Increasing Interoperability Between Food and Agricultural Information Systems: CGIAR & FAO Collaboration

Why to collaborate?

To integrate the CGIAR controlled vocabulary to AGROVOC and interlink our networks by securing multilingual quality labeling and tagging of data sets and information products in the food and agricultural domain.

FAO acts as a catalyst and a platform for leveling the playing field so that countries can make evidence-based decisions on the most appropriate technologies and innovations to adopt and adapt in sustaining their food security and nutrition. FAO can only achieve this by collaborating with the global scientific community of experts such as the CGIAR.

Ismahane Elouafi, Chief Scientist at FAO

If agriculture is going to take advantage of the digital revolution, it’s critical that data resources can talk to each other through ontologies and standards – this is a necessary foundation. Bringing CGIAR and FAO together ensures two major players in agricultural research and development are promoting common standards and approaches, for ourselves and for our large partner networks.

Andy Jarvis, DDG Research Alliance Bioversity-CIAT

What is AGROVOC?

AGROVOC

- a multilingual online thesaurus about all domains in agriculture
- +39,600 concepts with +924,000 terms in up to 41 languages to date.

CGIAR full usage of AGROVOC ...

- Recommended by the CGIAR Metadata Schema
- Used by 100% of CGIAR repositories as a source of keywords
- Semantic Resource for the Monitoring, Evaluation and Learning Systems
- ICARDA provides major contribution with the Arabic translation useful to partners

... Limited contribution

- Only 4 CGIAR centers submit terms (ICARDA, IFPRI, CIFOR and WorldFish)
- Part of the CGIAR vocabulary is hidden and isolated, cannot be reused
- CGIAR data managers are not trained in use of AGROVOC term submission tools
- AGROVOC contribution is not included in job description

Semantics for FAIR data

FAIR principles recommend to use controlled vocabularies (thesaurus, ontologies) that are widely accepted and applied by the community of the science domain to label data and tag information products.
An Official Agreement to

- Provide CGIAR with a visibility as contributor to AGROVOC and to its stewardship role in the development of semantics for agriculture
- Augment AGROVOC thesauri with CGIAR domain vocabulary to improve the interoperability of CGIAR metadata, across centers and domains
- Build Capacity of CGIAR Data managers in the maintenance of quality data description and interoperability
- Open more AGROVOC content to Arabic-speaking countries thanks to the translation done by ICARDA
- Train CGIAR trainers to support colleagues and partners to contribute and use AGROVOC
- Reduce the maintenance costs of domain specific terms

First Actions

- A Task Force created in 2021 to define a collaboration framework leading to an official agreement about CGIAR contribution to AGROVOC
- Identify and test the CGIAR concept submission workflow
  - Creation of a Curation team
  - Extracting most used CGIAR concepts from repositories and Monitoring and Learning System
  - Training in basics of the AGROVOC submission process

Result

- 37 fully defined CGIAR concepts integrated into AGROVOC in November 2021
- An online One CGIAR concept sub-schema created for the visualization of the CGIAR terms integrated in AGROVOC.

Task Force Members

Co-chairs: Olatunbosun Obileye (IITA), Elizabeth Arnaud (Alliance Bioversity-CIAT)
Members: Enrico Bonaiuti, Sara Jani (ICARDA), Soonho Kim, Erica Saito (IFPRI), Marie-Angélique Laporte (Alliance Bioversity-CIAT), Jacqueline Muliro (WorldFish), Abenet Yabowork (ILRI), Kristin Kolshus, Imma Subirats (FAO)

Test curation Team

Conveners: Sara Jani, Asma Jeitani (ICARDA)
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