



Food and Agriculture Organization
of the United Nations

>> FAO Statistics Division

Caliper

Collaboration to Improve the Interoperability of Statistical
Classifications Caterina Caracciolo, Carola Fabi

3rd Webinar of the International Statistical Classifications Sprint
“Statistical Classifications: a Foundational Block for Data Integration”
31 January 2024



Today

1. Overview of Caliper
2. Ongoing work
3. Caliper on the Global Platform

Caliper today

The FAO dissemination service for statistical classifications

<https://www.fao.org/statistics/caliper/>

A suite of tools and methodologies aimed at improving the interoperability of statistical classifications and, ultimately, the quality and timeliness of statistical data

Inspiring principles:

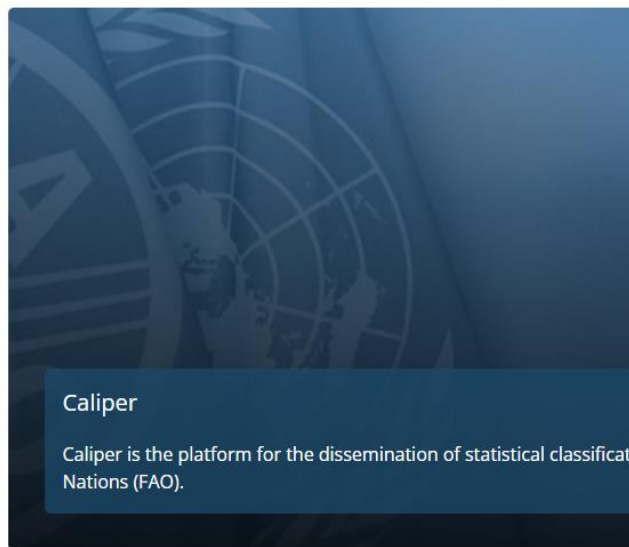
FAIR (meta)data!

classifications as public goods





Caliper - Statistical Classifications in a L



Caliper

Caliper is the platform for the dissemination of statistical classifications of the United Nations (FAO).

Caliper is an Open Linked Data platform developed by the Food and Agriculture Organization of the United Nations (FAO) for the dissemination of statistical classifications. It uses established web-based, open source technologies to make statistical data more understandable by the statistical community and the wider public.



Caliper - Statistical Classifications in a Linked Open World

Classifications in Caliper

In this section, users can consult and access the full list of statistical classifications available in Caliper, with pointers to the associated dissemination services. Classifications are grouped according to the Classification of Statistical Activities (CSA).



Agriculture, forestry, fisheries

- Indicative Crop Classification for the Agricultural Census (ICC)
- World Census of Agriculture Crop List (WCA)
- FAO Classification of Forest Products (FPC&D)



Economic statistics

- Classification of Individual Consumption by Purpose (COICOP)
- Central Product Classification (CPC)
- International Standard Industrial Classification of all Economic Activities (ISIC)
- FAOSTAT Commodity List (FCL)

Highlight #1 – Information at your fingertips

CPC2.1

Data Sparql Metadata

Concept **Collection** Scheme Property Alignments

A ↻ ⚙

- 0: Agriculture, forestry and fishery products (en)
- 1: Ores and minerals; electricity, gas and water (en)
- 2: Food products, beverages and tobacco; textiles, apparel and leather products (en)
 - 21: Meat, fish, fruits, vegetables, oils and fats (en)
 - 22: Dairy products and egg products (en)
 - 23: Grain mill products, starches and starch products; other food products (en)
 - 231: Grain mill products (en)
 - 2311: Wheat and meslin flour (en)
 - 2312: Other cereal flours (en)
 - 2313: Groats, meal and pellets of wheat and other cereals (en)
 - 2314: Other cereal grain products (including corn flakes) (en)
 - 23140: Other cereal grain products (including corn flakes) (en)
 - 2316: Rice, semi- or wholly milled, or husked (en)
 - 2317: Other vegetable flours and meals (en)
 - 2318: Mixes and doughs for the preparation of bakers' wares (en)
 - 232: Starches and starch products; sugars and sugar syrups n.e.c. (en)
 - 233: Preparations used in animal feeding; lucerne (alfalfa) meal and pellets (en)
 - 234: Bakery products (en)
 - 235: Sugar and molasses (en)
 - 236: Cocoa, chocolate and sugar confectionery (en)

Search 🔍 ⌵ ⌵ ⚙

23140: Other cereal grain product... <https://unstats.un.org/classifications/CPC/v2.1/23140> 🔍 A ↻ ⚙

Type	skos:Concept
In Scheme	The Central Product Classification (CPC) v2.1 - Expanded for Agriculture and Rural Statistics (en) The Central Product Classification (CPC) v2.1 (en)
Preferred Label	Other cereal grain products (including corn flakes) (en)
Broader	2314: Other cereal grain products (including corn flakes) (en)
Scope Note	This subclass includes: - cereal grains otherwise worked (for example, hulled, rolled, flaked, pearled, sliced or kibbled) - germ of cereals, whole, rolled, flaked or ground. - prepared foods obtained by the swelling or roasting of cereals or cereal products (e.g. corn flakes) - prepared foods obtained from unroasted cereal flakes or from mixtures of unroasted cereal flakes and roasted cereal flakes or swelled cereals - Bulgur wheat - other cereals, other than maize (corn), pre-cooked or otherwise prepared This subclass does not include: - rice, semi- or wholly milled, cf. 23161 - husked rice, cf. 23162 - prepared meals and dishes based on cereal grains, cf. 23997 (en)
Notation	23140
Narrower	23140.01: Germ of wheat (en) 23140.02: Bulgur (en) 23140.03: Breakfast cereals (en) 23140.04: Pot barley (en) 23140.05: Barley, pearled (en) 23140.06: Germ of maize (en) 23140.07: Oats, rolled (en) 23140.08: Cereal preparations (en)
Exact Match	https://unstats.un.org/classifications/CPC/v2.0/23140
Close Match	https://unstats.un.org/classifications/ISIC/rev4/1061

2313: Groats, meal and pellets of wheat and other cereals (en)

<https://unstats.un.org/classifications/CPC/v2.0/2313>

groats, meal and pellets of wheat and other cereals (en)

23130: Groats, meal and pellets of wheat and other cereals (en)

<https://unstats.un.org/classifications/CPC/v2.0/23130>

groats, meal and pellets of wheat and other cereals (en)

Highlight #2 – Machine processing

- Standard formats

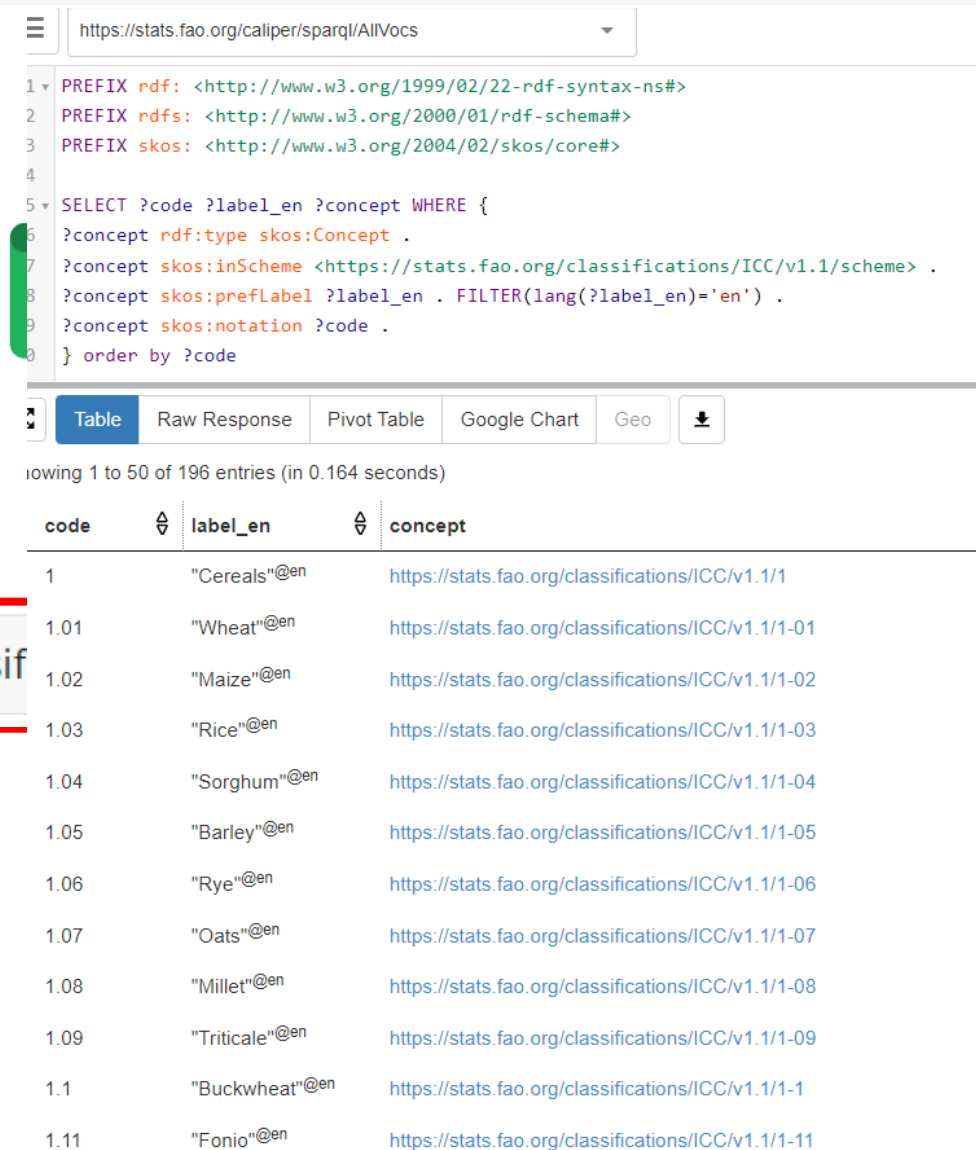


List all items in a given classification (with code, EN label, URI; sorted by code)

- Download
- Online queries

Highlight #2 – Machine processing

- Standard formats



The screenshot shows a SPARQL query interface. The URL is `https://stats.fao.org/caliper/sparql/AllVocs`. The query is as follows:

```
1 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3 PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
4
5 SELECT ?code ?label_en ?concept WHERE {
6   ?concept rdf:type skos:Concept .
7   ?concept skos:inScheme <https://stats.fao.org/classifications/ICC/v1.1/scheme> .
8   ?concept skos:prefLabel ?label_en . FILTER(lang(?label_en)='en') .
9   ?concept skos:notation ?code .
10  } order by ?code
```

Below the query, there are options to view the results: Table, Raw Response, Pivot Table, Google Chart, Geo, and a download icon. The results are shown as a table with 196 entries, displaying rows 1 to 50.

code	label_en	concept
1	"Cereals"@en	https://stats.fao.org/classifications/ICC/v1.1/1
1.01	"Wheat"@en	https://stats.fao.org/classifications/ICC/v1.1/1-01
1.02	"Maize"@en	https://stats.fao.org/classifications/ICC/v1.1/1-02
1.03	"Rice"@en	https://stats.fao.org/classifications/ICC/v1.1/1-03
1.04	"Sorghum"@en	https://stats.fao.org/classifications/ICC/v1.1/1-04
1.05	"Barley"@en	https://stats.fao.org/classifications/ICC/v1.1/1-05
1.06	"Rye"@en	https://stats.fao.org/classifications/ICC/v1.1/1-06
1.07	"Oats"@en	https://stats.fao.org/classifications/ICC/v1.1/1-07
1.08	"Millet"@en	https://stats.fao.org/classifications/ICC/v1.1/1-08
1.09	"Triticale"@en	https://stats.fao.org/classifications/ICC/v1.1/1-09
1.1	"Buckwheat"@en	https://stats.fao.org/classifications/ICC/v1.1/1-1
1.11	"Fonio"@en	https://stats.fao.org/classifications/ICC/v1.1/1-11

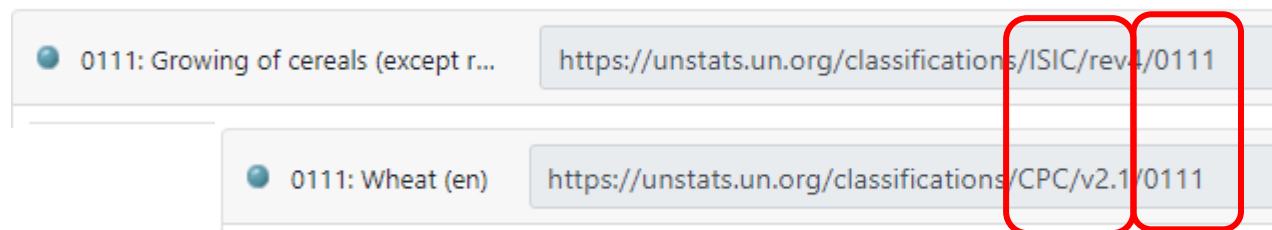
List all items in a given classif

- Download
- Online queries

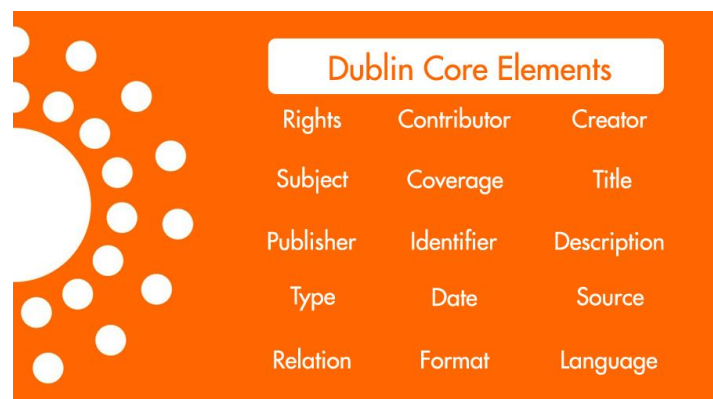
Highlight #3 – clarity behind the scenes

- Globally unique identifiers (for classifications and items)

0111



- Standard Metadata scheme



- Documentation

Ongoing work

Caliper on the UN Global Platform for maintenance and dissemination of international classifications

Optimize resources, offer better services

Caliper on the FAO internal network to support FAO statistical systems - Considered as next MDM

Have a flexible tool, friendly to different user profiles & roles

Pillars of the collaboration on the Global Platform

Custodians:

Benefit from common infrastructure for modelling, querying, editing

Keep control on their data and editorial workflow (within an agreed governance)

Control on (meta)data



<https://stats.fao.org/classifications/>

<http://unstats.un.org/classifications/>

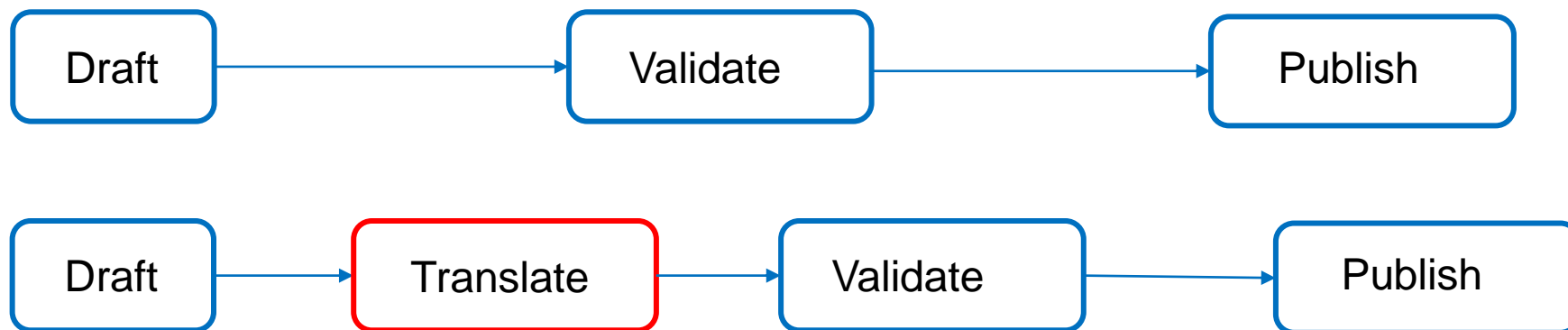
<https://myurl.org/classifications/>

Editorial workflows

Resulting from the combination of :

- User rights (e.g., edit, validate, publish)
- Status of edited element

Each custodian defines its own workflow



Governance

Different roles and competencies involved:

- Partner custodians to agree on content and functionalities
- Classifications experts to work on content
- A technical team, possibly distributed, taking care modelling, data conversion, functionalities, support to editors, ...

Thank you!

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Subscribe for Alerts! @FAO Methods and Standards page

<https://www.fao.org/statistics/standards/general/en>

Pointers

- Caliper

<https://www.fao.org/statistics/caliper/about/en>

- FAO Methods and Standards

<https://www.fao.org/statistics/standards/general/en>

- FAO statistics

<https://www.fao.org/statistics/en/>

- International Family of Classification

<https://unstats.un.org/unsd/classifications/family/>