



NIPWG VTC 02 / 2023

Report on IHO collaboration with;
IMO Expert Group on Data Harmonization (EGDH)



IHO

BACKGROUND (SLIDE FROM HSSC 15 NIPWG REPORT)

International
Hydrographic
Organization

1. IMO Expert Group on Data Harmonization (EGDH) is a **subgroup of the IMO FAL committee** and Stefan Engström will act as the permanent IHO liaison to this group.
2. The EGDH maintains the **IMO Compendium on Facilitation and Electronic Business.**
3. Expansion of the IMO Compendium beyond the FAL convention has introduced **some overlap with IHO GI-Registry concepts** requiring harmonization of definitions.
4. Collaboration between NIPWG and EGDH has been sporadic over the years, but has increased since 2022 with **NIPWG participation at EGDH** since EGDH 7 in 2022.



IHO

EGDH (FAL) VS. HGDM (MSC)

International
Hydrographic
Organization

- *EGDH not to be confused with;*
 - *The **IMO/IHO HARMONIZATION GROUP ON DATA MODELLING (HGDM)**, reporting to MSC- committee / NCSR)*



IHO

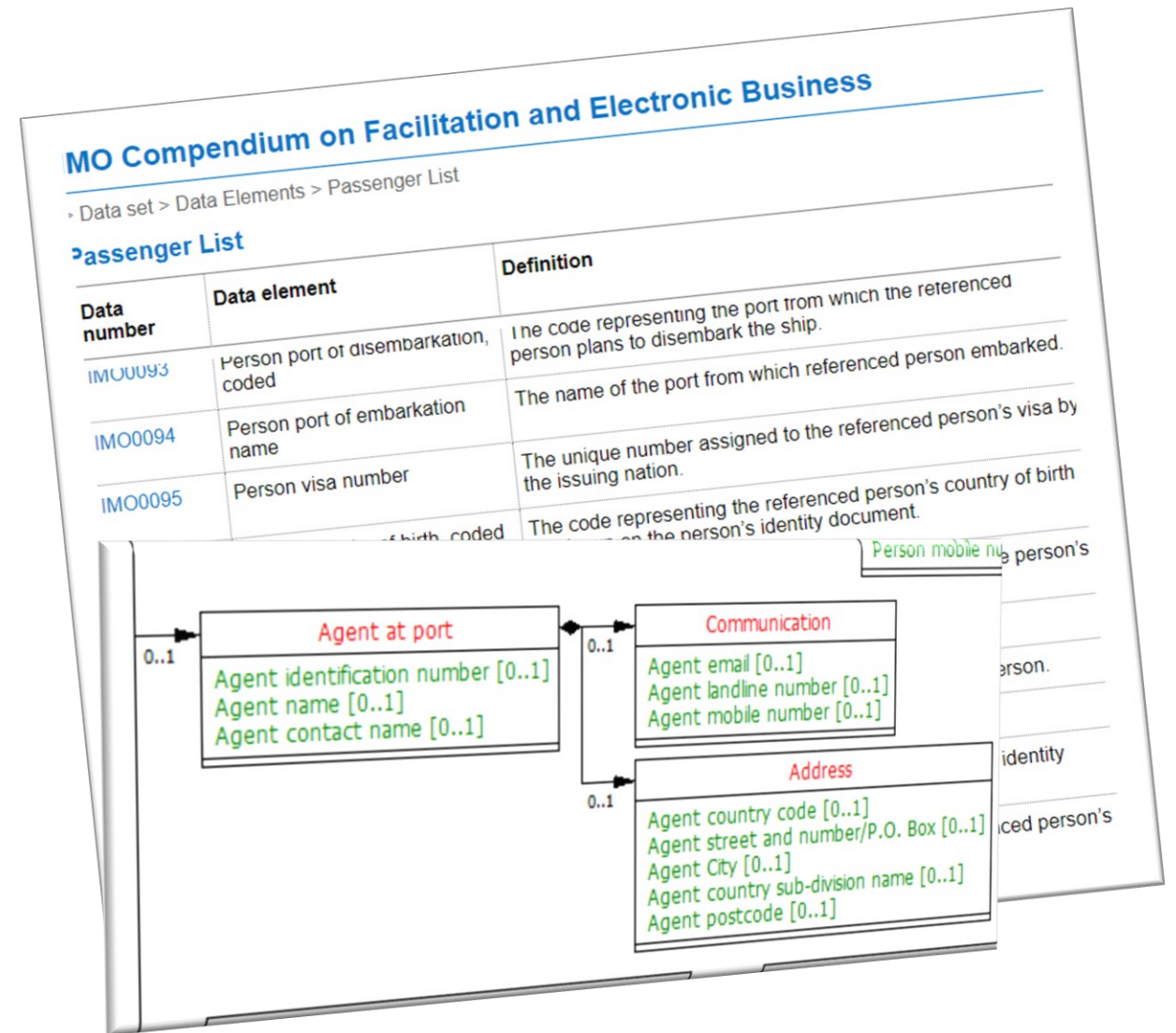
IMO COMPENDIUM IS BASED ON EDIFACT

International
Hydrographic
Organization

- UN/EDIFACT = the United Nations rules for Electronic Data Interchange for Administration, Commerce and Transport
 - a set of internationally agreed standards, directories, and guidelines for the electronic interchange of structured data, between independent computerized information systems.
- Relation to ISO 28005-1:2013
 - Security management systems for the supply chain — Electronic port clearance (EPC)

IMO Compendium content

- List of abt. 500 data elements, used in 17 datasets, expanding.
- An IMO reference data model, where the data elements are grouped into classes within a top-down hierarchical structure (UML)
- The IMO compendium currently goes beyond IMO and beyond the required reporting by FAL-convention. The intention is to expand the compendium.





IHO

IMO COMPENDIUM DATASETS

International
Hydrographic
Organization

- General Declaration
- Cargo Declaration
- Ships Stores Declaration
- Crew's Effects Declaration
- Crew List
- Passenger List
- Dangerous Goods Manifest
- Security Report
- Adv. Notif. Waste Delivery
- Maritime Declaration Health
- Just In Time Concept
- Stowaways
- Ship and Company Certificates
- Inspections
- PSC Inspection History Data
- Ship Reporting Systems
- Ballast Water Arrival Reporting
- Waste Delivery Receipt
- Adv. Passenger Information
- Verified Gross Mass

IMO Compendium use

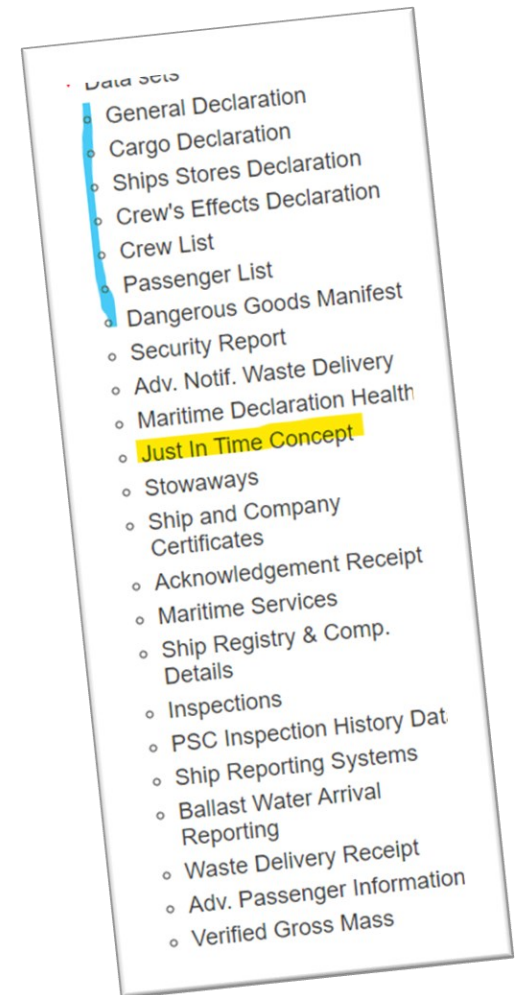
- The compendium should not be considered a convention or regulation by itself, but merely a tool to support data exchange
- Member states are encouraged by FAL 46 to use the IMO Compendium as a reference for implementations of the **Maritime Single Window**.



Image of data classification from a presentation at Maritime Single Window 2024 – A window of opportunities", a two-day Symposium (18-19 January 2023) jointly organized by IMO, [IAPH](#) and [BIMCO](#), with the support of the International Port Community Systems Association ([IPCSA](#)).

IMO-IHO collaboration

- Based on the outcome of EGDH 7 in 2022, FAL 47 agreed to;
 - collaborate with IHO to identify the intersection between the IMO reference data model and the S-100 product specifications (FAL 47/7, paragraph 3.10);
 - organize a meeting between IHO and IMO to discuss how to best **map the relevant S-131 information** to the IMO reference data model (FAL 47/7, paragraph 3.11);
 - add a standing agenda item to the EGDH provisional agenda to cover collaboration with IHO (FAL 47/7, paragraph 3.12);
- IHO NIPWG
 - rep. attends EGDH- meetings
 - standing agenda item for collaboration with IMO EGDH





IHO

EGDH 8 REPORT TO FAL 48, SELECTED ITEMS

International
Hydrographic
Organization

- EGDH 8;
 - noted that **identifying structural differences** might be necessary to support the harmonization of specific data elements and;
 - recalled that since all **e-navigation related Maritime Services should be conformant with the S-100 framework** while some of the Maritime Services relevant to the FAL Committee used the IMO reference data model, harmonization of both would be beneficial, and;
 - agreed to initiate a **mapping exercise** of selected IMO datasets into S-100 structure, in order to identify (structural) gaps, and;
 - expressed appreciation to IHO and noted that progress and findings of the gap analysis would be presented at EGDH 9



IHO

MAPPING EXERCISE (ONGOING)

International
Hydrographic
Organization

- IMO Compendium translated by scripting into S-100 style FC
- Selected datasets investigated
- Outcome will be a report of gaps identified during the process, presented at NIPWG 10 and EGDH 9
- Aim of the exercise is **not** to create an S-100 PS

```
</S100:datasetTopicCategory>transportation</S100:datasetTopicCategory>  
<S100:datasetPurpose>base</S100:datasetPurpose>  
<S100:updateNumber>0</S100:updateNumber>  
</S100:DatasetIdentificationInformation>  
▼ <members>  
  ▼ <Passenger_List gml:id="fiho.s100.IMO.Passenger_List.0001">  
    <agent_contact_name>Bond James</agent_contact_name>  
    <agent_identification_number>007</agent_identification_number>  
    <agent_name>M5</agent_name>  
    <arrivaldeparture_code code="1">Arrival</arrivaldeparture_code>  
    <authentication_date>2022-12-30</authentication_date>  
    <authenticator_name>Moneypenny Miss</authenticator_name>  
    <date_and_time_of_arrival_estimated>2023-01-01T00:00Z</date_and_time_of  
  ▼ <passenger>  
    ▼ <personOnBoardBasicData>  
      <person_on_board_sequence_number>1</person_on_board_sequence_number>  
      <person_fam...>...</person_fam...>  
      <person_give...>...</person_give...>  
      <person_port...>...</person_port...>  
      <person_cour...>...</person_cour...>  
    </personOnBoa...>...</personOnBoa...>
```

```
-----  
3/419 S100_FC_SimpleAttribute: IMO0002 (text) used in: ag  
Crews_Effects_Declaration, Crew_List, Passenger_List, Danger  
-----  
->  
<S100FC:S100_FC_SimpleAttribute>  
  <S100FC:name>IMO0002</S100FC:name>  
  <S100FC:definition>The agent's employee contact name. T  
  <S100FC:code>agent_contact_name</S100FC:code>  
  <S100FC:valueType>text</S100FC:valueType>  
</S100FC:S100_FC_SimpleAttribute>  
->  
-----
```

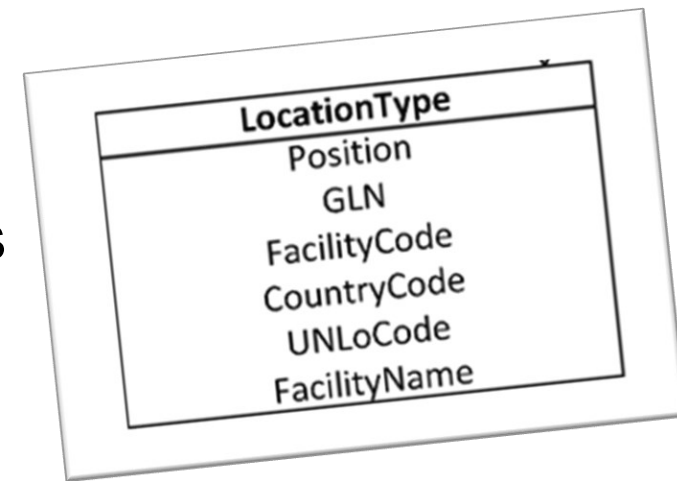


IHO

CURRENT FINDINGS

International
Hydrographic
Organization

- Current overlap found mostly among data in IMO Just In Time- arrival dataset and IHO S-131.
- Common elements include S-131 "Layout features"
 - Port, Terminal Berth, Anchorage, Pilot boarding place etc.
- Definitions in GI-registry and IMO Compendium mostly harmonized
- Discussion ongoing within the group;
 - mechanism to enforce optional / mandatory attributes
 - need for sub-models (complex structures)
 - need for additional user guidance
 - use of identifiers for berth, terminal, port etc.





IHO THE END

International
Hydrographic
Organization

Thank you!

Contact: stefan.engstrom@traficom.fi / NIPWG chair team

NAUTICAL DATA



OPERATIONAL DATA



ADMINISTRATIVE DATA

