

FSS Briefs by Partners of Scientific Group

“Food Systems Summit Briefs” are invited papers by the Scientific Group in support of the Summit agenda setting.

These papers have been contributed by researchers from partners of the Scientific Group after partnership had been agreed by the Scientific Group Leadership (Chair and Vice Chairs). The papers are authored by researchers in the Partner organizations. Members of the Scientific Group have co-authored some of the Briefs.

	Title, Authors	Affiliated Partner
A. Modelling Food Systems Transformations		
1.	The Bioeconomy and Food Systems Transformation Eduardo Trigo, Hugo Chavarria, Carl Pray, Stuart J. Smyth, Agustin Torroba, Justus Wesseler, David Zilberman, Juan F. Martinez	Intl Consortium on Applied Bioeconomy Research (ICABR) Inter-American Institute for Cooperation on Agriculture IICA
2.	The Transition Steps Needed to Transform Our Food Systems Patrick Webb, Derek J. Flynn, Niamh M. Kelly, and Sandy M. Thomas on behalf of the Global Panel on Agriculture and Food Systems for Nutrition	Global Panel on Food, Agriculture for Nutrition
3.	Cost and Affordability of Preparing a Basic Meal around the World William A. Masters, Elena M. Martinez, Friederike Greb, Anna Herforth, Sheryl L. Hendriks	World Food Program (WFP) Food Prices for Nutrition Tufts University
B. Science, Technology, and Innovation Actions		
4.	The Role of Science, Technology and Innovation for Transforming Food Systems Globally Robin Fears, Claudia Canales	Inter-Academy Partnership (IAP)
5.	How could science-policy interfaces boost food system transformation? Etienne Hainzelin, Patrick Caron, Frank Place, Arlène Alpha, Sandrine Dury, Ruben Echeverria, Amanda Harding	cirad Agricultural Research for Development International Food Policy Research Institute IFPRI

6.	<p>Food System Innovations and Digital Technologies to Foster Productivity Growth and Rural Transformation</p> <p>Rui Benfica, Judith Chambers, Jawoo Koo, Alejandro Nin-Pratt, José Falck-Zepeda, Gert-Jan Stads, Channing Arndt</p>	<p>International Food Policy Research Institute IFPRI</p>
7.	<p>Leveraging data, models & farming innovation to prevent, prepare for & manage pest incursions: Delivering a pest risk service for low-income countries,</p> <p>Taylor, B; Tonnang, HEZ; Beale, T; Holland, W; Oronje, M; Abdel-Rahman, EM; Onyango, D., Finegold, C; Zhu, J; Pozzi, S, Murphy, ST</p>	<p>Association of International Research and Development AIRCA</p>
8.	<p>Food Systems Innovation Hubs in Low-and-Middle-Income Countries</p> <p>Kalpana Beesabathuni, Sufia Askari, Madhavika Bajoria, Martin Bloem, Breda Gavin-Smith, Hamid Hamirani, Klaus Kraemer, Priyanka Kumari, Srujith Lingala, Anne Milan, Puja Tshering, Kesso Gabrielle van Zutphen, Kris Woltering</p>	<p>Sight and Life</p> <p>Johns Hopkins Bloomberg School of Public Health</p> <p>Children’s Investment Fund Foundation</p> <p>Food systems for the Future Institute</p>
9.	<p>A New Paradigm for Plant Nutrition</p> <p>Achim Dobermann, Tom Bruulsema, Ismail Cakmak, Bruno Gerard, Kaushik Majumdar, Michael McLaughlin, Pytrik Reidsma, Bernard Vanlauwe, Lini Wollenberg, Fusuo Zhang, Xin Zhang</p>	<p>Scientific Panel on Responsible Plant Nutrition</p>
10.	<p>A Whole Earth Approach to Nature Positive Food: Biodiversity and Agriculture</p> <p>Fabrice A.J. DeClerck, Izabella Koziell, Tim Benton, Lucas A. Garibaldi, Claire Kremen, Martine Maron, Cristina Rumbaitis Del Rio, Aman Sidhu, Jonathan Wirths, Michael Clark, Chris Dickens, Natalia Estrada Carmona, Alexander K. Fremier, Sarah K. Jones, Colin K. Khoury, Rattan Lal, Michael Obersteiner, Roseline Remans, Adrien Rusch, Lisa A. Schulte, Jeremy Simmonds, Lindsay C. Stringer, Christopher Weber and Leigh Winowiecki</p>	<p>CGIAR/CCAFS</p>
11.	<p>Delivering climate change outcomes with agroecology in low-and middle-income countries: evidence and actions needed</p> <p>Sieglinde Snapp, Yodit Kebede, Eva Wollenberg, Kyle M. Dittmer, Sarah Brickman, Cecelia Egler, Sadie Shelton</p>	<p>Climate Change, Agriculture and Food Security CGIAR</p> <p>CCAFS Foreign, Commonwealth & Development Office</p>

C. Actions for Equity, Inclusiveness and Nutrition and Health

12.	<p>A review of evidence on gender equality, women's empowerment, and food systems</p> <p>Jemimah Njuki, Sarah Eissler, Hazel Malapit, Ruth Meinzen-Dick, Elizabeth Bryan³, and Agnes Quisumbing</p>	<p>International Food Policy Research Institute IFPRI</p>
13.	<p>Indigenous Peoples' Food Systems – Characterization, Concept and Application for the UN Food Systems Summit</p>	<p>Alliance of Bioversity International and CIAT</p> <p>Asian Indigenous Peoples Pact</p> <p>FAO Indigenous Peoples Unit</p> <p>University of Cambridge</p> <p>Greenwich University, Natural Resources Institute</p> <p>McGill University, Centre for Indigenous Peoples' Nutrition and Environment</p>
14.	<p>Marginal areas and indigenous people – Priorities for research and action</p> <p>Sayed Azam-Ali, Hayatullah Ahmadzai, Dhrupad Choudhury, Ee Von Goh, Ebrahim Jahanshiri, Tafadzwanashe Mabhaudhi, Alessandro Meschinelli, Albert Thembinkosi Modi, Nhamo Nhamo, Abidemi Olutayo</p>	<p>Association of International Research and Development Centers for Agriculture (AIRCA)</p>
15.	<p>Priorities for inclusive urban food system transformations in the Global South</p> <p>Paule Moustier, Michelle Holdsworth, Dao The Anh, Pape Abdoulaye Seck, Henk Renting, Patrick Caron, Nicolas Bricas</p>	<p>cirad</p> <p>Agricultural Research for Development</p>
16.	<p>Secondary Cities as Catalysts for Nutritious Diets in Low- And Middle-Income Countries</p> <p>Kesso Gabrielle van Zutphen, Dominique Barjolle, Sophie van den Berg, Breda Gavin-Smith, Klaus Kraemer, Capucine Musard, Helen Prytherch, Johan Six, Simon Winter, Kris Woltering</p>	<p>Sight and Life</p> <p>Johns Hopkins Bloomberg School of Public Health</p> <p>Swiss Tropical and Public Health Institute</p> <p>ETH Zurich</p> <p>Syngenta foundation for sustainable agriculture</p>

17.	The Future of Small Farms: Innovations for Inclusive Transformation Xinshen Diao, Thomas Reardon, Adam Kennedy, Ruth S. DeFries, Jawoo Koo, Bart Minten, Hiroyuki Takeshima, and Philip Thornton	International Food Policy Research Institute IFPRI
18.	Fruits and vegetables for healthy diets: Priorities for food system research and action Jody Harris, Bart de Steenhuijsen Piters, Stepha McMullin, Babar Bajwa, Ilse de Jager, and Inge D. Brouwer	Association of International Research and Development Centers for Agriculture (AIRCA) Wageningen University & Research
19.	Safeguarding and using fruit and vegetable biodiversity Maarten van Zonneveld, Gayle M. Volk, M. Ehsan Dulloo, Roeland Kindt, Sean Mayes, Marcela Quintero, Dhrupad Choudhury, Enoch G. Achigan-Dako, Luigi Guarino	Association of International Research and Development Centers for Agriculture AIRCA
20.	Addressing Food Crises in Violent Conflicts Birgit Kemmerling, Conrad Schetter, Lars Wirkus	Bonn International Center for Conversion (bicc)
21.	COVID-19 and Food Systems: Rebuilding for Resilience, Patrick Webb, Derek J. Flynn, Niamh M. Kelly, Sandy M. Thomas, and Tim G. Benton on behalf of the Global Panel on Agriculture and Food Systems for Nutrition	Global Panel on Food, Agriculture for Nutrition
22.	In the age of pandemics, connecting food systems and health: a Global One Health approach Gebbienna M. Bron, J. Joukje Siebenga, Louise O. Fresco	Wageningen University and Research
<u>D. Actions for Sustainable Resource Use and Foresight</u>		
23.	Pathways to Advance Agroecology for a Successful Transformation to Sustainable Food Systems Urs Niggli, Martijn Sonneveld, Susanne Kummer	Swiss national FAO Committee CNS-FAO
24.	Water for Food Systems and Nutrition, by Claudia Ringler, Mure Agbonlahor, Kaleab Baye, Jennie Barron, Mohsin Hafeez, Jan Lundqvist, J.V. Meenakshi, Lyla Mehta, Dawit	CGIAR Research Program on Water, Land and Ecosystems

	Mekonnen, Franz Rojas-Ortuste, Aliya Tankibayeva, Stefan Uhlenbrook	WASAG Working Group: Water and Nutrition
25.	Crop Diversity, its Conservation and Use for Better Food Systems. The Crop Trust Perspective, Stefan Schmitz, Rodrigo Barrios, Hannes Dempewolf, Luigi Guarino, Charlotte Lusty, Janet Muir	Global Crop Trust
26.	Climate Change and Food Systems Alisher Mirzabaev, Lennart Olsson, Rachel Bezner Kerr, Prajal Pradhan, Marta Guadalupe Rivera Ferre, and Hermann Lotze-Campen	Center for Development Research, University of Bonn (ZEF) Cornell University Lund University Potsdam Institute for Climate Impact Research PIK The Agricultural Model Intercomparison and Improvement Project AgMIP Universitat Central de Catalunya UVIC Food System Economics Commission
27.	Reduction of Food Loss and Waste – The Challenges and Conclusions for Actions Findings and Recommendations for Actions of an international Conference by the Pontifical Academy of Sciences with the Rockefeller Foundation Joachim von Braun, Marcelo Sánchez Sorondo and Roy Steiner	Pontifical Academy of Science and Rockefeller Foundation and international research communities (2020 expert consultation)
28.	Livestock and sustainable food systems: Status, trends, and priority actions Mario Herrero, Daniel Mason-D’Croze, Philip K. Thornton, Jessica Fanzo, Jonathan Rushton, Cecile Godde, Alexandra Bellows, Adrian de Groot, Jeda Palmer, Jinfeng Chang, Hannah van Zanten, Barbara Wieland, Fabrice DeClerck, Stella Nordhagen, Margaret Gill	Commonwealth Scientific and Industrial Research Organization, CGIAR Research Programme on Climate Change Agriculture and Food Security International Livestock Research Institute ILRI Bloomberg School of Public Health Johns Hopkins University

		<p>University of Liverpool</p> <p>Impact Institute, The Netherlands.</p> <p>College of Environmental and Resource Sciences, Zhejiang University</p> <p>Wageningen University & Research</p> <p>International Livestock Research Institute, Addis Ababa,</p> <p>University of Bern</p> <p>Agricultural Biodiversity and Ecosystem Services, Bioversity International</p> <p>Global Alliance for Improved Nutrition (GAIN)</p> <p>School of Biological Science, University of Aberdeen</p>
29.	<p>The Vital Roles of Blue Foods in the Global Food System</p> <p>Jim Leape, Fiorenza Micheli, Michelle Tigchelaar, Edward H. Allison, Xavier Basurto, Abigail Bennett, Simon R. Bush, Ling Cao, Beatrice Crona, Fabrice DeClerck, Jessica Fanzo, Jessica A. Gephart, Stefan Gelcich, Christopher D. Golden, Christina C. Hicks, Avinash Kishore, J. Zachary Koehn, David C. Little, Rosamond L. Naylor, Elizabeth R. Selig, Rebecca E. Short, U. Rashid Sumaila, Shakuntala H. Thilsted, Max Troell, Colette C.C. Wabnitz</p>	<p>Stanford University</p> <p>Stockholm Resilience Centre, Stockholm University</p> <p>EAT</p> <p>The Blue Food Assessment</p>
<p><u>E. Investment, Finance, Trade and Governance actions</u></p>		
30.	<p>Ending Hunger by 2030 – policy actions and costs</p> <p>Joachim von Braun, Bezawit Beyene Chichaibelu, Maximo Torero Cullen, David Laborde, Carin Smaller</p>	<p>Center for Development Research, University of Bonn (ZEF)</p> <p>CERES</p> <p>FAO</p> <p>IFPRI</p> <p>IISD Cornell University</p>
31.	<p>Financing SGD2 and Ending Hunger</p> <p>Eugenio Díaz-Bonilla</p>	<p>IFPRI</p>

32.	Trade and Sustainable Food Systems Andrea Zimmermann and George Rapsomanikis	FAO
D. Actions in Regions and Countries		
33.	Policy options for food systems transformation in Africa – from the perspective of African universities and think tanks Fadi Abdelradi, Assefa Admassie, John Asafu Adjaye, Miltone Ayieko, Ousmane Badiane, Katrin Glatzel, Sheryl Hendriks, Mame Samba Mbaye, Fatima Ezzahra Mengoub, Racha Ramadan, Tolulope Olofinbiyi, Simbarashe Sibanda	African think tanks group, facilitated by Akademiya2063 and Malabo Montpellier Panel FARA African Academies of Sciences
34.	The Role of Science, Technology, and Innovation for Transforming Food Systems in Africa Sheryl L. Hendriks, Endashaw Bekele, Thameur Chaibi, Mohamed Hassan, Douglas W. Miano and John H. Muyonga	IAP NASAC
35.	The Role of Science, Technology and Innovation for Transforming Food Systems in Latin America and the Caribbean Elizabeth Hodson de Jaramillo, Eduardo J. Trigo and Rosario Campos	IAP IANAS
36.	The Role of Science, Technology, and Innovation for Transforming Food Systems in Asia Paul J Moughan, Daniel A Chamovitz, S Ayyappan, Morakot Tanticharoen, Krishan Lal, Yoo Hang Kim	IAP AASSA
37.	The Role of Science, Technology, and Innovation for Transforming Food Systems in Europe Claudia Canales, Robin Fears	IAP EASAC
38.	Transforming Chinese Food Systems for both Human and Planetary Health Shenggen Fan, Jikun Huang, Fusuo Zhang, Wenhua Zhao, Hongyuan Song, Fengying Nie, Yu Sheng, Jinxia Wang, Jieying Bi and Wenfeng Cong	National Institute for Nutrition and Health (CDC) Peking University China Agricultural University

<p>39.</p>	<p>Key Areas of the Agricultural Science – Development in Russia in the Context of Global Trends and Challenges</p> <p>Evgenia Serova, Nadezhda Orlova, Vladimir Popov, Marina Petukhova, Alina Osmakova, Oleg Kobiakov, Maxim Markovich, Irina Donnik, Irina Chernukha, Mikhail Glubokovsky, Viktor Tutelyan, Alla Kochetkova, Natalya Zinovieva, & Petr Tolmachev</p>	<p>Russian Academy of Sciences</p> <p>National Research University, Inst. For Agric. Science</p>
<p>40.</p>	<p>Food System in India. Challenges, Performance and Promise</p> <p>Ashok Gulati, Raj Paroda, Sanjiv Puri, D. Narain, Anil Ghanwat</p>	<p>ICRIER</p>
<p>41.</p>	<p>There is no single challenge, nor single solution, for food systems transformations: making plurality visible</p> <p>Marta G. Rivera-Ferre, Anne Mottet, Laura Pereira, Marianne Penker, Jeroen Candel, Anne Davies, Peter Jackson, Marina Heinonen, Tim McAllister, Katrien Termeer, Alexander Nikolov Hristov</p>	<p>FACCE</p>