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VTS AND THE NEED FOR PROPER CASUALTY DATA

Abstract

The casualty data information is often not available or, whenever available, it cannot always be considered as accurate or complete. This is due to the various limitations of the national and international bodies which are assigned to do this job.

In addition, varying standards of recording and non-uniformity of terminology confuse the presentation of casualty reports, when and if these become available.

As the need of a VTS for safety purposes can be demonstrated only through the compilation and study of the casualties in the area covered, the recording of reliable and unified casualty data is necessary.

In the case of a regional VTS, like the proposed Mediterranean one, the necessity of such information on international scale is absolutely essential. It is thus recommended that certain standards on casualty reporting, terminology and method of inquiry are laid down and agreed upon.

1.- ESTABLISHING THE NEED FOR A VTS

We may divide the types of VTSS in three categories, according to the coverage that they offer. Thus, there are VTSS suitable for:

1. Harbour approaches and areas.
2. Coastal areas.
3. Larger areas of national or international/regional waters.

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The function of a VTS is primarily that of the improvement of safety, in a general sense, within the area covered by it. Its services may also extend to the amelioration of operational and commercial procedures with a view on efficient management system of the area's traffic. This latter function applies specially to harbour and, to an extent, coastal VTSS, although lately there have been proposals for making use of the facility by regional VTSS too.

For the purposes of this paper the focus will be concentrated only in the safety aspects of VTSS servicing mainly areas (2) and (3) as above. The requirements of and the services rendered from a harbour VTS may call for different and/or additional considerations, which are not the purpose of this presentation.

To establish the need of a VTS two main factors are taken into consideration:

- The density, type and peculiarities of the traffic or ship movements in the area under consideration.
- The rate and type of casualties occurring in the above area, the type of ships involved, the cause and conditions of the accident.

These two factors will allow to determine the benefits, if any, which may result from the establishment of a VTS, its range and its type.

For this purpose full studies are necessary, taking also into account the local conditions and peculiarities, including -but not limited to- climatic conditions, sea state, coastline and obstructions, anchorages, erratic ship movements, naval training sites and fishing grounds.

The traffic study requires measurements of the ship movements. These may possibly be determined from available data, depending on their extent and credibility, or from observation, mainly radar tracking. The accumulated information can then be analysed in various manners to suit the requirements of the study. The procedure of the analysis should present no special difficulties, once the traffic data has been collected.

On the other hand the casualty data collection presents difficulties that may amount to such an extent as to distort completely the result.

The main reason is that no actual observations can be made during the study. Its validity will be based totally on data which has been collected sometime in the past, usually over a considerable period of time, by different people with different criteria. Furthermore, data for a number of casualties which have actually taken place, may have not been recorded at all.

In addition to the casualties that have actually taken place but remain unrecorded, the nearly-missed casualties are also of important interest for a proposed establishment of a VTS.

2.- SOURCES OF CASUALTY INFORMATION

Let us look now into the details in a more systematic manner.

First of all it must be determined what is a casualty, its type and magnitude. The various Organizations and Authorities use different definitions, which may sometimes lead to a confusion instead of a common understanding.

The casualty types are categorized as:

- Collision, ship to ship.
- Contact, ship to ship, or ship to quay, or ship to floating or underwater object.
- Grounding or stranding, ship to ground.
- Foundering or sinking of ship.
- Flooding of ship, which may or may not have sunk.
- Not-under-command, when the vessel lost its ability to proceed by her own means.
- Machinery damage.
- Equipment failure.
- Fire.
- Explosion.

It is clear that some of the above terms should be properly determined, possibly some of them unified, and all well understood and accepted by the parties concerned.

Further standardization of the types and sizes of ships which are recorded would also be very useful.

Having categorized the types of casualties, let us see what may happen when a one occurs. It may be reported or not to:

- (a) Search and Rescue (SAR).
- (b) Port/Government Authorities.
- (c) Underwriters.

- (d) P+I Clubs.
 - (e) Classification Societies.
 - (f) Cargo operators.
- and, of course,
- (g) Owners.

These are the sources which may have information of a casualty.

Leaving for the moment (a) & (b) out, the remaining sources may be viewed with varied reluctance as to the quality of the information they may make available. In fact their information may not be available at all or it may be subject to commercial considerations.

Regarding (a) and (b), these sources should in theory be free of the disadvantages of the other quoted sources. Unfortunately this is not the case here, either. Government Authorities are subject to national legislation, to political issues and national prestige and thus, from country to country (quoting only European countries), the procedures followed and the quality of information collected and/or made available varies tremendously, not to say that such information may even not be made public or ever published.

It is interesting to note that foreign ships sailing within a SAR area of another state may avoid in many cases to report their casualty, even in conditions of limited distress. Thus quite a number of accidents remain totally unreported, with the exception of course of the cases where such reporting is mandatory.

Nearly-missed casualties are also not reported or recorded.

The author believes that these points require careful consideration.

3.- CASUALTY REPORTING IN GREECE

Not wishing to describe or even criticize what happens in other countries, an outline will be given herebelow of what the Greek legislation requires regarding the investigation of a casualty.

Every ship sailing the Greek flag is obliged to report any abnormal incident to the Greek Authorities at home or abroad, wherever this has happened over the world.

If the incident was of minor importance then it is simply just filed.

If the incident involved injury to persons, major ship damage, fire, collision, grounding, a not-under-command condition or major loss of cargo, then an investigation takes place to establish the cause and conditions of the casualty. However this investigation may not cover all aspects which are required for proper casualty recording, but it may extend only, for example, to determine the responsibility (if any) of the ship's personnel. Of course, in cases which may be brought to civil courts the investigation usually proceeds in more depth.

For foreign flag ships sailing the Greek waters no investigation whatsoever is made, except if injury to a Greek subject or material damage to Greek property has taken place. The extent though of such an investigation may go only as far as to satisfy the recording of the sustained injury or material damage involved. Thus the data available on these casualties may be quite inadequate.

It must be stressed that ships of certain flags often avoid to give information in case of an emergency occurring on board, while they are in waters of Greek jurisdiction.

4.- USEFULNESS AND IMPORTANCE OF PROPER DATA

The proper casualty data, which is accumulated over the years, may be very useful for various purposes, such as:

- To determine the level of performance of the ship's crew and through this to deduce possible ameliorations in education and training.
- To establish if conditions and procedures on board need to be changed.
- To implement maintenance procedures of hull, machinery and equipment.
- To improve design characteristics of ships and their equipment.
- To ameliorate land lights and signals, marking of coastlines, underwater obstructions etc.
- To monitor the traffic or the ships' movements in areas which present a high casualty rate.

Remaining at this latter point, the importance of correct casualty data cannot but be stressed sufficiently. Furthermore, the standardization of terms and certain minimum procedures and information to be included in a casualty report should also be emphasized.

The importance of including data on the nearly-missed accidents must be stressed as well.

A guide to the form which a casualty data abstract report may take is shown in Appendix "A".

The unification of casualty reporting will greatly facilitate concerted action between various organizations and Government Authorities.

It is appreciated that there will be discrepancies due to different judgements, misinformation and other reasons during a casualty investigation and reporting. It is believed though that this will account for a relatively small proportion of the total information available and it should not distort the true image too much.

For the purposes of a proposed VTS it is considered that the information contained in casualty reports (as described above) may be superfluous to that required. It is believed, though, that all casualties irrespective of their type and magnitude, as well as those nearly-missed, will be of interest in a VTS expediency study as they may indicate the potential dangers existing in the area of concern.

A specimen of a casualty report useful for such a VTS study is shown in Appendix "B".

COST 301, of which many of us are familiar, based its casualty data mainly on a private source, namely Lloyd's Register of Shipping, although it was subsequently demonstrated that this source could be only considered as partly reliable.

It should be quoted that other sources, too, were used during this COST 301 work, like MARIN, HUT etc., but it has not been made clear if their data was obtained from primary sources or not.

Primary information was published in a paper by the Hellenic Institute of Marine Technology; it contained data obtained directly from official inquiry files, though their quality was subject to the limitations of these inquiries as made under Greek law and conditions.

5.- PROPOSALS

Having discussed the above, we wish to formulate the following proposals regarding casualty data gathering procedures which could be applicable to all in general. For the present purposes they could apply, as a start only, to the European Mediterranean countries and then progressively to the other non-European countries of that area, according to their prevailing conditions and possibilities.

- (a) Casualties should be reported by all ships to Official Authorities of either the flag or coastal state. For specific areas, like coastal areas or enclosed seas and passages, the reporting should be made mandatory towards the coastal state.
- (b) The terminology to be used for determining the type and magnitude of casualties should be agreed upon and made uniform as far as possible.
- (c) The method of inquiry should cover at least certain pre-determined targets; the use of expert surveyors will thus be required. Of course for complicated cases special considerations will apply.
- (d) The method of summary reporting should contain at least certain minimum information, expressed in internationally agreed terms and format. These reports should be made available in public and they should appear within a specified maximum period of time after the occurrence of the related accident, even if only with preliminary information.
- (e) Nearly-missed accidents should also be reported as per paragraph (a).

The implications of such a proposal are fully realised by the author, specially regarding items (c), (d) & (e) above. However it is believed that an effort must be made towards the direction proposed and a satisfactory solution agreed by all those concerned, as described in the beginning of this paper.

Commercial considerations should not impair such an effort. Disputes and second opinions may always exist; in the cases where they are of vital interest they may even form part of a casualty report in the form of an appendix. After all, our proposal concerns the accumulation of casualty data as uniform, reliable and complete as possible and does not have the intention of passing judgement on responsibilities.

Appendix "A"										Blk	Year	
Name of ship										Port of registry (flag) & Nr	Call sign	
Type										Visibility		
GRT	NRT	L	B	T	V	D	M	Y	H	M	Weather	
Place of casualty												
Lat. - Long. of casualty					Cargo status (& amount)					Cargo type		
Port last sailed from						Port of destination						
Type of accident												
Cause & responsibility												
Cause & responsibility (continued)												
Result										Help provided		
Crew lost / Passengers lost / Cargo lost										Pollution type & amount		
Comments												
File N°												

ACCIDENT RECORD

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SHIP	Name	
	Type	CARGO
	Flag	GREEK
	Call sign	SV3834
	Registry	PIRAEUS, 3815
	Year built	1950
	GRT	499
	NRT	280
	Dimensions	59,1x8,7x3,4
	Speed	10
CARGO	Status	LOADED
	Type	SAND STONE
PORTS	Departure	THIRA ISL.
	Destination	PIRAEUS
ACCIDENT	Type	FOUNDERING
	Date	17-01-86
	Time	03
	Weather	6-7 B.
	Visibility	GOOD
	Area	AGIOS GEORGIOS ISL.
	Position	EAST OF ISLAND
	Cause	CARGO SHIFTING
	Result	SANK
	Help	-
LOSSES	Crew	0
	Passengers	0
	Cargo	LOST
	Pollution	-

COMMENTS

47/86, FN 4472

SA