

FUSION METADATA REGISTRY USER GUIDE

FUSION METADATA REGISTRY
VERSION 10.5.#

User Guide

This guide describes the features and functionality provided by the User Interface to the Registry.

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Version History

Version #	Implemented By	Revision Date	Reason
20200914	V Murrell	14.09.2020	Product name changes and Value List added.

2 Overview

2.1 Fusion Metadata Registry

The Registry is a web application for Data and Metadata management conforming to the **Statistical Data and Metadata Exchange (SDMX) Specification - ISO 17369:2013**.

This guide provides an overview of browsing the metadata, and data content of the Fusion Metadata Registry using the HTML User Interface (UI).

For detailed information on reporting data in the Registry, please read the Data Reporters' guide.

For detailed information on administering metadata content, please read the Structural Metadata Management guide.

3 Supported Structures

3.1 Organisations

Organisations are used to define ownership of structures, or data, and can be used as a means to have privileged access to data. Organisations include:

Agencies: An Agency is responsible for owning other structures in the Fusion Metadata Registry. Each structure must be owned and maintained by an Agency.

Data Providers: A Data Provider is responsible for loading data or registering the URL of where data can be obtained. An **Agency** is responsible for setting up a Data Provider to provide data for any number of **Dataflows**. This is achieved using a **Provision Agreement**.

Each Organisation may contain additional Contact Information, which can include details such as email address and telephone number.

3.2 Item Schemes

Item Schemes provide the building blocks for data collection and dissemination. Item Schemes include:

Category Schemes: Category Schemes provide the means to categorise any other structure type. Typically, Categories are used to categorise Dataflows to assist in data discovery in a dissemination environment.

Concept Schemes: Concept Schemes are a container for **Concepts**. Concepts are used by **Dimension**, **Attributes**, **Measures**, and **Metadata Attributes** to provide semantic meaning.



Figure 1 showing the Concepts for the Dimensions in a DSD

Codelists: Codelists provide an enumerated list of allowable content. Codelists can be used by **Dimensions**, **Concepts**, and **Metadata Attributes** to define the allowable content for both data and metadata reporting.

Codes in a Codelist are all maintained in a single flat list. Each Code may define a parent Code Id, however the parent Code must exist in the same Codelist. This enables standard Codelists to define a simple Hierarchy. A simple Hierarchy may be used for data display, or for data collection (see **Reporting Constraints**).

Value List: A Valuelist is a managed list of values, similar to an SDMX Codelist but unlike a Code the Value Id does not need to conform to the SDMX ID Type as it is not an official part of the SDMX Specification. Valuelists provide an enumerated list of allowable values, for which there is also a mandatory Name and optional description. This list can be referenced for defining the set of allowed values for enumerated Components in Data Structure Definitions (DSDs) or Metadata Structure Definitions which describe Reference Metadata.

Hierarchical Codelists: A Hierarchical Codelist provides a hierarchical view over one or more 'standard' Codelists. A Hierarchical Codelist can be thought of a view, as it does not define any new Codes. It is used to group any number of existing Codes from any number of existing Codelists. The same Codes may appear multiple times in a Hierarchical Codelist.

A Hierarchical Codelist does not have a defined purpose, however they are typically used for data dissemination to provide another view on a standard Codelist.

3.3 Data Related Structures

Data related structures are used to define the structure of datasets along with allowable content, and they are also used to define what datasets **Data Providers** are allowed to report data on. Data related structures includes:

Data Structure Definition: A Data Structure Definition (**DSD**) defines a dataset in terms of its Dimensionality and allowable content. All reported datasets must conform to the description of a DSD.

Dataflow: A Dataflow is a structure on which data is collected and disseminated. A Dataflow references a **DSD** which is used as the underlying template to which the data must conform.

Provision Agreement: A Provision Agreement is the union of a **Dataflow** with a **Data Provider**. A Provision Agreement is a definition that the **Data Provider** is allowed to provide data for the **Dataflow**.

Reporting Constraints: Reporting Constraints are used to further restrict the allowable content of a **Codelist** in the context of a **DSD, Dataflow, Provision Agreement** or **Data Provider**. The restrictions imposed by Reporting Constraints are taken into account when validating a dataset reported by a **Data Provider**. A Reporting Constraint defines restrictions against Dimensions and Attributes of a DSD which take allowable content from an enumerated list (e.g Codelist).

When viewing a Reporting Constraint, the details will show either an Included Cube (allowable Codes) or an Excluded Cube (excluded Codes) or both. The cascade feature of a Reporting Constraint enables the include/excluded rules to apply to any child Codes of the Constrained Code.

Included Cube	Component Id	Code Id	Cascade
	COUNTERPART_AREA	_Z	false
	DATA_DOMAIN	01R	false
	INDICATOR	ENEER_IX	false
		RAXG_USD	false

Figure 2 showing a reporting constraint

Pre-Defined Queries: A pre-defined query is the same underlying SDMX Structure type as a Reporting Constraint (both structures are known as a **Content Constraint**). A Content Constraint can be constructed to define what data is allowed to be reported (Reporting Constraint) or alternatively it can be constructed to define existing data, the latter being used in the Registry as a Pre-Defined Query.

A Pre-Defined Query is used to define a sub-cube of data for a **Dataflow** and giving the sub-cube a name and description.

3.4 Metadata Structure Definition

The Metadata Structure Definition (MSD) is analogous to the **DSD**, and defines the structure and allowable content of a **Metadata Report** (a DSD defines the structure and allowable content of a Dataset). The MSD also defines what types of artefact in the Registry the Metadata Report can be reported for.

3.5 Structure Maps

Structure Maps are used to provide a relationship between two structures in the Fusion Metadata Registry. The Structure Maps available are:

Concept Scheme Map: A Concept Scheme Map is used to map the relationship between two Concept Schemes. The mapping defines how the Concepts from the source scheme map to the Concepts in the target scheme.

Codelist Map: A Codelist Map is used to map the relationship between two Codelists. The mapping defines how the Codes from the source list map to the Codes in the target list.

Data Structure Map: A Data Structure Map is used to map the relationship between two DSDs. The mapping defines how the Dimensions and Attributes from the source DSD map to the Dimensions and attributes in the target DSD.

Dataflow Map: A Dataflow Map is identical to a Data Structure Map, except the mapping is performed in the Context of a Dataflow.

4 Browsing Structure Content

Structure content can be browsed by using the left hand menu. All the structures in the UI can also be accessed from the public SDMX Web Services (see the **Web Services** guide).

Once a structure type has been selected from the left hand menu, the page will load a table of all the structures of the selected type. The table is interactive and can be sorted and filtered. A specific structure can be selected by clicking on the table row. Selecting a specific structure will display the details section, located below the table, showing the details of the selected structure.

The screenshot displays the Fusion Registry interface for the 'Dataflows' section. On the left, a navigation menu is visible with 'Data Reporting' selected. The main area contains a table of dataflow structures. One row, 'ESTAT_NASEC_T0801SA_Q', is highlighted in blue. Below the table, a 'Dataflow Details' section is shown for the selected structure, including fields for URN, URL, Version (1.9), State (Public (Non-Final)), Description, and Annotations. A version selector dropdown is set to '1.9'. To the right of the details, an 'Actions Bar' contains 'Changelog' and 'View Dataflow' buttons. The page header includes the Fusion Registry logo, a language picker set to 'en', and a 'Login' button.

	All	Id	Name	State
ESTAT	NASEC_T0800_A	NASEC_T0800_A	NASEC_T0800_A	Final
ESTAT	NASEC_T0801_Q	NASEC_T0801_Q	NASEC_T0801_Q	Final
ESTAT	NASEC_T0801SA_Q	NASEC_T0801SA_Q	NASEC_T0801SA_Q	Non-Final
ESTAT	NASEC_T2600_A	NASEC_T2600_A	NASEC_T2600_A	Non-Final
ESTAT	NASU_1516_A	NASU_1516_A	NASU_1516_A	Non-Final
ESTAT	NASU_1516ADD_5	NASU_1516ADD_5	NASU_1516ADD_5	Non-Final
ESTAT	NASU_163034_A	NASU_163034_A	NASU_163034_A	Non-Final
ESTAT	NASU_16BP_5	NASU_16BP_5	NASU_16BP_5	Non-Final
ESTAT	NASU_1710IN_5	NASU_1710IN_5	NASU_1710IN_5	Non-Final

Dataflow Details Version: 1.9

URN urn:sdmx:org.sdmx.infomodel.datastructure.Dataflow=ESTAT:NASEC_T0801SA_Q(1.9)
URL http://localhost:8080/FusionRegistry/ws/public/sdmxapi/rest/dataflow/ESTAT/NASEC_T0801SA_Q/1.9
Version 1.9
State Public (Non-Final)
Description -
Annotations N/A
Valid From

Figure 3 showing the Dataflows page

The details section contains information about any **Annotations** (extra information) that exist for the structure. If there is any Reference Metadata linked to the structure, it will be available to view here.

The actions bar contains additional actions that can be performed on the selected structure. There is also a version selector located on the left-hand side of the actions bar. This is used to select the version of the structure that you wish to view the details of. If a structure has a number of versions, the structure will only be listed once in the table. However the Version selector will have an option for each version. Changing the value in the drop-down will change the details shown in the Details Section and the “View” control (e.g. “View Dataflow, located in the Actions Bar) will show information for that version of that structure.

The language picker in the header (top right) of the page, is used to define the preferred language for all structure content. The available languages are defined by the content in the Fusion Metadata Registry.

It should be noted that the **Provision Agreement** and **Dataflow** are structures which ultimately reference a **DSD**. The Dataflow directly references a DSD, whilst the Provision Agreement indirectly references a DSD via the Dataflow.

When viewing a Provision Agreement or a Dataflow, the underlying DSD is displayed, however when selecting a Dimension or Attribute, any enumerated content will be shown in the context of the viewed structure (Provision Agreement or a Dataflow). If **Reporting Constraints** exist against the Dataflow, Provision Agreement, or Data Provider, then the subset of the enumerated list will be displayed.

For example, in the image below the Dataflow references a DSD with 4 Dimensions defined, one of which is Frequency. The Frequency Dimension references a Codelist which contains 6 Frequency Codes. A Reporting Constraint against the Dataflow which restricts the Frequency Codelist to only include the Code 'Annual'. When the Dataflow is viewed, the Frequency Dimension shows the constrained Codelist, as shown in the image below. If the underlying DSD was viewed, the full Codelist would be shown.

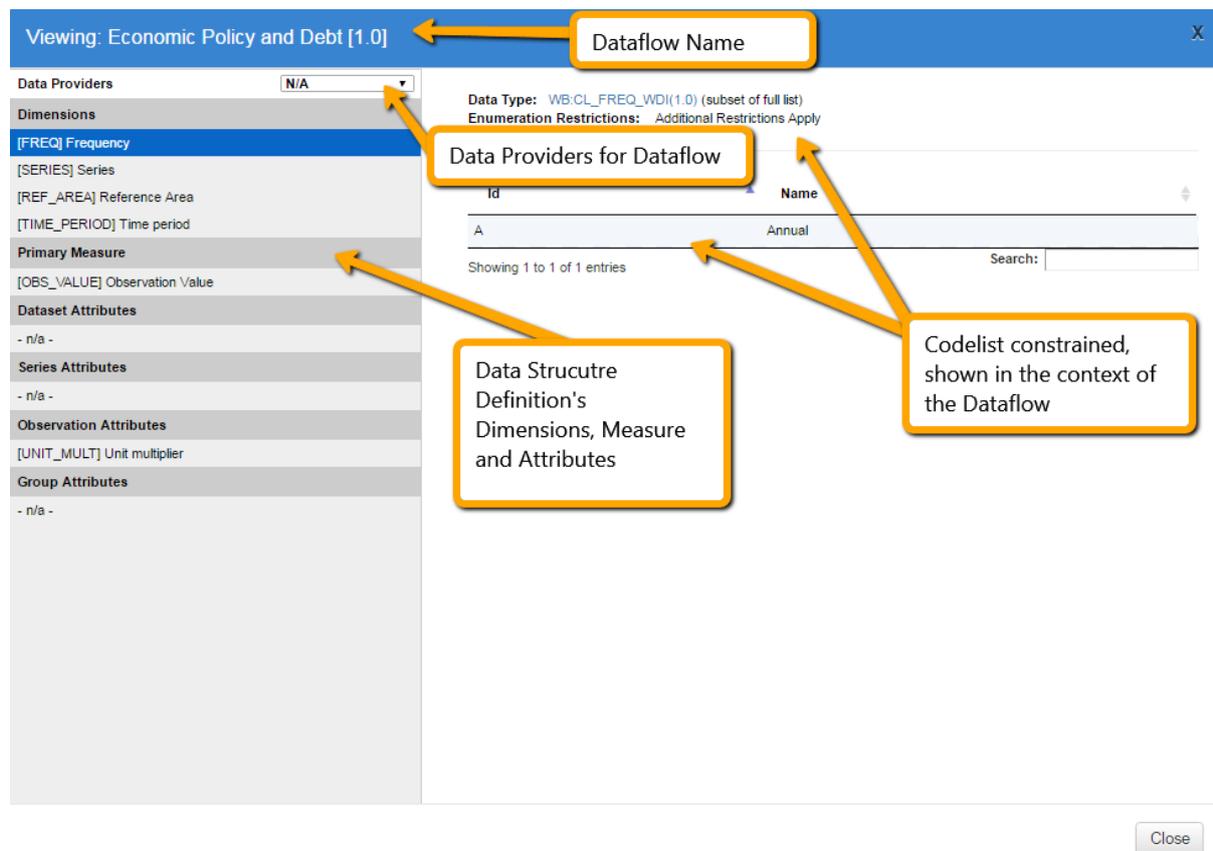


Figure 4 showing the Dimensions and Attributes of a DSD

This rule also applies when using the **Data Provider** selector shown on the top left of the image above. If a Data Provider is selected, Codelists may be further restricted in the Context of the **Dataflow** and **Data Provider** combination. This is shown in the image below, where France is the selected Data Provider, and the only Reference Area allowed to be reported by France for this Dataflow is FRA (France).

Data Providers France ▾

Dimensions

[FREQ] Frequency

[SERIES] Series

[REF_AREA] Reference Area

[TIME_PERIOD] Time period

Primary Measure

[OBS_VALUE] Observation Value

Dataset Attributes

- n/a -

Series Attributes

- n/a -

Observation Attributes

[UNIT_MULT] Unit multiplier

Group Attributes

Data Type: WB.CL_REF_AREA_WDI(1.0) (subset of full list)

Enumeration Restrictions: Additional Restrictions Apply

Id	Name
FRA	France

Showing 1 to 1 of 1 entries Search:

Figure 5 showing a constrained series – REF_AREA is constrained by the Data Provider

5 Export Structures

Structures can be exported from the Registry in several formats. To export structures, use the left hand menu to select the Bulk Actions (if you are logged in) or the Export Structures menu item if you are not logged in.

All the structures in the Registry can be exported by clicking the Export All button (shown in image below).

Alternatively, specific structures of a given type can be selected, by clicking on one or more checkboxes, and clicking the Export Specific button.

In both cases a pop up dialog will be presented, offering the option to choose the download format, and in the case of specific structures, cross references structures can also be included in the export.

The screenshot displays the 'Export Structures' page in the Fusion Registry. The left sidebar contains a navigation menu with 'Export Structures' highlighted. The main content area is divided into two sections: 'All Structures' and 'Codelists'. The 'All Structures' section lists various structure types with their respective counts, such as 'Agency Schemes' (2), 'Attachment Constraints' (0), 'Categorisations' (1), 'Category Schemes' (2), 'Codelists' (57), 'Concept Schemes' (5), 'Content Constraints' (20), 'Data Consumers' (0), 'Data Providers' (1), 'Data Structure Definitions' (19), 'Dataflows' (27), 'Hierarchical Codelists' (11), 'Metadata Structure Definitions' (1), 'Metadataflows' (0), 'Organisation Unit Schemes' (0), 'Processes' (0), 'Provision Agreements' (4), 'Reporting Taxonomies' (0), 'Structure Sets' (0), and 'Meatadata Reports' (1). The 'Codelists' section shows a table with columns for 'Id', 'Name', and 'Version'. The table contains 57 entries, each with a checkbox for selection. Two callout boxes with orange arrows point to the 'Export All' button (top left) and the 'Export Specific' button (top right).

Id	Name	Version
ECB.SDD	ACCNTNG_CLS...	Accounting clas... 1.0
ECB.SDD	ACCNTNG_FR...	Accounting fram... 1.0
ECB.SDD	BLN	Boolean 1.0
ECB.SDD	CRDT_QLTY	Credit quality 1.0
ECB.SDD	CRRNCY	Currencies 1.0
ECB.SDD	ECNMC_ACTVTY	Nomenclature of... 1.0
ECB.SDD	ENTTY_RL	Counterparty role 1.0
ECB.SDD	FDCRY	Fiduciary instru... 1.0
ECB.SDD	FRBRNC_STTS	Forbearance sta... 1.0
ECB.SDD	FRQNCY	Frequency 1.0
ECB.SDD	GGRPHCL_ARS	Geographical Area 1.0
ECB.SDD	IMPRMNT_ASS...	Impairment asse... 1.0
ECB.SDD	INSTTTNL_SCTR	Institutional sectors 1.0
ECB.SDD	LGL_PRCDNG_...	Status of legal pr... 1.0
ECB.SDD	NEVS	Null explanatory... 1.0
ECB.SDD	PRDNTL_PRTFL	Prudential portfolio 1.0
ECB.SDD	PRJCT_FNNC_LN	Project finance l... 1.0
ECB.SDD	PRPS	Purpose 1.0

Figure 6 showing the Export Structures page

6 Changelog

The changelog function allows all of the changes between versions of a single structure to be viewable on a single page. The control to view a changelog is located under the table of structures and can be activated for any structure where more than one version exists in the Registry.

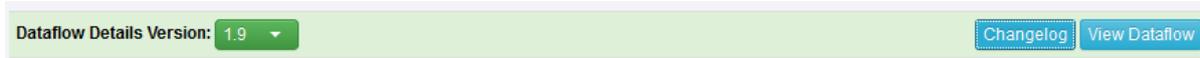


Figure 7 showing the Changelog control

Once activated a new tab in the browser is opened with a view of the changes between the versions. A typical example is shown below:

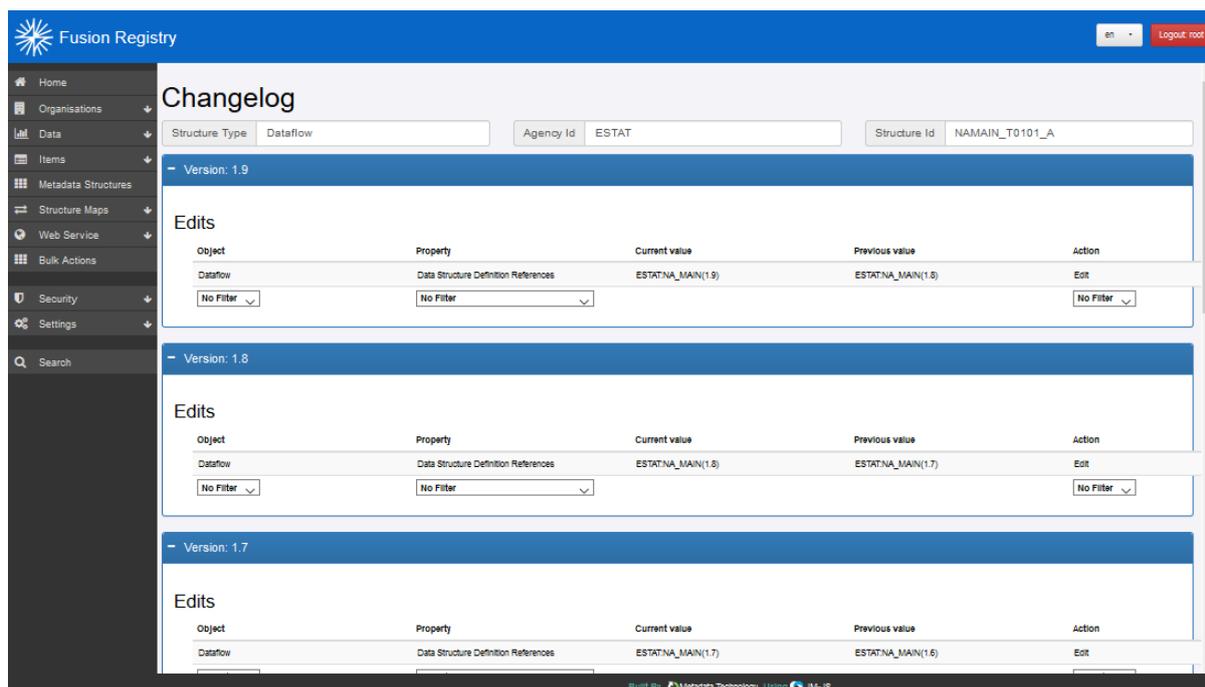


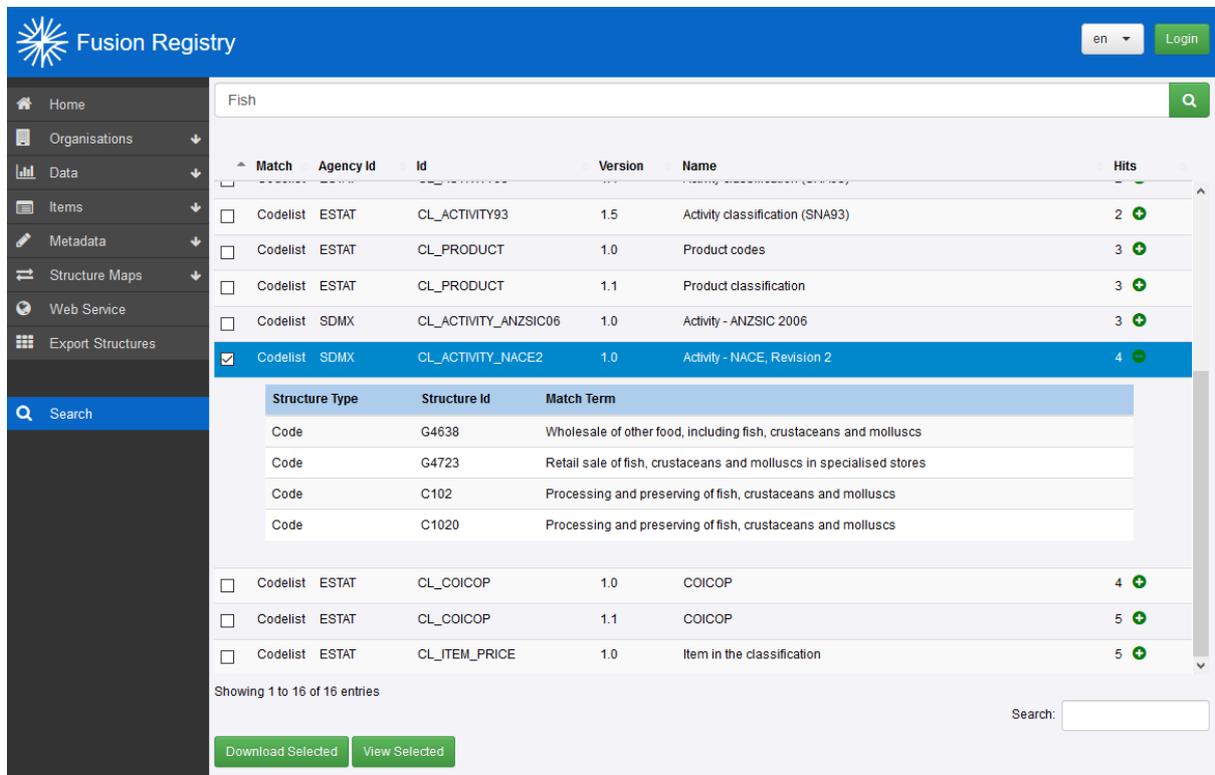
Figure 8 showing the results of a Changelog

Each version is shown in its own section with the changes split into 3 distinct parts:

- Additions: Such as codes added to a codelist, or descriptions added to a structure.
- Removals: Items that have been removed from a structure.
- Edits: References of a structure being changed or the ordering of items being modified.

7 Search Structures

The Search page enables the user to provide a free text search over all the structural content in the Registry. The results page shows the matched structure, and includes information on why the structure matched the search term. From the results page any of the structures can be downloaded, or viewed in the UI.



The screenshot shows the Fusion Registry search interface. The search term 'Fish' is entered in the search bar. The results table lists several codelist entries, with the entry 'Activity - NACE, Revision 2' (CL_ACTIVITY_NACE2) selected. A detailed view of this entry is shown below the main table, listing structure types and their match terms.

Match	Agency Id	Id	Version	Name	Hits	
<input type="checkbox"/>	Codelist	ESTAT	CL_ACTIVITY93	1.5	Activity classification (SNA93)	2
<input type="checkbox"/>	Codelist	ESTAT	CL_PRODUCT	1.0	Product codes	3
<input type="checkbox"/>	Codelist	ESTAT	CL_PRODUCT	1.1	Product classification	3
<input type="checkbox"/>	Codelist	SDMX	CL_ACTIVITY_ANZSIC06	1.0	Activity - ANZSIC 2006	3
<input checked="" type="checkbox"/>	Codelist	SDMX	CL_ACTIVITY_NACE2	1.0	Activity - NACE, Revision 2	4
<input type="checkbox"/>	Codelist	ESTAT	CL_COICOP	1.0	COICOP	4
<input type="checkbox"/>	Codelist	ESTAT	CL_COICOP	1.1	COICOP	5
<input type="checkbox"/>	Codelist	ESTAT	CL_ITEM_PRICE	1.0	Item in the classification	5

Structure Type	Structure Id	Match Term
Code	G4638	Wholesale of other food, including fish, crustaceans and molluscs
Code	G4723	Retail sale of fish, crustaceans and molluscs in specialised stores
Code	C102	Processing and preserving of fish, crustaceans and molluscs
Code	C1020	Processing and preserving of fish, crustaceans and molluscs

Figure 9 showing search results