION 1 – FINDINGS**

### **1.1 Factual Information**

Name of the Ship	: BURHAN KAPTAN 1
Flag	: Turkish
Port of Registry	: Istanbul
Call Sign	: TCA2162
Type of Ship	: Fish Hunting
Owner	: Aydogan KANBUROGLU; Mehmet KANBUROGLU
Manager	: Aydogan KANBUROGLU; Mehmet KANBUROGLU
Place and Year of Build	: Sürmene/Trabzon/Turkey – 2003
Gross Tonnage	: 103
Length over all (LOA)	: 24,2 meters
Main Engine Power	: 2x400 BHP
Number of Persons Onboard	: 5
Type of Navigation	: Cabotage
Date and Time of Accident	: 23 <sup>rd</sup> of September 2014 / 15:30
Type of Accident	: Very serious marine accident
Location of the Accident	: Off the Rumeli Lighthouse / Istanbul (41°18' N / 029°04' E)
Injured/Dead/Missing	: 1 dead, 1 injured
Damage	: Damage on windlass, portholes and AIS antenna
Pollution	: None



*Figure 2: Fishing Vessel BURHAN KAPTAN 1*

## **1.2 Environmental Conditions**

At the time of the accident, BURHAN KAPTAN 1 was catching fish 5 nautical miles off the Rumeli lighthouse, which was located at the Istanbul Strait's Black Sea exit. It was stated that; prevailing southern wind in the region immediately blasted after noon, and firstly from the west and afterwards from north-west blew approximately at a 45 knots speed in an hour, the visibility at the accident scene decreased to zero and wave height increased to 6 – 7 meters.

## **1.3 Sequence of Events Leading to Accident**

Fishing vessel BURHAN KAPTAN 1 left the Rumeli Lighthouse fishing port (Figure 3) on 23rd of September 2014 around 05:40. There are additional four crew having a Fisheries Licence with the master. The other crew of the ship, an ordinary seaman could not join the voyage because of his mothers' illness.





**Figure 3:** *Rumeli Lighthouse Fishing Port*

The net that was thrown for the forth time was in the sea before the accident. Turkish Radio, within the weather report which it broadcasts routinely from the VHF<sup>2</sup> 67<sup>th</sup> channel, announced that the wind would become stronger in a while. Coast Guard boat also made a warning broadcast to the region in line with the broadcast of the Turkish Radio. Thereupon, four crew started to recover the nets with the order of the master. There was 150 – 200 fathoms<sup>3</sup> length of wire in the sea. The fishing vessel was underway at a dead slow speed ahead and pulling the net. There was around 1-2 knots<sup>4</sup> speed on the vessel while wire ropes connected to the nets were being collected. During normal conditions, recovering wire ropes which are connected to the nets takes approximately 5 minutes, whereas collecting all the nets takes 25 minutes. During the incident there was approximately 5 nautical miles distance between the vessel and the Rumeli Lighthouse Port.

While the crew were pulling the net at the aft of vessel, suddenly the surrounding atmosphere became dark and visibility decreased nearly to zero. Seconds after it was seen that a waterspout was formed on the sea. Almost at the same time a second waterspout was formed and approached to vessel in very short while. In the meantime the master was commanding the vessel in the bridge, the other three crew were recovering the nets that were in the sea at the lower deck and one other crew was collecting the nets at the upper

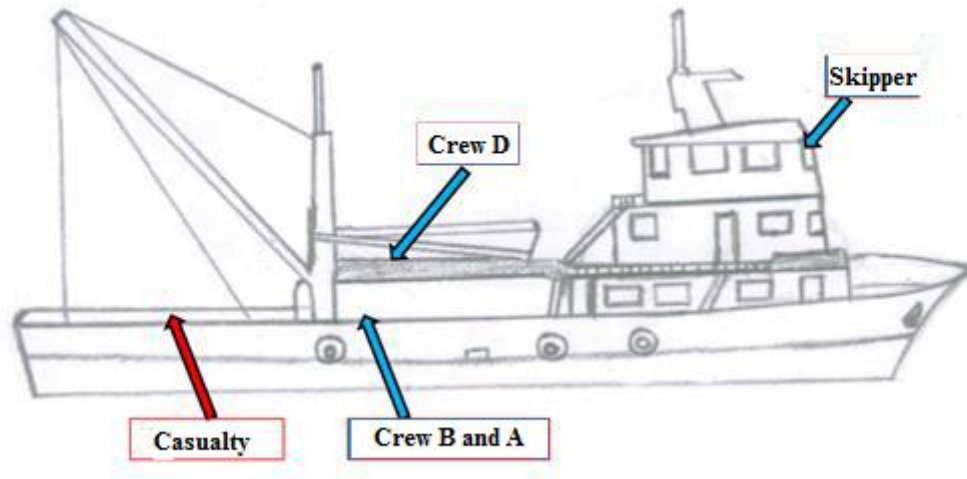
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2 Very High Frequency

3 A length of 183 cm used in the maritime sector.

4 Speed equal to one nautical mile in an hour.

deck (Figure 4). Casualty crew working at the extreme edge of the aft deck informed the master by hand signal that the waterspout was coming.



**Figure 4:** *Locations of the Crew at the Time of Accident*



**Figure 5:** *Locations of the Two Crew at the Time of the Accident*

The crew, working at the lower deck saw that waterspout was approaching the vessel and started to run towards the superstructure. Waterspouts hit the vessel with a roar and the vessel inclined dangerously towards the forecastle. Meanwhile crew member A pushed crew member B with his hand inside the superstructure and right after the door was closed with the strenght of wind. Crew member A fell to the floor with his face looking towards the hand rails as a result of inclining of the vessel or hitting of someone/something hardly himself. While he was falling, he hit a stair on the deck; (three of the ribs on the left was cracked) but he succeeded to enter into the superstructure by crawling on the floor with his own efforts. When the crew member A got inside the superstructure, crew member B stated that crew member C hit the crew member A with the effect of rising aft of the vessel and afterwards crew member C fell overboard 4-5 meters forward of starboard bow. When the crew member A learned that crew member C fell overboard, he informed the crew member D, who was collecting the nets at the upper deck and immediately he rushed the bridge and informed the master.

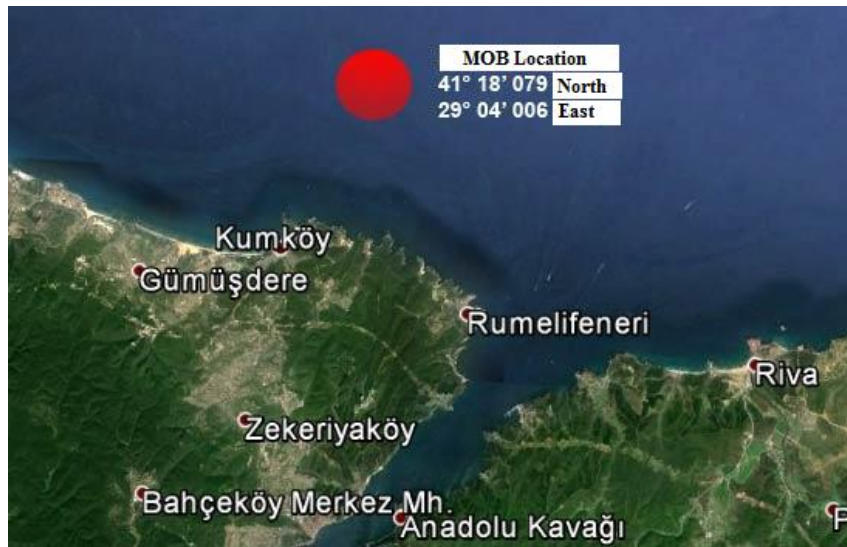


***Figure 6: The Position of Crew Member D at the Upper Deck***

The wind threw around the crew member D, who went up to scatter the nets to prevent them from falling into the sea on the upper deck, towards the pillars and squeezed him between. Meanwhile, the nets that were tangled to the head of crew member D, prevented him to fall overboard.

#### 1.4 Efforts to Rescue the Casualty

The master informed the fishing vessels around by announcing over radio, as soon as he learned that crew member C fell overboard. He requested the vessels around to inform the Coast Guard and Coastal Safety regarding the man over board (MOB) situation. He marked the position of the MOB on his radar immediately and he communicated with Vessel Traffic Services (VTS) (Sector Turkeli) over radio and informed them regarding the situation.



**Figure 7:** Man Over Board Location of the Casualty

After a short while the visibility became better but strong wind was continuing. Crew member D saw crew member C at the aft of the vessel, in the sea and at a distance 20-25 meters behind the vessel. After the master was informed by the crew, he commanded the two main engines as full astern and tried to approach towards crew member C and they came close to around 2-3 meters from the starboard side. In the meantime, crew member C was struggling to reach the vessel by swimming. Crew member A brought the life buoy that was carrying hauling line from the bridge and gave it to crew member D. Crew member D connected a thick rope to the life buoy and threw it towards crew member C, after three tries crew member C caught the life buoy.

They started to pull the rope that they connected to the life buoy when the crew member C caught the life buoy. Meanwhile, the master took the engine condition to idle speed<sup>5</sup> and the vessel started yawing with the effect of waves. Crew member C firstly was pulled to aft

<sup>5</sup> Idle speed: The minimum setting of the engine that gives no rotation to the propeller



and afterwards to starboard aft of the vessel but they could not pull the crew member C on board with the effect of waves and continuous yawing of the vessel. The master continuously ran the engines astern and tried to prevent the vessel move away from the crew member C. Lastly crew member A and crew member D pulled crew member C to starboard side and tried to rescue crew member C by lowering the rubber fender but crew member C was separated from the life buoy because he lost his power and lost from the sight. Crew member A went on the bridge for the look-out and search for crew member C and informed the master regarding the situation. Crew member C was last seen approximately behind 10-15 meters of the vessel in the sea as facedown and in the condition as left himself. Taking into account of the possibility of the crew member C catching, additionally two life buoys and one life jacket were also thrown to the sea.

After the crew member C lost from the sight, the master started to search for crew member C by unlash the fish nets. Fishing vessel OSMAN SERTER 1, which was close to BURHAN KAPTAN 1, also approached to the incident scene and joined the search and rescue operations. KIYI EMNİYETİ 3 boat and Coast Guard boat, which were trying to reach the incident scene after the broadcast made to rescue the casualty, returned back because of the weather conditions, but KURTARMA 9 tug arrived the incident scene and joined the search operations. BURHAN KAPTAN 1 and OSMAN SERTER 1 finished the search operations for that day because of the sunset and night and they returned back to Rumeli Lighthouse fishing port. KURTARMA 9 tug continued search and rescue operations until 23:00 as the weather permitted and they paused in the condition to continue next day at sunrise.

Search and rescue operations was continued by boats of Directorate General for Coastal Safety and boats and helicopter of Coast Guard Command on the following weather permitted three days but the casualty could not be reached as a result of search operations.

Approximately after one and half years later of the incident, it was detected that a male dead body was caught to a net of a fishing vessel which was routinely catching fish 4 nautical miles off the Rumeli Lighthouse on the 8<sup>th</sup> of January 2016. It was identified that the dead body was crew member C of the casualty crew member of fishing vessel BURHAN KAPTAN 1 in line with the investigation of notification directed to gendarmerie regional team and statements of witnesses.

### 1.5 Damage Condition

With the effect of generated wind and waves and as a result of rising the aft of the vessel 5 meters (**Figure 8**), windlasses normally used to pull the nets, tightened backwards and damaged the pipes behind by moving approximately 2 centimeters from its' original position. (**Figure 10**)



*Figure 8: Representation of the Rising Aft of the Vessel With the Effect of Waves*



*Figure 9: Windlass Used for Pulling the Nets*



***Figure 10: Damage on the Windlass***

Besides, with the effect of sea water rised by the tornado and the waves, journals, papers, electronical equipments and other stuff on the bridge got wet by the strong spray. Porthole glasses of master cabin towards port bow, which was located one floor below the bridge and w.c.'s which was located at the entrance of starboard deck, door hook and AIS<sup>6</sup> antenna located at the flying bridge was broken. (***Figure 11 and 12***)

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<sup>6</sup> AIS: Automatic Identification System



***Figure 11: Damage on the Window of the Skipper's Cabin***



***Figure 12: Damage on the AIS Antenna***



## 1.6 Crew and the Vessel

BURHAN KAPTAN 1 is manned with one fishing vessel master and one ordinary seaman, totalling two crew according to Minimum Safe Manning Certificate. It is stipulated on the Directive on Manning of Ships with Seafarers table 7, note 2 that; “Able seamen, who have 3 years of sea service as able seaman on the fishing vessels below 150 GRT, in the cabotage or port voyage regions, may take duty as master.” Additionally, it is stipulated on note 4 that; “restricted watchkeeping officer can take duty as master instead of fishing vessel master on the cabotage and near coastal voyages.”

The master is 45 years old and has a competency of Restricted Watchkeeping Officer and has been working as a fishing vessel master for approximately 23 years. At the same time he has been working onboard BURHAN KAPTAN 1, which he owns, with his elder brother, whom is the other shareholder of the vessel, since 2003 as a reliever master and able seaman. It was observed that he had all the certificates required according to the STCW Code<sup>7</sup> and the certificates were valid.

The other crew having the competency of able seaman of the vessel could not join the voyage on the day of the accident because of his mothers’ illness. This personnel was the skipper’s elder brother and they were working as a reliever skipper and able seaman between each other.

The other 4 workers onboard did not have any seafarer competencies but they had Aqua Products Registration Certificate given by the Ministry of Agriculture and Forestry.

BURHAN KAPTAN 1 fishing vessel was built in 2003 at Trabzon city Sürmene district. There were 2 engines onboard having a power of 400 BHP<sup>8</sup>. The vessel is 24,2 meters in length and 103 grt. The Certificate of Seaworthiness of the vessel was valid until 25<sup>th</sup> of June 2018 on the condition that yearly audits were carried out. The last Port Clearance Document was issued by the Harbour Master of Istanbul on 13<sup>th</sup> of September 2014 and was given 60 days of validity.

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<sup>7</sup> Code on Standards of Training, Certification and Watchkeeping for Seafarers

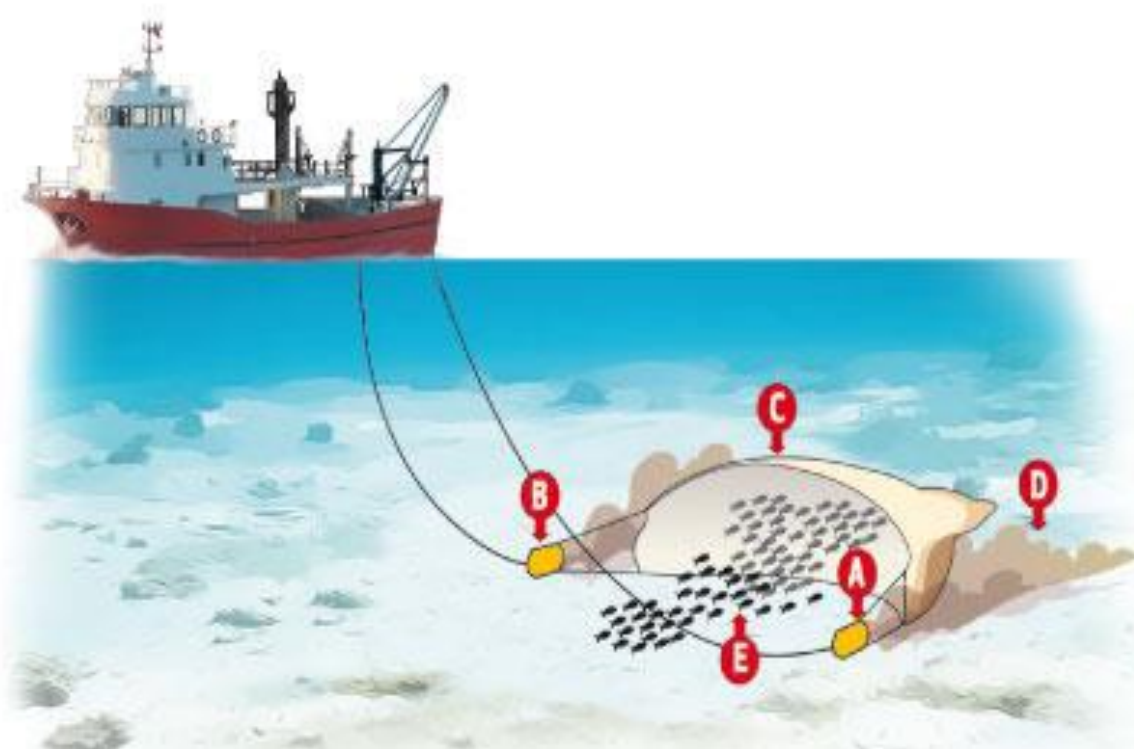
<sup>8</sup> BHP: Brake Horse Power

## 1.7 Trawl Fishing

Trawl nets are the hunting equipments used for hunting various fishes, mollusc and shelled sea organisms that live on the seabed or close to seabed. So many types of trawl nets were developed by understanding its' importance in fishing over time. These can include small models that can be towed by small vessels as well as there may be some types of reaching a spread of 30-40 meters and can be towed by vessels having a power of 500-3000 BHP.

The amount of catch in trawling is proportional with the size of the net. Heavy and modern trawl nets are used for an economical catch. A very good planning for the trawling is needed for searching and finding the catch and as well as for an efficient operation.

We can classify the trawls used at the times accident happened in two groups such as “with a door” (towed with one vessel) and “without a door” (towed with two vessels). Trawl equipments are comprised of six parts such as; windlass and masts, trawl wire, doors, rope and net.



**Figure 13:** Fishing vessel pulling trawl

**Trawl windlass;** is used while throwing and recovering the trawl net. It receives power from the main or auxiliary engine and comprises of wire drums, lockers, brake and command systems. Trawl wire is rolled on two wire drums. Lockers are two by number and are used in collecting the mooring line. Starting and stopping the windlass is achieved by transferring the power taken from the motor via belt and pulley system or hydrolic pump by means of brake and command systems to the wire drum or lockers. Besides, net drums and more functional trawl windlasses are also used at modern trawlers. This type of windlasses are mostly run by hydrolic power, thus they can be easily controlled. Hauling and coiling the trawl wire to the drums can be carried out more practically and properly.

**Trawler's mast outfit;** is comprised of two davits connected to the main jib mast and a boom. In modern trawlers a ramp exists that facilitates hauling of the net to the deck at the stern and over it, there are hanging davits that connect two sides as a bridge to each other.

**Doors;** provide the horizontal spread of the trawl nets that are towed with one vessel. It is placed between the trawl wire and the mooring line. Different doors are used for different trawl types. Widespread door types are; classical rectangular, oval and V type doors.

**Ropes,** which provide the connection between the door and the net within the trawl equipment, constitute the rope outfitting. Mooring line connects the net and the doors. longer mooring lines are used in deeper waters, while shorter mooring lines are used in shallow waters.

**Trawl nets** are comprised of wing, shoulder, tunnel (pipe) and pocket sections. Wing or arm nets direct the aqua products to be hunted to the net. Shoulder nets are placed between the wing nets and the tunnel. Shoulder section behind the lead neck is named as lower shoulder or midsection, while the section behind the mushroom neck is called as upper shoulder. The section, where shoulder and pocket are connected and provides directing of the fishes inside the net to the pocket is called tunnel. Part, where the tunnel connects to shoulder nets is wide and where it connects to pocket is narrower and that is why this section looks like a cone. Gap of the net eye is narrower than the shoulder and wider than the pocket. In classical nets shoulder, tunnel and pocket sections are at the same spread. Pocket is the section where the hunted fishes are accumulated and it has the smallest spread.

BURHAN KAPTAN 1 is a fishing vessel dealing with doored trawl fishing. On the day of the accident they shot their nets for the fourth time and moved for recovering the nets to the deck. 20-30 fathoms length of wire could be taken to the deck while the storm was approaching. When the storm stroke the vessel, there was approximately 150-175 fathoms length of wire in the sea.

## SECTION 2 - ANALYSIS

### 2.1 Life-saving Appliances

It is stipulated under the Responsibility of the Employer heading inside the By-law on Health and Safety Precautions of the Works Carried Out on Fishing Vessels which was promulgated by the Ministry of Work and Social Security that;

*Article 8 – (1) Without prejudice of the responsibility of the master, shipowners ensure that the measures below are taken in order to safeguard the health and safety of the workers:*

*c) Sufficient number of and appropriate emergency and life-saving equipment shall be ready for use onboard the vessel.*

*ç) Necessary measures shall be taken with regard to life-saving and survival equipments.*

*d) Without prejudice of the provisions of the By-law on Usage of Personal Protective Equipments in the Work Place which was promulgated on the Official Gazzette dated 2<sup>nd</sup> of July 2013 and numbered 28695, personal protective equipment would be in compliance with the properties stated in this By-law.*

It is stipulated under the Minimum Requirements with regard to Life-saving and Survival Equipments, which was published inside the By-law that;

*Obligations are applied in all conditions taking into account the properties of the ship, works carried out, working conditions or any risk present.*

*1. Taking into account the number of crew onboard and voyage region of the ship, necessary equipment and emergency GMDSS walkie-talkie, especially EPIRB and sufficient number of life-saving and survival equipment is kept onboard in order to rescue the crew from the sea.*

*2. Life-saving and survival equipment and all of its' parts are always kept on their original positions as in operation and ready to use. This parts are checked prior to leaving the port and also during the voyage by the crew.*

It is stipulated under Minimum Safety and Health Requirements with regard to Personal Protective Equipment heading that;

*Obligations are applied in all conditions taking into account the properties of the ship, works carried out, working conditions or any risk present.*

*1. Personal protective equipment shall be provided to the workers when risks towards health and safety of the workers can not be prevented fully or by technical protective methods or can not be decreased sufficiently.*

*2. Personal protective equipment which is in apparel form or worn over apparel shall be in the form which will create a contrast with the sea medium and in bright colours which can be seen clearly.*

and with the provisions above, criteria to comply with for the crew to work onboard fishing vessels are laid down with regard to health and safety precautions.

In addition to the mentioned by-law, according to the Annex-6 Audit List for Fishing Vessels within the Technical By-law for Ships which was issued by the Ministry of Transport and Infrastructure, it was observed that the ship was equipped with sufficient number of life-saving appliances.

Due to the fact that man over board incidents generally happens at unexpected times and conditions, equipping of the mentioned ship with sufficient number of life-saving equipment fell short of rescuing the over board casualty, because the crew onboard fishing vessels use the mentioned equipment after an accident in order to be protected from the effects of the accident. On the other hand time is needed in order to use this equipment. As a matter of fact, the mentioned accident developed rapidly and the casualty fell overboard without having the opportunity to use the life-saving equipments.

With regard to the subject, according to a research carried out by the University of Portsmouth (UK), the advantages of a personal flotation device which to be worn by a crew to fall overboard accidentally while working, was laid down as follows;

- Keeps clear the airway and the face from the water,
- Provides additional insulation in case of exposure to cold and decreases the submersion period of the face,
- Decreases the workload of the hearth resulted from the over effort of the person,

- Provides the time needed in order for the person to be rescued from the water and application of effective rescuing methods.

It is assessed that a possible personal flotation device worn by the crew at the time of accident could likely protect him from the cold water shock and prevent him from swallowing water while breathing. At the same time this type of equipment keeps the person floating and prevents from making unnecessary effort.

Within the framework of issues mentioned above, it is apparent that the risk of falling overboard is high on fishing vessel crew depending on the works carried out. In this context, it is considered that wearing a personal flotation device which does not hinder the motion capability especially by the deck crew onboard fishing vessels, would lengthen the survival period in the possible man over board incidents, thereby increase the possibility of rescuing the person alive.

## **2.2. Training**

The provisions with regard to training of crew working onboard fishing vessels are defined in Occupational Health and Safety Law (Law no: 6331), Law on Aqua Products (Law no: 1380) and By-law on Works Carried Out Onboard Fishing Vessels with regard to Health and Safety Precautions.

It is stipulated under the Training of Workers heading within the Law of Occupational Health and Safety (Law no: 6331) that;

*Article 17 – (3) Workers failing to present documents to prove that they have received vocational training on their job shall not be employed in jobs classified as hazardous and very hazardous which require vocational training.*

And under Education and Training heading of Law on Aqua Products (No. 1380);

*Article 16 – The Ministry of Agriculture, Forest and Rural Affairs may open paid or free courses and vocational schools within the authority of experts and in cooperation with other ministries with the aim of increasing vocational knowledge and experience of people dealing with production of aqua products, and takes necessary measures for the propaganda, education and training.*

Classification of workplace dangers list is defined with the Decree on Danger Classification with regard to Occupational Health and Safety. Fishing occupation is classified as dangerous within the mentioned decree.

On the other hand, the issues with regard to the training required to be taken by the fishing vessel crew is defined with By-law on the Works Carried Out Onboard Fishing Vessels with regard to Health and Safety Precautions.

Under the Training of Workers heading of the mentioned by-law,

*Article 10 – (1) Without prejudice of the provisions of the article 17 (Law no. 6331), workers are provided with appropriate training with regard to health and safety onboard, especially in the subject of prevention of accidents.*

*(2) Information given and instructions prepared in this training shall be clear, easy and understandable without creating any uncertainty.*

*(3) Training covers especially fire fighting, using of life-saving appliances, using of fish hunting and recovery equipment and issues of using various signals including hand signals.*

*(4) While operations onboard, in case of any revision, training that will be given to the crew is updated.*

As understood from the above mentioned law, by-law and decree, fishing occupation was regarded amongst dangerous occupation groups and it is required that crew that will carry out this type work must be trained in their subjects.

Within this context, it is seen that there are two types of crew onboard when taking into account the people working onboard fishing vessel BURHAN KAPTAN 1. 2 people, who had the competency as master and ordinary seaman was type 1 and 4 people, who were working with the Aqua Products Registration Certificate onboard were consisting type 2.

Competencies and the training required for the master and ordinary seaman, who were mentioned as type one crew onboard fishing vessels, was stated as follows inside By-law for Seafarers.



### **Requirements for Fishing Vessel Class Seafarers**

*Article 12 – (Revised: Official Gazette 23/8/2012-28390)*

*Requirements with regard to age, education&training, sea experience and other issues for fishing vessel seafarers are shown as follows.*

**a) Skipper (fishing vessel master);** *persons applying for becoming a skipper,*

*1) To be over eighteen years old,*

*2) To ensure one of the provisions below;*

*- To have seventy two months of sea service as a fishing vessel deck crew,*

*- To have thirty six months of sea service as an able seaman,*

*- To have one year of sea service as a boatswain,*

*- To be a graduate from either maritime anatolian vocational school, maritime vocational school, multi-program high school's maritime field's skipper branch or graduate of aqua products production branch and graduate of vocational colleges which provide fishing vessel master (skipper) curriculum, graduate of aqua products, aqua products engineering, fishing technology or fishing technology engineering branch of colleges or faculties. and **had the training and received the certificates of safety at sea which is mentioned in article 19 of this by-law.***

*to comply with one of the provisions above,*

*3) To qualify the skipper exam, which was stipulated by the Administration,*

*persons complying with the provisions above get the right to receive skipper competency.*

**c) Fishing vessel deck hand:** *Persons applying for becoming a fishing vessel deck hand,*

*1) To receive “**safety at sea training for the fishing vessel crew**” context and duration of which was determined by the Training and Exam Directive and from educational institutions approved by the Administration and additionally to qualify the “fishing vessel deck hand exam”,*

*persons complying with the provision above, get the right to receive “fishing vessel deck hand” competency.*

*2) Seafarers having the fishing vessel deck hand competency are exempt from safety at sea trainings and certificates which were mentioned in article 19 of this by-law. On the*

*other hand, fishing vessel deck hands, who will work onboard fishing vessels making international voyages, are required to receive this trainings and certificates.*

*3) Seafarers having a competency certificate of deck boy or above amongst deck class seafarers, are issued Fishing Vessel Deck Hand competency certificate without exam and in case of their request and prior competency certificate of him is cancelled.*

### ***Safety at Sea Trainings and Certificates***

***Article 19-*** (Revised: Official Journal-23/8/2012-28390)

*In accordance with VI/1 and VI/2 Articles of the STCW Convention and provisions of sections A-VI/1 and A-VI/2 of the STCW Code, all seafarers shall receive the trainings as follows:*

- a) Personal life-saving techniques at sea training,*
- b) Elementary first aid training,*
- c) Fire prevention and fire fighting training,*
- d) Personal safety and social responsibilities training,*
- e) Competency of using life-saving appliances training.*

*The Administration shall give the certificates below, to the seafarers, who receive the training from an educational institution approved by the Administration or document that they received successfully safety at sea training, context and duration of which was determined by the Training and Exam Directive during their education-training:*

*Certificate of personal life-saving techniques at sea,*  
*Certificate of elementary first aid,*  
*Certificate of fire prevention and fire fighting,*  
*Certificate of personal safety and social responsibilities,*  
*Certificate of competency in using life-saving appliances.*

4 people, including the casualty crew and mentioned as type 2 crew onboard fishing vessels, had the Aqua Products Registration Certificate (**Figure 14**). The provisions required for the Aqua Products Registration Certificate is explained in article 5 of the By-law on Aqua Products.

*Article 5- (Revised paragraph one: Official Journal (OJ)-18/10/2001-24557) Natural persons applying for receiving registration certificate are required to; be a Turkish citizen, be over 18 years old and (revised phrase: OJ-3/4/2012-28253) to present declaration including their Turkish Republic identity number, and in case of diver and scuba divers; additionally to present their certificates received from authorized institutions having a permission of issuing diver and scuba diver certificate.*

**T.C. GIDA, TARIM VE HAYVANCILIK BAKANLIĞI**  
**GERÇEK KİŞİLER İÇİN**  
**SU ÜRÜNLERİ RUHSAT TEZKERESİ**

Adı Soyadı: \_\_\_\_\_

TC Kimlik No: \_\_\_\_\_

Doğum Yeri: \_\_\_\_\_

Doğum Tarihi: \_\_\_\_\_

Dalış Belgesi: \_\_\_\_\_

Ruhsat Tipi: \_\_\_\_\_

Son Geçerlilik Tarihi: \_\_\_\_\_

İLETİŞİM ADRESİ: \_\_\_\_\_

Verildiği Yer: \_\_\_\_\_ Verildiği Tarih: \_\_\_\_\_

ONAYLAYAN: \_\_\_\_\_

Bu ruhsat tezkeresi 1380 sayılı Su Ürünleri Kanunu ile buna atf Yönetmelik hükümleri gereğince verilmektedir. Vize ettirilerek süresi uzatılabilir. Belgede yer alan bilgilerde değişiklik olduğunda yenilenmesi zorunludur.

**Figure 14: Aqua Products Registration Certificate**

Validity period for the Aqua Products Registration Certificate, issued for natural persons, is 5 years as mentioned in article 4 of the By-law on Aqua Products. This period is extended for 5 years upon the application of the related persons, if the applicant is partner, from the aqua products cooperative or association, where he/she is partner of; if the applicant is not a partner, from the nearest aqua products cooperative or association; in case there is no aqua products cooperative or association within the provincial border, on the condition that they present aqua products production certificate from provincial or

district directorate, endorsed by the issuing governorship. Registration certificates, which are not endorsed within three years after expiration date, are cancelled.

As it is understood, there is no any education requirement in order to receive the mentioned registration certificate within the context of article of the said by-law, any person who is a Turkish citizen and over 18 years old can receive this registration certificate.

When the crew working onboard BURHAN KAPTAN 1 are assessed within this framework, workers having a seafarer competency and regarded as type 1 worker, received their skipper or fishing vessel crew competencies through exam after having the trainings, defined within the context of law and by-laws. However, it is seen that, persons working with Aqua Products Registration Certificate and regarded as type 2 worker, did not receive the trainings stipulated in article 17 of the Occupational Health and Safety Law (Law no. 6331) and in article 10 of the By-law on Health and Safety Precautions on the Works Carried Out Onboard Fishing Vessels.

On the other hand, current legislation do not hinder persons to be onboard and work onboard fishing vessels even if they do not receive training either on maritime or on fishery occupation. For this reason, persons not receiving the subject training can work onboard fishing vessels and these people become vulnerable to occupational dangers in our country.

In this regard, it is assessed that there is a need for regulation with regard to minimum mandatory training and certification of persons who are working as other than seafarers onboard fishing vessels about safety at sea and elementary seamanship.

### **2.3. Status of Workers other than Seafarers Onboard Fishing Vessels**

Minimum number of seafarers needed onboard fishing vessels and minimum competencies required by the seafarers are regulated in By-law on Seafarers and Directive on Manning of Ships with Seafarers. It is stipulated under the definitions heading of the mentioned by-law that;

*Article 4- The definitions of this by-law are as follows;*

*21) Fishing Vessel: Commercial ship used solely in aqua products hunting or storage or processing, properties of which is in compliance with this purpose and mentioned as fishing vessel in its ' tonnage certificate,*

*32) Seafarer: Master of the ship, its' officers, assistant officers, cadets, ratings and assistant service personnel,*

*51) Rating: Seafarers other than master, ships' officers, assistant officers and cadets of the ship working at deck, engine and cabin departments,*

*53) Others carried: Represents persons onboard other than seafarers and passengers, who are given a voyage document by the Harbour Master for their prospective voyage and can be spouse or children onboard of shipowner, ship manager, the master and seafarers, representative and officers of shipowner or employer, shepherds of the animals carried, authorized, responsible or technical service persons of onboard for all kinds of machinery, deck equipment for the control, test, maintenance and repair, guides of ships having a tourism management certificate, scientists and similar personnel working on scientific ships, purser, assistant purser and cabin officer, additionally the persons taken onboard by the master for the purpose of life-saving, safety and profesional underwater works.*

*64) Fishing vessel deck crew: Fishing vessel class seafarers working on deck department onboard fishing vessels.*

As can be understood from the provisions of the related by-law, it is seen that persons work or carried onboard ships are clearly defined. However it is known that persons having Aqua Products Certificate are also working onboard vessels carrying out commercial fishing as in the case of BURHAN KAPTAN 1. As a matter of fact, BURHAN KAPTAN 1 was manned with 2 seafarers according to port clearance document, issued by Harbour Master of Istanbul on 13<sup>th</sup> of September 2014. On the other hand, it is understood that one of the two crew seen on the port exit document of BURHAN KAPTAN 1 did not go to voyage and four persons including the casualty, having Aqua Products Certificate, endorsed by the Ministry of Agriculture and Forestry attended the voyage on 23<sup>rd</sup> of September 2014. This situation

shows that persons, duties and presence of whom are not defined onboard commercial fishing vessels, are also working onboard fishing vessels.

It is important that persons working via Aqua Products Certificate onboard fishing vessels are defined in By-law on Seafarers and regulated the competencies for working these persons onboard fishing vessels.

#### **2.4 Manning of Fishing Vessels with Seafarers**

Minimum number of seafarers required onboard fishing vessels and minimum competencies for seafarers are regulated with Directive on Manning of Ships with Seafarers. It was seen that according to table 7 of the mentioned Directive, BURHAN KAPTAN 1, which was making near coastal voyage, required to be manned with minimum two seafarers having competencies of one skipper and one ordinary seaman.

On 23<sup>rd</sup> of September 2014, fishing vessel BURHAN KAPTAN 1 set sail with only one seafarer having a competency of skipper, other seafarer having a competency of ordinary seaman could not join the voyage because of his mothers' illness. It is understood that the ship made its' voyage with insufficient number of seafarers according to the provisions of the Directive.

#### **2.5 Responsibility of the Shipowner and the Master**

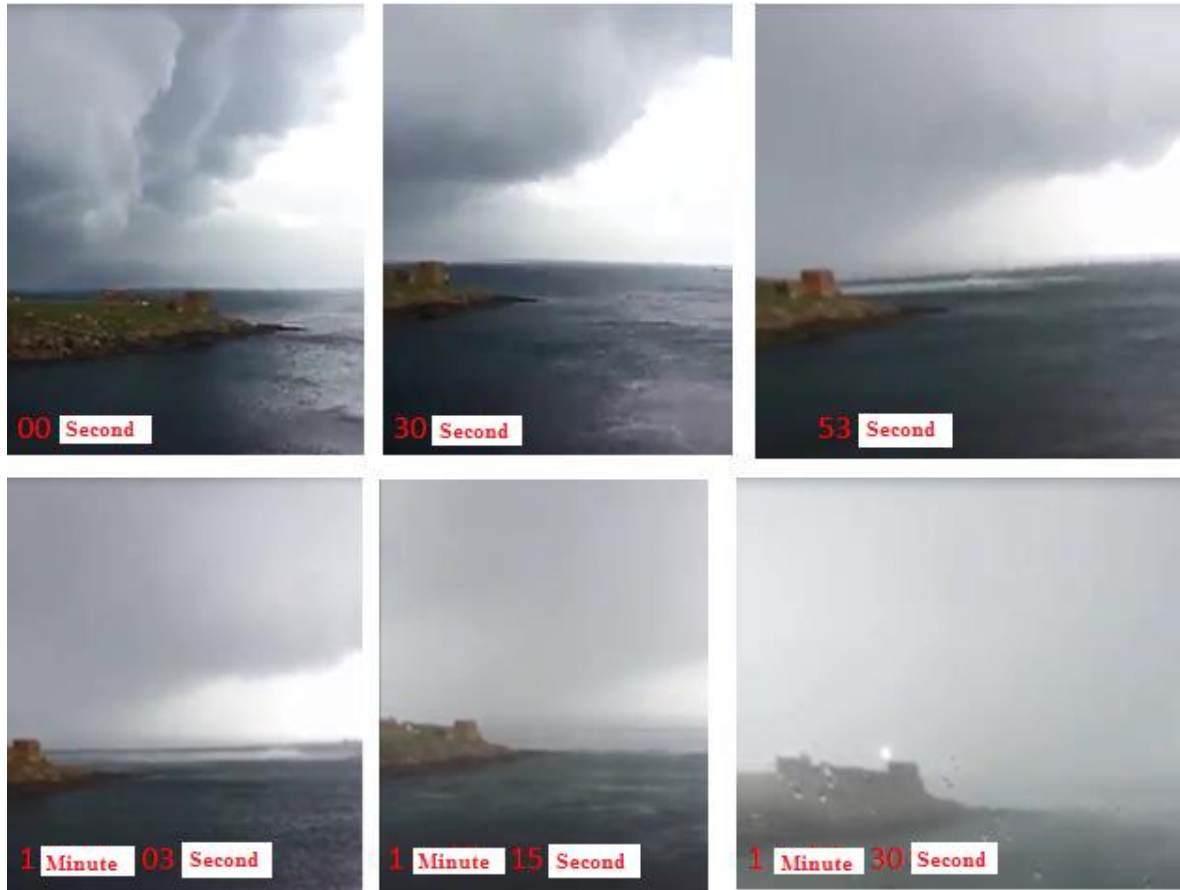
It is stipulated under the general requirements heading of the employer's responsibility section of the By-law on Health and Safety Precautions During Works Carried Out Onboard Fishing Vessels that;

Article 5 – (1) Shipowners are required to take the following measures:

a) Notwithstanding the masters' responsibility, master shall provide safe navigation of the ship especially without putting the crew's health and safety at risk during foreseeable meteorological conditions.

On the day of the incident, storm warning was broadcasted by the Turkish Radio. Following the Turkish Radio's storm warning, Coast Guard Command boat also broadcasted the fishing vessels for the possible storm and warned them not to go to sea the fishing vessels of below 15 meters of length. Thereupon the skipper received the sea and weather report by calling his fisher friends, who he taught that they were closer to the mentioned storm. He decided to collect the nets by assessing the situation on the basis of datas at hand and his experience and also warning his crew regarding the condition. However the storm had appeared before he expected and affected the ship.

It is seen from the video footage (**Figure 15**) that were taken from Rumeli Lighthouse that sea and weather conditions changed in seconds.



**Figure 15:** Snapshot taken from a place close to Rumeli Lighthouse

At this condition BURHAN KAPTAN 1 could not have the opportunity to collect its' nets and trapped in the middle of the storm. Taking into account the above provisions and at the

same time the fact that the skipper was one of the shipowners, it is understood from the skippers' statement that he warned his crew regarding the sea and weather conditions. It is considered that in addition to informing his crew regarding the weather conditions, he could have informed them with regard to the precautions that they could take in the event of possible dangerous situations.

## **2.6 Search and Rescue**

Rescue efforts was started by the crew as soon as the casualty got overboard. Meanwhile, the master informed the fishing vessels around the man over board situation with the VHF and requested their help and calling for the Coast Guard Command and Coastal Safety rescue vehicles. Rescue efforts carried out by BURHAN KAPTAN 1 crew did not result successfully and the casualty lost in the sea.

Afterwards fishing vessels close to BURHAN KAPTAN 1 and Coast Guard Command and Coastal Safety Rescue boats arrived the man over board position and started search and rescue operations. Weather permitted search operations continued on the day of the accident and the following three days with Directorate General for Coastal Safety boat, Coast Guard Command boat and the helicopter but missing casualty could not be reached as a result of the search operations. Dead body of the missing casualty was found by another fisherman on 8<sup>th</sup> of January 2016.

Search and rescue operations mentioned above, were carried out for a casualty, the identity and number of whom was known. On the other hand, if the accident had resulted in foundering or capsizing of the fishing vessel, it would be likely that the consequences would be more tragic. Although the number of persons mentioned in the port clearance document of fishing vessel BURHAN KAPTAN 1 was 2, they proceeded to voyage with 5 persons. Among these persons only the skipper was the crew of the fishing vessel, and there was no record for other persons to officially join the voyage. If this accident had resulted in missing of all persons, it is obvious that there would be an information pollution on how many people would be searched within the possible search and rescue operations. It is assessed that this condition would hinder starting of an effective search and rescue operation, additionally it would affect the success of a possible search and rescue operation.



During the investigation of the accident, it was observed that there was no legislative arrangement with regard to official declaration or recording of the persons other than the seafarers listed in the port clearance document onboard fishing vessels and the fact that these persons also joining the voyage.

On the other hand, it is crucial that the number of life-saving appliances and equipments are the same as number of crew onboard fishing vessels with regard to casualties to survive and to be rescued in the possible accidents. It was observed on the current accident that, the number of life-saving appliances and equipments were the same as the number of crew onboard BURHAN KAPTAN 1. As there is no record for the number of persons joining the voyage other than the crew listed on the port clearance document of the fishing vessels, it is not possible to check whether the life-saving appliances and equipments will be enough for the current number of crew.

Within the framework of issues mentioned above, it is considered as important to establish a reporting system with regard to registration of persons other than the seafarers before the voyage onboard commercial fishing vessels.

### **SECTION 3 - CONCLUSIONS**

1. It is understood that the casualty fell overboard because of the loss of stability of the vessel resulting from the meteorological conditions.
2. There was no personal flotation device on the overboard casualty. This situation caused the casualty to overexert in order to survive, hindered the time needed to be rescued from the sea and prevented the application of effective rescue methods.
3. It was understood that persons, other than seafarers, working onboard BURHAN KAPTAN 1 did not receive any elementary seamanship training and safety at sea training.
4. It was understood that persons that joined voyage onboard BURHAN KAPTAN 1, did not receive training and certified with regard to the fishing occupation, which was regarded as dangerous occupation class.
5. It was identified that BURHAN KAPTAN 1 did not navigate with the minimum number of seafarers mentioned in the Directive on Manning of Ships with Seafarers.
6. It was observed that 4 persons, who joined the voyage onboard BURHAN KAPTAN 1 other than the skipper, did not have any seafarer competency other than Aqua Products Certificate.
7. Inside the By-law for Seafarers, there is no definition for persons working with the Aqua Products Certificate onboard fishing vessels such as BURHAN KAPTAN 1.
8. It was seen that there was no official declaration for joining the voyage with regard to 4 persons other than seafarers listed on the port clearance document issued for BURHAN KAPTAN 1.

## **SECTION 4 – RECOMMENDATIONS**

### **4.1 Ministry of Family, Labour and Social Services is recommended to:**

**4.1.1** Effectively inspect persons working onboard fishing vessels with regard to receiving occupational health and safety training and certified in that subject as mentioned in article 17 of the Occupational Health and Safety Law (Law no. 6331) and article 10 of the By-law on Health and Safety Precautions During Works Carried Out Onboard Fishing Vessels,

**4.1.2** Effectively inspect whether the employer applies using of the warning placard explaining the importance of wearing personal flotation device in order to increase the safety of crew working on deck during bad weather conditions onboard fishing vessels.

### **4.2 Ministry of Agriculture and Forestry is recommended to:**

**4.2.1** Cooperate with related institutions with regard to providing the occupational training and certification of persons working with Aqua Products Registration Certificate other than seafarers onboard fishing vessels as stated in article 16 of the Aqua Products Law (Law no. 1380),

**4.2.2** Make legislative arrangement within the Aqua Products By-law with regard to receiving training and certification on the occupational training, health and safety subjects of the real persons that will receive Aqua Products Registration Certificate.

### **4.3 Directorate General for Sea and Inland Waters Regulation is recommended to:**

**4.3.1** Make a definition of persons, working other than seafarers onboard fishing vessels in the By-law for Seafarers and Directive on Manning of Ships with Seafarers,

**4.3.2** Make a legislative arrangement with regard to registration of persons joining the voyage other than crew listed on port clearance document onboard fishing vessels,

**4.4 The Association of Aqua Products Cooperatives Center is recommended to:**

**4.4.1** Ensure that persons commanding the fishing vessels, assesses the surrounding meteorologic conditions and weather forecast reports in compliance with occupational ethical standards and take precautions for life security of crew working onboard against possible dangers.

**4.4.2** Ensure that fishing vessels proceed their navigation in compliance with port clearance document issued by Harbour Masters.