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**Governor's Council on Climate Change (GC3)  
SCIENCE AND TECHNOLOGY WORKING GROUP  
MEETING MINUTES**

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**March 25, 2020  
10:00 am - 12:00 noon  
Via Zoom**

**ATTENDANCE**

<b>Working Group</b>	<b>Title</b>	<b>Organization</b>	<b>Present</b>
Susan Masino Co-Chair	Vernon D. Roosa Professor of Applied Science	Trinity College	✓
James O'Donnell Co-Chair	Executive Director	CT Institute for Resilience and Climate Adaptation (CIRCA)	✓
Mike Hogan	Transportation Principal Engineer, Hydraulics and Drainage	CT Department of Transportation	✓
Nick Zuba	Commercial and Industrial Programs	CT Green Bank	✓
Sage Hardesty	Project Engineer, Water and Natural Resources	Fuss & O'Neill	✓
Kristin DeRosia-Banick	Shellfish Program Lead	CT Department of Agriculture, Bureau of Aquaculture	✓
Nidia Martinez	Director, Climate Analytics	Willis Towers Watson, Climate Risk Analytics	✓
Peter Raymond	Professor of Ecosystem Ecology	Yale University	✓
Anji Seth	Director of Applied Research	University of Connecticut/CIRCA	✓
Jason White	Vice-Director	CT Agricultural Experiment Station	✓
Anne Hulick	State Director, Connecticut	Clean Water Action	
Eric Barz	Town Planner	Town of Windsor	
Harry White		Forest ecologist/naturalist	✓
Colleen Murphy-Dunning	Program Director, Hixon Center for Urban Ecology, Urban Resources Initiative	Yale University	✓
Neeta Connally	Director, Tickborne Disease Prevention Laboratory	Western CT State University	✓
Jeff Harrison	Consulting Engineer	Geothermal Consultant	✓

Jerry Crystal	Adjunct Magnet Theme Coach, CREC Academy of Aerospace and Engineering	Independent STEM Consultant	✓
Tamara Muruetagoiena	Executive Director	Great Mountain Forest	✓

Associated Staff	Title	Organization	Present
James Albis	Senior Advisor to Commissioner Katie Dykes	CT DEEP	✓
Brian Thompson	Director, Land and Water Resources Division	CT DEEP	✓
Mary-beth Hart	Land and Water Resources Division	CT DEEP	✓
Adelaine McCloe	Environmental Intern	CT DEEP	✓
Edith Pestana	Equity and Environmental Justice Program	CT DEEP	✓

Other Identified Attendees	Present
Qingyang Cao	✓
Hannah Michelson	✓
Laura Bozzi Yale University	✓
Katarina Bade	✓
Yaprak Onat CIRCA	✓
Robert LaFrance Audubon CT	✓
K. E. Kuhn	✓
Marianne Engelman-Lado Yale University	✓

Other Identified Attendees	Present
Lee Cruz Community Foundation for Greater New Haven	✓
Roger Kuhns	✓
Camilla Thompson	✓

**Welcome and Introductions/Critical Issues**

*Facilitated by Co-Chairs Susan Masino, Trinity College and Jim O'Donnell, CIRCA*

- Mary-beth Hart facilitated this meeting via the Zoom platform and began the meeting at approximately 9:04 AM. She introduced herself as the DEEP (Department of Energy and Environmental Protection) liaison for the Science and Technology working group. She also introduced the co-chairs, Jim O'Donnell and Susan Masino.
- The co-chairs proceeded to introduce themselves and asked other working group members on the call to introduce themselves. To hear specific roles and backgrounds of group members, please refer to the audio recording posted with these minutes.
- During this time, working group members also presented some "critical issues" that they foresaw the work group addressing in the overall context of the goals of the GC3 (Governor's Council on Climate Change). These can also be heard in the audio recording.

**Overview of GC3 Process, Overall Schedule, and Working Group Structure**

*Facilitated by James Albis, DEEP*

- James Albis, Senior Advisor to the Commissioner of DEEP, described the background of the GC3 and some of its initial goals.
- He then described changes made by Governor Ned Lamont in expanding the goals and membership of the GC3. Albis discussed a list of deliverables as outlined by the current GC3 (can be seen in the meeting slides). He stated that EO3 (Executive Order 3) delineates certain requirements for the Governor's Council, including reviewing and revising the strategies and recommendations outlined in both the 2011 Climate Change Preparedness Plan and the 2018 Climate Change Mitigation Plan. EO3 also requires that all strategies and recommendations be observed and reviewed through an environmental justice and equity lens.
- Albis then went over the GC3 structure, presented in a table. This table can be viewed in the meeting slides. Each GC3 Subcommittee is shown on this table, along with every working group established under these subcommittees. James also stated that the Science and Technology working group falls under both subcommittees and will provide support to all working groups under the subcommittees.
- Albis proceeded to introduce the overall timeline of the GC3, including its subcommittees and working groups. He mentioned that these dates might be impacted by complications related to COVID-19, especially those goals which have to be met by public involvement. However, the timeline can still be used as a general guide for work that can be done remotely or via teleconferencing.
- **Question 1:** One of the members asked if there was an outline of the report that will be presented to the Governor and if members could have access to it?
  - James Albis and Mary-beth Hart responded that it would be discussed and viewed in later slides.
- Susan Masino also pointed out that the structural graph of the GC3 does not demonstrate how financing options are addressed under the 'Climate Change Mitigation' subcommittee, as there is no specific financing workgroup that is listed under that subcommittee.
- Susan Masino and Peter Raymond discussed that there are four subgroups under the 'Working and Natural Lands' working group that are not listed in the graph and should be added in future illustrations.

**Discussion of Working Group Goals and Objectives**

*Facilitated by Co-Chairs Masino and O'Donnell*

- Mary-beth Hart presented a draft table of contents for the final report which can be seen in the meeting slides. What would be included under each section of the table of contents was discussed. These components are shown under the draft table of contents. Mary-beth pointed out that each section in this draft table of contents corresponds to recommendations and suggestions made in the original preparedness plan.
- Hart mentioned that recommendations made under each section of the table of contents should include actionable items, which can be implemented within a short-, medium-, and long-term time span. Items mentioned in the 2011 report should also be reviewed for progress and relevance in context of the goals of this GC3.
- Jim O'Donnell took over at this point to discuss the specific role of the Science and Technology working group in addressing some of the components listed under Section 3 ('Overview of Expected Impacts from Climate Change') of the draft table of contents. O'Donnell proposed a breakdown of this section, shown in the meeting slides. He discussed how each of these subsections are of interest to the public and policymakers.
- He also stated that the working group could make a valuable contribution by addressing what changes in these proposed subsections could occur, and how those changes could be addressed by recommendations from the working group.
- **Question 1:** Roger Kuhns posed the question of how this can all be related under the sphere of sustainability and how issues might be addressed through a sustainable lens. He also asked how this working group can incorporate innovation and forward thinking into the proposals made by the group?
  - Susan Masino responded by respectfully asking that public comment and questions be held to the end of the meeting. In response to Roger Kuhn's question, Susan stated that the working group made a concerted effort to recruit expert members from various backgrounds and disciplines so that they might best address the interests of the GC3 from multiple perspectives.
- **Question 2:** Working Group member Anji Seth asked if there was anything in this draft report overview that should be focused more towards mitigation, instead of solely focusing on adaptation? What could be added that might balance it out?
  - Jim O'Donnell responded that there definitely should be more of a focus on mitigation, but that it was important to relegate the scope due to limited resources and time. He also added that a major goal of the Science and Technology working group is to assist other working groups in their needs and recommendations, which will be a critical role for this working group.
- **Comment 1:** Working Group member Peter Raymond commented that under the draft table of contents, there should be a section for "extremes," i.e., projected outcomes that fall on the far ends of the spectrum. He also stated the phenology should be a major consideration in expected changes.
  - Jim O'Donnell and Susan Masino responded that this is a draft and open to input, whatever members decide upon can be added into this section.
- **Comment 2:** Working Group member Jerry Crystal added that there should be some focus on societal and infrastructure changes in response to expected changes. This could demonstrate impact to certain climate action scenarios, and help highlight areas that need to be focused on for future planning and preparation.
- **Comment 3:** Working Group member Nidia Martinez added that it might be important for the section on 'Expected Changes' to differentiate between chronic changes (like sea level rise and heat waves) versus shock events, and show areas that are particularly prone to impacts from

these events. This could be important for demonstrating where the most vulnerable people and infrastructure are located and showing how these events could impact those communities.

- Anji Seth responded that this was a good point and it might be a valid idea to have some people brainstorming how those areas can best be prepared for such events (i.e., what is vulnerable, how will communication be handled, what will be needed?).
  - Nidia Martinez responded that it also might be a good idea to differentiate between environmental events that will be catastrophic to many people, over a broad geographic range versus events that are more localized. It would also be good to differentiate between events that are likely to be seen over different time ranges.
- O'Donnell thanked everyone for their input and stated that the draft for this section's table of contents will be evolving and can be changed to include group member input.

### **Equity and Environmental Justice Goals**

*Facilitated by Lee Cruz and Marianne Engelman-Lado*

*Co-Chairs, GC3 Equity and Environmental Justice Working Group*

- Mary-beth Hart introduced Lee Cruz and Marianne Engelman-Lado, the co-chairs of the Equity and Environmental Justice (EEJ) working group to present on the role of their working group and how they will be working alongside the Science and Tech working group.
- Lee Cruz thanked the group for the invitation, and then both Cruz and Engelman-Lado introduced themselves and shared their respective backgrounds with the group.
- Lee Cruz outlined the goals of the EEJ group, which include:
  - Develop a framework for equity and environmental justice, so it is incorporated into the GC3
  - Share relevant data about climate change burdens and equity considerations that other working groups can take under consideration
  - Share best practices for public participation, so that all stakeholders may have meaningful participation in the development of adaptation and mitigation strategies
  - Identify EEJ members to serve on other working groups.
- Lee Cruz identified some high-level takeaways from previous meetings on existing inequities. Two commonly cited ones are who benefits from renewable energy (and changes in infrastructure) and the need for community meetings to be more accessible to every member of the public.
- The EEJ working group will be posting all drafts of their report for review by other working group members and members of the public.
- Incorporating “lived experience” of community members who can provide information on real-life impacts of climate change and resilience/adaptation efforts.
- Working groups must be creating plans that are linguistically and culturally accessible, and consider all vulnerable populations and locations.
- **Key takeaway:** Development of overall plan needs to be as iterative as possible.
  - Under this recommendation, Lee Cruz recommended a pre-final draft meeting to allow vulnerable members of the community to have final input on what deliverable is ultimately presented to the Governor.
- Marianne Engelman-Lado added that differential impacts need to be incorporated, especially within the Science and Technology working group, when considering how to address inequality.
- The EEJ group can also be reached for comments/questions at [GC3EEJ@gmail.com](mailto:GC3EEJ@gmail.com).
- **Question 1:** Jim O'Donnell asked how long it would take to get a review of a draft done for the Science and Technology working group?

- Lee Cruz responded that they hoped to get feedback from groups of residents at multiple locations so it's dependent upon how long it would take to gather adequate feedback within a given deadline. They are also working around complications posed by COVID-19 and developing best practices for gathering feedback online.
- Susan Masino added that this working group is planning on engaging in the iterative process in three ways:
  - Having members from the Science and Tech working group interface with members from other work groups to ensure collaboration and incorporation.
  - Dividing into sub-groups to tackle specific issues and collaborate amongst those sub-groups.
  - Planning on having targeted presentations and topics at subsequent meetings, maybe even presenters from the EEJ group or people from areas of expertise that contribute to the understanding of the goals set forth by the EEJ.

### **Overview of 2011 Climate Change Preparedness Plan and 2018 Climate Change Mitigation Plan** *Facilitated by Mary-beth Hart, DEEP*

- For the sake of keeping on schedule, Hart passed over this section on the two reports and stated that she would post PDFs and web links so that Working Group members could read through them in more depth. [2011 Climate Change Preparedness Plan](#); [Building a Low Carbon Future for Connecticut \(2018 Climate Change Mitigation Plan\)](#)

### **Discussion of Gaps**

*Facilitated by Co-Chairs Masino and O'Donnell*

- Jim O'Donnell opened this discussion to the working group members to ask if anyone had any recommendations for gaps/issues/topics that need to be discussed or considered.
  - Mike Hogan commented that it would be necessary to look over more of the documents before identifying any gaps in the group's need for more diverse representation or if there are any specific issues/topics that should be addressed.
  - Nidia Martinez responded that maybe the group should have a member from the EEJ sitting in on other meetings or someone who could help establish an inventory of what resources are already available to the working group.
  - Peter Raymond added that it might be beneficial to have someone present who specializes in ecosystems and asked what exactly the goals of this working group are in regards to technology?
    - Jim O'Donnell responded that this merited consideration.
    - Susan Masino also responded that long-term monitoring falls under the realm of technology and what kinds of datasets and databases are available- i.e., how can we utilize them to be helpful to the goals of the GC3?

### **Public comments**

*Facilitated by Mary-beth Hart*

- A member of the public brought up that they have been concerned about fossil fuels and the transition to renewable energy. They were also wondering about better representation in the technology sector of this working group, if there needed to be better representation because science and technology have an important role to play in the reduction of carbon emissions.
  - One attending member responded that, as an engineer, they were paying special attention to this and that would be a focus of that member's participation in the group.

### **Next Steps and Adjourn**

*Facilitated by Co-Chairs Masino and O'Donnell*

- Mary-beth Hart mentioned that the co-chairs would like to get an idea of when the next meeting should be held and next steps for getting involved in the EEJ group/sitting in on other working groups' meetings.
- Co-Chairs Masino and O'Donnell talked about having meetings approximately every two weeks, on Monday or Wednesday mornings generally. Any direct scheduling conflicts with either of those days should be brought to their attention.
- Jim O'Donnell also reminded members that short bios are being collected from them to share backgrounds amongst other working group participants.
- The Co-chairs adjourned the meeting at approximately 11:10 AM.

Comments may be sent to [DEEP.ClimateChange@ct.gov](mailto:DEEP.ClimateChange@ct.gov)