

CMI Questionnaire

1.1. Would a "cargo ship" in excess of 500 grt, without a master or crew onboard, which is either

1.1.1. controlled remotely by radio communication?

1.1.2. controlled autonomously by, inter alia, a computerised collision avoidance system, without any human supervision

constitute a "ship" under your national merchant shipping law?

Yes. This is the case because the definition of a ship under Maltese Law makes no distinction between the type of vessel, its size, or its means of navigation as per below, in fact Maltese Law states that the ship may be 'self-propelled'.

Article 2 of the Merchant Shipping Act, Chapter 234 of the Laws of Malta states that a "ship" means every description of vessel used in navigation, whether self-propelled or not, and it includes barges, pontoons, floating establishments, installations or structures, oil rigs and other similar vessels, and for those parts of the Act wherever applicable it shall also include a ship under construction;

1.2 Would an unmanned "ship" face difficulty under your national law in registering as such on account of its unmanned orientation?

Yes. Our law and practice requires a vessel to have a minimum number of officers to man the vessel registering under Malta Flag. Manning requirements are regulated by Maltese law under SL 234.51 Merchant Shipping (Maritime Labour Convention) Rules hereinafter 'MLC Rules'), which replaced SL 234.31 Merchant Shipping (Safe Manning and Watchkeeping) Regulations. Therefore, the Malta flag administration applies these rules and follow established practices on a case by case basis when issuing the minimum safe manning certificate.

The MLC Rules oblige Malta flagged vessels over 500gt to have a 'safe manning certificate-document' that must be kept on board.¹ The 'safe manning document' is defined as

'a document prescribing the minimum safe manning considered necessary for the sufficient and efficient manning of the ship from the point of view of safety of life at sea and pollution prevention...'

The Malta Flag Administration in fact issues a Minimum Safe Manning Certificate which establishes the number of officers required for a specific vessel, without which the vessel cannot navigate.

¹ Rule 32 of ~~LN 145 of 2013.~~

The minimum number of seafarers on board is calculated according to the tonnage and type of vessel in question. This calculation is based on the SOLAS Convention, ratified in 1986 by the International Convention for the Safety of Life at Sea (Ratification) Act, Chapter 314 of the Laws of Malta, and more specifically based on IMO Resolution A.1047(27) which given the effect of law by virtue of the Merchant Shipping (Safety Convention) Rules S.L. 234.30.

Section 16(1) of the Merchant Shipping Act states that:

*Saving any provision with regard to ships being built, rebuilt or equipped, all ships provisionally registered under this Act shall comply, **except where expressly exempted**, with the requirements of this Act...*

Article 90(1) of the Merchant Shipping Act reinforces the position by providing that:

Every Maltese ship when going to sea from any place shall be provided with such number and description of officers and crew as the Minister may by regulations prescribe:

Provided that the Minister may in such regulations authorise the Registrar-General to exempt any ship or a class of ships from all or any of the requirements of such regulations.

Whilst the MLC Rules do not specifically exempt ships from being unmanned per se, it should be noted that Rule 3 states that the MLC Rules do not apply to all Maltese seagoing ships and to all other ships while they are in Maltese ports. In fact, Rule 3(2) states that these rules shall not apply to:

- (a) Fishing vessels;
- (b) Ships of traditional build;
- (c) Small ships as defined in the Small Ships Regulations and that navigate exclusively in internal waters or waters closely adjacent to Malta;
- (d) Yachts in non commercial use;
- (e) Warships or naval auxiliaries.

The proviso to Rule 3 also states that if there is any ‘*doubt as to whether any categories of persons are to be regarded as seafarers...the matter shall be determined by the Registrar-General after consultation with shipowners and seafarers’ organisations concerned.*’

Nevertheless, it is our view that as the law stands, shipowners will have difficulty in registering unmanned ships under the Malta flag.

1.3 Under your national law, is there a mechanism through which, e.g. a Government Secretary may declare a "structure" to be a "ship" when otherwise it would not constitute such under the ordinary rules?

The definition of a ship as quoted above is sufficiently wide so as to include 'installations or structures'. Interestingly, the MLC Rules, which deal with the minimum safe manning of ships, state in the proviso to Rule 3 that *'in the case of doubt as to whether...any vessels are to be regarded as ships, the matter shall be determined by the Registrar-General after consultation with the shipowners and seafarers' organisations concerned'*.

1.4. Under your national merchant shipping law, could either of the following constitute the unmanned ship's "master"

1.4.1. The chief on-shore remote-controller

1.4.2. The chief pre-programmer of an autonomous ship

1.4.3. Another 'designated' person who is responsible on paper, but is not immediately involved with the operation of the ship

No, our national law requires that the master is on board for the safe manning rules to be satisfied. As the law currently stands, it is not possible for the Minimum Safe Manning rules to be satisfied if the person designated as master of the ship is not on board.

The Appendix of the IMO Resolution A.1047(27), which as stated above, ~~forms part~~ has the effect of law under Maltese law in fact specifically provides that a ship is considered to be safely manned only if it proceeds to sea **carrying** the specified number of personnel indicated in the Minimum Safe Manning Certificate. The Maltese Flag Administration's Minimum Safe Manning Certificate is also likewise drafted in a manner that implies that personnel must be on board the ship concerned. This is also supported by current practice in Malta. Since law and practice point towards a requirement of physical presence on board ships, the question above must be answered in the negative.

1.5. Could other remote-controllers constitute the "crew" for the purposes of your national merchant shipping laws?

No, for reasons explained above.

2. United Nations Convention on the Law of the Sea, 1982 (UNCLOS)

2.1. Do you foresee any problems in treating unmanned ships as "vessels" or "ships" under the Law of the Sea in your jurisdiction (i.e. that such. ships would be

subject to the same rights and duties such as freedom of navigation, rights of passage, rights of coastal and port states to intervene and duties of flag states) in the same way as corresponding manned ships are treated?

Maltese law ratified UNCLOS in 1993 by virtue of the Law of the Sea (Ratification) Act, Chapter 362 of the Laws of Malta. With regards to the interpretation of UNCLOS, we foresee problems in the treatment of unmanned ships by Malta because of the absence of legislation, nationally and internationally. It is a moot point whether Malta will acknowledge and accept that the rights and obligations of manned ships under UNCLOS III will extend to unmanned ships. ~~will extend to unmanned ship.~~

The state of uncertainty will, in our point of view, persist until unmanned ships become regulated at national and international level.

2 .2. Paragraphs (3) and (4) of UNCLOS Article 94 include a number of obligations on flag states with respect to the manning of such ships. Do you think that it is possible to resolve potential inconsistencies between these provisions and the operation of unmanned ships without a crew on board through measures at IMO (under paragraph (5) of the same Article) or do you think other measures are necessary to ensure consistency with UNCLOS. If so, what measures?

It is our view that measures at IMO level under paragraph (5) of Article 94 of UNCLOS could suffice to ensure consistency between UNCLOS and the operation of unmanned ships, particularly if there is wide participation and consensus amongst the Member States at IMO supporting those measures.

3. IMO Conventions — The International Convention for the Safety of Life at Sea (SOLAS) 1974 (as amended)

3.1. Does your national law implementing the safe manning requirement in Regulation 14 of Chapter V of SOLAS require at least a small number of on board personnel or does the relevant authority have the discretion to allow unmanned operation if satisfied as to its safety?

Malta recognizes and adopts IMO instruments adopted by the IMO under the SOLAS convention by virtue of SL 234.30 (cited above in reply to question 1.2). Amongst the SOLAS instruments recognized and adopted by Malta the IMO Resolution A.1047(27) is relevant here. This resolution requires a small number of 'on board personnel' for a vessel to be considered safe and be able to navigate freely. Limited exceptions may be allowed for Unmanned Machinery Space (UMS), which are permitted against certification and therefore the required number of personnel on board may be reduced. Exceptions are also permitted for dumb barges and others as stated in our reply to Question 1.2 above which contains a list of ships falling outside the scope of the MLC Rules and therefore do not require the minimum safe manning certificate required thereunder. However, these exceptions cannot be extended to such an extent that a ship will be permitted to navigate without on board personnel. IMO Resolution A.1047(27), ~~as stated above,~~ requires not less than three officers on

board, at least for navigational purposes and the Minimum Safe Manning Certificate issued by the Malta Flag Administration is issued according to the principles and guidelines set out in Resolution 1047(27).

3.2. Regulation 15 of SOLAS Chapter V concerns principles relating to bridge design. It requires decisions on bridge design to be taken with the aim of, inter alia, "facilitating the tasks to be performed by the bridge team and the pilot in making full appraisal of the situation...". In the contest of a remote controlled unmanned ship, could this requirement be satisfied by an equivalent shore-based facility with a visual and aural stream of the ship's vicinity?

Maltese law and practice is oriented towards on board personnel. For this reason, it is the accepted view that the SOLAS requirement for a bridge to be designed in the manner described above would not be satisfied by an equivalent shore-based facility with a visual and aural stream of the ship's vicinity. Changes in the law and practice are required before it can be said that the aforementioned SOLAS requirement could be satisfied through on shore facilities instead of those on the ship.

3.3. As interpreted under national law, could an unmanned ship, failing to proceed with all speed to the assistance of persons in distress at sea as required by Regulation 33 of SOLAS Chapter V, successfully invoke the lack of an on-board crew as the reason for omitting to do so (provided that the ship undertook other measures such as relaying distress signals etc.)?

It is our view that the lack of crew on board can indeed be invoked to excuse an unmanned ship from failing to provide assistance to persons in distress. Maltese authorities may decide to prohibit the registration under the Malta Flag of unmanned ships precisely because such ships will not be in a position to adhere to obligations under SOLAS and provide assistance to persons in distress at sea.

The obligations of a ship to respond to a distress signal can be found in Article 305 of the Maltese Merchant Shipping Act which states:

305.

(1) The master of a Maltese ship, on receiving at sea a signal of distress or information from any source that a vessel or aircraft is in distress, shall proceed with all speed to the assistance of the persons in distress (informing them if possible that he is doing so), unless he is unable, or in the special circumstances of the case considers it unreasonable or unnecessary, to do so, or unless he is released under the provisions of subarticle (3) or (4).

(2) Where the master of any ship in distress has requisitioned any Maltese ship that has answered his call, it shall be the duty of the master of the requisitioned ship to

comply with the requisition by continuing to proceed with all speed to the assistance of the persons in distress.

(3) A master shall be released from the obligation imposed by subarticle (1) as soon as he is informed of the requisition of one or more ships other than his own and that the requisition is being complied with by the ship or ships requisitioned.

(4) A master shall be released from the obligation imposed by subarticle (1) and, if his ship has been requisitioned, from the obligation imposed by subarticle (2), if he is informed by the persons in distress, or by the master of any ship that has reached the persons in distress, that assistance is no longer required.

(5) If a master fails to comply with the preceding provisions of this article, he shall for each offence be liable to imprisonment for a period not exceeding two years or to a fine (multa) not exceeding one thousand units or to both such imprisonment and fine.

(6) If the master of a Maltese ship, on receiving at sea a signal of distress or information from any source that a vessel or air craft is in distress, is unable, or in the special circumstances of the case considers it unreasonable or unnecessary, to go to the assistance of the persons in distress, he shall forthwith cause a statement to be entered in the official log book of his reasons for not going to the assistance of those persons, and if fails to do so, he shall be liable to a fine (multa) not exceeding one hundred units.

(7) The master of every Maltese ship shall enter or cause to be entered in the official log book every signal of distress or message that a vessel, aircraft or person is in distress at sea.

(8) Compliance by the master of a ship with the provisions of this article shall not affect his right, or the right of any other person, to salvage.

306.

(1) The master or person in charge of a Maltese vessel shall, so far as he can do so without serious danger to his own vessel, her crew and passengers (if any), render assistance to every person who is found at sea in danger of being lost, even if such person be a citizen of a State at war with Malta; and if he fails to do so he shall for each offence be liable to imprisonment not exceeding two years or to a fine (multa) not exceeding one thousand

It is our view that ships without on board personnel may have difficulty in satisfying the above requirements of Maltese law.

4. The International Regulations for Preventing of Collisions at Sea, 1972 (COLREGS)

Firstly and by way of a general background to the replies contained below, the COLREGS have been given the force of law in Malta in their totality. To this extent, Regulation 3(1) of the “Prevention of Collisions Regulations” (Subsidiary Legislation 234.20 of the Laws of Malta) states that:

“The Collisions Convention as may from time to time be in force, shall, unless otherwise provided in these regulations and notwithstanding the provision of any other law, form part of and be enforceable as part of the Law of Malta and shall apply to all Maltese ships and to all other ships while they are in Maltese waters as determined by the said Convention.”

There is no separate body of law and/or regulations providing national interpretation guidance to the COLREGS.

A degree of discretionary power is then granted to the Registrar-General of Ships:

The Registrar-General may either on a case by case basis or through the issue of Merchant Shipping Notices -

(a) determine, lay down, prescribe, set or specify what may be required to be determined, laid down, prescribed, set or specified by these regulations or by the Collisions Convention, or expound on the requirements of these regulations or of such Convention or clarify their applicability or interpretation; and

(b) extend any of the provisions of the Collisions Convention to other classes of Maltese ships or, to other classes of ships when they are in Maltese waters, and in so doing, and without prejudice to the generality of the foregoing, the Registrar-General shall be guided by the circulars, clarifications, codes, decisions, directives, guidelines, instruments, interpretations, manuals, notices, publications, recommendations, regulations, resolutions, rules or any other similar medium of the International Maritime Organisation or any other body or organization with an appropriate knowledge or competence on the subject matter.

4.1. Would the operation of an unmanned "ship" without any on board personnel, per se, be contrary to the duty /principle of "good seamanship" under the COLREGS, as interpreted nationally, regardless of the safety credentials of the remote control system?

Owing to the traditional understanding of “good seamanship” and the lack of guidance on the subject ref. the operation of unmanned “ships” (including through the publication of relevant notices/rules by the Registrar-General on the subject, as empowered under Regulation 3(2)(a) and (b)), our inclination is that, YES, the operation of an unmanned "ship" without any on board personnel, per se, be contrary to the duty /principle of "good seamanship".

(2)

- 4.2. Would the autonomous operation of a "ship", without any on-board personnel or any human supervision, be contrary to the duty /principle of "good seamanship", under the COLREGS, as interpreted nationally, regardless of the safety credentials of the autonomous control system?

Yes – see reply to the above.

- 4.3. As interpreted under national law, could the COLREG Rule 5 requirement to maintain a "proper lookout" be satisfied by camera and aural censoring equipment fixed to the ship transmitting the ship's vicinity to those "navigating" the ship from the shore?

No- see reply to the above with the application to the concept of 'proper lookout'. It is our view that the Convention assumes on board personnel. The national approach will be to maintain that proper lookout cannot be satisfied in the manner described above .

- 4.4. Would a ship navigating without an on-board crew constitute a "vessel not under command" for the purposes of COLREG Rule 3(f), read together with COLREG Rule 18, as interpreted under your national law?

This is a moot point, A reading of the law suggests that provided a vessel is able to maneuver as required by the COLREGS (including in accordance with the Rules stipulated in Rule 18), the fact that such vessel is "without an on-board crew" does not automatically make it fall within the scope of the definition of the term "vessel not under command".

Nonetheless, the reasons stated in the above replies must still be taken into consideration as should the fact that at the time the Convention was drafted it was assumed that ships will have on board personnel.

5. The International Convention on Standards of Training Certification and Watchkeeping, 1978 (STCW Convention)

- 5.1. The STCW Convention purports to apply to "seafarers serving on board seagoing ships". Would it therefore find no application to a remotely controlled unmanned ship?

It is our view that STCW as drafted does not apply to remotely controlled unmanned ships unless the Convention is amended in such a way to specifically extend to such ships. STCW will need to be adapted to cater for the different realities that apply in cases of remotely controlled ships.

Having said this, it would be superfluous to apply Conventions such as the STCW convention or the MLC for that matter (Conventions solely based on the Training, Certification or Working Conditions of Crew on board) to an unmanned vessel.

5.2. As interpreted under national law, can the STCW requirement that the watchkeeping officers are physically present on the bridge and engine room control room according to Part 4 of Section A-VIII/2 be satisfied where the ship is remotely controlled?

Not in our view. The definition of a 'seaman' under Article 2 of the Merchant Shipping Act *'includes every person...employed or engaged in any capacity **on board** a ship.'*

Is the situation different with respect to ships with a significantly reduced manning (bearing in mind that the scope of the convention only applies to seafarers on board seagoing ships)?

Not in our opinion.

6. Liability

6.1. Suppose a "ship" was navigating autonomously i.e. through an entirely computerised navigation/collision avoidance system and the system malfunctions and this malfunction is the sole cause of collision damage — broadly, how might liability be apportioned between shipowner and the manufacturers of the autonomous system under your national law?

Our law is fault-based and under general principles, liability between owner and manufacturer will be apportioned according to their respective degree of fault. If fault cannot be apportioned between them, the Civil Code, Chapter 16 of the Laws of Malta, provides that both ship owner and manufacturer will be jointly and severally liable.

'1031. Every person, however, shall be liable for the damage which occurs through his fault. When a person is deemed to be in fault.'

1032.(1) A person shall be deemed to be in fault if, in his own acts, he does not use the prudence, diligence, and attention of a bonus paterfamilias.

(2) No person shall, in the absence of an express provision of the law, be liable for any damage caused by want of prudence, diligence, or attention in a higher degree. Culpable negligence.

1033. Any person who, with or without intent to injure, voluntarily or through negligence, imprudence, or want of attention, is guilty of any act or omission constituting a breach of the duty imposed by law, shall be liable for any damage resulting therefrom.'

With regard to the apportionment of liability between the parties, under the Laws of Malta such a relationship would either be governed by the law of obligations found in the Civil Code, either under the law of contract between the parties or the general laws on tort. Article 1050 of the Civil Code states that:

- (1) Where the part of the damage which each has caused cannot be ascertained, the injured party may claim that the whole damage be made good by any one of the persons concerned, even though all or some of them have acted without malice, saving the right of the defendant to seek relief from the other or the others.
- (2) In such case, it shall be lawful for the defendant to demand that all the persons causing the damage be joined in the proceedings in the manner and for the purposes referred to in article 962 of the Code of Organisation and Civil Proceedings and the court may apportion among them the sum fixed by way of damages, in equal or unequal shares, according to circumstances; saving always the right of the injured party to claim the whole sum from any one of the persons concerned who in regard to him shall be all condemned jointly and severally.

6.2. Arts. 3 and 4 of the 1910 Collision Convention provide for liability in cases of fault. As interpreted under your national law, does the fact that the non-liability situations listed in Art. 2 are not conversely linked to no-fault, leave room for the introduction of a no-fault (i.e. strict) liability (for e.g. unmanned ships) at a national level?

At national level our civil law already provides for limited cases where liability is not fault based in cases of strict or vicarious liability. However, those cases are exceptions to the rule and the Courts of Malta will therefore only apply them in restricted cases which are specifically provided for in the law. Therefore for a case where liability is caused by an unmanned ship, strict or vicarious liability will not apply. The general rule that liability arises only in cases of fault will also apply to unmanned ships.

Article 2 of the 1910 convention, as drafted, would not in our view be the window through which a regime of strict liability (no fault liability) to be extended to unmanned ships, The traditional approach of our courts has been to award damages only in cases where fault is proven or where damages result as a result as a breach of a legal rule or regulation.

