# Climate change video ‘mash-up’

## Learning goals:

* Research and gain insight into an active area of climate change science research.
* Search for and access relevant primary literature, review articles, and news and perspectives articles about your topic.
* Think critically and collaboratively about how to convey information about your chosen topic.
* Create or find digital images and video clips that illustrate climate change science concepts within your topic area.
* Create a compelling storyline that synthesizes disparate sources of information and visuals into a cohesive media piece.
* Think critically and collaboratively about how to disseminate the media piece you produce.

## Assignment components:

This project can be divided into multiple steps. In the outline below, sub-components written in **bold** are handed in to the instructor to be graded. Additional details are provided about each of those assignments.

1. Pre-production research:
   1. **System map (or causal loop diagram) and major research questions**
   2. Scientific literature search and **synthesis of findings**
   3. In-class jigsaw exercise to share research findings and write narration outline
   4. **Narration**
   5. **Storyboard** to match components of narration with visual resources
2. Production:
   1. Gather visual assets
   2. Record narration
3. Post-production:
   1. Edit narration and visual assets into **rough cut media piece.**
   2. Incorporate comments on rough cut and revise to create **final cut.**

### Assignment component 1: system map and major research questions

Your first task is to meet as a group, discuss your topic area, think of major questions that you want to address during your project, create an overview diagram of the system you are studying, and assign each group member to research an aspect of that system. For example, for a group investigating the potential climate-carbon cycle feedbacks in tropical rainforest systems, important components of that system might include:

* Factors that currently control net primary productivity in tropical rain forests
* Climate change impacts on abiotic factors such as moisture availability and temperature and how those impacts might change over time
* Whether/how changing abiotic factors may influence carbon dioxide uptake and net primary productivity of the tropical rainforest in the future
* Exogenous factors that may accelerate or mitigate climate change impacts (e.g., deforestation, species extinctions, agricultural use, pollution).

As a group, discuss the key variables in your system. What are the relationships between those variables? Sketch a causal loop diagram that depicts your system’s elements and their inter-relationships. Are there any feedback loops? What do you expect the behavior of key variables to be over time? Dr aw a qualitative sketch of that behavior in the form of a graph, with ‘time’ on the x-axis. As a group, decide which group members will research particular aspects of your system. As a group, hand in a brief, written overview of your system, your system map, and each member’s area of focus.

### Assignment component 2: scientific literature search and synthesis of findings

Using your area of focus as a guide, each student conducts a search of the primary literature to learn about that area in depth. Students are expected to skim many (e.g., 10-15) papers, and to choose four papers that, together, offer a coherent and in-depth view of their focal area. Each student will submit an **annotated bibliography** with each reference provided and a paragraph that summarizes the key findings from each paper. Each student also prepares no more than 3 slides (printed out on paper) to share in a ‘jigsaw’ exercise during class time, with their fellow group members.

### Assignment component 3: narration and visual resource list

Students within each group will work together to write a 4-page narration for their video mash-up. The narration should draw from each group member’s research and provide a coherent story. Your goal is to clearly describe the key scientific concepts that you are focusing on and to support those descriptions with examples and results from scientific research you have read about. In addition to your narration, each group must submit a list of resources for images, websites, video clips, and/or sound clips that you plan to incorporate into your video, with a table that matches concepts presented in your narration to resources you intend to use (a storyboard).

### Assignment component 4: Rough cut of group video

Groups will work collaboratively to combine individual narratives and lists of resources into a single video presentation that is **4-5 minutes** long. Your editing work must be done collaboratively and at the Media Center (you can’t take the project home), although you are strongly encouraged to collect resources and be prepared to share them with your group as homework (rather than using in-class time). You will present your rough cut to other members of the class and your instructor ‘gallery style’ – i.e., on the computer that you are using to create it. At this stage, you should be presenting a **piece that you are proud to show!** At the same time, be ready to receive constructive feedback and to incorporate those suggestions to make your piece even better. As you critique your fellow students’ work, keep in mind the following questions:

* Does the video present information clearly and concisely?
* Are statements made substantive? Is there a need for more (or less) information to make statements more compelling?
* Are visuals, video clips, text, illustrations, sound effectively used to communicate key messages and information? Could they be used more effectively?
* Are there any scientific inaccuracies?
* Is the video effective in reaching the target audience (non-science major undergraduates)? Will they understand the content and relate to the style of presentation?

### Assignment 5: Final cut of group video

Your video should be submitted to the Media Center. Be prepared to show your video to the class and others at our public film screening. Before the film screening, as a group, write three questions for your audience, to stimulate discussion about your video’s topic. At the film screening, you will be responsible for facilitating a brief discussion about your video after it has been screened. ALL group members should contribute to the presentation. You should submit your three questions as a Word document at the same time that you submit your video.

### Assignment 6: Peer review of your group members

Our goal is to have each team work collaboratively and to produce pieces that each group member contributes to substantively and that you would be proud to share within and beyond our class (with science majors, other instructors, your friends, etc.). You will have an opportunity to express your view of how collaborative your group was via a peer review form that only the instructor will have access to. The questions on the peer review form include:

1. How would you rate the overall interaction of your team (highly collegial and collaborative to unproductive)
2. Do you feel like you did more, the same, or less work than the rest of your team members?
3. How would you describe this individual's contributions to your team project?
   1. Did they take a leadership role? Did they help organize team work? Did they contribute to the research needed to complete the project? Were they creative?
4. How would you rate this team member's contributions?