



UNITED NATIONS  
FOOD SYSTEMS  
SUMMIT 2021

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DIALOGUES



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# UN Food Systems Summit 2021 Global Dialogue

Integrating Indigenous Knowledge with Emerging  
Technologies  
To Enhance Sustainability of Food System

31 May 2021

10:00 to 12:30 EST

Registration:

[https://filac-org.zoom.us/webinar/register/WN\\_liF-5EctR-21pd88k-yFVQ](https://filac-org.zoom.us/webinar/register/WN_liF-5EctR-21pd88k-yFVQ)



# Background and Rationale

Food is connected to all aspects of our lives: Water, Land, Energy, Culture, Jobs, Technology, Economies, Politics, and is a lifeblood for our families, cultures, and communities. However, the way food is produced, processed, distributed, consumed, and wasted has undergone profound changes in recent decades threatening the sustainability of our food supply.

Additionally, climate change is creating more difficulties in food production linked to extreme weather conditions, such as droughts, floods, and major fires around the world. For example, 29% of greenhouse gas emissions come from the food supply chain, and 35 % of all food produced is wasted, accounting 80% of the loss of biodiversity and 70% of freshwater used.

The world will come together at the Food Systems Summit (FSS) in September 2021 to raise global awareness and initiate commitments to deliver bold actions to transform food systems, not only to eradicate hunger, but also to reduce the incidence of food-related diseases and heal the planet.

The entire purpose of this Summit is to embrace not only the shared interests of all stakeholders but importantly the areas of divergence on how we go about addressing the harsh reality humanity faces. The Summit has a strong focus on zero hunger and to find lasting solutions to this problem. Additionally, with the COVID-19 pandemic, poor nutrition is placing individuals at higher risk of non-communicable diseases and leading to increased food insecurity.

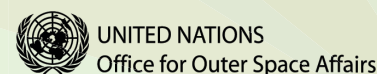


The UN will engage millions of rural people at the 2021 Food Systems Summit as part of an ambitious public participation process.

Indigenous Peoples see the Food Systems Summit as an opportunity to contribute to the Summit goal which is to achieve inclusive and sustainable food systems. Indigenous Peoples possess ancestral knowledge about cultivation, production and processing of food and conservation of diverse crop varieties that has proven to be resilient and in tune with the nature, and it is an opportunity to integrate this knowledge with emerging technologies.

To that end, Indigenous Peoples are attempting to mobilize meaningful commitments for concrete actions and investments for more sustainable food systems. For example, with support from IFAD (International Fund for Agricultural Development) progress has been made in collecting several global recommendations, which were presented to Ms. Agnes Kalibata. Additionally, FILAC has been leading Indigenous peoples' consultations in Latin America, Africa, Asia Pacific, North America, Russia, and the Arctic.

Indigenous communities, family farmers, rural women and youth are among those invited to join this Global Dialogue to help transform global food systems.





# Global Dialogue

The Food Systems Summit Dialogues are a core element of the engagement process and offer a purposeful and organized forum for stakeholders to come together to share evidence, experiences, and new ideas to transform the way the world produces, consumes, and disposes of food.

These dialogues encourage analyses, explorations, and solutions that are specific to the local context. Representatives from each of the five Action Tracks and the Food Systems Summit Dialogues will share progress of idea-generation, and next steps in the Summit process covering the Pre-Summit.

The Pre-Summit of the UN Food Systems Summit in Rome on 26-28 July 2021 will set the stage for the Summit in September by bringing together diverse actors from around the world. The overall goal of the Pre-Summit is to consolidate all substantive work of the Summit into a common vision and initiate commitments to action that will set an ambitious tone in the lead-up to the UN Food Systems Summit in September in the context of the UN General Assembly in New York.

Therefore, through the outcome from this “Global Dialogue”, we have an opportunity to contribute to the agenda and program of the Pre-Summit in July and the main Summit in September 2021.

Furthermore, the independent dialogues organized so far, at national, regional, and global level, are yet to address the issue of emerging technologies in the context of Indigenous knowledge for food security.

# Thematic Focus

The focus of this Global Dialogue is in combining developments in scientific concepts such as space data, AI, blockchain and identifying solutions to those mandated to deliver the Summit outcome, specifically focusing on Indigenous communities.

Specifically, it is important that these scientific concepts identify solutions that can deliver wide-reaching benefits for each of the five “Action Tracks” of the Summit:



## Action Track 1:

Ensure access to healthy and nutritious food for all



## Action Track 2:

Adopt sustainable consumption patterns



## Action Track 3:

Promote nature-friendly production.



## Action Track 4:

Promote equitable livelihoods



## Action Track 5:

Building resilience to vulnerabilities, shocks, and stresses



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FONDO PARA EL DESARROLLO  
DE LOS PUEBLOS INDÍGENAS DE  
AMÉRICA LATINA Y EL CARIBE



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# Thematic Focus

For example, through Action Track 4, scientific concepts such as space data would enable entrepreneurship and address the inequitable access to resources and distribution of value, which is further expected to improve resilience through social protection and seek to ensure that food systems “leave no one behind

Additionally, the dialogue plans to leverage the ongoing efforts of the Scientific Advisory Group of the Summit by inviting their participation, and thereby offering an opportunity to reconcile the resilient ancestral Indigenous Peoples knowledge with evidence based scientific knowledge

4. To make the regional collaborative effort using lessons learned during the Covid-19 pandemic, as scalable and replicable worldwide, with the aim of addressing technological inequalities among Indigenous Peoples, techno-cultural complexities and the role of emerging tools and solutions based on Earth Observation and Artificial Intelligence that have great relevance to complement Indigenous knowledge for the economic, social, and environmental dimensions of sustainable development.

## Objectives: Contribution to the Food Systems Summit

Given the main objective of this summit to achieve inclusive and sustainable food systems, there is a need to examine and identify the challenges and barriers that currently exist related to food systems and how Indigenous Peoples can contribute solutions combined with emerging technologies that can be adapted and replicated.

Thus, the goals of this “Global Dialogue” are:

- 1.To demonstrate that indigenous ancestral knowledge and aspects linked to Science and Technology can contribute to the achievement of the Food Systems Summit objective.
- 2.To promote a dialogue from the perspectives of Indigenous Peoples and aspects of science and technology that can demonstrate that these two aspects can synergize and contribute to more inclusive food systems.
- 3.To link the technical scientific aspects with the resilient ancestral knowledge of Indigenous Peoples.

### Expected Outcome:

The outcome from this Global Dialogue is expected to contribute to the food summit by (a) examining the challenges, barriers, and policy issues for integrating Indigenous knowledge/ experiences with emerging science and technologies, and (b) identifying workable and replicable solutions, and new development model for improving the food security for Indigenous People.



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# PROGRAM

150 Minutes

## A. Setting the Stage and Raison d'être:

30 minutes

- Moderator: **Ms. Dali Angel**, FILAC
- Welcome and Overview: **Mr. Gabriel Muyuy**, FILAC Technical Secretary
- Prayers: **Ms. Sonia Astuhuamán**, Prayers/ Coordinadora Andina de Organizaciones Indígenas CAOI
- Objectives and Structure of the Dialogue: **Mr. Milind Pimprikar**, Chairman, CANEUS
- "Space applications and solutions for food security": **Ms. Simonetta Di Pippo**, Director, UNOOSA
- "Food Systems Summit: An Opportunity", **Ms. Myrna Cunningham**, President, FILAC

## B. Addressing Track 1 and 2: Challenges, barriers, and policy Issues for integrating Indigenous knowledge/experiences with Food Systems and Scientific Knowledges

30 minutes

**Panel Input:** The panelists will provide insight into challenges and barriers for Indigenous knowledge and necessary policies including new development model for improving the food security for Indigenous.

**Moderator: Patricia Palma de Fulladolsa**, directora, Programa de Sistemas de Información para la Resiliencia en Seguridad Alimentaria y Nutricional para la Región del SICA (PROGRESAN-SICA II)

- **Panelists:**
- "Co-creating knowledge and evidence on Indigenous Peoples food systems: an approach",  
**Mr. Yon Fernandez-de-Larrinoa**, Agricultural Economist, FAO, Leader of the FAO Indigenous Peoples Team
- "New development model for improving the food security for Indigenous People." **Mr. Mattia Prayer Galletti**  
IFAD (International Fund for Agricultural Development)
- "Challenges and barriers" **Dr. Philip Loring**, respected anthropologist and ecologist, Professor, settler scholar living in Dish with One Spoon Territory, Guelph, Ontario, Canada.

## C. Addressing Track 3 and 4: Emerging S&T based solutions applicable for integrating Indigenous knowledge/experiences for food security.

30 minutes

**Panel Input:** To help define and implement workable and replicable new development model for integrating emerging S&T based solutions with Indigenous knowledge. The panelists will discuss their current efforts and ideas based on their experience in using S&T, especially EO based tools for food security.

**Moderator: Dr Shirish Ravan**, UNOOSA, Vienna

- **Panelists:**
- "Innovations to integrate indigenous wisdom for better diet diversity and planetary health",  
**Dr. Chandrashekhar Biradar**, International Center for Agricultural Research in the Dry Areas (ICARDA)
- Earth Observation and frontier technologies to investigate and integrate Indigenous knowledge for food security." **Prof Talbot Brooks**, Delta State University, USA
- "Indigenous knowledge/experiences for food security." **Dr. Tania Eulalia Martinez-Cruz**  
University of Greenwich and a member of the Global Hub on Indigenous Peoples Food Systems



## D. Addressing Track 5: Solutions for sustainable and resilient food system 30 minutes

**Panel Input:** The panelists will provide insight into challenges posed by climate change and extreme weather events that may impact the food systems and discuss current efforts, mechanisms and ideas based on using S&T tools for building resilient agriculture with focus on indigenous community.

- **Panelists:**
- Indigenous community-based food security: A learning experience from Cree and Dene First nation Communities **Prof. Ranjan Datta**, Canada Research Chair, Indigenous Studies, Department of Humanities, Mount Royal University, and **Ms. Colleen Charles**, Woodland Cree from the Lac La Ronge Indian Band, La Ronge, Saskatchewan, Canada
- Indigenous methods of food preparation as a viable means of achieving food security and nutrition in rural poor communities, **Francisca K.C Mwanda**, Zambia Agricultural Research Institute
- Development and implementation of programs that target food security using Indigenous knowledge, **Mr. Javier Aníbal León Guevara**, UN World Food Program, National Coordinator, Binational Adaptation Fund Project, Colombia

## E. Outcome and Way forward:

25 minutes

Summary from tracks 1 to 5 and contribution to the agenda and program of the Pre-Summit in July and the main Summit in September 2021

**Moderator:** Dr. Milind Pimprikar, CANEUS

**Contributor:** Moderators from Panels B, C and D above

**Wrap up:** Closing Remarks

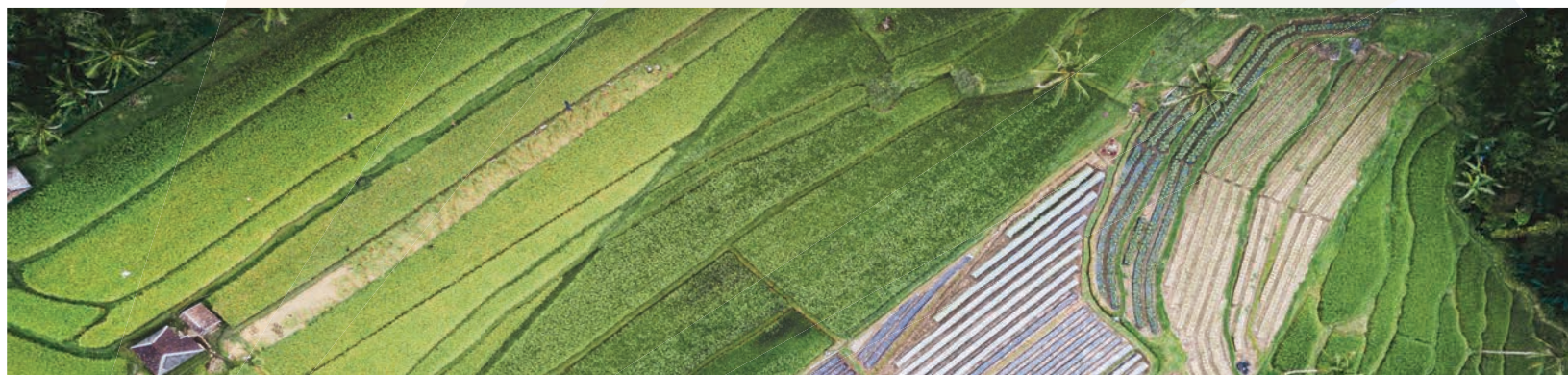
**Mr. Gabriel Muyuy**, FILAC Technical Secretary

5 minutes

### Supporting Materials:

Following documents provide background information to all participants:

- A background paper “emerging space technologies for food security” and “Space for Agriculture Development and Food Security” by UNOOSA
- A paper from the Scientific Group of the UN Food Systems Summit, by FSS Scientific Group



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