

NH Envirothon 2023 Current Issue: *Adapting to a Changing Climate*

Introduction

Climate change is a very complex issue and involves the sciences, politics, economics, and moral and ethical decision making. Earth's climate has been relatively stable for the past 10,000 years which has allowed human societies to develop. We are currently faced with a relatively rapid changing climate which makes it necessary to devise strategies to reduce the risks from the harmful effects of climate change such as biodiversity declines, more severe weather, extreme heat and cold, sea-level rise, and food insecurity. While many of the effects of climate change are on the global level, many of the adaptation strategies are most effective at the local level.

The Challenge

The challenge for your team in this year's Envirothon competition involves performing research on climate change and some of its impacts. Next you will look at your community to identify vulnerable areas and then devise adaptation and mitigation strategies and propose methods to implement these strategies.

Your presentation should focus on the following objectives:

1. Describe global climate change and the forcings that are driving it (both natural and man-made)
2. Explain the social, ecological, and economic impacts of climate change at different scales (global, national, and local)
3. Describe positive feedback loops and tipping points, and how these impact climate change.
4. Evaluate your community **using scientific data** to identify the known and expected impacts of climate change at 3 moments in time: present, 2030, and 2050.
5. Devise climate change adaptation and mitigation measures for your community, that if applied, would substantially reduce your community's climate change vulnerability.
6. Describe the process you would use to implement these measures.

Resources

2023 Competition Study Resources – NCF-Envirothon

Union of Concerned Scientists, Climate Change

<https://www.ucsusa.org/climate>

United State Environmental Protection Agency, Climate Impacts in the Northeast

<https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-northeast.html>

New Hampshire Department of Environmental Services, Climate Change Program

<https://www.des.nh.gov/climate-and-sustainability/climate-change>

U.S. Global Change Research Program, Climate Science Special Report

<https://science2017.globalchange.gov/>

The Nature Conservancy Climate Solutions

[NCS Handbook \(nature.org\)](#)

Positive Feedback Loop Example

<https://www.wired.com/story/the-grim-origins-of-an-ominous-methane-surge/>

NH Envirothon 2023 Current Issue Team:

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Presentation Guidelines

1. All five team members must participate in the presentation. Your team will have exactly 15 minutes to make your presentation, followed by 5 minutes of questions by the judges.
2. Any videos in the presentation must be produced by the NH Envirothon team making the presentation.
3. No videos downloaded or streamed from the Web can be used in your presentation.
4. Videos should be no longer than **two minutes**.

Evaluation of Presentations

1. Grading Rubric available on NH Envirothon website.
2. Panel of 3-4 judges hear presentation and then ask questions.
3. When answering questions, huddle and come to consensus.