

Iowa Climate Podcast Teaching Slides

Season 1 "Changemakers"

2023

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The Iowa Climate Podcast is produced by the Environmental Health Sciences Research Center, Community Engagement Core

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Overview

- The slides here are individual lessons based off each of the four episodes from the Iowa Climate Podcast's first season. Listen for free on soundcloud, no sign up required https://soundcloud.com/ehsrc_uiowa
- The lesson will start off with discussion/review of content from the podcast episodes to start conversation and engagement. Then the lesson will dive deeper into the topics, and will end with the taking it further activities in the instructor's document
- Feel free to tailor the lessons to meet your needs! This curriculum is designed to be used by a variety of grades and disciplines. Visit our website for more details <https://ehsrc.public-health.uiowa.edu/communityengagement/iowa-climate-podcast/>
- If you use these resources we would appreciate if you let us know by taking this short evaluation https://uiowa.qualtrics.com/jfe/form/SV_ahgvI4hm6bt6aPk

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Episode 1:
Organizing for the Future of
Linn County

Tam Marcus

Introduction

- Tam Marcus, from Cedar Rapids, IA
- Sustainability Director for Linn County
- PhD Candidate in Natural Resources and Earth System Sciences



Questions for Discussion

- What is Tam's PhD work about? Where is she collecting data and focusing her work?
- Why did Tam run for elected office? What does she say to people who are interested in making a difference?
- What are some of the activities of the Linn County Sustainability office?
- What was one takeaway from Tam's interview?

Reflect on the quote from the podcast

"It was this beautiful group of organizers becoming a campaign team...I might be the candidate, but this is bigger than all of us. This is an issue-based campaign And I still stand by that. That if I was elected and whoever gets elected., the more you can focus on the stand by the issues... you might not win re-election but that's not the goal. It's not about a person, but it is about more than that, it is about the mission. It's about the work."

Representation in Government

- "Diverse, equitable, inclusive and accessible workplaces yield higher performing organizations."
 - White House
- Tam is a great story of empowering us to make a difference, we are all capable, no matter who we are



Links:

- [Linn County Sustainability Plan](#)
- [Linn County Resiliency Hub](#)

What is a Derecho?

- Fast-moving bands of thunderstorms with destructive winds. The winds can be as strong as those in hurricanes and tornadoes!
- Unlike hurricanes and tornadoes, derechos follow straight lines



Iowa Derecho; August 10, 2020

- Costliest thunderstorm in U.S. history, crossing through several Midwest states, but hit Iowa the hardest.
- Life changing for many, taking out homes, power, trees and crops
- Many still recovering today...



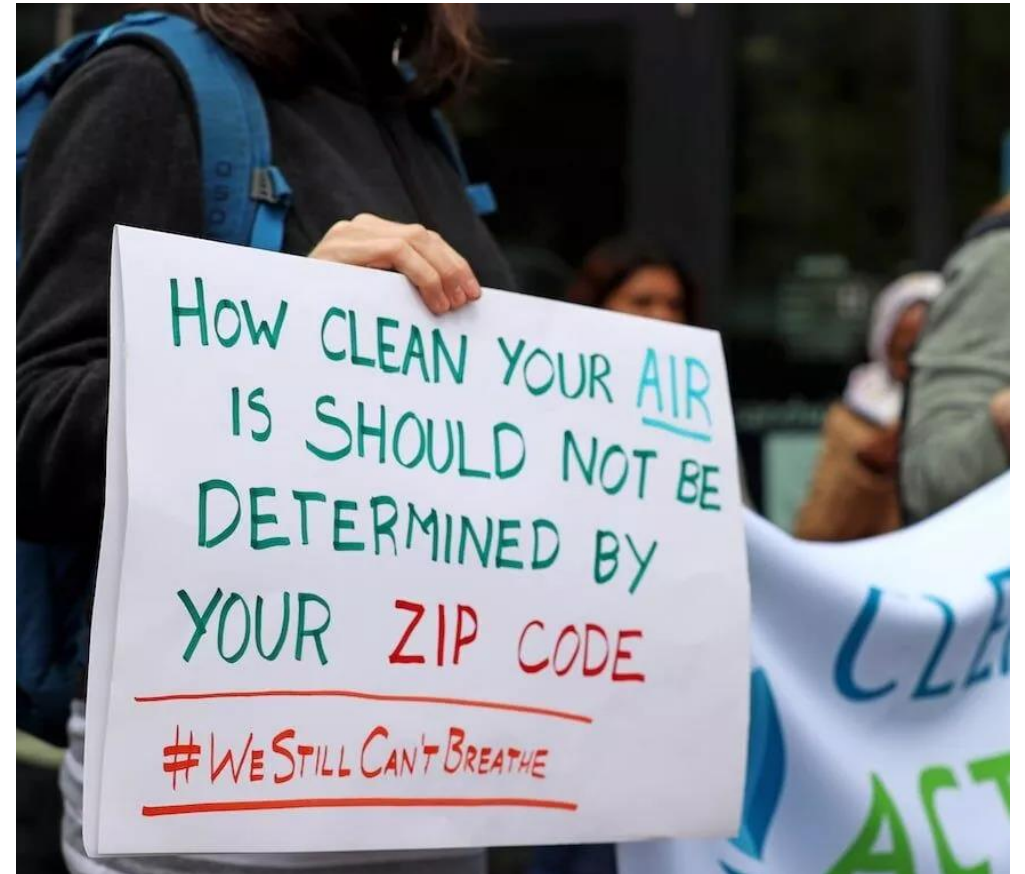
Environmental Justice

- "The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to development implementation and enforcement of environmental laws, regulations and policies."
 - -EPA



Environmental Justice

- Those enduring the greatest implications of climate change are lower socioeconomic status and minority individuals
- This movement was heavily influenced by the American Civil Rights movement



Discussion Question

How did the
Derecho show issues
of environmental
injustice?



Episode 2:
Sustainable Cohousing
Communities and Clean Energy
Districts

Dr. Craig Mosher

Introduction

- Dr. Craig Mosher
- Member of the Stakeholder Advisory Board of the Environmental Health Sciences Research Center
- Work in the clean energy districts and cohousing communities
- Retired Social Worker & Social Work Professor



Questions for Discussion

- What did Craig do for work before he retired?
- What is Craig's motivation to work on climate change?
- What is a clean energy district? How is the model similar to the soil and water conservation districts?
- What are some successes of the clean energy district? How does it contribute to the local economy?
- What is a cohousing community? How are they energy efficient and eco-friendly?

Renewable Energy Sources in Iowa

Wind Energy

- Wind spins the turbines, which powers/spins the connected generator to produce energy



Solar Energy

- Sunlight activates the panels, cells produce electrical current, this is then converted to electricity useable by homes, etc.



Energy Efficiency

Is getting the same/better results in lighting, power etc., and using less energy to do so

- Benefits of this include- emission reduction, reducing demand for energy imports (keeping it local), and lowering costs on all sectors



Cohousing

- An intentional community of private homes surrounding a shared space
 - Offers community, affordability, and a small carbon footprint
- About 318 cohousing communities in the US
 - [Explore them!](#)



Prairie Hill Cohousing, Iowa City

International examples:



Whole Village
Caledon, Ecovillage
in Canada



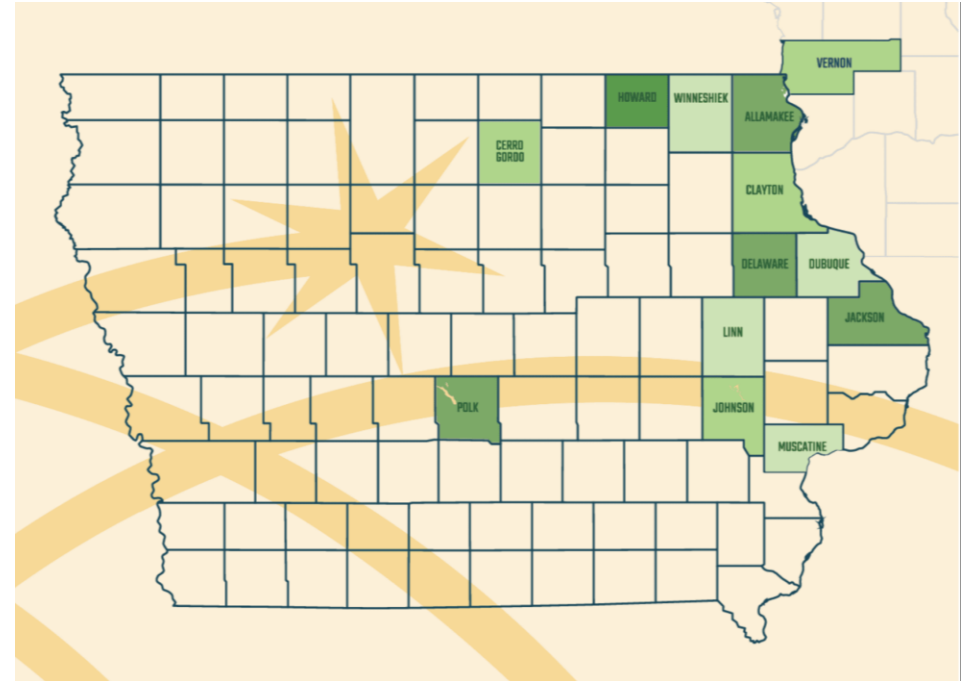
Dyssekilde Ecovillage,
in Denmark



Vauban Village,
Ecovillage in
Germany

Clean Energy Districts

- Inflation Recovery Act (IRA): monumental legislation in the U.S. to tackle the climate crisis and strengthen U.S. energy security
- Helping reduce fossil fuels and electrify everything we do



- [Clean Energy Districts of Iowa-CEDI](#)

Episode 3: Starting a Climate Reality Corps

Anna Kirchhoff and Emma Seward

Introduction

- [Climate Reality Campus Corps](#)
 - 2 students helped to start/grow a chapter at the University of Iowa
- In this organization they help raise awareness and educate about the climate crisis, while also fostering a culture of environmentalism through campus activities



Questions for Discussion

- What lead Emma & Anna to the Climate Reality Campus Corps club?
- Like Emma & Anna, you are all a part of the younger generation, what do you notice others your age are doing about the climate crisis?
- What in your community is being done/not done to combat the climate crisis?
- Who did Emma say the climate movement is? Why does she believe this?
- What climate related topics bring yourself excitement for the future?

Shopping More Sustainably

- Consumers are wanting to shop more sustainably
 - About 40% of shoppers would pay more for an environmentally friendly product, fitting their values more
- **Greenwashing**: the process of making false or misleading environmental claims to mislead customers



Ex of sustainable products: zero waste supplies

Sustainable Agriculture:

- Is farming in a way which protects the environment, expands natural resources and making the best use of nonrenewable resources.



Sustainable Practice looks like: crop diversity, reducing pesticides, cover crops, etc.

Sustainable Agriculture & Iowa

- Iowa's farming when not sustainable, produces run off into water sources, algal blooms, soil erosion, etc.
- Ex of a goal: The Nutrient Reduction Strategy (NRS)
 - Reducing Nitrogen and Phosphorus loads leaving the state 45% by 2035



Ocean Health

- Coral reefs have been struggling/dying due to a wide variety of issues, such as..
 - Climate change
 - Rising ocean temperatures
 - Pollution
 - Destructive fishing practices
- **Coral Reef Renewal**: can include simple growing, gardening and out planting but also harvesting millions of eggs/sperm to create new genetic individuals



Water Health

- For many US homes, the tap water is full of "forever chemicals" or PFAS at potentially unsafe levels
- Especially within underserved and low-income communities





Man-made chemicals that have been used in products/industry since the 1940s

- Most PFAS don't break down, so they remain in the environment

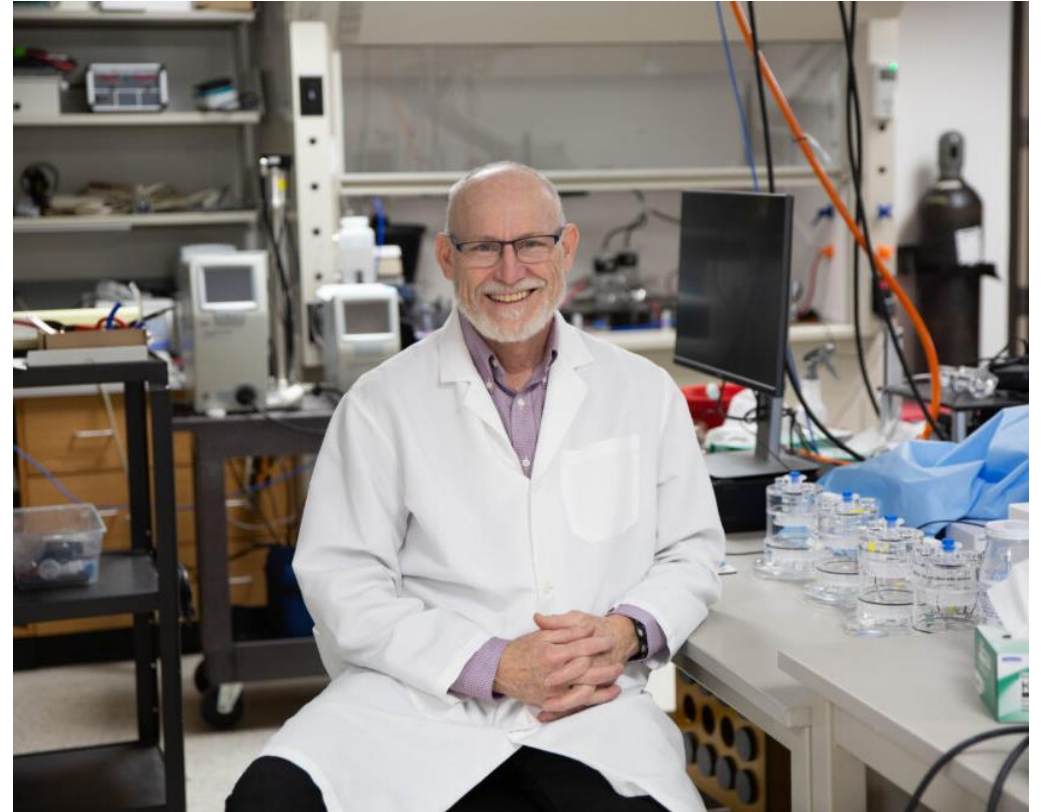
Check your tap water <https://www.ewg.org/tapwater/>

Episode 4:
Climate Change Research,
Teaching and Lifestyle Change

Dr. Peter Thorne

Introduction

- Professor in the College of Public Health at the University of Iowa
- Dr. Thorne created a course to help students learn about the climate crisis and to provide tips to finding a more environmentally friendly lifestyle
- Teaches in Denmark and the Netherlands as well, and is an Advisor Board Member for the EPA



Questions for discussion

- How does Dr. Thorne serve as a leader to others looking to live a more environmentally friendly life?
- What are the yearly Iowa Climate Statements and why are they important?
- Is there anything in the way of making more sustainable lifestyle changes in your life?
- Peter poses the question to his class- are you optimistic about the future of the climate or pessimistic? What makes you feel this way?

Sustainable Lifestyle Changes

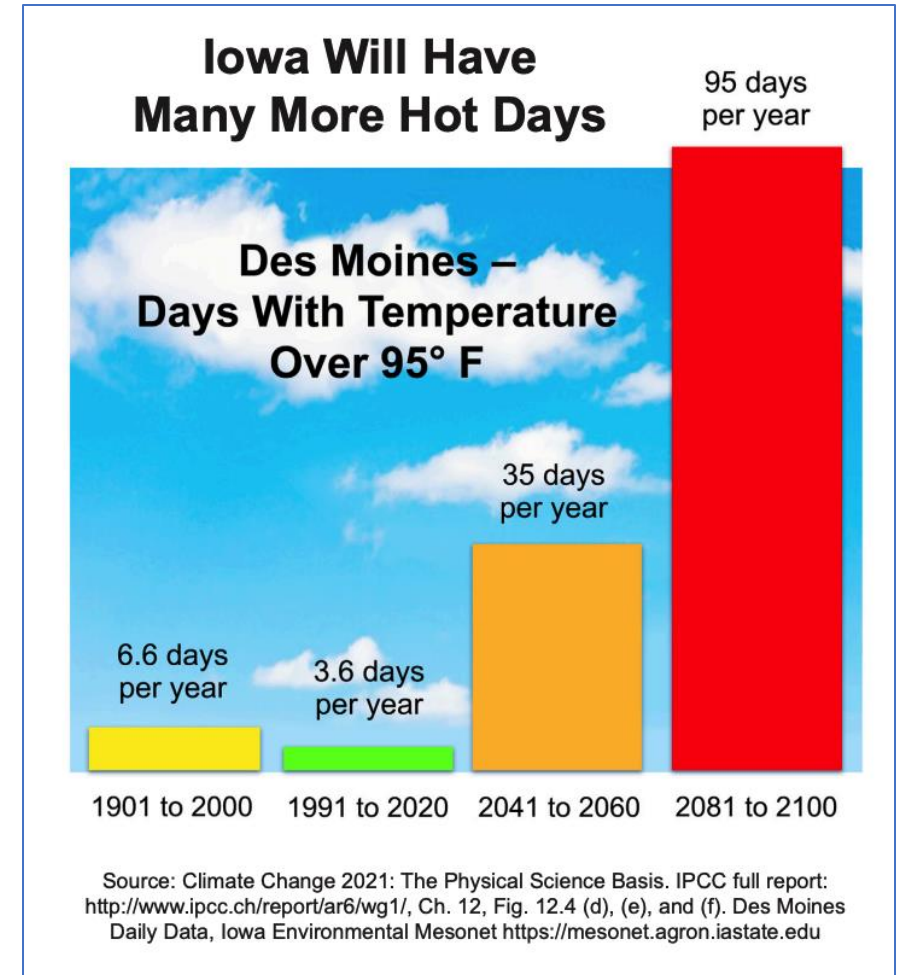
- **Carbon Footprint:** is the total amount of greenhouse gases that are generated by our actions (includes Carbon Dioxide and Methane)
- American's footprint is among the largest in the world
 - American average 16 tons per person, world average is 4 tons per person



The Carbon Footprint

Yearly Climate Statement

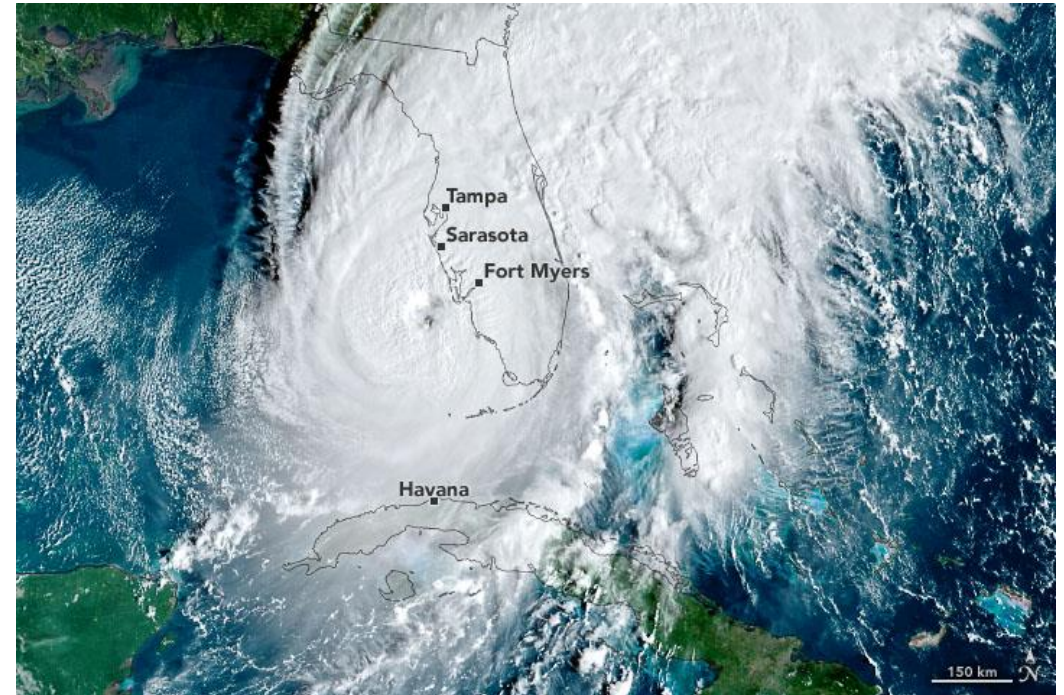
- A way to communicate easily digestible info to lowans about current climate updates
- Teachers and experts from Universities/cities all over the state
- [2022 statement](#)



Current Climate Events - *Hurricane Ian 2022*

Hurricanes are more likely because of climate change

- **Heat** is like the hurricane fuel, making it big, rainy and powerful
- 43% of affected individuals making <25k a year never returned to their homes



Climate Refugee

- A person who has been forced to leave their home, as a result of the climate change effects on their environment
- This can happen because of disaster, like a hurricane, but also a gradual environment change
 - Ex: South Africa



Current Climate Events — *Pakistan Flooding 2022*

- Displaced 30 million+
 - Hundreds of thousands now climate refugees in dire need of humanitarian aid
- Areas hit the hardest experienced 8x more rain than average years

