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List of Abbreviations

Automated System for Customs Data
Bunker Adjustment Factor
Coordinated Actions to Reduction Emissions from Ships
Climate Change Unit
Comprehensive Impact Assessment
Cost, Insurance, and Freight
Department of Partnerships and Projects
Environment and Conservation Division
Economic and Social Commission for Asia and the Pacific
Free On Board
Freedom of Information Act
Gross Domestic Product
Greenhouse Gases
Global MTCC Network
Global Transport Costs Dataset on International Trade
Global Value Chain
Harmonized System
International Chamber of Commerce
International Maritime Organization
International Merchandise Trade Statistics
Information Technology
Integrated Technical Cooperation Programme
Kilogram
Least Developed Countries
Liquified Natural Gas
International Convention for the Prevention of Pollution from Ships
Marine Environment Protection Committee
Memorandum of Understanding
Maritime Technology Cooperation Centre
Cubic Meter
Non-Disclosure Agreement
National Statistics Office
Ozone Depleting Substance
Pacific Data Hub
Pacific Island Countries and Territories
Small Island Developing State
Pacific Community
Statistics Quality Assurance Framework
IMO Technical Cooperation Committee
Twenty-foot Equivalent Unit

List of Abbreviations (continued)

Tonnes	Metric Tons
THC	Terminal Handling Charge
UN	United Nations
SMART	Sustainable Maritime Transport Training Programme
SQAF	Statistics Quality Assurance Framework
UNCTAD	United Nations Conference on Trade and Development
UNSD	United Nations Statistics Division
USD	United States Dollars
WCO	World Customs Organization
WTO	World Trade Organization

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Executive Summary

International maritime transport plays a central role in global merchandise trade, carrying 70% of that trade by value and more than 80% by volume. However, it is also a significant source of greenhouse gas (GHG) emissions, accounting for 2.89% of global emissions in 2018.

The Vision set out in the <u>2023 International Maritime Organization (IMO) GHG Strategy</u> confirms IMO's commitment to reducing GHG emissions from international shipping and, as a matter of urgency, to phasing them out as soon as possible while promoting, in the context of this Strategy, a just and equitable transition. The IMO GHG Strategy recognizes that the possible impacts on States of candidate GHG reduction measure should be assessed and taken into account as appropriate before their adoption.

For Member States that rely heavily on maritime transport and/or are distant from their markets, it is crucial to improve access to detailed, nationally derived and relevant transport cost data for both future impact assessments and to track the magnitude of actual impacts over time so that disproportionately negative impacts can be assessed and addressed, as appropriate.

The trade and in-country conditions for each country, especially Small Island Developing States (SIDS), is unique and even though a country may be in the same geographical region as other SIDS, their important differentiating characteristics mean that using surrogate data should be avoided. In some cases, the lack of available data may impede quantitative modelling of impacts of measures on States, and in-country data collection is needed through conducting stakeholders' analysis to complement quantitative modelling. Similarly, without detailed maritime transport cost data, the ability to track overtime in-country impacts from the measures (ex-post impact) and the consideration of adjustments to measures or potential mitigation opportunities may be constrained.

The United Nations Conference on Trade and Development (UNCTAD) has rich expertise in the area of maritime trade and a long record of experience in assisting countries in the setup and reinforcement of statistics production systems as well as in the management of related capacity building programs.

The purpose of this Guidebook is to provide insight on the need for quality macroeconomic, maritime transport costs, along with detailed port and fleet data , and possible concrete approaches to improve data collection. One of the key themes of the Guidebook is need for building, enhancing, or integrating in-country data collection programs as an essential element to establishing and maintaining the data streams needed for identifying potential impacts on States and/or the fleet prior to implementing an IMO GHG reduction measure, and to track and identify impacts overtime from implemented measures.

The Guidebook also brings forward key points identified in the comprehensive impact assessment of the short-term IMO GHG reduction measure, the IMO project on improving the availability of maritime transport costs data in the Pacific region and the related roundtable held in Fiji in February 2023, as well as other similar projects, which provide further insights on the potential approaches to challenges faced by countries when identifying, sourcing, collecting and using maritime transport cost data.

It should be noted that the Guidebook is not intended to provide a "one-size-fits-all" methodology for data collection as each country has its own unique organizational structures and dynamics that must be taken into account when developing data collection programs. This Guidebook should be taken as providing context, insight, suggestions for the countries' consideration and a place to start from.

The Guidebook provides definitions and key terms that are for the purposes of clarity related to the approaches and data needed in terms of an impact assessment and are only appliable to this Guidebook. In addition, specific data fields and definitions are identified for relevant, macroeconomic, transport cost, and port data typically used in impact assessments.

The Guidebook sets out and discusses the fundamental steps to consider related to the data collection process, as provided in Figure ES.1 on the next page. These steps are discussed and illustrated to provide a recommended process from which a country could adapt and enhance their data collection processes.



Understanding the data flow for the specific country is important and helps to identify who is providing the data, where it is being sent to, and who is holding the data. Further it helps identify which data is kept by whom, if data is transferred to other entities (data flow), where data is published, and which data is not published.

As identified during data mapping, the key data providers for macroeconomic, transport cost, and port data are typically in-country government entities such as customs offices, national statics offices, and port authorities. Additional qualitative and quantitative data can be provided by private shipping agents, importers, shipping lines, and custom brokers. These are two very distinct groups of data providers and when engaging them, the differences need to be taken into account.



When engaging government entities related specifically to transport cost data, it is important that the national government be aligned on the reasons for collecting the data, understand what the context for the needed data is, what outcomes the data influences, and what are the ramifications of not having in-country data.

To this end, it is useful that the country's representation to IMO communicates with the national government in-country to bring awareness to the needs and outcomes of data being sought. The goal being that the national government takes the ownership of the effort, communicates the importance of the data and ensures that it is identified, compiled, and made available to assess and monitor impacts.

The Guidebook presents considerations when building or enhancing data collection programs including national ownership on the production of transport cost data, state of technology, level of detail, level of review, state of publication/reporting, support policy instruments, identification of future improvements, and intended uses of the data.

The Guidebook provides an overview of a broad range of internal and external data resources including: national customs authorities, national statistics offices, regional data hubs, publicly accessible websites, and other resources. It provides more detailed introduction to UNCTADStat's online trade statistics online database, the UN Comtrade database and the UNCTAD Global Transport Costs Dataset of International Trade (GTCDIT). In addition, regional data collections efforts are highlighted and described. Finally, the Guidebook introduces further resource opportunities from IMO, UNCTAD, UN Regional Commissions, and support opportunities from more localized organizations.

The authors express their appreciation the IMO GHG TC-Trust Fund for generously funding the conduct of the work that resulted in this Guidebook.

1 Introduction

International maritime transport plays a central role in global merchandise trade, carrying 70% of that trade by value and more than 80% by volume. However, it is also a significant source of greenhouse gas (GHG) emissions, accounting for 2.89% of global emissions in 2018 according to the International Maritime Organization (IMO) <u>Fourth GHG Study</u> 2020.

The IMO is the United Nations specialized agency developing global regulations for shipping in areas such as safety, security, and prevention of pollution from ships, including air pollution.

In April 2018, IMO adopted an <u>Initial Strategy</u> on the reduction of GHG emissions from ships, setting out a vision which confirms IMO's commitment to reducing GHG emissions from international shipping and to phasing them out as soon as possible. The Initial Strategy contains several candidate GHG reduction measures, categorized into short, mid and long-term measures.

In July 2023, IMO adopted the <u>2023 IMO Strategy on Reduction of GHG Emissions from Ships</u>, in accordance with the agreed program of follow-up actions. The 2023 Strategy provides a framework for Member States, setting out the future vision for international shipping, strengthens the levels of ambition to reduce GHG emissions, and sets out the guiding principles. It includes a basket of new mid- and long-term measures with possible timelines, includes impacts on States, and identifies barriers and supportive measures including capacity building, technical cooperation, and research and development.

1.1 IMO impact assessments

Both the Initial Strategy and the 2023 IMO GHG Strategy recognize that the possible impacts on States of candidate GHG reduction measure should be assessed and taken into account as appropriate before their adoption and lay out eight potential impact areas. These include geographic remoteness of a connectivity to main markets, cargo value and type, transport dependency, transport costs, food security, disaster response, cost-effectiveness and socio-economic progress and development. The *Revised procedure for assessing impacts on States of candidate GHG reduction measures* is set out in MEPC.1/Circ.885/Rev.1.

IMO underscores that particular attention in these impact assessments should be paid to the needs of developing countries, especially Small Island Developing States (SIDS) and Least Developed Countries (LDCs). Transport costs are particularly important in the Pacific region which contains some of the States most vulnerable to climate change and which are already facing relatively high shipping and trade costs, being largely dependent on shipping for trade, including imports of essential goods.

With a view to reduce the carbon intensity of operational shipping by at least 40% in 2030, compared with 2008, MEPC 76 adopted, in 2021, a short-term measure combining technical and operational approaches to improve the energy efficiency of existing ships. The 2023 Strategy confirmed the energy efficiency and 2030 carbon intensity ambitions from the Initial Strategy, while broadening the ambition to include the uptake of zero or near-zero GHG emissions technologies, fuels, and/or energy sources representing at least 5%, striving for 10%, of the energy used by international shipping by 2030. In addition, the 2023 Strategy includes peaking GHG emissions from international shipping as soon as possible and to reach net-zero GHG emissions by or around, i.e. close to, 2050.

In considering the draft amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL Annex VI), MEPC 75 agreed that, before adopting the short-term measure, it was essential to undertake a Comprehensive Impact Assessment (CIA)¹ of its possible impacts on States. Consequently, the impact assessment was initiated in accordance with the approved terms of reference and a Steering Committee established. The CIA was conducted using a broad range of economic and maritime datasets including macro-economic data, marine transport cost data, port data, fleet data, and others.

The CIA comprised of seven associated tasks. Of interest for this Guidebook, Task 2 included an assessment of impacts of the proposed measures on the world fleet conducted by DNV, Task 3 included a quantitative impact assessment on IMO Member States conducted by the United Nations Conference on Trade and Development (UNCTAD),² Task 4 included a complementary stakeholder analysis which included deeper quantitative and qualitative analysis of specific essential goods and trade commodities across five Member States conducted by Starcrest Consulting Group,³ and Task 5 included an identification of data gaps identified across all tasks of the CIA also conducted by Starcrest.⁴

The CIA report also suggested possible considerations for future impact assessments of mid- and long-term GHG reduction measures for shipping, in particular:

- 1. to review and determine the availability, reliability, and level of granularity of data and identify main gaps relating to transport cost data pertaining to developing countries, in particular SIDS and LDCs; and
- 2. to identify capacity-building needs to improve impact assessments, including building the capacity of developing countries, in particular SIDS and LDCs to collect relevant data.

¹ MEPC 75/18, paragraph 7.37

² MEPC 76/Inf.68-Add.1 (UNCTAD 2021)

³ MEPC 76/Inf.68-Add.2 (Starcrest 2021)

⁴ MEPC 76/Inf.68-Add.3

The 2023 Strategy builds upon the Initial Strategy and the CIA of the short-term measure. MEPC 80 (July 2023) agreed that a CIA should be conducted to assess the impacts on States of the basket of candidate mid-term measures, comprised of a technical element (namely a goal-based maritime fuel standard) and an economic measure (on the basis of a maritime GHG emissions pricing mechanism). A Steering Committee was established in September 2023 to conduct this CIA and submit an interim report to MEPC 81 (March 2024) and a final report to MEPC 82 (September 2024).

1.2 The case for the collection of detailed transport cost data

The Vision set out in the 2023 IMO GHG Strategy confirms IMO's commitment to reducing GHG emissions from international shipping and, as a matter of urgency, to phasing them out as soon as possible while promoting, in the context of this Strategy, a just and equitable transition.

For Member States that rely heavily on maritime transport and/or are distant from their markets, it is crucial to improve access to detailed, nationally derived and relevant transport cost data for both future impact assessments and to track the magnitude of actual impacts over time so that disproportionately negative impacts can be assessed and addressed, as appropriate.

This fundamental principle that the data production process for transport costs statistics should be owned by the countries, as highlighted in the United Nations' publication *International Merchandise Trade Statistics: Concepts and Definitions 2010* (IMTS 2010),⁵ is of paramount importance. If the data production process is owned by the countries, this implies that the statistical output can be considered as validated by them, avoiding disagreements in a later stage when the results of the impact assessment will be discussed. Ownership of the production of their own data will also allow each country to take full care that their specific institutional provisions, for example, for guaranteeing confidentiality and impartiality, will be fully respected and applied.

The trade and in-country conditions for each country, especially SIDS, is unique and even though a country may be in the same geographical region as other SIDS, their important differentiating characteristics mean that using surrogate data should not be used. Without detailed country specific data, at best, surrogate data from other nations can range from 'may be relevant' to a worst case of 'highly not relevant'.

With no surrogate data, impacts will be more difficult to assess. Surrogate data from other nations could result in impact assessments that range from illustrative assessments of near-actual in-country conditions to assessments not indicative of actual in-country conditions. The latter risks significantly misrepresenting the potential impacts in either a positive or negative way.

⁵ United Nations, UNSD, International Merchandise Trade Statistics: Concepts and definitions 2010. ST/ESA/STAT/SER.M/52/Rev.3., 2011, https://unstats.un.org/unsd/trade/egimts/IMTS%202010%20(English).pdf

Similarly, without detailed maritime transport cost data, the ability to track overtime in-country impacts from the measures and the consideration of adjustments to measures or potential mitigation opportunities may be constrained.

1.3 Supporting the collection of transport cost and other related data

In considering the outcomes of the comprehensive impact assessment for the short-term measure, the seventy-first session of the IMO Technical Cooperation Committee (TC 71) noted the advice from the Secretariat that a number of IMO projects might be of assistance in providing analysis and data, for example the Global Maritime Technology Cooperation Centres (MTCCs) Network, many delegations also supported the strengthening of MTCCs globally and their possible involvement in the delivery of IMO's technical cooperation activities.

In response to the observations of MEPC and TC, the IMO Secretariat initiated a project aiming to improve the availability of relevant statistics, particularly maritime transport costs data, for the Pacific Region with a view to facilitating future assessments of the possible impacts on States of GHG reduction measures in shipping, including, as appropriate, from economic instruments. To assist in this, the project sought to establish interim baselines and to initiate the modelling of the impact on Pacific SIDS of a hypothetical increase in transport costs or change in connectivity patterns.

Central to the project's success would be its ability to identify the foundation of a system of continued monitoring and collection of data on maritime transport costs in the Pacific region. To this end, it was concluded that a useful outcome would be a guidebook, based on the efforts and lessons learned to date, that could be used as a reference by IMO Member States, but especially SIDS and LDCs, to establish data collection approaches and programs for future impact assessments and to track the actual impacts from the measures implemented by IMO under the revised IMO GHG Strategy.

1.4 Fiji Roundtable on improving availability of maritime transport costs

A regional roundtable was held in Fiji in February 2023⁶ (Fiji Roundtable) to discuss the collection of maritime transport costs data at the national level and the sharing of lessons learned. The event, held in Suva, brought together 31 stakeholders and focal points from Pacific SIDS, which included: Cook Islands, Kiribati, Nauru, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. The forum was a collaboration between IMO, UNCTAD, the Pacific Community (<u>SPC</u>) and the MTCC-Pacific, with funding from IMO's Integrated Technical Cooperation Programme (<u>ITCP</u>).

⁶ IMO, https://www.imo.org/en/MediaCentre/Pages/WhatsNew

The roundtable was part of IMO's efforts to support Pacific SIDS advance towards low-carbon shipping and underscores the role of South-South Cooperation in providing replicable solutions to challenges faced by IMO Member States in other regions.

Key outcomes of the roundtable include a "Talanoa," a word used in Fiji and the Pacific to describe an inclusive and transparent dialogue through which experience and good practice can be shared. Subjects discussed include the management of maritime transport cost data and the development of concrete recommendations on how to address existing data gaps, with a view to facilitating the assessment of impacts on Pacific SIDS of future GHG reduction measures for ships.

Further, the outcomes and insights from the Fiji roundtable were integrated into this Guidebook and several participants volunteered to review this work.

1.5 Purpose of this Guidebook

The purpose of this Guidebook is to provide IMO Member State countries insight on the need for quality macroeconomic, maritime transport cost, along with port and fleet data in view of future impact assessments. Further, the Guidebook presents approaches, insights, and considerations on building and enhancing data collection programs specifically for the data needed to inform future impact assessments and to track impacts resulting from measures adopted by IMO. The Guidebook also brings forward key points identified in the Fiji roundtable, the first IMO comprehensive impact assessment, and other similar projects, which provides further insights on the potential approaches to challenges countries face when identifying, sourcing, collecting and using maritime transport cost data.

It should be noted that the Guidebook is not intended to provide a "one-size-fits-all" methodology for data collection as each country has its own unique organizational structures and dynamics that must be taken into account when developing data collection programs. This Guidebook should be taken as providing context, insight, and a place to start from.

2 Definitions/key terms

The definitions and key terms presented in this Guidebook are for the purposes of clarity related to the approaches and data needed in terms of an impact assessment and are only appliable to this Guidebook. The definitions presented below are not intended to replace established definitions used by other entities or publications:

Commodities – goods that are traded between countries and for impact assessment purposes are grouped into the following categories:

- Essential goods those goods needed to sustain life and society such as food, water, medicine, fuel, building materials, electronic equipment (communications, computers, etc.), and many others.
- Trade commodities a broad group of goods that are traded between countries and include everything from food products (perishables and nonperishables), raw materials, partial or finished products, to animals, waste products, and fuels.

Fleet data - data associated with the international merchant fleet specifically, individual ships' port call activity for a targeted calendar year as well as ship parameters including IMO Number and name, gross and deadweight tonnage, draft, port and country called, date and time stamps for arrivals and departures to ports, distance sailed between ports, and other available operational data.

Macroeconomic and key trade data – which is typically derived from aggregating customs data are used in identifying and sorting commodities from a value perspective, as well as for determining volume and trading partners which facilitates the ranking of interest for both essential goods and trade commodities. These rankings are used by the Member State to group and filter down to a specific limited number of targeted commodities to be assessed.

Port data – both quantitative and qualitative data associated with international ship movements to and from Member State ports, ranging from ship parameter and call data to physical or operational restrictions associated with the port or terminal being evaluated to port cargo throughputs.

Transport cost data – the costs associated with the movement of commodities, including surcharges, insurance, and terminal handling charges.

3 Data needed to assess impacts on States

As noted above there were two types of assessments conducted as part of the CIA of the shortterm measure. This Guidebook focuses on the data associated with the stakeholder analysis – the 'deep dive' on specific trade commodities. It is important to note that the UNCTAD State level analysis which is highly detailed as well utilizes some of the same data sets, and those commonalities are highlighted. Therefore, transport cost data collected by programs will feed into both impact assessments. The following provides a high-level overview of the two different types of assessments:

- 1. The Assessment of Impacts of the Measures on States, conducted by UNCTAD, included a qualitative and quantitative assessment of specific negative impacts of IMO short-term measure. To ensure that the impact assessment carried out by UNCTAD had comprehensive coverage it did not rely exclusively on a sample of representative cases. Additionally, the scope of coverage extends to all ships and trades for which data is available. Two main interlinked steps underpinned UNCTAD's analysis. In step 1, UNCTAD assessed the impact of the IMO short-term measure on the maritime logistics costs, including shipping (transport) and time-related costs. In step 2, the impact of changes in maritime logistics costs across the three GHG reduction scenarios was assessed for the trade and GDP of 184 economies. The computed changes in maritime logistics costs across the three GHG scenarios were fed as input data into a global trade model that assessed the impact of the IMO short-term measure on countries' trade, economic output (GDP), and participation in the Global Value Chain trade (GVC).
- 2. The complementary Stakeholder Analysis, conducted by Starcrest, focused in a high level of detail on 22 specific commodities identified by five Member States. Quantitative data included key trade and macroeconomic, transport cost, fleet, and port data. Trade data was used to select commodities at HS Code⁷ level, identify key trading partners (country or State of origin and destination), select trade routes (for liner services as well for tramp services), identify typical parcel size as well as typical vessel size and characteristics in selected trade routes, identify ports of origin and destination, as well as determine cargo value and trade volume. Macroeconomic data was used to identify the impact of selected commodities in the States, for example, the importance of the commodity category in the State GDP, the employment generation in the commodity economic sector; as well as to estimate the economic impact on arrival delays. Transport costs data was used to estimate total commodity cost at country of destination. Fleet data was used to identify the types and sizes of the ships bring the commodity(ies) along the identified seaborne route. Port data was used to identify the actual ships directly calling the country being analyzed. Qualitative data included information specific to a commodity that, for example, note when a commodity could lose significant value or loss of market due to say port arrival delays. The economic impacts were modelled in both a high and low scenario to bracket

Harmonized System (HS) Codes were established by the World Customs Organization (WCO) in the 1980s and updated every year since then to provide a universal method of classifying traded goods.

potential impacts and the results were presented in terms of illustrative increases to the commodity's cost per extra day of delay and ranges of cost increases linked to the applicable port arrival delays.

The data needed to assess the impacts of IMO GHG reduction measures includes a broad range of data, and some of the key datasets include:

- Macroeconomic and key trade data
- Transport cost data
- Port data
- > Fleet data

As illustrated below in Figure 3.1, in the context of the CIA of the short-term measure, State level transport cost data was integral in both the Assessment of Impacts on States and the Stakeholder Analysis.



Figure 3.1: Data flows for IMO CIA for the short-term measure

As illustrated above, State level transport cost data generated in-country and compiled on all import and exported goods is critical for impact assessments. International best practices note that this data should ultimately be entered into the World Trade Organization (WTO) Single Window,⁸ IMO Maritime Single Window,⁹ and the UNCTAD Automated System for Customs Data

⁸ WTO, https://tfadatabase.org/en/tfa-text/measure/29

⁹ IMO, https://www.imo.org/en/MediaCentre/PressBriefings/pages/Mandatory-Maritime-Single-Window-Oneyear-to-go-.aspx

(ASYCUDA¹⁰). This data was fed into the Assessment of Impact on States. Fleet impacts were incorporated into both assessments.

The Stakeholder Analysis included five Member States: Cook Islands, Argentina, Chile, Peru, and the United States. Brazil conducted its own assessment of the impact of the short-term measures on the Brazilian economy.¹¹ Transport cost data was either provided or collected by the Member State or obtained from other sources. Macroeconomic data was used to identify and filter key commodities. The Cook Islands had no transport data in UN Comtrade database or other sources, so a data gathering effort was conducted in coordination with the Member State's IMO Delegation and a range of in-country stakeholders: ministries, the port authority, and private importers.

For the purposes of the Stakeholder Analysis, commodities were grouped as one of the following categories:

- Essential goods. Those goods needed to sustain life and society such as food, water, medicine, fuel, building materials, electronic equipment (communications, computers, etc.), and many others.
- Trade commodities. A broad group of goods that are traded between countries and include everything from food products (perishables and nonperishables), raw materials, partial or finished products, to animals, waste products, and fuels.

As described in the Stakeholder Analysis, the differences between these two groups are the nature of the commodities and their fundamentally different potential for negative impacts. Potential negative impacts caused by port arrival delays of essential good imports, for nations fully dependent on marine transportation to sustain the economy, for example, could result in shortages for those essential goods that are not warehoused in quantities to cover the delay period. In stark contrast, potential negative impacts from port arrival delays for trade commodities affect specific sector(s) of a country's greater economy however, only a segment of society will be impacted. It is important to note that countries can have both essential goods imported and trade commodities imported/exported.

The following sections provide an overview of the four key data sets identified above.

¹⁰ UNCTAD, https://asycuda.org/en/about/

¹¹ MEPC 76/INF.61

3.1 Macroeconomic & key trade data

The first step in the Stakeholder Analysis was the identification of relevant or key commodities for countries, using for the relevant HC codes the trade flows of these commodities (country and ports of origin and destination), which was essential to develop the rest of the work. Macroeconomic data and customs data were used in identifying and sorting commodities from a value perspective, as well as for determining volume and trading partners, which facilitated the ranking of interest for both essential goods and trade commodities. These rankings were used by the countries to group and filter down to a specific limited number of targeted commodities to be assessed.

The entities in charge of collecting national statistics usually have a repository of general data for the country. Macroeconomic data usually comes from the National Statistics Offices (NSO), Central Bank, and ministries of economy and/or finance, for example.

For trade facilitation issues, the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD), the International Maritime Organization (IMO), the World Customs Organization (WCO), and the Economic and Social Commission for Asia and the Pacific (ESCAP) promote trade facilitation and propose several actions to carry it out. There is a wealth of information, sources, tools, and guides for trade facilitation that help generate transparency and support the use of technological tools.

Measures to facilitate trade, such as simplifying documentation requirements, modernizing procedures and harmonizing customs requirements can reduce the costs and time required to export and import goods. These measures also include the digitalization of processes and the use of port single windows and single windows for foreign trade. These tools would provide a database to be used for the country's business intelligence activities, as well as risk analysis; and usually, centers of excellence are promoted through logistics observatories.

It is important to list and document the data needed, along with definitions, associated units as applicable, relevant contextual information, and where applicable the format of the data field helps everyone involved in the data collection process to understand specifically what is being sought and to ensure everyone involved is 'speaking the same language.'

The key macroeconomic data breaking down all imports and exports for a country, for a targeted calendar year, that is typically needed for stakeholder assessment is presented in Table 3.1 below.

	1
Data	Definition & context
Evaluation country	The name of the country the data is associated with.
Year	The year associated with the data being collected.
Country GDP	The Gross Domestic Product for the evaluation country, noting currency
	reported in.
Sector GDP	The sector Gross Domestic Product for the commodity being evaluated, if
	available.
Sector employment	The number of jobs associated with the commodity sector being evaluated, if
generation	available.
Trade direction	Indicates if the commodity being evaluated is an import or export.
Trade mode	Indicates transportation mode (sea, air, or land).
Commodity type	Indicate the type of commodity (essential good or trade commodity).
HS code	The Harmonized System (HS) code is used by customs authorities around the
	world to identify products when assessing duties, taxes, and for organizing
	trade statistics.
Commodity name	The name of the commodity, as recorded under the HS code.
Country of origin	The country where the commodity originates.
Port origin	The port where the commodity is loaded, if available.
Country of	The country where the commodity is finally delivered.
destination	
Port destination	The port where the commodity is unloaded, if available.
Quantity of HS code	The total numerical quantity of the commodity shipped and delivered to the
commodity	country of destination via the country of origin and the country of
	destination.
Quantity unit of HS	The unit of measure associated with the same quantity of HS code
code commodity	commodity (e.g., kilograms (kg), metric tons (tonnes), cubic meters (m ³),
	etc.).
Value HS code	The value of the total HS code commodity associated with the data above,
commodity	noted in the currency the value is tracked in nationally.
Total country exports	Indicate the total value of the country imports or export, during the year
& imports	selected, depending on the trade direction evaluated.

Table 3.1: Key macroeconomic data

In most countries, this data is typically collated and published annually by commodity by the country's Statistics Department/Office and is publicly available. It is important to document where this data is published if it is going to be compiled (later step below) and assembled into a regional data hub.

Table 3.2 below provides an illustrative example of macroeconomic data used in the stakeholder impact analysis for the case of the expert of cherries from Chile to China as an example.

GDP (USD)	2019	282,318,160,000
Sector GDP (USD)	2019	5,926,388,815
Sector employment generation	2019	571,894
(annual salaried employees)		
Trade direction		export
Trade mode		sea
Country of origin		Chile
Port origin		Santiago
Country of destination		China
Port destination		Shanghai
HS code		0809
Commodity name		apricots, cherries, peaches (including nectarines),
		plums and sloes, fresh
Commodity type		trade commodity - perishable
Quantity of HS code commodity	2019	183,779
(tonnes) for trade route		
Value HS code commodity (USD)	2019	882,029,396
for trade route		

Table 3.2: Macroeconomic example – case study on Chilean cherries exported to China in the CIA of the short-term measure

3.2 Transport cost data

Most countries have a process in place in which the customs records are cleaned, standardized, aggregated and refined, using data from other sources, to compile the international trade data regularly submitted to the United Nations Statistics Division (UNSD) for release in the global online database UN Comtrade. Over the years, the depth of information that countries are invited to provide in their international trade data files has increased. As noted previously, in the third revision of the IMTS 2010 revision of the global compilation standards for these data, countries are recommended to report their imports in terms of both cost, insurance, and freight (CIF) and free on board (FOB)¹² and to break their data on imports down by the mode of transport by which traded goods have entered the country. Over time, more and more countries have applied these recommendations into practice. Today, some countries report the new level of detail - combined CIF and FOB values and breakdowns by mode of transport - not only for their imports but also for their exports. The newly available data have recently been incorporated in UN Comtrade.¹³

¹² CIF & FOB are terms related to the two most common ocean freight agreements, as illustrated and described in info boxes on the following two pages.

¹³ UNSD, Methodology guide for UN Comtrade user on UN Comtrade Upgrade 2019, https://comtrade.un.org/data/doc/UpgradePlan

UNCTAD is using them for the development of a Global Transport Costs Dataset on International Trade (Hoffmeister et al., 2022).¹⁴

GTCDIT Database

Under a recent project, UNCTAD has been using the data from UN Comtrade to upgrade a novel 2016 dataset, the Global Transport Costs Dataset of International Trade (GTCDIT). This dataset tracks international trade in goods alongside the associated transport costs and transport work, detailed by mode of transport, pair of trading partners, and commodity. A beta version has been published on UNCTAD's online database, UNCTADstat (<u>https://unctadstat.unctad.org/EN/</u>). The data quality of GTCDIT is expected to increase, as more data will be provided to UN Comtrade with the required level of detail and as the methods used for data cleaning and imputation will be improved.

👌 Guided	Imports			Cost, In	CIF Incot ISUITANCE Sea and Inland	erm 2020 & Freigh Waterway Only	nt (port)			Transfer of Risk:	On Board Vessel
Export Packaging	Loading Charges	Delivery to Port/Place	Export Duty, Taxes & Customs Clearance	Origin Terminal Handling Charges	Loading on Carriage	Freight Charges	Insurance	Destination Terminal Handling Charges	Delivery to Destination	Unloading at Destination	Import Duty, Taxes & Customs Clearance
SELLER	SELLER	SELLER	SELLER	SELLER	SELLER	SELLER	SELLER	BUYER	BUYER	BUYER	BUYER

CIF

CIF is an International Chamber of Commerce (ICC) Incoterm that stands for: Cost, Insurance, Freight agreement, with the seller holding responsibility for all three. When purchasing internationally, the seller is responsible for exporting the cargo and shipping it until they arrive at the destination port, while insuring the cargo throughout the voyage.

When shipping under CIF Incoterms, the transfer of possession beings once the goods are loaded safely onto the boat, but the seller is responsible for paying freight charges and procuring the shipping insurance. This means the seller pays for all costs associated with moving the cargo until the goods arrive at the destination port. The buyer is responsible for the import process and the costs associated with bringing the shipment through customs and delivering the products to their final destination.

CIF only applies to sea or waterway shipments, and no other forms of shipping. This shipment method is most commonly used when shipping full containers; however, it is possible to use this Incoterm on less than container loads as well. (Illustration: Guided Imports, *https://guidedimports.com/blog/what-are-incoterms-chart/*)

¹⁴UNCATD, Developing a global transport costs dataset for international trade, UNCTAD Research Paper, 85, Hoffmeister O, et al., https://unctad.org/publication/developing-global-transport-costs-dataset-international-trade

👌 Guideo	lmports		FOB Incoterm 2020 Free On Board (port) Sea and Inland Waterway Only Transfer of Ris						Transfer of Risk:	On Board Vessel	
Export Packaging	Loading Charges	Delivery to Port/Place	Export Duty, Taxes & Customs Clearance	Origin Terminal Handling Charges	Loading on Carriage	Freight Charges	Insurance	Destination Terminal Handling Charges	Delivery to Destination	Unloading at Destination	Import Duty, Taxes & Customs Clearance
SELLER	SELLER	SELLER	SELLER	SELLER	SELLER	BUYER	Negotiable	BUYER	BUYER	BUYER	BUYER
FOB Free on Board, or FOB is an Incoterm, which means the seller is responsible for loading the purchased cargo onto the ship, and all costs associated. The point the goods are safe aboard the vessel, the risk transfers to the buyer, who assumes the responsibility of the remainder of the transport. FOB is the most common agreement between an international buyer and seller when shipping cargo via sea. This Incoterm only applies to sea and inland waterway shipments.											
FOB is pri Loadin Insurar Freight Unload (Illustrati	icing for a g nce : ling on: Guide	a product ed Imports	that does Custo VAT Impo Trans s, <i>https://</i>	not incluo oms rt Duty sportatior /guidedim	de any of h (from the hports.com	the follow e port to t n/blog/wl	ving costs the final d hat-are-in	: lestination coterms-o	ר) chart/)		

The production systems set up by countries for the conversion of customs records into international trade data described can be used as a key resource also for the compilation of maritime transport costs data. The NSO is the focal point for this production. The difference between the CIF and the FOB value already is a measure of transport costs, albeit a relatively broad measure, and the breakdown of imports and exports by mode allows separating maritime from other transport. Customs offices are usually able to collect further information relevant for the measurement of international freight transport, such as the insurance paid, the freight paid, and the country of consignment, as these are customarily provided in the customs declaration and in the shipping manifests presented by port authorities. Extending the existing systems for the conversion of customs records into international trade data by including more variables collected by customs offices can be a way to develop an efficient production system for exhaustive and accurate measurement of maritime transport costs, at low additional costs.

It is important to understand that transport cost data can be evaluated in different ways, depending on the analysis to be performed. For example, it can be seen from the shipowner's perspective, for which the cost data would be that related to the provision of the ship and those associated to transportation itself. This usually includes the daily cost of the ship, its provisioning, crew, insurance, and the costs associated to ship moving among different ports (port charges and costs, among others).

Transport cost data can also be evaluated from the cargo owner (importer or exporter) perspectives. The total freight costs paid by the beneficiary cargo owner is composed of different line items such as freight, terminal handling charge (THC), and a series of surcharges with which the shipping line is covered in the event of uncertainty events that impact its costs. These surcharges usually include bunker cost surcharge, currency surcharges, Panama, or Suez Canal surcharges (changes in the tolls and other charges on waterways), among others.

For the case of the Stakeholder Analysis, commodities were evaluated from the importer/exporter perspectives for each participating Member State; meaning that the transportation costs were specifically only the "freight rate" or the amount paid by the beneficiary cargo owner (importer or exporter) for transportation. At the time, the information collected was the total transport cost (freight rate, plus THC and surcharges); even though items like THC, insurance, and specific surcharges were not detailed into separate items in the freight rate.

SURCHARGES

Many ocean carriers use surcharges to adjust the overall freight rates they collect due to various changes in operational conditions. Surcharges cover a wide range of items including, but not limited to:

- > currency
- Bunker Adjustment Factor
- ➢ port
- Iow sulfur fuel

Because of surcharges, the freight rate can remain 'stable' over a long period of time, however if one takes into account the various surcharges, the total cost to move freight increases over the same period.

The key transport cost data breaking down all imports and exports for a country, for a targeted calendar year, that is typically needed for stakeholder assessments is presented in Table 3.3 below. This data is typically collected by in-country customs offices/department and stats offices/departments.

	Table 3.3: Key transport cost data
Data	Definition & context
Evaluation country	The name of the country the data is associated with.
Year	The year associated with the data is being collected.
Trade direction	Indicates if the commodity being evaluated is an import or export .
Commodity type	Indicate the type of commodity (essential good or trade commodity).
HS code	The HS code is used by customs authorities around the world to identify
	products when assessing duties, taxes, and for organizing trade statistics.
Commodity name	The name of the commodity, as recorded under the HS code.
Country of origin	The country where the commodity originates.
Port origin	The port where the commodity is loaded.
Country of	The country where the commodity is finally delivered.
destination	
Port destination	The port where the commodity is unloaded.
Quantity of HS code	The total numerical quantity of the commodity shipped and delivered to the
commodity	country of destination via the country of origin and the country of
	destination.
Quantity unit of HS	The unit(s) of measure associated with the same Quantity of HS Code
code commodity	Commodity (e.g., kg, tonnes, m ³ , etc.).
Value HS code	The value of the total HS code commodity associated with the data above,
commodity	noted in the currency the value is tracked in nationally.
Freight rate	The rate of transporting the commodity, associated units and currency; may
	or may not include various surcharges, insurance, terminal handling charges,
	etc. Very important to note what is included in transport cost.
Insurance cost	Note the insurance rate, associated units and currency, if available.
Low sulfur surcharge	Note the low sulfur surcharge rate, associated units, and currency.
Bunker Adjustment	Note the BAF surcharge rate, associated units and currency, if available.
Factor (BAF)	
surcharge	
Terminal Handling	Note the THC surcharge rate, associated units and currency, if available.
Charge (THC)	
Currency exchange	Note the currency exchange rate surcharge, associated units and currencies,
rate surcharge	if available.
Other surcharge or	Note the type of other surcharge or levy rate(s), associated units cost and
levy rate(s)	currency, if available.
Exchange rate	Note the exchange rate associated with the above rates, if available.

Any additional relevant data that can provide context beyond what is noted above should be included as part of the transport cost dataset.

3.3 Port data

For the Stakeholder Analysis, port data was used to identify the specific ships that call at ports of interest where commodities are shipped through. The primary port data providers are the associated Port Authorities with the ports included in the analysis. This data includes IMO number, ship name, dates and times of arrival and departures, any information on anchorage waiting times, terminal called, and other operational insightful data as maybe available.

Qualitative port data relates to any physical or operational restrictions with regard to the port and/or terminal being called. Examples of physical restrictions could include: the berths for a particular port or terminal may have a capacity limit based on depth, and/or length/beam(width) of a vessel. The berth may only be accessible by ships with a draft of less than 10 meters or that the maximum length of ship that a terminal can accommodate is 510 meters. An example of an operational restriction, from the Cook Islands, is that access to the port is through a narrow reef that cannot be transited during rough weather so during rough sea conditions the ship may delayed.

Additional operational information from the Port Authority's perspective is good to gather, which could include: ship agents, operational characteristics of the port or specific shipping lines, future infrastructure development/refurbishment plans for example terminal/bridge/dock construction, dredging projects that may increase the size of ships accessing the port, etc.

IDENTIFYING SHIPS

The most important identification data point for Port Authorities to track ships calling their port is a ship's IMO Number. These numbers are unique to each ship and never change, even if the ship is sold and the name is changed.

Tracking just the ship introduces uncertainty since a ship name could be used by one-to-many ships, ship names often change, and when misspelled identity could be lost.

The **best practice** for tracking ships is to record **both IMO Number and ship name**, that way the ship's identity can be cross referenced.

This qualitative data is compiled, used to inform the modeling during the Stakeholder Analysis, and used to match each ships activities over a calendar year from the fleet data highlighted below.

It is important to note that countries can have one or more ports or terminals. Private terminals can either be within or outside a Port Authority's administrative jurisdiction. Public terminals are typically associated with a Port Authority. The key port data and statics used in stakeholder assessments is presented in Table 3.4 below.

Data	Definition & context
Evaluation country	The name of the country the data is associated with.
Port or terminal	The name of the port or terminal the data is associated with.
name	
Associated port	The name of the Port Authority associated with the port or terminal
authority	associated with the data.
Year	The year associated with the data being collected.
Ship types	The type(s) of ship(s) that call the port or terminal (e.g., container, bulk, general cargo, bulk liquid, etc.).
Ship call	Preferably data on all the specific ship calls for the year the data is being collected, include: individual ship IMO numbers, names, arrival and departure times and dates, previous and next ports, and other related call data. If detailed data is not available, the number of ship calls and associated ship IMO numbers and names will suffice at minimum.
Time at-berth	Either specific times at berth (can be generated from detailed ship call data) or average times at berth by vessel type when detailed ship call data is not available.
Ship size limitations	Note any port or terminal size limitations due to draft, length, beam(width), and/or other limitations; note the associated cause(s) when possible.
Port restrictions	Note any port restrictions (e.g., operational limitations, access limitations, hydrographic limitations, etc.).
Annual imports	Port or terminal annual import quantities, noting quantities and units (e.g., number of twenty-foot equivalent (TEU) containers, number of cubic meters of liquified natural gas (LPG), number of autos, etc.)
Annual exports	Port or terminal annual export quantities, noting quantities and units (e.g., number of TEU containers, number of cubic meters of LPG, number of autos, etc.)
Annual throughput	Port or terminal annual throughputs quantities (imports + exports + other), noting quantities and units (e.g., other could be empty containers returned)

Table 3.4: Key port data

Any additional contextual information or data that is collected should be kept as part of the port dataset.

3.4 Fleet data

Fleet data is the data associated with the international merchant fleet, specifically individual ships' port call activity for a targeted calendar year. Fleet data also typically includes ship parameter data such as IMO number and name, ship gross and deadweight tonnage, draft, port and country called, date and time stamps for arrivals and departures to ports, distance sailed between ports, and other available operational data. This data is filtered based on the applicable port call data to match the identified ships, evaluate their port rotation, identify average times at ports and average speeds between ports to establish baseline values. The port rotation information allows to see if and which any trans-shipment hubs are identified along the path of a commodity from its port of origin to the in-country destination port. Fleet data providers are typically private vendors like IHS Markit, Clarkson's, Marine Traffic, and many others.

Fleet data is **not** within the focus area of the in-country data collection associated with this guidebook but is provided for contextual purposes only.

4 Data collection process

Building, enhancing, or integrating in-country data collection programs is an essential element to establishing and maintaining the data streams needed for identifying potential impacts on States and/or the fleet prior to an IMO GHG reduction measure's implementation and to track and identify impacts overtime from implemented measures. In doing so, it is important to understand how the various data streams 'flow' in-country. Figure 4.1 below illustrates the typical fundamental steps when approaching data collection. These include listing or tabulating the data needed, determining if the data needed is available or not, mapping of the flow of in-country data, compiling and documenting data so that it is ready to use, and providing the status of the availability of data to those that need to use the data. When data is found to be not available, then data gaps need to be identified, determine the data provider(s), engage the data provider(s) to procure the data, review the data provided, compile the data in the proper formats, then publish, document, and notify the data is available.



Figure 4.1: Fundamental steps for data collection process

The fundamental steps as they relate to the collection of macroeconomic, transport cost, and port data are discussed in the following sections.

4.1 Data production steps

Understanding the data flow for the specific country is important and helps to identify who is providing the data, where it is being sent to, and who is holding the data. Further it helps identify which data is kept by whom, if data is transferred to other entities (data flow), where data is published, and which data is not published. Within the data flow pathways for macroeconomic, transport cost, and port data includes data providers and data receivers. Data mapping identifies and connects data entities with identified movement of data, as applicable. Data mapping should be done through direct engagement with both groups in-country to get a full and clear understanding of the data flow, roles, responsibilities, and resource levels.

For the purposes of this Guidebook, entities can play one to all of the following roles: data providers, data receivers, data compilers. Data providers are entities that are the source of the data of interest. Data providers are either compelled to 'push' data to applicable data receivers via legal, tariff, or contractual requirements, including a memorandum of understanding (MoU), or they can hold their data to make them available upon request, or publish their data in public domains. Primary data providers typically range from government authorities like port authorities to private entities like importers, exporters, and custom brokers. Secondary data providers can be in-country government authorities like national customs or statistics departments that report data to trade databases or to other organizations that use the data like UNCTAD and IMO.

Data receivers fall into two categories: those that require data to be pushed by regulatory, legal, or contractual means, or entities that are interested in particular datasets and receive data on agreed terms with the data provider(s). Data receivers like in-country custom departments require specific transport cost data to assess and collect duty charges on imported and exported goods. Others like the UN request countries to input trade data into international databases so that studies can be conducted using the data.

Some data receivers compile the data they receive from multiple data providers and/or send it to other entities like national statistics departments that compile, review data, and use the data for national analysis. Data receivers and compilers can publish their data into non-public and public domains and/or hold data.

As noted previously, the NSO is a country's main focal point for the coordination of the statistical process. The NSO possess a central role in the compilation of maritime transport statistics due to its capacities to (1) collect, combine, and reconcile the customs data with data from other sources (e.g., the maritime safety authority, transport ministries, data from private providers, and AIS), (2) mirror data obtained from other countries' agencies, and (3) validate, analyze and release official statistics.

However, it is important to note that within each country the roles and where data is and is not published, either in non-public or public domains, can significantly vary. These roles are illustrated in Figure 4.2 below, with striped flows being optional.



Figure 4.2: Data flow roles

Data mapping, especially associated with transport cost data, is not typically available, therefore when starting a new or enhancing an existing data collection effort or program, the data providers need to be identified and engaged; knowing where to start is always helpful. Data mapping allows for the efficient identification and collection of data after the initial year.

After familiarizing with the data types that are of interest, the next step is to determine which data is available and to identify data gaps (data that is not available). Macroeconomic data is typically published by the government's NSO based on data it has received from the in-country customs office, who are fed with data from importers, exporters, custom brokers, Port Authorities, and others to assess duties on imported and exported commodities. Transport cost data typically lies within the data that is submitted to the in-country customs office. Port data is typically provided by the in-country Port Authority and/or private terminal, depending on the situation. Fleet data can typically be sourced via out-of-country private companies that collect marine activity data. There are numerous elements to include in data mapping, as listed in Table 4.1 below.

	Table 4.1: Data mapping
Data Mapping	Definition & Context
Elements	
Evaluation country	The name of the country the data is associated with.
Year	The year associated with the data being collected.
Data entities	The name of entities that have specific data, including contact name,
	position, department, email address, phone number, etc. (shipping lines,
	importer/exporter/customs brokers, port authorities, in-country customs, in- country statistics, etc.).
Data types	For each data entity, list the types of data it holds (macroeconomic data,
	transport cost data, port call data, and other types of data).
Data roles	For each type of data that the data entity is associated with, note which
	role(s) does it play: data provider, data receiver, or data compiler.
Specific data	For each data type and role, list the specific data fields that are associated
	and units, identify if the data field is considered confidential.
Where data is sent	For data types that are associated with the data provider role, identify who
	and if the data sent is required to be sent.
Where data is	For data types that are associated with the data receiver role, identify who
received	the data provider is along with contact information, what specific data is
	sent, if the data received is required to be sent.
Data sharing	Identify and note if there are any data sharing agreements between Data
agreements	Providers and Data Receivers; this could be in the form of a Memorandum of
	Understanding or MOU, organizational plans, etc.; if possible, procure a copy
	of the agreement and incorporate in the data mapping documentation.
Customs duty basis	Some data flows include custom duty charge estimates and billing, it is
	important to note what the customs duty charges are based on to determine
	what is included/excluded (as noted below in this section).

It should be noted that within each country, the flows can be different and participating entities, so it is best practice to develop data mapping to facilitate year-over-year data collection efforts and programs. The following data mapping figures illustrate the data flow for the countries of Tonga (Figure 4.3) and Nauru (Figure 4.4). These two SIDS participated in the 2023 Fiji roundtable on improving availability of maritime transport costs data.



While both countries have similar participating entities in their respective data mapping, the flows are different, as noted below:

- In Tonga, the importer, exporter, or customs broker sends detailed company invoice and manifest data along with the estimate duty charge (as described below) to the Ministry of Revenue & Customs. This data includes the quantity, port of origin, port of destination, cost of goods, insurance costs, freight shipping cost data (transport cost), and other data. The duty charges are assessed based on cost (of goods), insurance, and freight (transport cost) or cost, insurance and freight (CIF) cost basis.
- 2. In Nauru, the shipping lines send transport costs bills to the importer, exporter, or customs broker, which then sends detailed company invoices and manifest data to the Nauru Maritime Port Authority. This data includes the quantity, port of origin, port of destination, cost of goods, freight shipping cost data (transport cost), and other data. The duty charges are assessed based on free on board (FOB) cost basis. In addition they send along an estimated duty and payment to Nauru Customs Service.
- 3. For both countries, the Customs Offices/Ministries send their data to the NSO which is the focal point for the data to be reviewed, validated, combined with other data streams, analyzed, and publish the data in various forms for the government and public stakeholders.

Note that both countries are migrating their customs data to the UNCTAD Automated System for Customs Data or ASYCUDA,¹⁵ which is an integrated customs management system for international trade and transport operations in a modern automated environment. Advanced software applications are designed and developed for customs administrations and the trade community to comply with international standards when fulfilling import, export and transit related procedures. Through its ASYCUDA program, UNCTAD aims at:

- > Modernizing customs operations and helping to improve revenue collection;
- Facilitating trade efficiency and competitiveness by substantially reducing transaction time and costs;
- Improving security by streamlining procedures of cargo control, transit of goods and clearance of goods;
- > Helping fight corruption by enhancing the transparency of transactions; and
- Promoting sustainable development by cutting down on the use of paper, using electronic transactions and documents.

¹⁵ UNCTAD, https://unctad.org/topic/transport-and-trade-logistics/customs-automation-ASYCUDA, & https://asycuda.org/en/
4.2 Data availability

During the data mapping process, it is important to identify and document which data are currently available, including:

- Official data from various national government agencies before official statistics are created
- UN Comtrade database
- Customs data
- > Regional data hubs
- Publicly accessible websites
- Secured websites
- Formal/informal requests
- For-profit websites
- > Other

UNCTAD is supporting organization, collection and publication of data. All statistics of UNCTAD are harmonized and integrated into the UNCTADstat dissemination platform. It gives free access to basic and derived indicators built upon common rules, harmonized environment and clear methodology supported by powerful data browsing system.

The statistical series are regularly updated and classified into easy-to-navigate themes. UNCTADstat offers ready-to-use analytical groupings, with a unique coverage for countries and products and a particular focus on developing economies. This approach ensures data consistency across multiple data series and enables users to harness its full potential by mixing and matching data from various domains. UNCTAD provides key economic statistics by country, in a wide range of internationally comparable indicators. The Country Profiles provides a basic snapshot of a country's economic and financial situation; and the Maritime Profile, provides a basic snapshot of country's situation on maritime transport and international trade.

The following illustrations shows an example of the type of general data obtained from UNCTADstat's online database.¹⁶

UNCTADSTAT														
ABOUT DATA	COUNTRY PROFI	LES DAT	A EXPL	ORATIO	N		INFO	GRAP	HICS	DO	CUME	NTATION		
Reports Table Chart Actions \mathbb{H} Σ \mathbb{H} \mathbb{F}														
Merchandise: Total trade and share, annual	Merchandise: Total trade and share, annual 🖪													
Other: MEASURE VUS dollars at current prices in millions ()														
VEAR Click to drag			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
III ECONOMY	∰ <u>FLOW</u> 🗓		↑ ↓	* +									+ +	
Cook Jelanda	Exports		5	11	18	14	13	20	18	17	20	15	11	
Cook Islands	Imports		112	116	121	109	107	135	134	136	105	119	124	
Fili	Exports	Exports		1 108	1 373	895	926	956	1 041	1 033	826	815	1 085	
	Imports		2 253	2 826	3 250	2 081	2 316	2 420	2 720	2 734	1 731	2 116	2 984	
Papua New Guinea			6 328	5 951	8 794	8 453	8 194	9 952	10 524	11 399	9 288	10 885	15 193	
	Imports		4 755	5 410	4 000	2 551	2 068	3 059	3 519	3 934	3 289	3 383	3 189	
Vanuatu	Exports		55	39	63	39	50	47	61	56	46	54	64	
	Imports		296	313	313	367	422	370	390	357	301	339	413	

Figure 4.5. UNCTADstat data table

Figure 4.6: UNCTADstat country profile



¹⁶ UNCTAD, UNCTADstat's Database, https://unctadstat.unctad.org/EN/

The following is a view of an illustrative view from UNCTADstat's database.



In the UN Comtrade database, it is possible to navigate to identify trading partners, value, and volume of the transaction, either monthly or annual. For example, the following illustration shows the annual export of the United States for the year 2022 with all its partners, for the code "020450 Meat of goats, fresh, chilled, or frozen".

Mostrando	1 a 13 de 13	resultados								Colum	inas extend	idas	•	0
Period ↑↓	Trade Flow î↓	Reporter ↑↓	Socio ↑↓	2nd Partner ↑↓	Customs Desc î↓	Transport Mode î↓	Commodity Code ↑↓	Trade Value (US\$) ↑↓	Net Weight(kg) ↑↓	Gross Weight î↓	Qty Unit ↑↓	Qty ↑↓	Alternate Quantity unit ↑↓	Alternate Quantity î↓
2022	×	USA	World	World	TOTAL CPC	TOTAL MOT	020450	\$530,559	223691		kg	223691	kg	22369
2022	x	USA	Antigua and Barbuda	World	TOTAL CPC	TOTAL MOT	020450	\$106,074	58121		kg	58121	kg	5812
2022	х	USA	Bahamas	World	TOTAL CPC	TOTAL MOT	020450	\$108,019	46554		kg	46554	kg	4655
2022	x	USA	Barbados	World	TOTAL CPC	TOTAL MOT	020450	\$9,142	711		kg	711	kg	71
2022	х	USA	Bermuda	World	TOTAL CPC	TOTAL MOT	020450	\$11,419	918		kg	918	kg	91
2022	х	USA	Br. Virgin Isds	World	TOTAL CPC	TOTAL MOT	020450	\$23,143	1725		kg	1725	kg	172
2022	х	USA	Cayman Isds	World	TOTAL CPC	TOTAL MOT	020450	\$146,820	73954		kg	73954	kg	7395
2022	x	USA	Guyana	World	TOTAL CPC	TOTAL MOT	020450	\$11,367	830		kg	830	kg	83
2022	х	USA	Aruba	World	TOTAL CPC	TOTAL MOT	020450	\$7,452	572		kg	572	kg	57
2022	х	USA	Saint	World	TOTAL CPC	TOTAL MOT	020450	\$2,862	203		kg	203	kg	20

Figure 4.8: UN Comtrade database illustrative example

Regional data hubs may be setup to include transport cost data, however if the data hub is not specifically tracking transport costs, then this specific data might be missing. Publicly accessible data could include in-country government sites such as NSO, customs office, finance ministry, Port Authority(ies), and other government websites. Secured websites could include government and/or regional data hub websites that require a level of authorization to access the site and the data.

UN COMTRADE

The UN Comtrade database records detailed annual and monthly global trade statistics by product and trading partner for use by governments, academic institutions, research institutes and businesses, as recorded by countries. The database covers approximately 200 countries and accounts for more than 99% of world merchandise trade. Information can be extracted in a variety of formats, including application programming interface development tools for integration into enterprise applications and workflows.

During the data mapping process, it is important to document what the requirements are to access a secured website. Occasionally, data can be requested from government agencies through an informal or formal process. The success of informal requests is low compared to formal requests, which include letter requests or through a formal process access. For example, in the United States there is the Freedom of Information Act (FOIA)¹⁷ that allows for access to government unclassified documents with certain limits. These formal processes are often time consuming, the process to get the data can be long, and success is not guaranteed. For-profit websites that sell data require payment to access the data and then often restrict the use and distribution of that data. From an in-country or regional data hub perspective, care needs to be taken when deciding to engage private datasets to ensure that licensing agreements match with the intended use and distribution. Data from private providers often do not have the same transparency, with regard to sources and methods used, as official statistics, and the impartiality of their compilation is not governed by national regulations. Other data availability types could include actual printed hard copy materials, data provided via 'thumb drives' or compact disc, etc.

In addition, it is also important to determine if there are plans for moving where data 'sits' and where it is distributed, upgrading reporting inputs and/or outputs, shifting platforms (e.g., moving to ASYCUDA), report data to UN Comtrade database, and other plans that would change where and how data is available in the future.

4.3 Data gaps

Building on the data mapping and availability efforts, there is often a list of identified data gaps by data type and specific data fields that are not readily available, not at the right level of detail, or missing altogether. The level of detail of published trade and statistics data is typically the reason for the data gaps related to transport costs. The published data is derived from compiled and rolled up transaction data without transport costs being kept as a line item. This typically requires data collectors to engage the in-country trade and statistics offices to get access to the detailed data.

Grouping the list of data gaps by data type and specific data is helpful to identify and document who the data providers are so that the data gap can be maintained, and help closing data gaps when the missing data feed is established. Insights on how to engage data providers to try and close data gaps is presented below.

4.4 Engage data providers

As identified in data mapping above, the key data providers for macroeconomic, transport cost, and port data are typically in-country government entities such as customs offices, national statics offices, and port authorities. Additional qualitative and quantitative data can be provided by private shipping agents, importers, shipping lines, and custom brokers. These are two very distinct groups of data providers and when engaging them, the differences need to be taken into account.

¹⁷ United States Government, *https://www.foia.gov/*

When engaging government entities related specifically to transport cost data, it is important that the national government be aligned on the reasons for collecting the data, understand what the context for the needed data is, what outcomes the data influences, and what are the ramifications of not having in-country data. To this end, it is important that the country's IMO delegation communicates with the national government in-country to bring awareness to the needs and outcomes of data being sought, upon explicit request by the Organization, and the potential negative impacts in the IMO decision-making process of not having the data. The goal being that the national government takes the effort onboard, communicates and instructs the customs and statistics offices that this data is nationally important, and that it needs to be identified, compiled, and made available to for future impact assessments. Further, that the data needs to be compiled annually to enable impacts from future measures to be tracked.

EMPATHETIC ENGAGEMENT

It is very important for data collectors to understand and appreciate that it may not be the main job or responsibility of the people being engaged to collect and provide the data of interest.

Empathetic data collectors help build quicker and stronger relationships that lead to agreements that sustain successful data collection efforts.

Not being empathetic to the data provider can be problematic and typically results in delays, incomplete data, and/or no data provided.



Figure 4.9: Steps towards data sharing

When engaging private entities, it is important to recognize that data is typically viewed as 'company confidential' and there needs to be trust and understanding built prior to receiving data. This is especially true of quantitative data. Qualitative data may be provided on a more informal basis. As illustrated in Figure 4.9, there are some fundamental steps to get to agreements for data sharing.

Engaging entities can be done via 'cold call' with no prior introduction from a third-party, or through third party-introduction. The latter approach allows for a level of trust to be given by the third-party from the start of the engagement. Explaining the context and need for the specific data the provider has will enhance trust and help the data owner to being more receptive to requests.

Establishing a relationship that builds trust is important. Empathetic data collectors typically can establish these two fundamental pillars quickly. Once it is agreed in general that data of interest could be provided, it is important to get a common agreement on the terms of use of such data. What can and cannot be published, if detailed data needs to be aggregated prior to publishing, how to cite the data, and other terms important to both the data provider and the receiver.

The data collector should, where feasible, try to facilitate data collection to reduce the burden on the data provider. This could be in the form of providing spreadsheet files to facilitate data entry, to compiling data from multiple files, to scanning/digitizing paper-based data, to providing updated formats to make data more accessible, etc. Finally, agreements for data sharing can range from a 'hand shake' to signed non-disclosure agreements (NDA), it typically depends on the data provider and the relationship and trust they have with the data collector.

Once data collection has been established it is important to continue to keep contact with data providers so that any issues on their side or the data receiver's side are identified and resolved. It is a good idea to send published documents that use the provided data to the data provider so they can see what is being done with their data and the value of their cooperation. This reinforces both the relationship and trust built between the data providers, data collector, and data receiver. Further insight and thoughts on establishing or enhancing current data collection programs is provided in Section 5.

4.5 Review data

Once data is received it needs to be reviewed to ensure that it is reasonable, correct, and no anomalies stand out. For macroeconomic and transport cost data sets, this task typically falls on the national statistics office. The statistics offices are typically responsible for data quality assurance and data quality management. Through the office's quality assurance and quality control procedures, anomalies are identified and are communicated back to the national customs office for resolution.

UNCTAD has developed an extensive quality assurance framework as the organization aspires to produce and disseminate the best quality statistics possible. To that end, the UNCTAD Statistics Quality Assurance Framework (SQAF),¹⁸ which plays an important role in helping to maintain and improve quality standards was developed and implemented. SQAF addresses three areas of quality: institutional; output; and process. The framework is accompanied by definitions, guidelines, and a quality assessment checklist. Further, UNCTAD statistics are compiled and disseminated in accordance with the Principles Governing International Statistical Activities published by the Committee for the Coordination of Statistical Activities (2014).

Data quality assurance is the process of verifying the reliability and effectiveness of data, which must be performed periodically, and which includes actions such as update and standardization. Data Quality Management is a form of management that ranges from the definition and designation of roles to the deployment of functions, from the definition of policies and

¹⁸ UNCTAD, https://unctad.org/publication/statistics-quality-assurance-framework,

responsibilities to the establishment of procedures for the acquisition, maintenance, disposition, and distribution of data.

Within an organization, data quality is essential for consistency of reporting, user trust, and the effectiveness of operational and transactional processes. Business intelligence needs to be based on high-quality data, and to ensure that it is at the desired level, care must be taken that every interaction with the data is conducive to it, from the way it is entered, to how it is stored and managed.

An effective approach to data quality management comprises both reactive elements, including problem management in data located in existing databases; as proactive elements, which are those that have to do with:

- Establishing governance
- Identification of roles and responsibilities
- > Creation of quality expectations as well as supporting business strategies
- > Implementation of a technical platform that facilitates these business practices

Therefore, for a data quality management initiative to be successful, cooperation between information technology (IT) departments and business areas must be ensured. This partnership is important because, while technical profiles will be responsible for building and controlling the environment, business users will own the data and, upon acceptance of that role, will assume responsibility for the organization and its information assets.

In any data quality project, or when considering a business intelligence platform, the different roles associated with data quality management must be considered:

- Project and Program Manager: This is the person who will be responsible for overseeing specific quality initiatives or the business intelligence program. His/her functions also include to manage the budget, scope, and limitations of the project.
- Agent of change in the organization: this is a key position since its mission is to help all members of the company recognize the impact and value of the business intelligence environment, collaborating to face the possible challenges that arise.
- Business analyst: this role defines the profile of the person in charge of communicating business needs and translating them into data quality needs.
- Data analyst: once the requirements of the business area are known, this person translates those needs into the data model and establishes the prerequisites for the process of acquisition and delivery of the data; always keeping in mind the specific needs of quality and making sure that they are documented in the design.
- > Data administrator: this is the name given to those who manage data as a corporate asset.

Proper data quality management depends on knowing how to measure it. The establishment of indicators and the collection of metrics allows to gain understanding about each component of the data quality cycle because, although each organization is unique, there are a series of quantitative measures of data quality that are universal:

- > **Completeness**: is the degree to which all attributes of the data are present.
- > Validity: Represents the fitting of a data value to its set of values.
- > **Uniqueness**: The extent to which all different values of a data item appear only once.
- > Integrity: has to do with the degree of conformity with the defined data relationship rules.
- Accuracy: Determines the extent to which the data correctly represents the truth about a real-world object or conforms to what is established by an authoritative source.
- Consistency: Represents the degree to which a single piece of data contains the same value across multiple data sets.
- > **Timeliness**: This attribute of data quality allows you to know if data is available when required.
- Representation: refers to the format, pattern, readability, and usefulness of the data for its intended use.

In addition to these quantitative measures of data quality, to acquire a real perspective of the situation of the organization in this area, qualitative measures must also be considered, such as those that have to do with the satisfaction of customers and business users, compliance rates, the appearance of redundancies in processes or the identification of business opportunities.

The establishment of indicators allows to set a baseline to know the state of data quality in the organization and enables the monitoring of the progress of data quality management initiatives.

4.6 Compile, document, and notify

Once data has been collected and reviewed from a quality perspective, the data needs to be compiled into useable formats. For data entered into UN Comtrade database, ASYCUDA software, and regional data hubs, as discussed in Section 5.3 below, the compilation will be handled by these databases allowing user to search on a number of variables. Data collected and not put into compiling databases will need to be compiled so that it is in a useable format for impact assessments. Compiling data means grouping information by HS code, route, port pairs, and other configurations so that data can be pulled for specific scenarios used as part of the stakeholder analysis.

Documentation is important to track data field definitions, data formats, units, and other contextual information, the source of the data, and noting if the data has been reviewed for quality purposes.

Once the data is compiled and documented, the data compiler should notify the national focal point for trade data and the associated contributing governmental offices. As appropriate, the country delegation at IMO may inform the IMO Secretariat and/or the team conducting the comprehensive impact assessment what data has been compiled and for which years.

4.7 Data storage and security

Data collected needs to be stored in an organized structure that allows its use to inform analyses using the data. It also needs to be mindful of any security agreements and protocols. Confidential data needs to be stored such that the terms of non-disclosure agreed (NDA) to between the data provider, data receiver, and/or data compiler are maintained. Even with detailed confidential data, data can be aggregated in a way that 'hides' individual data elements that link the data back to the data provider. For example, when collecting specific ship level data, the findings can be aggregated by ship type and size ranges such that the underlying ships are not 'revealed' and the terms of the NDA are maintained.

Another important consideration about data security is that once a dataset has been reviewed and confirmed as final, it is important to make sure that the dataset is not accidently changed or corrupted by others after that stage. For example, if a transport cost dataset has been collected, reviewed, and compiled by a national statistics office, which is then uploaded it to a regional data hub, that dataset needs to be stored in such a way that prevents anyone from changing/corrupting the dataset. The dataset can be downloaded and manipulated for analysis purposes, but the base dataset on the region hub, in this example, is maintained as the version uploaded by the national statistics office.

4.8 Data collection frequency

While some of the data streams are on a transactional frequency, from a programmatic perspective it is best to collect data on a quarterly or annual basis as this keeps the program and the participants in sync with what is needed to be provided when; a routine is established and maintained. It is best to align with any existing data collection/analysis cycles, say that a national statistics office already has established. Programs that collect data intermittently, say once every other year or longer frequencies have the challenge of starting over each time with the potential of new people across the data flow network, which requires relearning what was done previously and the associated context. In addition, with infrequent data collection, the resolution to detect and observe changes over time is diminished.

5 Establishing and enhancing data collection programs

Building, enhancing, or integrating in-country data collection programs will be an essential element to establishing and maintaining the data streams needed for identifying potential impacts prior to an IMO measure's adoption and to track and identify impacts overtime from implemented measures. This section provides general approaches, considerations, and examples for the key steps that are needed support sustain data collection programs and efforts. In addition, it is important for successful and sustained data collection effort to develop and ensure robust frameworks for data management, quality, ownership, and data flows.

5.1 Building in-country support for data collection efforts

As noted above in Section 4.3, it is important to build, at a national level, governmental support for data collection efforts targeted at transport cost data. While most countries have the data within their Customs procedures, emphasis is generally not specifically focused on transport costs. So, assigning transport cost data as a national priority is one of the challenges that must be met in establishing sustained data collection efforts, especially in those countries where impacts from changes to transport costs are potentially most acute. From the Fiji Round Table, there was a common theme across Customs and Statistics Offices, that is there are two fundamental challenges when it comes to adding tracking of transport cost data:

FIJI ROUNDTABLE

Two common themes came across from the participants of the roundtable, related to expanding data collection and review to include transport cost data. They strongly noted the importance of getting maritime transport data set as a priority by the national government. This allows the NSO to work on the datasets. The second theme was that the NSO can be understaffed for their current workload and so there could be resource challenges.

- a) The offices are typically understaffed, so it is a challenge to add work items to their current list of priorities, and
- b) They are assigned their work priorities by their ministries based on the inputs from the national government and legislative bodies.

Each country's national government will have unique characteristics, relationships, and operating tendencies, so what works in one country may need to be adapted or not work at all in another country. In addition, national priorities can be acute to broad ranging and changing over time. Interagency cooperation and the establishment of periodic national, regional or sub-regional roundtables could assist the data collection process.

Identification of the correct in-country combination of government agencies, actors, and support mechanisms may become an iterative process, it will be ultimate support sustained data collection efforts and programs. It is important to document the relationships, agreements, and findings throughout the process. Standardized data collection can be attained by also observing conceptual frameworks designed for helping to maintain and improve quality standards such as UNCTAD's <u>Statistics Quality Assurance Framework</u> (see also section 4.5 above).

Where possible, the establishment of policies and/or data sharing agreements can provide durability to programmatic data collection efforts. Policies can help keep the data collection programs goals and significance in the government 'memory' and, importantly, can be used to support resource assignments and priorities. Formal agreements can help sustain data flows between government entities such as MOU between Customs and Statistics Offices, for example. There were two such MOUs identified and discussed at the Fiji Roundtable. The MOUs were from Tonga and Kiribati.

The Tonga MOU, revised 2014, is between the Ministry of Revenue & Customs Tonga and the Statistics Department Tonga, with the purpose "...to promote and further enhance cooperation and coordination between the Statistics Department and the Ministry of Revenue & Customs on areas of common interest. It provides a basis for a successful and enduring working relationship between the parties to ensure the best use of official statistics for policy other decision making and to inform the public of Tonga." The MOU spells out established data sharing relationship, information exchange and expertise, security information, communications, and other legal elements. The MOU is currently in the process of being updated again, which illustrates that conditions and needs change overtime and MOUs should be improved and retuned periodically based on changing conditions and from experience using such MOUs.

The Kiribati MOU, 2020, is between the Environment and Conservation Division (ECD), Ministry of Environment, Lands and Agricultural Development and Kiribati Customs Administration and Enforcement, Ministry of Justice. The MOU is driven from the ECD side by the Climate Change Unit (CCU) focusing on national ozone related matters including Ozone Depleting Substances (ODS) under the Montreal Protocol of Substances that Deplete the Ozone Layer. The objective of the MOU is "...to establish procedural matters to affect the intention of the MOU to strengthen the enforcement of imports and/or exports [of] controlled substances as stipulated under... the [national] ODS Regulation." While this is not explicitly focused on developing alignment between Customs and an NSO, it does provide an example of MOU language enabling two government organizations to work together for a common goal. The MOU spells out roles, responsibilities, and the sharing of data.

The Tonga and Kiribati MOUs are provided in Annex I of this Guidebook, as a starting point to inform others that are interested in developing such an instrument. Of course a new MOU has to be fine-tuned to the particular purpose, scope, country, and agencies the MOU would address.

These mechanisms that support sustained data gathering programs are further explored in Section 5.2 below.

COOK ISLANDS NATIONAL ALIGNMENT FOR IMPACT ASSESSMENT

An example of how national alignment and support was successful in collecting transport cost and port data, is that of the Cook Islands during the IMO stakeholder assessment for short-term measures. The country's IMO delegation understood the importance of the data needed for the analysis and the negative consequences to the analysis if surrogate data was to be used or, worse yet, the analysis was not conducted. The IMO delegation engaged with the Ministry of Foreign Affairs, which understood the implications and assigned staff to gather the needed data. In addition, the Ministry convened supporting government entities to communicate the need and importance of the data and engaged the private sector. This approach enabled the in-country Ministry staff to engage, gather, and provide quantitative and qualitative transport cost and port data for the assessment in record time. Without this national level of coordination and alignment, the effort would have taken too long to support the analysis.

5.2 Consideration when building or enhancing productive and sustained data collection programs

As noted above, the data needed to support IMO impact assessments and to track impacts from measures overtime, typically exist in-country. The level of sophistication at which those data are collected, stored, compiled, reviewed, and disseminated can range significantly from one country to the other. This section provides approaches and consideration when building or enhancing productive data collection programs.

All countries have established NSO and Customs Authorities with procedures to track and collect duty charges on imported and exported goods. Further, most countries provide trade statistics through their NSO quarterly and annually. So, building a new data collection system is not a typical case per se; usually, it is enhancing existing data collection programs to increase the level of detail being tracked and reported to include transport cost data and specific relevant port data. To this end, the following considerations could be useful depending on the in-country situation and should be documented so that institutional knowledge is not lost overtime:

a) National ownership on the production of transport cost data. As noted earlier, this fundamental principle that the data production process for maritime transport costs statistics should be owned by the countries, is of paramount importance. If the data production process is owned by the countries, this implies that the statistical output can be considered as validated by them, avoiding disagreements in a later stage when the results of the impact assessment will be discussed. Ownership of the production of their own data will also allow each country to take full care that their specific institutional provisions, for example, for guaranteeing confidentiality and impartiality, will be fully respected and applied.

b) **State of technology.** How are transport cost and/or port data being electronically recorded and stored or not? Data recording and storage could range from paper records, simple spreadsheets, local and/or national database, to regional or international databases.

Where paper records are still being used, it is important to identify those areas and organizations and develop a plan to assist them to move to electronic record keeping. This could include not only acquisition of computer equipment but also training and capacity building for those working with the data.

Where simple spreadsheets are being used, are they conducive to being queried? Investigating data collection spreadsheets is warranted to see what data is being stored and what the structure of the data worksheet(s) is/are. For example, if the same data is being repeated across multiple worksheets, it will be difficult to query and be prone to data duplication and associated errors. In these instances, an agreed consolidated approach and spreadsheet file might be developed for future use along documentation on fields, data formats, instructions, and capacity building/training.

- c) Level of detail. What is the level of detail required for the various data sets used for assessments? This is typically the most common cause of data gaps associated with transport cost data as transport costs are not generally a concern of customs, unless it is incorporated in the duty charge like in the CIF freight agreement for example. And even when it is incorporated into the duty charge, it may not be reported or published. Figuring out if the data is captured is key and then sorting publication or reporting is a relatively easy step. From the port data perspective, tracking the IMO number along with ship name is critical to reduce the uncertainty with which ships are servicing the country being evaluated. Where data is not being recorded or reported at the level of detail needed, then structural changes or improvements need to be identified and made to do so.
- d) Level of review. To what level is the data collected reviewed and how are anomalies addressed? Are data management best practices being used? It is a good idea to understand and document (if it is not already) what data quality assurance and quality control procedures or standards are used so that any resulting analysis using the data is informed of the level of accuracy or any uncertainties.
- e) **State of publication/reporting.** What data is being reported and/or published? Is it to the level of detail needed? If not, what can be done to change the reporting system and which organization(s) is key to carrying out improvements?

- f) Supportive policy instruments. Data sharing agreements between government agencies can be used to support the flow of data and helps to create the need by which resources can be allocated to service the agreement. As noted above, the agreements can be formal MOUs, letters of intent, inter- or intra-agency memorandums, or pro-forma documents such as forms. The more informal, the more at risk the agreement is to being abandoned or forgotten when conditions change, when people familiar with the agreement move on to other parts of the agency or leave altogether. During the Fiji Roundtable, Tonga informed the group that they have a data sharing MOU between Customs and the Statistics Office. While there were elements they would update, the MOU is provided for illustrative purposes as Annex 1.
- g) Identification of future improvements. Are their future improvements planned or being considered that would support, enhance, or develop new data collection capabilities incountry? Are their plans to move customs data to the ASYCUDA platform? Are their plans to join a regional data hub? Are their plans to increase resource capacity, improve technologies, implement administrative or policy instruments to improve data sharing? If so, then documenting these and taking them into account is important.
- h) Intended use of the data. What is the purpose of compiling maritime transport data in the Pacific region? Impact assessments are key in the formulation of global policy measures to reduce GHG emissions in international shipping, requiring relevant data to calculate possible impacts on States and/or the fleet. For example, improving the availability of maritime transport costs data in the Pacific region supports the preparation of future impact assessments of IMO GHG reduction measures and raises awareness on the importance and potential implications of the measures.

On the basis of the above assessment, UNCTAD, IMO and other entities, as appropriate, may provide support to address the identified needs.

5.3 Regional data collection efforts

Regional data collection efforts and data hubs are initiatives that pool resources and centralize data from across a region for collective uses. Countries can work together to harmonize and advance their data collection efforts, capacities, and capabilities through actively participating in regional hubs.

An example is the Pacific Data Hub (PDH)¹⁹, which aims to deliver the most comprehensive collection of data and information about the Pacific and from the Pacific, including key areas such

as population statistics, fisheries science, climate change adaptation, disaster risk reduction and resilience, public health surveillance, conservation of plant genetic resources for food security, and human rights.



¹⁹ SPC PDH, *https://pacificdata.org/*

The PDH is an innovative program of work, led by the Pacific Community (SPC) and supported by the New Zealand Ministry of Foreign Affairs and Trade and the Australian Department of Foreign Affairs and Trade. It is a regional public good that provides a single authoritative point of entry for data about the Pacific and serves as a vehicle for investment in a sustainable regional data infrastructure. It uses the open data principles²⁰ including:

- > Free to use data is published under an open data license;
- Structured directly machine-processable;
- > **Open formats** no restriction on software to be used;
- **Referenceable** each data point is identifiable with a URL; and
- > Linked to the web of data standard concepts and classifications are used.

The PDH uses graphical interfaces and dashboard to allow easy access to data (Figure 5.1).



Figure 5.1: PDH graphical interface example

²⁰ Tim Berner's Lee 5-Stars deployment scheme for open data, *https://5stardata.info/en/*

The goal is to make PACComtrade data available via the PDH. The plan envisages to reach twelve Pacific Island Countries and Territories (PICTs) using ASYCUDA via the PACComtrade database portal by the end of 2022 (Table 5.1).²¹

PICTs using	ASYC	JDAWorld begin of 2022
FJ	MEL	Fiji
KI	MIC	Kiribati
NC	MEL	New Caledonia
PG	MEL	Papua New Guinea
SB	MEL	Solomon Islands
TV	POL	Tuvalu
VU	MEL	Vanuatu
WS	POL	Samoa
PICTs that s	should	be using ASYCUDAWorld by end of 2022
СК	POL	Cook Islands
NR	MIC	Nauru
NU	POL	Niue
ТО	POL	Tonga
PICTs that I	might ເ	use ASYCUDAWorld later
FM	MIC	Micronesia (Federated States of)
PW	MIC	Palau
MH	MIC	Marshall Islands
PICTS not n	nentio	nned as potential ASYCUDAWorld users
AS	POL	American Samoa
GU	MIC	Guam
MP	MIC	Northern Mariana Islands
PF	POL	French Polynesia
PN	POL	Pitcairn
ТК	POL	Tokelau
WF	POL	Wallis and Futuna

Table 5.1: PACComtrade database portal development plan

²¹ SPC, Pacific Commodity Trade Database Presentation, Denis Grofils, SPC, Fiji Roundtable, February 2023

PACComtrade will consist of standardized data file formats and structures (Figure 5.2)

Table 5.2: PACComtrade file format and file structure

File format	
File name	CC-YYYYDDMM-hhmmss.csv
	(reporting country and date/time of the extract)
File format	CSV
Encoding	UTF-8
Header	Column names in first row
Separator	Semicolon
Quoting	No quoting of values
Number format	Point as decimal separator
	No thousands separator

File structure			
Column name	Column description	Cardinality	Representation
DATE	Date of lodgement of the customs declaration	Mandatory, 1 value	ISO 8601 (example "2022-05-16")
COMMODITY	Commodity code	Mandatory, 1 value	8-digits PACHS code
COMMODITY_CLASSIFICATION	Classification used for the commodity code	Mandatory, 1 value	Version of the PACHS classification used
TRADE_FLOW	Type of trade	Mandatory, 1 value	Codes from the IMTS global DSD
VALUE	Statistical value	Mandatory, 1 value	Number (integer or decimal number)
INCOTERMS	International commercial terms	Mandatory, 1 value	Value is "FOB" for exports or "CIF" for
FREIGHT_PAID	Freight paid	Mandatory, 1 value	Number (integer or decimal number)
INSURANCE_PAID	Insurance paid	Mandatory, 1 value	Number (integer or decimal number)
CURRENCY	Currency in which monetary values are expressed	Mandatory, 1 value	ISO 4217
QUANTITY	Quantity	Mandatory, 1 value	Number (integer or decimal number)
QUANTITY_UNIT	Unit of quantity	Mandatory, 1 value	Standard units of quantity recommended for
COUNTRY_ORIGIN	Country of origin	Mandatory, 1 value	ISO 3166-1 alpha-2
COUNTRY_DESTINATION	Country of destination	Mandatory, 1 value	ISO 3166-1 alpha-2
TRADE_AGREEMENT	Trade agreement	Mandatory, 1 value	Code list to be defined by the PACComtrade
TRANSPORT	Mode of transport used	Mandatory, 1 value	Codes from the IMTS global DSD, lowest level

Exhaustive lists of allowed codes is provided in the "CODELISTS" worksheet.

5.4 Surrogate data

Data gaps are inevitable and when conducting impact assessments, an analyst has two choices: use surrogate data or suspend the analysis until the data gaps can be closed. Ultimately, surrogate data should not be needed if data is collected in advance of impact assessments.

Surrogate data is typically used to fill these gaps, however the result of using surrogate data is that it introduces uncertainty and potentially bias into the results from any analysis. The uncertainty levels can range from minimal (close to actual conditions) to not reflecting actual conditions which renders analyses invalid. The severity of uncertainty introduced from using surrogate data depends on how close the surrogate data aligns and reflects actual conditions for a particular commodity in the country being evaluated. To reduce uncertainty, it is important to understand and align a number of contextual factors of both the target commodity and the surrogate commodity, such as:

- Seaborne transportation network. It is important to understand how the ocean transport operations of the target country/port and the surrogate country/port differ. For example, taking transport cost surrogate data from say Fiji, which acts like a regional transport hub with transshipment activities and applying those costs to the Cook Islands, which sits at the end of the container ship string served by a limited number of ships may not be the best fit as it might underestimate transport costs in the Cook Islands.
- Surcharges. It is important to understand qualitatively what the surcharge landscape is for the target country/port or region compared to the surrogate country/port. The surcharges can add significant costs to the overall transport freight rate and if the surrogate country does not have the same general surcharges, the overall freight rates can be significantly different.

Other key factors to consider when using surrogate data are currency, direction of trade, crosssubsidy, and similar commodity types. Currencies can be adjusted based on exchange rates. Direction of trade can introduce significant uncertainty (e.g., using an export transport cost from one surrogate country/port pair for a target import country/port pair). When commodities cannot be aligned, using another commodity that is in the same class and shipped in the same fashion is better than crossing types and shipping methods. Selecting different commodity classes that are fundamentally different will introduce significant uncertainties. For example, using containerized computer goods shipping rates for medical equipment might be a good fit, while using containerized computer goods shipping rates for refrigerated containerized perishable fruits and vegetables is not a good fit.

6 Support for data collection programs

The IMO and UNCTAD have capacity to provide support to IMO Member States that face challenges related to macroeconomic, transport cost, and port data programs. IMO has developed the <u>ITCP</u> which is designed to assist Governments which lack the technical knowledge and resources that are needed to operate a shipping industry safely and efficiently, and through its Department of Partnerships and Projects (DPP) has a long and successful track record of matching the requirements of developing countries, including Least Developing Countries and Small Island Developing States, with resources made available by a range of governmental, institutional and corporate donors. Dedicated support may also be provided through the <u>GHG-TC Trust Fund</u>.

The project on improving the availability of maritime transport costs data in the Pacific showed the importance of regional cooperation and entities such as IMO-established Maritime Technology Cooperation Centers (MTCCs) can play a role in supporting data collection programs.

More broadly, IMO has been supporting capacities and specific needs of LDCs and SIDS through various major projects, capacity building activities:

- Working with selected developing countries around the world, including Small Island Developing States (SIDS) and Least Developed Countries (LDCs), and partnering with maritime-related international associations and the industry, GreenVoyage2050 is supporting the reduction of Greenhouse Gas (GHG) emissions from shipping, in line with the Levels of Ambition set out in the IMO GHG Strategy. GreenVoyage2050 has been supporting Cook Islands and Solomon Islands in the development of National Action Plan for Green Shipping and the identification of measures that can support a sustainable and resilient maritime transport system.
- IMO Coordinated Actions to Reduce Emissions from Ships or IMO CARES project was established in 2023 to help SIDS and LDCs identify market ready technology solutions that will help improve the efficiency of selected ships and / or ports, reduce operational costs and GHG emissions.
- The Global MTCC Network (GMN) project established 5 Maritime Technology Cooperation Centre's (MTCCs) in 5 developing regions, which have been assisting SIDS and LDCs since 2017 to build local capacity and demonstrate new technologies for the decarbonization of their maritime sectors.

- Furthermore, the IMO GHG Sustainable Maritime Transport Training Program or GHG SMART project particularly supports SIDS and LDCs capacity building needs for maritime decarbonization, in line with the IMO 2023 GHG Strategy and as such has been providing an annual training programme, including a core online training, covering both regulatory matters, port and shipping, energy efficiency issues, as well as investment needs and opportunities, and an in-person training in the Republic of Korea, with opportunity for WMU scholarships for the past two years.
- Finally, IMO established a Voluntary Multi-Donor Trust Fund to facilitate delegates from developing countries, especially SIDS and LDCs to attend IMO GHG-related meetings in the IMO headquarters in London, which already allowed the participation of delegates from 12 SIDS and LDCs to MEPC 80 in July 2023.

UNCTAD has rich expertise in the area of maritime transport and a long record of experience in assisting countries in the setup and reinforcement of statistics production systems as well as in the management of related capacity building programs.

Further support and partnership opportunities may be explored such as with the UN Regional Commissions, including: <u>Economic Commission for Africa</u>, <u>Economic Commission for Latin</u> <u>America and the Caribbean</u>, <u>Economic and Social Commissions for Asia and the Pacific</u>, <u>Economic and Social Commission for Western Asia</u>. Finally, opportunities and programs can be provided by more localized organizations such as the <u>Micronesian Center for Sustainable</u> <u>Transport</u>.

Annex 1 – Example MOUs to facilitate data sharing between government agencies

Tonga MOU

Kiribati MOU

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE MINISTRY OF REVENUE & CUSTOMS TONGA

AND

THE STATISTICS DEPARMENT TONGA

June 2014

MEMORANDUM OF UNDERSTANDING BETWEEN

MINSTRY OF REVENUE

AND

STATISTICS DEPARTMENT

This Memorandum of Understanding is made the 30th day of June 2014

BETWEEN The Chief Executive Officer of Revenue, representing the

Ministry of Revenue & Customs Queen Salote Ex-Students Centre Railway Road PO Box 7 Nuku'alofa

AND The Government Statistician, representing the

Statistics Department Tonga TMF building Taufa'ahau Road Kolofo'ou PO Box 149 Nuku'alofa

1. Purpose

- 1.1 The purpose of this Memorandum of Understanding is to promote and further enhance cooperation and coordination between the Statistics Department and the Ministry of Revenue & Customs on areas of common interest. It provides a basis for a successful and enduring working relationship between the parties to ensure the best use of official statistics for policy and other decision making and to inform the public of Tonga.
- **1.2** This Memorandum must be read in the context of the statutory responsibilities both parties have under their respective legislation.

2. Format

- 2.1. This Memorandum contains guiding principles on cooperation and coordination between the parties which should drive the success of the relationship over the longer term.
- 2.2. An Annex of Schedules details the relationship between the parties on specific areas of common interest. The schedules are listed in the annex to the memorandum. They are regarded as part of the main document and therefore should be read subject to the provisions of this memorandum.
- 2.3. The schedules may be amended by consent from both parties from time to time by adding, amending, or removing a schedule from the annex.

3. The relationship

- 3.1 The Statistics Department and the Ministry of Revenue & Customs share an interest in working together to improve the reputations of their respective organisations, and to improve official statistics and enhance trust and confidence in official statistics.
- 3.2. The following key principles will underlie the relationship:

Interdependence/shared commitment: both parties have a shared understanding of each other's business strategy. There will be mutual commitment to success, particularly where there is joint interest.

Independence: each party has different imperatives/constraints and their own specific responsibilities and accountabilities. Common ground will be sought and there will always be effort to understand things from the other party's point of view. At times, however, the parties may hold and express differing views on particular issues and may not always reach agreement.

Honesty and no surprises: each party will commit to active, early, open engagement on relevant issues, responses and information, to ensure "no surprises".

Problem solving and responsive: a joint problem solving approach will be used to resolve issues in a constructive and responsive way.

Ongoing nature: the relationship is an ongoing one. It will be nurtured and there will be a commitment to regular communication.

3.3. The Memorandum will reflect the roles of each organisation, in particular:

The roles and competencies of the Statistics Department as Tonga's leading statistical agency producing statistics for better decision making and discussions within government, and to facilitate research and education of the public.

The roles and competencies of the Ministry of Revenue & Customs as the collector of duty and tax revenue for the Government, and to improve, encourage and strengthen compliance with the customs and tax legislations.

3.4. The Memorandum will reflect areas of common interest, in particular:

Reducing compliance load from government activities. Provision of tax and customs data will assist in the management of compliance load from statistical surveys.

The importance for both parties of trust and confidence in official statistics and in the public sector more generally. The integrity of official statistics and the reputation of the parties are essential to their effectiveness in serving the government and community, and for maintaining the willing provision of information by firms and households. Both parties will strive to promote trust and confidence in the official statistics system.

- 3.5. The Memorandum will -
 - (A) enable the provisions of the Statistics Act 1978 (ACT No 31), in particular section 9(1) and (2) which states:
 - (1) For the purposes of this Act and subject to subsection (1) of section 14:

"(a) the Government Statistician or any officer of the Statistics Department authorized by him to do so may inspect and have access to any returns, certificates, statements, documents, or other records obtained for the purpose of the Income Tax Act; and

(b) the Chief Executive Officer of the Ministry of Revenue & Customs shall cause such returns, certificates, statements, documents or other records to be made available to the Government Statistician or person authorized by him to inspect such records, in such manner and at such time and place as may be prescribed upon the recommendation of the Minister for Finance.

2) the Chief Executive Officer of the Ministry of Revenue & Customs shall cause to be sent to the Government Statistician entries of imports and exports into and from Tonga in electronic format in a form suitable for statistical analysis." And

(B) enable section 57 of the Revenue Services Administration Act 2002 which states:

That all documents received by the Ministry of Revenue & Customs shall be confidential however disclosure may be made to (57(2)(b)) any person in the service of Government in a revenue or statistical department where such disclosure is necessary for the performance of the person's official duties".

4. Information exchange and expertise

- 4.1. The Ministry of Revenue & Customs will provide to the Statistics Department tax and customs records as listed in Schedules 1 and 2 attached to this Memorandum.
- 4.2. The Statistics Department will provide to the Ministry of Revenue & Customs, aggregated statistical information only. Section 15(2) of the Statistics Act 1978 prohibits the use of information collected under the Statistics Act from being "used for or in connection with the assessment of levy of any tax imposed by the Government of Tonga and may not be used in evidence of such assessment".
- 4.3. Both parties will endeavour to assist each other in a technical capacity where particular skilled input is required and not available in the party requiring the input.
- 4.4. Requests for information shall clearly reflect that the applicant is duly authorised to make such a request.
- 4.5. Information shall be passed either in response to a specific request, or alternatively as a result of unsolicited, proactive liaison between the parties.
- 4.6. In instances where information is specifically requested by one party, significant use of resource may be encountered by the supplying party in order to obtain the detail required. To minimise disruption in this respect, the requesting party shall ensure that the request has been made for valid necessary reason, within a reasonable time frame, and where necessary, the requesting party may provide assistance to gather the information requested.
- 4.7. In the spirit of goodwill that exists between the two parties and collective Government interest neither party shall unreasonably with-hold information, be it information formally requested or provided voluntarily, and each party shall stand its own administrative costs in providing such information.
- 4.8. Either party, upon receiving from the other a formal request for information, shall respond to the request within 20 working days, unless significant valid reasons dictate otherwise.

5. Security of information

5.1. Each party shall hold in strict confidence any information passed and shall not divulge any information so passed except with the permission of the party who passed the information, and subject always to the provisions of the Statistics Act 1978 and the Revenue Services Administration Act 2007, and any other relevant legislation, or pursuant to Court proceedings.

5.2. The Statistics Department will not publish or disclose any taxpayer's information in a manner that could identify that individual or non-individual taxpayer.

6. Communications between the two parties

- 6.1. Schedule 3 to this Memorandum lists the contact details of liaison positions to whom requests for information should be directed, or who may supply information. Requests for information from staff of either party shall be directed to the appropriate liaison positions within the supplying party. It is recognised that this Schedule will be updated as personnel change.
- 6.2. The parties are encouraged to meet regularly, as a means of developing and maintaining positive business relationships and addressing matters of relevant interest to both parties.

7. Law

7.1. Nothing in this Memorandum is intended to override existing legislation or compel either party to do something not authorised by law.

8. Issue or dispute resolution

- 8.1 Issues, disputes and differences between the parties in relation to the interpretation or performance of this Memorandum of Understanding shall, in the first instance, be referred for resolution to the appropriate liaison officers nominated in Schedule 3.
- 8.2. If resolution cannot be reached through the above process, the matter shall then be referred, in writing, to the Chief Executive Officer of the Ministry of Revenue & Customs and the Government Statistician for final resolution within 28 days.

9. Period

9.1. This Memorandum shall have effect from the date of signing by both parties.

10. Review

10.1. This Memorandum shall be reviewed every three years or at such other time as may be mutually agreed by the respective Chief Executives of each party.

11. Termination

11.1. This Memorandum may be terminated at any time as agreed by the same Chief Executive Officers

SIGNATORIES

MINISTRY OF REVENUE & CUSTOMS:

STATISTICS DEPARTMENT:

.....

Mrs. Irma Daphney Stone Chief Executive Officer Ministry of Revenue & Customs

Mr 'Ata'ata Finau Government Statistician Statistics Department

Dated:

Dated:

ANNEX OF SCHEDULES

Schedule 1: Tax records to be supplied from the Ministry of Revenue & Customs to r	the
Statistics Department	

Non-individual - Application for Taxpayer Identification Number Purpose: business register information Required quarterly					
Item	Field details				
Tax identification number (TIN)	text				
1. Name	text				
2. Trade Name	text				
3. Main business location	text				
4. Resident for tax purposes	y/n				
5. Mailing address	text				
7. Contact details	text				
8. Organisation type	company, estate/trust,				
	partnership, club/other				
10. Nature of business trade	text code				
11. Organisation's start date	date				
12. Do you expect your annual turnover to be \$100,000 or more?	y/n				
13. Do you intend to employ people?	y/n				
14. How many employees?	Numeric fields				

CT206: Consumption Tax Return Purpose: GDP output and intermediate consumption Required quarterly by month	
Item	Field details
Tax identification number (TIN)	text
Name	text
Total taxable supplies made	\$
Zero rated supplies	\$
Standard rate supplies made	\$
Total taxable supplies purchased	\$
CT paid customs	\$
CT paid customs / 15%	\$
Value added	\$

Form 11: Company Return Purpose: GDP output and intermediate consumption, possible future development of GDP income account Required annually					
Item	Field details				
Year of income	date				
Tax identification number (TIN)	text				
Name of company	text				
Nature of business	text				
Payments to non residents:					
Name	text				
Type of payment	text				
Amount withholding tax paid	\$				
Tax withholding certificates:					
1-4 Item	Gross amount \$				
5. Net rental income/loss from rental statement	Gross amount \$				
6. Net business income/loss after adjustments from	Gross amount \$				
reconciliation statement from profit and loss statement					
7. Foreign source business income/Loss from profit and loss	Gross amount \$				
statement					
8. Share of income from estate/trust	Gross amount \$				
9. Net gain on sale of business assets	Gross amount \$				
10. Any other income	Gross amount \$				

PAYE return

Γ

Purpose: employment statistics, possible future development of GDP income account Required quarterly by date of payment (month?)

Item	Field details
Payer's tax identification number (TIN)	text
Name of employer or payer	text
Totals of this payment:	
Pay period	w, f, m
Total salary and wages for period	\$
Total value of benefits for pay period	\$
Tax deducted	\$
Net amount	\$
Date of payment/return	date

Form 1: Non-resident Shipping Owners and Charterers Withholding Tax Return

Purpose: Balance of Payments statistics Required quarterly

Item	Field details
Tax identification number (TIN)	text
Income period	date
Trading name	text
Name of owner of ship	text
Total gross amount	\$
Total tax deducted or tax due	\$
Date of payment/return	date

Form 2: Non-resident Aircraft Owners or Charterers

Purpose: Balance of Payments statistics Required quarterly

Item	Field details
Tax identification number (TIN)	text
Income period	date
Name of aircraft company	text
Trading name	text
Total gross monthly taxable amount	\$
Total tax deducted or pay payable	\$
Date of payment/return	date

Form 6: Tax withholding Certificate (for payments from Tongan source income to non-residents)

Purpose: Balance of Payments statistics Required quarterly

Item	Field details
Tax identification number (TIN)	text
Year of income	date
Name of person receiving payment	text
Interest	Gross amount \$
Company dividends	Gross amount \$
Royalties	Gross amount \$
Technical service fees	Gross amount \$
Natural resource amount??	Gross amount \$
Rent	Gross amount \$
Management fees	Gross amount \$
Insurance premium	Gross amount \$
Independent services	Gross amount \$
Any other fees or services	Gross amount \$
Date of payment/return	date

Schedule 2: Customs records to be provided by Customs Service to the Statistics Department

Customs records Purpose: Merchandise trade statistics				
Required monthly				
Data as specified below plus:				
Custom tarrif changes				
 Any changes of codes used 				
Vessel registers				
Passenger arrival and departure cards				
Item	Field details			
Line number	numeric			
Direction	I / E (import/export)			
SISC classification	private, government etc			
Date	date			
Warrant number	text			
Receipt number	text			
TIN (IRD and customs allocated TINs)	text			
Name	text			
Point of entry	text			
Aircraft/vessel	numeric			
Flight/voyage number	text			
AWB/BoL	text			
Gross weight	tonnes			
Country of export	text			
Country of origin	text			
Description of goods	text			
Substantive tariff code	HS code			
Concession tariff code	HS code			
HS quantity	numeric			
Excise quantity	lal			
CIF value	\$			
Unit price	\$			
Duty rate	% / Ial			
Excise rate	\$			
Duty payable	\$			
Duty concession	\$			
Excise payable	\$			
Excise concession	\$			
CT payable	\$			
CT concession	\$			
Line total	\$			
Total payable	\$			

Schedule 3: Nominated Liaison positions

Ministry of Revenue & Customs

The liaison officers and primary contacts at the Ministry of Revenue & Customs are the following positions. The current incumbents are:

Position	Name	Phone	eMail
Revenue Officer	Mrs. Felaloaki Vea	23444	felaloaki.vea@revenue.gov.to
Revenue Officer	Mr. Heiloni Latu	23651	heilonil@customs.gov.to

Statistics Department

The liaison officers and primary contacts at the Statistics Department are the following positions. The current incumbents are:

Position	Name	Phone	eMail
Head National Accounts	Mrs Masiva'ilo Masila	23 300 ex 110	mmasila@stats.gov.to
Head Trade Statistics	Mrs 'Ana Malia Kama	23 300 ex 118	akama@stats.gov.to
Head of Balance of Payment	Mrs Pamela Mone	23 300 ex 120	pmone@stats.gov.to



MEMORANDUM OF UNDERSTANDING

Between

Environment and Conservation Division Ministry of Environment, Lands and Agricultural Development

and

Kiribati Customs Administration and Enforcement Ministry of Justice

1.0 PREAMBLE

The Environment and Conservation Division (hereinafter referred to as "ECD") is mandated to safeguard the natural environment (land and sea) upon which life depends and to protect human health. ECD's operational work programs are implemented by different Units within the Division. The ECD – Climate Change Unit (CCU) serves as the interim National Ozone Unit (NOU). The authority of this MOU is within the CCU mandates that concern national ozone matters, and in collaboration with the LCS, enforce the Ozone Depleting Substances (ODS) Regulations 2017 in the Republic of Kiribati. CCU also coordinates, facilities and manages the implementation of all activities that implement and fulfill the Government of Kiribati's obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer.

The Kiribati Customs Administration and Enforcement (hereinafter referred to as "KCAE") promote and facilitate trades, protect the society and collecting the revenue at the border including enforcement of customs laws. KCAE is also tasked with border management which basically deals with ensuring safe and securing borders which shall ultimately contribute substantially to environmental, social and economic well-being of the nation. In essence most (if not all) approved ports of entry in the Republic are manned by customs officers to ensure all matters pertaining to boarder management are attended to. The ports of entry include seaports of Betio, Kiritimati, Fanning and Canton; and international airports of Bonriki, and Cassidy airport in Kiritimati.

WHEREAS:

The ECD and the KCAE agree to accept the respective roles, responsibilities and tasks as outlined in this MOU, to strengthen, improve, and enhance Government of Kiribati's national border control of Ozone Depleting Substances (ODS) in KIRIBATI.

Under this MOU, Parties agree as follows:

2.0 DEFINITION AND INTERPRETATIONS

CCU means Climate Change Unit

Controlled substances means substances that are controlled under the Montreal Protocol and ODS Regulation.

ECD means Environment and Conservation Division

KCAE means Kiribati Customs Administration and Enforcement

LCS means Licensing and Compliance Unit.

License means General License under the ODS Regulation.

Licensed importers/exporters refers to Government bodies, local or foreign companies, or individual that hold a valid License to import/export controlled substances and ODS based-equipment. MELAD means Ministry of Environment, Lands and Agricultural Development

MOU means this Memorandum of Understanding

OCO means Oceania Customs Organization

ODS Regulation means Ozone Depleting Substances Regulation 2017 of the Environment Amendment Act 2007.

OFFICER means an Environment Inspector under the Environment Amendment Act 2007 or any officer under the Customs Act 2005.

TCU means Transnational Crime Unit

UN Environment means United Nations Environment Programme

WCO means World Customs Organization.

3.0 NATURE OF COOPERATION

3.1 The objective of this MOU is to establish procedural matters to affect the intention of the MOU to strengthen the enforcement of imports and/or exports controlled substances as stipulated under Part III Section 11 of the ODS Regulation.

3.2 Activities to be undertaken in pursuit of the objective of the MOU include identifying and detaining any of the following consignments at the border.

3.2.1 Any controlled substances whether for individual purpose or for commercial purposes that do not have the appropriate license and notification letter issued by the ECD;

3.2.2 Equipment containing ODS that do not have the appropriate license and notification letter issued by the ECD; and

3.2.3 Suspected controlled substances confirmed as mislabeled or co cross-contaminated.

3.3 Acting upon reasonable doubt that consignment as stipulated in 3.2.1 or 3.2.2 are illegally imported or exported and/or based on such reasonable evidence to suspect consignment to be as stipulated in 3.2.3, the KCAE shall detain the consignments and transfer custody of such goods to the ECD for the following actions;

Consignment as stipulated in 3.2.1 or 3.2.2

ECD will examine whether it is prohibited substances (whether it is intended or unintended).

> If it is prohibited substances, the consignment shall be dealt with, under the ODS Regulation 2017.

> If it is not prohibited substances, ECD shall examine whether if could be imported or exported against the quota. If import or export is allowed, ECD will issue written approval to KCAE. Duties and taxes must have been appropriately paid, before release of the goods to the consignee.

Consignment as stipulated in 3.2.3

The consignment shall be confiscated and stored in the premise of ECD for proper disposal as advised by ECD.

3.4 Any controlled substances or ODS based-equipment found to be smuggled or removed without prior approval from ECD and KCAE outside of the KCAE's controlled area, shall be detained by the **Officer** and subject to Customs Act or ODS Regulation as appropriate.
4.0 ROLES AND RESPONSIBILITIES AND CONTRIBUTIONS OF ECD

4.1 The ECD shall:

4.1.1 Provide KCAE the updated list of licensed importers/exporters on quarterly basis for consideration;

4.1.2 Take possession of any detained controlled substances or ODS based-equipment confirmed as mislabeled or cross-contaminated from KCAE as soon as reasonably practicable and shall be transferred to a facility approved by the ECD for storage;

4.1.3 Carry out inventory of detained controlled substances or ODS based-equipment on six monthly and annual basis;

4.1.4 Provide KCAE with the Refrigerant Identifier equipment for necessary use for verification of type of substances;

4.1.5 For maintenance purposes, ECD will quarterly check the status of Refrigerant identifier equipment;

4.1.6 Undertake the training requirements for Customs officers;

4.1.7 Undertake the refresher training to KCAE on ODS Enforcement; and

4.1.8 Carry out prosecution of persons, organizations and/or companies found to have committed an offense under the ODS regulation. This does not prevent KCAE from prosecuting offenders under the Customs Act.

5.0 ROLES AND RESPONSIBILITIES AND CONTRIBUTIONS OF KCO

5.1 The KCAE shall:

5.1.1 Appoint Customs Landing Officers to undertake examination of incoming controlled substances or ODS based-equipment suspected as mislabeled or cross-contamination;

5.1.2 Ensure that the correct tariff code is being applied for each controlled substances consignment;

5.1.3 Ensure that all required trade documents for controlled substances importation and exportation are obtained and presented or made available by importers and exporters during entry application;

5.1.4 Ensure that the required documents are issued and endorsed by ECD including;

5.1.4.1 Valid License to import/export controlled substances; and

5.1.4.2 Notification letter, which emphasize the date of arrival/departure of shipment, and

type, amount and HS code of incoming controlled substances for that shipment.

5.1.5 Ensure that the Refrigeration Identifier equipment are to be only used by trained officers and to be used appropriately for the purpose of ODS verification only at the border.

5.1.6 Immediately notify ECD and undertake immediate legal actions, as appropriate under the Customs Act, on any suspected illegal importation and exportation of controlled substances and identification of shipment containing mislabeled or cross-contaminated substances.

5.1.7 Use the resources of the TCU, WCO, OCO and other regulatory bodies in tracing and sharing information on illegal imports or exports of controlled substances, and report to ECD; and 5.1.8 At all times whilst performing the duties of an Officer, a Customs officer is expected to maintain and uphold the terms and conditions that are required under the Customs Act.

6.0 RIGHTS AND OBLIGATIONS

The respective laws of the concerned parties shall govern the rights and obligations of the Parties.

7.0 APPLICABLE LAW

This MOU shall be governed by and construed in accordance with the Laws of the Republic of Kiribati and subject to the jurisdiction of the Kiribati Courts.

8.0 SHARING AND DISCLOSURE OF INFORMATION

The ECD and KCAE may share and exchange information and data as appropriate for the purposes of enforcing the ODS Regulation and Customs Act. The release of such information and data to a third party, must first attain the approval of both ECD and KCAE.

9.0 LIABILITY

9.1 The Refrigerant Identifier equipment:

The ECD shall not be liable to any technical defaults and repair of the refrigeration identifier, which are caused from or by mishandling of refrigerant identifier equipment by Customs officer. KCAE will be liable for any costs related to mishandling of the refrigerant identifier equipment by the Customs officer.

<u>9.2 Controlled Substances or ODS based-equipment confiscated for storage:</u> The KCAE shall handover any confiscated items to ECD for storage in the approved storage facility. ECD will be liable of any lost of confiscated items.

10.0 SETTLEMENT OF DISPUTES

The parties will endeavor to resolve disputes arising from the interpretation or implementation of the MOU by consultation or negotiation. If amicable solutions are not reached, parties may endeavor to seek redress of their concerns by a third party.

11.0 SECRETARIAT

The Climate Change Unit shall be the Secretariat arranging necessary administration for the training of Customs Officers.

12.0 COMMENCEMENT, AMENDMENT AND TERMINATION

12.1 This MOU will come into effect on the date of execution or date of signing by both Parties.

12.2 Mutually acceptable amendments may be affected at any time by exchange of notes between the parties.

12.3 This MOU may be terminated by either party giving written notice to the other of its intention to terminate it in which case it will terminate ninety (90) days from the date of receipt of the notice of termination. Alternatively, the parties may mutually consent to the termination of the MOU at any time.

IN WITNESS THEREOF the parties hereto have executed or signed this MOU:

Taare Aukitino Secretary & Principal Environment Officer (PEO) MINISTRY OF ENVIRONMENT, LANDS AND AGRICULTURAL DEVELOPMENT (MELAD)

Date: 15/10/20

Kaaro Neeti

MINISTRY OF JUSTICE (MOJ)

Date: _____

In the presence of: Witness

Secretary

Date: 08.10.2020

Mrs Nenenteiti Teariki-Ruatu Director ENVIRONMENT AND CONSERVATION DIVISION (ECD)

Mr Tekaie Ititaake Comptroller KIRIBATI CUSTOMS ADMINISTRATION AND ENFORCEMENT (KCAE)





Date: