Search and Rescue Operations of Immigrants at Sea: Challenges for the Crew of Merchant Ships

Abstract

The crisis that has arisen due to significant waves of immigrants leaving African and Asian countries towards Europe during the last decade has had a great impact on maritime sector. The usual immigrant routes include the sea passages in the Mediterranean Sea using unsafe and often overcrowded vessels during which human lives are at high risk. Very often different merchant ships are engaged in rescue operations of immigrants in danger. New regulations and measures helping to tackle with challenges posed to seafarers and coastal states are actively being developed and improved. However, these situations pose a great challenge for the crew of merchant ships and cause many problems regarding their own safety and security. This paper presents the legal framework in force and guidelines for seafarers on the issue, it presents the responsibilities of the crew engaged in rescue operations and most frequent dangers that masters and crew have to overcome. Furthermore, a set of recommendations to improve the procedures in the rescue of immigrants have been provided.

Key words: Immigrants, Mediterranean Sea, Safety, Security, Search and Rescue

1. Introduction

Population migrations have been a consequence and a way of adaptation to ever changing situation in the world, mostly due to political, economic and environmental causes. Even though migrations are taking place continuously, few major cases of migrations from one part of the planet to the other are recorded in history. Above all, these were, the Great Migration period, during the decline of the Roman Empire, the migrations from Europe to the New World continents in the period from 15th to 20th
century and during the World War I and II [1, 4]. During the past 10 years, a combination of war confrontations, political, economic and social instabilities in some countries in the Middle East and Africa, have caused one of the biggest waves of migrations in the 21st century, towards Europe. A significant part of these migrations has been conducted over the Mediterranean Sea through several sea routes. Due to different factors, including inadequate vessels, nearly always over capacitated, incompetent crews (if any at all) and adverse weather conditions, the frequency of maritime accidents has significantly increased [1] with people getting lost overboard, being drowned or dying due to hypothermia, lack of water, food and hygiene.

Apart from maritime accidents, the development of criminal activities has been taking place, such as smuggling, transfer of criminals and terrorists and even slavery. The world community, led by the European Union (EU) Member States and Turkey, as the major refugee shelter countries, have provided a series of measures to suppress the negative consequences of the migrations and increase the efficiency of life saving during the process. These measures include all the ships navigating in the Mediterranean Sea. While the Navy, Coastguard and Search and Rescue (SAR) specialized vessels are constantly present on the most frequent migration routes, often leading the SAR operations, merchant ships have a very important role as well. In cases where merchant ships are engaged in such rescue operations, the masters and crew members are exposed to a number of safety, health and security related specific threats, often with very limited experience, knowledge and resources for these situations [1, 19, and 29].

In this paper the migration wave in the Mediterranean region is analysed. Responsibilities are presented of ship masters in the international trade as well as the usual procedures conducted in rescue operations. Moreover, there are the most frequent yet specific challenges and dangers identified in the paper that are experienced by the crew in such situations, along with the set of recommendations which could be taken into account during planning and conducting rescue operations. It is important to emphasize that the causes which had triggered the migrations within the Mediterranean Sea and migrations across some other seas in other regions of the world are not discussed here.

2. Migration routes across the Mediterranean Sea

During the past ten years several major migration routes have been formed towards Europe. The most frequent migration seasons are spring and summer due to favourable weather conditions. During autumn and winter with frequent weather instabilities and low temperatures migrants have very low chances of survival in case of an accident.

The major migration regions can be divided geographically in Western, Central and Eastern ones (Figure 1) [1]. Most migrations take place in the Eastern region by land, through Turkey and Greece towards Europe, while another large portion has its departure points in African (Egypt and Lybia) and Middle East (Lebanon and
Syria) countries using sea routes to reach Turkey, Greece or Cyprus. The routes in the Central region cover Egypt, Libya and Tunisia as departure points, using Italian islands (Lampedusa and Pantelleria) as waypoints, and having Malta, France and Italy as destinations. Because of the shortest distance between Africa and Europe, this route is the most frequent sea route used by immigrants. The Western region is the least frequent one, and covers the routes from Algeria and Morocco, toward Spain and France. [2, 5, 28].

One of the first remedial actions to the migratory crisis was provided by Italy, starting the *Mare Nostrum* naval operation [22]. During the period of 12 months, between 2013 and 2014, the Italian Navy and Coastguard, with the help of merchant ships, saved approximately 140,000 lives at the expense of around 9 million Euro / month. The European Border and Coastguard agency Frontex then started a series of operations in which, voluntarily and in accordance with their capabilities, any EU country can take part. These security operations intended for protecting state borders include monitoring of the EU and Schengen borders, as well as conducting, leading and taking active part in SAR operations using military and coastguard naval and airborne facilities and crafts provided by EU countries and NATO. Most notable of these operations are *Poseidon* in the Eastern region, *Hermes* and *Triton* in the Central region, and *Indalo* and *Minerva* in the Western region [2]. Since 01st February 2018, operation *Triton* has been replaced by the *Themis* [25].

Apart from the above, the EUNAVFOR’s operation *Sophia* has the goal to prevent people trafficking and smuggling, together with other criminal activities. It should be emphasized that there are a number of other operations and activities carried out in cooperation with Europol, Eurojust and Frontex in crime prevention including a constant presence of NATO warships to increase security in the Mediterranean Sea [2].

The Mediterranean migration crisis reached its peak in 2015, when more than 1 million immigrants reached Europe using different sea routes (Table 1).

The Western and Central routes have been used by immigrants coming from different African states. With the growing rate of migrations the Central route has
become more frequently used because of the shortest distance between Africa and Europe (mainly Italian islands and Malta). Since 2014, there have been between 100,000 and 200,000 immigrants transferred per year through that route. The Eastern route became the most frequent route of all in 2015 during the peak of the migrants’ crisis, having reached the number of 856,723 people arrived in Greece only by sea. The reasons were mainly the political crisis and civil war in Syria, as well as economical situations in some other Middle East countries.

Table 1 - Overseas migration to Europe from 2009 until presently

<table>
<thead>
<tr>
<th>Year</th>
<th>Western route (Spain)</th>
<th>Central route (Italy)</th>
<th>Eastern route (Greece)</th>
<th>Total persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>10.242</td>
<td>11.043</td>
<td>39.975</td>
<td>51,018</td>
</tr>
<tr>
<td>2010</td>
<td>6.245</td>
<td>4.450</td>
<td>55.688</td>
<td>66,383</td>
</tr>
<tr>
<td>2011</td>
<td>9.800</td>
<td>64.300</td>
<td>57.000</td>
<td>131,100</td>
</tr>
<tr>
<td>2012</td>
<td>8.200</td>
<td>15.200</td>
<td>37.200</td>
<td>60,600</td>
</tr>
<tr>
<td>2013</td>
<td>8.600</td>
<td>45.300</td>
<td>24.800</td>
<td>78,700</td>
</tr>
<tr>
<td>2014</td>
<td>9.300</td>
<td>170.700</td>
<td>50.800</td>
<td>230,800</td>
</tr>
<tr>
<td>2015</td>
<td>10.000</td>
<td>153.842</td>
<td>856.723</td>
<td>1,049,400</td>
</tr>
<tr>
<td>2016</td>
<td>10.658</td>
<td>181.126</td>
<td>182.534</td>
<td>374,318</td>
</tr>
<tr>
<td>2017</td>
<td>22.103</td>
<td>119.369</td>
<td>29.718</td>
<td>171,190</td>
</tr>
<tr>
<td>2018 (until March 31st)</td>
<td>3.385</td>
<td>6.295</td>
<td>5.318</td>
<td>14,998</td>
</tr>
<tr>
<td>Total</td>
<td>88.291</td>
<td>771.783</td>
<td>1.368.433</td>
<td>2,228,507</td>
</tr>
</tbody>
</table>

Source: Authors according to [2, 3, 21, 28, 29].

Table 2 - Number of deaths on overseas passage in the Mediterranean Sea

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Ratio deaths / total number of immigrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>3.538</td>
<td>1.52%</td>
</tr>
<tr>
<td>2015</td>
<td>3.771</td>
<td>0.36%</td>
</tr>
<tr>
<td>2016</td>
<td>5.096</td>
<td>1.36%</td>
</tr>
<tr>
<td>2017</td>
<td>3.139</td>
<td>1.83%</td>
</tr>
<tr>
<td>2018 (until 31st March)</td>
<td>1.063</td>
<td>7.08%</td>
</tr>
<tr>
<td>Total</td>
<td>16.607</td>
<td>0.74%</td>
</tr>
</tbody>
</table>

Source: Authors according to [3, 29].
Table 2 shows the number of lives lost at sea during passages across the Mediterranean Sea. The central route may be categorised as the deadliest one, as more than 4,000 lives were lost in 2016 only [28]. It may be concluded that, despite the existence of a rather strongly organized search and rescue system of the EU states, the actual number of deaths is very large, pointing to the fact that additional resources and efforts are needed to improve the rescue procedures and activities.

3. Role of merchant ships

The Mediterranean Sea region is one of the highest maritime traffic density areas in the world and therefore merchant ships are frequently encountering vessels in distress carrying migrants and being engaged in rescue operations by the Maritime Rescue Coordination Centres (RCC) of nearby coastal states.

![Figure 2 - Ships participating in SAR operations of immigrants in the Central Mediterranean Sea during 2014][23]

In general, it is estimated that different merchant ships are conducting rescue operations alone or in cooperation with public or navy ships in one third of all rescue operations at sea.

3.1. Legal framework

The obligation to provide help and save lives at sea in case of any accident or danger is regulated at the international level primarily by the United Nations Convention on the Law of the Sea (UNCLOS) [27], International Convention for the Safety of Life at Sea (SOLAS) [12] and International Convention on Maritime Search and Rescue (SAR) [11]. The requirements, procedures and guidelines to establish [8], organise [9]
Search and Rescue Operations of Immigrants...

and conduct [10] SAR operations are set in International Aeronautical and Maritime Search and Rescue (IAMSAR) manuals.

Following the mentioned legal framework, the master of a ship and its crew is bound to provide help to any person at sea in danger. The SOLAS (Chapter V, Regulation 33) has clearly stated that this obligation applies regardless of the nationality or status of such persons or the circumstances in which they are found. In the same Convention it is stated that the master can decide not to proceed to assistance only if the vessel in distress, or the RCC in charge of SAR operation, has chosen other ships to carry out the operation; in adverse weather condition; if the vessel is not capable of providing assistance due to her limitations and if the master’s assessment is that such an action will endanger the safety of his vessel, crew and passengers. In such circumstances the master shall record all decisions, inform the authorities in charge of the operation, as well as his company, and shall keep his vessel as close as possible to persons in distress until the suitable vessel, which will rescue the persons in distress, arrives.

Taking all the above into account and knowing that among the migrants in distress could be one or more criminals, terrorists or persons carrying severely contagious diseases, the crew engaged in rescue operations should be aware that the safety and security of the ship and crew could be challenged. The security procedures should never be above safety of any person in distress at sea, so even being aware of potential dangers the rescue should be conducted. To conduct the rescue operation in the best way, the proper procedures should be followed. Regarding the rescue operation itself, according to the International Safety Management Code (ISM) [16], the proper procedures are laid down in the Emergency procedures manual as part of the ship’s Safety Management System (SMS). The relevant procedures usually include the common Search and Rescue operations i.e. the immediate communication and tasks after receiving information (a distress call or a visual contact) and the procedures for recovery of persons from water, once the vessel reaches the persons in distress. Following the safety related procedures, the appropriate security related procedures should be prepared before the recovery commences and they should be conducted concurrently with the recovery operations. The general security measures are set in the Ship’s Security Plan (SSP) which is mandatory for the ships in international trade according to the International Ship and Port Facility Security (ISPS) Code [7]. It is important to emphasize that neither in the ISM Code, nor in the ISPS Code, and thus nor in the respective ships’ plans, there are any specific measures mentioned which should be considered in situations of rescuing and recovering a large number of people. This drawback stands out even more if such a large number of rescued persons could pose a safety, security and health risk for the crew.

Motivated by the immigrants’ crisis in the Mediterranean Sea, and with the goal to improve the SAR operations, the international community has organized a number of meetings and set helpful guidelines for the masters and crews of merchant ships. IMO Resolution 167(78) Guidelines on the treatment of persons rescued at sea [17] was adopted before the immigrant crisis in 2004, and entered into force in 2006.
The resolution provides seven point guidelines concerning the responsibilities of shipmasters and compliance with UNCLOS, SOLAS and SAR Conventions during SAR operations at sea.

The Rescue at sea - a guide to principles and practice as applied to refugees and migrants, is issued by the IMO, UNHCR\(^1\) and ICS\(^2\) [18]. This publication sums up related regulations in force, and provides a basic review of general actions which should be taken by the masters and governments during rescuing of immigrants and refugees at sea.

The Large scale rescue operations at sea by ICS [6] is one of the very few documents providing concrete guidelines to improve procedures on board a merchant ship during rescue of immigrants and refugees. The publication includes an example of a safety related checklist and safety information which should be posted in a designated area intended for rescued persons.

Furthermore, the inter-agency meeting with the maritime industry on mixed migration was held on 30\(^{th}\) October 2017 [24]. Main participants were the representatives of the IMO, ITF\(^3\), ICS, BIMCO\(^4\), IFSMA\(^5\), IOM\(^6\), UNHCR, UNODC\(^7\), OHCHR\(^8\) and EUNAVFOR\(^9\). The goal was to express the main views of each party and to establish a mechanism to enhance the existing inter-agency communication related to the migration by sea. Special attention was paid to the prevention of human smuggling and trafficking, as well as to the protection of seafarers involved in such SAR operations.

3.2. Procedures on board a merchant ship

After the analysis of related procedures from three shipping companies and authors’ personal experience in these operations in the Mediterranean Sea, the general procedure i.e. course of actions and events are presented, which are laid down in the appropriate procedures and checklists, which the crew should follow. Here, the following actions are not divided in specific checklists, since the division, details and names of checklist vary between different ships’ SMS.
Distress Call and preparation

The operation starts by receiving the information, which may be through any of the GMDSS\textsuperscript{10} equipment or by visual contact from the own ship. The ship proceeds to the position of persons in distress. The following actions include:

- informing the Company (emergency situations department, Company Security Officer - CSO, Designated Person Ashore - DPA);
- identification of the vessel in distress and estimation of number of persons in distress;
- situation risk assessment - considering weather condition, geographical restrictions and the level of security threat;
- if possible, contact the vessels nearby for using their resources (medical team, helicopter or high speed craft for transport ashore, military intervention or extra capacities for accommodation of immigrants).

Recovery operation:

- establish a designated space on board for accommodation of persons, determine the access to the designated space and restrict access to other spaces on the ship;
- determine the best way to recover the persons considering the circumstances (rescue boat, ship to ship, life raft or other);
- use the vessel to approach as close as possible the persons in distress, if possible, providing lee and establishing communication to agree the transfer method;
- begin with the recovery, providing priority to the children, women and injured;
- count the number of persons recovered and accommodate them in the designated space;
- once the recovery is completed, if the empty vessel in distress got away, the particulars should be noted (name, shape, colour, etc.) and the nearest RCC and surrounding ships notified.

Treatment of refugees

- provide medical assistance if necessary, distribute water and food (milk and juices for children if possible);
- organize the use of toilets and showers, establish a space for collecting garbage;
- start with the identification of persons to make the disembarkation process faster.

\textsuperscript{10} Global Maritime Distress and Safety System
Disembarkation:

- the Coastal state in charge of SAR operation (RCC) determines the port or anchorage safe for transfer and reception of rescued persons;
- immigration authorities and medical squads take lead during disembarkation after determining all relevant facts (identities and medical state of all persons);
- depending on the number of persons, the disembarkation is organized in groups.

4. Challenges for the crew

The efficiency of international community, despite the great efforts invested, is facing many difficulties in organising more efficient rescue operations and agreeing a network of ports to accept a large number of immigrants. The acceptance and immigrant distribution problems are tackled in cooperation between states that provide shelters with states that immigrants come from, and the states not willing to provide shelter.
Some states, like Italy as the most recent example, has been significantly affected by accepting a large number of immigrants. The largest Italian island Sicily is taking role as the “European refugee camp” [20]. Some states, such as Malta, Greece and Italy, face over capacity, not having an efficient strategy on how to manage a large number of people, having political disagreements on the issue and not having an efficient support of some other EU Countries [5].

All of these problems have great influence on ships’ masters and the seafarers participating in a large number of rescue operations and transport of immigrants. In some cases, merchant ships could be even refused to access safe ports with rescued immigrants [26]. For ships and their crews navigating frequently in the Mediterranean Sea, rescue operations may pose a significant psychological pressure, requiring additional trainings, drills and equipment for the increasing workload and stress.

The responsibilities to provide help are clearly set out in international regulations, but in real SAR operations it is very difficult for a master and the crew to assess the risk of danger for them until the danger itself becomes imminent. In general, the recognised dangers could be divided into three categories: safety, security and health related. Some of the recognised dangers requiring special attention to be paid by the crew will be presented and discussed herein.

One of the greatest safety related dangers for the crew is the recovery process. The recovery of persons from other vessels or water may be very difficult, especially in the case of a large number of people. One of the first challenges is a safe approach to the distressed vessel and possible panic behaviour of persons in danger. If the weather conditions are favourable, the transfer may be conducted using the ship to ship method i.e. berthing the vessel in distress alongside a merchant ship and using ship’s gangway. When that method is not possible than, in most cases, a rescue boat is used to approach and tow the distressed vessel or use the rescue boat to transfer persons in smaller groups. Both methods may be very challenging for the crew. In case of towing, in many cases the rescue boat is significantly smaller and lighter than a distressed vessel. Problems occur when a towing line, usually sent by the rescue boat, cannot be attached to any part of the vessel in distress or the persons in distress do not know or are not capable of making fast a towing line. In such cases it is very dangerous to approach the vessel in distress due to panic behaviour of the persons in distress who might uncontrollably transfer or jump onto the rescue boat. The second problem of towing (if the towing line is successfully made fast) is the towing process itself. In most cases the rescue boat crew is not experienced in towing, especially larger vessels, which causes serious problems in manoeuvring and approaching the ship. Unfortunately, towing is very rarely (or never) practiced during abandon ship, man-overboard or search and rescue drills on ships.

Another method to recover persons, which is seldom used, is the use of life raft. By this method the rescue boat is used to tow one or more inflated empty life rafts towards the persons in distress, allowing them to transfer into the life rafts. After embarkation, the full life rafts are towed back alongside the ship. This process may be repeated several times until all persons are recovered.
To cope with these challenges, the crew should be fully familiarised with towing procedures using rescue boat. Analysing the STCW Convention [13], in Section A-VI/2 Mandatory minimum requirements for the issue of certificates of proficiency in survival craft, rescue boats and fast rescue boat, towing with the rescue or fast rescue boat is not mentioned as a competence. In the Model Courses 1.23 (*Proficiency in survival craft and rescue boats*) [14] and 1.24 (*Proficiency in fast rescue boats*) [15] towing is recommended as 1 hour practice only. However, during onboard drills this part of training is performed nearly never.

The second one is a security related danger which requires a high level of master’s and ship security officer’s knowledge, experience and good assessment, as well as crew’s readiness. This type of danger is imminent, due to the fact that there may be concealed terrorists among immigrants, or thieves, smugglers and other criminals. In every SAR operation, the master has to be aware of these threats and prevent any criminal activity. These situations require an efficient use of the Ship Security Plan, an efficient system to count and monitor the rescued persons, and a constant contact with the nearest RCC and the Company Security Officer. Security measures often include locking all entrances in the ship’s superstructure leaving only one designated entrance, setting at least one crew member on the designated entrance, establishing a patrol of at least two crew members to search for possible threats, counting, identification and search of rescued persons. Usually the most challenging of all the mentioned measures is counting, identification and searching of rescued persons. On many occasions these measures are executed after the recovery of all persons in distress i.e. when everybody is on board. This approach makes any properly done counting difficult and especially searching because there is enough time allowing criminals to conceal dangerous items (weapons, drugs or other) somewhere on deck. The crew should be trained to inform the persons during the rescue, prior to their recovery, that any weapons or drugs are not allowed on the ship and that all of them will be searched. This announcement may be done using the public address system or megaphone. Prior to the embarkation, if it is possible, there should be established a confined “reception area” where several crew members should be prepared for the “fast reception process” where counting, identification (if possible) and at least rough personal search would be performed. Portable hand metal detectors are very useful to detect weapons and to speed up the search process. After passing the “reception area” the persons should be directed to the designated deck area. The injured persons requiring immediate medical assistance and children should be immediately directed to a designated area.

Considering all the above mentioned, appropriate security drills, including the fast reception procedures for large groups of people, should be carried out. Apart from that, a megaphone, a counter (analogue or digital) and hand metal detectors should be a standard ship’s security related equipment.

The third danger is related to health condition of crew members, both physiological and psychological. After the reception of all persons it is essential to provide first aid to injured persons, but also to establish the medical condition of all persons i.e. to identify
all those being sick. If there are any signs of contagious diseases, the eventual spread of
the disease should be prevented by appropriate quarantine of the sick and medical care
should be provided as soon as possible. The quarantine inspectors of the nearest coastal
state should be informed about the physiological state of persons and medical assistance
provided prior to or immediately upon arrival at the port of safety. During the voyage, it
is important to carefully monitor the access to all ship’s areas and to reduce the contact
between the sick and all the rest, being other rescued persons and crew members.
The greatest danger for the crew members is the first contact with persons in distress
during the recovery, identification, counting, searching, organising the designation
area, providing first aid, supplies and other. During all these tasks, if not adequately
protected, the crew members are exposed to any present pathogens among rescued
persons. The identification of sick and possible contagious persons at a later stage could
be late. Thus, all the crew involved in the recovery of and assistance to the rescued,
beside the standard personal protective equipment (helmet, goggles, overall, gloves
and safety shoes), should be provided with sufficient additional equipment to preserve
health, including filtering disposable facemasks and rubber gloves, at least. Apart from
that, there should be enough medical antimicrobial soap for personal hygiene in the
superstructure. It is important to emphasize that there is no mandatory drill either in
the STCW or in the SOLAS Convention which includes procedures appropriate for
managing multiple injuries and contagious persons, organizing quarantines and other
important issues to preserve health of crew members.

Another issue to be raised is that there is no system developed to help crew
members who might be psychologically traumatized after witnessing difficult situations
involving heavily injured persons, death or diseases in such situations.

5. Conclusion

Search and rescue at sea, in general, is a complex and dangerous operation which
requires a high level of competence of the ship’s master and crew members providing
help. Operations of rescuing immigrants or refugees are rather specific and therefore
quite demanding for merchant ship masters. Those rescue operations are demanding
because nearly always it is a matter of a large number of people (sometimes counting
hundreds), situated on an inadequate and unsafe vessels, many of them being in poor
health condition, sick or injured, with women and children present. Dangers related
to safety, security and health of the crew must be recognized and dealt with prior to
engaging in the rescue operations. A proper preparation of all crew members before
reaching for the persons in distress is of paramount importance. Very often, once the
recovery of a large number of people commences there is little or no time to adequately
and timely organize the whole rescue operation without seriously endangering the
ship’s own crew.

Due to the escalation of immigrant crisis in the Mediterranean Sea during the last
decade, consciousness about the issues involved has grown to the international level.
Many positive regulations and guidelines have been provided, as well as international actions and initiatives conducted. The result is shown in numerous lives saved at sea. The shipping companies, in most cases, do not employ specialized crew on merchant ships sailing predominantly in the Mediterranean Sea with skills needed in such situations as a precautionary measure, like medical teams and armed forces. There is one very important approach for the merchant ships to tackle with the challenges, being to develop the appropriate procedures and conduct specific training and drills. The goal of training and drills should be to increase the knowledge of the crew members on the safety, security and health related risks, and to improve their skills to safely recover and manage large groups of persons in distress.

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