



Food and Agriculture
Organization of the
United Nations



Enhancing the Accessibility to Agricultural Information by the Use of Open Science Principles

7 April 2021



@ Photo by Rennon Kiefer from Pexels



Food and Agriculture
Organization of the
United Nations

The Food and Agriculture Organization

The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger.

Our goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.

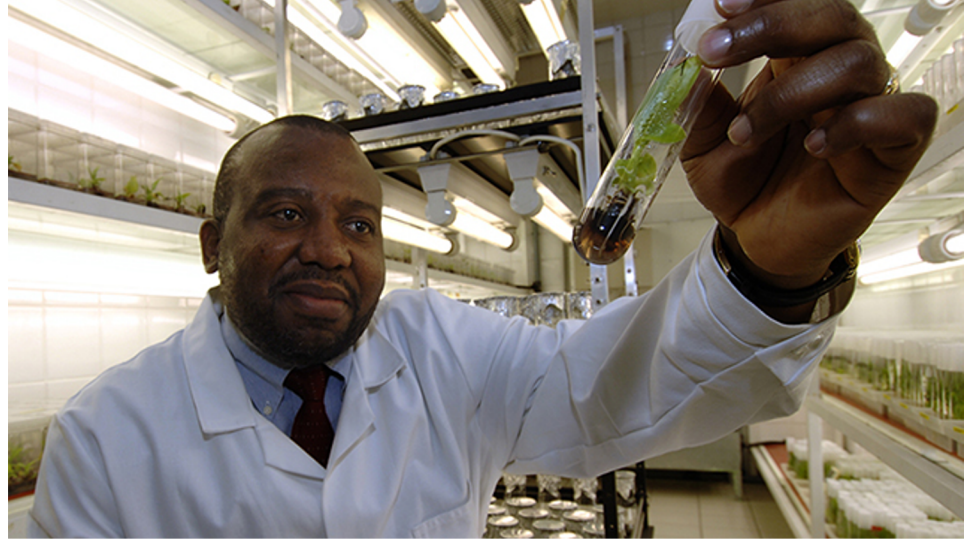
With over 194 member states, FAO works in over 130 countries worldwide. We believe that everyone can play a part in ending hunger.





Knowledge sharing

As the world's population grows, the climate changes and people increasingly migrate from rural areas to cities, global food and agriculture systems will need to transform in order to be able to provide everyone with enough safe and nutritious food. Access to scientific knowledge and research for food and agriculture is crucial for this transformation to happen sustainably, in a way that safeguards both livelihoods and the environment.





Food and Agriculture
Organization of the
United Nations

FAO's role

Through a series of knowledge programmes, FAO helps to increase the accessibility and visibility of research products in its Member Countries, and to make this information available, accessible and usable worldwide. This exchange of knowledge not only supports FAO's work for a world free of hunger, malnutrition and poverty, but also contributes to the achievement of the Sustainable Development Goals (SDGs).



**SUSTAINABLE
DEVELOPMENT
GOALS**



Open Science

To allow scientific information, data and outputs to be more widely accessible (**Open Access**) and more reliably harnessed (**Open Data**) with the active engagement of all the stakeholders (**Open to Society**). *UNESCO*





FAO programmes & Open Science

Promote accessibility of scientific information in food & agriculture -
WWW.FAO.ORG/AGRIS/

Strengthen engagement of stakeholders in scaling up access to and
dissemination of agricultural data - **WWW.FAO.ORG/AGROVOC/**

Improve the quality and effectiveness of agricultural research and
education - **AIMS.FAO.ORG, **CoPs and Capacity Development****



Food and Agriculture
Organization of the
United Nations

AGRIS

AGRIS consists of three elements:

A network. The AGRIS network refers to the contributing community of up to 450 institutions and 150 countries.

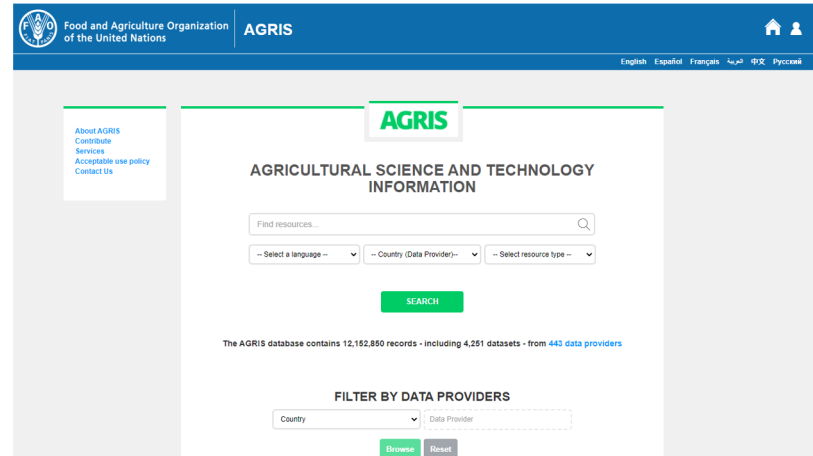
A database. AGRIS is also a database with more than 12 million structured bibliographical records on agricultural science and technology in 90 languages.

A web portal. AGRIS is a web portal that links AGRIS knowledge to related web resources.

Maintained by FAO, AGRIS has been serving users worldwide since 1974.



AGRIS
COORDINATING CENTRE
A 107 4611



The screenshot shows the AGRIS web portal interface. At the top, there is a blue header with the FAO logo and the text "Food and Agriculture Organization of the United Nations" on the left, and "AGRIS" on the right. Below the header, there is a navigation bar with language options: English, Español, Français, العربية, 中文, and Русский. The main content area features a search bar with the text "Find resources..." and a magnifying glass icon. Below the search bar, there are three dropdown menus: "-- Select a language --", "-- Country (Data Provider) --", and "-- Select resource type --". A green "SEARCH" button is positioned below these menus. Underneath the search bar, there is a line of text: "The AGRIS database contains 12,152,850 records - including 4,251 datasets - from 443 data providers". At the bottom, there is a section titled "FILTER BY DATA PROVIDERS" with a "Country" dropdown menu and a "Data Provider" field. Below this section are two buttons: "Browse" and "Reset".



Open access & scientific literature

The purpose of AGRIS is to provide comprehensive scholarly research information in the agricultural domain, accepting content related to all FAO's areas of interest from data providers.

Types of content

- books
- conference papers
- data sets
- journal articles
- scientific and technical projects
- technical reports
- theses

Some topics covered by AGRIS

- agriculture
- animal husbandry
- biotechnology
- environment
- fishing and aquaculture
- food
- food technology
- food toxicology
- forestry
- plant protection
- veterinary medicine

AGRIS is used by anyone interested in such literature, including students, scientists, librarians, researchers, publishers and policy-makers, among others.



Food and Agriculture
Organization of the
United Nations

The AGRIS network





Testimonials

“There are many benefits of participating in AGRIS. First of all, it is an international collaboration and partnership. The participation of the University library in AGRIS helps to increase visibility and accessibility of agricultural contents issued in the Republic of Moldova in the information global space. It also helps to facilitate the information and data exchange in the field of agricultural sciences and provides reliable AGRIS user services.”

*Viorica Lupu, State Agrarian University of Moldova
(Republic of Moldova)*

“AGRIS creates a great benefit for the younger Georgian generation, who are interested in the agricultural domain and it opens the door to the rich collection of research documents, which represents the great possibility to find the potential for collaboration, examples for analyzing problems and others’ methods of resolutions of problems.”

Marina Razmadze, Techinformi (Georgia)



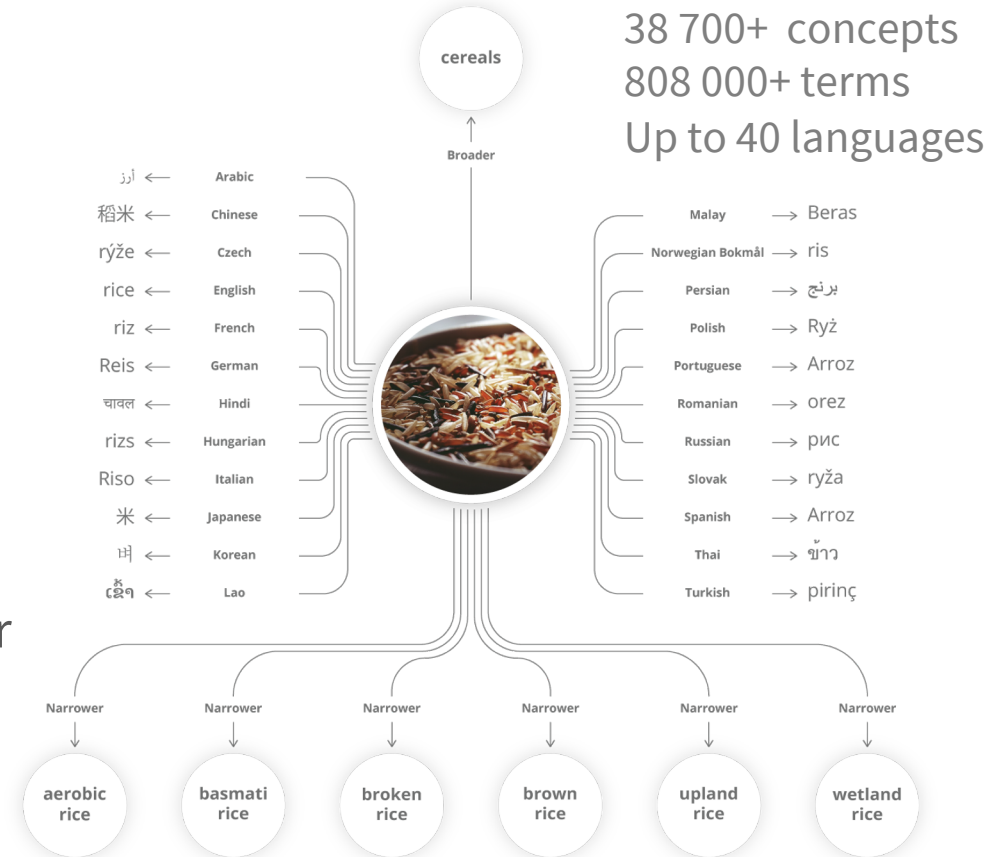
Food and Agriculture
Organization of the
United Nations

AGROVOC



Since the early 1980's, the Food and Agriculture Organization of the United Nations (FAO) has coordinated AGROVOC, a valuable tool for data to be classified homogeneously, facilitating interoperability and reuse.

AGROVOC is a multilingual and controlled vocabulary designed to cover concepts and terminology under FAO's areas of interest.

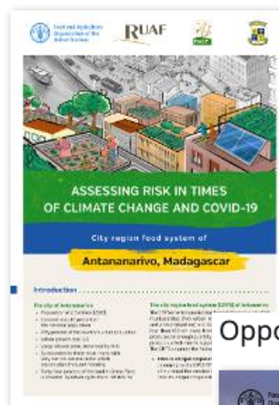


First published to describe documents and other information resources for indexing and searching, AGROVOC has moved from print catalogues to online classification of scientific literature and data.

AGROVOC is online and linked to other vocabularies, building bridges between datasets.

AGROVOC provides a way to organize knowledge for subsequent data retrieval.

City region food system of Antananarivo, Madagascar



Année de publication: 2021

Lieu de publication: Rome, Italy

Autres partenaires: RUAF Global Partnership on Sustainable Urban Agriculture

Pages: #4 p.

ISBN: 978-92-5-133856-8

Auteur: FAO

Par Pays: Madagascar

Éditeur: FAO

Agrovoc: chaîne d'approvisionnement alimentaire rurale-urbaine; systèmes d'évaluation de l'impact; Madagascar

Télécharger: 

Opportunities for innovation in livestock systems



Year of publications: 2021

Place of publication: Rome, Italy

Pages: #32 p.

ISBN: 978-92-5-133864-3

Author: FAO

Publisher: FAO

Agrovoc: disease control; food security; food systems; mitigation; livestock production

Abstract:

Progress towards Zero Hunger must be protected from the challenges of pandemics and climate change. The frequency of infectious disease outbreaks – including the emergence of zoonotic diseases – is expected to continue rising as food security, economies, and global health are increasingly threatened by a destabilizing climate. At the same time, malnutrition is increasing in all regions of the world. In 2019, nearly one billion people in the world were exposed to severe levels of food insecurity.

Download: 



AGROVOC helps to make data FAIR

FAIR Principles

Compliance



Findability

Resource and its metadata are easy to find by both, humans and computer systems. Basic machine readable descriptive metadata allows the discovery of interesting data sets and services.

- ✓ F1. Resource is uploaded to a public repository.
- ✓ F2. Metadata are assigned a globally unique and persistent identifier.



Accessibility

Resource and metadata are stored for the long term such that they can be easily accessed and downloaded or locally used by humans and ideally also machines using standard communication protocols.

- ✓ A1. Resource is accessible for download or manipulation by humans and is ideally also machine readable.
- ✓ A2. Publications and data repositories have contingency plans to assure that metadata remain accessible, even when the resource or the repository are no longer available.



Interoperability

Metadata should be ready to be exchanged, interpreted and combined in a (semi)automated way with other data sets by humans as well as computer systems.

- ✓ I1. Resource is uploaded to a repository that is interoperable with other platforms.
- ✓ I2. Repository meta- data schema maps to or implements the CC Core metadata schema.

✓ I3. Metadata use standard vocabularies and/or ontologies.



Reusability

Data and metadata are sufficiently well-described to allow data to be reused in future research, allowing for integration with other compatible data sources. Proper citation must be facilitated, and the conditions under which the data can be used should be clear to machines

- ✓ R1. Metadata are released with a clear and accessible usage license.
- ✓ R2. Metadata about data and datasets are richly described with a plurality of accurate and relevant attributes.

To share data, shared understanding of meaning and unambiguous terminology.

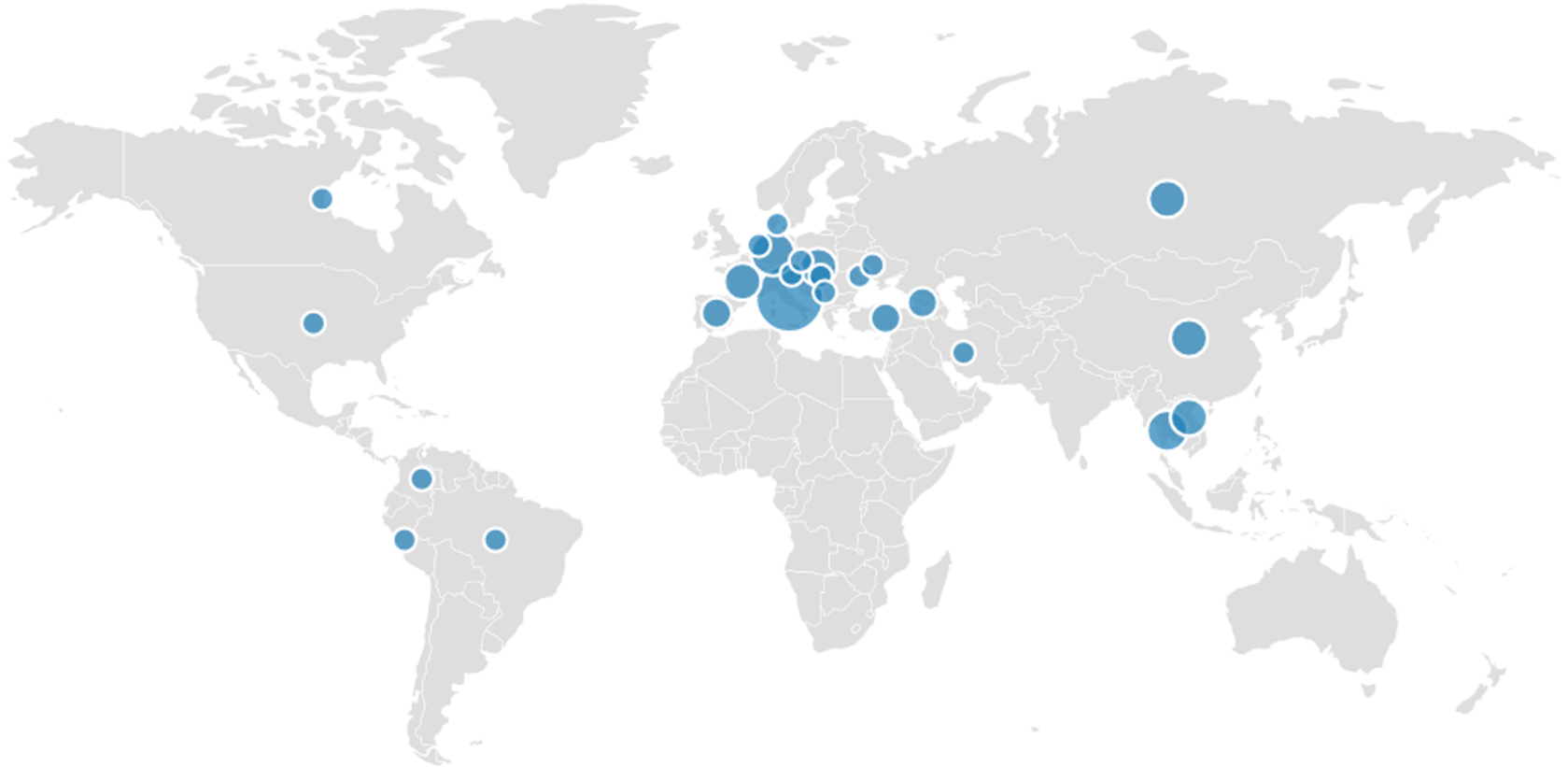
High quality and standardised content and metadata, so it can be shared and re-used.

International standard for subject terms.



Food and Agriculture
Organization of the
United Nations

Who is behind AGROVOC





Food and Agriculture
Organization of the
United Nations

Communities of Practice (CoPs)



AIMS is a Community of Practice (CoP) with more than 4,300 experts in (agricultural) information and data management from around the world.

It provides an open and free space for communication and the exchange of ideas, suggestions, questions, and solutions around the core areas of Information and Data Access Services, information and data management open standards, technology and methodologies.

Community members can connect with each other to share good practices, projects, and events.

The screenshot shows the homepage of the AIMS website. At the top, there is a blue header with the FAO logo and the text "Food and Agriculture Organization of the United Nations". Below the header, there are language options: العربية, 中文, English, Français, Русский, Español. The main heading "AIMS" is displayed in large, bold letters. A navigation menu includes links for Home, About, News, In action, Online Courses, AGRIS, AGROVOC, AGORA, and Data resources. The main content area features a large image of farmers in a field, with a text box overlay that reads: "AGRIS adds 48,859 additional records and now boasts 11,911,717 total records". Below this, there is a "LEARN MORE" button. A blue box contains the text: "The Agricultural Information Management Standards Portal (AIMS) gathers information on (and access to) standards, technology and best practices. It is also a forum connecting information management workers around the world to discuss open access and open data. AIMS represents collaboration and interoperability." To the right, there is a "Become a member" section with a "REGISTER" button. At the bottom, there is a "Latest News" section with a "VIEW ALL" button and two news items: "AGRIS in 2020" and "AGROVOC in 2020". On the far right, there is a "Tweets by @FAOAIMS" section showing a tweet from @ASKFOOD_EU.



O&A Members

58

Active Organisational & Affiliate
members

MY PROFILE

Members: 9712

My details, My Groups, My comments

[Go to my profile](#)

RDA Groups

WG & IGs: 91

Discover what RDA Working and Interest
Groups and all other Groups are up to and find
out how to join them. [Explore Groups](#)

Agricultural Data Interest Group (IGAD)

[Home](#) » [Working And Interest Groups](#) » [Interest Group](#) » [Agricultural Data Interest Group \(IGAD\)](#)

[View](#)

[Edit](#)

[Group](#)

IG

Group details

Status: Recognised & Endorsed

Chair (s): Imma Subirats Coll, Patricia R. Bello Bertin, Cynthia Parr

Group Email: rda-agrdatainterop-ig@rda-groups.org

Secretariat Liaison: Stefanie Kethers

TAB Liaison: Françoise Genova

Case Statement: [Download](#)

IG Established

Formed in 2013, since its inception the Interest Group on Agricultural Data (IGAD) has grown in community strength to over 200 members, becoming one of the RDA's most prominent Themat Groups.

IGAD is a domain-oriented group working on all issues related to global agriculture data. It

Formed in 2013, the Interest Group on Agricultural Data (IGAD) CoP has over 250 members, being one of RDA's most prominent thematic groups.

Domain-oriented group working on all issues related to global food and agricultural data

Represents stakeholders in managing data for agricultural research and innovation, including producing, aggregating and consuming data

Forum for sharing experiences and providing visibility to research and work in agricultural data



Open Data Management in Agriculture and Nutrition Online Course

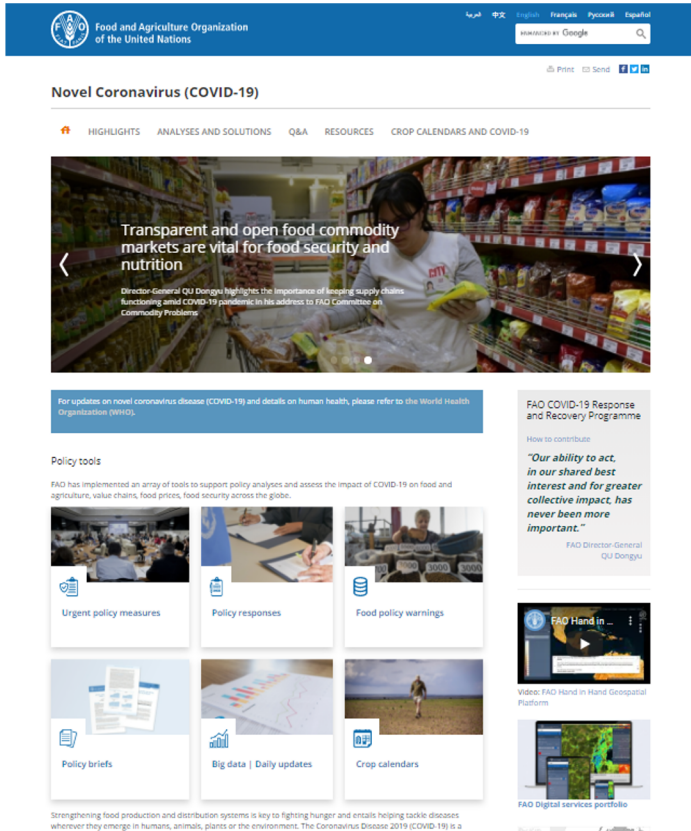
Objective: to strengthen the capacity of data producers and data consumers to manage and use open data in agriculture and nutrition. The course also aims to raise awareness of different types of data formats and uses, and to highlight how important it is for data to be reliable, accessible and transparent.

<http://aims.fao.org/moocs-ODM>

Farm Data Management, Sharing and Services for Agriculture Development Online Course

Objective: to strengthen the skills of professionals who use, manage data for the benefit of farmers and farmers organisations. The course explores the importance of data in the agriculture value chain and how new and existing technologies, products and services can leverage farm level and global data to improve yield, reduce loss, add value and increase profitability and resilience.

<http://www.fao.org/documents/card/en/c/cb2840en>



Food and Agriculture Organization of the United Nations

Novel Coronavirus (COVID-19)

HIGHLIGHTS ANALYSES AND SOLUTIONS Q&A RESOURCES CROP CALENDARS AND COVID-19

Transparent and open food commodity markets are vital for food security and nutrition

Director-General QU Dongyu highlights the importance of keeping supply chains functioning amid COVID-19 pandemic in his address to FAO Committee on Commodity Problems

For updates on novel coronavirus disease (COVID-19) and details on human health, please refer to the World Health Organization (WHO).

Policy tools

FAO has implemented an array of tools to support policy analysis and assess the impact of COVID-19 on food and agriculture, value chains, food prices, food security across the globe.

Urgent policy measures

Policy responses

Food policy warnings

Policy briefs

Big data | Daily updates

Crop calendars

FAO COVID-19 Response and Recovery Programme

How to contribute

"Our ability to act, in our shared best interest and for greater collective impact, has never been more important."

FAO Director-General QU Dongyu

Video: FAO Hand in Hand Geospatial Platform

FAO Digital services portfolio

Strengthening food production and distribution systems is key to fighting hunger and entails helping tackle diseases wherever they emerge in humans, animals, plants or the environment. The Coronavirus Disease 2019 (COVID-19) is a

“Our ability to act, in our shared best interest and for greater collective impact, has never been more important.”

FAO Director-General
QU Dongyu

AIMS@fao.org
AGRIS@fao.org
AGROVOC@fao.org
knowledge-lab@fao.org



Food and Agriculture
Organization of the
United Nations

Thank you

<http://www.fao.org/knowledge-sharing/>

<http://www.fao.org/agrovoc/>

<http://www.fao.org/agris/>

<http://agris.fao.org>

<http://aims.fao.org/>

<https://knowledgelab.fao.org/>