An illustration by James McKay of the Amazon in 2020 (1) and in 2500 (2) under a RCP 6.0 scenario.
In 2500, forest cover may be largely gone, with reduced surface water levels. In addition, human presence and
infrastructure may be minimal, degraded, or absent, given high temperatures and water stress.
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Lesson: Survive the Century: Climate Change Journalists of Tomorrow

By Heidi Scott, SESYNC | June 13, 2022

Overview:

Survive the Century is a climate fiction, choose-your-own-adventure game designed by a SESYNC research team. It allows the player to select among important policy choices that affect climate change in each decade of the 21st century. The provisional objective is to "win" the game by surviving to 2100, but much of the game's edification comes from comparing various midline scenarios triggered by choices at particular points in history, starting with funding global access to COVID vaccines in 2020. Scenarios result from how the user chooses to fund public- or private-sector infrastructure plans, achieve land-use regulations, and invest in military and speculative geoengineering technologies.

In this lesson, students play the game to pursue two alternate outcomes: ecotopia and ecocide. As they play, they will be immersed in creative newspaper headlines that mark climate and environmental justice events caused by their scenario choices. Their creative challenge is to write short, proleptic (future-narrative), newspaper articles that develop these headlines in detail. The assignment will require them to integrate factual information (logos) with creative writing that articulates future events: fact-based climate fiction.

Assumed Prior Knowledge:

This lesson is appropriate for undergraduate and graduate students. It could also be used at the high school level for advanced students. Some background in climate change scenarios and/or environmental policy is helpful but not required.

Learning Objectives:

- "Perish" by 2060 to see how poor policy choices exacerbate baseline climate crises and inequality and lead to non-linear feedbacks and tipping points (ecocide).

- "Thrive" in 2100 to see how ecology, policy, and the social sciences all inform the renewable energy revolution and foster greater global equality (ecotopia).
- Develop creative and journalistic writing skills to clearly and vividly articulate specific future scenarios that represent the many possible pathways of the 21st century.
- Consider and debate the game's inherent critiques of capitalism and multinational corporations and evaluate the political orientation of its writers and designers.

Key Terms and Concepts:

climate fiction; environmental justice; ecocide; ecotopia; narrative scenarios; greenwashing; green infrastructure; biomimicry; climate migration; the Global South; sacrifice zones; geoengineering; rewilding

The Hook (suggestions for quickly engaging students):
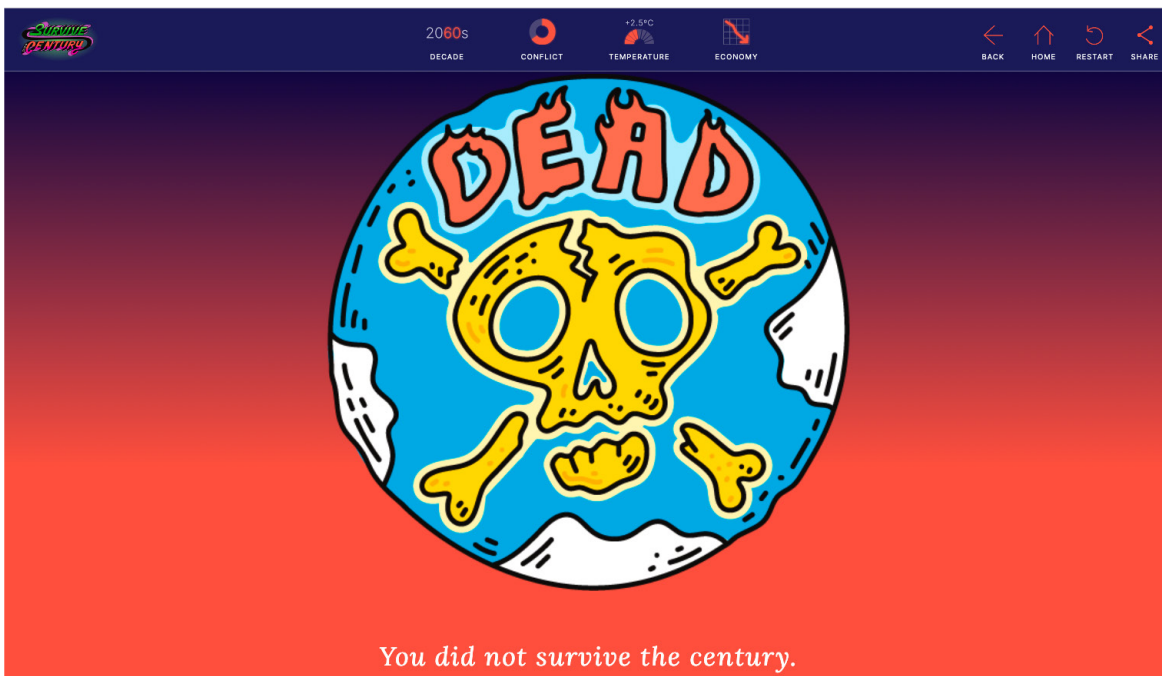
A message from the game that displays when a player puts too much faith in a technology fix alone solving all of our problems, instead of the urgent, ongoing work needed to change society and stabilize the environment.

1. The above graphic shows the outcome of radical technological interventions, as opposed to fixes that legislate efficiency, emissions reductions, and green infrastructure.
   - In an open, rapid brainstorm, have the students call out all of the speculative technological solutions they've heard of (e.g., Silicone Dioxide [SiO_2] parasol; seeding the ocean with iron; carbon recapture and bedrock storage). Then in another column, brainstorm potential solutions that involve biomimicry, that is, emulating nature's processes (reforestation, green roofs, ECOncrete).
   - Where do technology and biomimicry overlap? How are their aims and means quite different when considering the ethical principles with which humans adapt to and assuage climate change? Close the 5–10 minute Hook by having students vote on their 2–3 favorite ideas collected on the board. Circle them.

Teaching Assignments:

The following series of activities will take up multiple class sessions, as well as out-of-class homework time. Instructors may follow these activities in full or in part, depending on their interest and the focus of their class.

1. **Endgame: Capitalist Corporate Techno-Belly-Flop**
    - Start with the worst—have students play the game with the most selfish choices exacerbated by untested and extreme geoengineering. Their planet is functionally dead by the 2060s.
    - As they advance from 2020–2060, have them write newspaper headlines that they *do not wish to happen*. Collect these headlines in a scary box on the shared screen. *Students do not have to write these stories*. This exercise addresses the apocalypse track so that students can move beyond it toward actionable solutions.

2. **Reset: Ecotopia is a Communal Garden Path**
    - Now, have the students play the game using the ideals of its designers, which the nonprofit group [350.org](350.org) exemplifies: equality, capitalist reform, taxing the wealthy, public green infrastructure, and wise technology.
    - As the students advance from 2020–2100, have them write newspaper headlines that *entice them*. Collect these headlines in a utopian box on the shared screen. *Have each student identify the headline they'd like to write a story for*. Try to assign a writing cohort of 2–3 students to each headline. Now proceed to the next step.

3. **Climate Change Journalists of Tomorrow**
    - The final product of this lesson is a series of ~1000–word articles that match the headlines on the ecotopian pathway. Some students may not be familiar with the [basic principles of journalistic writing](#) and [news writing guidelines](#), so review these first.
    - Have writing cohorts spend 20 minutes researching the scientific, social, and factual information surrounding the fictional story title they've chosen. For example, if they chose the headline "Successful Test of Great Barrier Reef Corals Relocated to Tasman Sea," they might find crucial scientific insight in [recent research on migrating corals](#).
    - For each story, have students find 2–3 factual science or news pieces to support their writing. If they find critiques of the implied article's utopianism, they should note them.
    - Each cohort now spends at least 10 minutes using their research to create a factual outline that will support their proleptic fiction. Then, invite them to integrate creative, fictional, and utopian specifics to pair with this factual frame.
    - Ask students to extend beyond the natural sciences by using sociological and humanist elements of analysis, including principles of environmental policy, restorative justice, ecofeminism, and ecotopian ideas like the [Land Ethic](#).
    - Review [news writing guidelines](#), including the lead, fact and attribution, full name and age, short paragraphs, 3rd-person perspective, and the headline (which they inherited). Writing cohorts should now have a journalistic frame, factual scientific information, and creative imaginings to braid together into their story.

4. **Journalists of Tomorrow: Draft, Rewrite, Share**

   As homework or in the class session after activity #3 above, have cohorts draft their story in ~1000 words.

   - After each cohort produces a rough draft, workshop these pieces across cohorts and have each group take away useful editorial suggestions.

   - The students need to make the print deadline! Have one more round of revision, and then have each cohort submit their groomed story as a finished piece of writing. In order for students to have fun with this, set aside a presentation time for each group to share their ecotopian dream. Leave time for Q&A/debate about the likelihood of this vision and outcome.

   - The instructor should consider sending the best-written stories to SESYNC for uploading in association with links to the game.

5. **Ideological Framing**
   - Conclude this series of activities by discussing the ideological frame of Survive the Century —how it advocates for the Green New Deal and principles of the Green Party, which is notably left of standard political operations.
   - Ask the students to brainstorm ways to have conversations with non-environmentalists and climate change skeptics to entice them to consider these policies rather than marginalize or ridicule them.
   - Encourage the students to bring in personal anecdotes and their own doubts about the feasibility of an eco-utopia. Hopefully, this hard conversation will motivate them to approach the social and political elements of ecology with empathy and patience. We don't want them leaving the session with a sense of "mission accomplished!" but instead they should be energized by new ideas and ready to start mobilizing.

Background Information for the Instructor:

1. SESYNC Researchers Develop Game That Challenges Users to "Survive the Century"

   - If you had the global platform to sway human opinion and behavior in the face of climate change—what would you do? What choices would you make when confronted with various political, environmental, and social scenarios? Would you invest in green technology and cut taxes? Would you be tempted to unleash your inner supervillain and spark WWIII? What if you blocked out the sun (just a little bit)? If you've never considered such questions before, an online game, developed by researchers from the National Socio-Environmental Synthesis Center (SESYNC), now gives you the opportunity to do so.

2. En-ROADS Climate Solutions Simulator

   - En-ROADS is a global climate simulator that allows users to explore the impact of roughly 30 policies—such as electrifying transport, pricing carbon, and improving agricultural practices—on hundreds of factors like energy prices, temperature, air quality, and sea level rise.

Related SESYNC Content:

- Scott, Heidi. (2022, June 13). *Survive the Century: Climate Change Decisions for your Grandchild*. SESYNC. https://www.sesync.org/resources/survive-century-climate-change-decisions-your-grandchild

- Jantz, Samuel M., et al. (2015). Future habitat loss and extinctions driven by land-use change in biodiversity hotspots under four scenarios of climate-change mitigation. *Conservation Biology, 29* (4), 1122-1131. https://doi.org/10.1111/cobi.12549

- Pereira, L. M., et. al. (2021). From fAIrplay to climate wars: making climate change scenarios more dynamic, creative, and integrative. *Ecology and Society, 26*(4), 30. https://doi.org/10.5751/ES-12856-260430

- SESYNC. *Geoengineering Scenarios*. 2018. https://www.sesync.org/research/geoengineering-scenarios

- Kosow, H., & Schweizer, V. SESYNC. (2021, November 23) *Creating Socio-Environmental Scenarios*. 2021. YouTube. https://youtu.be/imVfvYpG_fs