

Affiliated Coordination of Rescue and Salvage in ASEAN+3

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Abstract : *On May 12th, 2007 a merchant vessel of Golden Rose (South Korea) sank into near 38 mile from Yentai in China after the vessel collided with a container vessel of Jinsung (China), leaving all 16 sailors, including seven South Koreans, missing. According to the official report, The Chinese vessel, authorities, and South Korean government did not coordination of rescue and salvage for the sailors and vessel properly as follows: 1) The Chinese vessel left the scene without rescue and salvage of the sailors, 2) Chinese authorities failed to comply with law of the sea that required them to report the collision to South Korea immediately after confirming the accident, and 3) The South Korean government is also being criticized for its slow response to the incident since the government did not set up a response team until 21 hours after the incident. In order to reduce this number of sailor missing in future incidents, this research is studied regarding assembling conferences, assigning SRR in ASEAN+3, simplicity to enter other territory waters and cooperative training and education for the SAR.*

Key words : *Shipping, Maritime, Coordination, Salvage, Rescue, EPIRB*

1. Introduction

A Chinese container vessel is being blamed for disrespect for human life after a South Korean merchant vessel sank in a collision with a Chinese vessel in waters off the eastern coast of China, leaving all 16 sailors, including seven South Koreans, missing. The Chinese vessel allegedly left the scene without attempting to rescue the sailors. Chinese authorities, furthermore, failed to comply with law of the sea that required them to report the collision to South Korea immediately after confirming the maritime accident, thus increasing the number of missing sailors. The South Korean government is also being criticized for its slow response to the incident. Belatedly informed, the government did not set up a response team until early Sunday morning, 21 hours after the incident. The 16 sailors missing include seven South Koreans, eight Myanmarese, and one Indonesian. The Chinese vessel didn't try to recover the sailors, continued its cruise, and reported the collision to the Chinese maritime authorities when it arrived at Port of Dalian at 11:40 a.m., seven hours after the crash. The South Korean Coast Guard was notified of the incident at 2:00 p.m. from the Bukwang Shipping Co., which was notified of the accident from the Chinese maritime authorities. The Chinese authorities sent rescue helicopters to the waters at around 2:15 p.m., 11 hours after the incident, to search for the missing sailors, but failed to find any of them. Some are concerned about possible diplomatic repercussions between Seoul and Beijing since the

Chinese authorities allegedly let about 13 hours pass before informing the Korean Embassy in China of the collision. According to the report of South Korean Coast Guard, the incident related 29 authorities in China including the Ministry of Foreign Affairs and Trade at around 8:00 p.m., six hours after it was told about the collision. According to the article 98 of United Nations Convention on Law of the Sea (UNCLOS) 1982 and chapter 5 and article 15 of International Convention for the Safety of Life at Sea (SOLAS) 1974, each country should measures such as rescue and salvage the salvage for the ship being in distress. This is the country's duty, not the other ships' duty passing by the distressed vessel. International Convention on Salvage, 1989 allow the captain to rescue and salvage the distressed vessel. The duty in the convention, however, is only working when related parties are applied the convention. South Korea has not joined the convention yet. Therefore, by the convention the Chinese freighter can not be argued directly from failing their duty. By an article 166 of China and 12 of South Korea's maritime law, it is also composed that the captain should measure to search and rescue the distressed vessel and salvage' duty.

To rescue and salvage distressed vessel on the sea become a customary international law and practice. Because of repeated customary practice and lawful trust between seafarers, the captain failed to the rescue and salvage can be considered a violation of due diligence.

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2. International Conventions Regarding Rescue and Salvage

There are four major conventions need to be studied for coordination regarding rescue and salvage on the sea such as international convention on maritime search and rescue 1979, international convention on salvage 1989, united nations convention on law of the sea 1982, and international convention for the safety of life at sea 1974. In addition, South Korea took effect on two international conventions for SAR with China 2007 and Japan 1990 in ASEAN+3.

2.1 International Convention On Maritime Search and Rescue, 1979

The Convention was aimed at developing an international search and rescue (SAR) plan, so that, no matter where an accident occurs, the rescue of persons in distress at sea will be co-coordinated by a SAR organization, when necessary, by co-operation between neighboring SAR organizations. Although the obligation of ships to go to the assistance of vessels in distress was enshrined both in tradition and in international treaties such as the International Convention for the Safety of Life at Sea (SOLAS), 1974, there was, until the adoption of the SAR Convention, no international system covering search and rescue operations. In some areas there was a well-established organization able to provide assistance promptly and efficiently, in others there was nothing at all.

1) Organization

The organization has been re-drafted to make the responsibilities of Governments clearer. It requires Parties, either individually or in co-operation with other States, to establish basic elements of a search and rescue service, including legal framework, assignment of a responsible authority, organization of available resources, communication facilities, co-ordination and operational functions, and processes to improve the service including planning, domestic and international co-operative relationships and training. Parties should establish search and rescue regions within each sea area - with the agreement of the Parties concerned. Parties then accept responsibility for providing search and rescue services for a specified area. The organization also describes how SAR services should be arranged and national capabilities be developed. Parties are required to establish rescue co-ordination centers and to operate them on a 24-hour basis with trained staff that has a working knowledge of English. Parties are also required to ensure the

closest practicable co-ordination between maritime and aeronautical services.

2) Co-ordination

Co-ordination requires parties to co-ordinate search and rescue organizations, and, where necessary, search and rescue operations with those of neighboring States. This states that unless otherwise agreed between the States concerned, a Party should authorize, subject to applicable national laws, rules and regulations, immediate entry into or over its territorial sea or territory for rescue units of other Parties solely for the purpose of search and rescue.

3) Operating Procedures

The operating procedure include that each RCC (Rescue Co-ordination Centre) and RSC (Rescue Sub-Centre) should have up-to-date information on search and rescue facilities and communications in the area and should have detailed plans for conduct of search and rescue operations. Parties - individually or in co-operation with others should be capable of receiving distress alerts on a 24-hour basis. The regulations include procedures to be followed during an emergency and state that search and rescue activities should be coordinated on scene for the most effective results. It is said that search and rescue operations shall continue, when practicable, until all reasonable hope of rescuing survivors has passed.

4) Ship Reporting Systems

Ship reporting systems include recommendations on establishing ship reporting systems for search and rescue purposes, noting that existing ship reporting systems could provide adequate information for search and rescue purposes in a given area.

2.2 The International Convention on Salvage, 1989

Regarding performance of salvage operations, there are described from article 8 to 11 in chapter 2 of the convention, which is summarized as follows.

1) Duties of The Salvor And of The Owner And Master

The salvor shall have a duty to the owner of the vessel or other property in danger to perform the salvage operations with due diligence; in carrying out the duty specified in subparagraph, to exercise due care to prevent or minimize damage to the environment; whenever circumstances reasonably require, to seek assistance from other salvors; and to accept the intervention of other salvors when

reasonably requested to do so by the owner or master of the vessel or other property in danger; provided however that the amount of his reward shall not be prejudiced should it be found that such a request was unreasonable. The owner and master of the vessel or the owner of other property in danger shall owe a duty to the salvor: in so doing, to exercise due diligence to prevent or minimize damage to the environment; and when the vessel or other property has been brought to a place of safety, to accept redelivery when reasonably requested by the salvor to do so.

2) Rights Of Coastal States

Nothing in this Convention shall affect the right of the coastal state concerned to take measures in accordance with generally recognized principles of international law to protect its coastline or related interests from pollution or the threat of pollution following upon a maritime casualty or acts relating to such a casualty which may reasonably be expected to result in major harmful consequences, including the right of a coastal State to give directions in relation to salvage operations.

3) Duty To Render Assistance

Every master is bound, so far as he can do so without serious danger to his vessel and persons thereon, to render assistance to any person in danger of being lost at sea. The States Parties shall adopt the measures necessary to enforce the duty set out.

4) Co-operation

A State Party shall, whenever regulating or deciding upon matters relating to salvage operations such as admittance to ports of vessels in distress or the provision of facilities to salvors, responsible with the need for co-operation between salvors, other interested parties and public authorities in order to ensure the efficient and successful performance of salvage operations for the purpose of saving life or property in danger as well as preventing damage to the environment in general.

2.3 United Nations Convention On Law Of The Sea, 1982 and International Convention For The Safety Of Life At Sea, 1974

According to the article 98 of United Nations Convention on Law of the Sea, 1982 (UNCLOS) and chapter 5 and article 15 of International Convention for the Safety of Life at Sea (SOLAS) of 1974, each country should measures such as rescue and salvage for the ship being in distress. This is the

country's duty, not the other ships' duty passing by wrecked vessel.

2.4 Agreements of SAR with China 2007 and Japan 1990

There are main agreements including emergency settlement and cooperative support for SAR, Assistant of refuge on the sea, Application of entering territorial waters for SAR, and strengthening a cooperation of SAR. As a expecting effect, each country is trying to strengthening safe of life at sea by settling down a institutional foundation for cooperation of SAR by taking effect on conventions with Chain 2007 and Japan 1990. These conventions are summarized as follows.

- Emergency Settlement and Cooperative Support for SAR

Each country can request cooperative support by treating emergency situation for SAR although nationality when getting information regarding the distressed vessel in the region.

- Assistant of Refuge on the Sea

It is available for any vessel to put into refuge shelter in each other country after sending notice to the corresponding country when under heavy wether or other emergency incidents occur.

- Application of Entering territorial waters for SAR,

An application should be submitted to corresponding country in order to enter their territorial waters for SAR.

In addition, application to enter territory waters in each country is recommended to submit at same time when SAR action is took place. These agreements better to spread out to the other ASEAN+3 countries in order to soundly cooperate several cases of SAR in those countries and, reduce and prevent number of life and entities from missing on the ASEAN+3 region by attending and assembling the detailed SAR conferences, cooperation, and co-research and development.

2.5 SAR Agreement between U.S. and Canada.

This agreement is aim to provide for co-ordinated search and rescue activities in maritime areas of mutual interest between the United States and Canada. In general,

a. The Canadian Forces are responsible for organizing and co-ordinating search and rescue operations on behalf of Canada.

b. The United States Coast Guard is responsible for organizing and co-ordinating search and rescue operations on behalf of the United States in the maritime areas covered by this agreement. Figure 1 below showed a SRR in the Canada Region

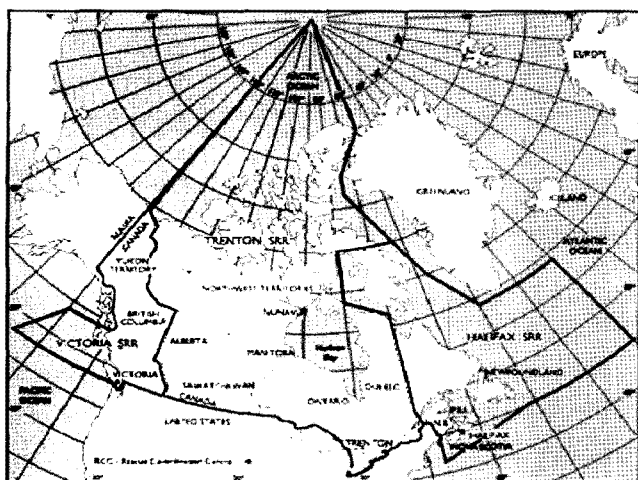


Fig. 1 SRR in the Canada Region

Two bilateral agreements relating to SAR exist between Canada and the United States. The first permits public aircraft of either country that are engaged in SAR operations to enter or leave the other country without being subject to normal immigration or customs formalities. The second agreement permits vessels and wrecking appliances of either country to render aid and assistance on specified border waters and on the shores and in the waters of the other country along the Atlantic and Pacific Coasts within a distance of 30 NM from the international boundary on those coasts.

In situations not covered by the agreements above, requests from the United States for aircraft or rescue vessel of their own registry to participate in a SAR operation within Canada may be addressed to the nearest Joint Rescue Co-ordination Center (JRCC). The JRCC would reply and issue appropriate instructions.

3. Affiliated Coordination in ASEAN+3

ASEAN+3 countries including the Indonesia, Malaysia, Philippine, Singapore, Thai, Brunei, Vietnam, Laos, Myanmar, Cambodia, China, Japan, and South Korea have to special study robust coordination for the rescue and salvage on and of the sea.

3.1 Seafarer's Advanced Training

In addition to the convention on the international

regulations for preventing collision at sea, 1972 seafarer should understand and be trained a) for each procedure and measure of the SAR (1979), salvage (1989), and GMDSS b) Emergency Position-Indicating Radio Beacon (EPIRB)'s sound and operating method. All ships also shall carry an up-to-date copy of Volume 3 of the International Aeronautical and Maritime Search and Rescue (IAMSAR). It is recommended that seafarers visit and learn RCC and RSC center's role and activities with face to face in order to develop effectiveness of communication and reduce afraid to call each other when incident occurs. There are two types of training for taking actions depending on if the damage is little or heavy when the vessels had collided as follows.

- a) in little damage (it is expected in safe based on force of restoration and submerged time until the ship is rescued and salvaged or it is available to voyage to refuge or destination port by herself); Asking rescue and salvage assistances (if needed), calculating the force of restoration and submerged time, keeping a record from right after collision including time, place, head's compass direction and angle etc, recording by electronic methods including GPS plotter or track record of ECDIS, VDR (Voyage Data Recorder), and Course Recorder.
- b) in heavy damage (it is expected in unsafe based on force of restoration and submerged time until the ship is rescued and salvaged); Asking rescue and salvage assistances, EPIRB's operation and preparing abandon ship.

3.2 New Technology of EPIRB

The Global Maritime Distress and Safety System (GMDSS) provides for automatic distress alerting and locating. The 406 MHz EPIRB as a new technology EPIRB was designed to operate with satellites. The signal frequency (406 MHz) has been designated internationally for use only for distress. Other communications and interference, such as on 121.5 MHz, is not allowed on this frequency. Its signal allows a satellite local user terminal to accurately locate the EPIRB (much more accurately -- 2 to 5 km vice 25 km -- than 121.5/243 MHz devices), and identify the vessel (the signal is encoded with the vessel's identity) anywhere in the world (there is no range limitation). These devices are detectable not only by COSPAS-SARSAT satellites which are polar orbiting, but also by geostationary GOES weather satellites. EPIRBs detected by the GEOSTAR system, consisting of GOES and other geostationary satellites, send rescue authorities an instant alert, but without location information unless the EPIRB is equipped with an integral

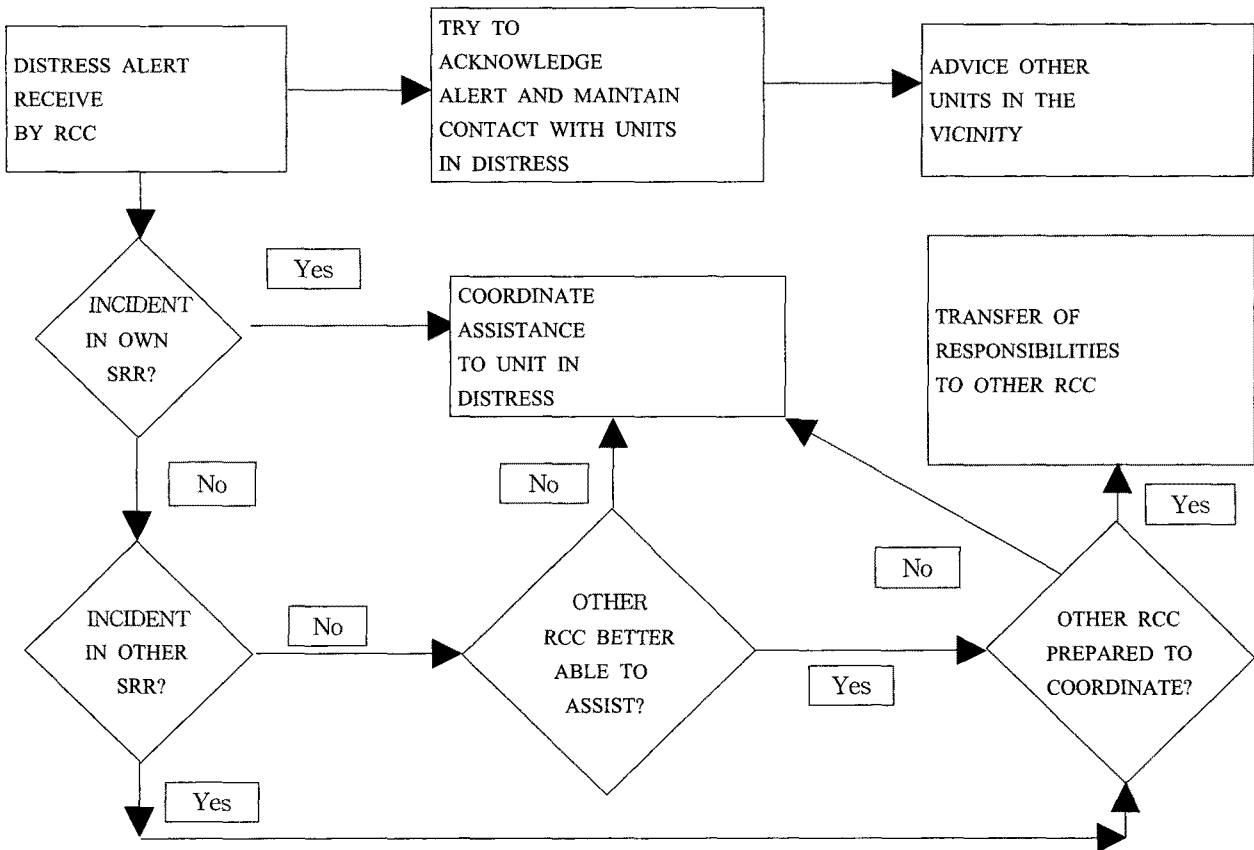


Fig. 2 The Action of the First RCC

GPS receiver. EPIRBs detected by COSPAS-SARSAT (e.g. TIROS N) satellites provide rescue authorities location of distress, but location and sometimes alerting may be delayed as much as an hour or two. These EPIRBs also include a 121.5 MHz homing signal, allowing aircraft and rescue craft to quickly find the vessel in distress. These are the only type of EPIRB which must be certified by Coast Guard approved independent laboratories before they can be available in the United States. The Coast Guard recommends a 406 MHz EPIRB, preferably one with an integral GPS navigation receiver. If an unregistered EPIRB transmission is abbreviated for any reason, the satellite will be unable to determine the EPIRB's location, and the Coast Guard will be unable to respond to the distress alert.

3.3 Coordination of Agreements and Procedures

In order to reduce the number of sailor missing at future incidents in ASEAN+3 countries, it should be set up a study for coordination of rescue and salvage.

1) Designation of RCC, RSC and OSC based on the SAR Region

Based on the SAR region (SRR) in ASEAN+3 Countries, the SAR system has to three levels of co-ordination

associated with SAR Co-coordinators (SC), SAR Mission Co-coordinators (SMC), and On-Scene Co-coordinators (OSC). SC has the overall responsibility for establishing, staffing, equipping and managing the SAR system, including providing appropriate legal and funding support. SC is not normally involved in the conduct of a SAR operation. SMC is in charge of a SAR operation until a rescue has been conducted or until it has become apparent that further efforts would be of no avail, or until responsibility is accepted by another Rescue Co-ordination Center (RCC). OSC is assigned by the SMC to coordinate the activities of the participating units. He may be a person in charge of a SAR unit, ship or aircraft, participating in the SAR operation.

2) SAR Procedures

The response to a SAR incident usually proceeds through a sequence of five stages. These stages are groups of activities typically performed by the SAR system in responding to a SAR incident from the time the system

becomes aware of the incident until its response to the incident is concluded. The response to a particular SAR incident may not require the performance of every stage. For some incidents, the activities of one stage may overlap the

activities of another stage such that portions of two or more stages are being performed simultaneously. The five SAR stages are: a) Awareness: Knowledge by any person or agency in the SAR system that an emergency situation exists or may exist. b) Initial Action: Preliminary action taken to alert SAR facilities and obtain more information. This stage may include evaluation and classification of the information, alerting of SAR facilities, communication checks, and, in urgent situations, immediate performance of appropriate activities from other stages. c) Planning: The development of operational plans, including plans for search, rescue, and final delivery of survivors to medical facilities or other places of safety as appropriate. d) Operations: Dispatching SAR facilities to the scene, conducting searches, rescuing survivors, and delivering casualties to medical

facilities. e) Conclusions: Return of SAR units to a location where they are debriefed, refueled, replenished, and prepared for other missions, return of other SAR facilities to their normal activities, and completion of all required documentation.

First RCC

The term First RCC refers to the RCC affiliated with the shore station that first acknowledges a distress alert, and which should assume responsibility for all subsequent SAR coordination unless and until responsibility is accepted by another RCC better able to take action. The actions of the first RCC are as follows in Figure 2. The Figure showed that after distress alert is received by RCC by trying to acknowledge alert and maintain contact with units in distress, advising other units in the vicinity. If the incident was occurred in own SRR, corresponding country should assistants to unit in distress that other RCC in not able to assist and other RCC is not prepared to coordinate. If the incident was took place in other SRR and other RCC already prepared to coordinate, then transfer to other RCC for responsibilities for SAR. action.

3) Effective and Efficient Responsiveness and Communications

The communications equipment is aiming at the proper receiving of distress alerts and the efficient conduct of SAR operations and it consists of: Two satellite Inmarsat stations, Radio transceivers operating in distress and other frequencies, A number of Hot Lines for immediate communication with the SAR unit bases and alerting posts, Commercial telephone lines for national and international communications, Telex and fax services, Aeronautical Fixed Telecommunication Network station, Direction Finder

covering the international distress frequencies, NAVTEX and Digital Selective Calling (DSC) services of the Cyprus Coast Radio Station. In doing so, there are critical matters

as follows. 1) Training related stations, task force and sailors, 2) Deregulation in each country regarding international SAR activities, 3) Set up an official SAR communication, and 4) Conferences including pre-conference and post-conference based on training and in real practices.

4) Sound Coordination for Rescue and Salvage

In order to obtain robust coordination for rescue and salvage and reduce the number of sailors missing at real incident, ASEAN+3 Countries have to key role of creating and developing a robust coordination manual for setting SAR Region and large-ranged Vessel Traffic Service, designating main RCC system based on the region, and training coordinate with very sound and affiliated concerns and interests. Regarding to this coordination training, there are basically two types of coordination conferences and a training stage should be considered based on the manual, which can be called Pre-Conference, Coordination SAR Training, and Post-Conference. Pre-Conference need to discuss a detailed manuscript of the coordination SAR training including the training region (SRR), types of ship, weather condition (Heavy, Medium, and Good), Coastal or Open Sea, day or night, date, number of training per year, communication method, designating main RCC system (including RSC, SMC, OSC, CSS), and training procedure etc. Regarding to the Coordination SAR Training, in fact, saving time and life based on the safety are best measurements of performance. In addition, application to enter territory waters in each country is recommended to submit at same time when SAR action is took place. Finally, all of the training needs to be reviewed in the Post-Conference in order to feed back to next training and real incidents and when the accident occurs.

4. Conclusion

Even if there are many international conventions for SAR including agreements with China 2007 and Japan 1990, The incident between Jinsung and Golden Rose had some missing for life of seafarers and processes. ASEAN+3 Countries have to key role of creating and developing a robust coordination manual for setting SAR Region and large-ranged Vessel Traffic Service between member's countries, designating main RCC system based on the region (SRR), and training coordinate with very sound and affiliated concerns and

interests. In addition, application to enter territory waters in each country is recommended to submit at same time when SAR action is took place such as SAR operations between U.S. and Canada to enter or leave the other country without being subject to normal immigration or customs formalities and permitting rescue vessels and wrecking appliances of either country to render aid and assistance on specified border waters and on the shores and in the waters of the other country along the Atlantic and Pacific Coasts within a distance of 30 NM from the international boundary on those coasts. In addition, the agreements with China and Japan better to spread out to the other ASEAN+3 countries in order to soundly cooperate several cases of SAR in those countries and reduce and prevent number of life and entities from missing on the ASEAN+3 region by attending and assembling the detailed SAR procedures, conferences, cooperation, and co-research and development.

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