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IMPA MARITIME ENVIRONMENTAL FOOTPRINT (IMEF) INITIATIVE

DIGITAL WORKFLOW & EMISSIONS DATA INTEGRATION

IMPLEMENTATION PACK FOR
PROCUREMENT PLATFORMS

impa|save
People, Planet, Profit, Purpose

**im
pa** International
Marine
Purchasing
Association

Procurement Platform Manager

Introduction to the IMEF Digital Workflow

The International Maritime Environmental Footprint Initiative (IMEF) is a collaborative initiative aimed at standardising the collection and exchange of emissions data across the maritime supply chain. By establishing a common digital workflow, IMEF enables transparency, traceability, and accountability in emissions reporting. This initiative is crucial for driving sustainability in procurement decisions, ensuring that emissions data becomes a fourth dimension alongside price, quality, and availability.

This document provides role-specific instructions to support the implementation of the IMEF Digital Workflow. Each chapter outlines the responsibilities and system requirements for key stakeholders in the supply chain.

ROLE-SPECIFIC INSTRUCTIONS

As a Procurement Platform Interface Manager, your platform must be able to receive and forward emissions data at both the quotation and order confirmation stages. If emissions data is not received from suppliers, your platform must implement an agent capable of identifying the category and weight of the transacted item. This agent should fetch emissions data from external databases such as Exiobase or Ecoinvent and label the data as spend-based or weight-based before passing it to the buyer's ERP system. The implementation can be in 2 phases, phase 1 implement the fields to enable the transactional data, phase 2 the agent 'filling the blanks'.

RELEVANT DATA FIELDS

Attached to this document is the IMEF Digital Transactions Appendix data fields list, customised for PROCUREMENT PLATFORMS TRANSACTIONAL and for PROCUREMENT PLATFORM PCF AGENT. The fields highlighted in the PROCUREMENT PLATFORMS TRANSACTIONAL list, should be created in your Transactional software to be able to receive from Suppliers and transfer further to the Buyers the information around PCF Emissions. (Phase 1). In case the information received from the supplier are missing the PCF Emissions, the PROCUREMENT PLATFORM PCF AGENT list highlight the fields which should trigger the AGENT and the fields to be used by the AGENT to fetch the PCF Emissions from the Exiobase or Ecoinvent databases. (Phase 2)

Thank you for your commitment to the IMEF initiative. Sustainability in the maritime supply chain begins with data visibility. By enabling emissions transparency, we pave the way for procurement decisions that consider not only price, quality, and availability, but also environmental impact.

IMEF Digital Transactions Appendix

for **PROCUREMENT PLATFORMS TRANSACTIONAL**

TRANSACTIONAL PLATFORM Must be added to your IN and OUT data?	AGENT the agent is triggered when the PCF Total Carbon Footprint is <blank>
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Title	Description	Field Name in the interface	Type	Digits	Reference/Standard	Y N	Remarks	Used by Agent	Remarks
Supplier's Information:									
SUPPLIER ID	a unique reference for all purchasing systems and procurement platforms to identify the vendor, for the time being the procurement platform id, a mapping could be generated	SUPPLIER ID	Alphanumeric	50	The buyer assigned id for the vendor + the procurement platform id or a new database generated by IMPA or similar	N	already there		
Supplier Country	the country of the supplier	SUPPLIER COUNTRY	Alphanumeric	3		Y	If not there already	Y	Can be used as an alternative CRADLE to refine the calculation, in case COUNTRY of ORIGIN is blank
Product Information:									
Product ID: 123456789	The supplier unique reference for the item (not to be confused with IMPA code or PART NUMBER) this is the internal unique reference used by the supplier in his ERP to uniquely refer to the specific item/lot/batch etc.	SUPPLIER REF ID	Alphanumeric	128		Y	If not there yet, make sure not to confuse this with IMPA Code or Part Number.		

Product maker: qwerty	the maker/manufacturer/ producer, if known	MAKER	Alphan umeric	128		Y	If not there yet		
Product Specification: qwerty	a text field containing a collation of all the info available in the transaction, typically the line1, line 2, line....x, of the item, spare part ref/code and remarks /notes merging both the buyer and vendor info	PRODUCT SPECIFICATIO N	Alphan umeric	MEMO		Y	optional	Y	Can be used by an agentic AI to identify the CATEGORY in case CATEGORY is blank
MAKER ID/MSG CODE	the maker or supplier unique reference, typically the PART NUMBER or IMPA CODE or a catalogue reference used to identify the product commercially	MAKER ID	Alphan umeric	50		N	already existing		
COUNTRY OF ORIGIN (CRADLE)	The origin of the item, if available	COUNTRY OF ORIGIN	Alphan umeric	3	ISO 3166 COUNTRIES	Y	if not there yet	Y	Can be used to refine calculation on both SPEND BASIS and WEIGHT BASIS for those CATEGORIES providing regional based Emission Factors
WEIGHT PER UNIT	the weight per unit	WEIGHT PER UNIT	Numeri cal	5		Y	if not there yet	Y	If populated, trigger the use of WEIGHT BASIS methodology hence the use of ECOINVENT database for fetching the emission factor
CATEGORY	The product category of the item in order to identify the Emission factors in EXIOBASE (for spend basis) and/or ECOINVENT (for weight basis) for the calculation by the web service in case the PCF is not provided by the vendor	CATEGORY	Alphan umeric al	50	EXIOBASE product category for spend basis or ECOINVENT category for weight basis in conjunction with above WEIGHT per UNIT	Y		Y	If blank could be populated by an agentic AI using the item description. Use ECOINVENT or EXIOBASE product categories basis the intention to use SPEND or ACTIVITY Basis methodology for this transaction

Transaction data									
COUNTRY OF DELIVERY (GATE)	The place in which the delivery is taking place and for which the supplier is providing data on (GATE) Could be extrapolated from the EXW if not available elsewhere	COUNTRY OF DELIVERY	Alphanumerical	3	ISO 3166 COUNTRIES	Y	If not there yet, use the EXW or the VENDOR country	Y	Can be used to refine calculation on both SPEND BASIS and WEIGHT BASIS for those CATEGORIES providing regional based Emission Factors
VALUE	The unit price of the item	VALUE	Numerical	99,999,999.999		N	already existing		
CURRENCY	The currency of the transaction	CURRENCY	Alphanumerical	3	ISO 4217 CURRENCIES	N	already existing		
UNIT OF MEASURE	the unit of measure of the transaction	UNIT OF MEASURE	Alphanumeric	5	TBA	N	already existing	Y	the agent could determine by the UOM if the item PCF could be calculated using 'weight basis' methodology.
QUANTITY	The quantity transacted	QUANTITY	Numerical	99,999,999.999		N	Already existing		
USD/EUR VALUE	A transitional calculation based on exchange rate to be used ad hoc in case the AGENT need to calculate PCF Emissions using spend basis	USD/EUR VALUE	Numerical	99,999,999.999		Y	if not there yet	Y	In case of SPEND BASIS methodology used, the Emission Factor in EXIOBASE will be basis a specific currency
Environmental Impact:									
Date of Calculation:	it is the date of the calculation, can be in the past	DATE OF CALCULATION	DATE	DATE		Y	if available this data will come from suppliers		
Total Carbon Footprint:	the cradle to gate emissions in Kg CO2 equivalent (ie 1500.25 kg CO2 equivalent (CO2e))	PCF	Decimal (999.99)	6+4		Y	if available this data will come from suppliers		If blank AGENT should populate this field as a result of the AGENT OUTCOME

Lifecycle Stages Included:	a text description with Raw material extraction (A1), transportation to manufacturing (A2), manufacturing process (A3)	LIFECYCLE STAGES	Alphanumeric	50	EPDF Taxonomy	Y	if available this data will come from suppliers		
EF EMISSION FACTOR	The Emission Factor utilised to calculate the Emissions or viceversa the result of the emissions/weight or value	EF	Numerical	5+4		Y	if available this data will come from suppliers	Y	If blank will trigger AGENT to calculate using SPEND BASIS via EXIOBASE or WEIGHT BASIS via ECOINVENT depending on data available in the transaction
INFLATION ADJUSTMENT	the inflation adjustment used	INFLATION ADJ	%	2+2		Y	if available this data will come from suppliers		If blank AGENT should populate this field as a result of the AGENT OUTCOME
Data Quality and Verification:									
Calculation Method:	a text indicating the calculation methodology used	CALCULATION METHOD	Alphanumeric		ACTIVITY BASIS / SPEND BASIS / WEIGHT BASIS / LCL	Y	if available this data will come from suppliers		If blank AGENT should populate this field as a result of the AGENT OUTCOME
Verification Status: Independently verified	a text indicating the status of the verification	VERIFICATION STATUS	Alphanumeric	50	Y/N	Y	a Y/N basis if the supplier provided relevant info around independent verification of their data.		
Verification Document: EXAMPLE URL		VERIFICATION DOCUMENT	URL	100	URL	Y	URL of the verification certificate		
Traceability and Transparency									
Date Traceability Identifier:	a unique reference to identify (i.e. abc123xyz789tracehash)	DATE TRACEABILITY IDENTIFIER	Alphanumeric	100	#.....	Y	if available this data will come from your suppliers		

Emission Factors Version Used	reference to the emission factors used (ie EFv2025.1)	EF USED VERSION	Alphan umeric	50	FREE TEXT	Y	if available this data will come from your suppliers		If blank AGENT should populate this field as a result of the AGENT OUTCOME
Data Source: Supplier provided, externally audited		DATA SOURCE	Alphan umeric	50	TBA	Y	if available this data will come from your suppliers		