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| From: ARM Committee | ENAV30-5.2.5 |
| To: ENAV Committee |  |

LIAISON NOTE

Technologies to support Maritime Single Window.

# Introduction

This Liaison Note is a response to the Liaison Note adressed to the ARM Committee by the ENAV Committee regarding Technologies to Support Maritime Single Window (see attached ARM15-8.5.1)

The ARM Committee, Work Group 2, Ship Reporting Task Group reviewed the issues raised in the ENAV Liaison Note.

# Discussion

The ARM Committee offers responses to the actions requested as follows:

1. Where does this document fit within the framework of the outcome of FAL45 and the revision to FAL.5/Circ.42/Rev.1 on Guidelines for setting up a Maritime Single Window?

ARM: The Guideline on Ship Reporting from a Shore-based Perspective (G1159) in its description of a “Fully Digital Harmonized System for Ship Reporting” supports FAL.5/Circ.42/Rev.1. It is expected that several IMO Technical Cooperation Projects will address technical and financial barriers that countries face when they are planning to implement an MSW.

G1159 also spells out an alternative to implementing a MSW (i.e. the “Intermediary System for Ship Reporting”) that will enable automated ship reporting. This alternative would allow countries that implement the Intermediary System for Ship Reporting to support automated ship reporting without having to implement a full MSW.

This alternative to a MSW was invalidated by amendments to the annex of the FAL Convention.

1. How is the work on G1159 being coordinated with the work being done by other organisations as noted in this liaison note?

ARM: The work being done by other organizations mainly focuses on definition of data structures and data elements. G1159 does not specify data structures or data elements. Rather it refers to the IMO Compendium. The IMO compendium consists of a data set, a reference model, and mapping to three main standards maintained by the following organizations:

* World Customs Organization (WCO)
* United Nations Economic Commission for Europe (UNECE)
* International Standards Organization (ISO)

1. What data is expected to be required, and where (as this will have an impact on the suitable technology). i.e. for many elements identified in the FAL.5/Circ.42/Rev.1 data will be from shore entity to shore entity. The focus of the work of the ENAV Committee task would be on the data required from ship/shore and shore/ship.

ARM :The Guideline on Ship Reporting from a Shore-based Perspective (G1159), in its description of the Fully Digital Harmonized System for Ship Reporting, envisions information exchanges between ship and shore using an (IP-based) web service (SOAP or REST) that exchanges XML or JSON formatted files. For a portcall, this involves :

1. Transmission of a port entry request from ship to shore
   * Ship Partculars
   * High Level Cargo particulars
   * Voyage Plan Details
2. Transmission of references to required data elements from shore to ship. These refer to the data structures and data elements that are defined in the IMO Compendium and additional data elements that are required by individual countries/ports (for instance unique reporting elements that are required by single EU Member States noted in Part C in the context of the EMSWe Regulation (EU) 2019/1239 that sets the technical and legal framework for the electronic transmission of information about the reporting obligations for ships calling at EU ports).
3. Transmission of the values of the required data elements from ship to shore along with updates of previously transmitted data values.

The bandwidth required for these information exchanges is expected to be relatively modest even with the overhead associated with making information exchanges secure.

G1159 covers ship reporting from a shore-based perspective. Shore-based entities are expected to have IP connectivity with more than sufficient bandwidth to support message exchanges with ships. G1159 does not address IP Connectivity for ships.

1. Consider the most appropriate manner to be engaged with the related work at the ISO group ISO/TC 8/SC 11 (for example, through a rapporteur or with direct IALA participation in the same manner as similar organisation)

ARM: The Guideline on Ship Reporting from a Shore-based Perspective notes the requirement for shore-based stakeholders to harmonize the definition of the data elements of their required reports with the definitions, formats and code lists of data elements published in the [*IMO Compendium on Facilitation and Electronic Business*](https://www.imo.org/en/OurWork/Facilitation/Pages/IMOCompendium.aspx).

The IMO Compendium consists of a data set, a reference model, and mapping to three main standards maintained by the following organizations:

* World Customs Organization (WCO)
* United Nations Economic Commission for Europe (UNECE)
* International Standards Organization (ISO)

IALA is a participant in ISO/TC 8/SC 11 as are Individual IALA Members. However, IALA involvement with WCO’s, UNECE’s and ISO’s additions, deletions or changes of definitions of data structures and elements is not expected to materially improve the value of the guideline for shore-based stakeholders.

1. Obtain the ISO/CD 28005-1 document that deals with the MSW and share this with the IALA membership to support coordination of the work on MSW.

ARM: G1159 refers to IMO Compendium, which includes references to ISO/CD 28005-1.

Also, IMO FAL has published a guideline for setting up a maritime single widow (see [FAL.5/Circ.42/Rev.1](https://wwwcdn.imo.org/localresources/en/OurWork/Facilitation/FAL%20related%20nonmandatory%20documents/FAL.5-Circ.42-Rev.1.pdf)). IALA Members can use it to assist them with establishing a MSW. G1159 in section 4.2.1.2. “Establish National/Maritime Single Window (NSW/MSW) refers to an earlier version of this document. This reference will need to be updated.

1. Obtain clarity on the activity surrounding MSW and document the interface between the Local Port Services (LPS) and Vessel Traffic Services (VTS) for those MSW components that affect these IALA domains

ARM: MSW-based information exchange methodology between ship and shore-based entities envisions a (SOAP or REST) Webservice hosted by the Shore-based entity. This methodology is congruent with the IALA Guideline on Web Service Based S-100 Data Exchange (G1157).

Preferably, a similar methodology should be used for other e-Navigation Maritime Services such as LPS and VTS. Although LPS, VTS and other Maritime Services are outside of the ARM Committeee’s remit, their information exchange methologogies should be harmonized.

1. Review the proposed addition from the ENAV Committee regarding technologies to support ship reporting (section 5.6.5).

ARM: This additional consideration when selecting the communications systems will be added to the next version of G1159.

# Action requested

* + - 1. The ENAV Committee is requested to reviw the reponses to the issues raised in ARM15-8.5.1 and acknowledge that they adequatly address these issues.
      2. The ARM Committee recommends that an IALA Cross Committee be established to address harmonization of ship/shore information exchange methodologies for all e-Navigation Maritime Services