



FINAL PROGRAM

Climate Change 2021: The Push to Carbon Neutrality, Adaptation, and Resiliency

Virtual Conference • December 1-2, 2021

www.awma.org/climatechange

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FINAL PROGRAM

GENERAL INFORMATION

CONFERENCE OVERVIEW

The Air & Waste Management Association's international conference on climate change will focus on the dual goals of achieving a carbon neutral and resilient economy while at the same time adapting to inevitable climate change impacts.

The conference will address emerging policies and strategies for tackling climate change impacts, including mitigation, adaptation and resiliency, as well as GHG policies and initiatives and innovative technologies. The event will highlight case studies and action plans to reduce and/or adapt to the impacts of climate change and review recent climate change data, and advances in policies that complement the global 2015 Paris Accord.

CONFERENCE COMMITTEE

Conference Co-Chairs:

Michael Conrardy, AECOM
Miriam Lev-On, The LEVON Group, LLC

Committee Members:

Chih Chao, Cantech Environmental Services
Chris Easter, Environmental Science Associates (ESA)
Joshua Fu, University of Tennessee
Sardar Hassan, U.S. Department of Defense
Michele Karnes, Coterie Environmental LLC
Harish Rao, Rao Consulting Services
C. Flint Webb, Leidos

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REGISTRATION

Register online at www.awma.org/climatechange.

Registration includes access to all live keynotes, panels, and presentations offered online during the conference, plus recordings of the presentations online for three months following the conference.

Online registrants will receive a confirmation and receipt, which they can access at any time by logging into their account. Your registration will not be processed without payment.

A few days prior to the conference, registrants will receive instructions on how to access the links for the virtual conference.

CONFERENCE PROCEEDINGS/ON DEMAND ACCESS

Conference proceedings will include recordings of the live sessions and slides from presenters who have provided permission. The online proceedings will be accessible from the virtual conference website for three months following the conference. Attendees will be notified when the recordings and slides have been posted.

CONTINUING EDUCATION UNITS

Conference attendees may be eligible for continuing education credits and can apply to receive a Certificate of Participation for the sessions attended. For more information, please contact Gloria Henning at +1-412-904-6021 or glhenning@awma.org.

ABOUT THE AIR & WASTE MANAGEMENT ASSOCIATION

A&WMA is a not-for-profit, nonpartisan professional organization that enhances knowledge and expertise by providing a neutral forum for technology exchange, professional development, networking opportunities, public education, and outreach to more than 5,000 environmental professionals in 65 countries. A&WMA also promotes global environmental responsibility and increases the effectiveness of organizations to make critical decisions that benefit society. For more information, please visit www.awma.org.

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TECHNICAL AGENDA – Wednesday, December 1

KEYNOTE PANEL — CLIMATE CHANGE STRATEGIES AND ACTIONS

10:00 am – 11:30 am ET

Welcome and Introduction

Brian Bunger, Bay Area Air Quality Management District, A&WMA President; Miriam Lev-On, The LEVON Group, LLC, Conference Co-Chair

DoD Climate Change Strategies and Actions

Richard Kidd, Deputy Assistant Secretary of Defense, Environment & Energy Resilience, U.S. Department of Defense

Research Trends – The Science of Climate Prediction

Gerald Geernaert, Director, Earth and Environmental System Sciences Division, U.S. Department of Energy

Science-based Corporate Net Zero Target Setting

Cynthia Cummis, Director, Private Sector Climate Mitigation, World Resources Institute

11:30 am – 11:45 am ET

Break

SESSION 1: CLIMATE CHANGE SOLUTIONS AND PERCEPTIONS

11:45 am – 1:00 pm ET

Chair: Chih Chao, Cantech Environmental Services

CC01

Global Climate Change: Where Do We Stand?

Frank Princiotto, U.S. EPA (retired)

CC14

Peoples' Perceptions, Awareness, and Acceptance of Renewable Energy in Taiwan

Hoda Fakour, Chang Jung Christian University, Taiwan; Moslem Imani, National Cheng Kung University, Taiwan; Shang Lien Lo, National Taiwan University, Taiwan; Isara Muangthai, Solent University, Southampton, United Kingdom

CC21

Nature-based Solutions - The Myth and the Truth of Hazard Mitigation

Kristin Tremain Davis, T. Luke Young, Taylor Nordstrom, Chris Levitz, AECOM

United Nations Climate Change Conference (COP26) Report

Brian Bunger, Bay Area Air Quality Management District, A&WMA President

1:00 pm – 1:30 pm ET

Break

SESSION 2: EMISSION POLICIES AND REGULATIONS

1:30 pm – 2:40 pm ET

Chair: Harish Rao, Rao Consulting Services

CC20

Impact of Natural Gas Operations on Methane and Volatile Organic Compounds Emissions from Natural Gas Based Transportation Fuels in Israel

Miriam Lev-On, Perry P. Lev-On, The LEVON Group, LLC, Thousand Oaks, CA; Naama Shapira, Samuel Neaman Institute, Technion, Haifa, Israel; Ofira Ayalon, University of Haifa, Haifa, Israel

CC18

Evaluating Greenhouse Gas Emissions and Climate Change Mitigation Strategies During Environmental Impact Review: A Washington State Case Study

Jennifer Pohlman, Trinity Consultants, Inc., Kent, WA

CC28

Signaling A Major Shift: Illinois' Climate Change and Equitable Jobs Act

Harish Rao, Rao Consulting Services, Barrington, IL

2:40 pm – 3:00 pm ET

Break

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TECHNICAL AGENDA – Wednesday, December 1, con't.

SESSION 3: CARBON NEUTRALITY APPROACHES

3:00 pm – 4:20 pm ET

Chair: Miriam Lev-On, The LEVON Group, LLC

CC06

Use of Offsets in Pursuing Carbon Neutrality

Adam Conti, Civil & Environmental Consultants, Inc., Austin, TX

CC10

Carbon as a Currency: Carbon Offsets and Environmental Products for Corporate Sustainability and Compliance Programs

John McDougal, David Moore, Element Markets, Houston, TX

CC13

Sequestering Biomass for Natural, Efficient, and Low-Cost Direct Air Capture of Carbon Dioxide

Jeffrey A. Amelse, Universidade de Aveiro, Aveiro, Portugal; Paul K. Behrens, Chemical Industry Consultant, Greenfield, IN

CC19

Carbon Neutrality & Environmental Analyses

Ali Molthen, Kevin Taylor, Michael Conrardy, AECOM

4:20 pm – 4:40 pm ET

Break

SESSION 4: TECHNOLOGICAL APPROACHES

4:40 pm – 6:00 pm ET

Chair: Chris Easter, ESA

CC15

Development of Polyethylenimine-Modified γ -Cyclodextrin Metal Organic Frameworks for Enhanced Post-Combustion CO₂ Capture

Amro El Badawy, Corrine Watson, Dustin Lee, California Polytechnic State University, San Luis Obispo, CA

CC11

High-power Plasma Torch Development for Replacement of Fossil Fuel Burners in Industrial Heating Applications

Jean-René Gagnon, Pierre Carabin, François Rivard, Christine Bryce, Pyrogenesis Canada Inc., Montréal, Québec, Canada

CC24

Red Bag, White Bag: Regulated Medical Waste Sorting in the Emergency Department

Robin (Julia) Yu, Steven Keckan, Will Peterson, University of Michigan, Ann Arbor, MI

CC22

Use of Commercial Aircraft for Climate Change Geoengineering

C. Flint Webb, Leidos, Reston, VA

TECHNICAL AGENDA – Thursday, December 2

KEYNOTE PANEL – CLIMATE CHANGE INTERNATIONAL PERSPECTIVES

10:00 am – 11:30 am ET

Chair: Chih Chao, Cantech Environmental Services

Global Trends, Local Impacts (Taiwan Case Study)

Eugene Chien, President and Board Chairman, Taiwan Institute for Sustainable Energy; Ambassador-at-Large and Chairman in Alliance for Sustainable Development Goals

IPCC Key Findings

Gregory Flato, Acting Director, Climate Research Division, Science and Technology Branch, Environment and Climate Change Canada; Vice-Chair, IPCC Working Group I

Connecting the Dots: Why We Should Worry About the Impacts of Climate Change

Roberto Sánchez-Rodríguez, Professor, College of the Northern Border, Mexico National Council of Science and Technology; Vice-Chair, IPCC Working Group II

11:30 am – 11:50 am ET

Break

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TECHNICAL AGENDA – Thursday, December 2, con't.

SESSION 5: CLIMATE IMPACTS

11:50 am – 1:30 pm ET

Chair: Joshua Fu, University of Tennessee

CC02

The Impacts of COVID-19 Partial and Full Lockdowns on Transportation-Related CO2 Emissions

Nawaf S. Alhajeri, Fahad M. Al-Fadhli, Ahmed Z. Aly, Kuwait University, Kuwait City, Kuwait

CC05

Do Climate Change Impacts Disproportionately Affect EJ Areas?

Chris Whitehead, Enviro-Sciences, Inc.; Michael Kolian, U.S. EPA

CC16

The Impact of Climate Change on Economic Growth in Developing Countries: Case of Morocco

Fatima Arib, Abdessamad Ejjiar, Cadi Ayyad University, Marrakech, Morocco

CC26

Climate Resilience – The Global Warming Control Policy, Commitment, and Compliance

S. Rao Chitikela, RC-WEE Solutions (USA)

1:30 pm – 1:50 pm ET

Break

SESSION 6: CLIMATE RISK AND RESILIENCE

1:50 pm – 3:10 pm ET

Chair: Michael Conrardy, AECOM

CC08

Materiality Assessment in the Chemical Sector

Hannah Losey, TRICORD Consulting, LLC; Sanjay Sampath, Albemarle Corporation

CC17

Interdisciplinary Approach to Identifying and Managing Climate-related Risks and Opportunities

Elizabeth Logan, Will Kruger, Rob Larkin, Curtis Columbare, Michael Conrardy, AECOM

CC25

Building Community Resilience

Heather M. Byers, Scott A. Schulte, University of Kansas Edwards Campus, Overland Park, KS; Ian Fannin-Hughes, City of Overland Park, Overland Park, KS

CC27

Trend of Wildfire Impacts in Present and Future Climate

Joshua S. Fu, Cheng-Pin Kuo, Cheng-En Yang, University of Tennessee, Knoxville, TN

3:10 pm – 3:30 pm ET

Break

PANEL – CLIMATE CHANGE ADAPTATION AND RESILIENCY

3:30 pm – 5:00 pm ET

Chair: Flint Webb, Leidos

Panelists:

- Beth Gibbons, *Executive Director, American Society of Adaptation Professionals*
- Matthew Naud, *Associate Senior Consultant, RRS*
- Kimberly Clark, *Program Manager, Resource Conservation & Resilient Communities, Southern California Association of Governments*

Conference Wrap-Up and Closing Remarks

Michael Conrardy, AECOM, Conference Co-Chair