



THE PONTIFICAL
ACADEMY OF SCIENCES

WORKSHOP ON

Food and Humanitarian Crises: Science and Policies for Prevention and Mitigation



9-10 MAY 2023
CASINA PIO IV, VATICAN CITY



“...it will not be possible to tackle the many crises affecting humanity if we do not work and walk together, leaving no one behind. This demands, first and foremost, that we see others as our brothers and sisters, as members of the same human family, whose sufferings and needs affect us all, for “if one part suffers, all the others suffer with it” (cf. 1 Cor 12:26)... the goals set are ambitious and may seem unattainable. How can we achieve them? First of all, by not losing sight of the fact that at the heart of any strategy are the people, with concrete stories and faces, who live in a given place; they are not numbers, data or endless statistics. Also, by introducing “the category of love” into the language of international cooperation, to clad international relations with humanity and solidarity, in pursuit of the common good. We are therefore called to refocus our gaze on what is essential, on what has been freely given to us, focusing our work on care for others and for creation (cf. Encyclical Letter Laudato Si’, 216 ff.).

*Message of His Holiness Pope Francis for World Food Day 2022,
from the Vatican, 14 October 2022*

Concept note

A PAS workshop in cooperation with the UN Food and Agriculture Organization (FAO) and other partners, to be held at Casina Pio IV, The Vatican, May 9-10, 2023.

Building on earlier food related PAS conferences: The Pontifical Academy of Sciences (PAS) has repeatedly addressed problems of the world food system in the past from various angles, and issued statements for action and research. Recently this included conferences on Science and Innovations for a Sustainable Food System - Preparing for the UN Food Systems Summit, 21-22 April 2021, and Reduction of Food Loss and Waste, 11-12 November 2019. Moreover, PAS climate-related conferences and biodiversity-related conferences, as well as conferences addressing innovations in bio-sciences also including attention to food systems and food security. The findings from these conferences and the related statements and publications form important backdrops to the concept of this workshop.

Addressing multi-dimensional crises: Food systems are impacted by a complex set of multidimensional problems. The set of problems include,

1. Wars and armed conflicts, which add to risks and uncertainty, disrupt food supply chains, and hinder production (e.g. access to inputs such as fertilizers) and food trade. The workshop will pay strong attention to these related issues.
2. Climate change and water stress, which undermine Agri-food systems' resilience.
3. Covid19 and other disease-related disruptions of food value chains.
4. Economic slowdowns and downturns, accelerated inflation, exchange rate devaluation, market volatility, and income and job losses.

These problems are interconnected and reinforce each other, and result in humanitarian crises and food access problems, 3.1 billion people with no access to healthy diets, and with accumulated debts, curtailing finance of social protection and nutrition programs. Moreover, there is regional diversity in the set of determinants of Agrifood systems' crises, as well as diversity in capacities to respond.

Focus on short-term actions: While above-mentioned earlier PAS conferences offered important insights and solutions mainly for the medium- to long-term, this workshop has a focus mainly on acute food insecurity and nutrition crises and related short-term actions. The UN World Food Systems Summit of 2021 too, mainly had a focus on medium- to long-term actions. Follow up to the Summit will need to have a stronger focus on acute crises. Addressing acute food crises effectively in the short-term also requires more attention because new research findings point to significant human impacts in terms of child underdevelopment (stunting) and mortality due to even short-term price and income

shocks. Effective action for protecting the poor in crises cannot wait. Trade-offs and synergies between short-term and long-term actions and investments also need to be on the policy agenda and will be addressed by this workshop.

Framing the workshop: A concept that may shape the agenda of the workshop is the "Triple Nexus" approach, which postulates integrating the interlinkages between the humanitarian, development and peace sectors (HDP). It specifically refers to attempts in these fields to work together to more effectively meet peoples' needs, mitigate risks and vulnerabilities, and move toward sustainable peace. Sciences, i.e. natural sciences and social sciences, need to explore opportunities for their contributions to short-term lifesaving actions in acute food crises. Noting that there are significant practical experiences with such actions, sciences have not paid much attention to short-term food crises mitigation and prevention.

Theoretically, short-term actions need to be based on foresight, information about risks and consideration of uncertainties, and the need to make decisions while there is a high degree of information deficiency. New data, modelling, and analytical approaches, incl. application of artificial intelligence, may be helpful to explore narrowing risks and uncertainty and effective actions. Political economy aspects, governance, and power need consideration. Short term actions are often taken under conditions of lack of information, missing predictability of emerging crises, and lacking resources for comprehensive responses. There are also hard choices between the short and long term, i.e. to address the challenge of systems' transformation toward sustainability, while also addressing the acute food crisis with urgency. And it must be noted that initially considered short-term issues can result in very long-lasting consequences, such as populations in refugee status in the Levant Region, Afghans in Pakistan, Darfur, etc.

Moral and ethical issues: the focus of the workshop shall be on marginal population groups, incl. smallholder producers, slum dwellers, migrants, women, children, as well as indigenous peoples. Direct and indirect effects on vulnerable people in food crises situations shall be considered prominently, such as exploitation, human trafficking and modern forms of slavery. The short cum / versus long-term choices raise moral and ethical issues that will be considered in the workshop. A focus on science related to helpful short-term actions is justified for at least three reasons: first, because lives at risk in crises must be saved; second, it is likely that complex crises of Agrifood systems triggered by the set of causes mentioned above may occur more frequently in the future; and third, there is a lack of scientific insights into appropriate short-term actions, as indicated by many ad hoc initiatives in food crises, and lack of science involvement.

Focus on Solutions: At the centre of solutions to the challenges are innovations, that is, policy, technological, and organizational innovations. These must be guided by science, be context specific, and some must be international. They include finding ways to promote local agency in acute food crises, because individuals, households/families, and communities are invariably the first and most important respondents in crises. Expanding the choices available to them in real time may be vital – i.e., in addition to getting external support to them. A set of key actions and innovations are considered in this workshop, mapped into relevant contexts and regions. They may include actions such as,

- Emergency aid interventions, incl. forecast-based actions and investments.
- Modelling Agrifood systems shocks and trade-offs of actions / incl. over time.
- Explicit integration of transformative policies, peace building, governance strengthening for food security.
- Digital innovations, bio-science, new foods, processing, and technology innovations for de-risking the Agrifood systems.
- Organizational innovations, to identify best operational / institutional models to alleviate malnutrition and speed up humanitarian work during and post-conflicts.

Operational aspects of the workshop:

- The workshop shall include about 30 participants, high level and international.
- We aim to include researchers and academicians that cover basic (biological, climate, AI, etc.) as well as applied science.
- On the side of FAO, the chief scientist, Ismahane Elouafi and the chief economist, Maximo Torero, agreed to be actively involved, and partner for shaping the workshop.
- Researchers from related UN, public sector, civil society, and from private sector (e.g. insurance) are included, and experienced practitioners, people that lived food crises, plus a small group of senior policy makers.
- Speakers will be asked to give 15-minute presentations at the workshop (with PPT if desired), and share a brief paper of 5 to 10 pages that shall be published (open access) in a proceedings volume of the Pontifical Academy of Sciences
- An outcome statement and a proceedings volume with the presentations is envisioned, as usual by PAS.

Programme

DAY 1 – May 9th, 2023

09.00-09.30	Opening Session Joachim von Braun President, PAS, Chair Peter Turkson Cardinal, Chancellor, PAS
09.30-11.00	SESSION 1 The scale, consequences, and causes of Food and Humanitarian Crises Chair: Joachim von Braun President of PAS, Distinguished Professor for Economic and Technological Change, Bonn University
09.30-09.45	Cindy McCain Executive Director of the World Food Programme (WFP) <i>Introductory keynote on responding to Food and Humanitarian Crises</i>
9.45-10.00	Maximo Torero Chief Economist, FAO <i>Combinations of crisis drivers and their impacts on food security and nutrition and access to healthy diets unaffordable for millions (modelling causes and actions)</i>
10.00-10.15	Jeannie Annan Chief Research and Innovation Officer, International Rescue Committee <i>Designing, testing, and scaling solutions with and for people affected by conflict and disaster</i>
10.15-10.30	Shakuntala H. Thilsted CGIAR Director, Nutrition, Health and Food Security Impact Area Platform <i>Nutrition-sensitive food systems approaches to address food and humanitarian crises</i>
11.00-11.30	Coffee Break
11.30-13.00	SESSION 2 Theory, Ethics, Approaches and Data for actions to predict, prevent and mitigate food crises Chair: Mohamed Hassan PAS Academician and President, Sudanese National Academy of Sciences (SNAS)
11.30-11.45	Catherine Bertini Managing Director, Food Initiative, The Rockefeller Foundation, former Executive Director WFP <i>Political economy aspects, governance, and power</i>
11.45-12.00	Cardinal Peter Turkson Chancellor of The Pontifical Academy of Sciences <i>Moral and ethical issues of actions and non-actions in humanitarian crises</i>
12.00-12.15	Carlo Cafiero UN FAO Statistics Division <i>Data Innovations for identification of Agri-food crises</i>
12.15-12.30	Ousmane Badiane Executive Director of Akademiya2063 <i>Data to predict, prevent and mitigate food crises</i>
12.30-12.45	Samuel Fraiberger Data Scientist, The World Bank <i>Predicting food crisis outbreaks using natural language processing of news streams</i>
13.30-14.30	Lunch at the Casina Pio IV

14.30-16.00	<p>SESSION 3 Research and practical insights from actions addressing food and humanitarian crises - location and people specific, with an attempt to identify generalizable actions and further research needs Chair: Hailemariam Boshe Former Prime Minister of Ethiopia</p> <p>Speakers from countries / regions. Each presentation structured by scale, consequences, causes of Food and Humanitarian Crises and review of proven / promising / innovative actions taken, lessons learned</p>
14.30-14.45	Were Omamo CEO, New Growth International (NGI), Kenya <i>Horn of Africa, and Ethiopia</i>
14.45-15.00	Cheikh Mbow Director General, Centre de Suivi Écologique (CSE), Dakar, Sénégal <i>Sahel</i>
15.00-15.15	Justin Miteng Amos IFDC Office: South Sudan  by Zoom <i>South Sudan - Opportunities and Solutions for agricultural development to address the acute food problems</i>
15.15-15.30	Oyewole S. Oginni Researcher, Armed Conflicts in Sahel, Bonn International Centre for Conflict Studies <i>Northern Nigeria & Cameroon</i>
15.30-15.45	John M. Ulimwengu Senior Research Fellow of International Food Policy Research Institute (IFPRI) <i>DR Congo</i>
15.45-16.00	Discussion
16.00-16.30	Coffee Break
16.30-18.00	<p>SESSION 4 Research and practical insights from actions addressing food and humanitarian crises - location and people specific, with an attempt to identify generalizable actions and further research needs Chair: H.E. Dr. Omar Razzaz Former Prime Minister of Jordan</p> <p>Speakers from countries / regions. Each presentation structured by scale, consequences, causes of Food and Humanitarian Crises and review of proven / promising / innovative actions taken, lessons learned</p>
16.30-16.45	Sikandra Kurdi Research Fellow of the International Food Policy Research Institute (IFPRI) <i>Yemen</i>
16.45-17.00	Fazlullah Akhtar Senior researcher at Centre for Development Research (ZEF) Bonn University <i>Afghanistan</i>
17.00-17.15	Omar Atik Program Head, Shafak Organization, Co-Coordinator Technical Working Group and Strategic Advisory Group member of Food Security and Livelihood cluster in Turkey  by Zoom <i>Impact of humanitarian assistance on the food security of people affected by conflict, drought, and earthquake in Northwest Syria</i>
17.15-17.30	Anas Alkaddour Food Security Manager at Global Communities International (NGO) in Turkey <i>Syria – Impact of prolonged conflict besides other shocks on food security situation in Syria</i>
17.30-17.45	Alrich Nicolas Former Foreign Minister of Haiti and Prof. of Sociology and Economics <i>Haiti - Managing the food crisis. Short term activities and lessons learned</i>
17.45-18.00	Oleg Nivievskiy Professor, Faculty of Graduate Economics Studies at Kyiv School of Economics, and Center for Food and Land Use Research <i>Ukraine – Addressing domestic humanitarian crisis and the effects of the war on global food systems</i>
18.15-19.00	<p>Panel discussion on lessons for action. Introductory statements by: H.E. Hailemariam Boshe Former Prime Minister of Ethiopia & Chair of Haile Mariam & Roman Foundation H.E. Dr. Omar Razzaz Former Prime Minister of Jordan</p>
19.00	Dinner at the Casina Pio IV

DAY 2 – May 10th, 2023

08.00-09.00	Audience with His Holiness Pope Francis
09.00-10.30	SESSION 5 Innovations for Solutions in food crises Chair: Ousmane Badiane Executive Director of Akademiya2063 Institutional, political, technical innovations – considering local and regional contexts, international aspects (also drawing on practical cases)
09.00-09.15	Ismahane Elouafi Chief Scientist of FAO  by Zoom <i>Innovations, Bio-Science, New Foods, Processing, Technology Innovations for de-risking the Agrifood Systems</i>
09.15-09.30	Valerie N. Guarnieri Deputy Executive Director for Programme and Policy Development, World Food Programme, Rome <i>Innovative Actions in humanitarian and food crises at scale</i>
09.30-9.45	Claudia Ringler Deputy Division Director, Environment and Production Technology Division, International Food Policy Research Institute (IFPRI) <i>Women empowerment and food crises prevention and mitigation under climate stress</i>
9.45-10.00	Lukas Kornher and Joachim von Braun Center for Development Research, Bonn University <i>Global food crisis and implications for actions in the context of war and pandemic shocks</i>
10.30-11.00	Coffee Break
11.00-13.00	SESSION 6 Experiences with innovative types of actions addressing humanitarian and food crises (also drawing on practical cases) Chair: Catherine Bertini Managing Director, Food Initiative, The Rockefeller Foundation, former Executive Director WFP
11.00-11.15	Bettina Iseli Director Programs of Welthungerhilfe (WHH), Germany <i>Driving the Humanitarian Paradigm Shift to mitigate or prevent food crisis: Anticipatory Humanitarian Action for less losses and preserved human dignity</i>
11.15-11.30	Tania Martinez-Cruz Associate Researcher at Free University of Brussel and member of the Global Hub on Indigenous Peoples' Food Systems <i>Learning from and including indigenous peoples' concepts and resilience approaches</i>
11.30-11.45	Laurence Hart International Organization for Migration (IOM) Chief of Mission in Rome <i>Effective actions for refugees and displaced people in acute crises</i>
11.45-12.00	Dunja Dujanovic Senior Emergency and Rehabilitation Officer Office of Emergencies and Resilience at FAO <i>Management of food emergencies</i>
13.00-14.30	Lunch at the Casina Pio IV
14.30-15.30	SESSION 7 Concluding on What Needs to Happen Next (incl. consideration of Conference statement, draft to be shared) Chair: Joachim von Braun President, PAS Impulse statements by selected participants and discussion with all participants

List of Participants

Prof. Joachim von Braun

President
Pontifical Academy of Sciences
Vatican City

Cardinal Peter Turkson

Chancellor
Pontifical Academy of Sciences
Vatican City

Dr. Fazlullah Akhtar

Senior researcher
Centre for Development Research (ZEF) Bonn University
Germany

Dr. Anas Alkaddour

Senior Food Security and Livelihoods Advisor, at Global Communities International (NGO), Syria/Turkiye mission, member of the Strategic Advisory Group of FSL cluster, Turkiye hub, Research Fellow CARA and South Wales University, the UK

Mr. Justin Miteng Amos

IFDC Office, South Sudan

Dr. Jeannie Annan

Chief Research and Innovation Officer
International Rescue Committee
New York, USA

Dr. Omar Atik

Program Head and Co-Coordinator
Technical Working Group and Strategic Advisory Group member
“Food Security and Livelihood cluster in Turkey”
Shafak Organization
Sk, Sehitkamil, Gaziantep, Turkey

Dr. Ousmane Badiane

Founder and Executive Director
Akademiya 2063
Kigali, Rwanda

Prof. Catherine Bertini

Managing Director, Food Initiative
The Rockefeller Foundation,
former Executive Director WFP
New York, USA

H.E. Hailemariam Boshe

Former Prime Minister of Ethiopia.
Chair of Hailemariam & Roman Foundation
Addis Ababa, Ethiopia

Dr. Carlo Cafiero

Statistics Division
UN FAO
Rome, Italy

Dunja Dujanovic

Senior Emergency and Rehabilitation Officer
Office of Emergencies and Resilience at FAO

Dr. Ismahane Elouafi

Chief Scientist of FAO
Rome, Italy

Dr. Samuel Fraiberger

Data Scientist, The World Bank. Washington DC, USA

Ms. Valerie N. Guarnieri

Deputy Executive Director for Programme and Policy
Development
World Food Programme, Rome

Prof. Laurence Hart

Chief of Mission in Rome
International Organization for Migration (IOM)
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Prof. Mohamed Hassan

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Prof. Cheikh Mbow

Director General
Centre de Suivi Ecologique (CSE)
Dakar, Senegal

H.E. Cindy McCain

Executive Director of the World Food Programme (WFP)
Rome, Italy

Dr. Alrich Nicolas

Former Foreign Minister of Haiti and
Lecturer in Sociology and Economics
State University of Haiti

Prof. Oleg Nivievskiy

Faculty of Graduate Economics Studies at Kyiv School of Economics, and Center for Food and Land Use Research, Ukraine

Mr. Oyewole S. Oginni

Researcher, Armed Conflicts in Sahel, Bonn International Centre for Conflict Studies, Nigeria

Dr. Were Omamo

CEO of New Growth International (NGI), Kenya

H.E. Omar Razzaz

Former Prime Minister of Jordan, Amman, Jordan

Dr. Claudia Ringler

Deputy Division Director
Environment and Production Technology Division, International Food Policy Research Institute (IFPRI)

Dr. Shakuntala H. Thilsted

Director, Nutrition, Health and Food Security Impact Area Platform, CGIAR

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Chief Economist, FAO
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Dr. John M. Ulimwengu

Senior Research Fellow
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Msgr. Dario Edoardo Viganò

Vice Chancellor
Pontifical Academy of Social Science and Sciences
Vatican City

Prof. Maryanne Wolf

PAS Academician
Director, Centre for Dyslexia, Diverse Learners, and Social Justice
Prof. in Residence, Graduate School of Education and Information Studies, University of California, Los Angeles, USA

Memorandum

In-person attendance

- Pickup schedule from hotels:
On 9-10 May a bus will leave your hotel at 8.30 a.m. to accompany participants to the Casina Pio IV, where the meeting starts at 9.00 a.m.
On 9-10 May the same buses will take you back to your hotels after dinner.
- Lunch and dinner for the participants will be served at the Academy on 9 May. On 10 May only the lunch.
- For those arriving before 9 May and those staying after the workshop, your hotel will take care of your full board and lodging on behalf of the Academy until your departure.

The Audience with the Holy Father

- A Vatican car will pick you up at 7.15 at your hotel to lead you to venue of the Audience. After the Audience, the same cars will take you to the Casina Pio IV for the workshop.

Access instructions to the Vatican Casina Pio IV

- You can come through the entrance called Perugino (Via della Stazione Vaticana, no number, it's a very short street). Instructions to reach the Casina Pio IV, headquarters of the Pontifical Academy of Sciences, can be found in the following link:

<https://www.pas.va/en/about/contacts-and-maps.html>



Just inside the gate there is a Vatican Security checkpoint. The Vatican Gendarmes already have the names of the invitees and will make sure everyone reaches us.

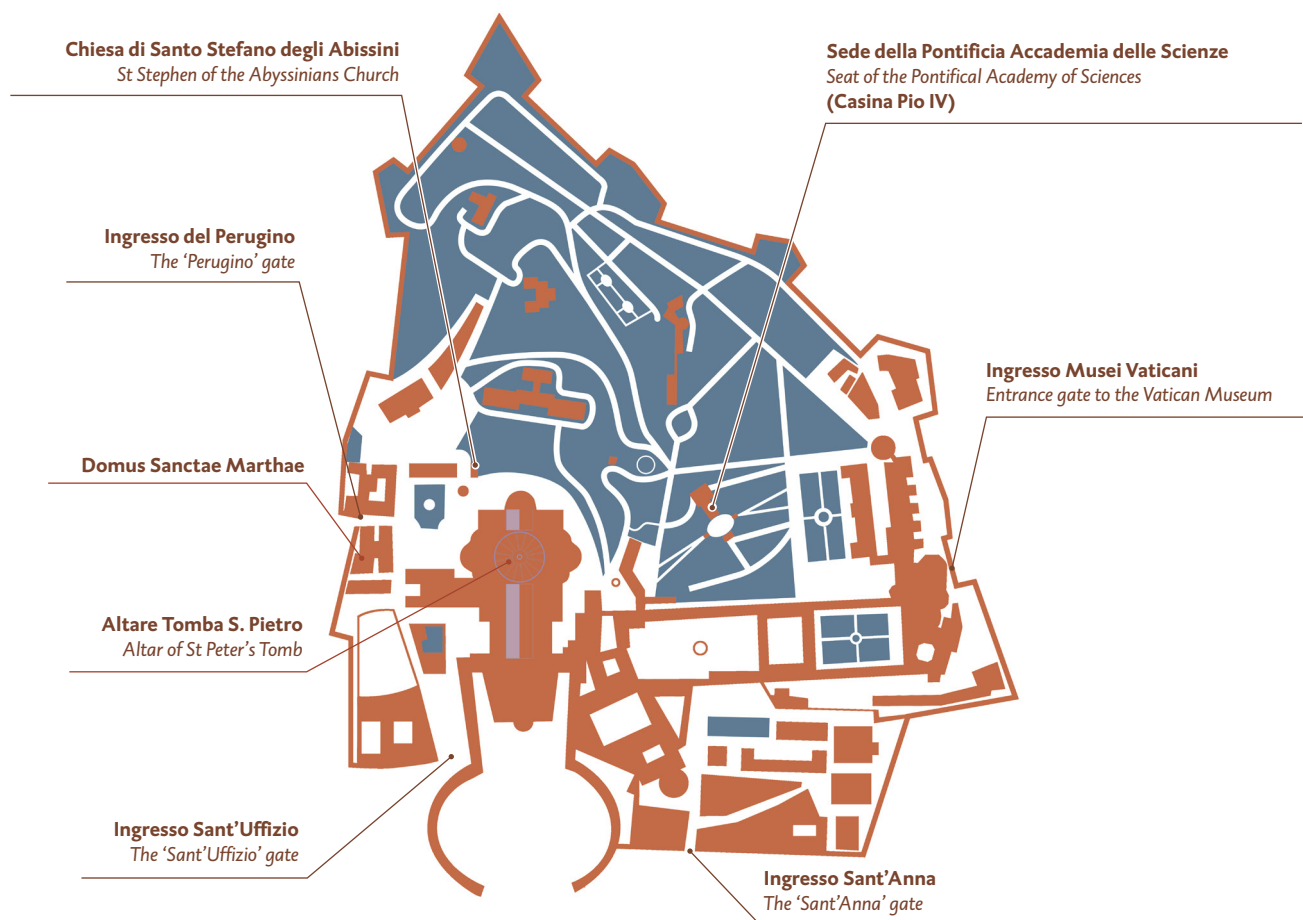
For all eventualities the telephone numbers of the Academy are the following:
+39 06 69883195 or +39 06 69883451

For more information

- Please refer to **www.pas.va** for further information on the Academy, the Academicians, and current and past events.
- Dress code: is formal business attire.
- Security: Invites are strictly personal. Please remember to bring a valid ID.

WI-FI

- WI-FI network: academy-guest
- Password: G@rdens1936



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