

Science and Technology Work Group

2020 Work Plan

Introduction

The Science and Technology Work Group (STWG) assists the Maryland Department of the Environment's Climate Change Program staff in reviewing pertinent information and preparing information that can help inform actions or decisions taken by the Maryland Commission on Climate Change (MCCC). The functions can be defined as **hindsight** (review of past information), **insight** (working with agency staff and others to package unbiased information in an understandable and actionable way), and **foresight** (anticipation of issues and articulation of alternative futures based on different actions).

Work Plan

1. Interaction with other Working Groups

A small liaison team from the STWG will be established so that a representative will be present at other Commission Work Group meetings – Mitigation (MWG), Adaptation and Resiliency (ARWG), and Education, Communication and Outreach (ECO). If advance notice is provided by a Work Group on a particular topic, STWG will strive to ensure the relevant experts from the STWG are also present. Scientific information may not be provided immediately but it will shorten the response time from the STWG.

2. Tracking IPCC and Related Reports or Activities

MDE Staff and STWG members will track relevant United Nations' Intergovernmental Panel on Climate Change (IPCC) and related products, including papers, reports, press releases, workshops, webinars and seminars in the region. MDE will forward links or announcements of key documents/links to MCCC members. Additions from other MCCC members are welcome.

3. Reviews. (Hindsight)

3.1. *Maryland Greenhouse Gas Inventories*

Provide advice to questions posed by MDE Staff on the current inventories and how some estimates may be improved.

4. Insights

4.1. *Blue Carbon.*

There is significant potential in Maryland to link wetland restoration to carbon sinks. This activity supports both the mitigation and adaptation mission of the MCCC. This may also create public outreach opportunities and linking with other Maryland programs such as the Dredge Material Management Program and Coast Smart.

Using the UN Report on Carbon Sequestration in Wetlands as a foundation, a summary report will be prepared that quantifies the opportunity and uncertainties with wetland sequestration for Maryland.

Partners in the Blue Carbon Workshop include MDE, MPA, COMPASS, and SERC. Originally scheduled for July 2020, the workshop is now expected to take place in late 2020 or early 2021.

4.2. GGRA Review

STWG will provide comments on the GGRA Draft Plan. The STWG will pay particular attention to the potential for Maryland to go beyond the 40 by 30 Reduction. STWG has received input from MDE on the areas of the Plan where STWG would be particularly useful.

4.3. Requests from MCCC Working Groups and the Commission

STWG will respond to specific questions from the Commission or its Work Groups.

4.4. Emissions During the Pandemic

STWG hopes to gain insight on the level and types of reduced emissions due to the reduced travel, manufacturing, and commercial energy use due to the coronavirus pandemic and social distancing orders. This may serve as an insightful analysis of the significant steps necessary to vastly reduce carbon-based emissions. The STWG will explore other lessons that can be learned from reduction in GHG during the COVID-19 crisis.

5. Foresights

STWG will work with MDE staff to prepare reports or presentations on the following:

5.1. Climate Impacts to Maryland's Agriculture

A final report from the 2018 workshop on the climate impacts to agriculture will be presented at a STWG meeting. The draft report will be updated in respect to the IPCC Climate Change and Land Report (2019).

5.2. Building the Maryland Modeling Community

Working with MDE, the Department of Natural Resources (DNR), the Maryland Department of Transportation (MDOT), the Maryland Department of Agriculture (MDA), the Maryland Department of Planning (MDP) and other state agency staff, recommendations will be developed for a Maryland modeling strategy for mitigating and adapting to climate change. This will include how model results can be communicated most effectively.

5.3. Innovations:

The STWG will work with scientists in agencies to track innovations that might include Direct Removal of GHG, Stabilization of Polar ice, Enhancing Reflectivity and other emerging concepts. The STWG will track these emerging technologies with periodic reporting to the MCCC.

NOTE #1: Expanding Advisory Expertise Within the STWG

Given the breadth of the Commission's responsibilities, the STWG will invite a few discipline experts to contribute to some of the work products described in the work plan that are not covered adequately by the current STWG.

NOTE #2: Coronavirus Pandemic

Due to Maryland's Stay-at-Home-Order caused by the coronavirus pandemic no in-person meetings or workshops will be held until further notice. This will have an impact the STWG planning and workflow, but nonetheless, regular meetings will be held virtually.