



The Pontifical Academy of Sciences

Technical Workshop on

FOOD SAFETY AND HEALTHY DIETS



12-13 September 2018 | Casina Pio IV | Vatican City



“The future of all nations is interconnected, more than ever before; they are like the members of one family who depend upon each other. However, we live in an era in which relations between nations are all too often damaged by mutual suspicion, which at times turns into forms of military and economic aggression, undermining friendship between brothers and rejecting or marginalizing those who are already excluded. Those who lack their daily bread or decent employment are well aware of this. This is a picture of today’s world, in which it is necessary to recognize the limits of approaches based on the sovereignty of each State, understood as absolute, and on national interests, frequently conditioned by small power groups ... States may be inspired by the conviction that the right to nutrition can be guaranteed only if we care about the actual subject, that is, the person who suffers the effects of hunger and malnutrition: the true subject!

...Nowadays there is much talk of rights, frequently neglecting duties; perhaps we have paid too little heed to those who are hungry. It is also painful to see that the fight against hunger and malnutrition is hindered by “market priorities”, the “primacy of profit”, which have reduced foodstuffs to a commodity like any other, subject to speculation, also of a financial nature. And while we speak of new rights, the hungry are waiting, at the street corner, asking for the right to citizenship, asking for due consideration of their status, to receive a healthy, basic diet. They ask for dignity, not for alms.

...Interest in the production, availability and accessibility of foodstuffs, in climate change and in agricultural trade should certainly inspire rules and technical measures, but the first concern must be the individual person, who lacks daily nourishment, who has given up thinking about life, family and social relationships, and instead fights only for survival.”

Address of His Holiness Pope Francis, 2nd International Conference on Nutrition, Thursday, 20 November 2014.

“Besides, we know that approximately a third of all food produced is discarded, and whenever food is thrown out it is as if it were stolen from the table of the poor”.

***Laudato Si’*, para 50, p. 36.**

Concept Note

Addressing malnutrition in all its forms

Assuring all people have access to safe, affordable and nutritious foods is essential for sustaining food security and human dignity.

Malnutrition takes many forms: hunger, stunting, micronutrient deficiencies, overweight and obesity. Under the Sustainable Development Goals, improved nutrition received new impetus as a core development driver – but progress in tackling malnutrition remains mixed. There have been successes, for example, on reduced stunting and improved child survival, although both levels remain unacceptably high – but there are negative trends on other indicators. The food system is certainly dynamic, changing consumption habits often at break-neck speed, and is succeeding in providing food security to a growing number of the world's population – but at least one third of humanity is being left far behind –

- ▶ In 2017 the number of undernourished people in the world increased to over 815 million, up from 777 million in 2015
- ▶ 155 million children, or 23%, are stunted; 52 million children, or 8%, are wasted; and 41 million, or 6%, are overweight.
- ▶ 4.5 billion people a year are exposed to mycotoxins, including aflatoxins, which contaminate 25% of the world's food supply; and 1 in 10 people suffer from eating unsafe foods
- ▶ approximately 1.3 billion tons, or one-third of the food produced in the world for human consumption annually is lost with substantial environmental impact – food production generates a third of greenhouse emissions.
- ▶ Today micronutrient deficiencies impact over 2 billion men, women and children – often with irreversible health consequences.
- ▶ Worldwide obesity is rising, having tripled between 1975 and 2016. In 2016 about 13% of the world's adult population (11% of men and 15% of women) were obese.

Poor diet is a common cause contributing to these different effects, and today is the number one risk factor for disease globally, linked to 1 in 5 annual deaths according to the recent Burden of Disease Study.

Pontifical Academy of Sciences (PAS) Seeks Sustainable Solutions

The *Summit on Safe, Nutritious Foods: to Enhance and Sustain Human Dignity* will explore practical actions to not only feed but also to nourish the world, and empha-

size the benefits to global sustainability of human-centered food systems. It will seek to inspire participants to advocate and stimulate transformative changes to improve health and nutrition through safer, better quality foods.

No single entity or stakeholder group can address these challenges; multi-disciplinary research, multi-sector collaborations and partnerships are essential implementing mechanisms; and focused, sustained urgency must be the underlying characteristic for programs and initiatives.

Key Objectives and Messages

The key objective of the Summit is to explore how to tackle all forms of malnutrition by increasing the availability and affordability of safe and nutritious foods for all on a sustainable basis.

It will present compelling, evidence-based presentations and interactions so that participating scientific experts and knowledgeable policy experts will: (1) address the political and moral challenges of ensuring access to safe, nutritious foods on a sustainable basis at affordable prices; (2) Highlight the urgent need for influential secular and religious decision makers to eliminate unsafe foods and end all forms of hunger and malnutrition; (3) Support solutions with tools, capabilities and scientific expertise to mitigate the negative consequences of the linkages among these safety and nutrition challenges; (4) Enable an understanding of the essential need to facilitate uncommon collaborations and partnerships with multi-disciplinary expertise and multi-sector stakeholders; (5) Provide insights and perspectives to contribute to the 2019 FAO-WHO International Food Safety Conference (IFSC); and (6) Provide a robust and rich body of evidence-based information for future actions, activities and proclamations by the Vatican and Pontifical Academy of Sciences.

Background Note

A draft background note expanding on the topics to be covered by the Summit is attached below.

Background Note

Envisioned Outcome and Elements of Summit Communiqué

Unsafe foods and malnutrition in all its forms presents a pervasive global problem that hampers the health, well-being and development of billions of people. Fundamentally, it is one of the largest problems of violated ethics, and of dignity and rights of people in our times.

- Multiple safety challenges are prevalent throughout supply chains in food systems from production, harvesting, transportation, processing, storage, and manufacturing and at the consumer level.
- Food contamination is clearly linked to post harvest food loss and waste and is a significant, preclusive barrier to eliminating food insecurity.
- Nutritional deficiencies and several forms of malnutrition are widely prevalent, especially in developing countries and significantly pronounced in conflict areas and fragile states, while overweight and obesity are now present and rising in both developed and developing countries.
- Food that is lost or wasted contributes to food scarcity, malnutrition and environmental degradation, including climate change.

The Summit Communiqué shall reflect the compelling narrative that links these interrelated food and nutrition security challenges that must be immediately and urgently addressed in holistic ways. The good news is that solution pathways exist; new ones can be developed through research and innovation; and multi-disciplinary and multi-sector partnerships must be strengthened.

Achievement of these objectives will derive from participants' papers and interventions, and a consensus is sought around these desired key messages:

- (1) Time is running out to meet the many goals and targets that have been established;
- (2) Scientific research and data supports the hypothesis that unsafe foods and malnutrition are individual elements of global food insecurity, but they are also inter-related problems that create synergistic negative human, health, social, economic and environmental impacts;
- (3) There is an urgent need to advocate for greater awareness by decision makers that food safety and nutrition problems must be addressed at a higher priority level than currently;
- (4) Solutions exist, but additional problem-solving approaches, tools, technologies and expertise must be developed through a stream of sustained research and development; and
- (5) A cadre of champions and collaborators must unite to solve these multi-faceted problems through multi-disciplinary research, multi sector stakeholder partnerships, including the interfaith communities, since no single entity can.

Food Insecurity

The FAO's most recent State of Food Insecurity (SOFI) reported that the number of undernourished people in the world increased to over 815 million, up from 777 million in 2015. Most of the world's hungry people live

in developing countries and the majority – 489 million of the 815 million – of chronically food-insecure and malnourished live in countries affected by conflicts. This includes an estimated 122 million of the 155 million stunted children. Today micronutrient deficiencies impact over 2 billion men, women and children often with irreversible consequences. Meanwhile, the worldwide prevalence of obesity is rising, having nearly tripled between 1975 and 2016. In 2016 about 13% of the world's adult population (11% of men and 15% of women) were obese in 2016.

Child Malnutrition

The 2017 UNICEF/WHO/World Bank joint-harmonized malnutrition estimates for children under 5 support the SOFI report: (1) 155 million children, or 23%, are stunted; (2) 52 million children, or 8%, are wasted; and (3) 41 million, or 6%, are overweight. Poor diets are the number one risk factor for disease globally and linked to 1 in 5 annual deaths, according to the Global Burden of Disease Study. The consequences of these interconnected problems lead to multiple health and disease problems and impede poverty reduction, economic development and trade opportunities. These different aspects of malnutrition highlight that our food system needs to be actively managed to be more sustainable better able to deliver the safe, nutritious affordable foods required for healthy diets.

Contaminated Food

Food safety influences every person and every community. Unsafe foods have debilitating human, economic and social consequences as illustrated by key WHO, FAO and CDC facts:

- (1) 4.5 billion people a year are exposed to mycotoxins, including aflatoxins, which contaminate 25% of the world's food supply;
- (2) 1 in 10 people suffer from eating unsafe foods; 600 million people fall ill; 420,000 die; and 33 million "healthy life years" are lost;
- (3) 40% of foodborne disease incidents occur among children under 5, mostly in Africa and SE Asia, with 125,000 deaths and survivors suffer from chronic infections and stunting; while Sub-Sahara Africa has the highest rates of aflatoxin-related liver cancers, especially in women;
- (4) Small scale farmers cannot break the poverty cycle; incomes remain depressed from unmarketable, rejected, contaminated commodities; and
- (5) US\$600 million to US\$1 billion in lost earnings are aflatoxin-related.

Unsafe foods are a significant silent killer, as are micronutrient deficiencies, especially among women, children and infants, and should receive more policy and program attention and resources from the United Nations, international agencies and other development stakeholders.

Malnutrition and unsafe foods have significant and pervasive negative human consequences that sap the dignity and life from billions of people as they:

- (1) Thwart human and economic development;
- (2) Deplete social and environmental resources;
- (3) Burden health care systems with numerous health-related problems;
- (4) Impede national development; and
- (5) Exacerbate the inhuman conditions of despair in conflict areas, fragile states and in the words of His Holiness Pope Francis, “the phenomenon of forced migration”.

Food Waste and Losses

Any discussion about the linkages among food security, food safety and nutrition must incorporate an understanding of the roles that post-harvest loss and food waste play in the challenging dynamics of enhancing access to safe, nutritious foods. Post-harvest food loss and food waste describe closely related but different streams that

adversely impact global food security by reducing overall availability of food when viewed through the lens of food safety and nutrition. Unsafe foods and malnutrition contribute to food loss and waste, stress the environment with additional production input needs, and reduce local and national growth and economic opportunities.

While more solid information of scale and causes of food waste and losses is needed, several studies and reports suggest that approximately 1.3 billion tons, or at least one-third of the food produced in the world for human consumption annually, is not consumed but rather dissipates—prior to or after harvest or is wasted as agricultural commodities move towards consumers. The bottom line cost for food loss and waste may be almost a trillion dollars plus the squandering of resources to produce these unused products, which also results in substantial environmental impact since food production and related land use is responsible for 1/3 of greenhouse gas emissions. For this reason, it is crucial to increase efforts in improving agricultural infrastructure, capacity building and investing in innovations in packaging and processing to reduce food waste

Behind the numbers are the faces of billions of people around the world who deserve to have their food and nutrition and health and well-being improved to not only survive, but thrive with human dignity as productive members of their communities.

Programme

Key Objectives and Messages

The key objective of the workshop is to share the latest scientific evidence and innovations on food safety and healthy diets and to develop recommendations – with a focus on food systems in low- and middle-income countries – leading up to the 2019 FAO-WHO International Food Safety Conference.

Background

- Multiple **food safety** challenges are prevalent throughout supply chains in food systems from production, harvesting, transportation, processing, storage, and manufacturing and at the consumer level.
- Post-harvest **food loss and waste** are linked to significant food insecurity, nutrition and sustainability issues.
- **Safe, nutritious foods** need to be produced and made more available and affordable. There is growing consensus that food systems, in their current form, are failing to deliver.
- Poor diet is the number one **risk factor** in the global burden of disease. This includes **nutritional deficiencies** as well as **overweight** and **obesity** in both developed and developing countries.

The workshop will discuss the evidence on related key themes: the most common food safety challenges prevalent throughout supply chains; post-harvest food loss and waste; and the double burden. These issues will be addressed using an interdisciplinary lens, combining food and health policy perspectives as well as presenting the latest technology, innovations and state-of-the-art solutions.

September 12, 2018	
9:00	<p><i>Opening</i> Marcelo Sánchez Sorondo <i>Bishop Chancellor of Pontifical Academy of Sciences</i> Joachim von Braun <i>President of Pontifical Academy of Sciences</i></p>
9:30	<p><i>Chair: Joachim von Braun</i> <i>PAS</i> Introduction Panel: Safe and Nutritious Foods: Where we are? Where we are headed? And where we need to be to meet the Sustainable Development Goals (SDGs)</p> <p>Opening panel will be used to set the stage and provide some context and evidence on the main issues affecting the provision of safe, affordable and nutritious foods for all people, in a sustainable way. The panel will outline the obstacles, as well as the progress and opportunities to tackle malnutrition in all its forms as a cornerstone for the SDG efforts. It will also remind the audience of the need for global, multi-stakeholder commitment and the importance of prioritizing evidence-based solutions and innovations.</p> <ul style="list-style-type: none"> ➤ Dr. Lawrence Haddad <i>Executive Director, Global Alliance for Improved Nutrition (GAIN)</i> ➤ Dr. Amare Ayalew <i>Director of Partnership for Aflatoxin Control, Africa</i> ➤ Dr. Jessica Fanzo <i>Director of the Global Food Ethics and Policy Program, Johns Hopkins University</i> ➤ Dr. Alan Dangour <i>Head of the Nutrition Group at the London School of Hygiene and Tropical Medicine (LSHTM)</i>
11:00	Coffee Break
11:30	<p><i>Chair: (tbd)</i> Panel 1: The consequences of unsafe food: an impediment for human development</p> <p>This session will present the debilitating human, economic and social consequences of unsafe foods and solutions to reduce contamination and food borne disease. The latest research and case studies with best practices from different contexts will be examined to ignite a conversation on the approaches that have the most potential to tackle the issue. The session will serve to set the scene on foodborne disease in LMICs, provide an analysis of available data, gaps and what that means for health & nutrition and potential areas of focus over the coming years.</p> <ul style="list-style-type: none"> ➤ Dr. J. David Miller <i>Researcher, Department of Chemistry, Carleton University (tbc)</i> ➤ Dr. Rose Omari <i>Researcher, CSIR-STEPRI, Ghana</i> ➤ Dr. Delia Grace <i>Program Leader, International Livestock Research Institute</i> ➤ Renata Clarke <i>Director Food Safety, FAO (tbc)</i> ➤ Kazuaki Miyagishima <i>Director Office of Food Safety and Zoonoses, WHO (tbc)</i> ➤ Dr. Yolanda Sanz Herranz <i>My New Gut project, Institute of Agrochemistry and Food Technology, Spanish National Research Council</i>

13:00	Lunch at the Casina Pio IV
14:30	<p>Chair: (tbd)</p> <p>Panel 2: Food safety and food waste: the connections and solutions (Four research-oriented presentations on key issues of food loss and waste)</p> <p>Scientific leaders and innovators will examine the global challenges that food loss and waste present to achieving food security in Low and Middle-Income Countries (LMICs) and offer evidence-based solutions on scientific, technical, management and policy tools to mitigate the negative human and social impacts and enhance economic opportunities for small-scale food producers</p> <ul style="list-style-type: none"> ➤ Dr. Pawan Agarwal CEO, Food Safety and Standards Authority of India ➤ Dr. Prasanta Kalita Associate Dean for Academic Programs, College of ACES (tbc) ➤ Dr. Vanderlei Salvador Bagnato University of Sao Paulo, Brazil. Member of Pontifical Academy of Sciences ➤ Dr. Bertha Mjawa Value Addition Specialist for MIVARF, Prime Minister's Office, Tanzania ➤ Lu Yunbo Professor of Food Science and Nutrition College, China Ag University (tbc)
16:00	Coffee Break
16:30	<p>Chair: (tbd)</p> <p>Panel 3: The double burden of malnutrition: the new global epidemic that can be prevented</p> <p>A panel of research presentations on healthy diet, the double burden and proven interventions. Scientific leaders and policy experts will present the growing challenge of the double burden of malnutrition, over-nutrition and related NCDs in LMICs. They will also share identified priority actions and policies to reverse the trend and drive greater inclusivity, nutrition and health.</p> <ul style="list-style-type: none"> ➤ Dr. Juan Rivera Director of the Mexican Institute of Public Health (INSP) ➤ Dr. Emorn Udomkesmalee Co-Chair, Global Nutrition Report's International Expert Group ➤ Dr. Corinna Hawkes Director of the Centre for Food Policy at City and Co-Chair of the Global Nutrition Report (tbc) ➤ Dr. Howdy Bouis CEO, HarvestPlus
16:00	Dinner at the Casina Pio IV

September 13, 2018

9:00	<p>Chair: Vinita Bali GAIN</p> <p>Panel 4: The corporate sector as an agent for change in nutrition: Moving beyond CSR and increasing collaboration with civil society (A panel of corporate and civil society leaders)</p> <p>Corporate and civil society leaders will discuss how the business sector views the need, opportunities and their roles to connect Safe, Nutritious Foods to Global Food Security and ways to collaborate and join efforts with civil society in order to address the challenges:</p> <ul style="list-style-type: none"> ➤ Jonathan Fischer Vice President Food Safety, Quality & Regulatory Affairs for Cargill (tbc) ➤ Dr. Klaus Kraemer Managing Director, DSM Sight and Life Foundation ➤ Howard-Yana Shapiro Chief Agricultural Officer, Mars, Incorporated (tbc) ➤ Briano Olivares Head of Strategic ReD, Ferrero (tbc) ➤ Julian Madeley Managing Director, International Egg Foundation
10:15	Coffee Break
10:45	<p>Chair: Lawrence Haddad GAIN</p> <p>Panel 5: The role of International Organizations: emerging themes, recommendations for research and action to continue the collaboration at the FAO – WHO Conference</p> <ul style="list-style-type: none"> ➤ Jose Graziano da Silva Director General of FAO ➤ Tedros Adhanom Ghebreyesus Director General of WHO (tbc) ➤ Henrietta Fore Executive Director, UNICEF (tbc)

12:30	Lunch at the Casina Pio IV and Networking Opportunities
14:00	<p>Chair: H.E. Msgr. Marcelo Sánchez Sorondo <i>PAS Chancellor</i></p> <p>Interfaith session: Interfaith leaders: advocates of collaboration to achieve human dignity and meet the SDGs (tbc)</p> <p>Interfaith representatives will dialogue on how pathways of collaboration can be enhanced, developed and implemented to support, advocate and partner for ending malnutrition.</p> <ul style="list-style-type: none"> • Rabbi Awraham Soetendorp <i>Netherlands</i> • Archbishop Bernard Ntahoturi <i>Archbishop of Canterbury's personal representative to the Holy See and Director of the Anglican Centre in Rome</i> • Reverend David Beckman <i>Lutheran Minister and President Bread for the World</i> • Prof. Dr. Muhammad Hussein Mahrasawi <i>President of Al-Azhar University</i>
15:30	Review of Workshop Statement, and way forward and closing

List of Participants

ADHANOM Tedros	FANZO Jessica	MILLER David J.
AGARWAL Pawan	FORE Henrietta	MIYAGISHIMA Kazauki
ARBER Werner	GALLAGHER H.E. Msgr. Paul Richard	NTAHOTURI Archb. Bernard
AYALEW Amare	GARRET Greg	OLIVARES Briano
BAGNATO Vanderlei S.	GRACE Delia	OMARI Rose
BALI Vinita	HADDAD Lawrence	POTRYKUS Ingo
BECKMAN David	HAWKES Corinna	RIVERA Juan
BOUIS Howdy	KALITA Prasanta	SÁNCHEZ SORONDO H.E. Msgr. Marcelo
CLARKE Renata	KRAEMER Klaus	SOETENDORP Rabbi Awaham
DANGOUR Alan	MADELEY Julian	UDOMKESMALEE Emorn
DA SILVA Graziano	MAHRASAWI Muhammad Hussein	VON BRAUN Joachim
DUNLAY Douglas	MJAWA Bertha	WALTNER-TOWES David

Memorandum



MEDIA ENQUIRIES

 All journalists and media organizations wishing to apply for accreditation may request TEMPORARY accreditation through the online form of the Media Operations Section of the Holy See Press Office website: <http://press.vatican.va/content/salastampa/en/accrediti/pubblico/> **accredito**. Journalists and media organizations regularly accredited at the Holy See Press Office may send their request through the usual channels. All requests must be sent no less than 48 hours before the event.

 I giornalisti e gli operatori media che intendono partecipare devono inviare richiesta di accreditamento TEMPORANEO attraverso il modulo disponibile online nella sezione accrediti del sito della Sala Stampa della Santa Sede: press.vatican.va/accredimenti. Coloro che già dispongono di accredito ordinario valido devono inviare una richiesta di partecipazione secondo le consuete modalità. Tutte le richieste dovranno pervenire entro 48 ore dall'evento.

 Todos los periodistas y gráficos que deseen participar deben enviar una solicitud de acreditación TEMPORAL a través del módulo que está disponible online en la sección de acreditaciones de la página web de la Oficina de Prensa de la Santa Sede: press.vatican.va/accredimenti. Los que ya dispongan de acreditación normal válida, deben enviar una solicitud de participación según la modalidad habitual. Todas las peticiones deberán hacerse al menos 48 horas antes del evento.

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