



INTERNATIONAL UNION of FOOD SCIENCE AND TECHNOLOGY

Strengthening Global Food Science and Technology for Humanity

IUFOST Scientific Roundtable (SRD4)

COVID-19 Crisis: Implications for Food Systems in Developing Economies (Focus on Africa)

News Release - The critical importance of ensuring that developing economies are supported by the international community as they prepare to contain the spread of COVID-19 was highlighted in a Scientific Roundtable organized and coordinated by the International Union of Food Science and Technology (IUFOST) on April 17, 2020. **COVID-19 Crisis: Implications for Food Systems in Developing Economies (Focus on Africa)** brought together internationally renowned experts in food science looking at nutrition, agriculture, regulation, epidemiology, and industry to address challenges specific to Africa and Lebanon related to the impact of COVID-19.

The Scientific Roundtable was co-chaired by **John McDermott**, Director, CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), and **Ruth Oniang'o**, Chair of Sasakawa Africa Association, Founder Rural Outreach Africa. Presentations were made by **Catherine Bertini**, World Food Prize Laureate, Former UN Under Secretary and Executive Director of the World Food Programme; **Cheikh Ndiaye**, Executive Director, African Food and Agriculture Skills Development Centre, Senegal; **Samuel Godefroy**, Senior Food Regulatory Expert, United Nations Industrial Development Organization, Arab Food Safety Initiative for Trade Facilitation (SAFE); **Lara Hanna Wakim**, Vice Director of Higher Center for Research, Holy Spirit University of Kaslik, Lebanon; **Theo Knight-Jones**, Senior Scientist Epidemiology, Animal and Human Health, International Livestock Research Institute (ILRI); and **Silnia Badenhorst**, Group Food Safety Manager (SME) Massmart/Walmart.

Speakers raised warnings about the potential impact of measures taken to contain the virus that could result in a food crisis with dire implications beyond those of the virus itself unless solutions matching the African reality are developed and implemented now. The expectation is that COVID-19 will move 80 million Africans into extreme poverty. While each expert presented a different aspect of COVID-19, key concerns identified were the critical need for financial support for African government measures in fighting virus spread; the importance of communication of factual information; ensuring the integrity of both informal and formal food supply and distribution; and accurate definition of essential goods and services to include all activities and processes which support the production, processing, distribution, consumption, and waste disposal of food in the system.

“While there will be some challenges in global food supply chains, most disruptions in food production, supply chains, markets and services will come from domestic circumstances and livelihood shocks.”
(John McDermott)

Ruth Oniang'o compared the COVID-19 pandemic to a conflict, with major disruptions in people's lives impacting food production for a majority of smallholder farmers and the food supply chain. With the world predicting the worst for Africa's 54 sovereign states, countries with very weak economies have been forced to get ready, despite the fact that these governments do not have social safety net programs to cushion the impact on their populations. They have no reserves and have coped with their periodic food crises through donors who now have to mobilize all resources to help themselves.

Following on this theme, Cheikh Ndiaye stressed that the strategy of everyone solving their own problems is unsustainable and counterproductive. The globally accepted practice of closing down cities and businesses is difficult to implement in the African context without food shortages, price increases and starvation in vulnerable populations. Efforts should be made to assist workers in all sectors of food systems impacted in the hope that with support from the international community it may be possible to mitigate some of the foreseeable negative impacts.

“Guidance needs to be provided for practices of sanitation, but also how to protect workers’ health and conditions in order to make sure that they continue to operate.” (Sam Godefroy)

Regulators must continue to play an important role in limiting supply disruption and maintaining operations through communication of scientifically credible information, especially with regard to transmission of the virus; including providing guidance to food and agri-food producers in sanitation and worker protection standards, amongst other things; and ensuring that no new threats or hazards are introduced, including food fraud and prevention of dumping to avoid shortages. Sam Godefroy noted that guidance must be adapted to African food production sector and supply chain realities, including how to practice social distancing in the context of farmers markets and small farmer production.

“From villages to nations, leaders must be nimble and must quickly fix disruptions in the food chains.” (Catherine Bertini).

The inevitable rise in demand for food and the need for innovation on how food can be safely sold and distributed rules for acceptable sales and distribution to avoid wasting food also was a key issue. Catherine Bertini advocated against knee-jerk political decisions, such as closing borders, that negatively impact consumers, farmers, and processors and strongly supported finding creative approaches for delivery of food and food aid including sufficient production of special food for children from birth to two years of age to avoid the potential creation of a generation of stunted children during a food shortage.

“Continuous tracking of operations within the value chain will be necessary. A disruption of activities at any single point in the value chain will have knock-on implications for others. Furthermore, problems with cross-cutting services, such as transportation of employees and goods, could impact at multiple nodes simultaneously. In this regard, the importance of logistical services within the chain, to ensure efficient movement of both products, services and labour, cannot be overemphasised.” (Silnia Badenhurst).

With regard to food access, the focus was on the importance of a number of measures, including promotion of school feeding at home; establishment of food banks; compelling food-producing companies and food retail stores to recycle consumable foodstuffs and make it available to the most vulnerable; establishing humanitarian food reserves; ensuring emergency foodstuffs are mobilised; and scaling up nutritional support and feeding schemes. The informal sector plays an essential part of the ‘business as usual’ food system, as it supplies a variety of essential food and related services to the poor and vulnerable groups, Silnia Badenhurst emphasized.

“This global health crisis is not an ordinary shock to supply and demand or access to food; it is a shock to the world as a whole. It is a human crisis.” (Lara Hanna Wakim)

The specific issue is the access to inputs in time for the agricultural planting season, as delays due to transport and market disruptions may affect yields and income. A declining demand due to a decline in

purchasing power will in turn affect the ability and willingness of farmers and producers to invest and adopt adequate technology and will consequently further shrink food production and availability. Thus the COVID-19 pandemic creates a spike in demand, due to panic buying and hoarding of food by consumers, which is increasing food demand in the short-term, primarily among those who have the means to over-buy food for storage in their homes. There is an urgent need to raise awareness among people to reduce food waste, and to better look after the categories of food they are buying in terms of nutrition facts. Therefore, in the absence of responsive social safety nets and robust income assistance, the working poor will see their ability to access nutritious food decline in many situations, pointed out Lara Hanna-Wakim.

John McDermott requested panelists to provide advice as to what IUFoST might do in the COVID-19 response and recovery phases. Advice included:

1. Engage with government policy makers and community leaders
2. Compile food lessons from other epidemics (Ebola in West Africa) and the 2007-9 food price crisis
3. Look beyond the urgent response to continue to build food science and regulatory capacity
4. Engage IUFoST Adhering Bodies in workshops on food science and food safety
5. Monitoring and rapid learning of changing food supply chains
6. IUFoST to support resources for food scientists and for food supply practitioners.

Relative to the challenge of COVID-19 in Africa, Ruth Oniang'o closed by saying:

“We have a chance to actually begin to find local solutions, to begin to see how further engagements with other partners can emerge in a way that is completely different.”

A full summary of this IUFoST Scientific Roundtable, and other reference materials may be obtained through secretariat@iufost.org.

This information is available to all with notification to the IUFoST Secretariat secretariat@iufost.org and recognition of source. Thank you.

Appendix 1 – Programme



IUFoST Scientific Roundtable

COVID-19 Crisis: Implications for Food Systems in Developing Economies (Focus on Africa)

Friday, April 17 08.00 to 09.30 Eastern Time Toronto/New York)

PROGRAMME

Co-Chairs Ruth Oniang'o and John McDermott

IUFoST Overview by Fereidoon Shahidi, IUFoST Scientific Council Chair

Introduction by Co-Chair John McDermott, Director, CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). ***COVID-19 Crisis – Impacts on food systems and government program and policy responses in Lower to Middle Income Countries (LMICs)***

Introduction by Co-Chair Ruth Oniang’o, Chair of the Board of Sasakawa Africa Association, SAA and Founder of Rural Outreach Africa: ***Implications of COVID-19 on Food Systems in Africa***

1. **Catherine Bertini**, World Food Prize Laureate, Former UN Under Secretary and Executive Director of the World Food Programme
Focus: Crisis Management - Interruptions in the Food Chain
2. **Cheikh Ndiaye**, Executive Director, African Food and Agriculture Skills Development Centre, Senegal.
Focus: COVID - 19 and African Governments policies ' implications on the Food System of Vulnerable Populations
3. **Samuel Godefroy**, Senior Food Regulatory Expert, United Nations Industrial Development Organization, Arab Food Safety Initiative for Trade Facilitation (SAFE)
Focus: Crucial Role of Food Regulators to Support the Food Production Sector at Times of Emergencies
4. **Lara Hanna Wakim**, Vice Director of Higher Center for Research, Holy Spirit University of Kaslik, Lebanon
Focus: Lebanese Economic and COVID-19 crises: Impact on Food supply, demand and access
5. **Theo Knight-Jones**, Senior Scientist Epidemiology, Animal and Human Health, International Livestock Research Institute (ILRI)
Focus: Urban informal markets in Africa– Challenges of Crisis
6. **Silnia Badenhorst**, Group Food Safety Manager (SME) Massmart/Walmart
Focus: Industry challenges and solutions for Food Safety and Security

Followed by Discussion led by Roundtable Co-chairs John McDermott and Ruth Oniang’o.

Appendix 2 – Biographies

IUFoST Scientific Roundtable (SRD4)

COVID-19 Crisis: Implications for Food Systems in Developing Economies
(Focus on Africa)

Friday, April 17 08.00 to 09.30 Eastern Time Toronto/New York)

Brief IUFoST Introduction from Dr. Fereidoon Shahidi, IUFoST Scientific Council Chair.

Biographies In order of speaking:



John McDermott Co-Chair

John McDermott is Director, CGIAR Research Program on Agriculture for Nutrition and Health (A4NH).

John McDermott joined IFPRI in 2011 to lead the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), led by IFPRI. Previously he was Deputy Director General and Director of Research at the International Livestock Research Institute (ILRI) in Nairobi from 2003-2011. John has lived and worked in Africa for 25 years.

The A4NH program that John leads has large research programs on food systems for healthier diets, food safety, nutrition-sensitive programs and policies, biofortification and One Health. Further information and details can be found at <http://a4nh.cgiar.org/>.

As a researcher, John's research career has focused on public health, animal health and livestock research in developing countries, primarily Africa. He has led projects on zoonotic and emerging diseases in Asia and Africa. John has a strong background in quantitative methods (modeling, study design, statistics). He has earned a PhD in quantitative epidemiology from the University of Guelph, a Masters Degree in Preventive Veterinary Medicine from the University of California – Davis, and a Doctor of Veterinary Medicine from the University of Guelph. During his research career, John authored or co-authored 200 peer-reviewed publications, book chapters and conference papers and has advised over 30 post-graduate students, including 20 PhD graduates. He was a visiting Lecturer at the University of Nairobi and a Professor at the University of Guelph. He has also served as an advisor to FAO, WHO, OIE, and other international agencies, served as a non-executive Director of the Global Alliance for Livestock Vaccines and Medicine (GALVmed).



Ruth Oniang'o Co-Chair

Hon. Prof Ruth Oniang'o is the Chair of the Board of Sasakawa Africa Association, SAA, and succeeded Dr Norman Borlaug in this position. She is founder and Editor-in-Chief of AJFAND and is founder of Rural Outreach Africa and a strong advocate against hunger and malnutrition.

Ruth won the African Food Prize in 2017.

Hon. Professor Ruth Oniang'o, a Kenyan is a holder of a PhD in Food Science and Nutrition. Based in Kenya. She received her first and second degrees at Washington State University, Pullman USA, a scholarship program supported by the USA and Kenya governments, and her PhD at the University of Nairobi. As a member of Kenya's Parliament (2003-2007), she worked to alleviate poverty and hunger, with special focus on science and technology, agricultural research and productivity, food security and nutrition, and gender. The African Journal of Food, Agriculture, Nutrition and Development (AJFAND) promotes African research, scholarly exchanges and builds the capacities of upcoming scientists around issues of food systems, nutrition and development. The Rural Outreach Africa, works to uplift the lives of resource poor smallholder farmers, especially women; there is also special effort to train the youth to find and create jobs agro-enterprises. She has served in advisory capacity for various UN agencies, the World Bank. She was a board member of Nestle, a global food, beverage and wellness company, she has served on IRRI, CIAT, IFDC, ACIAR and Micronutrient initiative boards, and as Vice-Chair of GFAR (Global Forum for Agricultural Research). She now serves on CABI and some local Boards as she helps the Kenya Government to define its policies on agri-nutrition and food safety. Ruth is also a winner of two national medals in Kenya, 2014 IFAMA (International Food and Agribusiness Management Association) award for a lifetime of distinguished service and 2014 Fortune magazine's '30 Women Achievers' globally in Food and Drink. Ruth was President of the International Academy of Food Science and Technology (IAFoST) 2016-2018.



Catherine Bertini

Catherine Bertini is a distinguished fellow of global food and agriculture at the Chicago Council on Global Affairs. For ten years, she was executive director of the United Nations World Food Program, the world's largest international humanitarian agency. She became the 2003 World Food Prize laureate for her ground-breaking leadership there. Bertini was UN Under Secretary General for Management and the UN Security Coordinator. She led the US domestic nutrition programs as USDA assistant secretary for food and consumer services and the nation's assistance program for single mothers at HHS. She was on the

Board of International Food and Agricultural Development (BIFAD). Bertini was senior fellow on the first agriculture team at the Bill and Melinda Gates Foundation and served as a fellow at the Rockefeller Foundation. She is chair of the board of the Global Alliance for Improved Nutrition (GAIN).



Cheikh Ndiaye

As a former First UNU Fellow, holds a PhD in Food Science and Technology, UNU advanced Certificate for Research and Development and courses in Management, Marketing and technical requirements in Food Science, Food quality, Packaging and Processing for Export. Fluent in English, French and several other languages. Dr. Ndiaye served at the Institute of Food Technology and Taught Food Sanitation at University Institute in Dakar, Senegal and Packaging at the Development Cooperation Program of the Helsinki School of Economics.

In collaboration with UNU, Association of African Universities and Commission of European Communities assisted in the preparation and implementation of a Regional Food and Nutrition Project for Africa.

As Former FAO Senior Regional Food Policy and Nutrition Officer preparation and holding of regional and sub-regional meetings, training courses, workshops and seminars in various parts of Africa and the World in Food and Nutrition.

The most important ones were: The International Conference on Nutrition, The 23rd ACC /SCN, The World Food Summit, The global Forum of Food Safety regulators and the Regional Conference for Food Safety for Africa.

After retirement, registered as Executive Director two NGOs: The Food information Council for Africa and The Center for Skills Development In Food and Agriculture in Africa. Both based in Dakar, Senegal.

Main publications included besides the above studies and reports: The State of Nutrition and the Challenge for the 21st Century, The National Food Safety Systems , The 8th Chapter of the book on Global Governance of Food and Agriculture Industries and A paper on Emerging Issues In Food Safety , Policy and Régulation of Biotechnology in Food Production in Africa . FAO Regional Conférence for Africa.

A member of many consultancy groups and many scientific societies at national and International levels has been one of the corresponding editor of the West African Journal of Foods and Nutrition.



Samuel Godefroy

Samuel Godefroy is the former Director General of Health Canada's Food Directorate, Canada's Food Standard Setting body and a former Vice Chair of the FAO/WHO Codex Alimentarius Commission. Samuel is currently Full Professor of Food Risk Analysis and Regulatory Policies in the Department of Food Science, Faculty of Agriculture and Food Sciences, Université Laval, Québec, QC, Canada and is leading the development of a Food Risk Analysis and Regulatory Excellence Platform (PARERA), hosted by the Institute of Nutrition and Functional Foods (INAF) of Université Laval.

Prof. Godefroy currently serves as a senior food science and regulatory expert on a number of advisory bodies and committees domestically and internationally, including as Chair of International Risk

Assessment Committee (IRAAC) of the Saudi Food and Drug Authority and member of the International Advisory Committee of the China Centre for Food Safety Risk Assessment (CFSA).

Prof. Godefroy also serves as a strategic and operational advisor to international food safety capacity building initiatives focused on food regulatory enhancement, implemented by the United Nations Industrial Development Organization (UNIDO) and the Food and Agriculture Organization of the United Nations (FAO).

Dr. Godefroy assumed senior food regulatory positions at the executive level with Health Canada for over 10 years.



Lara Hanna-Wakim

Lara Hanna-Wakim is the Vice-Director for the Higher Center for Research at the Holy Spirit University of Kaslik (USEK), Lebanon since September 2019. She served as Dean of the Faculty of Agricultural and Food Sciences at the Holy Spirit University of Kaslik from 2013-2019.

She is the first scientist to represent the MENA Region as a regular member at the Governing Council of the International Union of Food Science and Technology (IUFoST) since 2014. She is actually serving as Senior International Officer (SIO) at the Academy of Leaders in

International Higher Education (AIEA), Duke University, North Carolina, USA.

She is the National Coordinator in Lebanon for the “Faith for Earth Initiative” at the UNEP and has served as Focal Point for Lebanon of the Arab States Green University Network (ASGUN) at UNEP, and the National Food Safety Expert at UNIDO.

She’s nominated by the Lebanese Minister of Education and Higher Education as National Contact Point (NCP) for “Climate action, resource efficiency and raw materials” for the EU Commission within Horizon 2020 Framework Programs.

She has been honored, at the Lebanese Parliament, as Women Leader in Lebanese Universities and Research Pioneers, by the National Initiative for the Centennial of Greater Lebanon. She has been honored as well by the Lebanese Minister of Agriculture to acknowledge her major accomplishments and outstanding leadership and performance, and for obtaining the American accreditation ABET for the Diploma of Agricultural Engineering at the Faculty, the first in the MENA region.

Lara Hanna-Wakim holds a PhD in Food Process Engineering from AgroParis Tech (Paris, France), an MS in Quality Assurance from INAP-G (Paris, France), an Agricultural Engineering Diploma from USEK (Lebanon), an MS in Teaching and Learning in Higher Education from Norwich University (USA) and an MA/PG Diploma in Learning and Teaching in Higher Education from University of Chester (UK).



Theodore Knight-Jones

Theo Knight-Jones is Senior Scientist Epidemiology, Animal and Human Health, International Livestock Research Institute.

Having started my career as a UK mixed and farm animal vet I then specialised in veterinary epidemiology and public health. Working in Europe, Africa and Central Asia I have worked as a researcher and consultant performing practical research for disease control. I have extensive knowledge of government veterinary services having been the Chief Veterinary Officer for Jersey, British Channel Islands. I currently work as a Senior Scientist for ILRI, based in Tanzania. My particular strengths are

epidemiology, animal health economics and veterinary policy, with a lot of experience in food safety and foot-and-mouth disease.

Recent project work: to improve food safety in urban informal markets in Burkina Faso and Ethiopia. We hypothesize that both 'pull' and 'push' approaches need to be co-implemented in urban food markets in Africa to lead to sustainably improved food safety. In addition, an enabling environment is a pre-requisite to improvements in food safety.

The project aims to improve food safety in urban informal markets in Burkina Faso and Ethiopia. While previous efforts have focused on training producers or regulators with little attention to incentives for behaviour change, the project investigates if consumer demand can provide the same incentive ('pull') for food safety in low- and middle-income countries as it has in high-income countries. It also builds capacity of market-level value chain actors to respond to demand (for example, by improving practices or adapting technologies) and of regulators to provide an enabling environment ('push'). We hypothesize that both 'pull' and 'push' approaches need to be co-implemented in urban food markets in Africa to lead to sustainably improved food safety. In addition, an enabling environment is a pre-requisite to improvements in food safety.



Silnia Badenhorst, Group Food Safety Manager (SME) Massmart-Walmart

Silnia Badenhorst is a Food Safety professional with 19 years' experience in all aspects of food safety and food safety regulation in the manufacturing and retail industries. Her expertise includes food safety regulatory requirements and the developing, implementation and managing of food safety compliance programs across Africa. She is currently heading up the Food Safety team for Massmart (Walmart) across all their retail outlets in Africa which includes all suppliers and distribution centres which supplies into these outlets.

Silnia holds a B. Tech Degree from the Tshwane University of Technology - Cum Laude for which she received an academic achievement award from the South African Association for food science and technology for post graduate student as well as a Councillors Medal. She also completed numerous food safety and food quality management courses throughout her career. Silnia recently completed the Compliance Management Certificate through the University of Cape Town.

Silnia achieved various successes in her career including successfully protecting the Massmart-Walmart business and its customers during the listeriosis outbreak in South Africa which were recorded as the largest Food Borne outbreak in history.

She was also instrumental in the introduction of GFSI in South Africa as a member of a small Technical committee which developed and deployed the standard throughout Africa. She also presented this achievement at the GFSI Conference in Barcelona as well as the GFSI focus day in South Africa.

Silnia is currently serving on numerous Industry and Technical committees.

The International Union of Food Science and Technology (IUFoST) stimulates the ongoing exchange of knowledge in those scientific disciplines and technologies relating to the expansion, improvement, distribution and conservation of the world's food supply. The international food science and technology scientific community works within the Union to exchange ideas and develop strategies to meet the vision and mission of IUFoST.

The Union works with other international organizations such as FAO, WHO and UNIDO to fulfill its mission. It is the elected global representative of Food Science and Technology in the International Science Council (ISC). IUFoST's vision is to **Strengthen Global Food Science and Technology for Humanity**.

IUFoST's mission is to: (a) Promote international co-operation and information exchange. (b) Provide education and training to food scientists and technologists around the world. (c) promote professionalism and profession organization among food scientists and technologists.

For more information visit www.iufost.org, Contact: Secretariat@iufost.org.