



**THE CYPRUS  
INSTITUTE**



# CLIMATE CHANGE 2018

**INTERNATIONAL CONFERENCE  
IN THE MEDITERRANEAN & MIDDLE EAST  
CHALLENGES & SOLUTIONS  
Nicosia, Cyprus**

**18 & 19 May 2018**

**Conference Handbook**





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## Welcome Message

Cyprus is the only EU country located in the Eastern Mediterranean and Middle East (EMME) region, one of the most complex regions in the world. The EMME region populated by over 350 million people, is not only one of the ancient cradles of civilization, blessed with enormous cultural heritage, diversity and natural resources, it is also burdened with conflict, poverty and the emerging threats of Climate Change. It is anticipated that this combination of Climate Change and conflict will result in enormous impacts on migration and security in this region, whose societies and ecosystems are already extremely vulnerable and stressed. The solutions to adapt to and to ameliorate climate change impacts in the region are to a degree known, and the scientific communities are acutely aware of the need to collaborate to solve these problems. In this respect, the Cyprus Institute stated mission to act as a bridge between the European Research Area and Scientists in the Middle-East and North Africa, in order to develop common solutions to common challenges is both relevant and timely. It is in this context that I welcome you all to this important conference, which comes at a critical time, and which brings together an impressive array of policy makers, researchers and other stakeholders, to discuss the actions which are needed for the region and advance them to implementation.



A handwritten signature in black ink that reads "C. N. Papanicolas".

**Prof. Costas N. Papanicolas**

President, The Cyprus Institute  
Chair, International Advisory Committee

## Welcome Message

It is with great pleasure, and indeed pride, to welcome you to this very important Conference on “Climate Change in the Mediterranean and the Middle East”.

Over the past 10 years, the Cyprus Institute, and in particular the Energy-Environment-Water Research Centre (EEWRC) as a spearhead, has been pursuing excellent science and research in this field with internationally noticeable achievements. To a large degree this excellence is nurtured by a network of collaborations and alliances with local, regional, European, and Global Institutions, which have leaders and scientists who are instrumental in defining cutting-edge state-of-the-art excellence in Atmosphere and Climate Research.

“Climate Change Challenges and Solutions in the Mediterranean and the Middle East” illustrate the best of our research in service of Society, Policy and the Environment. We have thus engaged in the endeavour of establishing a new Eastern Mediterranean and Middle East Climate and Atmosphere REsearch Centre of excellence (EMME-CARE; <http://emme-care.cyi.ac.cy/>), so as to address new challenges and opportunities ranging from Climate Change and Air Pollution Observations and Modelling, to Mitigation, Adaptation and Sustainability. With the establishment of such a centre, Cyprus will join the few countries from Europe and the World leading science and research for Climate Change and our Environment, to serve a region that is in dire need for such a Centre. In this endeavour, The Cyprus Institute has teamed up with world renowned research teams led by Prof. Markku Kulmala (Univ. of Helsinki, Finland), Prof. Philippe Ciais (Laboratory for Climate and Environmental Sciences, CEA, France), and Prof. Jos Lelieveld (Max Planck Institute for Chemistry, Germany).

We feel inspired and motivated for the future Centre’s prominence and international attention, when for the first tangible proof of its outreach, which is this Conference, we have the honour to welcome all of you as prominent Policy Makers, Ministers, EU Commissioners, Ambassadors, Academicians, Scientists, Stakeholders, and Opinion-Leaders from around the world. We feel confident that the objective of the European Commission, through the Horizon 2020 Teaming Programme, will be fulfilled by our EMME-CARE Centre of Excellence, which will indeed build on regional and international networks, spearhead scientific, research and innovation breakthroughs, provide advanced training and education, and establish infrastructure and globally recognized technical and scientific competencies.

With my Warmest Welcome Wishes for fruitful Conference deliberations,

A handwritten signature in black ink that reads "Jean SCIARE".

**Prof. Jean SCIARE**

Chair of Scientific Programme Committee  
Director – EEWRC  
The Cyprus Institute



**Mr Nicos Anastasiades**  
The President of the Republic

### Short Bio

Nicos Anastasiades was born in Pera Pedi, Limassol, in 1946. Both his parents played an important role in his life, especially his father. He has a twin brother and a sister.

In 1971 he married Mrs Antri Moustakoudi and they had two daughters, Elsa and Ino. He has four grandchildren, Andys, Nicholas, Giorgos and Nicos. He studied Law at the University of Athens and pursued his postgraduate degree in Maritime Law at the University of London. He practices law since 1972.

During his student years he has been an active member of the Youth of Georgios Papandreou's Centre Union in Athens.

After his studies he served in the National Guard, first at the Recruits' Training Centre (KEN) in Larnaca and then at the 4th Higher Military Command.

Nicos Anastasiades is a founding member of the Youth of the Democratic Rally (NEDISY), in which he served from the posts of District Secretary, Vice President and President.

After his successful term in NEDISY he takes action next to the historical leader Glafkos Clerides from the positions of First Vice President and later Deputy President until 1997. He is a member of the Cyprus National Council since 1995.

Nicos Anastasiades was triumphantly elected as President of the Democratic Rally in 1997, a position that the members and officials of the party firmly trusted him with by being re-elected in 1999, 2003, 2007 and 2012.

At the same time Nicos Anastasiades was being elected Member of the House of Representatives from 1981 until his election to the Presidency of the Republic. During his lengthy term he has served the Parliament as Chairman of the Committee on Foreign Affairs, Chairman of the Committee on Educational Affairs, Chairman of the Inter-Parliamentary Committee on Foreign Affairs until 2006 as well as Vice-Chairman and member of many other Committees. He has also been elected Vice President of the House of Representatives for the years 1996-2001 and he has served as Parliamentary Spokesman of the Democratic Rally.

In his political course, Nicos Anastasiades actively participates in the international political scene. From his position as Chairman of the Committee on Foreign Affairs, as Head of the Inter-Parliamentary Committee on Foreign Affairs as well as Head of the Cyprus delegation to the Inter-Parliamentary Union (IPU), he represents the Cyprus Parliament since 1991 and takes part in a number of international missions, specialized conferences and visits.

Since his election to the Presidency of the Democratic Rally he participates in all the European People's Party (EPP) Summits and Conferences, he represents the Democratic Rally in the European Democrat Union (EDU) and actively participates in all the conferences of the International Democrat Union (IDU).

His regular presence and interventions in Summits and Conferences have reinforced the positions of the Democratic Rally in these groups, while through interpersonal relations he has developed, he has contributed so that the political positions of these groups fully identify with the positions of the Greek Cypriot side on our national matter.

Nicos Anastasiades has been elected President of the Republic of Cyprus on 24 February 2013 by winning the run-off presidential election with a majority of 57.4%.

*Nicos Anastasiades (Greek: Νίκος Αναστασιάδης; Turkish: Nikos Anastasiadis;[1][2] born 27 September 1946) is a Greek Cypriot politician who has been President of Cyprus since 2013. On 4 February 2018, he was re-elected for a second five-year term. Previously, he was the leader of Democratic Rally and a Member of Parliament for Limassol.*

*Anastasiades is a lawyer by profession, and the founder of law firm "Nicos Chr. Anastasiades & Partners".[3] He graduated in law from the National and Kapodistrian University of Athens and completed postgraduate studies in shipping law at University College London. During his university studies, he was a member of the Centre Coalition based in Athens formed by Georgios Papandreou.[4]*

*Anastasiades was first elected to the House of Representatives in 1981 and was leader of his party from 1997 until 2013.[5]*

## Invited Speakers



**Assia Alaoui Bensalah**  
Ambassador at Large, Morocco

### Short Bio

Dr Assia BenSalah Alaoui, has a PhD in Law « The concept of Food Security » and a master in English Studies.

Currently Ambassador at Large of his Majesty Mohamed VI, the King of Morocco, she is as well: \* Vice-President of the Association of Moroccan-Japanese Friendship, and a Member of the BOT of a number of institutions among which “The Orientation Council of the Royal Institute of Strategic Studies (IRES), Rabat, Morocco; “The Moroccan-British Society”; “The International Advisory Board of The Bibliotheca Alexandrina and of the CITpax (Centro Internacional de Toledo para la Paz; The Jury of the Hassan II World Prize for Water and the Board of « Leaders for Peace », Paris.

Dr Assia Bensalah Alaoui is « Chevalier de la Légion d’Honneur »

Professor of International law and Director of Studies of the Centre for Strategic Studies; University Mohammed V, Rabat 1981-2005 she has amonth other things co-chaired “the High Level Advisory Group on the Dialogue between Peoples and Cultures in the Euro-Mediterranean Area», editor of the Romano Prodi Report, EU November 2003; and has been a \*Member of the “World Bank’s Council of Advisors for MENA 1995-1998; \*Vice-Chair of the Private Sector Committee - CGIAR - (1995-1999) Washington, DC and \*Member of the Board of Trustees of ICARDA, , Syria, 1994-2000); and of the Advisory Board of the UNDP, Arab Region 2002-2005, New York

Dr. Assia Bensalah Alaoui is the author of several publications, on diverse topics such as food security, security in the Mediterranean Area, Euro-Mediterranean Partnership, Democracy Process, Intercultural Dialogue, Disarmament and Conflict Prevention;

Since a few years she is increasingly involved in Sustainable Development matters and the UN SDG; Water Governance and Climate Change challenges.

## Invited Speakers



**Prof. Manuel Blanco**  
European Research Area (ERA) Chair in Solar Thermal Technologies for the Eastern Mediterranean, The Cyprus Institute

### The role of Concentrating Solar Thermal technologies in the Global Energy transition

#### Abstract:

After decades of research and development, concentrating solar thermal (CST) technologies are now starting to be widely commercialized. The International Energy Agency predicts that by 2050, with sufficient support, over ten percent of global electricity could be produced by concentrating solar thermal power plants. Electricity production, however, is just but one of the many possible applications of CST technologies. The presentation will provide detailed information on the state of the art of CST technologies, their commercial deployment, and the latest advances in research in the field. It will also explore the role that these technologies could play in the Global Energy Transition.

#### Short Bio

Prof Manuel Blanco has more than thirty years of experience as a solar researcher and engineer, contributing to advancing the state-of-the-art of Concentrating Solar Thermal (CST) technologies. He is an expert on Thermodynamics, Heat Transfer, Optics, and Modelling of Energy Systems. He holds a Doctoral Degree in Industrial Engineering for the University of Seville (Spain) and a Doctor of Philosophy Degree in Applied Physics for the University of Massachusetts – Lowell, (USA).

Since September 2016, he is Full Professor and European Research Area (ERA) Chair in Solar Thermal Technologies for the Eastern Mediterranean of the Energy Division of the Cyprus Institute’s Energy, Environment and Water Research Centre (EEWRC) - one of the few selected ERA Chairs awarded by the European Commission across Europe.

He is currently Vice-Chair of SolarPACES, the Technology Collaboration Programme of the International Energy Agency responsible for promoting the development and deployment of solar thermal power technologies

and the solar-assisted manufacture of fuels and chemicals, and was Chair of SolarPACES from September 2011 to September 2017.

Until August 2016, he was Science Leader of the Solar Energy Systems Research Group of CSIRO - Australia’s National Research Agency, and Director of the Australian Solar Thermal Research Initiative (ASTRI), an eight-year eighty seven million dollars research program targeted to increase the cost-competitiveness of CST technologies and enhance the international positioning of Australia in these technologies. In addition to CSIRO, the development of ASTRI involves six Australian universities and the collaboration of several US National Laboratories and universities.

He is former Director of the Solar Thermal Energy Department of the National Renewable Energy Centre of Spain (CENER); Chair and Full Professor of the Engineering Department of the University of Texas at Brownsville; and Director of the Plataforma Solar de Almería of CIEMAT, the world’s largest solar research infrastructure.

He participated in the studies and in the decision-making process that culminated in the regulation of the Feed-In-Tariffs for renewable energy technologies in Spain, and participated as a consultant for the World Bank in Feed-In-Tariff and in studies of the economic impact of CST technologies in India. He has also participated in over 23 techno-economic feasibility studies of CST power plant projects in Spain and directed a detailed feasibility study of a 200 MW CST power plant in Botswana sponsored by the World Bank.

He is the author of numerous scientific publications, and participates, in a senior capacity, in a large number of national and international expert groups and committees. Very recently one of the editors and authors of the book: Advances in Concentrating Solar Thermal Research and Technology (Woodhead Publishing Series in Energy) 1st Edition.

## Invited Speakers



**Edouard Brézin**  
Former President Of The French Academy  
Of Sciences, Ens Paris, France

### Short Bio

Edouard Brézin is professor of physics emeritus at Ecole Normale Supérieure, Paris. My field is theoretical physics, in particular statistical field theory. In the past I have chaired the Board of CNRS (1992-2000). I am a member of the French Academy of Sciences since 1991, president in 2005-2006; I belong to its Committee on Energy and I co-chair its Committee on Human Rights.

I have been associated with the Cyprus Institute since 2005, chairing its Board of Trustees until 2015; I then became the chair of its Scientific Advisory Committee.

I am a foreign member of the American Academy of Arts and Sciences, of the National Academy of Sciences (USA), of the Royal Society (UK), of Bilim Akademisi, the independent Turkish academy. I am a Commander of the Order of the Merit of the Republic of Cyprus and of the French Légion d'Honneur.



**Refaat Chaabouni**  
Former Minister of Higher Education  
and Scientific Research, Tunisia

### Short Bio

Refaat Chaabouni is Professor Emeritus of Engineering at the University of Tunis El-Manar and was Minister of Higher Education and Scientific Research. He obtained his Doctorat d'Etat degree at the University of Lyon and was a post doctoral fellow at the University of California, Santa Cruz. He spent most of his academic career at the National School of Engineering of Tunis where he founded the Department of Industrial Engineering and directed it for several years before being appointed Director of Foresight, Planning and Evaluation at the Secretary of State of Scientific Research and Technology and then High Level expert at the Tunisian Institute for Strategic Studies. At international level, he has been member of several Standing Committees for STI and has collaborated for many years with the European Commission as an expert evaluator, reviewer and steering committee member.

## Invited Speakers



**Loucas Christophorou**  
Academy Of Athens, Greece

### Emerging World-Wide Energy Trends and Long-Range Energy Planning

#### Abstract

Energy is and will remain the most critical parameter of every country's development, a challenge in the struggle to alleviate world poverty, and a crucial factor in understanding human intervention in the environment and climate change. Recent trends of different types of natural catastrophes are on the rise. Negative Emission Technologies (NET), aiming at removal of many Gt of CO<sub>2</sub> from the atmosphere will not likely be possible and urgent mitigation measures are needed at the source foremost in the combustion industry.

The total world energy consumption continues growing and the world energy mix continuous changing. There is a clear gradual shift in the energy fuel mix toward Renewable Energy Sources (RES). There is also a decrease in the use of oil and coal and an increase in the use of natural gas; in the coming decades however, oil and coal will continue to prevail and will continue to exacerbate climate change.

The global electricity sector is being transformed largely because of "decarbonization" with strong penetration of RES, digitization of the electrical system and participation in the market of decentralized energy resources. Consequently, the electricity sector faces new challenges such as electricity storage, smart grids/meters, security and controls.

The emerging energy landscape of individual countries also undergoes significant changes to adapt both to the framework of the European Union and World Policy, as well as to technological developments and national specificities. This will be discussed with reference to Greece.

### Short Bio

Professor Loucas G. Christophorou presently is a Permanent Member of the Academy of Athens (Chair of Physical Sciences – Experimental Physics). At the Academy he is the Director of the Office of Research in Experimental Physics, Chairman of the Academy's Energy Committee, Member of many committees, and represents the Academy at, and interacts with, Organizations of the World Academies of Science. Formerly he was at Oak Ridge National Laboratory, the University of Tennessee and the Institute of Standards and Technology in the USA. His research programs cover five decades, and deal with Atomic and Molecular Radiation Physics, and Chemical, Electron and Plasma Physics. His researches on the fundamental interactions of photons, electrons and ions with atoms and molecules in all phases of matter have had worldwide impact and formed the basis of many technologies, foremost in radiation detection, plasma processing, gaseous dielectrics for energy transmission and distribution, pulsed power, energy and environment.

## Invited Speakers



**Dr. Philippe Ciais**  
Associate Director, LSCE,  
France

### Short Bio

Philippe Ciais received a PhD in 1991 entitled “Holocene climate record of Antarctic ice cores”. In 1992 he was a post-doctoral fellow at NOAA in Boulder, Colorado, and investigated how  $^{13}\text{C}$  and  $^{18}\text{O}$  isotopes in atmospheric  $\text{CO}_2$  can be used to constrain terrestrial carbon fluxes. He also designed the first three-dimensional simulation model of  $^{18}\text{O}$  in  $\text{CO}_2$ , an isotopic tracer of the water cycle coupled with  $\text{CO}_2$  uptake by plant photosynthesis. From 2005 to 2013, Philippe Ciais devoted his time to the coordination of the preparation of Integrated Carbon Observation System (ICOS) large European research infrastructure. Going from national and European auditions, to technical preparation work, and the negotiation of the governance and funding leverage. At that time, Philippe Ciais also acted as co-chair of the GEO task force on integrated carbon observations. Philippe Ciais co-chaired of the Global Carbon Project(<http://www.globalcarbonproject.org/>) in 2009-14. He also acted as Convening Lead Author of the IPCC Working Group 1, for the Carbon Cycle chapter of the 5th IPCC Assessment Report. Philippe Ciais research activity during the last twenty years, mainly on the relationships between ecosystem  $\text{CO}_2$  fluxes and climate, combining terrestrial biosphere models with satellite and eddy-covariance observations. Currently 52 years old, Philippe Ciais has contributed more than 600 publications in A-ranking journals over the past 17 years. He was ranked as the most productive scientific author in the field of climate change, and among the authors who contributed to 5 of the 100 most influential papers in this field.

## Invited Speakers



**Fadi Comair**  
General Director of Hydraulic & Electrical Resources (Ministry of Energy & Water), Lebanon

### Short Bio

Mr. Fadi Georges Comair is a member of the Overseas Scientific Academy and the Academy of water in France.

A graduate of the universities of Texas, Harvard and French universities “l’Ecole Nationale des Ponts et Chaussées et Claude Bernard Lyon I” with a very honorable Doctorate in energy, he is also a diplomat (D.W.R.) at the American Academy of Water (AAWRE).

Dr. Comair has been the chief of service of the CERIB 1987-1993 in France. In 1993, he was appointed Chairman of the CA of the National Office of Litani River and then Director General of hydraulic and electrical resources of Lebanon, Director of the Research Center on Water, Energy and the environment at the University of Notre Dame and professor at the NYU (New York University).

President of MEDURABLE: an non-profit association( Act of 1901) located in Paris that intervenes in the field of sustainable development; and honorary President of the Mediterranean Network of Basin Organizations (REMOB).

Vice-president of the Euro-Mediterranean System Information on the know-how in the field of water (EMWIS).

Mr. Fadi Comair is a Knight of the National Order of the Legion of Honor and the National Order of Merit.



## Invited Speakers



**Richard N. Cooper**  
Professor of International Economics  
at Harvard University

### Pricing versus cap-and-trade the case for a global price

#### Abstract

A cap-and-trade system cannot be operated at a global level, thus vitiating its major potential advantage: first, because meaningful national targets cannot be negotiated and, second, because the allocation of valuable emission allowances creates irresistible conditions for favoritism by many political leaders, which would make them unacceptable to other countries. In contrast, a common world emissions tax, revenues to be kept by each country, would neutralize the problem of “competitiveness,” which will otherwise plague national actions for mitigation; in addition, it will generate revenue, which virtually all governments need.

#### Short Bio

Richard N. Cooper is Maurits C. Boas Professor of International Economics at Harvard University. He is a member of the Trilateral Commission, the Council on Foreign Relations, Aspen Strategy Group and the Brookings Panel on Economic Activity. He has served on several occasions in the US Government, as chairman of the National Intelligence Council (1995-97), Under-Secretary of State for Economic Affairs (1977-81), Deputy Assistant Secretary of State for International Monetary Affairs (1965-66), and senior staff economist at the Council of Economic Advisers (1961-63). He was also chairman of the Federal Reserve Bank of Boston (1990-92), and Vice-Chairman of the Global Development Network (2001-2007). As a Marshall Scholar, he studied at the London School of Economics, and earned his Ph.D. at Harvard University. His most recent books include *Boom, Crisis, and Adjustment* (with others), *Macroeconomic Management in Korea, 1970-1990* (with others), *Environment and Resource Policies for the World Economy*, and *What the Future Holds* (with others) and *Rebalancing the Global Economy* (with others).

## Invited Speakers



**Prof. Cramer Wolfgang**  
Med ECC

### Environmental change represents multiple risks for sustainable development in the Mediterranean Basin

#### Abstract

In the Mediterranean Basin, recent accelerated changes in the environment (climate, land use, pollution, biodiversity loss) have caused loss of life and damages to infrastructure and ecosystems. The future presents unprecedented risks for human well-being, socio-economic development, ecosystems and biodiversity. Policies for sustainable development need to aim for the mitigation of these risks but lack adequate information about the rates of environmental change and the combined risk they present to human society. For five interconnected impact domains (water, ecosystems, food, health and security), trends and scenarios point to significant risks during coming decades. More observations and better impact models exist for the Northern Mediterranean shores than for the South. This important bias is exacerbated by the large difference in financial resources available for adaptation and the development of resilience between north and south. A dedicated effort to synthesize existing scientific knowledge from all relevant disciplines is now underway to provide better understanding of the risks posed.

#### Short Bio

Professor Dr Wolfgang Cramer, environmental geographer and global ecologist, is a CNRS senior scientist at the Mediterranean Institute for Biodiversity and Ecology (IMBE), Aix-en-Provence (France), since 2012. His academic training is from the Universities of Gießen/Germany (geography) and Uppsala/Sweden (plant ecology). 1987-1992, he taught and conducted his research at the Department of Geography, Trondheim University (Norway). In 1992, he joined the Potsdam Institute for Climate Impact Research (PIK) in Germany, as head of the department “Global Change and Natural Systems”. In 2003, he was appointed full professor of global ecology at Potsdam University. The scientific contributions by Cramer’s research group (140+ papers) use modeling techniques to seek a broader understanding of biosphere dynamics at the global and continental scale, including aspects of natural and human disturbance as well as biodiversity. He contributes to the IPCC (Peace Nobel Prize 2007), co-chairs the Science Committee of ecoSERVICES and is chief editor of the Springer Nature journal *Regional Environmental Change*. He regularly serves as advisor of the German and French governments. 2017, he was elected associated member of the Académie d’Agriculture de France.

## Invited Speakers



**Dr Charles Ellinas**  
Nonresident Senior Fellow  
Global Energy Center, Atlantic Council

### Challenges to a smooth energy transition

#### Abstract

The world is going through a major and permanent transition from high-carbon to low-carbon energy, with a relentless increase in the use of renewables at the expense of fossil fuels. This is happening at a time of rising energy demand, especially in Asia and Africa, in response to rising populations and increasing standards of living in these countries.

There is a general consensus about achieving the 2015 Paris Agreement objectives in the longer term, but getting there is not without its challenges.

In this presentation I will talk about the challenges of ensuring a smooth transition, ie having sufficient and affordable energy for the world's needs, while embarking on a pathway to permanently reduce emission levels. My interest is what happens over the next 20-30 years, rather than beyond.

I will also talk about challenges being faced around the Eastern Mediterranean and the wider region in implementing Paris Agreement pledges and IDCs. I will talk about priorities, blockages, obstacles and mindsets and suggest how these could be overcome.

## Invited Speakers



**Laurent Fabius**  
Former Prime Minister,  
Chair of COP 21, France

### Short Bio

Born 1946 in Paris, Laurent Fabius is a former student of the Ecole Normale Supérieure of the Rue d'Ulm, holder of an Agrégation higher degree in French Language and Literature and a former student of the Ecole Nationale d'Administration. Member of the "Conseil d'Etat", Laurent Fabius occupied several governmental positions in France: Minister for the Budget (1981-1983), Minister of Industry and Research (1983-1984), Prime Minister (1984-1986), Minister for the Economy, Finance and Industry (2000-2002), Minister of Foreign Affairs and International Development (2012-2016). He was also Member of Parliament from 1978 to 2012, and served twice as President of the French National Assembly, from 1988 to 1992, and again from 1997 to 2000. In 2015, as President of the COP 21, he played a crucial role in the negotiations that led to the Paris Climate Agreement, the first universal agreement to fight against climate change. In February 2016, he was appointed President of the Constitutional Council of the French Republic.



**Anastasios Giannitsis**  
Former Minister of Interior,  
Foreign Affairs, Greece

**Short Bio**

Professor emeritus at the Kapodistrian University of Athens. He studied Law, Economics & Political Sciences in Athens and obtained his PhD in economics at the Free University of Berlin. He served at the Department of Economics from 1975 to 2011. He was Minister of Labour and Social Affairs, Alternate Minister of Foreign Affairs, Minister of Foreign Affairs and Minister of Interior (2000-2004 and 2011-2012); Member of the Board of Trustees at CREF, Cyprus; He has published many books and articles on economic, social and political issues. Recent publications: ‘Crisis management in Greece. The shaping of new economic and social balances’ (Hans Boeckler Stiftung, with St. Zografakis, 2018), “Inequalities, poverty and turmoil in the years of crisis” (with St. Zografakis, 2016), ‘The pension system and the crisis’ (2016), “Greece in Crisis” (2013). Recent articles: Reflections on Banking Union (2016), Fiskalkonsolidierung und Einkommensverteilung (2016), Linking structural and technological change to industrial recovery in Greece (with I. Kastelli, 2016), ‘Industrial Policy in Times of Crisis: The Case of Greece’ (with I. Kastelli, 2014). Fields of research: Development Economics, International Economics, European Integration, Economics of Technology and Technology policy, Industrial Structures and Policy.



**Filippo Giorgi**  
Head, Earth System Physics, International Centre for  
Theoretical Physics, Italy

**A review of climate change projections  
for the Mediterranean regions**

**Abstract**

The Mediterranean region has been identified as one of the most prominent “Climate Change Hotspots” of the world, i.e. a region particularly sensitive to global warming. Different generations of global climate model (GCM) projections for the 21st century have provided consistent indications of much drier and warmer climate conditions for the Mediterranean in the coming decades, especially during the warm seasons. Interannual variability is expected to increase, as well as the intensity and frequency of temperature and some precipitation extremes. These changes can have severe impacts on a range of ecosystem services and societal sectors. High resolution regional climate model (RCM) projections have also been conducted over the region as part of the MED-CORDEX and EURO-CORDEX programs, showing in some cases interestingly different local responses compared to the driving GCMs. In this paper I will review the most robust messages emerging from available GCM and RCM-based projections over the Mediterranean region and I will discuss outstanding issues still in need of substantial research and how these are being addressed by ongoing research programs.

**Short Bio**

Filippo Giorgi obtained a Ph.D. from the School of Geophysical Sciences of the Georgia Institute of Technology, Atlanta, Georgia, USA in 1986. From 1986 to 1998 he was a scientist at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, USA. Since 1998 he is at the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, where he is the head of the Earth System Physics (ESP) section. Giorgi is an international expert in climate modeling and climate change research, with main focus on the regional scale. He authored or co-authored over 300 papers in peer-reviewed scientific journals and is included in the 2001 list of most highly cited scientists in the Geosciences (which places him in the top 0.1% of this category). From 2002 to 2008 Giorgi was one of the vice chairs of Working Group I of the Intergovernmental Panel on Climate Change (IPCC), which won the 2007 Nobel Peace Prize. In 2018 Giorgi was awarded the Alexander von Humboldt medal of the European Geosciences Union (EGU) for his outstanding contribution to regional climate research and his outreach work towards the progress of science in developing countries.

## Invited Speakers



**Graves Arnault**  
Union for the Mediterenean

### Short Bio

September 2016 till - now: Climate Adviser – Secretariat of the Union for the Mediterranean, Barcelona, Spain (Sec-onded by the French Ministry of an Ecological and Inclusive Transition)

2012 - 2016: Senior Officer - Head of the Team « Energy-Cli-mate - Sustainable Buildings », Lille, France Cerema (French National Center for Studies on Risks, Mobility, and Urban and Country Planning)

2009 - 2012: Deputy Chief at the Regional Economic Ser-vice of the French Embassy in Moscow - Russia Counsellor for « Sustainable Development, Industry and Transport » Ministry of Ecology / Directorate for European and Interna-tional Affairs

2006 - 2009: Senior Officer – Chief Engineer - Ministry of Ecology / Directorate of «Pas-de-Calais », Boulogne-sur-Mer, France

2006: Promotion to the upper grade “Ingénieur Division-naire des Travaux Publics de l’État” (Chief engineer)

2005 – 2006: Project director for Transport and Energy ef-ficiency activities – Eastern Europe Engineering company « BCEOM » (EGIS group of companies), Guyancourt, France

2002 –2005: Project director – Russia - Engineering group of companies « SETEC », Moscow, Russia

1998 2002: Officer for Environment and Energy Efficiency - Attaché at the French Embassy in Moscow – Russia - Min-istry of Economy, Finance and Industry

1995 - 1998: Officer – Public Works Engineer – French Min-istry of Public Works / Directorate for Northern Region, Lille, France

1992 - 1995: Public works Engineer – French Embassy in Tashkent, Uzbekistan

### The Union for the Mediterranean main Climate Actions

#### Abstract

The Mediterranean region is one of the world’s climate change hotspots where the rise of average temperature by 1.5°C, compared to pre-industrial levels, the lower limit not to be surpassed as agreed through the Paris Agreement, is already being exceeded.

In line with the commitments made under the UfM Ministerial Declaration on Environment and Climate Change, adopted in Athens in March 2014, UfM Secretariat has established a spe-cific work program: it aims to support all UfM Member States in the implementation of the Paris Agreement and the prepa-ration of their NDCs by providing an accurate understanding of the UfM regional context and of possible synergies and complementarities in the region.

The work program comprises four main activities:

- Science-based consensus on climate impacts: The activity aims to provide a sound and comprehensive scientific basis for the development of nationally determined contribu-tion of at least one macro-ecosystem of the UfM region.
- Sharing of experience on national measures; this activity aims to provide exchange of information and best practi-ces on national climate measures related to mitigation and adaptation.
- Cooperation among financial institutions: Providing an overview on the amount of climate financing delivered in the UfM region; Assessing the current areas of actions of IFIs and donors; Identify needs and gaps.
- Addressing regional concerns in international fora: This activity aims to ensure that the specific concerns of the Euro-Mediterranean region regarding climate change is properly identified and addressed in international fora.

## Invited Speakers



**Joanna Haigh**  
Professor of Atmospheric Physics  
co-Director of the Grantham Institute

### Short Bio

Joanna Haigh is the co-Director of the Grantham Institute - Climate Change and the Environment at Imperial College London, having taken up this position in May 2014. For five years prior to that she was the Head of the Department of Physics at Imperial.

Joanna is also Professor of Atmospheric Physics and has published widely in the area of radiative transfer in the atmosphere, climate modelling and radiative forcing of climate change. Her work on how changes in solar activity may influence climate has been particularly influential.

She is a Fellow of the Royal Society, the Institute of Physics (IoP) and the City & Guilds and an Honorary Fel-low of Somerville College, Oxford and the Royal Meteorological Society (RMetS). She is also a past-President of the RMetS. She has been a Lead Author of a UN Intergovernmental Panel on Climate Change report, and shares a Nobel Peace Prize with several hundred others for that work. She has been awarded the IoP Chree Medal and Prize, and the RMetS Adrian Gill Prize, for her work on the interface between atmospheric science and solar physics, and was appointed CBE for her services to physics in 2013.

She is an enthusiastic teacher and communicator, participates in a wide range of community scientific activ-ities and media engagement. She is also Director of the Science and Solutions for a Changing Planet NERC Doctoral Training Partnership at Imperial College.

## Invited Speakers



**Prof. Helal Hany**  
Cairo University, Former Minister  
of Higher Education, Egypt

### Short Bio

Hany Helal is currently Professor of Rock Mechanics and Engineering Geology, Faculty of Engineering, Cairo University. He is an expert in Higher Education Reform, Science & Technology, Innovation policies and Entrepreneurship. He has a long experience in international cooperation, management and cultural activities. He is the Secretary General of the Steering Committee of Egypt-Japan Education Partnership (EJEP). He is the President of Senghor University in Alexandria and was the chairman of the board of trustees of the French University in Egypt, June 2013 – September 2017. He used to be the Minister of Higher Education and State for Scientific Research, January 2006 - February 2011 and former President of Senghor University, March 2004 - June 2010. In July 2005, he was appointed the Secretary General of the Education Development Fund, Egypt until September 2009. He worked as the Egyptian Cultural and Scientific Counselor in France, Belgium, Luxemburg and Switzerland, and the Director for Cultural, Educational and Scientific Office in the Egyptian Embassy, Paris, France, from June 1998 to September 2002. He was the National TEMPUS Coordinator (EU Higher Education Enhancement program), October 2002 – December 2005. He acted as UNESCO Consultant / Interim Administrative Director, International Centre for Synchrotron-Light for Experimental Sciences and Applications in the Middle East (SESAME), Jordan, from October 2002 to December 2005. He was a Program Specialist and National Professional Officer, Earth Sciences, UNESCO Regional Office for Science and Technology for Arab States, September 1993 – June 1998.

Hany Helal was graduated from mining engineering department, Faculty of Engineering Cairo University, in 1974. He got his 'Diplôme de Docteur Ingénieur', Earth Sciences (Rock Mechanics and Engineering Geology) from 'Ecole des Mines de Nancy, Institut National Polytechnique de Lorraine', Nancy, France, September 1979 – March 1982.

He is member of several committees and associations and has several publications in the fields of rock mechanics, engineering geology, cultural heritage preservation and restoration. He has developed strategic reform plans for Higher Education and Science and Technology in Egypt.

Hany Helal has received several awards, including the "Grand Cross of the Order of Merit of the Federal Republic of Germany", June 2008 and, the "Grade d'Officier dans l'Ordre des Palmes Académiques", Ministère de l'Education National, de l'enseignement Supérieur et de la Recherche, France, November 2005.

## Invited Speakers



**Prof. Massimo Inguscio**  
President of the Italian National  
Research Council (CNR)

### Facing climate change, a Mediterranean perspective

#### Short Bio

The scientific community is fully aware of ongoing climate changes and the dramatic role humans have in them. Yet, magnitude and rate of such change impact on human societies, economies and, ultimately, lives in regionally differentiated ways. The Mediterranean, a basin where Evaporation is larger than Precipitation and Runoff combined, is a hot spot of accelerated climate change; its waters are becoming warmer leading to more water vapour in the atmosphere and to "Medicanes", Mediterranean hurricanes. New wind patterns can increase the generation of freak waves, sea level rise is already enhancing coastal erosion and altered water cycle leads to increasing droughts and desertification in some areas, concentrating precipitations in others and potentially making river floods more severe. Accurate pan-Mediterranean real-time observation, modelling, open science and citizen science are tools for building scenarios that can help mitigating the impact of natural disasters and manage the environment with increased awareness.

### Short Bio

President of the Italian National Research Council (CNR), of which he had previously directed the Department of Physical Sciences, and President of the Council of Presidents of Public Research Bodies. Member of the National Academy of Lincei, has been President of the National Metrology Institute (NMI). He has been given the title of Grand Officer of the Order of Merit of the Italian Republic, awarded the Legion d'Honneur by the French Government, received the prize Enrico Fermi of Italian Physical Society, the Herbert Walther Award of the Optical Society of America and the German Physical Society and has been included in the Thomson-Reuters list of "most influential scientific minds" for his activities in atomic physics research close to absolute zero at LENS - European Laboratory for Non-linear Spectroscopy, University of Florence, of which he was director. He is author of more than 300 scientific papers which have been cited around 13000 times for an h-index of 57.

## Invited Speakers



**Dr Jarraud Michel**  
Secretary General Emeritus - World Meteorological Organization

### Short Bio

Education (University level):

1971 - 1974: Ecole Polytechnique (France) (Ecole Polytechnique is the one of the most prestigious University level scientific establishment in France)

1974 - 1976: Ecole de la Météorologie Nationale (France)

Professional experience:

1976 – 1985: Météo-France and ECMWF (European Centre for Medium-range Weather Forecast)

- Researcher in Numerical Weather Predictions (NWP) specialist of mathematical techniques for modelling the atmosphere. Played a major role in the development of the ECMWF operational numerical model, one of the leading NWP models in the world.

January 1986 – December 1989: Météo-France

- Director of French national forecasting division with responsibility for: General forecasting, including early warnings in case of extreme events; Aeronautical and Marine forecasting; Relations with national medias

January 1990 – December 1994: ECMWF (UK)

- Head of Operations Department and Deputy Director of ECMWF

January 1995 – December 2015: WMO (World Meteorological Organisation)

WMO is a specialised agency of the United Nations System with 191 Members, responsible for meteorology, climate, operational hydrology and related geosciences.

- Deputy Secretary General (1995-2003)
- Secretary General (2004-2015)
- Member of the CEB (Chief Executive Board) of the UN System

January 2012 – January 2016:

- Chair UN-Water, the coordination body for all water related issues in the UN System

Distinctions:

- Doctor of Science (Honoris Causa) of the Universidad Nacional Agraria « La Molina », Peru (2004)
- Honorary Professor of the Nanjing University of Information Science & Technology, Nanjing, China (2010)
- Honorary Doctor of the Yerevan State University of Architecture and Construction, Armenia (2013)
- Secretary General Emeritus WMO (from 2016)

## Invited Speakers



**Panos Kelamis**  
CEO, Cyprus Hydrocarbon Company, Cyprus

### Short Bio

Panos joined the Cyprus Hydrocarbons Company as CEO in October 2016. A graduate of University of Athens in Physics, he obtained his graduate degrees at Imperial College (MSc, DIC) and University of Alberta (PhD). His industrial career started with Western Geophysical in Houston and then with Dome Petroleum in Calgary. In 1985 he joined Saudi Aramco in Dhahran where he held technical and managerial positions, including chief geophysicist and chief technologist responsible for geophysical research and technology development. Recognized for his leadership/management skills and strong technical background Dr. Kelamis is a well-known author/speaker in the international Oil & Gas industry and advisor of Universities & Research Centers in North America, Europe and The Middle East. He was the Society of Exploration Geophysicists (SEG) 75th Anniversary Distinguished Lecturer in 2005 and served SEG as Vice President in 2006. In 2009 SEG bestowed on him Life Membership. He received EAGE's 2010 Nigel Anstey Award for his research efforts and innovation in Geophysics.

## Invited Speakers



**Thorsten Kiefer**  
Future Earth Secretariat, Paris

### Aiming for multiple goals with one shot - the Paris Agreement and the SDGs

#### Abstract

Recent international policy agreements on targets for climate mitigation (Paris Agreement) and on sustainable development (Sustainable Development Goals) are confronting societies with substantial challenges. They require deep transformations of our economies, infrastructures and behaviours, smart strategies for transformative actions, and highly integrative research that can provide the systemic knowledge to master these challenges. It is evident that MENA is one of those regions where the environmental and socioeconomic risks of unabated climate change are particularly high and action for mitigation and adaptation therefore particularly urgent. Globally, there are good reasons to be hopeful that our systems can be decarbonised at a pace of halving emissions by each decade, as proposed by the Carbon Law. Decarbonisation, however, is not an isolated challenge. The Sustainable Development Goals have embedded the climate issues into a framework of other environmental and socio-economic goals. Our collective responsibility will therefore be to implement measures that maximise co-benefits and minimize detrimental trade-offs between the goals. I will outline initiatives of research and innovation that may allow us to accelerate decarbonisation while also advancing our efforts towards achieving other sustainability goals.

#### Short Bio

Thorsten Kiefer is director of the Future Earth Global Hub in Paris, with its overall mission is to accelerate transformations to global sustainability through research and innovation. Thorsten's specific interests include the integration of climate research and action into the sustainability agendas. He is therefore cultivating Future Earth's collaboration with the Intergovernmental Panel on Climate Change, the United Nations Framework Convention on Climate Change, and the World Climate Research Programme, furthermore co-coordinates the Knowledge-Action Networks in Future Earth that address the topics of sustainable oceans and of resilience to emerging risks from climate extremes. Finally, Thorsten serves as the connector of Future Earth's Regional Centre for Middle East and North Africa with the global operation of Future Earth.

A paleoscientist at heart, Thorsten joined Future Earth after a decade as Executive Director of Future Earth's Past Global Changes programme. Thorsten's research background is in ocean sciences. He studied past oceanographic and climatic changes from deep-sea sediments as a researcher at the Universities of Kiel, Germany and Cambridge, UK.

## Invited Speakers



**Professor Dr. Phoebe Koundouri**  
Director of ICRE8, Greece

#### Short Bio

Professor Dr. Phoebe Koundouri holds a PhD (2000), MSc (1996) and MPhil (1995) in Economics from the University of Cambridge (UK). She is Professor in Economic and Econometric Theory and Applications (with special emphasis on Natural Resources, Energy and the Environment) at the School of Economics, Athens University of Economics and Business (Greece). She is the Founder and Scientific Director of the Research Laboratory: ReSEES: Research on Socio-Economic and Environmental Sustainability at the same University. Prof. Koundouri is also the Founder and Scientific Director of the International Center for Research on the Economy and the Environment (ICRE8, [www.icre8.eu](http://www.icre8.eu)). She is a Visiting Professor at the CCCEP: Centre for Climate Change Economics and Policy, London School of Economics (UK), an affiliated Professor at the ATHENA Research and Innovation Center, Greece, and co-chair of the United Nations Sustainable Development Network - Greece. She has published numerous books and monographs, and hundreds of scientific papers. She is a highly cited academic author ranked in the top 1% of all female economists in the world. She is co-editor of the official journal of the European Association of Environmental and Resource Economists, associate editor and editorial board member in 25 academic journals, elected Council Member (2012-2015) and Vice President of the European Association of Environmental and Resource Economists (2014-2015), Vice-Chair of the Scientific Advisory Board of the European Forest Institute. In the past she held academic positions at the University of Cambridge, University College London, University of Reading, and many visiting positions worldwide. She has been acting as an advisor to the European Commission, World Bank, OECD, UN, NATO, WHO, etc. and various Governments. Prof. Koundouri attracted millions in research funding, coordinated hundreds of research projects, organized numerous international conferences and supervised many PhD and post-doc students. Over the last two decades, Phoebe Koundouri has given keynote and public lectures all over the world, and received scholarships and prizes for academic excellence from various academic institutions and foundations. Her work has impacted policies relevant to natural resource management worldwide.

## Invited Speakers



**Prof. Markku Kulmala**  
University of Helsinki, Finland

### Short Bio

Academy Prof. Markku Kulmala (M) directs the Institute for Atmospheric and Earth System Research (INAR) at the University of Helsinki. Kulmala also acts as coordinator for the Finnish Centre of Excellence, appointed by the Academy of Finland first time in 2002 and for Nordic Center of Excellence, appointed by Nordforsk (CRAICC), which is the largest joint Nordic research and innovation initiative to date. Academician Kulmala together with Prof. Hari is the primary inventor of the SMEAR (Station for Measuring Ecosystem – Atmosphere Relations) concept. According to the ISI Web of Knowledge, M. Kulmala is in the first place in the Citation Rankings in Geosciences (since 1.5.2011). His H-index is 100. Prof. Kulmala has received several international awards such as the Smoluchowski Award (1997), the International Aerosol Fellow Award (2004), the Wilhelm Bjerkenes medals (2007), Fuchs Memorial Award (2010), Litke Medal (2015) and The Wihuri International Prize (2017). In 2015 he was acknowledged by a membership of the CASAD, Chinese Academy of Sciences, (CAS). Kulmala together with the Prof. Sergej Zilitinkevich is the initiator of the large scale multi-disciplinary Pan-Eurasian Experiment (PEEX) Program (<https://www.atm.helsinki.fi/peex/>).

## Invited Speakers



**Prof. Jos Lelieveld**  
Max Planck Institute, Germany

### Short Bio

Prof. Jos Lelieveld received a PhD from the Faculty of Physics and Astronomy at Utrecht University, the Netherlands (1990). He was at Stockholm University (1991) and the University of California, San Diego (1992), and became professor at Wageningen University in 1993 (Air Quality), and at Utrecht University in 1995 (Atmospheric Physics and Chemistry). In 2000 he was appointed director at the Max Planck Institute for Chemistry in Mainz, Germany. He is also professor in Atmospheric Physics at the University of Mainz. Since 2008 he is part-time institute professor at the Cyprus Institute.

Further, he is spokesperson of the Paul Crutzen Graduate School and associated editor of several scientific journals. He published more than 400 peer-reviewed articles of which many are highly cited. He is a member of the German national academy of sciences Leopoldina, and the International Silk Road Academy of Sciences, China. He received many international distinctions, including an honorary doctorate by the University of Crete. His research addresses atmospheric chemistry, aerosols, climate change and planetary health.



## Invited Speakers



**Dr. Theodoulos Mesimeris**  
 Dep. of Environment, Cyprus

### Short Bio

Dr Theodoulos Mesimeris is a Senior Environment Officer and Head of “Climate Action and Energy Unit” at the Department of Environment – Ministry of Agriculture, Rural Development and Environment of Cyprus.

Theodoulos Mesimeris got his PhD in Chemical Engineering from the National Technical University of Athens in 2010. He has also two MSc one in Environmental Management from the European Association for Environmental Management Education and the other in Chemical Engineering. His Bachelor in Engineering was also awarded by National Technical University of Athens in 1995.

He has been the Chair of the European Working Party for International Environmental Issues on Climate Change during Cyprus’ Presidency on the second semester of 2012. He was the Chair of the Cyprus Chemical Engineers Association and has extensive experience in multitask projects. He has participated in a number of private, governmental and European projects.

As Head of the Department of Climate Action and Energy Unit is:

- Chairing the Ad-hoc Technical Committee for the evaluation of environmental impacts of energy related projects including oil and gas activities

- Implementing the Cyprus Government’s Climate Change and Energy Policy as well as the Environmental Policy
- Participating in processes for the harmonization of Cyprus with the European Union in the fields of Climate Change, Energy and Environment
- Coordinating activities and programs related to the Climate Change, Energy and Protection of the Environment
- Participating in technical committees for the evaluation of Environmental Impact

### Assessment Studies

He has participated in national, regional and international Conventions, Committees, and Conferences related to the Climate Change and Environment and actively contributed to Environmental Awareness-raising, sensitization and education of the public.

Dr Mesimeris has played an important role in the promotion of new legislation for Climate Change and environmental protection. He has also an advisable influence on matters concerning energy as well as oil and gas activities.

## Invited Speakers



**Rabi H. Mohtar**  
 Dean Faculty of Agriculture and Food Science,  
 American University of Beirut, Lebanon

### Climate change impact on water and food and the role of the water energy food nexus

#### Abstract

The presentation starts with an overview of the regional climate change issues and how it affects the water, energy and food sectors. A framework towards adaptation and resilience will be presented with overview of associated challenges and opportunities. The talk will conclude with the role of water energy food nexus in addressing the primary resources security under Climate Change for the Arab and eastern Mediterranean countries.

### Short Bio

Rabi H. Mohtar, Dean, Faculty of Agricultural and Food Sciences, American University of Beirut, and TEES Research Professor, Departments of Biological and Agricultural Engineering and Zachry Civil Engineering at Texas A&M University, where he founded the Water-Energy-Food Nexus Initiative and serves as an Advisor to its Energy Institute. Mohtar was founding executive director of the Qatar Environment and Energy Research Institute (QEERI), Qatar Foundation. He is adjunct professor at Texas A&M-Qatar and at Purdue University, where he was the inaugural director of Global Engineering Programs and co-founded the Division of Environmental and Ecological Engineering. Mohtar’s research focuses on developing analytic frameworks linking science and policy toward enabling better decisions for a more sustainable future. Mohtar’s groundbreaking work includes: pedostructure characterization of the soil-water medium, non-traditional water use for agriculture, and applications for sustainable, integrated water management. Mohtar is a Governor of the World Water Council, a Senior Non-resident Fellow at OCP Policy Center, a Fellow of the American Society of Agricultural and Biological Engineers (2018), and a Distinguished Alumnus of the American University of Beirut.



### Three decades of climate change science: Focus on the Mediterranean Region

#### Abstract

This presentation will be dedicated to the Intergovernmental Panel on Climate Change (IPCC) - the UN body for assessing the science related to climate change. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 and this year is celebrating its 30th anniversary. Since its inception the IPCC has produced five comprehensive Assessment Reports and several Special Reports on specific topics. The IPCC has also produced Methodology Reports, which provide practical guidelines on the preparation of greenhouse gas inventories for the inventory reporting requirements of Parties to the United Nations Framework Convention on Climate Change (UNFCCC). For thirty years now IPCC science has provided the foundations for global processes and actions. The IPCC First Assessment Report in 1990 provided the basis for the agreement of the Framework Convention on Climate Change in Rio just two years later and the last Fifth Assessment Report (AR5) for the Paris Agreement in 2015. The IPCC is currently in its Sixth Assessment cycle, during which it will produce three Special Reports, a Methodology Report and the Sixth Assessment Report.

### Dr Abdalah Mokssit Secretary of the Intergovernmental Panel on Climate Change

This presentation will focus on climate change science with focus on the the main finding of the fifth assessment report as well as the current process handled during the 6th assessment cycle. Including the 3 special reports: the 1.5, the Climate change and land and the climate change and Ocean and cryosphere. Some emphasis will be made on the Mediterranean region and how the necessary downscaling medullisation tools are implemented

The Fifth Assessment Report found that warming trends and increasing temperature extremes have been observed across most of the mediterranean region, water scarcity and food security are expected to be challenges. One of main messages of the AR5 is that we have the means to limit climate change and build a more prosperous, sustainable future New research has been published since the AR5 and will be assessed during the AR6.

The presentation will also look at the preparation of the full Sixth Assessment Report and the three working group contributions on different aspects of climate change looking also at issues relevant to regional (Mediterranean) aspects . The outlines of these reports have been approved and for instance the Working Group I report will look among other things at the changing state of the climate system, including the large-scale indicators of observed change in the atmosphere and land as well as weather and climate extreme events in a changing climate including droughts. The Working Group II report will look among other things at the risks, ad-

aptation and sustainability for systems impacted by climate change including terrestrial and freshwater ecosystems, food, fiber, health and wellbeing as well as will look specifically at the world regions and the risks and possible measures for adaptation specific to them. Working Group III has a dedicated chapters with relevance sectors well present in Mediterranean region. Such as agriculture, Forestry, and Other Land Use. The three Working Groups contributions will be ready in 2021, and the full AR6 will be completed with a Synthesis Report in 2022, in time for the first Global Stocktake, a periodic review of collective progress towards achieving the long-term goals of the Paris Agreement.

#### Short Bio

Mr Abdalah Mokssit is the Secretary of the Intergovernmental Panel on Climate Change (IPCC). He has a long experience with the IPCC and the World Meteorological Organization (WMO). He is a former Vice-Chair of IPCC Working Group I, which deals with the physical science basis of climate change. He is also a former Third Vice-President of the World Meteorological Congress of WMO and was member of several WMO commissions including the Commission on Climatology and the Commission for Basic Systems.

Mr Mokssit, born in Azrou, Morocco in 1961, obtained his Masters Degree in Mathematics from the University of Rabat in 1983, his graduate degree in Meteorology from the National School of Meteorology of Toulouse, Météo-France in 1985 and second graduate degree in Telematics and Information Systems from SUPELEC in France in 1987. He also has a diploma of High Management Course of the Ministry of the Public Works of Morocco.

Mr Mokssit has an extensive experience in strategic management. In July 1987, he joined the Centre of Studies and Information Processing in Morocco and became the Chief of dynamic meteorology service of Morocco in 1991. In July 1992, he became the Head of a Division in the National Centre for Climate and Meteorological Research (CNCRM) in Morocco and in January 2005 was appointed as the Deputy Director of the National Meteorological Department of Morocco and Head of the CNCRM. In February 2009, Mr Mokssit was appointed as the Director of the National Meteorological Department of Morocco.

At the National Meteorological Service of Morocco, he has focused on upgrading forecasting, from nowcasting to long-range forecasting; improving warning and crisis management for extreme events; and generating regional models of climate change scenarios, climate change sector impact studies and services for end users. In May 1996, His Majesty, the late King Hassan II of Morocco awarded the «National Order of Merit, Excellent Class» to Mr Mokssit for his contribution to the modernization of the National Meteorology. He was also awarded the medals “Chevalier” and “Commandeur” personally by His Majesty King Mohamed VI.

Mr Mokssit has been active in international cooperation with regional and international centres such as the European Centre for Medium-Range Weather Forecasts, the African. Centre of Meteorological Applications for Development (ACMAD) and the ALADIN, a European group of countries working on numerical weather prediction. Mr Mokssit has received the medal Le Verrier in recognition of his work achieved on expanding the use of the PERIDOT model to North Africa and Eastern Europe and the initiation of the international project ALADIN.

## Invited Speakers



**Kerstin Neumann**  
Leibniz-Institute of Leibniz Institute of Plant  
Genetics and Crop Plant Research (IPK), Germany

### Non-invasive phenotyping is a valuable tool to genetically dissect components of drought tolerance in cereals

Future yield improvement is hampered by biotic and abiotic stresses due to climate change and accordingly, wheat and barley yields in Germany showed a strong fluctuation during the last 15 years, reflecting the impact of climate change. One factor is the increased frequency and severity of drought stress events, especially in spring during the vegetative growth phase - affecting the formation of biomass. In our studies, a pot based imaging system was used to evaluate daily biomass assessed in wheat and barley collections. The experimental setup comprised a drought period starting in the tillering stage with watering regime corresponding to 10% field capacity (well-watered: 90%) and a recovery period up to the start of flowering. We obtained a high heritability over the whole observation period, allowing to conduct genome-wide association scans (GWAS) for biomass. Moreover, modelling of biomass curves revealed further traits involved in development and drought tolerance. Different genetic loci were identified for early and later vegetative biomass under well-watered conditions. Comparison of both treatments revealed constitutive biomass QTL that are shared between drought and well-watered treatments and stress-adaptive QTL that occur only under or after the influence of drought stress. Results point at candidate genes involved in plant growth hormone regulation and phenology. Although plants were quickly recovering upon the end of drought, the results demonstrate a

strong effect of drought on grain yield. We observed a general reduction of ~30% in grain yield in wheat and barley, caused mainly by reducing the number of seeds per plant. In conclusion, non-invasive phenotyping under strictly controlled conditions has the power to provide a powerful tool to investigate the impact of drought on sensitive growth parameters by mimicing very specific climate scenarios.

#### Short Bio

Kerstin Neumann is a scientist working in the Leibniz-Institute of Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) in Germany. Her major interest is the valorization of genetic resources by uncovering the allelic variation for traits in cereals related to stress tolerance. She studied biology at the University of Potsdam and graduated in 2004. In 2005 she joined the IPK as a PHD student and earned a PhD in Agriculture at the University of Halle in 2011, having studied drought tolerance in barley and applied genome-wide association scans (GWAS) for genetic analysis. After her PhD she continued in that topic now in the context of non-invasive high-throughput phenotyping (HTP). She established and applied this technology in wheat and barley to map abiotic stress tolerance and to get insights into the genetic architecture of drought tolerance in both crops. Kerstin Neumann teaches at the Martin Luther University and is a member of the German Plant breeding association (GPZ).

## Invited Speakers



**George A. Papandreou**  
Former Prime Minister of Greece  
President of Socialist International

#### Short Bio

George A. Papandreou is former Prime Minister of Greece (2009-2011). First elected as member of Parliament at 1981, he served in many governmental posts. As Minister of Education (1994-1996), he founded the Greek Open University and promoted multicultural programs. As Minister of Foreign Affairs (1999-2004), he promoted peace building and European integration in the Eastern Mediterranean and the Balkans and managed a breakthrough in Greek-Turkish relations. Since 2015, he has founded with Ipek Cem the Cem-Papandreou Peace Award. A pioneer of sustainable development throughout his public service career, he is member of the Global Leadership Council of the United Nations Sustainable Development Solutions Network. He is currently the leader of the Party of Democratic Socialists, member of the coalition of Greek progressive parties, Movement of Change. Since 2006, he is the President of the Socialist International, the largest global political family.

## Invited Speakers



**Dr Taleb Rifai**  
Former Secretary-General of the World  
Tourism Organization (UNWTO)

### Short Bio

Taleb Rifai was the Secretary-General of the World Tourism Organization (UNWTO), until 31 December 2017. His post as Secretary-General began on 1 January 2010 for a four-year term and was elected for a second four-year term, starting January 2014, by the 20th Session of UNWTO General Assembly held in August 2013.

Mr. Rifai has an extensive background in international and national public service, the private sector and academia. Positions held include: Assistant Director General of the International Labour Organization (ILO), several ministerial portfolios in the Government of Jordan (Minister of Planning and International Cooperation, Minister of Information and Minister of Tourism and Antiquity), CEO of Jordan's Cement Company, Director of the Economic Mission to Washington DC and Director General of the Investment Promotion Corporation of Jordan.

Mr. Rifai was involved in research, teaching and practicing Architecture and Urban Design in Jordan and the USA. He has a Ph.D. in Urban Design and Regional Planning from the University of Pennsylvania in Philadelphia, an M.A. in Engineering and Architecture from the Illinois Institute of Technology (IIT) in Chicago, and a B.S.c. in Architectural Engineering from the University of Cairo in Egypt.

## Invited Speakers



**Dr Vladimir Ryabinin**  
Executive Secretary, Intergovernmental  
Oceanographic Commission of UNESCO

### Oceanographic dimension of the climate change in the Mediterranean

Atmospheric, terrestrial and ocean dimensions of the climate change are intrinsically connected. Healthy ocean moderates the warming and provides a plethora of other life-supporting functions for humans. However, warming (including heat waves), acidification (“the other side” of the carbon problem), deoxygenation, pollution, habitat destruction, invasive species, and unsustainable modes of fishing and aquaculture have an increasingly strong impact on the ocean health. According to the First United Nations World Ocean Assessment (2016), the humankind is running out of time to start sustainably managing the ocean. Major changes already occur in ecosystems of the Mediterranean Sea in response to climate change and other anthropogenic factors. The United Nations Decade of Ocean Science for Sustainable Development (2021-2030) will provide a platform for globally consistent and yet regionally focussed science-based actions to address the decline of ocean health, globally and in the Mediterranean Sea.

### Short Bio

Dr Ryabinin, the Executive Secretary of the Intergovernmental Oceanographic Commission (IOC) of UNESCO and Assistant Director-General of UNESCO, is an oceanographer, climatologist, and marine engineer. Previously he worked as a scientist and head of a laboratory at the Hydrometcentre of Russia, a lecturer at the Moscow State University, the Executive Director of the International Ocean Institute, and senior officer of the World Climate Research Programme.

His own scientific research has focussed on turbulence, ocean thermocline and its variability, physical processes of relevance for weather prediction, numerical mathematics, ice processes, shelf engineering, marine prediction, and wind-wave modelling. He contributed to international coordination of climate research related to polar matters, ocean, cryosphere, sea-level, stratospheric processes, atmospheric chemistry, and climate services.

Dr Ryabinin has been a part of the design teams for the following major research and development initiatives: USSR numerical medium-range (weekly) weather prediction system, Russian Federal Program “World Ocean”, national marine prediction and services system, Global Ocean Observing System, Joint Technical Commission of IOC and World Meteorological Organization for oceanography and marine Meteorology, International Polar Year, and UN Decade of Ocean Science for Sustainable Development (2021-2030).

## Invited Speakers



**Hervé Sabourin**  
Regional Manager of the A.U.F in the Middle-East,  
Former Vice-President of the University of Poitiers,  
France

### Short Bio

Hervé Sabourin has a PhD in Mathematics and is Professor of Mathematics at the University of Poitiers in France. Since September 2014, he is the Director of the Middle-east office of the “Agence Universitaire de la Francophonie” (A.U.F), an Worldwide Association of Francophone Universities – 850 University members covering 110 countries.

From 2007 to 2014, he was:

- Vice-Dean of the Faculty of Science of Poitiers, in charge of International Relations and Communication (2007-2012)
- Board member of the University of Poitiers (2008-2012).
- Vice-President of the University of Poitiers in charge of International Relations(2010-2012)
- Director for International Relations of “FIGURE” ( [www.figure-network.org](http://www.figure-network.org) ), a Network of 15 French Universities for Engineering (2012-2014).He is an European Expert for EACEA (Education Audiovisual and Culture Executive Agency) since 2013 and in charge of assessment and promotion of European Education programmes.

## Invited Speakers



**Prof Jeffrey D. Sachs**  
Columbia University, USA  
Director of UN SDSN

### Short Bio

Jeffrey D. Sachs is a world-renowned professor of economics, leader in sustainable development, senior UN advisor, bestselling author, and syndicated columnist whose monthly newspaper columns appear in more than 100 countries. He is the co-recipient of the 2015 Blue Planet Prize, the leading global prize for environmental leadership. He has twice been named among Time Magazine’s 100 most influential world leaders. He was called by the New York Times, “probably the most important economist in the world,” and by Time Magazine “the world’s best known economist.” A recent survey by The Economist Magazine ranked Professor Sachs as among the world’s three most influential living economists of the past decade.

Professor Sachs served as the Director of the Earth Institute from 2002 to 2016. He was appointed University Professor at Columbia University in 2016, and also serves as Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University. He is Special Advisor to United Nations Secretary-General António Guterres on the Sustainable Development Goals, and previously advised both UN Secretary-General Ban Ki-moon Sustainable Development Goals and Millennium Development Goals and UN Secretary-General Kofi Annan on the Millennium Development Goals. He is a Distinguished Fellow of the International Institute of Applied Systems Analysis in Laxenburg, Austria. Sachs is Director of both the Center for Sustainable Development, and the UN Sustainable Development Solutions Network under the auspices of UN Secretary-General Ban Ki-moon.

Prior to joining Columbia, Sachs spent over twenty years as a professor at Harvard University, most recently as the Galen L. Stone Professor of International Trade. A native of Detroit, Michigan, Sachs received his B.A., M.A., and Ph.D. degrees at Harvard.

## Invited Speakers



**Professor Euripides Stephanou**  
Vice President for Research of Cyl, Cyprus

### Short Bio

He majored in Chemical Engineering (Univ. Neuchâtel). He was awarded a MSc in Environmental Chemistry (Univ. Genève) and a PhD in Organic Chemistry (Univ. Zurich). After his PhD he worked as Researcher, Lecturer and Senior Researcher at the Swiss Federal Institute of Technology of Zurich, the University of Genève and Stanford University. He joined the University of Crete at 1986 and served it as Rector, Dean of the Faculty of Science and Engineering and Chairman of the Department of Chemistry. His research focuses on Atmospheric Aerosols, Biogeochemical Cycles of Organic Pollutants, and Human Exposure to Toxic Contaminants. He acted as Coordinator and Principal Investigator in numerous European Projects. He is the author and co-author of more than 125 peer-reviewed papers in leading international scientific journals (e.g. Nature, Science). His work found a broad echo in the scientific community and international and scientific press (e.g. New York Times; Chemical & Engineering News). He served as Editor in the Journal of the Air and Waste Management Association and the Environmental Science and Pollution Research. He was panel member of the European Research Council (2007-2015). He received the “Ecopolis 2006 Award” for “scientific achievements in Environmental Research”.

## Invited Speakers



**Christos Stylianides**  
EC Commissioner Humanitarian Aid & Crisis Management

### The challenge of Climate Change and the rescEU proposal to strengthen the European system of civil protection

#### Abstract

The Commissioner will speak about the new reality and the dramatic increase of natural disasters and the European response through the rescEU proposal. rescEU aims at enhancing the European capacities to respond effectively to these challenges and build a European culture of prevention and preparedness.

### Short Bio

Christos Stylianides is the European Commissioner for Humanitarian Aid and Crisis Management since November 1st, 2014. On October 24th, 2014 he was appointed by the European Council EU Ebola Coordinator.

He was elected Member of the European Parliament in the May 2014 European elections where he served until October 31st 2014. He was twice appointed Government Spokesperson of the Republic of Cyprus (in 2013-2014 and in 1998-1999). He was responsible for the formulation and coordination of the Government’s communication strategy and was the head of the Government’s Press and Information Office.

During the period 2006-2013 he served as a Member of the Cyprus House of Representatives (elected in 2006 and 2011). During his tenure he served as Vice-Chair of the Committee on Foreign and European Affairs (2011-2013) and member of the Committee on European Affairs, the Committee of Internal Affairs and the Committee of Employment and Social Affairs (2006-2011). Between 2006 to 2011 he was a member of the OSCE Parliamentary Assembly and he was elected Member of its Bureau in 2012.

## Invited Speakers



**Petteri Taalas**  
Secretary General Of The World Meteorological Organization (WMO)

The climate in 2017: focus on the Mediterranean and the Middle East

### Abstract

In the past 25 years, atmospheric concentrations of CO<sub>2</sub> have risen from 360 ppm to more than 400 ppm. Climate change is also increasingly manifested in sea level rise, ocean acidification and heat, melting sea ice and other climate indicators. The global mean temperature in 2017 was approximately 1.1 °C above the preindustrial era, more than half way towards the maximum limit of temperature increase of 2 °C sought through the Paris Agreement. The year 2017 was the warmest on record without an El Niño event, and one of the three warmest years behind the record-setting 2016. The Mediterranean and the Middle East regions are particularly affected by climate change, with increasingly dry conditions – including in winter – and consequent decreasing water availability and drought, summer heatwaves and wildfires. This is having significant socioeconomic impacts on these regions and calls for innovative solutions for mitigating climate change and fosters climate-smart economy

### Short Bio

Petteri Taalas, born 1961 in Helsinki, Finland

- Secretary-General of the World Meteorological Organization 2016- (United Nations specialized agency on weather, climate and water, 191 Members, HQ in Geneva)

- Director of WMO Development and Regional Activities department 2005-07
- Director-General of Finnish Meteorological Institute 2002-05 & 2007-2015 (Government atmospheric, marine and space research and service institute with 350 scientists)
- Research professor, head of research and scientist at FMI 1986-2002 (Topics global change, satellite programs, ozone, UV radiation & air quality)
- PhD in meteorology 1993, Helsinki University department of physics, docent at University of Eastern Finland 1997-
- Chairman of the board of University of Eastern Finland 2009-15 (15 000 students, 2600 employees)
- Chairman of EUMETSAT Council 2010-14, Chairman of EUMETNET Council 2003-05
- Delegate of Finland to IPCC, chairman of national IPCC committee 2008-15
- Member of Fortum energy company board of directors 2014-16
- Member of Finnish Science Academy 2009- and Technology Academy 2015-
- Honorary doctor of TERI University, New Delhi 2016
- Honorary member of Chinese Science Academy on Meteorology 2015
- Academician at the Eurasian Science Academy 2011
- Military service at Naval Academy 1981, reserve Lieutenant-Commander

## Invited Speakers



**Dr. Khaled Toukan**  
Director General SESAME, Jordan

Jordan's Energy Profile in Transition

### Abstract

Jordan, a country with limited access to natural resources (especially water and fossil fuels), is facing an energy problem and significant challenges in planning a sustainable energy future.

Jordan relies on importing energy resources to meet its domestic energy demand for fossil fuels. These energy imports account for more than 40% of the government's budget. Jordan's total primary consumption is entirely focused on fossil fuels, and its installed capacity is also principally fired on gas and oil.

The uncertainty and vulnerability of energy supplies and increasing costs are severely affecting the growth of Jordan's economy and security. Hence, the development of secure alternative energy supplies is a top priority for the country.

The Jordanian government is implementing plans to boost the contribution of renewable sources to a tall target of 10% of primary energy demand by 2020. Even with increasing population, especially due to influx of refugees, Jordan still plans to achieve a 20% reduction of primary energy consumption by 2020.

The presentation will address the challenges and the opportunities of energy de-carbonization in Jordan, whether they are renewables or nuclear energy. It will provide an assessment of Jordan's efforts in building its energy infrastructure and meeting the above challenges.

### Short Bio

Dr. Khaled Toukan is regarded as among the most important academic and scientific figures in Jordan. Dr. Toukan obtained his B.E. in Electrical Engineering from the American University of Beirut, M.Sc. in Nuclear Engineering from the University of Michigan and his Ph.D. in Nuclear Engineering from the Massachusetts Institute of Technology in USA. Dr. Toukan was appointed as the President of Al-Balqa Applied University, Minister of Education, Minister of Higher Education and Minister of Energy. During his term as Minister of Education, Dr. Toukan launched the "Education Reform for the Knowledge Economy" (ERfKE) Project throughout all schools in Jordan. ERfKE has had a big impact on the improvement of Jordan's national scores in "Trends in International Mathematics and Science Study" (TIMSS). Also, Dr. Toukan served as the Chair of Board of Trustees of the University of Jordan

Currently Dr. Toukan is the Chairman of Jordan Atomic Energy Commission and Director of the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) Center. He also served as a member of IAEA's SAGNE Advisory Group since 2016.

Dr. Toukan holds several distinguished international and national medals of honour and is the winner of several awards and prizes. He has also been selected as one of Nature's ten people who mattered for 2017.

## Invited Speakers



**Androulla Vassiliou**  
Former EU Commissioner for Health, Education,  
Culture, Multilingualism & Youth, Cyprus

### Short Bio

Androulla Vassiliou was the European Commissioner for health from 2008-2010. From 2010- 2014 she was the European commissioner for Education, Culture Multilingualism and Youth. During this time she was a leading force in the Erasmus+ Programme. Before being appointed as a member of the European Commission, Vassiliou was actively involved in the politics of her home country, Cyprus, as member of the House of Representatives (1996-2006) and before that, a practicing lawyer. She had studied Law and International Affairs in London. Vassiliou is the President of the High Council of the 'European University Institute' in Florence, a member of the Board of Trustees of the 'Cyprus Institute' and of the 'European University of Cyprus' . She is also Chair of the Board of Trustees of the 'Bank of Cyprus Oncology Centre' and VP of 'Europa Nostra' the leading European NGO fighting for the support and protection of European Cultural heritage.

## Invited Speakers



**Dr. Lassina Zerbo**  
Executive Secretary  
Preparatory Commission for the Comprehensive  
Nuclear-Test-Ban Treaty Organization

### Short Bio

Dr. Lassina Zerbo has been the Executive Secretary of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) since August 2013. A geophysicist by training, he previously served as Director of the CTBTO International Data Centre. Zerbo has been instrumental in strengthening the CTBTO as the world's centre of excellence for nuclear test-ban verification, as well as in advancing efforts towards the entry into force of the Comprehensive Nuclear-Test-Ban Treaty. During a professional career spanning 25 years, Zerbo has developed expertise ranging from scientific and technical competencies to results-based management and multilateral diplomacy. He has been recognized with numerous international awards, including the American Association for the Advancement of Science 2018 Science Diplomacy Award, Presidential Medal on the 25th anniversary of the Republic of Kazakhstan, Grand Cross in the Chilean Order of Bernardo O'Higgins, and Special Honorary Citizenship of the City of Hiroshima. He is a member of several think tanks on energy, science, technology and development, and peace and security, and was a member of the World Economic Forum and Vice-Chair of the Global Agenda Council on Nuclear Security from 2014-2016.

### Innovative Solutions to Climate Change: the Contribution of the Comprehensive Nuclear-Test-Ban Treaty Organization

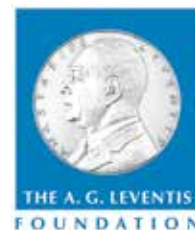
#### Abstract

The CTBT bans nuclear explosions globally, thus playing a major role in preventing the massive climate impacts caused by such explosions. With monitoring stations worldwide, the CTBTO has a unique expertise in the application of its four International Monitoring System technologies: seismic, radionuclide, hydroacoustic and infrasound.

In addition to its use in nuclear test verification, scientists and institutions can make use of the data from these technologies for scientific studies, including in the field of climate change. The ability of the system to track atmospheric disturbances, volcanic eruptions, severe storms or other large scale turbulence, provides a way to improve weather forecasts and, by using nearly two decades of accumulated data, track climate change. Data can also be used for systematic research on ocean processes and marine life in the context of climate change. The CTBTO promotes and facilitates the full of its data, in the Mediterranean, Middle East and throughout the world, in early warning or global monitoring systems with relevance for climate resilience and climate change studies.



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Secretary-General Emeritus, World Meteorological Organisation

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Nobel Prize in Chemistry, 1995

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Founding Director of the Potsdam Institute for Climate Impact Research, Germany

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Imperial College London (ICL), UK

Co-Director, Grantham Institute for Climate Change & Environment, ICL, UK

**Prof. Khaled Toukan**

Former Minister of Higher Education, Jordan

Director General of SESAME, Jordan

**Ms. Connie Hedegaard**

Former European Union Commissioner for Climate Action

Chair of the COP15 in 2009, Copenhagen, Denmark

**Ms. Androulla Vassiliou**

Former European Union Commissioner for Health, and Education, Culture, Multilingualism & Youth

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Director of EEWRC, The Cyprus Institute, Cyprus  
CNRS Research Director, France

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Vice-Chair, SolarPACES TCP, International Energy Agency

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Director General, Kuwait Institute of Scientific Research, Kuwait

**Prof. George Christophides**

Imperial College London, UK; and The Cyprus Institute, Cyprus

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Weizmann Institute of Science, Israel

**Prof. Philippe Ciais**

Associate Director, Laboratoire des Sciences du

Climat et de l'Environnement, France

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**DAY 1**

Friday 18<sup>th</sup> May 2018

**SCIENTIFIC PROGRAMME**

SESSION #1 - "The Issue & The Challenge"
COFFEE BREAK
SESSION #2 - "The Scientific Basis"
Panel Discussion: "The Scientific Basis"
LUNCH BREAK
SESSION #3 - "Impacts"
SESSION #4 - "Challenges"
LUNCH BREAK
Panel Discussion: "Impact and Challenges"
Conference Dinner

**DAY 2**

Saturday 19<sup>th</sup> May 2018

**SCIENTIFIC PROGRAMME**

SESSION #5 - "Strategy: Mitigation and Adaptation"
Panel Discussion: "Mitigation and Adaptation"
LUNCH BREAK
SESSION #6 - "Policy Challenges & Policy Options"
Panel Discussion: "Policy and Migration - Addressing the Challenges"
LUNCH BREAK
SESSION #7 - "Concluding Session"
End of the Conference



07:45-08:45	REGISTRATION & WELCOME COFFEE
08:45-09:35	SESSION #1 - "The Issue & The Challenge" - Chairperson: Dan Olof RISKA
	<p><b>Costas PAPANICOLAS (Cyl)</b> Welcoming address</p> <p><b>Laurent FABIUS (Former Prime Minister, France)</b> "Action against climate change: where do we stand?"</p> <p><b>Nikos ANASTASIADES (President of the Republic of Cyprus)</b></p>
09:35-10:00	COFFEE BREAK
10:00-11:40	SESSION #2 - "The Scientific basis" Chairperson: Euripides STEPHANOU (Cyl)
	<p><b>Petteri TAALAS (WMO)</b> "The climate in 2017: focus on the Mediterranean and the Middle East"</p> <p><b>Abdallah MOKSSIT (IPCC)</b> "Three decades of climate change science : Focus on the Mediterranean Region"</p> <p><b>Vladimir RYABININ (UNESCO-IOC)</b> "Oceanographic dimension of the climate change in the Mediterranean"</p> <p><b>Filippo GIORGI (ICTP)</b> "A review of climate change projections for the Mediterranean regions"</p> <p><b>Nikos MIHALOPOULOS (NOA)</b> "Mediterranean and Middle East air pollution in a changing climate"</p>
11:40-12:40	Panel Discussion #A: "The Scientific basis"
	<p>Moderator/Convener : <b>Michel JARRAUD (Former WMO)</b> Participants: <b>P. CIAIS, M. KULMALA, P. TAALAS, A. MOKSSIT, V. RYABININ, N. MIHALOPOULOS, E. STEPHANOU, F. GIORGI</b></p>
12:40-13:40	LUNCH

13:40-15:00	SESSION #3 - "Impacts" Chairperson: Silas MICHAELIDES (former DoM, Cyl)
	<p><b>George CHRISTOPHIDES (ICL, Cyl)</b> "Health impacts: the spread of vector-borne diseases"</p> <p><b>Jos LELIEVELD (MPIC, Cyl)</b> "Climate change, weather extremes and Impacts"</p> <p><b>Taleb RIFAI (Former WTO)</b> "Tourism, A vector and a victim of climate change"</p> <p><b>Kerstin NEUMANN (IPK)</b> "Agriculture and Animal Husbandry in a Changing Climate"</p>
15:00-15:30	LUNCH
15:30-17:10	SESSION #4 - "Challenges" Chairperson: Refâat CHAABOUNI (Univ. Tunis EI-Manar)
	<p><b>Thorsten KIEFER (Future Earth)</b> "Aiming for multiple goals with one shot - the Paris Agreement and the Sustainable Development Goals"</p> <p><b>Arnault GRAVES (UfM)</b> "The Union for the Mediterranean main Climate Actions"</p> <p><b>Loucas CHRISTOPHOROU (Academy Athens)</b> "Emerging world-wide energy trends and long-range energy planning"</p> <p><b>Fadi COMAIR (Ministry Energy &amp; Water, Lebanon)</b> "Hydro-diplomacy and the Nexus adaptation climate Change in the MENA Region"</p> <p><b>Rabi MOHTAR (AUB)</b> "Climate change impact on water and food and the role of the water energy food nexus"</p>
17:15-18:30	Panel Discussion #B: "Impacts and Challenges"
	<p>Moderator/Convener: <b>Theodore PANAYOTOU (CIIM)</b> Participants: <b>P. KELAMIS, P. POLYCARPOU, K. NEUMANN, T. RIFAI, L. CHRISTOPHOROU, F. COMAIR, R. MOHTAR, R. CHAABOUNI, A. GRAVES, J. LELIEVELD, G. CHRISTOPHIDES</b></p>

08:00-08:40	<b>REGISTRATION &amp; WELCOME COFFEE</b>
08:40-10:40	<b>SESSION #5 – “Mitigation &amp; Adaptation: New initiatives”</b> Chairperson: Vassilis TSAKALOS (RPF)
	<p><b>Wolfgang CRAMER (MedECC)</b> “Environmental change represents multiple risks for sustainable development in the Mediterranean Basin”</p> <p><b>Theodoulos MESIMERIS (DoE)</b> “Climate Change Mitigation &amp; Adaptation National Plans”</p> <p><b>Charles ELLINAS (eCNHC)</b> “Challenges to a smooth energy transition”</p> <p><b>Khaled TOUKAN (SESAME)</b> “Jordan’s Energy Profile in Transition”</p> <p><b>Manuel J. BLANCO (Cyl)</b> “The role of Concentrating Solar Thermal technologies in the Global Energy Transition”</p> <p><b>Lassina ZERBO (CTBTO)</b> “Innovative Solutions to Climate Change: the Contribution of the Comprehensive Nuclear-Test-Ban Treaty Organization”</p>
10:40-11:10	<b>COFFEE BREAK</b>
11:10-12:10	<b>Panel Discussion #C: “Mitigation &amp; Adaptation: New Initiatives”</b>
	<p>Moderator/Convener: <b>Phoebe KOUNDOURI (UAEB)</b></p> <p>Participants: P. HADJINICOLAOU, G. PENINTAEX, W. CRAMER, T. MESIMERIS, L. ZERBO, M. BLANCO, C. ELLINAS</p>
12:10-13:20	<b>COFFEE BREAK</b>

13:20 -15:00	<b>SESSION #6 – “Policy Challenges &amp; Policy Options”</b> Chairperson: Joanna HAIGH (ICL)
	<p><b>George PAPANDEOU (Former Prime Minister, Greece)</b></p> <p><b>Massimo INGUSCIO (CNR)</b> “Facing climate change, a Mediterranean perspective”</p> <p><b>Richard COOPER, (Harvard Univ.)</b> “Pricing versus cap-and-trade: the case for a global price”</p> <p><b>Androulla VASSILIOU (former EU Commissioner for Health, Education, Culture, Multilingualism &amp; Youth)</b> “Education Crucial to Combating Climate Change as well as for Climate Change Adaptation”</p> <p><b>Anastasios GIANNITSIS (former Minister Interior, Greece)</b> “Climate change: Economic &amp; social governance challenges in Eastern Mediterranean”</p>
15:00-16:00	<b>Panel Discussion #D: “Policy: Addressing the Challenges”</b>
	<p>Moderator/Convener: <b>Edouard BREZIN (ENS)</b></p> <p>Participants: A. ALAOUI BENSALAH, H. HELAL, T. THEMISTOKLEOUS, G. PAPANDEOU, M. INGUSCIO, R. COOPER, A. VASILIOU, T. GIANNITSIS, J. HAIGH</p>
16:00-16:30	<b>COFFEE BREAK</b>
16:30-17:50	<p><b>Jeffrey SACHS (Columbia Univ., SDSN)</b> “Climate change: The Middle East North Africa Challenge”</p> <p><b>Christos STYLIANIDES</b> (EU Commissioner for Humanitarian Aid &amp; Crisis Management) “The challenge of Climate Change and the rescEU proposal to strengthen the European system of civil protection”</p> <p><b>Jean SCIARE (Cyl)</b> “Addressing climate changes in the EMME region: The research frontier”</p> <p><b>L. FABIUS</b> - Closing Ceremony</p>

### MEDITERRANEAN & MIDDLE EAST AIR POLLUTION IN A CHANGING CLIMATE

Time	Title
08:00-09:00	Registration & Welcome coffee
09:00-10:30	<b>Opening Session</b> Mediterranean & Middle East air pollution in a changing climate
09:00-09:20	Opening – <b>M. Jarraud</b> , Former Secretary General WMO
09:20-09:50	Context and Objectives – <b>J. Sciare</b> , Director EEWRC, The Cyprus Institute, Cyprus
09:50-10:30	Keynote talk – <b>J. Lelieveld</b> , "Health impacts of ambient air pollution"
<b>COFFEE BREAK</b> (30 min) "Pentadaktylos" Restaurant	
11:00-12:40	<b>Session#1 – Air pollution sources</b>
11:00-11:20	<b>N. Mihalopoulos</b> , "Sources of aerosols in the Mediterranean"
11:20-11:40	<b>H. Harder</b> , "AQABA, measurements of trace gases, dust and aerosols in the Mediterranean and Arabian Basin, overview and first results of a ship born campaign"
11:40-12:00	<b>J. Kushta</b> , "Elemental carbon contribution to climate in the Eastern Mediterranean and the Middle East"
12:00-12:20	<b>I. Stavroulas</b> , "One-year study of sources, seasonal variability and geographical origin of submicron organic aerosol from high resolution measurements in Athens, Greece"
12:20-12:40	<b>S. Coehlo</b> , "Identification and analysis of particulate matter source contributions to the air quality in mainland Portugal"

<b>LUNCH BREAK</b> (1h20 min) "Pentadaktylos" Restaurant	
14:00-15:40	<b>Session#2 – Climate Change &amp; Air pollution Modelling, Trends and Prediction</b>
14:00-14:20	<b>P. Hadjinicolaou</b> , "Differential 20th and 21st century warming around the Mediterranean and the MENA region"
14:20-14:40	<b>G. Zittis</b> , "Observed rainfall trends and precipitation uncertainty in the vicinity of the Mediterranean, Middle East and North Africa"
14:40-15:00	<b>K. Constantinidou</b> , "Uncertainty of modelled climate over the Middle East and North Africa (MENA) region due to land surface schemes"
15:00-15:20	<b>C. Pain</b> , "Proposed new generation atmospheric models for the Mediterranean and the Middle East"
15:20-15:40	<b>F. Fang</b> , "Multiscale Adaptive Mesh Atmospheric/Air Pollution Predictive Modelling and Applications"
<b>COFFEE BREAK</b> (30 min) "Pentadaktylos" Restaurant	
16:10-17:50	<b>Session#3 – Climate change &amp; Air pollution Impacts</b>
16:10-16:30	<b>A. Borbon</b> , "Urban atmospheric pollution within TRANSEMED: from emission evaluation to health impact assessment in the Eastern Mediterranean"
16:30-16:50	<b>S. Achilleos</b> , "Climate change adaptation in Eastern Mediterranean: Desert Dust Storms and the EU LIFE project MEDEA"
16:50-17:10	<b>B. Herut</b> , "Climate change in the Levantine basin - observational signals"
17:10-17:30	<b>S. Uddin</b> , "Effect of Climate Change on Marine Ecosystems in Gulf: An example of likely change in calcification among corals"
17:30-17:50	<b>S. Rafael</b> , "Impact of resilience measures on air pollutants dispersion in Porto's urban area"

**MEDITERRANEAN & MIDDLE EAST AIR POLLUTION  
IN A CHANGING CLIMATE**

Time	Speaker & Title
08:00-09:00	Registration & welcome coffee
09:00-10:30	<b>Session#4 – Atmospheric Monitoring &amp; Composition</b>
09:00-09:30	<b>M. Kulmala</b> , "Global SMEAR (Stations for Measuring Earth Surface - Atmosphere Relations)"
09:30-09:50	<b>P. Ricaud</b> , "The GLAM airborne campaign across the Mediterranean"
09:50-10:10	<b>L. Dada</b> , "New particle formation: from semi-clean to very polluted environments"
10:10-10:30	<b>R. Baalbaki</b> , "Chemical composition of newly formed particles at Agia Maria forest station, Cyprus"
<b>COFFEE BREAK (30 min) "Pentadaktylos" Restaurant</b>	
11:00-12:20	<b>Session#5 – Atmospheric Dust</b>
11:00-11:20	<b>F. Howari</b> , "Dust storms in the Arabian Gulf"
11:20-11:40	<b>Y. Rudich</b> , "Ice nucleation properties of mineral dust particles in the Eastern Mediterranean"
11:40-12:00	<b>M. Pikridas</b> , "Change of the dust transport patterns in the East Mediterranean affect the coarse mode levels in Cyprus"
12:00-12:20	<b>H. Panahifar</b> , "Investigating source and trend of atmospheric dust and urban pollution in central part of Iran plateau using a depolarized lidar, in situ recordings and satellite data"

<b>LUNCH BREAK (1h20 min) "Pentadaktylos" Restaurant</b>	
13:40-15:10	<b>Session#6 – Greenhouse Gases &amp; Remote Sensing Observations</b>
13:40-14:10	<b>P. Ciais</b> , "How to spend a greenhouse gas budget without legating large negative emissions to future generations"
14:10-14:30	<b>M. Vrekoussis</b> , "Remote Sensing of tropospheric pollution from space"
14:30-14:50	<b>T. Maggos</b> , "GHGs and AQ measurements over European cities using aerial and ground platforms as part of the ICARUS air pollution and climate change mitigation strategy"
14:50-15:10	<b>F. Aboubi</b> , "How can ground based Doppler Lidar systems can help modeling and forecasting Air Quality?"
<b>COFFEE BREAK (30 min) "Pentadaktylos" Restaurant</b>	
15:40-17:40	<b>Session#7 – International Networks &amp; Regional Initiatives</b>
15:40-16:10	<b>F. Dulac</b> , "The Chemistry-Aerosol Mediterranean Experiment (ChArMEx, 2010-2020)"
16:10-16:30	<b>H. Lappalainen</b> , "The Pan-Eurasian Experiment (PEEX) Program"
16:30-16:50	<b>M. Lange</b> , "Future Earth MENA"
16:50-17:20	Scientific Workshop Concluding Remarks, <b>J. Sciare</b>
17:30-20:00: <b>Poster session + cocktail "Pentadaktylos" Restaurant</b>	

## AGRICULTURE AND ANIMAL HUSBANDRY IN A CHANGING CLIMATE

Conveners: Dr. Polycarpou Polycarpou and Dr. Kerstin Neumann

Thematic Areas	Thematic Areas
Genomics and breeding in a changing climate	Soil microecology and greenhouse gas emissions
Crop production in a changing environment	

### INVITED TALKS

Talk	Title	Title
1	Dr. Georgia Hadjipavlou, Agricultural Research Officer A', Agricultural Research Institute or Dr. Michalis Omirou, Agricultural Research Officer A', Agricultural Research Institute	<b>The AGRICYGEN project: Genomic studies of animals, plants and microbes under Cyprus conditions</b>
2	Dr. Dionysia Fasoula, Agricultural Research Officer A', Agricultural Research Institute	<b>Acceleration of climate modifications and need to follow up with an equal pace during plant breeding efforts</b>
3	Dr. Kerstin Neumann, Post-doctoral fellow, The Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Germany	<b>Non-invasive phenotyping is a valuable tool to genetically dissect components of drought tolerance in cereals</b>
4	Dr. Carole Moreno-Romieux, Senior Researcher, L'Institut National de la Recherche Agronomique (INRA), Toulouse, France	<b>Genetic determinism of feed efficiency traits in French sheep breeds</b>
5	Dr. Pauline Aad, Assistant Professor, Notre Dame University – Louaize, Lebanon	<b>Effect of Heat Stress and Water Quality on adaptation, Production and Reproduction of Awassi Sheep</b>
6	Dr. Marinos Markou, Chief Agricultural Research Officer, Agricultural Research Institute	<b>Adaptation of Mediterranean Agriculture to climate change - Adapt2Clima project results</b>
7	Dr. Panayiotis Dalias, Agricultural Research Officer A', Agricultural Research Institute	<b>Water demands and irrigation needs of crops in the changing environment of Cyprus</b>
8	Dr. Laurent Philippot, Director of Research, L'Institut National de la Recherche Agronomique (INRA), Dijon, France	<b>Soil microorganisms act as sources and sinks of the greenhouse gas N2O</b>

Timing	Title	Description
<b>General session – Chairperson</b>		
08:00-09:00	Registration & Welcome coffee	
09:00-09:10	Welcome – <b>Polycarpou Polycarpou</b>	
09:10-09:20	Address – <b>Costas Kadis, Minister of Agriculture</b>	
09:20-09:30	Address – <b>Ioanna Panayiotou, Cyprus Environment Commissioner</b>	
09:30-10:00	<b>Invited talk #A – Georgia Hadjipavlou</b>	The AGRICYGEN project: Genomic studies of animals, plants and microbes under Cyprus conditions
10:00-10:30	<b>Invited talk #B- Dionysia Fasoula</b>	Acceleration of climate modifications and means to follow up with an equal pace during plant breeding efforts
<b>COFFEE BREAK (30 min) “Pentadaktylos” Restaurant</b>		
<b>TOPIC#1 Genomics and breeding in a changing climate- G. Hadjipavlou (chair)</b>		
11:00-11:30	<b>Invited talk #C- Carole Moreno</b>	Genetic determinism of feed efficiency traits in French sheep breeds
11:30-12:00	<b>Invited talk #D- Pauline Aad</b>	Effect of Heat Stress and Water Quality on adaptation, Production and Reproduction of Awassi Sheep
12:00-12:30	<b>Invited talk #E- Kerstin Neumann</b>	Non-invasive phenotyping is a valuable tool to genetically dissect components of drought tolerance in cereals
<b>LUNCH BREAK (1h20 min) “Pentadaktylos” Restaurant</b>		
<b>TOPIC#2 Crop production in a changing environment – D. Fasoula (chair)</b>		
14:00-14:30	<b>Invited talk #F- C. Moraiti</b>	Adaptation of Mediterranean Agriculture to climate change - Adapt2Clima project results



14:30-15:00	<b>Invited talk #G – Panayiotis Dalias</b>	Water demands and irrigation needs of crops in the changing environment of Cyprus
15:00-15:20	<b>Christos Zoumides</b>	Mediterranean terraced vineyards as a climate change adaptation option
15:20-15:40	<b>Elias Giannakis</b>	Agricultural labour productivity in a changing climate: Evidence from European regions
<b>COFFEE BREAK</b> (30 min) “Pentadaktylos” Restaurant		
<b>TOPIC#3 Soil microecology and greenhouse gas emissions – M. Omirou (chair)</b>		
16:10-16:40	<b>Invited talk #H- Laurent Philippot</b>	Soil microorganisms act as sources and sinks of the greenhouse gas N <sub>2</sub> O
16:40-17:00	<b>Michalis Omirou</b>	Using microbes in a climate changing agriculture: theory, challenges and practice
17:00-17:20	<b>Evgenios Agathokleous</b>	Hormesis For Predicting The Effect of Ozone on Vegetation
<b>17:30-20:00: Poster session + cocktail</b> “Pentadaktylos” Restaurant		

### Posters

1. Martial Sylvain Marie Abega Eloundou. Climate change and opportunities for the development of sustainable agriculture in Africa.
2. Evgenios Agathokleous, Mitsutoshi Kitao, Edward Calabrese. Lanthanum Induces Hormesis in Plants: A Perspective for Agriculture.
3. Athanasia-Eleni Kavadia, Michalis Omirou, Ioannis M. Ioannides. Drought conditions affect nutrient content and mycorrhizal associations on two different chickpea genotypes.
4. Ioannis Anastopoulos, Michalis Omirou, Ioannis M. Ioannides. The effect of agricultural wastes on soil bacterial communities and on greenhouse gas emissions.
5. Coralea Stephanou, Michalis Omirou, Ioannis M. Ioannides. The effect of tetracycline on soil microbial communities and N<sub>2</sub>O flux.



The AGRICYGEN project receives funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 763700

Day 1 | 16 May 2018

08:00-09:00	Registration & Welcome coffee
09:00-10:30	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: “Briefing Room no.6”
10:30-11:00	<b>COFFEE BREAK</b> “Pentadaktylos” Restaurant
11:00-12:40	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: “Briefing Room no.6”
<b>LUNCH BREAK</b> (1h20 min) “Pentadaktylos” Restaurant	
14:00-15:40	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: “Briefing Room no.6”
15:40-16:10	<b>COFFEE BREAK</b> “Pentadaktylos” Restaurant
16:10-17:50	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: “Briefing Room no.6”

08:00-09:00	Registration & Welcome coffee
09:00-10:30	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: "Briefing Room no.6"
	<b>ENVIMED - TRACOMED: TRansfer of Atmospheric COntaminants to the MEDiterranean Sea</b> Chairperson: Prof. Jean Sciare Room: "Briefing Room no.7"
	<b>New Frontiers and Emerging Challenges in Aerosol Science and Technology</b> Chairperson: Assoc. Prof George Biskos Room: "Briefing Room no.8"
10:30-11:00	<b>COFFEE BREAK</b> "Pentadaktylos" Restaurant
11:00-12:20	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: "Briefing Room no.6"
	<b>ENVIMED - TRACOMED: TRansfer of Atmospheric COntaminants to the MEDiterranean Sea</b> Chairperson: Prof. Jean Sciare Room: "Briefing Room no.7"
	<b>New Frontiers and Emerging Challenges in Aerosol Science and Technology</b> Chairperson: Assoc. Prof George Biskos Room: "Briefing Room no.8"
<b>LUNCH BREAK (1h20 min)</b> "Pentadaktylos" Restaurant	
13:40-15:10	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: "Briefing Room no.6"
	<b>ENVIMED - TRACOMED: TRansfer of Atmospheric COntaminants to the MEDiterranean Sea</b> Chairperson: Prof. Jean Sciare Room: "Briefing Room no.7"
	<b>New Frontiers and Emerging Challenges in Aerosol Science and Technology</b> Chairperson: Assoc. Prof George Biskos Room: "Briefing Room no.8"
15:10-15:40	<b>COFFEE BREAK</b> "Pentadaktylos" Restaurant
15:40-17:40	<b>Future Earth MENA Regional Center (FEMRC-RAC)</b> Chairperson: Prof. Manfred Lange Room: "Briefing Room no.6"
	<b>ENVIMED - TRACOMED: TRansfer of Atmospheric COntaminants to the MEDiterranean Sea</b> Chairperson: Prof. Jean Sciare Room: "Briefing Room no.7"
	<b>New Frontiers and Emerging Challenges in Aerosol Science and Technology</b> Chairperson: Assoc. Prof George Biskos Room: "Briefing Room no.8"
17:40-20:00	Poster session + cocktail "Pentadaktylos" Restaurant



## About Nicosia

Nicosia is the capital of Cyprus; a status it has enjoyed for 1000 years since the 10th century, though its beginnings date back 5000 years to the Bronze Age. It lies roughly in the centre of the island in the Mesaoria Plain, flanked by the beautiful northern range of Kyrenia Mountains with its distinctive 'Pentadaktylos' - the five finger mountain. There are various suggestions as to the origin of the name Nicosia - or 'Lefkosia' In Greek - but the most likely one is linked to the popular tree, the tall 'Lefki' which once adorned the city.

Based in Nicosia are the Government head offices, Diplomatic headquarters and the cultural centre of Cyprus. The capital presents two distinct faces: the old, original part of the city, surrounded by sturdy Venetian walls over 400 years old, and a busy modern metropolis which has a population of 171.000 together with the suburbs.

Within the large area, encircled by the strong bastion walls that served to protect the town for centuries, are many places of great historic interest.

The central Eleftheria Square links old Nicosia with the elegant modern city that has flourished outside the walls, where hotels, offices restaurants and gar-

dens blend happily with the fine old houses and colonial buildings of this cosmopolitan city.

Nicosia is a sophisticated and cosmopolitan city, rich in history and culture that combines its historic past with the amenities of a modern city. Nicosia has established itself as the island's financial capital and its main international business centre. The 'new' Nicosia developed outside the walls became a contemporary, business and cultural center. Just a few miles away are enchanting places of interest such as Byzantine churches and monasteries, archaeological sites and charming villages. The uniqueness of such a combination makes the capital of Cyprus a place worth knowing and certainly a place worth visiting!



### Top Nicosia Landmarks

The city has a number of landmarks, which include the Cyprus Archaeological Museum, Venetian Walls, Famagusta Gate, Archbishopric, St. John's Cathedral and the Liberty Statue within the old city, 'Laiki Yitonia', State Gallery of Contemporary Art, Ledra Street and the 'Levention' Municipal Museum. You can also find many traditional taverns. There you can have lunch with local wine and drinks.

### Cyprus Archaeological Museum

The first archaeological Museum of Lefkosia was housed in a building on Victoria St. in old Lefkosia, in the occupied part of the town. It was founded in 1888 as a privately run institution to protect the finds that started to come to light during the first legal excavations undertaken during the British rule of the island. The Cyprus Archaeological Museum has a huge collection of important archaeological findings.

### Archbishopric, St. John's Cathedral

The Cathedral was built in 1662 by Archbishop Nikiforos on the site of an earlier building. Since the 18th century the Cathedral has been the place where all Archbishops of Cyprus are consecrated.

### Venetian Walls

The capital city is surrounded by sturdy 16th century stone walls built by the Venetians to replace the inadequate medieval walls they inherited. Despite being considered a great example of military defence of the era, they proved to be practically useless: The Ottomans overran the city before the construction could be completed.

### Liberty Monument

The Liberty Monument is on the Podocatro Bastion of the city walls, close to the old aqueduct and within walking distance of the Famagusta Gate. It was erected in 1973 to commemorate the release

from prison in 1959 of EOKA fighters. The monument portrays two EOKA heroes tugging on chains in order to open prison gates and release Greek Cypriot prisoners, peasants and clergy, from British colonial rule.

### Famagusta Gate

The Famagusta Gate is one of the most interesting attractions. The Venetian walls which completely encircle the old city have eleven heart-shaped bastions (which gives them the shape of a hand grenade). There were only three gates to the city in the north, south and east and one of these gates, the Porta Giuliana called Famagusta Gate, has been restored and is now the Lefkosia Municipal Cultural Centre. One of the most typical quarters of the town close to Famagusta gate is also being restored.

### Laiki Geitonia

Laiki Geitonia is a traditional neighbourhood in the pedestrian area of the 'walled city' of Nicosia, opposite the D'Avila moat and 0.3 km from Eleftheria square. Laiki Geitonia contains restored houses that are examples of traditional Cypriot urban architecture. The buildings date from the end of the 18th Century, with building materials being mainly wood, sandstone and mudbrick. It is a pedestrianised area of narrow winding streets, combining residential houses with craft shops, souvenir shops and tavernas.

### State Gallery Of Contemporary Art

Collection of paintings and sculpture by 20th century Cypriot artists is housed in a restored building.

### Ledra Street

This is a paved pedestrian way with shops and restaurants and starts at Eleftheria Square; it is one of the busiest shopping centers of the city.

For all tourist information concerning sites of interest, visit the official webpage of Cyprus Tourism Organization [www.visitcyprus.com](http://www.visitcyprus.com).

Please note that Cyprus has a comprehensive public bus network, with extensive inner-city routes and also major city and airport connections. You can find more information at [www.cyprusbybus.com](http://www.cyprusbybus.com).

### Nicosia Public Transportation

Nicosia boasts a reliable and efficient public bus service which runs every day and covers the whole Nicosia District. The bus fare for a single journey is €1.50 (day fare) and €2.50 (night fare, after 21:00). The daily ticket with unlimited journeys costs €5.00 and the weekly ticket costs €20.00. Tickets can be purchased on the bus or before boarding, from the station. For more information about the bus routes and schedules visit [www.osel.com.cy](http://www.osel.com.cy), Nicosia's Transport Organization (OSEL Buses) website.

For ease of reference, **OSEL Buses Route 116** serves Semeli Hotel (John Kennedy Avenue), Hilton Hotel (Arch. Makariou C Avenue) and Solomos square which is close to Classic Hotel (city centre).

For further bus routes and more information please visit [www.osel.com.cy](http://www.osel.com.cy).

### Taxi Service

Taxis in Cyprus are relatively cheap and reliable. It is best to use a registered taxi company, therefore we recommend that you ask a member of staff at the Conference Help Desk who will be pleased to reserve a taxi for you.

### Getting Back to the Airport

#### Private Transportation

Whether you require a transfer to Larnaca or Paphos Airports, you can contact a member of staff at the on-site Conference Help Desk who will be pleased to reserve a taxi for you.

#### Public Transportation

Departing from Larnaca International Airport, you may take Kapnos Airport Shuttle towards Larnaca airport. Please visit their webpage for more information and timetables, [www.kapnosairportshuttle.com](http://www.kapnosairportshuttle.com). In case you would like to use the public bus service, you may use Intercity Buses (Nicosia - Larnaca) to go to Larnaca (Old Larnaca Hospital stop). From there you may use Zenon Bus route 417 to go to Larnaca airport. For more information please visit [www.intercity-buses.com](http://www.intercity-buses.com) and [www.zinonas-buses.com](http://www.zinonas-buses.com).

Departing from Paphos International Airport, use Kapnos Airport Shuttle towards Paphos airport. Please visit their webpage for more information and timetables, [www.kapnosairportshuttle.com](http://www.kapnosairportshuttle.com). Alternatively, you may use Travel & Express (Intercity Taxi). For more information please visit [www.travelexpress.com.cy](http://www.travelexpress.com.cy).

## Useful Contact Numbers

Country code prefix	+357
Directory Enquiry Service	11892
Private Doctors on Call	90 901432
Ambulance & Police	112
Pharmacies (after hours)	90 901412
Nicosia General Hospital	22 603000
Nicosia Transport Organization	77 777755
Larnaca and Paphos International Airports	77 778833

### Contact Details

#### Hilton Hotel

Address: 98 Archbishop Makarios III Avenue, Nicosia, 1077, Cyprus  
 Phone: +357 22 377777  
 Fax: +357 22 376101  
 Email: [hilton.cyprus@hilton.com.cy](mailto:hilton.cyprus@hilton.com.cy)

#### Semeli Hotel

Address: 10 Petraki Giallourou Str, Nicosia, 1077, Cyprus  
 Phone: +357 22 452121  
 Fax: +357 22 670200  
 Email: [hotel@semelihotel.com.cy](mailto:hotel@semelihotel.com.cy)

#### Classic Hotel

Address: 94 Rigenis Street, Nicosia, 1513, Cyprus  
 Phone: +357 22 664006  
 Fax: +357 22 670072  
 Email: [reservations@gapgroup.com](mailto:reservations@gapgroup.com)

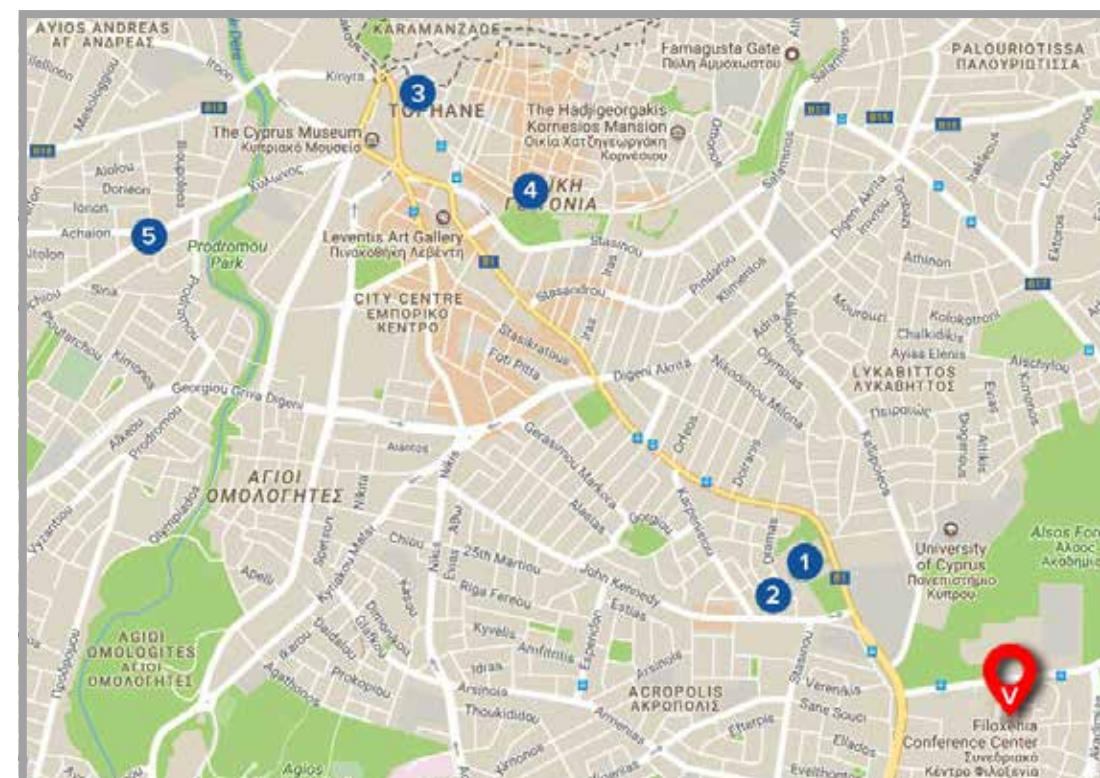
#### Centrum Hotel

Address: 15 Pasikratous street, Eleftherias Square, 1011 Nicosia, Cyprus  
 Phone: +357 22 456 444  
 Fax: +357 22 873 560  
 Email: [suggestions@centrumhotel.net](mailto:suggestions@centrumhotel.net)

#### Altius Boutique Hotel

Address: Acheon 1, Nicosia 1101, P.O. Box 24330, Nicosia 1703-Cyprus  
 Phone: +357 22 255540  
 Fax: +357 22 255541  
 Email: [info@altiushotel.com](mailto:info@altiushotel.com)

## Venue Map



- V** Venue
- 1** Hilton Hotel
- 2** Semeli Hotel
- 3** Classic Hotel
- 4** Centrum Hotel
- 5** Altius Boutique Hotel



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