



# Scientific and Technical Working Group

*Potential Recommendations*

*from the STWG for 2016 Commission Report*

Don Boesch

Maryland Commission on Climate Change Meeting

June 20, 2016

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# STWG Members

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Name	Affiliation
Ghassem Asrar	Joint Global Change Research Institute
Donald F. Boesch	University of Maryland Center for Environmental Science (UMCES)
Antonio J. Busalacchi*	Earth Science Interdisciplinary Center, UMCP
Eric A. Davidson	Appalachian Laboratory, UMCES
Gerrit J. Knaap	National Center for Smart Growth Research and Education, UMCP
Cindy L. Parker*	Bloomberg School of Public, Johns Hopkins University
Belay Demoz	Joint Center for Earth Systems Technologies, University of Maryland Baltimore County
David A. Vanko	Fisher School of Science, Towson University
Eric D. Wachsman	University of Maryland Energy Research Center, UMCP

\* Resigned, moving out-of-state

# STWG Action Goals

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- Climate impacts assessments
- S&T support for adaptation strategies
- Information & analysis for science-based reductions of greenhouse gas emissions (GHG)
- Technical effectiveness of GHG emissions sources & sinks
- Scientific basis for communication & education

# STWG 2016 Tasks

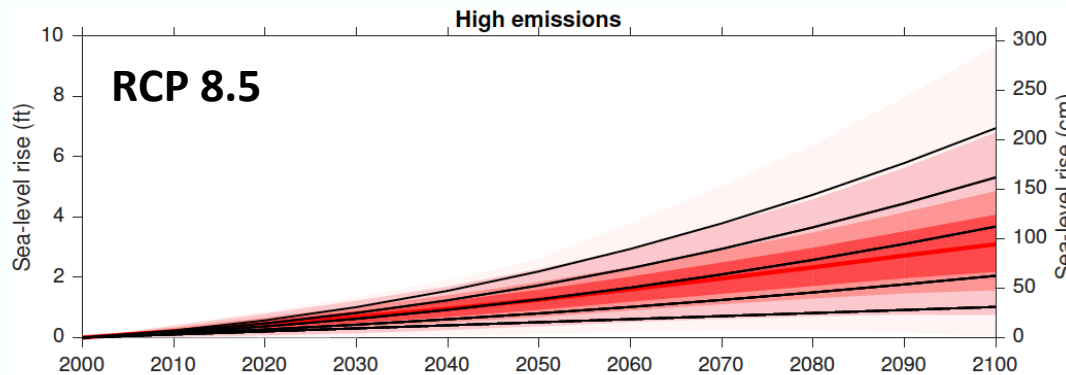
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- Vetting team for communication & education
- Climate impacts
  - General update of 2008 assessment based on newer global & national assessments
  - Begin assessment of impacts on agriculture
  - Update of 2013 sea-level rise projections
- Assess methane emissions & mitigation strategies

# Probabilistic Sea-Level Projections

## Baltimore, MD – comparison to VLM-adjusted CARSWG

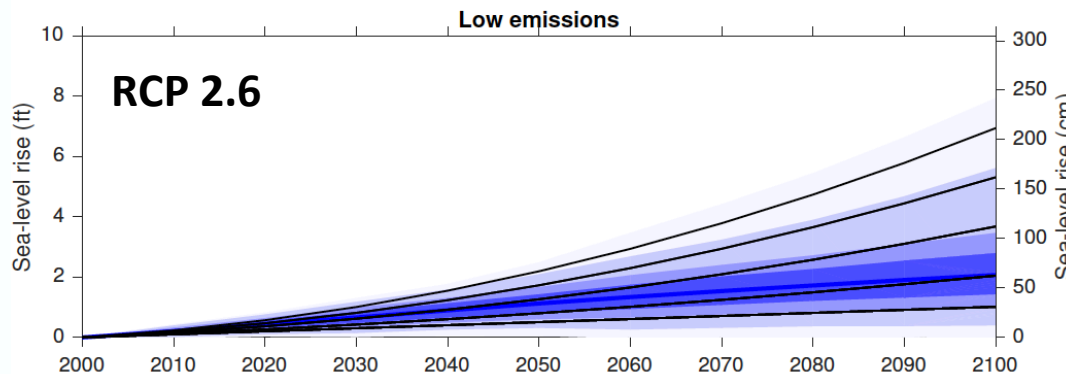
High Emissions



Likely 17<sup>th</sup>-83 percentile

67-124  
cm

Low Emissions  
< 2°C  
warming



44-85  
cm

Dark = likely (17th-83rd percentile range)  
Medium = 5th-95th percentile range  
Medium-Light = 0.5th-99.5th percentile range  
Very light = 0.1st-99.9th percentile range

Robert Kopp, Rutgers  
University, unpublished based  
on Kopp et al. 2016 *PNAS*

# STWG Forthcoming Meetings

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- Overview on methane consequences, sources & trends by Dr. Laura Lapham, MWG meeting, June 27
- STWG meeting, July 13, Adelphi
  - Implications for STWG of GGRA 2016
  - Form S&T vetting and review team
  - STWG contributions re. methane emissions
  - Impact assessments, including sea-level rise
- STWG meeting, September (TBD)
  - Review progress
  - Prepare contributions to MCCC 2016 report

# Proposed Contributions to 2016 Report

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- Emerging scientific insights on Maryland's climate change vulnerability (including new probabilistic sea-level rise projections)
- Why focus on methane emissions?
- Framework for assessments on agriculture (called for by the MCC Act) and on Chesapeake Bay restoration (technical support to state for the 2017 Mid-Point TMDL Assessment)