



Northern Illinois University

Sustainability at NIU

Courtney Gallaher

Campus Sustainability Coordinator
Associate Professor in EAE/CSWGS

Why is sustainability important for NIU?



NIU's Mission

To empower students through educational excellence and experiential learning as we pursue knowledge, share our research and artistry, and engage communities for the benefit of the region, state, nation and world.

- The urgency of the climate crisis and other environmental crises
- Sustainability means ensuring our ability to fulfill NIU's mission
- Opportunity for us to be leaders in our community around sustainability
- Better choice from a long-term operational perspective
- Aligns with diversity, equity, and inclusion (DEI) initiatives through environmental justice

Why is sustainability important for NIU?



- **Students want campuses to focus on sustainability**
 - 74% of students consider commitment to the environment when choosing which schools to attend¹
 - Students are aware of the precarity of their futures in a changing climate
 - Learning opportunities for students to engage in sustainability teaching and research



Students participating in climate strikes throughout the United States

¹Princeton Review's most recent College Hopes and Worries survey (2022) <https://www.princetonreview.com/college-rankings/college-hopes-worries>

Why is sustainability important?



“United in Science” Report, Oct 2022 World Meteorological Organization (WMO)

Key Findings

- Emissions continue to rise, and current climate pledges are insufficient to keep global warming below 1.5 °C above pre-industrial levels
- On a likely path to 2-3°C of warming
- Cities will face increasing climate impacts that will intersect with socioeconomic inequalities
- The science is clear, and urgent action is needed to mitigate emissions and adapt to our changing climate



Impacts of climate change in Illinois

- **Increased rainfall intensity and flooding**
 - More intense storm systems
 - Stress on aging urban drainage systems, sewage overflows
 - Contaminated drinking water supplies
 - Public health risks
- **More frequent drought stress**
 - Declines in agricultural yields
 - Stress on state's water resources
 - Economic costs
- **Increased temperatures**
 - Increases in mosquito and tick borne diseases (e.g. Lyme)
 - More frequent heat waves
 - Air quality problems that trigger respiratory conditions (e.g. asthma)



Climate change is a threat amplifier



- More vulnerable populations are harder hit by the impacts of climate change
- Environmental justice
- E.g. Increases in extreme heat
 - People of color and low-income earners are more likely to have asthma, and to self-report fair or poor health
 - Less likely to live in communities with fewer green and blue spaces
 - Less likely to have access to air conditioning or reliable transportation to cooling centers
 - **Students are part of a vulnerable population and may come from vulnerable communities**

Why is sustainability important?



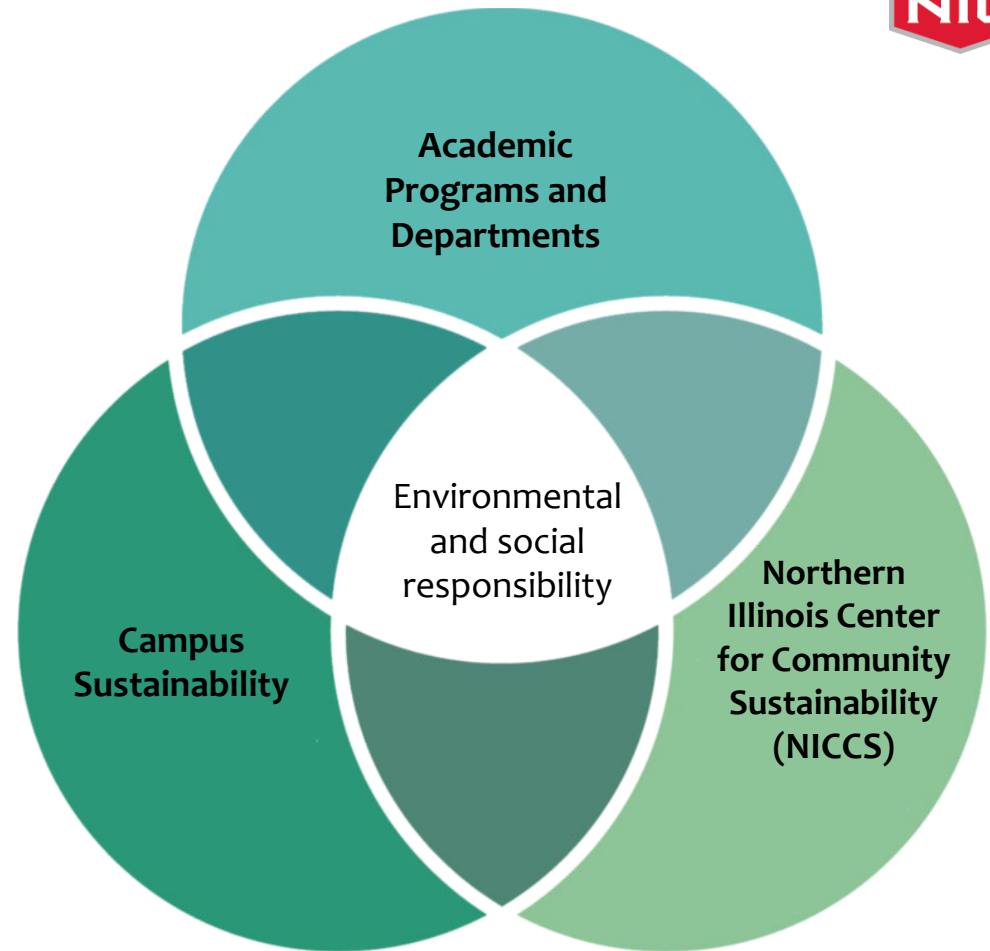
- Climate change is interconnected with other environmental crises
 - Pollution, land degradation, natural resource depletion, waste management, loss of biodiversity, etc.
- **Sustainability involves finding creative solutions to these problems**
 - Research and technology
 - Systems thinking
 - Community resilience

Sustainability at NIU



“Sustainable development is meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

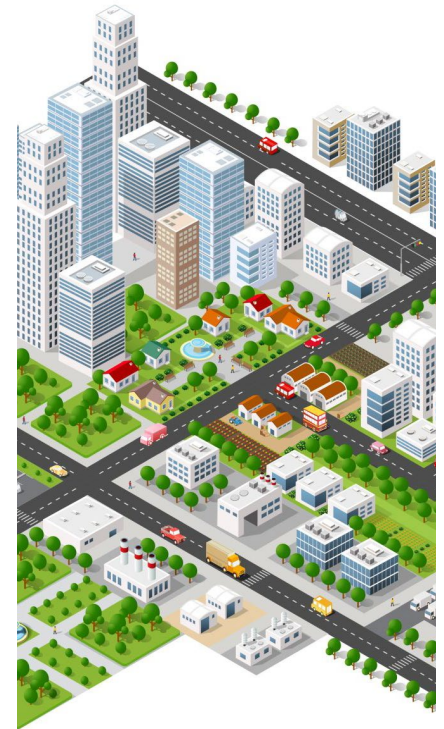
- Bruntland Report, 1987



Campus Sustainability



- Climate action planning
- Sustainable building design
- Grounds (tree care, native restoration, pollinator habitats, stormwater)
- Transportation (fleet, commuting, buses, bikes)
- Waste management and recycling
- Teaching, research, and outreach



Sustainability Tracking, Assessment, & Rating System



- Self-reporting framework for colleges and universities to measure their sustainability performance
- Rates colleges based on their sustainability efforts
- Benefits of participation
 - Public recognition
 - Sierra Club’s “Cool Schools” List
 - Princeton Review
 - Benchmarking against other institutions
 - Creates a baseline for future planning
 - Helps to guide strategic planning around specific sustainability efforts



AASHE STARS



Universities earn points for sustainability efforts in several categories:

- Academics (curriculum and research)
- Campus and public engagement
- Campus operations (buildings, energy, food and dining, etc)
- Sustainability planning and coordination
- Diversity, equity and inclusion
- Innovation and leadership



AASHE Resource Hub



aashe stars conference community hub bulletin

LOGIN CREATE AN ACCOUNT BECOME A MEMBER



Campus Sustainability Hub

Search

Browse All

<https://hub.aashe.org/>

The Campus Sustainability Hub is a one-stop shop for AASHE members to access toolkits and resource collections about all aspects of sustainability in higher education, from academics to operations to governance. To get started, browse by sustainability topic or content type, or enter search terms above. [Learn more](#)

Browse Topic List Browse Content Types

Submit a Resource

Curriculum	Research	Campus Engagement	Public Engagement
Air & Climate	Buildings	Energy	Food & Dining
Grounds	Purchasing	Transportation	Waste
Water	Coordination & Planning	Diversity & Affordability	Investment & Finance
Wellbeing & Work			

NIU has an institutional membership

Create your own account to access these resources



Campus Sustainability Hub

Search Hub

Home / Curriculum

Curriculum

- Toolkit**
- Resources
- STARS Data
- [Submit a Resource](#)

Introduction

One of the primary functions of colleges and universities is to educate students. By training and educating future leaders, scholars, workers, and professionals; higher education institutions are uniquely positioned to understand and address sustainability challenges. Institutions that offer courses covering sustainability issues help equip their students to lead society to a sustainable future.

- [View all Curriculum](#)
- [Submit a new resource](#)

★ Featured Resources

☆	A Guide for Applied Sustainability Learning Projects: Advancing sustainability outcomes on campus and in the community	Publications
☆	Education for Sustainable Development Goals: Learning Objectives	Publications
☆	Teaching and learning sustainability: An assessment of the curriculum content and structure of sustainability degree programs in higher education	Publications
☆	The Sustainability Literacy Test (Sullitest)	Tools
☆	Sustainability Curriculum in Higher Education: A Call to Action	Publications

New Resources

- Climate Emergency: Feedback Loops**
Course Materials
Published 1 week, 2 days ago
- Sustainability Management Simulation: Net Zero**
Course Materials
Published 1 week, 2 days ago
- Employing the SDGs to Enhance University Research and Education Sustainability Objectives**
Videos & Webinars
Published 1 week, 4 days ago
- Webinar: Assessing Sustainability Literacy & Culture: Innovations & Lessons Learned by Multiple Institutions**
Videos & Webinars
Published 3 weeks, 3 days ago
- Webinar: Innovations in Teaching Sustainable Consumption in Higher Education**
Videos & Webinars
Published 1 month ago





Campus Sustainability Hub

[Search](#)[Browse All](#)

Home / Curriculum

Curriculum

[Toolkit](#) [Resources](#) [STARS Data](#)

[Submit a Resource](#)

FILTERS

View as:



Content Type

[Show all](#)

Academic Discipline

[Show all](#)

Office or Department

[Show all](#)

Tag(s):

Organization(s):

Institution Type

[Show all](#)

7334 RESOURCES

Climate Emergency: Feedback Loops

Moving Still Productions Inc.

Teach climate change with the following free resources: Climate Emergency: Feedback Loops, a series of five short films narrated by Richard Gere, featuring twelve renowned climate scientists, and endorsed by ...

Posted Oct. 19, 2022 Course Materials [View more](#)

Sustainability Management Simulation: Net Zero

Harvard University (MA)

In the Sustainability Management Simulation: Net Zero - Winner of the 2022 Gold Medal at the International Serious Play Awards - learners play the role of the General Manager of a 500-room ...

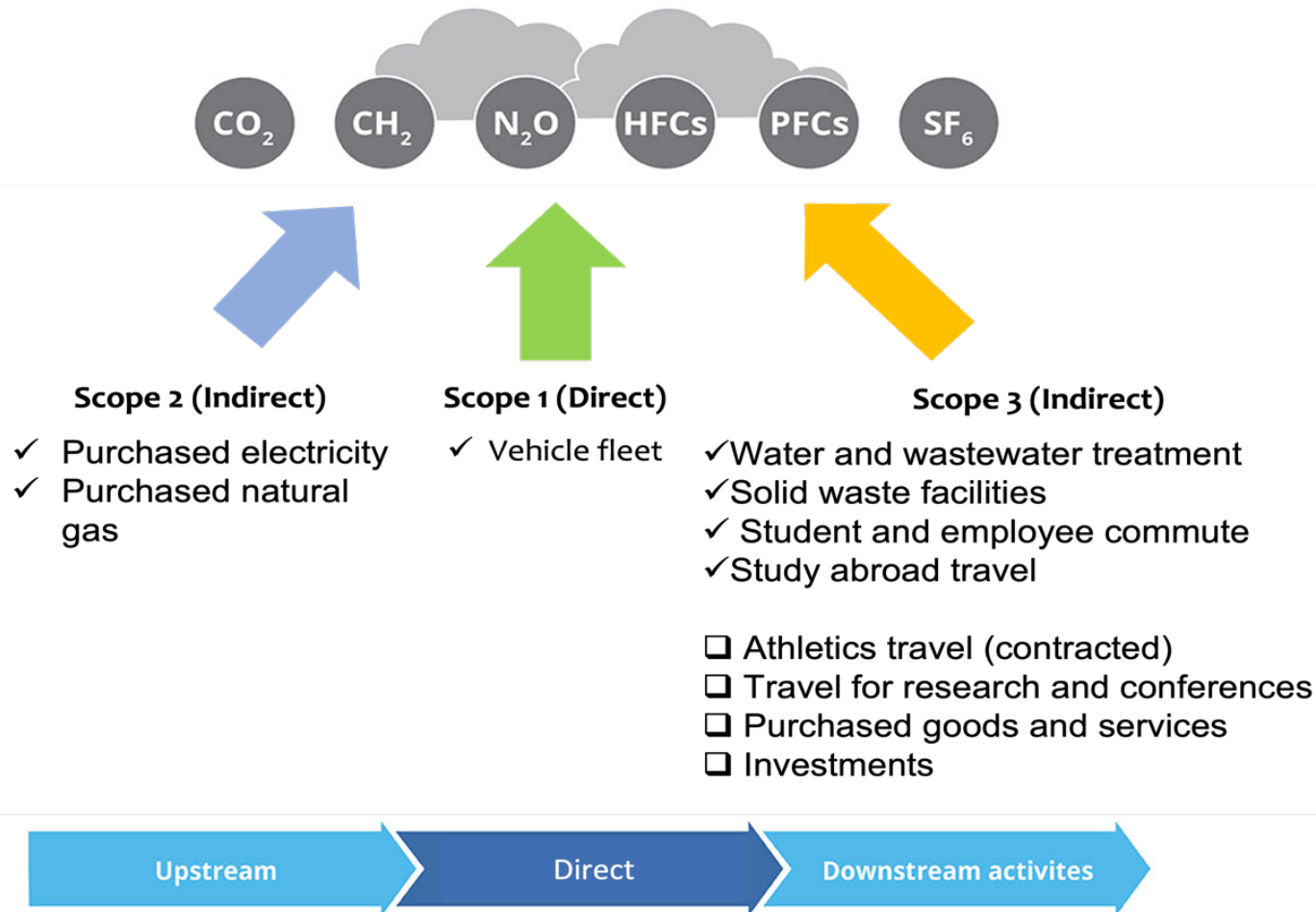
Posted Oct. 19, 2022 Course Materials [View more](#)

Employing the SDGs to Enhance University Research and Education Sustainability Objectives

Carnegie Mellon University (PA) University of California, Davis (CA) University of Southern California (CA) AASHE (PA)

Although the SDGs are a global framework, there is not a one-size-fits-all approach to how universities employ them to enhance research,

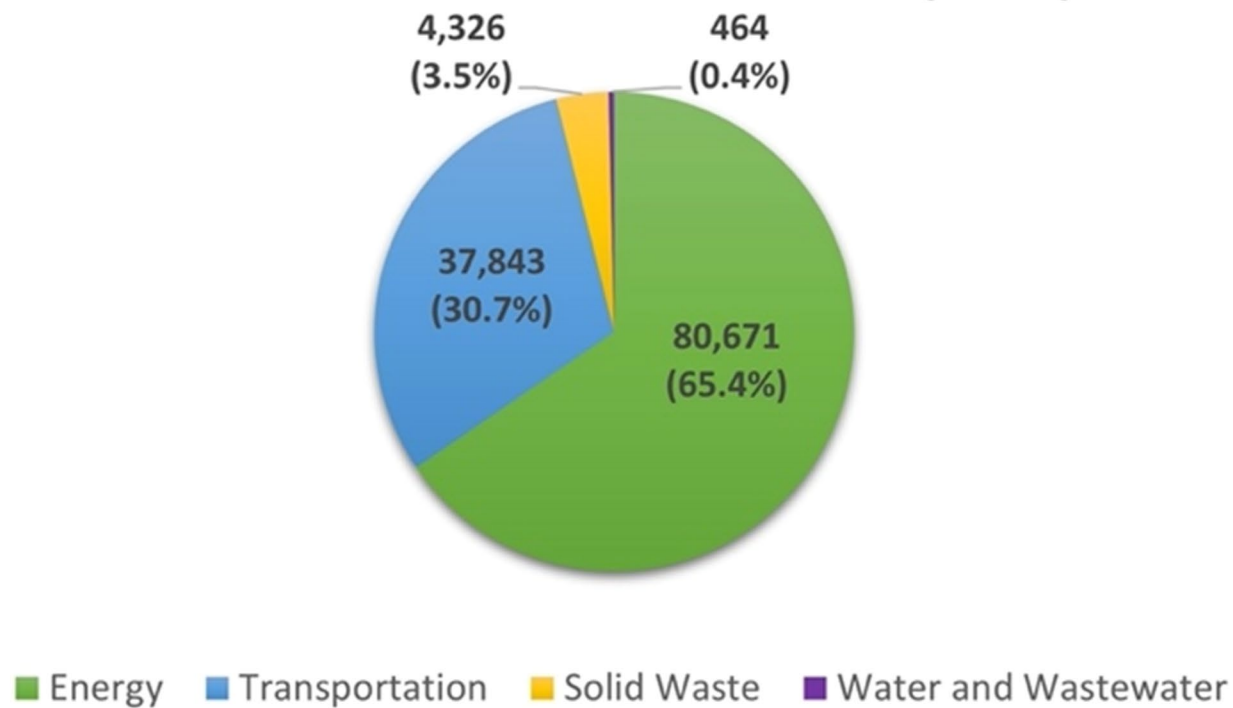
Greenhouse Gas Inventory



Greenhouse Gas Inventory



CO₂e Emissions in Metric Tons (2019)



Report for 2019 and 2020 GHG inventories available at <https://www.niu.edu/sustainability/planning/index.shtml>

NIU relative to other institutions

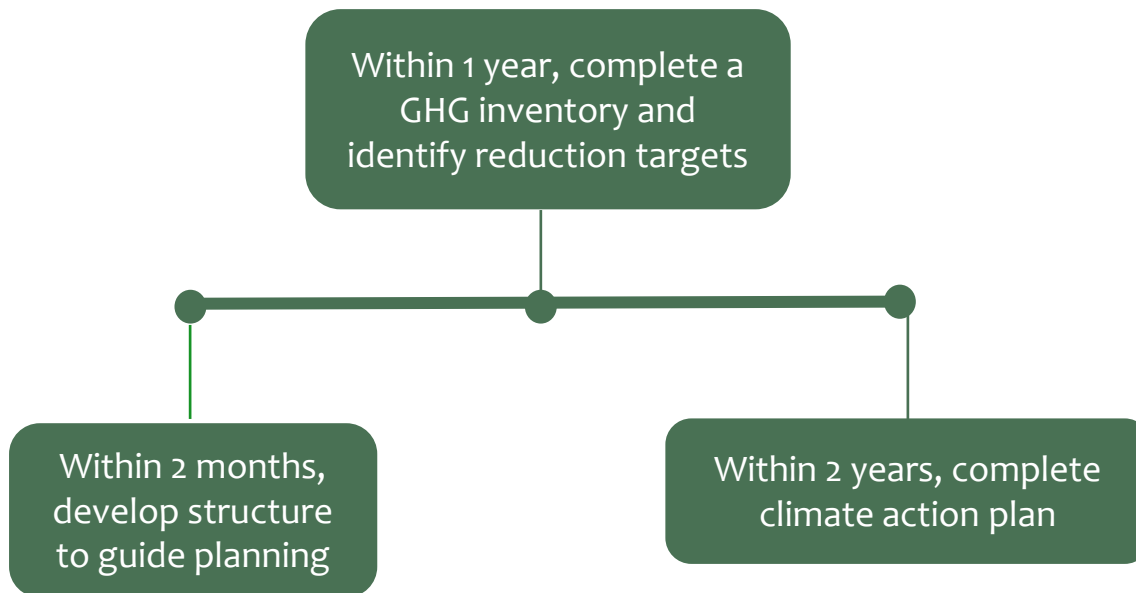


Institution	Total CO ₂ e Emissions (MT)	Year	Student Population	Per capita emissions (MT)
University of Wisconsin-Milwaukee	107,377	2019	19,829	5
Northern Illinois University (2020)	86,589	2020	16,769	5.1
Northern Illinois University (2019)	123,297	2019	16,609	7.4
University of Illinois Urbana Champaign	433,797	2019	51,605	8
Michigan State University	423,765	2016	47,131	9
University of Illinois Chicago	275,000	2008	27,875	10
University of Michigan	593,000	2020	47,907	12
University of Wisconsin-Madison	567,096	2020	45,537	12

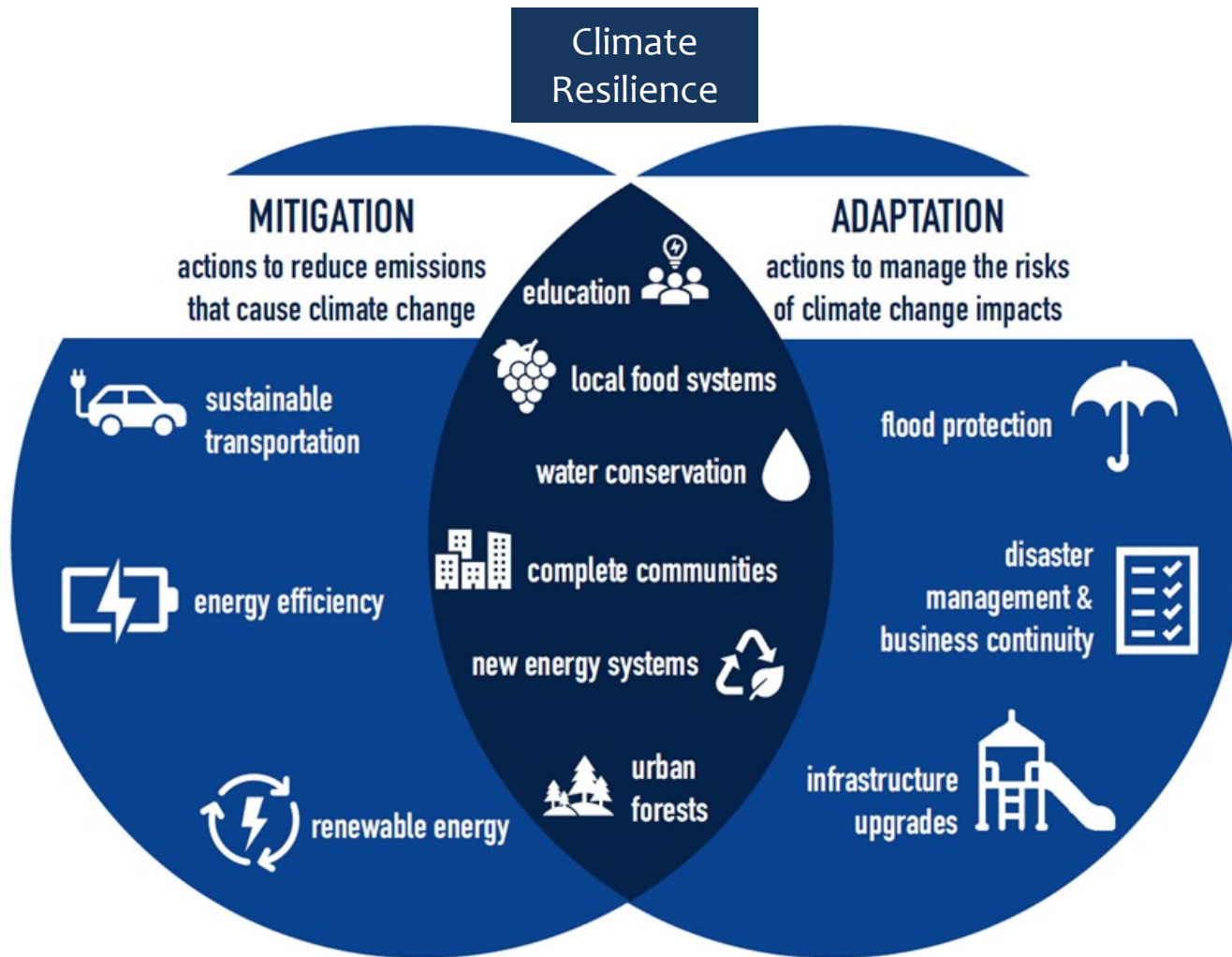
Second Nature Carbon Commitment



Commit to reduce GHG emissions and achieving carbon neutrality as soon as possible



Climate Action Plans



Climate Action Plans



- **Mitigation of carbon emissions**

- A target date for achieving carbon neutrality as soon as possible
- Interim target dates for meeting milestones that will lead to carbon neutrality and increasing resilience
- Mechanisms and indicators for tracking progress (including those that cut across campus-community boundaries)

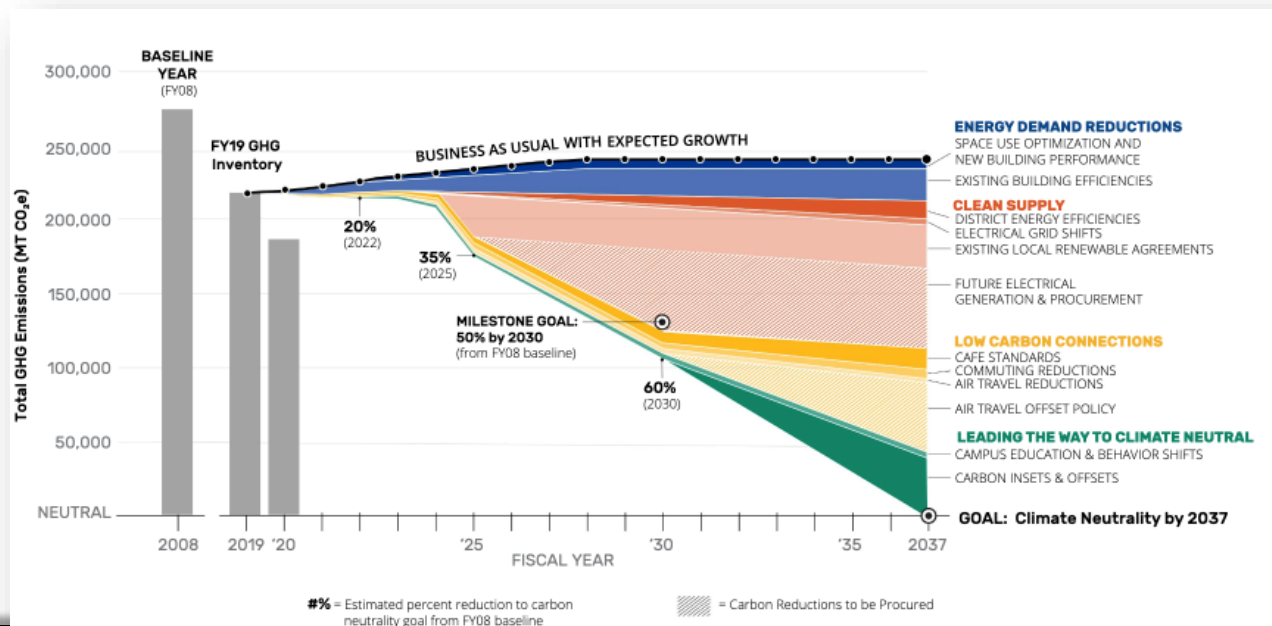


Figure 28. PittCAP Wedge Diagram - Pathway to Neutrality by 2037

Example climate action plan from University of Pittsburgh

Path to carbon neutrality with interim milestones

https://issuu.com/pittsustainability/docs/pitt_climate_action_plan_final_march_2022_

Example mitigation strategies



Energy Conservation

- Weather/infiltration sealing
- LED lighting
- Heat pumps
- Lighting sensors
- Temperature settings

Renewable Energy

- Solar or wind energy
- Electrification of buildings
- Power purchase agreements

Transportation

- Improve public transportation options
- Incentivize carpooling or public transportation
- Micromobility (e.g. bike sharing)
- Work from home, online courses, etc.

Sequester or Offset Emissions

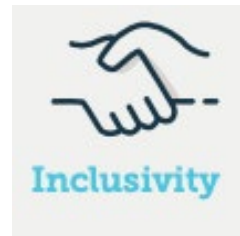
- Renewable energy credits
- Carbon offset credits for Scope 3 emissions (e.g. air travel to conferences)

Resilience and Adaptation



- Requires operating in the context of change and disruption, overcoming problems in the short-term while preparing for a continually changing future

Key characteristics of climate resilience for campuses and communities



Example adaptation and resilience strategies



- Climate resilience workshops to train campus and community on extreme weather responses
- Heat or severe weather action plans
- Improve native landscaping and tree cover
 - e.g. Flood mitigation, cooling during heatwaves
- Build campus community resilience (e.g. food assistance programs)

Campus Sustainability Plans



- Academics
- Engagement
- Operations
- Planning and administration
- Diversity and equity
- Investment and Finance
- Employee wellbeing



Example campus sustainability activities



- Sustainability themed study abroad programs
- Student ambassador programs
- Sustainable campus dining programs
- Student organic farms
- Tree care plans
- Native plant restoration programs
- Sustainable/ethical procurement policies
- Green office initiatives
- Campus sustainability grants
- So many more!

NIU's approach to sustainability



- Create NIU's first campus-wide sustainability and climate action plan
- Objectives
 - Climate action planning that is tied to a “net zero” goal and date, with science-based targets
 - Concrete goals for creating a more sustainable campus
 - Alignment of the sustainability plan with NIU's master planning framework
 - Integration of sustainability planning into NIU's institutional operations

Sustainability and Climate Action Planning



Steering Committee
(Senior Leadership)



Working Committee

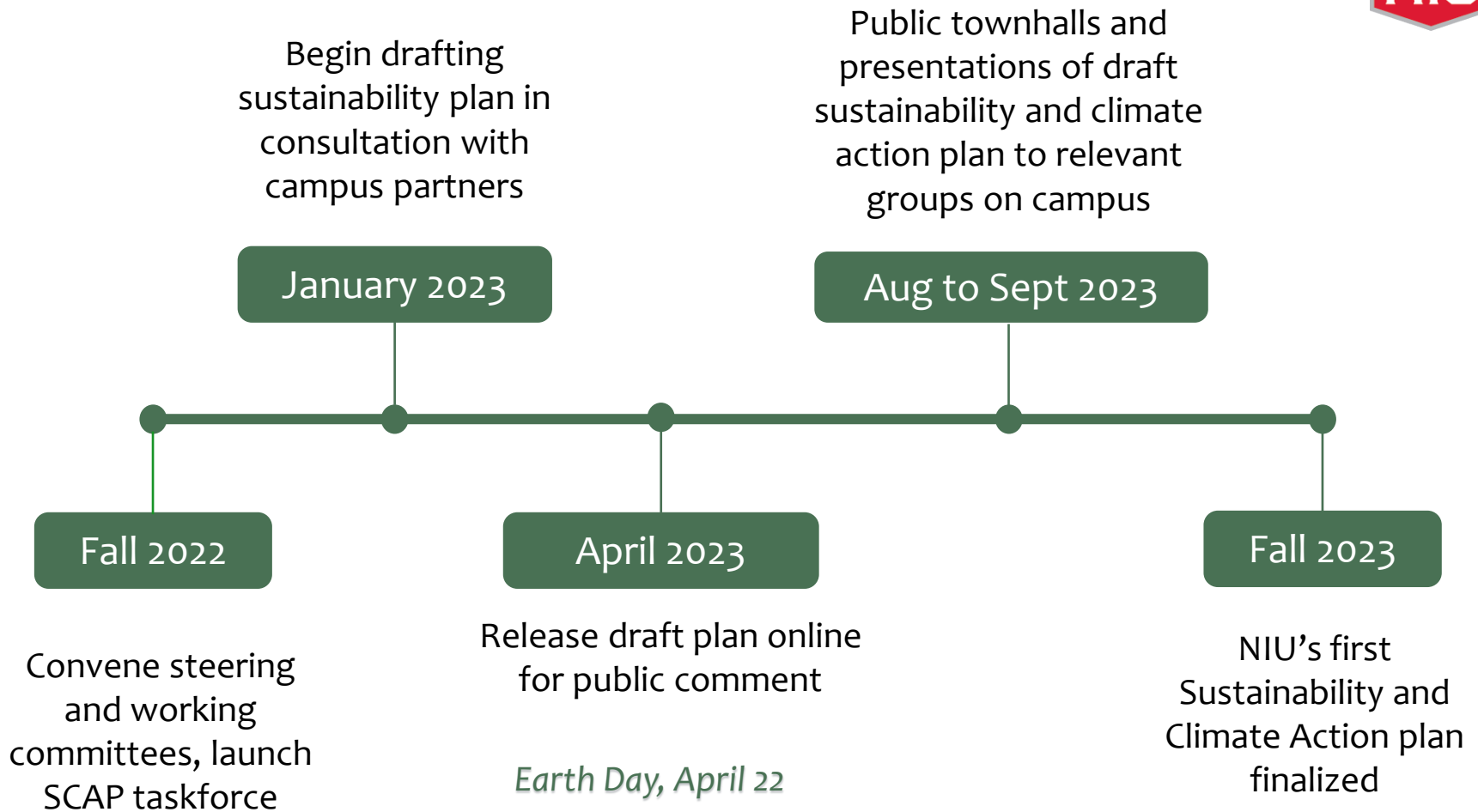


Engage with
stakeholders across
campus

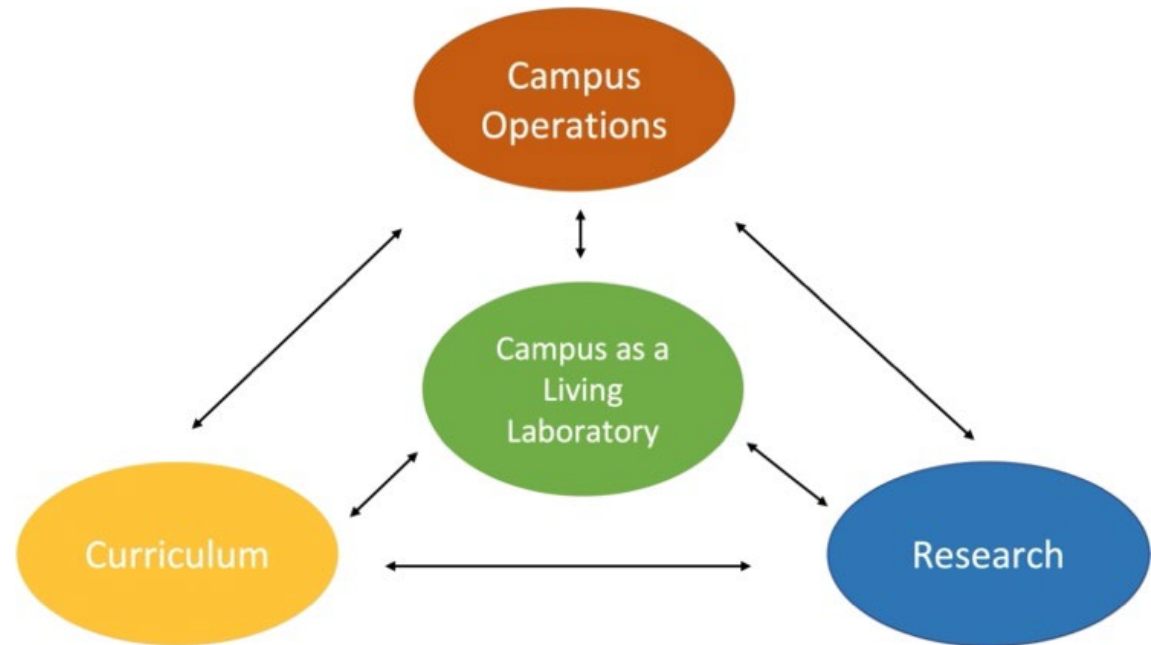


Public feedback

Timeline



Sustainability as an opportunity



"The world will be what we make it."

- Kate Marvel, NASA, lead chapter author on the U.S. fifth National Climate Assessment