Academic Libraries Join the Fight Against Climate Change

Lisa Spiro and Ashley Fitzpatrick, Rice University
CNI Fall Membership Meeting
December 9, 2020
Agenda

- Introductions
- Why libraries should act on climate change
- How libraries can act on climate change
- Fondren Library Actions
- Question & Answer
POLL:
How active is your organization in addressing climate change?

- Not at all active
- Somewhat active
- Active
- Very active
The Experience of Hurricane Harvey

Brandy McDaniel, “Emergency Alerts”

W White, “Rescue boat on Riverview Dr”
The Aftermath of Harvey

Arun Chaduhary, Ambulance on Road with Trash Heaps
Share your memories of Hurricane Harvey.

Where were you? What's your story?

In August 2017, Hurricane Harvey dropped more than 30 trillion gallons of water along the Texas Gulf Coast. This website is a place where you can find memories and digital artifacts about this historic natural disaster or share your own stories, images, and audiovisual recordings related to Hurricane Harvey.

Our mission is to collect, preserve, and share digital artifacts associated with the storm, as well as the many stories that Harvey left in its wake—stories of rescue, resilience, and recovery, as well as stories of painful loss and lingering questions.

Read our About page for more information or Contact Us with your questions. For past and upcoming events, see our News and Events page.

https://harvymemories.org/items/show/3242
Student Experience at Rice University

Rice Context

- Over 100 faculty conduct research related to the environment or sustainability
- More students choose environmental academic programs including majors, minors, and certificates
- 10+ student clubs focus on the environment
1. Why should libraries and archives act on climate change?
We All Must Act on Climate Change

- 2018 IPCC report: limiting warming to 1.5°C requires emissions dropping by ~45% by 2030 and reaching net-zero by 2050
- 23% of Fortune 500 cos. have pledged to be carbon neutral by 2030
- 600+ universities signed the Carbon Commitment

Sydney Climate March, 2019
The Public Needs Good Information on Climate Change

%Adults who think global warming will harm people in the US
%Adults who think global warming is already harming people in the US, 2020
%Adults who think global warming will harm them personally, 2020

Yale Climate Opinion Maps, 2020
Libraries Impact the Environment

Carbon Footprint (By Activity)

Emissions by Activity (tCO₂e)

- Natural Gas: 321.8 tCO₂e
- Electricity: 24.7 tCO₂e
- Waste: 7.7 tCO₂e
- Paper: 21.5 tCO₂e
- Travel: 47.6 tCO₂e
- Shipping: 11.0 tCO₂e
- Staff Commuting: 97.2 tCO₂e

- Natural Gas: 60.5%
- Travel: 9.0%
- Paper: 4.1%
- Waste: 1.5%
- Electricity: 4.6%
- Staff Commuting: 18.3%
- Shipping: 2.1%

UVic Libraries Carbon Emissions by Activity 2018 - 2019
Climate Change Has Already Impacted Libraries

Houston Public Library after Hurricane Harvey
Libraries & Archives Face Future Risks from Climate Change

By 2100:

- 17.7% of archives are at risk of “future storm surge plus sea level rise”
- More than 90% of archives face a temperature change over 1°C, with “7.5% of sites likely to change by 10 °C”

Sustainability as a Library Value

- 2019: American Library Association adopts sustainability as a core value
  - Triple Bottom Line
  - “ALA is recognizing that libraries of all types can act as catalysts and inspire future generations to reach solutions that are not only sensible but essential to sustaining life on this planet.” -ALA President Loida Garcia-Febo, 2019

https://sustain.wisconsin.edu/sustainability/triple-bottom-line/
POLL:
Which argument is most persuasive in making the case for academic libraries to address climate change?

- Take responsibility for a common crisis.
- Protect their collections.
- Sustainability is a key value for libraries.
- Promote mission to support research and teaching.
- Serve as a community hub for information.
- Other (please enter into chat)
2. How might libraries and archives act on climate change?
“If we really want to strengthen our communities, and build up our social infrastructure and create more resilient places...maybe we should take a closer look at some of the resources that we already have....So in case the power goes out of a neighborhood, you can go to the library and call it a resilience center....” – Eric Klinenberg

Harris County Public Library Pop Up Library, NRG Arena (Hurricane Harvey)
Create Lending Programs: Tools, Seeds, etc.

Austin Public Library Seed Collection

University of Florida, Marston Tool Library
Reduce Waste and Resource Consumption

● Green Office Programs
● Composting during peak use
● Packaging reductions and recycling

https://sustainability.usu.edu/getinvolved/green-office

https://library.oregonstate.edu/composting-recycling
Reduce Carbon Footprint by Shifting to Electronic Resources

- 2020 Fondren Fellows project by James Sanders
- Makes ballpark estimates based on available data and models
- Finds that in general shifting from print to electronic books will reduce carbon footprint

<table>
<thead>
<tr>
<th>Greenhouse Gas Emissions</th>
<th>Units</th>
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<tbody>
<tr>
<td>Emissions impact of each book acquired</td>
<td>3.36 kgCO2-eq</td>
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<tr>
<td>Emissions impact of each read of physical book</td>
<td>0.13 kgCO2-eq</td>
</tr>
<tr>
<td>Emissions impact of each read of online book</td>
<td>0.56 kgCO2-eq</td>
</tr>
<tr>
<td>Impact of one year of physical book acquisitions</td>
<td>67,150.00 kgCO2-eq</td>
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<tr>
<td>Impact of one year of online books</td>
<td>166,906.25 kgCO2-eq</td>
</tr>
<tr>
<td>Impact of one year of running building</td>
<td>701,415.00 kgCO2-eq</td>
</tr>
<tr>
<td>Total Yearly Impact of Library</td>
<td>935,471.25 kgCO2-eq</td>
</tr>
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</table>

Estimate of Library Environmental Impact
Use Green Building Techniques

- Solar thermal collectors & heat pumps
- Daylighting
- Photovoltaics
- Wind chimney
- Proximal to public transit
- No parking
- Garden
- Stormwater management
- Community spaces
Facilitate Public Dialogue on Climate Change

- Group of libraries sponsoring events and activities aimed at helping the community address climate change
- Pivoted to podcast and blog after pandemic

https://borrowed-time.org/
Support Sustainability Research & Education

- Collections focused on sustainability
- Research guides
- Sustainability literacy
- Curriculum development
Provide Access to Archival Collections

A sample of tidal records from Port Arthur, February 1840 (National Archives of Australia)

Old Weather: archived weather data from 19-20th C. ship logs
Support Open Science in Climate Research

“Given that global efforts to combat climate change impacts will require both rapid collaborative research and communication among academics, policymakers and the public, climate change research is in urgent need of strong OS stewardship.”

(Tai & Robinson, 2018)

https://www.icos-cp.eu/
What roles might libraries play in future climate crises?

- Shift to local in face of climate catastrophes and pandemics
- Focus on saving energy, reuse, and collective action
- Decline in use of tech
- Re-emergence of print
- Libraries as local information hubs & refuges

**Scenario 1: Silent Spring**

Public libraries do well in this world. People become voracious consumers of physical books (especially old books) and libraries are rediscovered and revered by the majority of the population due to their safety and neutrality. They are also highly valued because they are free public spaces that promote a wide variety of community-related events. Nevertheless, there are still pressures caused by the high cost of energy and the need to maintain facilities.

The phrase ‘dark euphoria’ (Bruce Sterling) sums up the mood in this scenario, because on one level the world is falling apart but on another level people are quite content.

*Bookends Scenarios* (2009)
3. Fondren Library’s Climate Actions
Developing a Sustainability Plan

- Student-led research through Fondren Fellows
- 5 key focus areas
- Successes so far

Spaces
Resource Consumption
Education & Research
Collections & Archives
Engagement
Hiring Library Eco-Rep

- Extends **existing program** of “student-led peer-to-peer environmental outreach”

- Responsibilities include:
  - Research sustainability initiatives
  - Provide training
  - Conduct outreach
  - Coordinate with campus eco-reps
Creating Green Team

Responsibilities:

1. Implement, update, and steward Fondren’s sustainability plan;
2. Assess implementation progress;
3. Communicate priorities and progress;
4. Educate library community on best practices;
5. Foster a culture of environmental responsibility;

https://library.rice.edu/sustainability
20 public & 5 academic libraries awarded $1000 by ALA for programs and events that “engage their communities in programs and conversations that address the climate crisis.”

Required to screen one film and run two other programs

Rice’s focus: “Advancing Environmental Justice and Intersectionality in Houston”
“Justice and Transformation” Panel

- Featured Houston women on local climate problems and their roles in engaging the community in solutions
- Drew diverse audience of about 50 people from across Rice, Houston, and beyond

Justice and Transformation:
Houston Women on Climate Action

Wednesday, October 28
6 p.m.

From wildfires to floods, the consequences of climate change are increasingly evident, and underserved communities often face the most severe impacts.

Inspired by Dr. Ayana Elizabeth Johnson and Dr. Katharine Wilkinson’s All We Can Save: Truth, Courage, and Solutions for the Climate Crisis, this virtual panel discussion will bring together four Houston women whose work addresses climate justice:
- Dr. Denae King (TSU)
- Dr. Cymene Howe (Rice)
- Amy Catherine Dinn (Lone Star Legal Aid)
- Iris Gonzalez (Coalition for Environment, Equity & Resilience (CEER))

Join us on October 28, 2020 for a discussion about gender, climate change, and environmental justice. Co-sponsored by Rice’s Fondren Library, Rice’s Center for Environmental Studies, Houston’s Citizens’ Environmental Coalition (CEC), and Rice Environmental Society.
All We Can Save Book Circles

- Focus on collection of essays and poems about the climate crisis by women activists, scientists, and artists
- Uses guides developed by book’s co-editors
- Discussions connect members of Rice community, raise awareness of climate change, and provide inspiration for action

https://www.allwecansave.earth/circles
Communities Responding to Extreme Weather (CREW) Climate Resilience Hub

- Provide help to community before, during & after extreme weather event
- Provide information about extreme weather
- Host annual event on extreme weather

In Process: Partnership for Environmental Data Literacy

- Builds on prior collaboration with Kinder Institute to provide civic data training to young people (Civic Switchboard)
- Partnering with ACTS (frontline community group) and local middle school to help students understand air quality monitoring data

Washington Post (12/7/20)
Upcoming: Screening *Fire and Flood*

Partner with **Citizens’ Environmental Coalition** Houston Green Film Series and Rice environmental organizations
Elements of Success

- Engaging the expertise and energy of students
- Pursuing diverse partnerships
- Understanding local needs
- Including the library’s different functions (e.g. space, research, teaching and learning)
- Starting small, then building

http://news.rice.edu/2020/10/19/fondrens-green-team-hosting-sustainability-focused-events-thanks-to-ala-grant/
POLL:
Which strategies seem most promising for libraries to address climate change? (Pick top 2)

- Facilitating public dialogue
- Helping communities be resilient
- Reducing waste & resource use
- Creating lending programs
- Shifting to electronic collections
- Using green building techniques
- Supporting sustainability research
- Providing access to archives of climate data
- Supporting open science
- Other (please enter into chat)
4. Q&A / Discussion:

1. What is your organization doing to address climate change?

2. How might we act collectively to fight climate change?

3. How does sustainability fit into the mission of academic libraries?

4. What questions do you have for us?
Contact Information

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Note: A few of the images in this presentation have been switched from the video version; in addition, a typo has been corrected.
Resources


ALA Sustainability Round Table


IFLA Green Library Award

IFLA, Sustainability is Libraries' Business: Libraries and Sustainable Development (2019)