

# **Position Paper**

## **OSV Decarbonisation Forum: Data- & Reporting Standards**

### **September 2024**

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#### **Introduction**

At the OSV Decarbonisation Forum session on 8 February 2024, a project team started working on Data-& reporting standardisation following Principle 10 of the OSV Decarbonisation Principles: “Performance data should be transparent and shared in a standardised format, ensuring credibility and ease of access”. The project team participants represent vessel owners, vessel charterers, ship classification societies, maritime data & management information technology companies and trade associations. The project team is hosted by the ISOA Secretariat and is organised in compliance with the “ISOA Statement of Compliance with Competition Law” and “Code of Practice” of the OSV Decarbonisation Forum.

#### **Objective**

Objective: Develop an OSV sector Data- & Reporting Standard (Version 1.0) supported by charterers, owners and other stakeholders by further shaping and developing existing OSV sector data- & reporting standards.

#### **Context**

The OSV sector will have to manage the increasing demand for decarbonisation and the opportunities and expectations of regulators, authorities, markets, and the general public. Transparent data and reporting are thereby key elements for decarbonisation successes, and an OSV sector standard will accelerate this process. Energy consumption, emission data, and other key data points are widely reported in the shipping sector, providing valuable input for the OSV sector project team. The project team also contributes to alignment on this topic within the OSV sector by regularly sharing progress information with OSV sector stakeholders, inviting & welcoming new participations to the project and encouraging all involved to use the project network established to engage with each other on data pro-actively- & reporting standardisation topics.

#### **Approach**

The project team applied a conversation-style team approach, focusing on practical solutions and proposals, applying best practices, and sharing information with a low admin burden for participants. A monthly meeting cycle via TEAMS, file notes capturing points discussed & progress, and email exchanges in between meetings. The time, effort, and input given to the project by all project team participants are very valuable, and good progress was made together. Special thanks to the project participants at both ends of the time zones for your willingness to receptively join early morning and early evening sessions!

## Pointers

Following the initial project team meetings and general input received, main OSV sector conclusions and observations were identified as pointers for developing the project team's recommendations. Such as building on existing data- & reporting strengths, proposing key changes to enhance decarbonisation impact, involving and informing the wider OSV sector, and ensuring that setting and developing the OSV data- & reporting standard is practical and gradual.

Describing the OSV sector, the following was noted:

- Availability of data in the OSV sector is in general good, and the data quality in general high
- A fragmented reporting approach, resulting in limited OSV sector transparency
- A wide range of good ship management systems, voyage & operations systems, remote monitoring systems and other (ICT-) reporting infrastructure is in place.
- "Noon-report" or "Midnight" reporting cycles, capturing a 24-hour vessel dataset, and vessel logbooks are verifiable, well-established and managed data sources to be used as source data
- Data formats and definitions are often owner- and/or charterer(-contract) specific, be it that overall data- and reports circulating in the OSV sector are generically similar.

In developing the OSV data- & reporting standard, the following recommendations were applied:

- Data- & reporting standardisation is a continuous development process
- Defining a Version-1.0 is now a priority, and this is a starting point for future enhancements
- Make a step-change in decarbonisation data- & reporting elements to increase transparency
- Recognise the specific operating and service characteristics of the OSV- sector and vessels
- Data collection via existing reporting practices & processes in place and covering 24/7/365 data
- Low (admin & process) burden for vessel crew(s) and providing new valuable insights for them
- Reporting recommendations by charterers and stakeholders very welcome and important
- Data- & reporting standardisation to be kept aligned with/prepared for regulatory requirements

## Recommendations

The recommendations for the development of the OSV data- & reporting standard are centred around six main themes:

### 1) Implement the "Operating mode" data category => increase transparency

It is recommended that the concept of vessel "operating mode" be introduced to enhance the transparency of the vessel's operating profile and the OSV sector. Vessel operating modes allow allocating data to and reporting vessel performance for three generic modes:

- In port: the period a vessel is in or around a port area, including anchorage
- In transit: the period a vessel is in transit, in a voyage, between two port areas, or between a port area and field (or v.v.) or between two field locations.
- In-field: the period between the moment the vessel has arrived at the location for providing offshore services and the moment she departs from her service location

By applying these 3 generic operating modes to the vessel (decarbonisation) data & reporting structure, the reporting transparency for the sector is substantially enhanced, and the specific characteristics of the offshore support vessel work are structurally better reflected in data and reporting.

### 2) Implement "stamps", capturing 3 date elements => increase decarbonisation data depth

It is recommended to routinely capture 3 additional data elements, called stamps (or tags), to increase reporting functionality and insights for decarbonisation purposes. This is to be achieved in combination with the introduction of operating modes by registering a "time stamp", a "location stamp" and a "bunker-energy stamp" the moment an "Operating mode" change takes place.

The three defined “stamps” (or tags) are:

- a. Time stamp: capturing the (local and/or UTC) time of the operating mode switch
- b. Location stamp: capturing the coordinates of the vessel at the moment of operating mode switch
- c. Bunker-energy stamp: capturing the quantity of remaining bunkers (bunkers, e-fuels, green-fuels, all) on board the vessel at the moment of the operating mode switch

Including these 3 data “stamp” elements will allow for linking energy consumption and emission reporting to operating modes and transparency of corresponding time duration and location data.

### **3) Implement the “Activity type” data category => drill-down insights per operating mode**

To create additional insight into the specific vessel activity within an operating mode, by describing the specific service provided by the vessel, an initial 19 generic activity types have been defined. These activity types describe most of the activities an offshore ship can be involved in. These range from the vessel laying “idle”, which could mean waiting for her next activity “In field” or waiting for departure “In port”, to a list of main activities like “cargo activities”, “subsea activities” and “seismic activities”. Going forward, the activity type list will be reviewed and enhanced to ensure all relevant OSV sector activities are covered. Within a single operating mode, multiple activities can take place. Implementing the “Activity type” data category concept is recommended. The list of activity types can be further extended as per OSV Decarbonisation Forum events and recommendation.

Note 1: for now, “activity type” reporting is not linked to “stamp” registration; the option to do so is, of course, always there.

Note 2: it has been mentioned that some offshore activities (could also) take place both in the “in field” and the “in transit” mode, for example, some AHTS activities and ROV operations. While it would be recommended to report such activities under the “In field” mode by using the relevant activity type, applying the “in transit” mode in combination with the activity type would still allow to separate the vessel voyage transit element from the vessel activity element.

Note 3: the specific case of vessels not leaving the port area and delivering their services within that same port area can also be captured by reporting all activities within the “in port” operating mode. In that case, applying the 3 data stamps (time/location/bunkers-energy) is recommended to allow for good reporting functionality.

Note 4: and there will be more exceptions and topics to be clarified; this is part of the ongoing process going forward 😊

### **4) Implement “event flags” => include unique offshore events**

There are three main event types that are mostly unique for offshore shipping, which are included in offshore operating guidelines and manuals and impact vessel operations offshore. Therefore, it is recommended to routinely register these events, which are:

- a. On DP: the duration for which the vessel is controlled by the Dynamic Positioning (DP) system
- b. Within a safety zone: the duration for which the vessel is positioned within a defined safety zone (which can be a 500m zone, 50m zone etc.)
- c. Drift-on position: the duration for which the vessel is positioned in a drift-on position of any surrounding asset/vessel/object

The objective is to start with structurally capturing “event flag” base data for the OSV sector, at least capturing the events taking place and the number of hours involved. More enhanced data capture, like including stamps and linking event flags with activity type, is encouraged and will be further developed over time.

The recommendation is also to include a more generic shipping event regarding the use of shore power to register when and how long a vessel has been connected to shore power. The “intake” of e-power can thereby be reported as per existing bunker-energy intake reporting procedures in place by reporting type & quantity. Other events like jacked-up, to be used for jack-up vessel events, can also be included to increase data depth where needed.

**5) Implement an OSV Standardised Vessel Dataset => clear definitions and industry aligned**

It is recommended to create an OSV Standardised Vessel Dataset, which lists and defines the mandatory data fields to be captured via the owner's existing data collection and reporting set-up, to achieve the benefits of the above-mentioned 4 previous recommendations. A Version 1.0 of the OSV Standardised Vessel Dataset has been drafted as guidance, which will be further and regularly updated and enhanced based on input received from the OSV sector and shipping industry stakeholders via the OSV Decarbonisation Forum.

**6) Agree an energy consumption & GHG emission conversion => set industry standard**

Define and agree on the OSV sector standard for conversion of energy consumption data into GHG emission volume reporting data. The recommendation is to use the current FuelEU values (CO<sub>2</sub>e, Cf, Cslip, EF, Savings) and the IMO GWP100 values (CH<sub>4</sub> and N<sub>2</sub>O) values and replace these with IMO LCA Guidelines once available. A Version 1.0 conversion table, listing LCV & GHG intensity values for a wide range of fuels, has been drafted and will be kept up to date going forward based on feedback from the OSV sector and industry standards.

**Attachments:**

- Definitions:
  - o Operating modes
  - o Activity types
  - o Stamps
  - o Event flags
- Standardised Vessel Dataset (per separate file)
- Energy consumption and GHG conversion table
- OSV 10 Decarbonisation Principles
- ISOA Competition Law Compliance Policy
- OSV Decarbonisation Forum Code of Conduct

## **Attachments:**

### **Definitions:**

#### ○ **Operating modes V1.0:**

Three operating modes have been defined:

- In port: the period a vessel is in or around a port area, including anchorage
- In transit: the period a vessel is in transit, in a voyage, between two port areas, or between a port area and field (or v.v.) or between two field locations.
- In-field: the period between the moment the vessel has arrived at the location for providing offshore services and the moment she departs from her service location

#### ○ **Activity types V1.0:**

Nineteen activity types have been defined:

- Drydocking
- Breakdown
- Maintenance & repair
- Bunkering
- Alongside
- At anchor
- Manoeuvring and shifting
- General standby
- ERRV standby activities
- Cargo activities
- Passenger & SPS personnel activities
- Anchor handling & towing activities
- Subsea activities
- Diving activities
- ROV activities
- Seismic activities
- Medivac & rescue activities
- Other activities
- Idle (including waiting and lay-up)

#### ○ **Stamps V1.0:**

Three generic stamps are defined:

- Time stamp: capturing the (local and/or UTC) time
- Location stamp: capturing the coordinates of the vessel
- Bunker-energy stamp: capturing the quantity of remaining bunkers (bunkers, e-fuels, green-fuels, all) on board the vessel

Moment of taking a "stamp":

- Change of Operating mode: capturing a Time stamp, a Location stamp and a Bunker stamp are recommended
- Change of Activity type: optional and it is suggested to at least capture a Time stamp
- "Start" and "End" of a defined Event type: optional and it is suggested to at least capture a Time stamp

○ **Event flags V1.0:**

Four OSV Event flags are currently defined:

- On DP: when and the duration for which the vessel is controlled by the Dynamic Positioning (DP) system
- Within a safety zone: when and the duration for which the vessel is positioned within a defined safety zone (which can be a 500m zone, 50m zone etc.)
- Drift-on position: when and the duration for which the vessel is positioned in a drift-on position of any surrounding asset/vessel/object
- Connected to shore power: when and the duration for which the vessel is connected to shore power

**Standardised Vessel Dataset V1.0:**

Provided per separate file in combination with this document

File name: Standardised Vessel Dataset (SVD) draft V1.0 ISOA 2024.xlsx

**Energy consumption and GHC conversion table V1.0:**

Fuel Class	Pathway name	LCV MJ/g	GHG Intensity gCO2e/MJ
<b>Fossil</b>	HFO (RME to RMK)	0,0405	91,60
	LFO (RMA to RMD)	0,0410	91,25
	MDO, MGO (DMX to DMB)	0,0427	90,63
	LNG Otto DF medium speed	0,0491	91,03
	LNG Otto DF slow speed	0,0491	83,83
	LNG Diesel DF slow speed	0,0491	76,13
	LNG LBSI (Lean-Burn Spark-Ignited)	0,0491	88,46
	LPG butane	0,0460	74,74
	LPG propane	0,0460	74,08
	H2 natural gas	0,1200	132,40
	NH3 natural gas	0,0186	123,64
	Methanol natural gas	0,0199	102,86
	<b>Biofuels</b>	Ethanol	0,0270
Bio-diesel FAME		0,0370	16,37
Bio-diesel FAEE		0,0380	16,33
Hydrotreated Vegetable Oil (HVO)		0,0440	17,10
Liquefied Bio-methane (Bio-LNG) Otto DF medium speed		0,0500	35,02
Liquefied Bio-methane (Bio-LNG) Otto DF slow speed		0,0500	27,96
Liquefied Bio-methane (Bio-LNG) Diesel DF slow speed		0,0500	20,39
Liquefied Bio-methane (Bio-LNG) LBSI		0,0500	32,50
Bio-Methanol		0,0200	17,50
Bio-H2		0,1200	28,20
<b>RFNBO</b>	e-diesel	0,0427	17,13
	e-DME	0,0280	16,79
<b>Notes:</b>			
	1 Table created on 9 May 2024.		
	2 The table is based on FuelEU values (CO2e, Cf, Cslip, LCV, EF, Savings) and the IMO GWP100 values for CH4 and N2O.		
	3 When the IMO the LCA Guidelines -see MEPC.376(80)- are progressed and a comprehensive list of fuels with values is available, then the table can be revised.		

**OSV 10 Decarbonisation Principles:**

The OSV 10 Decarbonisation Principles: <https://www.isoaoffshore.org/osv-10-decarbonisation-principles>

**ISOA Competition Law Compliance Policy:**

ISOA Competition Law Compliance Policy: <https://www.isoaoffshore.org/competition-law-compliance-policy>

**OSV Decarbonisation Forum Code of Practice:**

OSV Decarbonisation Forum Code of Practice: <https://www.isoaoffshore.org/code-of-practice>