

READING 1

Can board games teach us about the climate crisis? Game creators say yes

Board games might be the best learning device to think creatively about impending climate disaster

Zoe Dutton - Sat 28 Jan 2023

Europe is planting trees to offset its emissions but is swiftly hit with massive wildfires. The United States is investing in mining operations abroad to wean off its dependence on fossil fuels but harbors concerns about trading with an abusive government. Meanwhile, a coalition of countries from the global south must decide whether to accept construction loans from China or the United States.

These are not conversations at another high-profile global summit, but rather scenarios envisioned by the board game Daybreak. Four players – the United States, China, Europe and the “Majority World”, encompassing the global south – cooperate to reach zero emissions before hitting 2 degrees of warming or putting too many communities in crisis.

In the world of board games, most titles involve total victories over adversaries in zero-sum competitions. In the new genre of climate-themed games, creators like Leacock make collaboration the key to success.

Leacock, who designed the hit game Pandemic, said that he and fellow designer Matteo Menapace initially based Daybreak on a textbook model of the atmospheric emissions cycle; conversations with relief groups prompted them to take a more human-centered approach. The makers of Daybreak, which developed a following on the crowdfunding site BackerKit, have pledged to donate a portion of the profits to climate justice organizations. (They also said they would not use plastics in the game.)

Board games and puzzles are an \$11bn industry – one that grew 20% between 2019 and 2021, fueled partly by pandemic-related boredom and digital fatigue, according to market research group Euromonitor International.

Role-play and empire-building adventures like Settlers of Catan have steadily transformed board games from a children’s pastime dominated by brands like Hasbro and Mattel to a sprawling, diverse market in which smaller designers make games for adults. In recent years, those designers have released

climate and biodiversity-themed titles like Wingspan, Cascadia and Daybreak.

“There is an increased public desire to engage with climate change in a tangible way,” said designer Matt Parker, who has also taught courses on game development. “Often people don’t want to confront climate change or feel powerless in the face of its complexity. But a lot of the joy of board games is in engaging complex systems with other people.”

In 2020, Wingspan, in which players develop biodiverse bird habitats, was named the best strategy game by the American Tabletop Awards. The game was reviewed by the science journal Nature, in addition to more traditional gaming publications, and sold over 750,000 sets in its first year.

Last year, Cascadia, where players compete to create “the most harmonious ecosystem” in the Pacific north-west, won the prestigious Spiel des Jahres award as well as American Tabletop Awards’ best strategy competition.

Other recent titles include Kyoto, where players put themselves in the shoes of climate negotiators; Renature, where the objective is to restore a polluted valley, and Tipping Point, where participants build cities that must adapt to a warming climate.

These games do more than simply entertain, research shows. Simulation games can measurably facilitate learning about international climate politics, according to a 2018 study published in Climatic Change. The authors found that playing a single round of the climate game Keep Cool increased participants’ sense of responsibility toward the environment and confidence in climate cooperation.

A separate 2020 study published in the journal Simulation & Gaming reached similar conclusions. Researchers found that games presented a “simplified alternative to overcomplicated science communication” and that “portraying reality in a highly concentrated and simplified manner” helped players conceptualize the climate crisis in tangible ways.

Though many of these games, like Daybreak, imagine future climate scenarios, some look back in time and explore past injustices.

85 Rising Waters, by Central Michigan University Press, depicts the Great Mississippi Flood of 1927, which killed hundreds and displaced some 700,000 people.

The flood was one of the most destructive in American history. It disproportionately affected Black communities along the Delta lowlands, communities who were largely excluded from government relief programs. Players of the game, which is available now digitally and will ship physical copies in May, cooperate to save their families from floods as well as 95 white vigilante violence.

Elizabeth “Scout” Blum, a professor of environmental history at Troy University in Alabama, created Rising Waters alongside a team of historical, gaming and artistic collaborators and consultants.

100 “You are confronted with sobering questions. To the point that in designing situations, we think about how to not be insensitive or trigger people, while still including these really important themes,” Blum said, noting the game touched on difficult topics such as 105 food insecurity and lynching that people would often prefer not to think about – not unlike the climate crisis. “The hope is playing can teach empathy and understanding or spark outrage and questions, as appropriate.”

110 Games can provide both students and the general public space to explore challenging questions, according to Blum. They’re also key decision-making tools used at the highest echelons of power.

Ed McGrady, a chemical engineer by training, has run 115 wargames for a range of government entities, including the White House. An adjunct senior fellow at the Center for a New American Security, McGrady said gaming can help players anticipate future conflicts and emergencies and plan accordingly.

120 “That competitive interaction with a live human being – it gets you to care and think creatively about the issue at hand more than any sort of report or learning device or briefing mechanism ever could,” McGrady said.

125 During the 2015 United Nations Climate Change Conference in Paris, he organized a game to examine climate impacts on global security. Players found that warming temperatures would trigger migration flows into Europe and the United States, leading to popular 130 discontent and an uptick in authoritarian governance.

At the time, McGrady said he and other experts were surprised by the game’s far-reaching outcomes. But following the rise of far-right leaders over the next few years, the game proved prescient.

135 Game creation also is a form of storytelling. It’s one that has been traditionally dominated by white, male designers – according to one analysis, more than 96% of designers of top-ranked board games were white men. Bringing more diversity to the game-design field 140 can tell a richer story about the climate crisis and biodiversity.

Rising Waters illustrator Makiyah Alexander said that growing up, she yearned to see stories that centered people of color. While Rising Waters shows the 145 suffering of Black Americans in the wake of the 1927 flood, it also identifies pockets of agency and resistance; Alexander designed the deck of community cards that players must draw from to survive the game, labeled with sources of power 150 including blues music, farm animals, church, garden, family and education.

“So many [games] are about conquering or dividing; I thought it was important to share something from us, about our values of unity and being equal with 155 others,” said Inuk designer Thomassie Mangiok. “Even our dog sled teams are seen as partners, not pets.”

Mangiok, a school administrator, created a game called Nunami – “on the land” in Inuktitut – as a way 160 to share the traditions of his village Ivujivik, the northernmost settlement in Canada. Players collaborate to achieve a balance between the Arctic tundra’s natural and human elements before their characters starve.

165 “The message I’m trying to send through my game is to work with others, to make a better environment for everybody,” he said. “We remember how to work together, and through play can show that.”

