

Organized by the Scientific Group of the



Facilitated and Hosted by

Food and Agriculture  
Organization of the  
United Nations

## DAY 1: 08 JULY

13:00 – 14:00 CEST *Plenary Session***SESSION 1: SCIENCE FOR THE FOOD SYSTEMS SUMMIT: UNLOCKING THE POTENTIAL OF SCIENCE, TECHNOLOGY AND INNOVATION (STI) FOR FOOD SYSTEMS TRANSFORMATION**

*This session will set the stage for Science Days, and will focus on the role of STI in transforming food systems, on the evolving state of the art of STI, on how to unlock the potential of STI, and on setting the agenda for science to accelerate the transformation of food systems to contribute to achieving the SDGs, especially SDG2.*

**Moderator: Magdalena Skipper**, Editor in chief, NATURE**QU Dongyu**, Director-General, United Nations Food and Agriculture Organization (FAO)**Amina J. Mohammed**, UN Deputy Secretary-General and Moderator of the Summit Advisory Committee**Agnes Kalibata**, UN SG's Special Envoy for the 2021 Food Systems Summit**Joachim von Braun**, Chair, Scientific Group of the UN Food Systems Summit 2021 – Introducing an Agenda paper of the Scientific Group14:00 – 14:15 CEST *Transition from Plenary to Parallel Sessions*14:15 – 15:30 CEST *Parallel Sessions***SESSION 2: SCIENCE AS ACTION: SCIENCE-BASED OPTIONS TO ACHIEVE MORE HEALTHY DIETS AND MORE INCLUSIVE, SUSTAINABLE, AND RESILIENT FOOD SYSTEMS**

*While each of the sessions has a clear thematic focus, each session will also look into trade-offs and synergies across the themes.*

**2A. Achieving more *healthy diets* in food systems – STI for affordable and accessible nutritious foods for healthy diets**

*This session will focus on science, technology, policy and institutional innovations to enhance productivity, incentivize availability, affordability, and uptake of nutritious and safe foods such as through diversified production systems, taxes, subsidies, regulation, labelling, food*

*fortification, pricing – what is working and what is not in what contexts, and what are the key knowledge and evidence gaps that must be addressed.*

**Moderator: Lynnette Neufeld**, Director-Knowledge Leadership, Global Alliance for Improved Nutrition (GAIN)

**Marta Hugas**, Chief Scientist, European Food Safety Authority

**Andrew Kambugu**, Executive Director, Infectious Diseases Institute, College of Health Sciences, Makerere University

**Chizuru Nishida**, Unit Head, Safe, Healthy and Sustainable Diet Unit, Department of Nutrition and Food Safety at World Health Organization

**Pauline Scheelbeek**, Assistant Professor in Nutritional and Environmental Epidemiology, London School of Hygiene & Tropical Medicine

**2B. Achieving more *inclusive food systems* – STI for eliminating hunger and poverty and for advancing equitable livelihoods**

*This session will focus on science, technology, policy and institutional innovations to eliminate hunger, malnutrition and poverty and to advance equitable livelihoods, such as through improving smallholder productivity, overcoming inefficient and unfair land, credit, and labor arrangements, advancing rights-based approaches, and facilitating greater inclusion and empowerment of marginalized groups – what is working and what is not in what contexts, and what are key knowledge and evidence gaps that must be addressed.*

**Moderator: Claudia Sadoff**, Executive Management Team Convener and Managing Director, Research Delivery and Impact, of the CGIAR

**Christopher B. Barrett**, Professor of Applied Economics and Management, Cornell University

**Shen Xiaomeng**, Director, UNU Institute for Environment and Human Security

**Uma Lele**, President, International Association of Agricultural Economists

**Ishmael Sunga**, CEO, Southern African Confederation of Agricultural Unions

**2C. Achieving more *sustainable and resilient food systems* – STI for making sustainable use of natural resources and managing and preventing risks and crises, incl. climate change and COVID-19**

*This session will focus on science, technology, policy and institutional innovations to achieve more sustainable and resilient terrestrial and marine-based food systems and to foster more climate-neutral, climate-positive, and climate-resilient food systems such as through transforming agronomic, ecological, livestock, forestry and fisheries practices; enhancing productivity; protecting and regenerating productive soils, land, and water; reducing food loss and waste; protecting biodiversity; reducing risk through novel insurance products and early warning systems and through innovative finance and social protection programs – what is working and what is not in what contexts, and what are key knowledge and evidence gaps that must be addressed; and how do related sustainability actions impact on nutrition, poverty, hunger i.e. how to address trade-offs.*

**Moderator: Rattan Lal**, Professor of Soil Science, Ohio State University

**Kaoru Kitajima**, Professor, Kyoto University Graduate School of Agriculture

**Lisa Sennerby Forsse**, past President, Royal Swedish Academy of Agriculture and Forestry (KSLA)

**Jean-François Soussana**, Vice-President of International Policy, Institute national de la recherche agronomique (INRAE)

**Morakot Tanticharoen**, Professor and Senior Advisor to the President, National Science and Technology Development Agency (NSTDA)

15:30 – 15:40 CEST    *Transition between parallel sessions*

15:40 – 16:55 CEST    *Parallel Sessions*

### **SESSION 3: PUTTING SCIENCE TO WORK: SCIENCE, PEOPLE AND POLICY**

*While each of the sessions has a clear thematic focus, each session will also consider implementation actions and related implementation research.*

#### **3A. Strengthening the science-policy interface across disciplines and policy areas incl. economics, and health-, nutrition-, climate-, ecological-sciences**

*This session will focus on how to strengthen the science-policy interface at national and international levels to enable food systems transformation – what are effective mechanisms to connect knowledge from science (e.g. economics, health, climate, ecology and more) with policy action, how governments and private sector can support food systems science, how science can support effective policymaking, how international sharing of science can be facilitated including through new or strengthened international scientific bodies and their linkages with national and regional counterparts; what platforms can they use to better coordinate their engagement; what methods can they use to better integrate their sciences.*

**Moderator: Ousmane Badiane**, Executive Chairperson, AKADEMIYA2063

**Shenggen Fan**, Professor, College of Economics and Management, China Agricultural University

**Princess Sumaya bint El Hassan**, President, Royal Scientific Society of Jordan

**Miyuki Iiyama**, Program Director, Information Program, Japan International Research Center for Agricultural Sciences (JIRCAS)

**Gerardine Mukeshimana**, Minister of Agriculture and Animal Resources, Rwanda

#### **3B. Investing in institutional and human capacity for science and innovation**

*This session will focus on what type of investments are needed to strengthen institutional and human capacity to enable food systems transformation -- how to encourage and support these investments within and across disciplines and geographies; how to support basic science and applied science / natural science and social science; and what mechanisms to push the frontiers of science.*

**Moderator: Mohamed Hassan**, President, The World Academy of Sciences (TWAS)

**Patrick Caron**, Vice President, University of Montpellier

**Julius Ecuru**, Head, BioInnovate Africa

**Volker ter Meulen**, President, InterAcademy Partnership

**Jing Zhu**, Professor and Dean of the College of Economics and Management, Nanjing Agricultural University

### **3C. Capitalizing on models, data, and communications revolutions, and new methods**

*This session will focus on how we can capitalize on and further expand investments in models, data, methods, and communications to enable food systems transformation – what type of models and modelling platforms do we need for food systems; what innovations are happening / should happen to speed up (big) data availability, utilization, analysis and effective use in decision-making; how do we creatively tap into the communications revolution; what new methods are being developed within and outside food systems science that can be creatively put to work to push the frontier of knowledge.*

**Moderator: Mario Herrero Acosta**, Chief Research Scientist of Agriculture and Food, The Commonwealth Scientific and Industrial Research Organisation (CSIRO).

**Renata Dainese**, Production Research Scientist, Bayer Crop Science

**Frank Ewert**, Professor, Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF)

**David Laborde**, Senior Research Fellow, International Food Policy Research Institute

**Catherine Nakalembe**, Assistant Research Professor, Department of Geographical Sciences, University of Maryland, and Africa Food Prize Laureate 2020

16:55 – 17:00 CEST    *Transition from Parallel to Plenary Sessions*

17:00 – 18:00 CEST    *Plenary Session*

### **SESSION 4: WHY THE FIGHT: GETTING TO GRIPS WITH MISSED OPPORTUNITIES AND CONTENTIOUS ISSUES IN SCIENCE AND INNOVATION FOR FOOD SYSTEMS**

*This session will explore causes of important lingering and emerging food systems related science controversies, as well as missed opportunities in STI for food systems transformation, and discuss the role of research to address such controversies and move beyond polarization]*

**Moderator: Anne Mullen**, Chief Editor, Nature Food

**Ertharin Cousin**, Founder and CEO, Food Systems for the Future

**Urs Niggli**, Honorary professor, Kassel University

**Shakuntala Thilsted**, Global Lead, Nutrition and Public Health, WorldFish, and 2021 World Food Prize Laureate

**David Zilberman**, Professor, Department of Agricultural and Resource Economics, University of California at Berkeley

13:00 – 14:00 CEST *Plenary Session*

**SESSION 5: ACHIEVING THE 2030 GOALS: OPPORTUNITIES, TRADE-OFFS, OBSTACLES AND SYNERGIES**

*This session will, drawing upon global foresight models and scenario exercises, look ahead to the world in 2030 – what will it take to achieve the SDGs especially SGD2 and how much will it cost; what do different scenarios offer under differing conditions/ assumption; what are the key trade-offs and synergies to look out for; what are the key opportunities to tap.*

**Moderator: Maximo Torero**, Chief Economist, FAO

**Thomas Hertel**, Professor of Agricultural Economics, Purdue University

**Elizabeth Mkandawire**, Africa Network and Research Manager, Food Systems Research Network for Africa, University of Pretoria

**Jean Eric Paquet**, Director-General, Directorate Research and Innovation, European Commission

**Josefa Sacko**, Agriculture Commissioner, African Union (tbc)

14:00 – 14:15 CEST *Transition from Plenary to Parallel Sessions*

14:15 – 15:30 CEST *Parallel Sessions*

**SESSION 6: EMPOWERING AND ENGAGING KEY PLAYERS IN FOOD SYSTEM INNOVATION**

**6A. Youth**

*This session will focus on how to effectively and appropriately engage, include, incentivize, and empower youth in science and innovation for food systems transformations.*

**Moderator: Oliver Kirui**, Senior Researcher, Center for Development Research (ZEF), University of Bonn

**Lahcen El Youssfi**, Associate Professor Agro-biology and Natural Resources Management, Moulay Slimane University, Morocco

**Mike Khunga**, Vice-Moderator of the UN Food Systems Summit Action Track 5

**Preet Liddar**, Technical Adviser, FAO

**Yugratna Srivastava**, Youth Constituency Focal Point to UN Environment Programme

#### 6B. Traditional and indigenous knowledge

*This session will focus on how to effectively and appropriately support and use traditional and indigenous peoples' knowledge and facilitate access and benefit sharing.*

**Moderator: Kaosar Afsana**, Professor, BRAC University

**Oren Lyons**, Faithkeeper of the Turtle Clan and member of the Onondaga Indian Nation Council of Chiefs of the Six Nations of the Iroquois Confederacy

**Tania Martinez Cruz**, Post-doctoral Research Fellow, Natural Resources Institute, University of Greenwich

**Gam Shimray**, Secretary General, Asia Indigenous Peoples Pact

**Mariam Wallet Mohamed Aboubakrine**, former chair and member, United Nations Permanent Forum on Indigenous Issues

#### 6C. Science in and by food industry and start-ups

*This session will focus on how to effectively and appropriately support and use science in and by food industry and start-ups, and to foster partnerships that serve achieving the SDGs between food industry science and public sector, academia and civil society science.*

**Moderator: Robynne Anderson**, Director General, International Agri-Food Network

**Ashok Gulati**, Professor for Agriculture, Indian Council for Research on International Economic Relations (ICRIER)

**Lee Recht**, Head of Sustainability, Aleph Farms

**Bente Torstensen**, Head of Aquaculture Division. Nofima AS

**Aman Wirakartakusumah**, Professor Em., Department of Food Science and Technology, Bogor Agricultural University

#### 6D. Women

*This session will focus on strengthening rights, and how to effectively and appropriately engage, include, and empower women in science and innovation for food systems transformation.*

**Moderator: Jemimah Njuki**, Director for Africa, IFPRI

**Emma Naluyima**, Vice Chairperson, Green and Fresh farmer's Cooperative, Uganda, Africa Food Prize laureate

**Sundus Saleemi**, Senior Researcher, Pakistan Institute of Development Economics and Center for Development Research (ZEF), University of Bonn

**Maria Virginia Solis Wahnish**, Cofounder and CEO, Matera

**Lawrence Haddad**, Executive Director, GAIN

15:30 – 15:40 CEST    *Transition between parallel sessions*

15:40 – 16:55 CEST    *Parallel Sessions*

## **SESSION 7: BRAVE NEW WORLD: PUSHING THE FRONTIERS OF SCIENCE FOR FOOD SYSTEMS**

### **7A. Bio-science innovations**

*This session will focus on the frontiers of science for food systems, in this case on the frontiers of bio-science innovations such as genome editing, synthetic biology, microbiomes, alternative protein sources, alternative sources for essential micronutrients, cell factories and more – what are the important new and emerging bio-science innovations, what will it take to put them effectively to work to transform food systems, and what are potential risks and unintended consequences.*

**Moderator: Martin Cole**, Chair, High Level Panel of Experts on Food Security and Nutrition (HLPE)

**Frances Arnold**, Professor of Chemical Engineering, Bioengineering and Biochemistry, California Institute of Technology (Caltech)

**Pedro Coelho**, Co-founder and CEO, Provivi

**Rob Bertram**, Chief Scientist, USAID Bureau for Resilience and Food Security

**Robin Fears**, Biosciences Programme Director, European Academies' Science Advisory Council (EASAC)

**Najat Mokhtar**, Deputy Director-General, International Atomic Energy Agency

### **7B. Digital innovations**

*This session will focus on the frontiers of science for food systems, in this case on the frontiers of digital innovations such as artificial intelligence, machine learning, Internet of Things, remote sensing, big data analysis, robotics, and more – what are the important new and emerging digital innovations, what will it take to put them effectively to work to transform food systems, and what are potential risks and unintended consequences, and ethical implications.*

**Moderator: Heike Baumüller**, Coordinator, Program for Accompanying Research for Agricultural Innovation (ZEF)

**Mustapha Diyaol-Haqq**, Co-founder, Okuafo Foundation

**Su Kahumbu Stephanou**, Founder and CEO, iCow

**Matthew McCabe**, Professor, Director of the Climate and Livability Initiative, King Abdullah University of Science and Technology

**Suvankar Mishra**, CIO & Co-founder, eKutir

### **7C. Policy and institutional innovations**

*This session will focus on the frontiers of research on policy and institutional innovations such as financing the actions for food systems transformations, repurposing subsidies, innovating taxes, designing regulations, facilitating collective action, governing common goods, revising gender norms, improving market functioning, re-assessing the price and value of food and more – what are the important new and emerging policy innovations,*

*what will it take to put them effectively to work to transform food systems, and what are potential risks and unintended consequences.*

**Moderator: Sheryl Hendriks**, Professor, Department of Agricultural Economics, Extension and Rural Development, University of Pretoria

**Nicoletta Batini**, Lead Evaluator, Independent Evaluation Office, International Monetary Fund  
**Jikun Huang**, Professor of Agricultural Economics, China Center for Agricultural Policy, Peking University

**Elizabeth Hodson de Jaramillo**, Professor Emeritus, School of Sciences of the Pontificia Universidad Javeriana

**Fadel Ndiame**, Deputy President, Alliance for a Green Revolution in Africa

**Tom Arnold**, Chair of the High Level Expert Group of the European Commission

16:55 – 17:00 CEST    *Transition from Parallel to Plenary Sessions*

17:00 – 18:00 CET    *Plenary Session*

#### **SESSION 8: LOOKING AHEAD: STRATEGIC FOOD SYSTEMS SCIENCE BEYOND 2030**

*This session will close the Science Days with reflections on the long-term (beyond 2030) issues, opportunities, and challenges for science, technology and innovation, with special consideration given to ethical issues, nutritional issues, equity issues, rights and justice issues, culture issues, demographics, risk management issues, and international scientific cooperation.*

**Moderator: Thin Lei Win**, Food & Climate Correspondent, Thin Ink

**Louise Fresco**, President of the Executive Board, Wageningen University & Research

**Peter Bakker**, President & CEO, World Business Council for Sustainable Development (WBCSD) and Member of the Advisory Committee to the UN Food Systems Summit 2021

**Johan Swinnen**, Director General, IFPRI

**Ismahane Elouafi**, Chief Scientist, FAO

**17:55: Joachim von Braun**: Closing remarks and way forward