

## Scientific and Technical Working Group Meeting

February 17, 2023

2:30 - 4:00 pm

By ZOOM

<https://umces-edu.zoom.us/j/86091909324?pwd=RGU4TkdwcnJCUi9tNzdLSGRrSDJ6Zz09>

Meeting ID: 860 9190 9324

Passcode: 419196

Dial by your location

+1 301 715 8592 (Washington DC)

### Meeting Objectives:

- Update on MCCC and STWG Activities
- Overview of Emerging Climate Ready Engineering Practice

### Meeting Agenda

*Times shown are approximate only*

1. Welcome, Introductions, and Roll Call  
*Peter Goodwin, STWG Chair*
2. Approval of November Meeting Summary
3. Update on 2022 MDE Activities for the MCCC  
*Mark Stewart (MDE) (10 minutes)*
4. Maryland 2023 Sea Level Rise Projections. *Don Boesch (5 minutes)*
5. Natural and Working Lands Strategy. *Rachel Lamb and Vimal Amin (30 minutes)*
6. Lecture: **Climate Resilient Infrastructure** [Presentation will start at 3:20pm]  
*Professor Bilal M. Ayyub, Professor and Director*  
Center for Technology and Systems Management, <http://ctsm.umd.edu>  
This presentation will give a broad overview of emerging engineering practices, available resources and trends at the regional and national levels. Q&A will identify initiatives that will be covered later in the year by STWG or other Working Groups.
6. Public Comment. *[5 minutes]*
7. Summary of Action Items and Closure [Krieg] *[2 minutes]*

**2023 Publications of Relevance to the  
Maryland Commission on Climate Change**

**General Interest**

White House announcement on release of Nature Based Solutions Roadmap. November 2022.  
<https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/08/fact-sheet-biden-%E2%81%A0harris-administration-announces-roadmap-for-nature-based-solutions-to-fight-climate-change-strengthen-communities-and-support-local-economies/>

IPCC Working Group II Sixth Assessment Report: Climate Change 2022 - Impacts, Adaptation and Vulnerability: <https://www.ipcc.ch/report/ar6/wg2/>

American Society of Civil Engineers  
Responding to Code Red  
Civil Engineering January 2022. 36-45

Impacts of Future Weather and Climate Extremes on United States Infrastructure: Assessing and Prioritizing Adaptation Actions  
Book authored by the ASCE Task Committee on Future Weather and Climate Extremes. December 2021.

Which racial/ethnic groups care most about climate change?  
<https://climatecommunication.yale.edu/publications/race-and-climate-change/>

Professor Matt Fitzpatrick (UMCES) on the shifting climate of America's cities.  
<https://www.bostonglobe.com/2021/06/29/metro/boston-has-seen-baltimore-style-heat-june-it-might-be-preview-summer-comes/>  
The tool is available at:  
<https://www.umces.edu/futureurbanclimates>

Location of Maryland's Air Monitoring Stations  
<https://mde.maryland.gov/programs/Air/AirQualityMonitoring/PublishingImages/MonitoringNetwork.png>

NOAA National Integrated Heat Health Information System  
<https://nihhis.cpo.noaa.gov/>

NOAA analysis of new climate normals  
<https://www.noaa.gov/news/new-us-climate-normals-are-here-what-do-they-tell-us-about-climate-change>

Maryland's Coast Smart Climate Ready Action Boundary (CRAB) Tool  
<https://mdfloodmaps.net/CRAB/>

## **Policy**

Inequitable patterns of US Flood risk in the Anthropocene.

O.E.J. Wing et al.

[Nature Climate Change](https://www.nature.com/natureclimatechange) | VOL 12 | February 156 2022 | 156–162 | [www.nature.com/natureclimatechange](https://www.nature.com/natureclimatechange)

Opportunities for U.S. State Governments and in-Region Partners to Address Ocean Acidification through Management and Policy Frameworks. Turner, J. et al., August 1, 2021

<https://www.tandfonline.com/doi/full/10.1080/08920753.2021.1947126>

Additional background on BIL/IIJA implementation in Maryland:

<https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Commission/Governors%20Infrastructure%20Subcabinet%20presentation.pdf>

## **Science**

EPA. Climate Change Indicators

<https://www.epa.gov/climate-indicators>

## **Technology**

Maryland Energy Innovation Accelerator: Creating Investible Clean Energy Businesses

October Newsletter and signup for updates

<https://mdeia.org/>

International Energy Agency.

Dramatic action is required in the next decade to have any hope of achieving a net-zero goal by 2050, IEA said. Where electric vehicles now account for 5% of global automobile sales, they will need to represent 60% of new automobile purchases in 2030. Annual renewable installations, which hit a record 280 gigawatts last year, will need to exceed 1,000 GW. And energy efficiency improvements will need to grow by 4% annually, roughly three times their current rate. Read the article:

<https://www.scientificamerican.com/article/net-zero-emissions-by-2050-are-possible-landmark-report-says/>

Future World Vision: Mega City 2070

[futureworldvision.org](https://futureworldvision.org) (available after February 22, 2022).

## **Engineering**

American Society of Civil Engineers (August 2022)  
Objective Resilience: Policies and Strategies  
Manual of Practice 146

Objective Resilience: Objective Processes  
Manual of Practice 147

Objective Resilience: Technology  
Manual of Practice 148

Objective Resilience: Applications  
Manual of Practice 149  
Further details available [at ASCE](#):

## **Human Health**

Maryland Climate and Health Program webpage:  
[https://health.maryland.gov/phpa/OEHFP/EH/Pages/climate\\_change.aspx](https://health.maryland.gov/phpa/OEHFP/EH/Pages/climate_change.aspx)

Maryland Environmental Public Health Climate Adaptation Tracker:  
<https://maps.health.maryland.gov/climatechange/>

## Webinars and Other Events

### *Webinars*

*Workshop: Nature-Based Solutions.* November 30, 2022. <https://mailchi.mp/nas/register-now-measuring-what-matters-comprehensive-and-equitable-evaluation-of-benefits?e=223b065c1c>

*Workshop: Exploring Best Practices for Large-scale Marsh Persistence and Restoration in the Chesapeake Bay.*

October 6, 2022. Virtual and In-person

*Maryland Sea Grant and Chesapeake Bay Sentinel Site Cooperative*

*Collaborative activities on blue carbon in Maryland  
Living Shorelines in Practice - Enhancing Coastal Resilience*

<https://drive.google.com/file/d/18grfKQesGi6yHGoKpmI61iRZ0kYCS64v/view>

<https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/STWG/Blue%20Carbon%20in%20Maryl and%20presentation.pdf>

*Collaborative activities on blue carbon in Maryland: Living Shoreline webinar  
Living Shorelines in Practice - Enhancing Coastal Resilience*

*Coastal Adaptation Report Card. 2021*

<https://www.youtube.com/watch?v=v4ivioWna94&t=20s>

[https://virginia.planning.org/conferences-and-meetings/mid-atlantic-planning/?utm\\_medium=email&utm\\_source=govdelivery&utm\\_term=](https://virginia.planning.org/conferences-and-meetings/mid-atlantic-planning/?utm_medium=email&utm_source=govdelivery&utm_term=)

### *Recordings:*

#### **Adaptation For All**

is available at: <https://nlintheusa.com/adaptation-for-all/>

#### **Flood Resilience in the Year Ahead: Opportunities for the New Congress**

is available to watch here: <https://www.youtube.com/watch?v=dI91vyl6GYw>