

VIRTUAL WORKSHOP

CLIMATE AND ATMOSPHERE RESEARCH & INNOVATION IN THE EASTERN MEDITERRANEAN & MIDDLE EAST

PROGRAM - DAY 1 (11 October 2021)

<https://climatechange2021.org/workshops/>

All times are in (Cyprus) EEST

Opening Session		
09:15	Welcome & Introduction to the Workshop	
	Workshop Introduction & Opening	Jean Sciare The Cyprus Institute
Atmospheric Modelling and Prediction (Chair: T. Christoudias)		
09:30	Invited Speakers	
	Human driven changes in atmospheric deposition of nutrients to the ecosystems	M. Kanakidou Univ. Crete, Greece
	Air Quality modelling and forecasting in the Arabian Peninsula: Research & Applications	C. Fountoukis QEERI, Qatar
	Oral Presentations	
	Real-time Air Quality forecasting over the Eastern Mediterranean with WRF/CHEM	G. Georgiou Cyl, Cyprus
	Modelling Air Quality in the Middle East during the 2017 AQABA campaign	S. Osipov MPIC, Germany
	Satellite-derived emission trends: Uncertainties and implications for atmospheric modelling	J. Kushta Cyl, Cyprus
11:00	Coffee Break	
Air Pollution and Impacts (Chair: N. Mihalopoulos)		
11:10	Invited Speakers	
	A quick look at the Chemistry-Aerosol Mediterranean Experiment (ChArMEx) legacy	F. Dulac CEA-LSCE, France
	Non-methane hydrocarbons in the East Mediterranean and Middle Region	E. Bourtsoukidis Cyl, Cyprus
	Oral Presentations	
	Regional background sources of submicron organic aerosol in the Eastern Mediterranean	M. Pikridas Cyl, Cyprus
	Assessment of the spectral absorptions by Black and Brown Carbon for different sources: Application in Athens	D. Kaskaoutis NOA, Greece

	Characteristic of New Particle Formation in Cyprus	R. Baalbaki Univ. Helsinki, Finland
	Satellite-based observations of aerosol-cloud relationships under different water vapor conditions over the Eastern Mediterranean	S. Stathopoulos DUTH, Greece
	Relationship between Aeronet and Modis-based Aerosol Optical Depth with surface PM10 over Cairo (Egypt)	Ahmed Sara said EMA, Egypt
	Premature mortality from exposure to ambient PM2.5, Black and Organic Carbon in the EU-27	N. Paisi Cyl, Cyprus

13:00 Lunch Break
Atmospheric Dust (Chair: F. Marenco)
14:00 Invited Speakers

	Dust storms in the MENA region: Atmospheric drivers, characteristics, and impacts	D. Francis Khalifa Univ., UAE
	Oral Presentations	
	Light Absorption properties of aeolian dust – case studies of storm events	B. Alfoldy Aerosol doo, Slovenia
	Vertically resolved optical and physical characterization of aerosol layers over Amman employing CALIPSO satellite data	H. Panahifar IASBS, Iran
	Large-scale atmospheric patterns and PM10 pollution: The contribution of the Saharan oscillation	K. Kenza GDM, Morocco

Climate Modelling and Prediction (Chair: P. Hadjinicolaou)
15:00 Invited Speakers

	Impact of Global Warming on regional climate over the Arabian Peninsula	G. Stenchikov KAUST, Saudi Arabia
	Oral Presentations	
	Sensitivity analysis of WRF model PBL schemes in simulating temperature extremes over the Middle East - North Africa (MENA) region	A. Ntoumos Cyl, Cyprus
	Rainfall-Aerosols Interactions at time Scales of Minutes to Days with Focus over the EMME region and Mediterranean Climate	P. Alpert Tel Aviv Univ., Israel
	Utilizing weather station, satellite, and population datasets to estimate urban heat island over locations in the Middle East and North Africa (MENA) region	A. Tzyrkalli Cyl, Cyprus

15:50 Coffee Break
vPICO session on Atmosphere & Climate Modelling and Prediction (2 minutes each) (Chair: P. Papazoglou)

16:00	Urban representation in High resolution WRF simulations over the region of Eastern Mediterranean and the Middle East	K. Constantinidou Cyl, Cyprus
	Tin-Copula Bias-Correction method for model-derived maximum temperature in the MENA region	G. Lazoglou Cyl, Cyprus
	The impact of assimilating Aeolus remote sensing wind data on regional aeolian dust	P. Kiriakidis Cyl, Cyprus
	Assessment of reanalysis datasets against radiosonde observation over Eastern Mediterranean region	R. Hassan EMA, Egypt

vPICO session on Air Pollution (2 minutes each) (Chair: P. Papazoglou)

16:10	First near-real-time characterization of fine particulate matter (PM) and volatile organic compounds (VOCs) in Cairo Megacity (Egypt)	A. Christodoulou Cyl, Cyprus
	C2-C12 NMHC measurements in two sites with contrasted characteristics in the Greater Athens area over the period 2015-2019	E. Liakakou NOA, Greece
	The effect of spatial and altitudinal distribution of air parcels in the Eastern Mediterranean basin on PM10 and PM1 composition	K. Dimitriou NOA, Greece
	Optical properties and the curvature effect in spectral scattering and absorption coefficients for key aerosol types identified in Athens	D. Kaskaoutis NOA Greece
	Air quality and cloud effects on surface solar radiation over urban and rural areas in Greece	A. Georgoulis AUTH, Greece
	Methane and non-methane hydrocarbons concentrations and sources in an Eastern Mediterranean island (Cyprus)	E. Germain Piaulenne Cyl, Cyprus
	Characterization of fine and coarse atmospheric particulate matter from Beirut suburb using PIXE technique	R. Mohamad CNRS, Lebanon
	Monitoring of atmospheric aerosols pollution over Egypt based on satellite and ground-based observations	N. Zanaty NARSSS, Egypt
	Assessment of the intensity of dust events over Egypt with Climate Change scenarios	Z. Salah EMA, Egypt
16:30	End of Workshop DAY 1	

PROGRAM - DAY 2 (12 October 2021)

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Climate Change and Weather extremes (Chair: J. Lelieveld)

09:30	Invited Speakers	
	Future projections of High-Impact extreme weather events in the EMME region	G. Zittis Cyl, Cyprus
	Oral Presentations	
	Climate Change projects for Greece in the 21 st century from a High-resolution Euro-CORDEX ensemble	A. Georgoulis AUT, Greece
	Spatio-temporal characteristics of observed air temperature 1981-2020 trends in the Middle East North Africa (MENA) from the CRUTEM4.6 dataset	P. Hadjinicolaou Cyl, Cyprus
	Projected changes in temperature and precipitation extremes in Egypt by the REGCM4	Z. Salah EMA, Egypt
	Projecting the potential evapotranspiration of Egypt using a high-resolution regional climate model (REGCM4)	S. Rateb EMA, Egypt
	City, Citizens, and Climate crisis in the East Mediterranean: From Global Climate predictions to the citizens experience	M. Neophytou Univ. Cyprus, Cyprus
	Effects of rapid coastal urbanization on local near-surface climate variables in the Middle East	E. Elhacham Tel Aviv Univ., Israel
	Future climate change impact on wildfire danger over the Mediterranean: The case of Greece	A. Rovithakis TUC, Greece

11:10 Coffee Break

Greenhouse Gases & Remote Sensing (Chair: M. Vrekoussis)

11:20	Oral Presentations	
	Methane Budgets and inverse modelling in the Eastern Mediterranean and Middle East	X. Lin LSCE, France
	Comparison of methane emissions reported in bottom-up inventories against atmospheric inversions in the Eastern Mediterranean and Middle East region	Z. Tzompa Sosa LSCE, France
	Aggregation of greenhouse gas emissions over Cyprus and international reporting obligations	F. Dubart Cyl, Cyprus
	First columnar greenhouse gases in the Eastern Mediterranean and Middle East region by TCCON Nicosia	C. Rousogenous Cyl, Cyprus
	Quantifying Nitrogen Oxides emissions in Egypt using satellite observations	A. Rey-Pommier LSCE, France
	Variability and trend of precipitable water vapor, lower stratospheric water vapor, methane, nitrogen dioxide, and temperature in Alexandria city, Egypt, using MERRA2	M. Abdelfattah Cairo Univ., Egypt
	Observatory for the waterborne air pollution in the Eastern Mediterranean	E. Yfantis CMMI, Cyprus

New Instrumentation (Chair: A. Maisser)

12:40	Oral Presentations	
	Employing low-cost particulate matter sensors for developing cost-effective aerosol instruments	S. Bezantakos Cyl, Cyprus
	Performance assessment of low-cost air quality sensors through long-term observations over Nicosia, Cyprus and the effect of meteorological conditions	R.Papaconstantinou Cyl, Cyprus
	A new mobile platform of ACTRIS for cost-effective atmospheric profiling with UAV-sensor systems	M. Kezoudi Cyl, Cyprus

13:10 Lunch Break
Education & Training opportunities (Chair: C. Leontiou)

14:20	Oral Presentations	
	MEDCYCLONES COST Action: A European Network for Mediterranean cyclones in weather and Climate	E. Flaounas HCMR, Greece
	Climate Change competencies in Education	L. Riuttanen Univ.Helsinki, Finland
	Addressing Climate Change by educating young Europeans towards a sustainable and socially just economy	D. Cochliou Univ. Nicosia, Cyprus
	Teaching systems thinking in Climate Change and sustainability education	M. Äijälä Univ.Helsinki, Finland
	Learning researcher skills while working in small groups on real scientific questions and data and in a multi-disciplinary and multicultural course is motivating for teachers and students	T. Ruuskanen Univ.Helsinki, Finland
	Climate-related education: on-line approach in COVID times	T. Kryvomaz Kyiv Univ., Ukraine

15:20 Coffee Break
vPICO session on Climate Change & Weather extremes (2 minutes each) (Chair: P. Papazoglou)

15:30	Atmospheric energetics under different CMIP6 climate scenarios	S. Michaelides Cyl, Cyprus
	A pragmatic approach to statistical modelling of big spatio-temporal climate data	T. Economou Cyl, Cyprus
	Statistical disaggregation and bias-adjustment of CMIP6 variables for climate change impact studies at global and regional scales	Y. Proestos Cyl, Cyprus
	Wildfire sensitivity on climate drivers in the Eastern Mediterranean	M. Grillakis TUC, Greece
	Climate Change implications on the operational safety of civil protection emergency practitioners in the Eastern Mediterranean Middle East	P. Papazoglou Cyl, Cyprus
	A low-cost CO2 commercial NDIR sensor for UAV atmospheric applications	Y. Liu Cyl, Cyprus
	Novel UAS for environmental monitoring during natural disasters	C. Keleshis Cyl, Cyprus
	Performance characterization of a newly developed atmospheric pressure interface time of flight mass spectrometer (API-TOF MS)	F. Schmidt-Ott Cyl, Cyprus

16:00 End of Workshop