

**CGIAR-AGROVOC Task
Group of the
CGIAR Ontology Working
Group**



Platform for
Big Data
in Agriculture

ONTOLOGIES WEBINAR SERIES

WEBINAR
**CGIAR CONTRIBUTION TO
AGROVOC THESAURUS**

Why & how to engage with the team?

21 JUNE, 15:00 PM UTC



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Knowledge Management
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CGIAR contribution to AGROVOC thesaurus: Why & how to engage with the team ?

Sara Jani & Asma Jeitani ◦ ICARDA

Kristin Kolshus ◦ FAO

Elizabeth Arnaud ◦ Alliance Bioversity-CIAT

Ontologies Webinar Series. 21 June 2022



“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**



“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

CGIAR-AGROVOC Collaboration:

- ▶ Collaboration Objectives
- ▶ Collaboration October 2021 – June 2022
- ▶ New Work Process July 2022 – December 2022



Food and Agriculture Organization
of the United Nations

AGROVOC



AGROVOC June 2022 Release

40,180

Concepts

939,648

Terms

41

Languages



CGIAR – AGROVOC Collaboration Objectives

CGIAR usage of AGROVOC

- ▶ Recommended by the CGIAR Metadata Schema
- ▶ Used by all of CGIAR repositories and MEL platform as a source of keywords
- ▶ Important contribution of some CGIAR centers to AGROVOC

Example of AGROVOC keywords usage in MELSpace & MELData

Citation Statistics

Default Permission net:20.500.11766.11766/13570

Publication Date 2020-11-18

Title Data of technical support on crop management, inspection, purification, sanitation, irrigation and fertilizer application

Other ID MEL_20877

Author Name, Abdul Aziz (International Center for Agricultural Research in the Dry Areas - ICARDA) - ORCID: 0000-0001-3873-4394
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El-Karawi, Tarek (Independent / Not associated)
Shukri, Ismail (International Center for Agricultural Research in the Dry Areas - ICARDA) - ORCID: 0000-0003-0888-3242

Contact Use email button above to contact

Description Name, Abdul Aziz (International Center for Agricultural Research in the Dry Areas - ICARDA)
The spreadsheet holds data of the technical support provided in the target sites Sahran and Tarek. This dataset is a collaboration work between ICARDA and FAO and it is released under creative common license CC-BY-NC-SA 3.0 IGO (<http://www.fao.org/3/9471EN/9471en.pdf>)

Subject Agricultural Sciences

Keyword Irrigation (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3964
fertilizers (AGROVOC) http://aims.fao.org/iaas/agrovoc/_2887
fungicides (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3148
insecticides (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3887
weed control (AGROVOC) http://aims.fao.org/iaas/agrovoc/_8348
purification (AGROVOC) http://aims.fao.org/iaas/agrovoc/_6177
herbicides (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3668
sanitation (AGROVOC) http://aims.fao.org/iaas/agrovoc/_1738

Notes Type: Dataset; Subtype(s): Other (Technical Support Data)

Language English

Publisher International Center for Agricultural Research in the Dry Areas (ICARDA) <https://www.icarda.org>

Production Date 2020-09-30

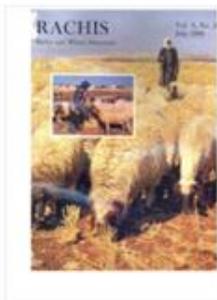
Contributor Data Curator: Asma Jaleel (International Center for Agricultural Research in the Dry Areas - ICARDA)
Data Curator: Paulo Barrios (International Center for Agricultural Research in the Dry Areas - ICARDA)
Funder: Food and Agriculture Organization of the United Nations - FAO
Project Manager: Abdul Aziz Name (International Center for Agricultural Research in the Dry Areas - ICARDA)
Project Member: Zaidah Bahau (International Center for Agricultural Research in the Dry Areas - ICARDA)
Project Member: Wajdi Jamal (International Center for Agricultural Research in the Dry Areas - ICARDA)
Project Member: Nabil Trabelsi (International Center for Agricultural Research in the Dry Areas - ICARDA)
Project Member: Tarek El-Karawi (Independent / Not associated)

Deposit Date 2020-11-18

Keyword

Irrigation (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3964
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herbicides (AGROVOC) http://aims.fao.org/iaas/agrovoc/_3668
sanitation (AGROVOC) http://aims.fao.org/iaas/agrovoc/_1738

Wheat Barley and Triticale Newsletter -RACHIS -No. 5 (2)



Citation
J. P. Srivastava, Habib Kelata, Surendra Verma, Jouhayna Issa. (31/7/1986). Wheat Barley and Triticale Newsletter -RACHIS -No. 5 (2). Lebanon: International Center for Agricultural Research in the Dry Areas (ICARDA).

Abstract
The RACHIS information service has been initiated by ICARDA to meet the information needs of barley, wheat and triticale research workers in the Near East and North Africa region. RACHIS seeks to report research results in a rapid manner, to highlight achievements and new ideas, and to stimulate an open discussion of problems. In this way RACHIS seeks to contribute to the improvement of barley, bread wheat, durum wheat and triticale production in the Near East and North Africa region.

URI
<https://hdl.handle.net/20.500.11766/13570>

Collections
Agricultural Research Knowledge [9615]

Subject(s)
yield performance; rainfed; triticale; morphological data; Barley; Triticale; Durum Wheat

AGROVOC Keywords
barley ; germplasm ; wheat ; insect pests ; plant diseases

View/Open
View/Open

Author(s)
Srivastava, J. P.
Kelata, Habib
Verma, Surendra
Issa, Jouhayna

Metadata
Show full item record

Open access



AGROVOC Keywords
barley ; germplasm ; wheat ; insect pests ; plant diseases

CGIAR usage of AGROVOC



Findable



Accessible



Interoperable



Reusable

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

[*Increasing interoperability between food and agricultural systems: CGIAR and FAO collaboration*](#)

[*CGIAR Open and FAIR Data Assets Policy*](#)



Objectives of a collaboration framework with One CGIAR perspective

- Get more streamlined submission from CGIAR.
- Improve AGROVOC content cover with CGIAR terms.
- Support the quality indexation.
- Improve the keyword-based search.
- Provide global visibility of CGIAR contribution to AGROVOC.
- Remain a key player in the international community effort to develop semantics.

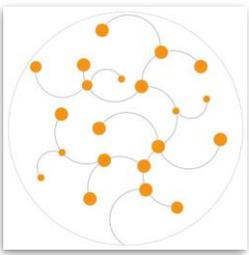


Objectives of a collaboration framework

- Enhance the stewardship role in the development of semantics for agrifoods.
- Develop capacity building for partners.
- Leverage a team of domain experts.
- Strengthen the AGROVOC coverage.
- Reduce the duplicated efforts/costs.
- Improve efficient use of knowledge for users.



CGIAR-AGROVOC Collaboration October 2021 – June 2022



CGIAR - AGROVOC Task Group Members

Co-chairs:

Olatunbosun Oibileye (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)

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Platform for Big Data in Agriculture | **Food and Agriculture Organization of the United Nations**

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 the 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
Immane 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, DGG Research Alliance Bioversity-CIAT

What is AGROVOC? | **Semantics for FAIR data**

AGROVOC | **FAIR** (FINDABLE, ACCESSIBLE, INTEROPERABLE, REUSABLE)

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

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.

CGIAR full usage of AGROVOC ... | **Limited contribution**

- 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

- 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

Platform for Big Data in Agriculture | **IDM CoP** | **AGROVOC** | **Food and Agriculture Organization of the United Nations**

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

Task Group and Curation Team Report

November 2021

"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 before anything can meaningfully progress. 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, DGG Research Alliance Bioversity-CIAT

"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" - Immane Elouafi, Chief Scientist at FAO

Authors:

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

Guests: Andea Turbat (FAO), Alan Orth (ILRI)

Team for the curation workflow test chaired by Sara Jani, ICARDA.

Center	Team members	Focal Points
Alliance Bioversity-CIAT	Maria Garruqueo	
CIAMINT	Araueli Zúñiga for Spanish translations	Jesus Herrera de la Cruz
ICARDA	Sara Jani, Azma Jattani	
IFPRI	Erica Saito	
ILRI	Abenet Yabowork	
IITA	Hafez Adegoju	
WorldFish	Saadiah Ghazali	Jacqueline Muliro

Report: <https://cgspace.cgiar.org/handle/10568/116236>
Factsheet: <https://cgspace.cgiar.org/handle/10568/116448>

CGIAR - AGROVOC Curation Team

Chair:

Sara Jani (ICARDA-MEL)

Members:

Maria Garruccio (Alliance Bioversity-CIAT)

Jesus Herrera (Focal Point) & Araceli Zuniga (curation) (CIMMYT)

Vilma Hualla (CIP)

Sara Jani & Asma Jeitani (ICARDA)

Hafeez Adepoju (IITA)

Abenet Yabowork (ILRI)

Rasika Thushantha & Yamuna Udumalagala (IWMI)

Saadiah Ghazali (WorldFish)

CGIAR Contribution to AGROVOC Work Process

October 2021 - June 2022

Step 1. Centers submit keywords indexed in their repositories (CGSpace, CIMMYT, CKAN-IITA, IFPRI, MEL, WFDSpace-WF)



Step 2. Identification of keywords unmatched with AGROVOC



Step 3. Selection of most used 50 keywords.



Step 4. Keywords assigned to centers by alphabetical order. Centers that submitted their own keywords worked on those.



Step 5. Work done through a “shared template” allowing curators to contribute and AGROVOC’s team to review.



Repetitions of **Steps 3, 4, and 5.**

Some centers proposed adding their keywords (IFPRI, IWMI, WorldFish)



The used “shared template”

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
	Responsible Center	Main Source	New suggested concept	Preferred term (language)	Alternative term (if needed)	In AGROVOC already?	Suggested AGRV broader term	URI of AGV broader term (if possible).	Any related AGRV terms? Look before suggesting	Mandatory: Definition new concept, (language) - FAOTERM is often good source. Concise, max 1-2 sentences. What concept IS, not so much what it does.	Mandatory: Source of definition (URL or text like publication title, year, link)	Availability translations	Round one from AGROVOC - do not write here. Please look at https://agrovoc.fao.org/browse/agrovoc/en/	CGIAR Reply 1	Round two from AGROVOC - write here
74	WorldFish	WF	aquatic resources							example: boiersiev, Engie, and Biotic element of the aquatic ecosystem, including genetic resources, organisms or parts thereof, populations, etc. with actual or potential use or value (sensu lato) for humanity. Fishery resources are those aquatic resources of value to fisheries.	http://firms.fao.org/firms/concepts/en		need definition to look at		definition of concept already published 3
75	WorldFish	WF	stocking						fish stocks	The practice of placing aquatic organisms into natural or modified water bodies.	http://www.fao.org/3/ca7041en/ca7041en.pdf		probably OK to add but need definition to review. AGRV has restocking and destocking. Agree that fish stocking might be needed if stocking also used for other organisms - like pheasants, yes. FAOTERM: "The practice of placing		As noted the refers to aquatic organisms "fish stocking" "stocking" a broader term 29/11, add

Implementation of the work process October 2021 - June 2022

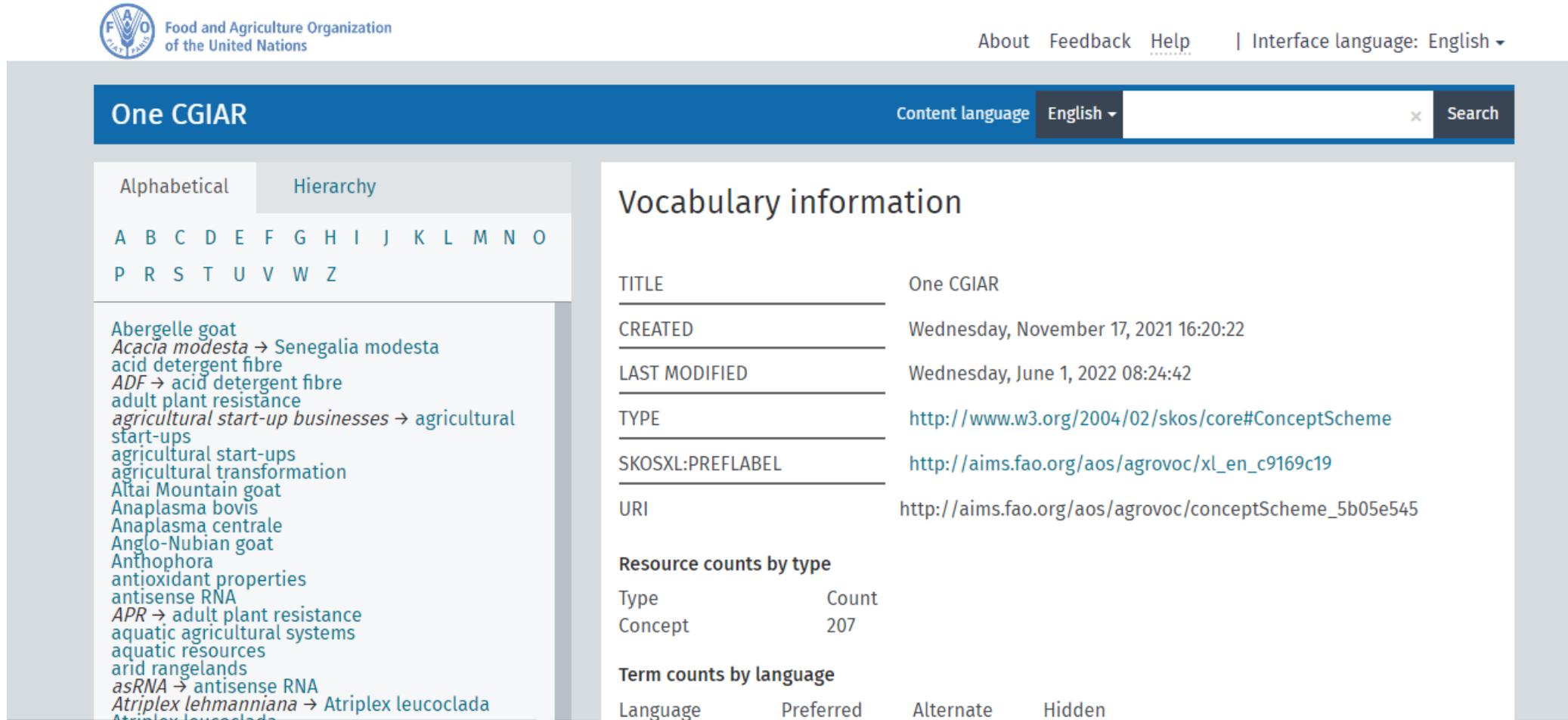
309	keywords suggested	41	concepts & terms added to AGROVOC	65	keywords open-discussion
203	keywords not considered	4	training sessions delivered	6	centers participated



- Introduction and submission workflow
- Training on definitions
- 2 Individual training on submission workflow

Creation of the One CGIAR concept sub-schema

<https://agrovoc.fao.org/skosmosOneCGIAR/cgiar/en/>



Food and Agriculture Organization of the United Nations

About Feedback Help | Interface language: English ▾

One CGIAR

Content language English ▾ Search

Alphabetical Hierarchy

A B C D E F G H I J K L M N O
P R S T U V W Z

Abergelle goat
Acacia modesta → *Senegalia modesta*
acid detergent fibre
ADF → acid detergent fibre
adult plant resistance
agricultural start-up businesses → agricultural start-ups
agricultural start-ups
agricultural transformation
Altai Mountain goat
Anaplasma bovis
Anaplasma centrale
Anglo-Nubian goat
Anthophora
antioxidant properties
antisense RNA
APR → adult plant resistance
aquatic agricultural systems
aquatic resources
arid rangelands
asRNA → antisense RNA
Atriplex lehmanniana → *Atriplex leucoclada*
Atriplex leucoclada

Vocabulary information

TITLE	One CGIAR
CREATED	Wednesday, November 17, 2021 16:20:22
LAST MODIFIED	Wednesday, June 1, 2022 08:24:42
TYPE	http://www.w3.org/2004/02/skos/core#ConceptScheme
SKOSXL:PREFLABEL	http://aims.fao.org/aos/agrovoc/xl_en_c9169c19
URI	http://aims.fao.org/aos/agrovoc/conceptScheme_5b05e545

Resource counts by type

Type	Count
Concept	207

Term counts by language

Language	Preferred	Alternate	Hidden
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*Contributions made separately from other CGIAR centers (ICARDA [~150], IFPRI, WorldFish) are also included in the sub-schema.

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New Work Process

July 2022 – December 2022

New Work Process Description

Each center submits its own 10 keywords unmatched with AGROVOC whether through their repositories or other means and includes them in the “shared template” file.



ICARDA’s curators review the file to remove any duplicates.



AGROVOC team at FAO reviews and comments on the file.



Curators work on the file.

65 pending keywords
from the Oct 21-June 22
work process

Target: submit 35 concepts in 3 months.

Next deadline: end of September 2022.



Joining CGIAR & AGROVOC curation teams

➤ Interested to join

- Colleagues from all CGIAR centers
- Contact Sara Jani: S.Jani@cgiar.org

➤ CGIAR-AGROVOC Task Group Public page

<https://cgiar.sharepoint.com/sites/ontology-wg/SitePages/CGIAR-AGROVOC-TASK-GROUP.aspx>



Annual AGROVOC Editorial Community Meeting

- ★ The 5th Annual AGROVOC Editorial Community Meeting will take place on **Tuesday, 19 July 2022, 13:00 - 16:00 CEST.**
- ★ The objective is to revise the work carried out during the last months and to define priorities for 2022/2023.
- ★ Event registration at: <https://fao.zoom.us/meeting/register/tJArf-6vqDlrHdS2UI-bufet2mVCv8IYg5qE> .

Thank you



Alliance



AfricaRice



Science for resilient livelihoods in dry areas



International Water Management Institute



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