



WORKSHOP ON

INDIGENOUS PEOPLES' KNOWLEDGE AND THE SCIENCES:

combining traditional knowledge and sciences for resilience to address climate change, biodiversity loss, food security, health



14-15 March 2024 Casina Pio IV, Vatican City





I give thanks for this visit, ... an opportunity to recognize the fundamental role Indigenous Peoples hold in the protection of the environment, and to highlight their wisdom in finding global solutions to the immense challenges that climate change poses to humanity every day. ... We should listen to Indigenous Peoples more and learn from their way of life, so as to understand properly that we cannot continue to greedily devour natural resources... The contribution of Indigenous Peoples is fundamental in the fight against climate change. And this has been scientifically proven... Therefore, I ask governments to recognize the Indigenous Peoples of the whole world, with their cultures, languages, traditions and spirituality, and to respect their dignity and their rights, in the knowledge that the richness of our great human family consists precisely in its diversity.

Address of His Holiness Pope Francis To participants in the indigenous people's forum Consistory hall, Friday, 10 February 2023

Purpose of the conference

- With this conference indigenous knowledge communities and scientists in social and natural sciences are called upon, to hold an open dialogue, based on mutual respect, and shared concerns for peoples' and planetary health.
- The conference will create opportunities for dialogue on how knowledge can play an important role in developing local solutions that can have global consequences.
- This conference aims to build bridges between

the views and knowledge systems of diverse Indigenous Peoples and diverse science communities to explore new opportunities for solutions to the global challenges of resilience to climate change, biodiversity loss, and food systems problems, and on developing local solutions that can have global benefits.

Pope Francis has kindly agreed to hold an Audience with the Conference participants.

Opportunities and objectives of the conference

- Indigenous knowledge communities and science communities are lacking platforms to exchange views and work jointly to develop innovative nature-based solutions for climate change impact and resilience. Overcoming that may contribute to advancements in sustainability, justice and equity.
- Indigenous peoples are often caretakers of key natural ecosystems and have an important role in bending the nature degradation curve, with positive impacts for, mitigation, adaptation and biodiversity challenges. Indigenous peoples can play a fundamental role in protecting natural ecosystems against degradation and in restoring ecosystems for multiple outcomes, including forests, biodiversity and water resources. The role of Indigenous Peoples in the biodiversity agenda is being increasingly recognized in the CBD process. Recently, in COP 15 in Montreal, indigenous peoples were given a special recognition.
- Indigenous Peoples worldwide have a dual relationship with climate change.
- On one hand Indigenous Peoples represent a clear case of climate injustice, as they have contributed the least and are suffering the most from climate-related extreme events and ecosystem

- degradation. COP28 and other climate forums recognize this.
- Nature-based solutions (NBS) are increasingly considered as having lower costs and delivering more co-benefit's than other alternatives. Nature-based solutions now play an important role in the agenda of UNFCCC, but the concept has not yet been adequately incorporated in the CBD process and needs further research
- The Science communities and the indigenous knowledge communities also have a lot of opportunities to exchange perspectives on health, medicine, and healthy diets. The pharmaceutical products and health practices.
- Also, fundamentally there may be multiple and diverse perspectives on
- life, spirituality in Indigenous Peoples' and Science driven communities. The pontifical academies do see complementarities and synergies between faith and science. This perspective may also be discussed among indigenous knowledge communities and the science communities at the workshop, including with faith-based community at the Vatican and beyond.

CONFERENCE ORGANIZATION

- Presentations and discussion: As we have received a very high interest in the conference, speaking times need to be short in order to protect time for discussion.
- Participants are expected to share a short paper of max. 10 pages before the conference.
- Papers will be published online at www.pas.va and in an edited book published open access by the Pontifical Academies. Please note our editorial guidelines: https://www.pas.va/en/about/editorial_guidelines.html

Programme

DAY 1 | 14 MARCH 2024

9:30-10:30	PAPAL AUDIENCE (Clementine Hall, Apostolic Palace)
10.30-11.00	Coffee break
11.00-11.15	Welcome and General Introduction to the Workshop Joachim von Braun PAS President Sr Helen Alford PASS President Cardinal Peter K.A. Turkson PAS & PASS Chancellor
11.15-12.45	SESSION 1. INDIGENOUS PEOPLES KNOWLEDGE AND SCIENCES – CHALLENGES AND OPPORTUNITIES Chair: Joachim von Braun PAS President
11.15-11.30	Sonia Gujajara Minister, Ministry of Indigenous People - Brazil Full possession of territories, ways of life and preservation of Biodiversity. The importance of indigenous peoples in fighting climate change
11.30-11.45	Nigel Crawhall Chief, Local and Indigenous Knowledge Systems (LINKS), UNESCO Indigenous Knowledge Systems and Sciences: Trends and opportunities within the United Nations
11.45-12.00	Anna Giulia Medri Head, Equator Initiative, United Nations Development Programme (UNDP) A global outlook on Indigenous Peoples and the importance of their role for the climate and biodiversity agenda. Challenges, opportunities, and solutions supported by the UNDP Equator Initiative
12.00-12.15	Yon Fernández-de-Larrinoa Food and Agriculture Organization of the United Nations – Indigenous Peoples Head of Unit
12.15-12.30	Ilaria Firmian International Fund for Agricultural Development (IFAD), Senior Technical Specialist, Indigenous Peoples IFAD engagement with Indigenous Peoples for climate, biodiversity, food and nutrition agendas
12.30-12.45	Discussion
12.45-14.15	Lunch at Casina Pio IV
14.45-16.15	SESSION 2. REGIONAL PERSPECTIVES FROM AND OUTLOOKS BY INDIGENOUS PEOPLES Chair: Helen Alford PASS President
	SESSION 2. 1. PERSPECTIVES FROM AFRICA
14.15-14.30	Elifuraha Laltaika Tumaini University Makumira, Faculty of Law -Senior Lecturer of Human Rights Law & Policy Climate Change & Energy Transition: Safeguarding Africa's Indigenous Peoples' Spiritual and Cultural attachment to Lands
14.30-14.45	Stanley Kimaren ole Riamit Indigenous Livelihoods Enhancement Partners (ILEPA) Team Leader by Zoom Indigenous knowledge and Climate change Adaptation strategies: Lessons from Maasai Pastoralists of East Africa
	SESSION 2. 2. PERSPECTIVES FROM AMERICAS
14.45-15.00	Myrna Cunningham Kain Center for Autonomy and development of Indigenous Peoples-Pawanka Fund Intercultural experiences in health and education in LAC Region
15.00-15.15	Octaviana Valenzuela Trujillo Founding Chair and Professor Emerita of the Applied Indigenous Studies Department at Northern Arizona University, USA Traditional Knowledge of Indigenous Peoples: Voices of Respect for Sacred Nature and Transformative Stewardship of Mother Earth
15.15-15.30	Lorna Wanosts'a7 Williams Member First Nation, Professor Emerita, Lil'watul; University of Victoria Ti Szwatenem: What we know, The gift of indigenous knowledge for life and living and the Challenges of Exclusion

	SESSIONI 2. 2 DED SDECTIVES ED OM A SIA
	SESSION 2. 3. PERSPECTIVES FROM ASIA
15.30-15.45	Viswajanani Sattigeri Council of Scientific and Industrial Research - Traditional Knowledge Digital Library Unit India's Experiences on Traditional Knowledge and Traditional Knowledge Digital Library Unit (TKDL)
15.45-16.00	Anamika Dey CEO - Gujarat Grassroots Innovation Augmentation Network (GIAN) Women-led community knowledge-based bio-enterprises: insights from the Honey Bee Network
16.00-16.15	Discussion
16.15-16.45	Coffee break
16.45-18.15	SESSION 3. BUILDING BRIDGES BETWEEN SCIENCE AND INDIGENOUS KNOWLEDGE SYSTEMS Chair: Mohamed Hassan PAS Academician
	SESSION 3.1. BRIDGES BETWEEN INDIGENOUS KNOWLEDGE AND SCIENCE SYSTEMS
16.45-16.55	Brijal Chaudhari President, Global Home for Indigenous Peoples (GH4IP) The importance of Indigenous Peoples for climate, biodiversity, food and nutrition agendas, and building bridges between indigenous knowledge and sciences
16.55-17.05	Hindou Oumarou Ibrahim AFPAT President, Chad Bringing science and traditional knowledge to build resilience and adaptation and mitigate conflict over resources
17.05-17.15	Doug Simons Professor, Director, Institute for Astronomy University of Hawaii at Manoa by Zoom Exploring Indigenous and Contemporary Science Through Hawaii Astronomy
17.15-17.25	Adriano Fontana Research Director, Istituto Nazionale di Astrofisica How astronomers explore the world and what they have learned — and not yet
17.25-17.35	Discussion
	SESSION 3.2. BRIDGES IN EDUCATION SYSTEMS
17.35-17.45	Vanderlei S. Bagnato PAS, University of Sao Paulo and Texas A&M University, Professor Science Education as perspective for young indigenous people
17.45-17.55	Pierre Léna PAS Academician; Office of Climate Education, Emeritus President Climate education facing traditional cultures
17.55-18.05	Jane Lubchenco PAS Academician; Oregon State University, Department of Integrative Biology
18.05-18.15	Discussion
18.15-19.20	SESSION 4. INDIGENOUS PEOPLES KNOWLEDGE SYSTEMS FOR HEALTH, PHARMACEUTICAL PRODUCTS, WATER, AND THE SCIENCES – INNOVATION OPPORTUNITIES, RIGHTS, POLICIES
	Chair: Vanderlei S. Bagnato PAS Academician; University of Sao Paulo and Texas A&M University
18.15-18.30	Pauliina Nykanen-Rettaroli Senior Technical Lead and Unit Head on Human Rights, World Health Organization Promoting and Protecting Indigenous Knowledge and Contributions to Health
18.30-18.45	Ester Innocent Associate Research Professor, Institute of Traditional Medicine-Muhimbili University of Health and Allied Sciences, Tanzania Bridging Indigenous Knowledge and the Science: The Role of Indigenous Peoples in Health and Pharmaceutical Products Development
18.45-19.00	Yolanda López-Maldonado Geography Department, Ludwig Maximilian University of Munich, Germany Beyond Sacred Ecology: Indigenous People's Observations for Understanding Complex Earth Processes
19.00-19.15	H.E. Archbishop Samuel Kléda Metropolitan Bishop of Douala by Zoom Indigenous Healthcare and Pharmaceutical Science: an African Example
19.15-19.30	Discussion
19.30	Dinner at Casina Pio IV

DAY 2 | 15 MARCH 2024

09.00-12.30	SESSION 5. THE IMPORTANCE OF INDIGENOUS PEOPLES FOR CLIMATE, BIODIVERSITY, FOOD AND NUTRITION AGENDAS, AND BUILDING BRIDGES BETWEEN INDIGENOUS KNOWLEDGE AND SCIENCES
	SESSION 5.1. BIODIVERSITY AND NATURE PROTECTION Chair: Virgilio Viana PASS Academician
09.00-09.15	Katrin Böhning-Gaese Director and Professor Senckenberg Biodiversity and Climate Research Centre, Frankfurt University Biodiversity and social-ecological research for people and nature
09.15-09.30	Lun Yin Professor of School of Geography and Ecotourism, Southwest Forestry University, Executive Vice President of the Yunnan Green Environment Development Foundation (China) Traditional knowledge in forest resource management for climate change adaptation
09.30-09.45	Q"apaj Conde Secretariat of the Convention on Biological Diversity, Associate Programme Management Officer The role of traditional knowledge in the Kunming-Montreal Global Biodiversity Framework
09.45-10.00	Robert Nasi Director General, Center for International Forestry Research (CIFOR) by Zoom Sustainable use of wildlife, why indigenous people matter
10.00-10.15	Paulo Artaxo University of São Paulo, Director of the Center for Amazonian Sustainability Amazonian forests protected by Indigenous people
10.15-10.30	Mariam Wallet Aboubakrine Co-Principal Investigator-Adjunct Professor Arramat Project-University of Ottawa Holistic approach to health and well-being of people, climate and biodiversity: what can we learn from Indigenous Peoples' knowledges?
10.30-11.00	Coffee break
	SESSION 5.2. FOOD SYSTEMS Chair: Johan Swinnen Managing Director of Systems Transformation, CGIAR, and Director General, International Food Policy Research Institute (IFPRI)
11.00-11.15	Maximo Torero Chief economist of FAO
11.15-11.30	Tania Eulalia Martinez-Cruz Director of food sovereignty at Land is Life and Research Associate at Universidad Intercultural Maya de Quintana Roo Indigenous Youth leading the future: Sustainable food systems & a sustainable future
11.30-11.45	Mehrdad Ehsani Vice President, The Rockefeller Foundation. Food Initiative, Nairobi, Kenya Regenerative agriculture and indigenous knowledge
11.45-12.00	Justice Tambo Senior Socio-Economist CABI, Switzerland Recognizing farmers' indigenous innovations in Africa
12.00-12.15	Hanieh Moghani Senior Legal Counsel and Indigenous Advocate - Centre for Sustainable Development and Environment (CENESTA), Tehran by Zoom Indigenous Knowledge in Participatory Plant Breeding
12.15-12.30	Xananine Calvillo Ramirez Ambassador - Stop Financing Factory Farming Coalition The food of the future is also ancestral: Mesoamerican plant-based food traditions as climate solutions
12.30-12.45	Discussion
12.45-14.00	Lunch at Casina Pio IV

	SESSION 5.3. CLIMATE – ADAPTATION, MITIGATION, TRANSFORMATION Chair: Hindou Oumarou Ibrahim AFPAT President, Chad
14.00-14.15	Jennifer Rubis Green Climate Fund, Indigenous Peoples Specialist Enhancing synergies between knowledge systems in climate action: why it matters and mobilizing it at the Green Climate Fund
14.15-14.30	Agnes Leina Il'laramatak Community Concerns Executive Director Traditional Indigenous Knowledge Vs Scientific Knowledge in addressing climate change
14.30-14.45	Juan Carlos Jintiach Arcos Executive secretary - Global alliance of the Territorial Communities Indigenous peoples Knowledge from the tropics in the context of climate change and biodiversity
14.45-15.00	Nelson Ole Reiyia Nashulai Maasai Conservancy, CEO The Maasai Response to the Climate Crisis – A global outlook on Indigenous peoples
15.00-15.15	Charles Ian McNeill Senior Fellow, Meridian Institute and former Senior Advisor, Forests & Climate, United Nations Environment Programme (UNEP), New York The Critical Role of Indigenous Peoples in Addressing the Twin Crises of Climate Change and Loss of Nature: How Powerful New Partnerships Between Indigenous Peoples, Faith Communities and Science To Protect Forests Can Turn The Tide
15.15-15.45	Coffee break
15.45-17.10	SESSION 6. COMBINING AWARENESS WITH ACTION Chair: Nigel Crawhall Chief, Local and Indigenous Knowledge System (LINKS), UNESCO
15.45-15.55	Tørris Jæger Rainforest Foundation Norway Indigenous-led Solutions and the Extensive Corridors Approach – at the Heart of Climate and Nature Action
15.55-16.05	Wendy Philips Bald Eagle Clan, Canada Living within the Laws of Creation and Anishinaabe journey on Mother Earth for the next 7 Generations
16.05-16.15	Fiona Watson Advocacy and Research Director, Survival International Indigenous peoples versus false prophets – how "nature based solutions" to climate change threaten Indigenous rights, their knowledge and our planet
16.15-16.25	Ora Marek-Martinez Associate Vice President / Assistant Professor, Northern Arizona University Braiding Indigenous Knowledges and Western Science: Remembering Who We Are and Reclaiming Our Sacred Responsibility to Mother Earth
16.25-16.35	Victoria Tauli-Corpuz Indigenous Peoples Rights International Indigenous Peoples' Knowledge, Science and Technologies and the role of this in addressing the global environmental and food crises
16.35-16:45	Erick Marques Polidoro Apolinario Director, Eric Terena Music Combining Awareness with Action
16.45-17:10	Discussion
17.10-18.30	SESSION 7. CONCLUSIONS Chairs: Helen Alford PASS President and Joachim von Braun PAS President
	Presentation and discussion of a draft conference statement
18.30	Dinner at Casina Pio IV

List of Participants

Prof. Dr. Joachim Von Braun

President

The Pontifical Academy of Sciences Germany

Rev. Prof. Helen Alford

President

The Pontifical Academy of Social Sciences Rome

Cardinal Peter K.A.Turkson

Chancellor

The Pontifical Academy of Social Sciences Vatican

Msgr Dario E. Viganò

Vice Chancellor

The Pontifical Academy of Social Sciences Vatican

Mr. Juan Carlos Jintiach Arcos

executive secretary

GATC

Ouito- Ecuador

Prof. Paulo Artaxo

Director of the Center for Amazonian Sustainability University of São Paulo, São Paulo, Brazil

Prof. Vanderlei S. Bagnato

Professor

University of Sao Paulo and Texas A&M University PAS Academician Houston -Texas - USA

Prof. Katrin Böhning-Gaese

Director

Senckenberg Biodiversity and Climate Research Centre

Ms. Erika Xananine Calvillo Ramirez

Ambassador

Stop Financing Factory Farming Coalition Mexico City

Mr. Brijlal Chaudhari

President

Global Home for Indigenous Peoples (GH4IP)

Msgr Fernando Chica Arellano

Permanent Observer

Holy See Mission to the United Nations Food and Agriculture Agencies in Rome.

Vatican City

Dr. Nigel Thomas Crawhall

Chief of Section,

Section for Local and Indigenous Knowledge Systems (LINKS) Natural Sciences Sector, UNESCO

Mr. O"apaj Conde

Associate Programme Management Officer Secretariat of the Convention on Biological Diversity Montreal, Canada

Mr. Carlos Eduardo da Cunha Oliveira

Minister-Counselor

Embassy of Brazil to the Holy See

Dr. Anamika Dey

Gujarat Grassroots Innovation Augmentation Network [GIAN] **AHMEDABAD**

Ms. Rosa Maria dos Anjos Vieira

Fundation for Amazon Sustainability - FAS

Mr Mehrdad Ehsani

Vice President, Food Initiative, Africa Rockefeller Foundation

Mr. Yon Fernández-de-Larrinoa by Zoom

Indigenous Peoples Head of Unit

Food and Agriculture Organization of the United Nations Rome

Ms. Ilaria Firmian

Senior Technical Specialist, Indigenous Peoples International Fund for Agricultural Development (IFAD)

Prof. Adriano Fontana

Research Director Istituto Nazionale di Astrofisica Rome

Ms. Georgia Franco

Fundation for Amazon Sustainability - FAS Brazil

Ms. Fernanda Graeff Machry

Second Secretary Embassy of Brazil to the Holy See

Her Excellency Mrs Sonia Guajajara

Ministry of Indigenous People Brazil

Prof. Mohammed Hassan

President Sudan Academy of Sciences PAS Academician Sudan

Msc Pablo Innecken

FAO Indigenous Peoples Unit Expert on biodiversity and climate change

Prof. Ester Innocent

Associate Research Professor Institute of Traditional Medicine-Muhimbili University of Health and Allied Sciences Tanzania

Mr. Tørris Jaeger

Executive Director Rainforest Foundation Norway Oslo

Dr. Myrna Kay Cunningham Kain

Former chair Center for Autonomy and development of Indigenous Peoples-Pawanka Fund Managua, Nicaragua

Prof. Gasparini Kaingang

International Affairs Ministry of Indigenous People of Brazil Brazil

Ms. Olena Kamisareno

Assistant to Sr Helen Alford

H.E. Archbishop Samuel Kléda by Zoom

Metropolitan Bishop of Douala

Dr. Elifuraha Laltaika

Senior Lecturer of Human Rights Law & Policy Tumaini University Makumira, Faculty of Law Vancouver

Mrs. Agnes Leina

Executive Director/Founder Il'laramatak Community Concerns Nairobi

Prof. Pierre Léna

Emeritus President Office of Climate Education PAS Academician **Paris**

Dr. Yolanda López Maldonado

Indigenous Science Vienna

Prof. Jane Lubchenco by Zoom

Oregon State University Department of Integrative Biology PAS Academician

Mr. Ora Marek Marek-Martinez

Associate Vice President / Assistant Professor Northern Arizona University Phoenix, Arizona, USA

Dr. Tania Eulalia Martinez Cruz

Director of food sovereignty at Land is Life and Research Associate at Universidad Intercultural Maya de Quintana Roo Mexico

Dr. Charles Ian McNeill

Senior Fellow

Meridian Institute and former Senior Advisor, Forests & Climate, United Nations Environment Programme (UNEP) New York

Anna Giulia Medri, Esq.

UNDP Equator Initiative United Nations Development Programme (UNDP) New York City

Mr Mehrdad Ehsani

Vice President. Food Initiative, Africa **Rockefeller Foundation**

Dr. Hanieh Moghani by Zoom

Senior Legal Counsel and Indigenous Advocate Centre for Sustainable Development and Environment (CENESTA) **Tehran**

Dr. Robert Nasi by Zoom

Director General CIFOR Jakarta

Ms Monica Ndoen

Special Envoy to the SG of AMAN Aliansi Masyarakat Adat Nusantara (AMAN)

Ms. Pauliina Nykanen-Rettaroli

Senior Technical Lead and Unit Head on Human Rights, World Health Organization

Mr. Nelson Ole Reiyia

CEO/CO-FOUNDER Nashulai Maasai Conservancy Nairobi

Ambassador Hindou Oumarou Ibrahim

President **AFPAT** N'Djamena/Paris

Elder Wendy Phillips

Grand Challenges Canada Montreal

Mr. Erick Marques Polidoro Apolinario

Director Eric Terena Music Campo Grande - MS (CGR)

Stanley Kimaren Riamit by Zoom

Team Leader Indigenous Livelihoods Enhancement Partners (ILEPA) Nairobi

Ms. Jennifer Rubis

Indigenous Peoples Specialist Green Climate Fund Seoul

Bishop Marcelo Sánchez Sorondo

Former Chancellor PAS

Dr. Viswajanani Sattigeri

Scientist H and Head Council of Scientific and Industrial Research – Traditional Knowledge Digital Library Unit New Delhi, India

Prof. Doug Simons by Zoom

Professor Director, Institute for Astronomy University of Hawaii at Manoa

Dr. Johan Swinnen

Director General IFPRI and Managing Director of Systems Transformation **CGIAR**

Dr. Justice Tambo

Senior Socio-Economist CABI, Switzerland Mannheim, Germany

Her Excellency Puyr Tembé

President of Indigenous Peoples of Pará State Brazil

Dr. Maximo Torero Cullen by Zoom

Chief Economist FAO. Rome

Prof. Octaviana Valenzuela Trujillo

Founding Chair and Professor Emerita Department of Applied Indigenous Studies Northern Arizona University Flagstaff, Arizona, USAO

H.E. Amb. Everton Vieira Vargas

Ambassador of Brazil to the Holy See

Prof. Viana Virgilio

Director Foundation for Amazon Sustainability PASS Academician Brazil

Dr. Mariam Wallet Aboubakrine

Co-Principal Investigator-Adjunct Professor Arramat Project-University of Ottawa Ottawa

Dr. Lorna Wanosts'a7 Williams

member First Nation, Professor Emerita Lil'watul; University of Victoria Victoria BC Canada

Ms. Fiona Watson

Advocacy and Research Director Survival International London, UK

Prof. Lun Yin

Founder and Director of the Climate Action SDG Laboratory Executive Vice President of the Center for Biodivercity and Indigenous Knowledge (CBIK) Kunming

Pickup schedule from and to the Hotels

The pick up every morning from Carpegna Hotel will be at o8.00 am in the morning

Meals

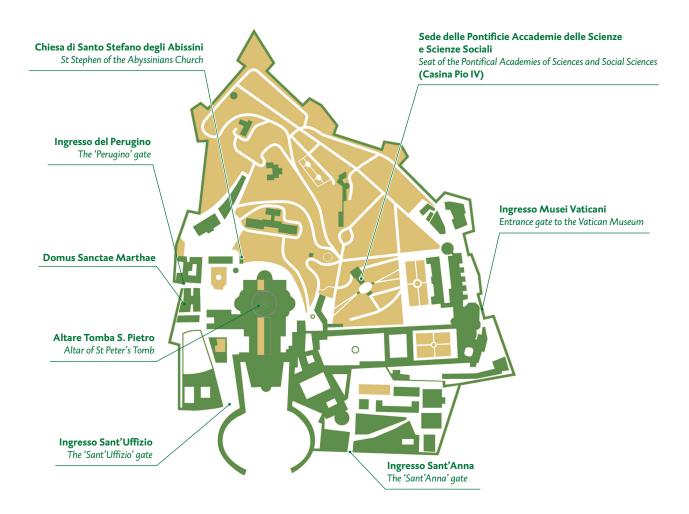
Meals are offered at the Casina Pio IV. After Dinner, a Shuttle Bus will bring you back to the Hotel.

General information

- Dress code is business attire. Invites are strictly personal. But accompanying persons are invited to the conference if meeting room space allows and to share the meals. Please remember to bring a valid ID.
- In case of any problems, please call the Academy on +39 0669883195 or +39 0669881441.
- On travel days, the mobile phone number +393420026216 will be available.
- Please refer to www.pas.va and www.pass.va for further information on the Academy, the Academicians, and current and past events.

WI-FI

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



THE PONTIFICAL ACADEMY OF SCIENCES THE PONTIFICAL ACADEMY OF SOCIAL SCIENCES CASINA PIO IV | V-00120 VATICAN CITY

Tel: +39 0669883451 | Fax: +39 0669885218 | Email: pas@pas.va - pass@pass.va For further information please visit: www.pas.va and www.pass.va

