
REPORT ON
SDMX IMTS GLOBAL CONSULTATION

4 March 2016

Note by the Working Group

## 1. Background

The **Statistical Data and Metadata Exchange (SDMX)** is an initiative taken by a number of international organizations beginning in 2001 with an aim to set technical standards and statistical guidelines to facilitate the exchange of statistical data and metadata by using modern information technology. SDMX is now being implemented in several statistical domains (such as national accounts and balance of payments).

The **UN Statistical Commission** recognized and supported the SDMX standards and guidelines in 2008 as the preferred standard for the exchange of data and metadata, requesting the SDMX sponsors to continue their work and to encourage national and international statistical organizations to increase the use and implementation of SDMX. The SDMX sponsors report regularly to the Statistical Commission (see E/CN.3/2013/30 and E/CN.3/2015/33).

Since 2013, SDMX standards have also been developed for International Merchandise Trade Statistics (SDMX-IMTS). The inter-agency working group on SDMX-IMTS (WG), which develops these new standards, seeks to specify uniform structures, concept definitions and code lists for IMTS data and metadata which comply with the latest version of the SDMX standard (2.1), and which follow the latest recommendations for IMTS (IMTS 2010).

## 2. Purpose and scope of the Global Consultation

In 2015, United Nations Statistics Division (UNSD) on behalf of the inter-agency WG, conducted a Global Consultation on the proposed global **Data Structure Definition (DSD) for IMTS**. A survey questionnaire to facilitate the review was designed for this purpose.

A DSD is a central component of the SDMX. It specifies: i) a set of **concepts** which describe and identify the data; ii) the **attachment** level of each of these concepts as well as their **status** (mandatory

or conditional); and iii) **code lists** which provide acceptable values for the concepts and their standard coding and formatting.

In most cases, all concepts will not generally be required to fully specify a data set. Therefore, three DSDs based on purpose of data transmission were defined using subsets of concepts of the main DSD. These DSDs were developed based on the analysis of existing data flow between data providers and international organisations. They are as follows:

**DSD1**: This DSD is meant to specify all required elements for data collection. It may also be sufficient for data transfer within an organization. Transfers of confidential elements are supported.

**DSD2**: This DSD is meant to specify all required elements for data dissemination. This includes tariff line data disseminated by UNSD. Confidential elements are not supported.

**DSD3:** This DSD is meant to specify all required elements for aggregated data. It also defines required elements for the transfer of some indices.

Respondents were asked to review the DSD as a whole, the purpose oriented DSDs defined (DSD1, DSD2, DSD3), and the code lists associated with the concepts in the DSD. They were further asked questions on their experience and plans with SDMX, usefulness of the concepts in the DSD in their context, and needs and challenges related to implementation of SDMX-IMTS.

The full questionnaire can be found at [Link].

## 3. Respondent information

A total of 87 countries, economic areas and organizations responded to the survey. Given the technical nature of SDMX and the level of detail of the DSD, this represents a high response rate.

Out of all respondents, 3 were international/supranational organizations, namely, The Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC); World Trade Organization (WTO); and World Tourism Organization (UNWTO). In addition, the WG also sought the feedback from SDMX Secretariat.

The regional breakdown is as below:

| | Region | Number of respondents |
|---|---|---|
| 1 | Europe | 27 |
| 2 | Asia | 24 |
| 3 | Africa | 16 |
| 4 | LAC | 10 |
| 5 | Oceania | 5 |
| 6 | Northern America | 2 |
| 7 | Organization | 3 |

# 4. Summary Findings

*[**Note**: SDMX is a very technical topic and thus the responses might sometimes contain error because of, among others, misinterpretation of the questions by the respondents. However, results presented in this report are as per the responses. The feedback from the questionnaire was compiled in the issue log and discussed within the WG in details.]*

## 4.1 Data Structure Definition

The set of concepts in DSD was found to be complete and adequate by most respondents. A number of comments and suggestions were received on the code lists (see next section).

It was suggested that "Duty, Dumping duty, and Goods and Services Tax" be included in the observation type (CL_OBS_TYPE). Suggestion was also made to include Economic Activity (CL_ACTIVITY) in DSD2 rather than DSD1.

Some European countries mentioned that they follow EU standards indicating necessity of harmonisation of IMTS-SDMX with EU standards.

## 4.2 Code lists

Respondents were asked to specify whether there were missing codes, codes not properly defined, and any other issues with the code list.

Below is a summary of comments received on individual code lists:

### *4.2.1 Geographic Area Codes (CL_AREA)*

This is the code list for countries and geographic area.

A number of comments and suggestions were received on the code list. Countries informed about discrepancy between their national codes and CL_AREA. Many European countries indicated that there are differences between CL_AREA and Geo-nomenclature used by EU and suggested harmonisation.

Some countries use ISO3 codes while CL_AREA is ISO2.

Inclusion of some territories and groups such as Eurasian Economic Union (EAEU) or Republic of South Ossetia were suggested. Furthermore, it was requested to reduce of number of codes due to duplicates or unclear definitions.

WTO mentioned that there is difference in the definition of North America between their code and CL_AREA.

### *4.2.2 Commodity Codes (CL_COMMODITY)*

This is the list of primary commodity codes or commodity group codes. It comprises of all versions of the Harmonised System (HS), Standard International Trade Classification (SITC) and Classification

by Broad Economic Categories (BEC). Its composition includes a prefix that identifies the commodity classification (e.g. HS02_XXXXXX, SITC4_XXXXX, BEC_XXX).

Some EU countries suggested inclusion of Combined Nomenclature (CN), and Classification of Products by Activity in the European Economic Community (CPA). One country suggested inclusion of Central Product Classification (CPC).

Interesting suggestion was made to make provision in the classification to differentiate between consumer goods based on their ratings of environmentally friendliness, e.g. energy efficient goods vs non-efficient goods.

A number of comments were made on discrepancy between SDMX-IMTS code list and national code list. In particular, 98XXXX and 99XXXX codes in HS were found to be most problematic since countries allocated various commodities to them.

### *4.2.3 Mode of Transport (CL_TRANSPORT_MODE)*

This is the code list for the mode of transport used when goods enter or leave the economic territory of a country.

Some EU countries commented that CL_TRANSPORT_MODE should be aligned with EU Combined Nomenclature. Some countries commented that provision should be made for multiple mode of transport (it should be noted that IMTS recommends recording mode of transport when goods cross the border).

### *4.2.4 Customs or Statistical Procedure (CL_CUSTOMS_PROC)*

This is the code list for all types of customs or statistical procedures.

The comments received on the code list were many. European countries stressed the need to harmonise with EU's Customs Procedure Codes (CPC).

Many respondents pointed towards the difference between their national CPC and CL_CUSTOMS_PROC, and shared their detail code lists.

Specific suggestion was made to break down inward/outward processing according to whether it occurred with or without change of ownership.

### *4.2.5 Economic activity (CL_ACTIVITY)*

This is the list of economic activity codes according to ISIC.

Comments received on this code list were mainly from the EU countries informing that in EU, Statistical classification of economic activities in the European Community (NACE) is used to classify economic activities rather than ISIC.

*4.2.6 Unit of Measure (CL_UNIT)*

This is the code list for units in which the data values are measured.

Many comments were received on CL_UNIT. EU countries asked for harmonisation with Combined Nomenclature.

A number of suggestions were made to include new unit of measures such as Barrels, Heads, Joules, Gross register ton, Curie, Bone dry unit, etc.

Some requests were received to include multiplier of units of measure already in the list (it should be noted that there is already a concept allowing for specification of multiplier).

Suggestions were made to include non-metric units of measures such as pounds or gallons.

## 4.3 Implementation

Respondents were asked whether they have experience in implementation of SDMX in any other domain, and whether they have plans to implement SDMX for the dissemination of IMTS.

35 countries said that they have experience in implementation of SDMX in at least one other domain. Most of these are concentrated in Europe (19), with some in Africa, Americas and Oceania.

When asked if they have plans to implement SDMX for dissemination of IMTS where the response categories were ranges of years, the responses showed clear regional variation. Five to seven countries in each of Africa, Asia and Europe said that they could implement in 1-2 years. A fewer number of countries in the three regions mentioned it could take them 2-5 years.

Very few African countries mentioned that it could take them more than 5 years or that they have no plans at all. In Asia, number of countries that thought implementation would take them more than 5 years, and those who had no such plans, were comparable in number with countries that indicated implementation was possible in 1-2 or 2-5 years. Interestingly, 12 countries in Europe indicated that they had no plans to implement SDMX for IMTS.

There were very few responses from the Latin America and the Caribbean (LAC), Northern America and Oceania with 5 countries in LAC mentioning that they could implement SDMX for IMTS in 2-5 years.

Overall, there were 22 countries who responded to this question using each of the 1-2 and 2-5 years categories, and 20 countries said that they had no such plans.

As additional comments, respondents expressed that SDMX is considered part of the overall information infrastructure and can facilitate external reporting including for international reporting purposes. A concern was raised on lack of technical skills and the feasibility of implementing SDMX for IMTS due to data volumes. EU countries reported that TEC (Trade by Enterprise Characteristic) data have been regularly produced and submitted to Eurostat using SDMX.

For more details, see Annex-II.

### 4.4 Challenges in the Implementation

Respondents were asked if they anticipated any challenges in the implementation of SDMX for IMTS, and if they are to do so, what were their training requirements, if any. They were further asked to elaborate using a textbox.

22 countries said that they have no problem in implementing SDMX for IMTS, 25 responded otherwise, and 29 countries chose to provide no opinion.

Those who mentioned that there were challenges in the implementation (25), pointed out the following issues in particular in the comments section:

a. Possible inconsistency of codes with existing (national) standards
b. Impracticality of using SDMX format for IMTS due to huge data volumes
c. The needs to invest to upgrade/build IT system
d. Lack of SDMX knowledge in substantive area (trade statistics)
e. The need to address confidentiality issues

A higher variation among the responses were seen for the training requirements question where 44 countries mentioned that they do have training needs, and only 10 countries said that they had no training needs. 26 countries choose to provide no opinion.

In the comments section, those countries who responded that they had training requirement expressed that sharing of experience and tools among institutions was important to improve capacity of countries. In addition, training programmes (e.g., workshops, online, consultation) were welcome as part of implementation strategy. The programme could focus on 1) more detailed explanation of each component in DSDs, 2) sharing the national practices including common problems and issues, 3) common tools and demo of data in SDMX-IMTS.

### 4.5 Overall/additional comments

Respondents were asked to mention any additional comments they had using a text box. Based on the experiences from the implementation of Balance of Payments and National Accounts SDMX, countries emphasized on the importance of the stability of DSD once enforced. Concern was raised that it would be costly otherwise. Furthermore, countries indicated that the capacity building should be focused on the SDMX tool and its usage, especially for the developing countries.

## 5. Use of IMTS 2010 concepts

The respondents were asked questions to assess the national compilation practices in regards to the implementation of IMTS 2010 concepts. The detail results are presented in Annex-IV. Please note that even though countries are not yet able to implement fully the IMTS 2010 concepts, it does not affect the design of DSDs.

## Annex-I: Experience in other domains

Countries with experience in other (any) domains

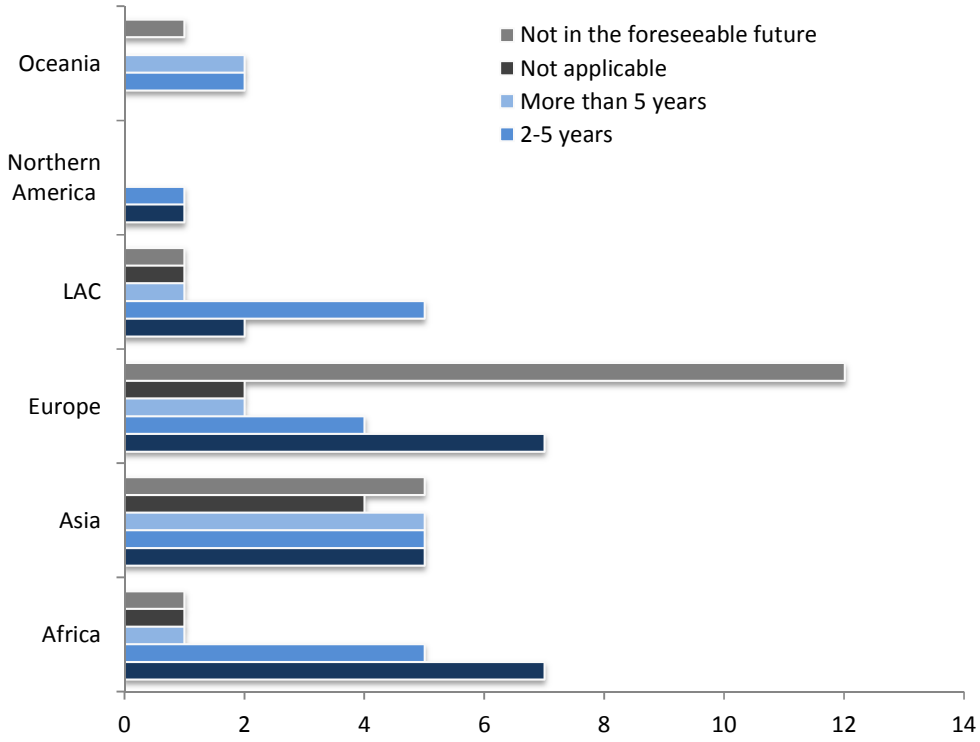
| Africa | Asia | Europe | Latin Am. & the Carib. | Northern America | Oceania |
|---|---|---|---|---|---|
| Benin | Cyprus | Austria | Mexico | Bermuda | Fiji |
| Burundi | Iraq | Belgium | Venezuela | | Australia |
| Ghana | Israel | Bulgaria | Colombia | | |
| Mozambique | Palestine | Croatia | | | |
| Sudan | | Denmark | | | |
| Tanzania | | Estonia | | | |
| Togo | | Germany | | | |
| | | Hungary | | | |
| | | Iceland | | | |
| | | Ireland | | | |
| | | Latvia | | | |
| | | Netherlands | | | |
| | | Poland | | | |
| | | Portugal | | | |
| | | Serbia | | | |
| | | Slovakia | | | |
| | | Sweden | | | |
| | | Romania | | | |

## Annex-II: Plan to implement SDMX IMTS

| 1-2 years | 2-5 years | More than 5 years | Not in foreseeable future |
|---|---|---|---|
| Bermuda | Aruba | Albania | Austria |
| Bulgaria | Australia | Botswana | Belgium |
| Burundi | Bahamas | Cambodia | Croatia |
| Denmark | Benin | Dominican Republic | Cyprus |
| Estonia | Canada | Fiji | Czech Republic |
| Ghana | Chile | Guam | Hungary |
| Iceland | Costa Rica | Hong Kong, China | Japan |
| Iraq | Ecuador | Republic of Moldova | Kuwait |
| Ireland | Egypt | Saudi Arabia | Mauritius |
| Kingdom of Bahrain | Indonesia | Singapore | Netherlands |
| Mexico | Israel | Yemen | Papua New Guinea |
| Morocco | Latvia | | Philippine |
| Nepal | Macedonia | | Portugal |
| People's Republic of China | Malaysia | | Qatar |
| Poland | Mongolia | | Belarus |
| Serbia | Mozambique | | Romania |

| | | |
|---|---|---|
| Sudan | New Zealand | Slovakia |
| Tajikistan | Palestine | Suriname |
| Togo | Russia | Sweden |
| Tunisia | Seychelles | United Kingdom |
| Venezuela | Switzerland | |
| Zimbabwe | Tanzania | |

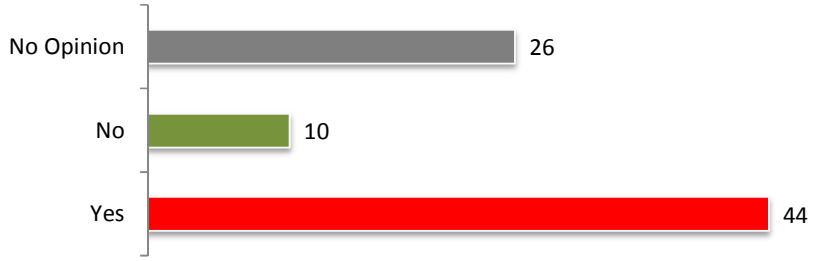
**Plan to implement SDMX IMTS by region and number of countries**




# Annex-III: Challenges in implementation

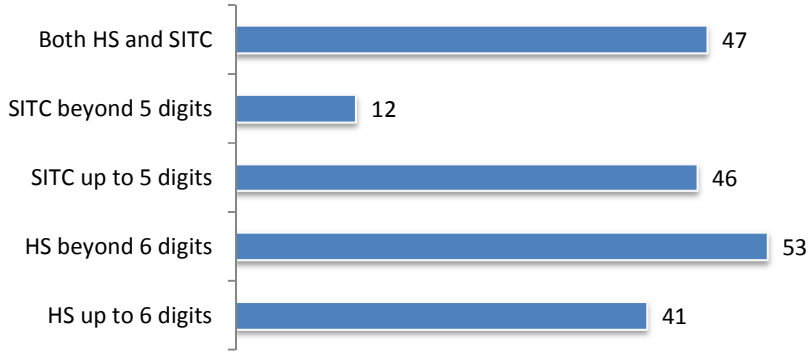
**Any problem is implementation?**

**Do you require training for implementation?**

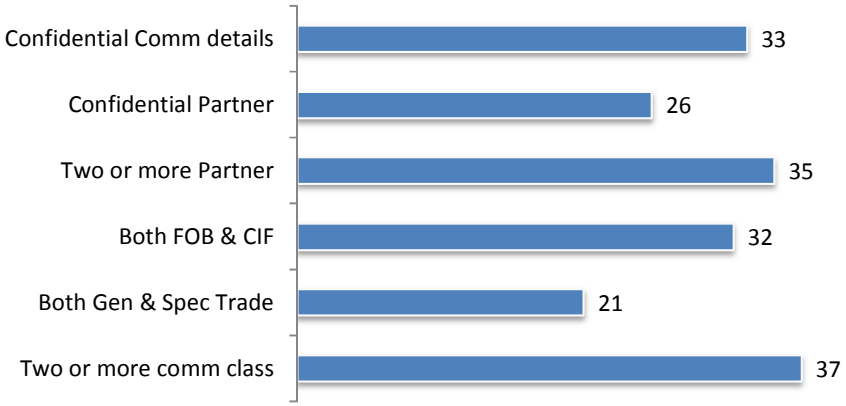



## Annex-IV: Use of IMTS 2010 concepts

1. **Commodity classification used by countries**



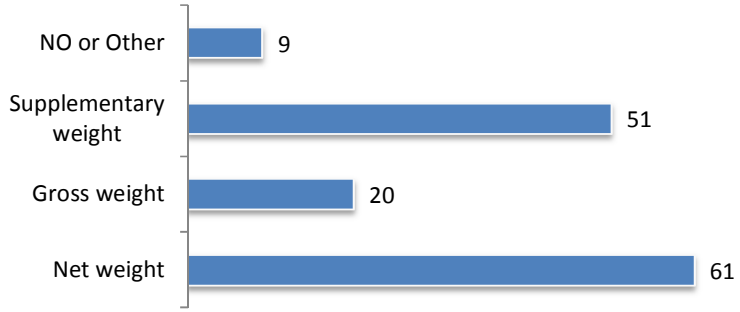

2. **Number of countries who disseminate, or plan to disseminate Two or more commodity classifications; Both General and Special Trade System; Both FOB and CIF valuation; Two or more Partner countries; Confidential Partner countries; Confidential Commodity details**



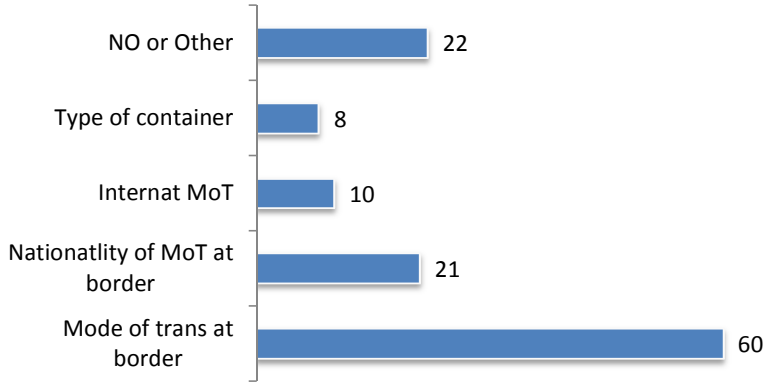
Note on confidentiality

The national practices on handling trade data confidentiality differ from country to country. However, in general, confidentiality is used to protect the identification of natural/legal person who performs business transactions. Some countries indicate that micro-data can be made available for special purposes (e.g., research/analysis, support investigation).

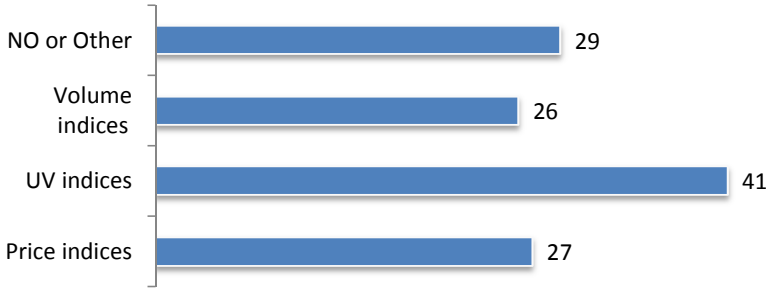
### 3. Weight types used by countries



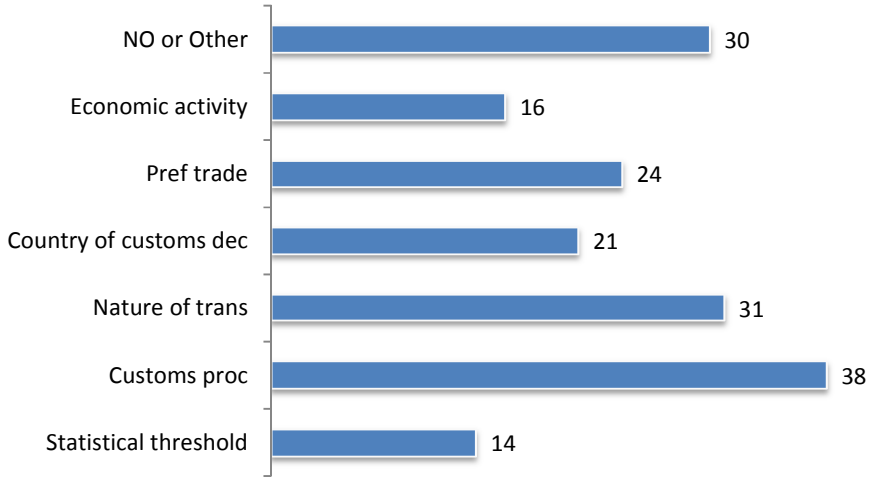

### 4. Mode of transport details used by countries




### 5. Indices disseminated by countries



6. **Additional details used by countries (Economic activity of importer/exporter; Preferential trade treatment; Country where customs declaration is lodged; Nature of transaction; Customs or statistical procedure code; Statistical threshold indicator)**



## Annex-V: Visualizing results of selected questions

Countries without SDMX experiences
https://public.tableau.com/profile/publish/ExperienceinNOdomain/Sheet1#!/publish-confirm

Countries with SDMX experiences
https://public.tableau.com/profile/publish/ExperienceinOtherdomains/Sheet1#!/publish-confirm

Timeline of implementation
https://public.tableau.com/profile/publish/Timelineofimplementation/Sheet1#!/publish-confirm

Commodity classifications used by countries
https://public.tableau.com/profile/publish/Commodityclassification/Sheet1#!/publish-confirm

Use of SDMX IMTS concepts by countries
https://public.tableau.com/profile/habib.khan1041#!/vizhome/UseofSDMX IMTSconcepts/Sheet1

Weight types used by countries
https://public.tableau.com/profile/publish/Weighttypeused/Sheet1#!/publish-confirm

Mode of transport details used by countries
https://public.tableau.com/profile/publish/Modeoftransportdetails/Sheet1#!/publish-confirm

Indices disseminated by countries
https://public.tableau.com/profile/publish/Indicesdisseminatedbycountries/Sheet1#!/publish-confirm

Additional details relevant to countries
https://public.tableau.com/profile/publish/Additionaldetails/Sheet1#!/publish-confirm

Implementation challenges
https://public.tableau.com/profile/publish/Implementationchallenges/Sheet1#!/publish-confirm

Training requirement
https://public.tableau.com/profile/publish/Trainingrequirement/Sheet1#!/publish-confirm