

Worked Examples – Trade in Biomass Products

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Introduction

In this workbook, the focus is on accounting for biomass in the B & C 1.4.1, 1.4.2, and 1.4.3 categories, which cover “Wild fish catch”, “All other wild aquatic animals”, and “Aquatic plants” respectively. This is because the other biomass materials have been generally well covered in the tutorial videos, including partial re-allocation of compound and complex products containing biomass. In contrast, aquatic products were not dealt with at all, but can be quite significant products for some countries.

Seeking local data is always advisable, as where it exists it is likely to be more up-to-date and more detailed than data from international datasets. At a minimum, local data will provide something to check and verify against.

Here, however we will explore using a high quality, international data set as a good base data set for initial compilation in these categories.

Comtrade has a very detailed breakdown of aquatic animal and plant products split across a number of different major categories. These are concentrated in HS categories under 03 “Fish and crustaceans, molluscs and other aquatic invertebrates”, but also occur under categories like 2301 (which has a fish meal component) and 1212 (which has sea weeds). The “Corresp HS2017_Trade” worksheet The Compiler has the relevant concordance to MFA categories, so it is possible to compile from the Comtrade data.

An alternative international database is the FAO’s Fisheries and Aquaculture database. This is dedicated to fisheries / aquatic products statistics, with an emphasis on trade volumes (tonnages) rather than value. As such, it is likely to have estimates better grounded in domain expertise than a more generalist database, with relevant quality control.

It also has querying options which allow you to choose more aggregated product flows, which should make your compilation task simpler.

The following example shows how to use that database to compile trade for the MFA 1.4.1 and 1.4.3 categories.

Unfortunately, the data from this source is typically two years behind the current year, so for the most recent years you would need to find local data.

Determining which, if any local agency reports to fisheries data to FAO, would be a logical first step to finding out whether there is local data for the most recent year

Example

The relevant querying interface for the FAO's Fisheries and Aquaculture database was located at https://www.fao.org/fishery/statistics-query/en/trade/trade_quantity at the time of writing.

The first four selection panels on the query interface are shown in Figure 1. The input required for three of these is self-explanatory (Reporting Country, Trade Flow, and Year).

Dimensions

REPORTING COUNTRY REPORTERS BY ECONOMIC CLASS RE

Search

- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra

« < 1 2 3 4 5 > »

COMMODITY FAOSTAT GROUP ISSCAAP DIVISION YEAR

Search

- Abalone (Haliotis spp.), frozen
- Abalone meat, prepared or preserved
- Abalone shells
- Abalones, dried, salted or in brine, smoked
- Abalones, shucked or not, live, fresh or chilled

« < 1 2 3 4 5 > »

TRADE FLOW TRADE FLOW (GROUPED)

Search

- Exports
- Imports
- Reexports

« < 1 > »

YEAR

- 2021
- 2020
- 2019
- 2018
- 2017

2021 X 2020 X 2019 X 2018 X 2017 X

Figure 1 Initial query interface panels for the FAO Fisheries and Aquaculture database

The other, where you select the product category system / grouping, is where you have a range of different category / grouping system options. Some of these systems are very aggregated, yet

still appropriately detailed for allocation to MFA categories. This should make your compilation task much simpler

For this example we change from the default “Commodity” category to the “ISSCAAP Division” option, as shown in Figure 2.

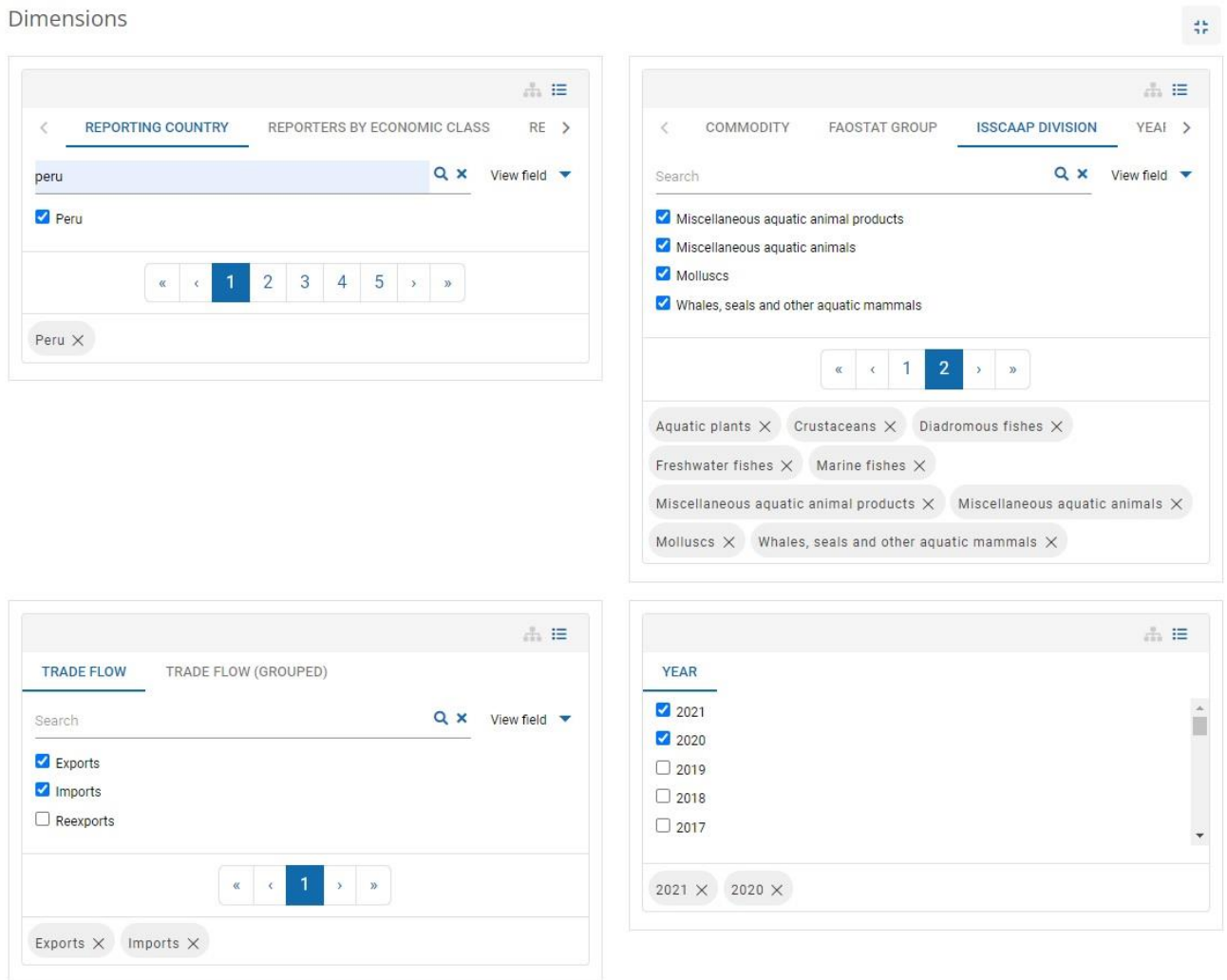


Figure 2 Initial query panels filled out for example.

The “ISSCAAP Division” grouping system has only nine divisions, which map to the MFA1.4.1, 1.4.2, and 1.4.3 categories as shown in Table 1.

Table 1 Concordance of ISSCAAP Divisions to MFA categories

ISSCAAP Division	MFA Category	Tonnes
Aquatic plants	1.4.3 Aquatic plants	
Crustaceans	1.4.2 All other wild aquatic animals	
Diadromous fishes	1.4.1 Wild fish catch	
Freshwater fishes	1.4.1 Wild fish catch	
Marine fishes	1.4.1 Wild fish catch	
Miscellaneous aquatic animal products	1.4.2 All other wild aquatic animals	
Miscellaneous aquatic animals	1.4.2 All other wild aquatic animals	
Molluscs	1.4.2 All other wild aquatic animals	
Whales, seals and other aquatic mammals	1.4.2 All other wild aquatic animals	

After filling out these panels as shown for this example i.e Country set to Peru, Imports and Exports for Trade Flow, and the most recent years available at the end of 2023 were selected (2020 and 2021), further query refinements are required in a subsequent set of panels, shown in Figure 1.

Query definition

Select fields from the list and drag or click the arrow buttons to move them. Drag fields to sort or move them between rows and columns.

The screenshot shows a query definition interface with four main panels:

- Filters:** A panel containing the text "No items found".
- Columns (only one allowed):** A panel containing the text "Year".
- Selected rows:** A panel containing three rows: "Reporting country Name En", "Commodity ISSCAAP division Name En", and "Trade flow Name En".
- Possible fields:** A scrollable list containing several options, including "Reporting country Reporters by economic class Name En", "Reporting country Reporters by economic group Name En", "Reporting country Other reporter country groups Name En", and "Reporting country Reporters by continent Name En".

Navigation arrows are present between the panels to move fields between them.

Figure 3 Subsequent query interface panels settings for the example

In this case, the selections made will include the country name, the trade flow, and the commodity category in the query output, with different years as different columns. The query result is shown in Figure 4.

Query results

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🔍 Show data

Reporting country Name En	ISSCAAP division Name En	Trade flow Name En	Unit Name	2021	2020
Peru	Aquatic plants	Exports	Tonnes – net product weight	43 734	29 642
Peru	Aquatic plants	Imports	Tonnes – net product weight	21	32
Peru	Crustaceans	Exports	Tonnes – net product weight	50 925	41 338
Peru	Crustaceans	Imports	Tonnes – net product weight	11 684 E	11 456
Peru	Diadromous fishes	Exports	Tonnes – net product weight	6 469	5 486
Peru	Diadromous fishes	Imports	Tonnes – net product weight	1 311	708
Peru	Freshwater fishes	Exports	Tonnes – net product weight	2 436	1 789
Peru	Freshwater fishes	Imports	Tonnes – net product weight	9 069	7 397
Peru	Marine fishes	Exports	Tonnes – net product weight	1 555 063 E	1 100 311 E
Peru	Marine fishes	Imports	Tonnes – net product weight	100 483	104 021
Peru	Miscellaneous aquatic animal p	Exports	Tonnes – net product weight	76	71
Peru	Miscellaneous aquatic animal p	Imports	Tonnes – net product weight	0	0
Peru	Miscellaneous aquatic animals	Exports	Tonnes – net product weight	135 E	107
Peru	Miscellaneous aquatic animals	Imports	Tonnes – net product weight	20	7
Peru	Molluscs	Exports	Tonnes – net product weight	354 000	301 960
Peru	Molluscs	Imports	Tonnes – net product weight	1 698	900

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Figure 4 Example query results

Expanding a version of the concordance shown in Table 1, with a column to accommodate each year’s tonnages for each product, and duplicating rows to allow for both imports and exports, will organise your data so that you can then simply calculate subtotals, for transfer to the relevant field on the Compiler’s tables B and C. This is shown in Table 2, for 2021 data.

Table 2 Expansion of ISSCAAP concordance to compile aquatic products for one year

ISSCAAP Division	MFA Category	Trade Flow	Tonnes (2021)
Aquatic plants	1.4.3 Aquatic plants	Exports	43,734
<i>Sub-Total</i>	<i>1.4.3 Aquatic plants</i>	<i>Exports</i>	<i>43,734</i>
Diadromous fishes	1.4.1 Wild fish catch	Exports	6,469
Freshwater fishes	1.4.1 Wild fish catch	Exports	2,436
Marine fishes	1.4.1 Wild fish catch	Exports	1,555,063
<i>Sub-Total</i>	<i>1.4.1 Wild fish catch</i>	<i>Exports</i>	<i>1,563,968</i>
Crustaceans	1.4.2 All other wild aquatic animals.	Exports	50,925
Miscellaneous aquatic animal products	1.4.2 All other wild aquatic animals.	Exports	76
Miscellaneous aquatic animals	1.4.2 All other wild aquatic animals.	Exports	135
Molluscs	1.4.2 All other wild aquatic animals.	Exports	354,000
Whales, seals and other aquatic mammals	1.4.2 All other wild aquatic animals.	Exports	
<i>Sub-Total</i>	<i>1.4.2 All other wild aquatic animals.</i>	<i>Exports</i>	<i>405,136</i>
Aquatic plants	1.4.3 Aquatic plants	Imports	21
<i>Sub-Total</i>	<i>1.4.3 Aquatic plants</i>	<i>Imports</i>	<i>21</i>
Diadromous fishes	1.4.1 Wild fish catch	Imports	1,311
Freshwater fishes	1.4.1 Wild fish catch	Imports	9,069
Marine fishes	1.4.1 Wild fish catch	Imports	100,483
<i>Sub-Total</i>	<i>1.4.1 Wild fish catch</i>	<i>Imports</i>	<i>110,863</i>
Crustaceans	1.4.2 All other wild aquatic animals.	Imports	11,684
Miscellaneous aquatic animal products	1.4.2 All other wild aquatic animals.	Imports	0
Miscellaneous aquatic animals	1.4.2 All other wild aquatic animals.	Imports	20
Molluscs	1.4.2 All other wild aquatic animals.	Imports	1,698
Whales, seals and other aquatic mammals	1.4.2 All other wild aquatic animals.	Imports	
<i>Sub-Total</i>	<i>1.4.2 All other wild aquatic animals.</i>	<i>Imports</i>	<i>13,402</i>

Note that there are 12 different categorization systems available in online interface to the FAO's Fisheries and Aquaculture database. The "ISSCAAP Division" option was used here due to its simplicity, however you may need to use another option, if for example you are trying to allocate local data you have sourced for the most recent years. The HS system used on the Compiler's "Corresp HS2017_Trade" concordance worksheet is one of the systems available, as is the SITC V4 system used on the "Corresp SITC Rev.4_Trade" worksheet.