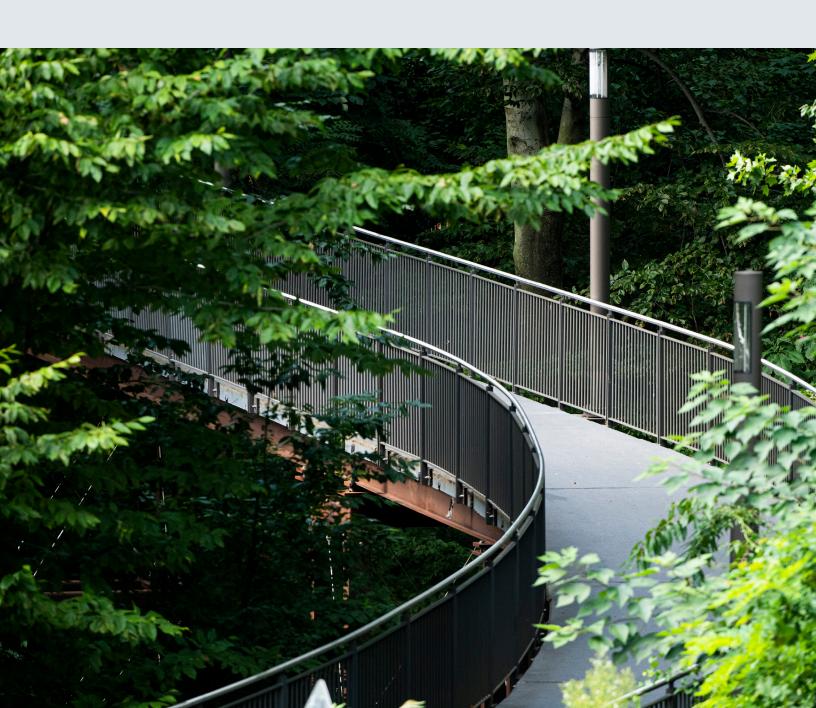


Johns Hopkins University Sustainability Leadership Council Annual Report 2019-2020



Letter from the Provost



t brings me great pleasure to share with you the inaugural annual report from the Johns Hopkins Sustainability Leadership Council on behalf of the numerous students, faculty, staff, and alumni who have contributed their time to this important endeavor. This has been an excellent year of strengthening Johns Hopkins' resolve and record as a leader in higher education sustainability efforts, with the chartering of the SLC, the announcement of a record-setting renewable energy agreement, and the hiring of a new sustainability director for the University.

From the outset of the SLC's work, it was clear to President Daniels and me that sustainability should continue to be a significant priority for Johns Hopkins in both our local and global citizenship, and that priority has been emphasized by the impacts of COVID-19 on our community and around the world. The pandemic has shone a critical light on our interconnectedness and on both the challenges and the importance of sustained collective action in the face of global threats.

At this pivotal moment, we are examining sustainability through a reinvigorated lens of environmental health, justice, and conservation. The need for a cooperative, universitywide effort to move the needle on sustainability is clearer now more than ever, and I am hopeful for the change we can effect.

This renewed energy, coupled with the past efforts of the Johns Hopkins community, has laid a strong foundation for the work of the SLC, and I am excited to join you in reflecting on the progress of the council's members and partners during its first year.

Sunil Kumar

Provost of Johns Hopkins University

Table of Contents

1

A Letter from the Provost

3

Reflections from Sustainability Leadership Council Co-Chairs

4

One University Representation

5

Subcommittee Highlights

13

First Annual Sustainability Leadership Council Symposium

14

Looking Ahead

Reflections from Sustainability Leadership Council Co-Chairs

Dear Sustainability Partners,

s we pause and look back on the charter and launch of the Sustainability Leadership Council (SLC) over the past year and a half, it is incredible to reflect on just how much our work and lives have changed in that short time. We would not have guessed, as we stood side by side (likely at a distance of less than 6 feet) with Provost Kumar at the official launch of the SLC, that one year later our local, national, and global communities would be in the midst of one of the defining, if not the most defining, challenges of our lifetime. Our homes are now our offices, masks are the accessory of the season, and civic engagement and trips to the grocery store are on the short list of justifiable reasons to leave one's home.

Despite every reason for the work of the SLC to slow or stall, its members met this extraordinary challenge with remarkable resilience. In those same 12 months, JHU leadership and members of the SLC established and ratified a formal structure, implemented a university-wide nomination process, identified strategic goals and priorities, hired and onboarded an SLC Coordinator, and initiated several technical working groups to address those priorities. All of this, and yet our work has just begun.

Looking forward, we are energized to build on the momentum of the SLC and its members to continue the hard work of establishing Johns Hopkins University as a leader in higher education sustainability. We are positioned to do this during a time of unparalleled behavior change and awareness of the impacts of human activity on our environment. In the past several months, not only have our social calendars been cleared but so have our waterways and the air above major urban centers.

As we begin our next year of work, we are pleased to share with you the highlights of the SLC's charter, launch, and achievements in this first year of activity. Join us as we reflect on the hard work of you, your colleagues, and peers and think critically on how to both deepen and broaden the activities and accomplishments of the SLC in the coming year.

Thank you for your continued support and participation.

Sustainability Leadership Council Co-Chairs

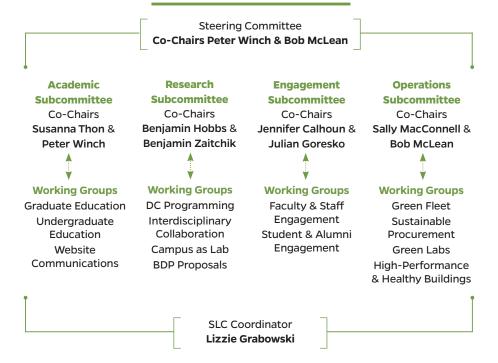
Peter Winch and Bob McLean

One University Representation

he objectives of the Sustainability Leadership Council are to both deepen and broaden the activities of Johns Hopkins University consistent with the three broad pillars established by the President's Task Force on Climate Change in 2008—intellectual leadership, sustainable operations, and community impact—and to provide advice and recommendations to the provost on policies, programs, and other initiatives that will establish JHU as a leader in environmental sustainability.

A nomination and appointment process, created and managed by SLC leadership in the summer of 2019, united **31 faculty**, **28 staff**, **15 students**, and **1 alum** to address four areas of sustainability at Johns Hopkins: Academic, Engagement, Operations, and Research. These members represent eight schools, the Applied Physics Lab, and nine divisions & offices across the university. They were joined by 20 working group members to take on the work of the SLC in its first academic year—an embodiment of the One University vision.

SLC Organization



Schools Represented

Bloomberg School of Public Health

Carey Business School

Krieger School of Arts and Sciences

School of Advanced International Studies

School of Education

School of Medicine

School of Nursing

Whiting School of Engineering

Divisions and Offices Represented

Applied Physics Lab

Center for a Livable Future

Development and

Alumni Relations

Division of Facilities and Real Estate

Homewood Student Affairs

Human Resources

Office of Communications

Office of Government and Community Affairs

Office of Procurement Services

Subcommittee Highlights

he work of the JHU Sustainability Leadership Council is shared by four subcommittees, each addressing a different pillar of environmental sustainability at the university: Academic, Research, Engagement, and Operations. The subcommittees' missions and charges are supported by a collection of working groups that operate within each. Working groups address specific, pressing themes and issues of environmental sustainability identified by SLC members as priorities and interests of each subcommittee.

Academic Subcommittee

Mission

The Academic Subcommittee seeks to build bridges and identify synergies between current and evolving academic offerings, facilitate collaboration between programs, and strengthen JHU's role in preparing graduates for leadership and careers in environmental sustainability.

Scope of Work

The efforts of the Academic Subcommittee are supported by three working groups.

A **Graduate Education Working Group**, to assess current graduate programs and courses related to sustainability and make recommendations to expand academic offerings and curricular priorities.

An Undergraduate Education Working Group, to assess current undergraduate programs and courses related to sustainability and make recommendations to expand academic offerings and curricular priorities.

A Website Communications Working Group, to develop and manage a robust website presence, as well as build resources for prospective, current, and former students and JHU faculty and staff.

Highlights

Highlights of the Academic Subcommittee's work during the 2019–20 academic year include:

- Compiling a catalog of sustainability-related courses taught across JHU schools and examining how best to make it accessible to students
- Advising content updates to Hopkins Sustainability website and initiating work toward building an updated web presence incorporating practice, research, and academics
- Initiating planning for sustainability-related research and education activities with a focus on energy policy to operate out of 555 Pennsylvania Avenue in Washington, D.C.
- Providing recommendations in response to the Second Commission on Undergraduate Education (CUE2) report for incorporation of sustainability focal areas into the curricular and co-curricular Hopkins experience

Members

The Academic Subcommittee is composed of 4 students, 14 faculty, and 2 staff members across Bloomberg School of Public Health, Carey Business School, Krieger School of Arts and Sciences, School of Advanced International Studies, School of Nursing, Whiting School of Engineering, and the Division of Facilities and Real Estate.



Susanna Thon
Subcommittee Co-Chair,
Associate Professor, and
Director of Undergraduate Studies,
Department of Electrical and
Computer Engineering



Peter Winch
Subcommittee Co-Chair
and Professor,
Department of International
Health

Colin Bowen

Graduate Student, Whiting School of Engineering

Thomas Burke

Professor, Department of Health Policy and Management

Stuart Chaitkin

Senior Associate, Department of Environmental Health and Engineering

Meghan Davis

Assistant Professor, Department of Environmental Health and Engineering

Jessica Fanzo

Bloomberg Distinguished Professor, Berman Institute of Bioethics, SAIS, Bloomberg School of Public Health

Julian Goresko

Director, Office of Sustainability

Kaitlin Gulock

Graduate Student, School of Nursing

Rebecca Kelly

Associate Teaching Professor, Department of Earth and Planetary Sciences

Jordan Kuiper

Postdoctoral Fellow, Department of Environmental Health and Engineering

Carl Latkin

Professor, Department of Health, Behavior, and Society

Megan Latshaw

Assistant Scientist, Department of Environmental Health and Engineering

Hannah Marker

Research Associate, Department of International Health

Anand Pandian

Associate Professor and Director of Undergraduate Studies, Department of Anthropology

Yoga Prakasa

Graduate Student, Carey Business School

Genee Smith

Assistant Professor, Department of Environmental Health and Engineering

Johannes Urpelainen

Prince Sultan bin Abdulaziz Professor of Energy, Resources, and Environment; Director, Initiative for Sustainable Energy Policy

Darryn Waugh

Professor, Morton K. Blaustein Department of Earth and Planetary Sciences

Lana Weidgenant

Undergraduate Junior, Department of Public
Health Studies

SPOTLIGHT: COLIN BOWEN



Colin Bowen is a recent graduate of the Applied Mathematics and Statistics program at Whiting School of Engineering and a highly committed student representative to the SLC. Active in sustainability-focused student groups on campus, such as Refuel Our Future and the Sustainability Coalition, Colin is involved with multiple projects of the Academic Subcommittee. Most recently, he has worked with fellow Subcommittee members on a joint grant application and is revisiting an initiative for an undergraduate energy minor. Colin will be completing his master's degree at WSE during the 2020-21 academic year and expanding his involvement in the SLC to include the Research Subcommittee.

Research Subcommittee

Mission

The Research Subcommittee promotes coordination and communication between different research groups working on sustainability. In addition, it identifies opportunities for new funding and projects involving multiple university divisions that strengthen sustainability research.

Scope of Work

The efforts of the Research Subcommittee are supported by four working groups.

A D.C. Programming Working Group, to develop research and academic programs that address issues of sustainability and environmental policy, which will operate out of Johns Hopkins' 555 Pennsylvania Avenue location.

An Interdisciplinary Research Collaboration Working Group, to highlight research initiatives taking place across the university; create working partnerships to cultivate greater progress, interest, and availability of resources for sustainability-related research at Johns Hopkins; and/or sponsor activities promoting the formation of such partnerships, such as seminar series and workshops.

A Campus as Lab Working Group, to harness the built and natural environments of the Johns Hopkins campus for sustainability research and experiential learning.

A Bloomberg Distinguished Professors (BDP) Proposal Working Group, to develop proposals for a sustainability-focused BDP cluster hire.

Highlights

Highlights of the Research Subcommittee's work during the 2019–20 academic year include:

■ Developing a concept proposal for an interdisciplinary energy department, institute, or center to leverage expertise of JHU faculty and to establish the university as a destination for renewable energy research and innovation

- Proposing a future presence for robust energy policy research and engagement out of JHU's recently acquired Washington location at 555
 Pennsylvania Avenue
- Initiating a Campus as a Living Lab working group and began assessing current faculty research utilizing campus-based infrastructure while exploring outside program models
- Launching efforts to map cross-institution sustainability-focused research

Members

4 students, 16 faculty, and 3 staff across Bloomberg School of Public Health, Carey Business School, Krieger School of Arts and Sciences, School of Advanced International Studies, School of Medicine, Whiting School of Engineering, and the Division of Facilities and Real Estate.



Benjamin Hobbs
Subcommittee Co-Chair and
Professor, Department of
Environmental Health and
Engineering



Benjamin Zaitchik Subcommittee Co-Chair and Associate Professor, Morton K. Blaustein Department of Earth and Planetary Sciences

Evans Brown

Resident in Internal Medicine, Bayview Medical Center

Thomas Burke

Professor, Department of Health Policy and Management

Will Checkley

Associate Professor, School of Medicine

Jonah Erlebacher

Department Chair and Professor, Department of Materials Science and Engineering

Jessica Fanzo

Bloomberg Distinguished Professor, Berman Institute of Bioethics, SAIS, Bloomberg School of Public Health

Paul Ferraro

Bloomberg Distinguished Professor, Carey Business School and the Department of Environmental Health and Engineering

Dennice Gayme

Associate Professor, Department of Mechanical Engineering

Sarah Jordaan

Assistant Professor, Energy, Resources and Environment

Hannah Marker

Research Associate, Department of International Health

Jason Mathias

Strategic Initiatives Coordinator, Office of Sustainability

Emma Moynihan

Graduate Student, Department of Environmental Health and Engineering

Keeve Nachman

Assistant Professor, Department of Environmental Health and Engineering

Roni Neff

Associate Professor, Department of Environmental Health and Engineering

Yoga Prakasa

Graduate Student, Carey Business School

Kellogg Schwab

Professor, Department of Environmental Health and Engineering

Stephen Ruckman

Deputy Director, SNF Agora Institute

Genee Smith

Assistant Professor, Department of Environmental Health and Engineering

Johannes Urpelainen

Director and Professor, Energy, Resources and Environment

Darryn Waugh

Professor, Morton K. Blaustein Department of Earth and Planetary Sciences

Peter Winch

Professor, Department of International Health

Lana Weidgenant

Undergraduate Student, Krieger School of Arts and Sciences

SPOTLIGHT: DARRYN WAUGH



Darryn Waugh, a professor in the Earth and Planetary Sciences Department, is a committed member of both the Academic and Research subcommittees. Professor Waugh studies large-scale atmosphere and oceanic processes, with a focus on understanding global environmental issues such as stratospheric ozone depletion, air pollution, and climate change. Professor Waugh has been a tremendous asset to the Interdisciplinary Research Collaboration Working Group of the Research Subcommittee in its work to develop a tool that will help faculty and students performing sustainabilityfocused research connect with one another across JHU's decentralized campus.

Engagement Subcommittee

Mission

The Engagement Subcommittee works to identify programs and strategies that foster sustainable behavior change among individuals at Johns Hopkins, enhance sustainability literacy and awareness throughout the university, and strengthen strategic communications solutions to improve information sharing.

Scope of Work

The efforts of the Engagement Subcommittee are supported by two working groups.

A Staff & Faculty Engagement Working Group, to identify broad opportunities to foster sustainable behavior change, develop strategies that establish a culture of sustainability, and raise awareness of the university's existing resources and institutional commitments related to sustainability.

A Student & Alumni Engagement Working Group, to cultivate an ethos of sustainability among JHU students across all degree programs and campuses, identify and promote opportunities for sustainable behavior change, connect students and alumni interested in sustainability-focused careers and professional opportunities, and increase visibility of the university's existing sustainability efforts and commitments.

Highlights

Highlights of the Engagement Subcommittee's work during the 2019–20 academic year include:

- Identifying opportunities to enhance sustainability-focused communications with student and employee audiences
- Supporting the implementation of monthly SLC update emails to all members
- Finalizing New Employee Orientation slides for all new JHU hires

- Integrating sustainability resource information for prospective employees into the Jobs at JHU webpage
- Creating and maintaining significant updates to the Hopkins Sustainability website

Members

The Engagement Subcommittee is composed of 5 students, 4 faculty, 13 staff, and 1 alum across the Bloomberg School of Public Health, Krieger School of Arts and Sciences, School of Advanced International Studies, School of Education, School of Medicine, School of Nursing, Division of Development and Alumni Relations, Division of Homewood Student Affairs, Office of Government and Community Affairs, and Office of Human Resources.



Jennifer Calhoun Subcommittee Co-Chair and Senior Adviser to the Vice Provost for Student Affairs



Julian Goresko Subcommittee Co-Chair and Director, Office of Sustainability

Janice Allotey

Graduate Student, Bloomberg School of Public Health

Marianne Amoss

Senior Communications and Marketing Manager, Bloomberg American Health Initiative

Patti Anderson

Director of Wellness and Health Promotion, University Health Services

Jessica Bast

Student Programming and Outreach Coordinator, Office of Sustainability

Brittany Claridge

Student Success Adviser, Office of Student Transitions and Family Engagement

Courtnee Connon

Communications Specialist, Center for Social Concern

Ginger Hanson

Assistant Professor, School of Nursing

Anne Haskins

Associate Director, Regional Programs, Development and Alumni Relations

Leana Houser

Solid Waste & Recycling Specialist, Custodial Services

Sushmita Jena

Graduate Student, School of Advanced International Studies

Luise Lampe

Assistant Director, Donor Relations and Stewardship

Celia Lane

Undergraduate Sophomore, Program in International Studies

Omar Lloyd

Undergraduate Senior, Program in Environmental Science and Studies

Jennifer Mielke

Director of Community Affairs, University Administration

Amy Murphy

Organization Development & Effectiveness Manager, Talent Management

Kylie Patterson

Director of Economic Inclusion, Office of Economic Development

Aliza Rosen

Communications Specialist, Office of University Communications

Ana Maria Rule

Assistant Professor, Department of Environmental Health and Engineering

Deborah Schwengel

Director of Communications, Center for a Livable Future

Lanise Stevenson

Graduate Student, School of Education

David Yaffe

Alumnus

SPOTLIGHT: AMY MURPHY



Amy Murphy applies her expertise in organizational development and effectiveness seamlessly to the work of the Engagement Subcommittee. In her role as co-lead of the Faculty & Staff Engagement Working Group, Amy facilitates group members in identifying actionable sustainability-focused programs and initiatives that will help establish an ethos of environmental sustainability among all faculty and staff at Johns Hopkins.

Operations Subcommittee

Mission

The Operations Subcommittee seeks to address opportunities for improving the daily operational and business practices of Johns Hopkins across all areas of its environmental footprint, including energy, waste, food, water, transportation, wellness, procurement, and more.

Scope of Work

The efforts of the Operations Subcommittee are supported by four working groups.

A Green Fleet Working Group, to assess electrification and alternative fuel options for the university fleet, while examining programs to reduce the purchase and use of single-occupancy vehicles.

A Sustainable Procurement Working Group, to develop sustainable procurement targets, standards, and tools to influence universitywide purchasing strategies and waste reduction.

A **Green Labs Working Group**, to develop an initiative to reduce energy use and waste in lab spaces, to incentivize efficient equipment, and to recognize labs for their efforts.

A High-Performance & Healthy Buildings Working Group, to create high-performance & healthy building standards to reduce energy consumption and promote wellness in university buildings.

Highlights

Highlights of the Operations Subcommittee's work during the 2019–20 academic year include:

- Collaborating with external consultant on a JHU fleet electrification study and report
- Piloting a Green Lab certification program with two Institute for NanoBioTechnology labs in Croft Hall
- Initiating green building rating systems assessment to establish JHU high-performance and healthy buildings standards in FY21

■ Developing draft contract language for Construction & Demolition waste diversion standards and data reporting

Members

5 students, 4 faculty, 17 staff, and 1 alum across Applied Physics Lab, the Bloomberg School of Public Health, Krieger School of Arts and Sciences, School of Education, School of Medicine, Center for a Livable Future, Division of Facilities and Real Estate, Division of Homewood Student Affairs, Johns Hopkins Medical Institutions, Office of the President, and Office of Procurement Services.



Sally MacConnell
Subcommittee Co-Chair and
Senior Vice President of
Facilities, Johns Hopkins Medical
Institutions



Bob McLeanSubcommittee Co-Chair and Vice
President, Facilities and Real
Estate

Debbie Aguilar

Director of Operations, School of Advanced International Studies

David Ashwood

Senior Director of Plant Operations, Facilities and Real Estate

Roger Becks

Executive Director, Student Auxiliary Services

Ray Cho

Director, Construction and Planning

Quintina Erby

Category Portfolio Group Director, Procurement

Ross Fischer

Director of Asset Management, Facilities and Real Estate

Julian Goresko

Director, Office of Sustainability

Leana Houser

Solid Waste & Recycling Specialist, Custodial Services

Thomas Howard

Senior Undergraduate Student, Department of Environmental Health and Engineering

Martin Kajic

Director of Facilities Management, Bloomberg School of Public Health

Preethi Kaliappan

Undergraduate Sophomore, Department of Environmental Health and Engineering

Ryan Kennedy

Assistant Professor, Bloomberg School of Public Health

Jason Mathias

Strategic Initiatives Coordinator, Office of Sustainability

Scot Miller

Assistant Professor, Department of Environmental Health and Engineering

Gregory Moormann

Group Supervisor of Facilities Engineering and Project Management, Applied Physics Lab

Karin Neufeld

Associate Professor, Department of Psychiatry and Behavioral Sciences

Stephen Ruckman

Deputy Director, SNF Agora Institute

Raychel Santo

Senior Program Coordinator, Center for a Livable Future

Kellogg Schwab

Professor, Department of Environmental Health and Engineering

Brian Smith

Chief Procurement Officer, Procurement

Greg Smith

Director, Transportation Services

Irena Steiner

Graduate Student, Department of Environmental Health and Engineering

Lanise Stevenson

Graduate Student, School of Education

Lana Weidgenant

Undergraduate Junior, Public Health Studies Program

David Yaffe

Alumnus

SPOTLIGHT: QUINTINA ERBY



Quintina "Q" Erby, in the Office of Procurement, is the leader of the Operations
Subcommittee's Sustainable Procurement
Working Group. Q's commitment to waste
diversion and reduction is embodied in her
work to hold university suppliers accountable
for tracking waste metrics and her willingness to challenge current best practices in
all areas of spend. From purchasing to
construction and demolition, Q is a champion
for a more sustainable Johns Hopkins.

First Annual Sustainability Leadership Council Symposium

n April 17, 2020, the SLC hosted its first annual symposium, "Earth Day at 50: Renewing JHU's Commitment to a Livable Planet." Initially designed as an in-person gathering for members of the Johns Hopkins community to convene and discuss sustainability issues as they relate to the university, our broader community, and the planet, the event moved to a virtual platform in accordance with the university's response to the COVID-19 pandemic. Despite this last-minute change in format, the SLC welcomed over 230 attendees to the digital event.

Guests attended a variety of sessions, from



a keynote address to SLC update to lightning talks and poster sessions delivered by faculty and students. Keynote speaker Andrew Revkin, former New York Times reporter on the environment and founding director of Columbia Universi-

ty's Initiative on Communication & Sustainability at the Earth Institute, spoke about "making information matter on a noisy, polarized but deeply observed and connected planet" and joined a collection of internal sustainability experts in a variety of fields to reflect on both our collective action and the 50th anniversary of Earth Day.

SPOTLIGHT: SYMPOSIUM SESSIONS

A collaborative session led by Professor Anand Pandian and Dr. Nicole Labruto, Department of Anthropology, engaged attendees around the dimensions of defining "sustainability." Attendees were also challenged to think about the many ways sustainability is embodied in academics, research, and our own behavior through a series of lightning talks delivered by faculty and students:

- Tracking Greenhouse Gas Emissions in Baltimore and Across the Globe
 Professor Scot Miller; Whiting School of Engineering, Department of Environmental Health and Engineering
- Enabling Renewable Energy Penetration
 Through Modeling and Control

 Professor Dennice Gayme; Whiting School of Engineering, Department of Mechanical Engineering
- EN-ROADs: A New Way to Inspire Climate Action Talia Henkle; School of Medicine, Department of Immunology
- The Global Politics of Decarbonization
 Professor Bentley Allan; Krieger School of
 Arts & Sciences, Department of Political
 Science
- Why We Need Fossil Fuel Divestment to Beat Climate Change
 Colin Bowen; Whiting School of Engineering, Department of Applied Mathematics & Statistics
- Taboos as the Key to Sustainability
 Mariama Morray; Krieger School of Arts &
 Sciences, Department of Spanish

Video recordings of these lightning talks and all other symposium sessions are available through the SLC webpage.

Looking Ahead

he successful mandate and launch of the SLC were direct results of the support and commitment of the SLC members and Steering Committee as well as university leadership. Building off the successes of its first year, the SLC looks forward to another year of growth, learning, and impact to maximize member engagement and to implement many of the shared initiatives that are currently underway, as well as new ones yet to be determined.

Some anticipated activities of the SLC for the coming year include:

- Continued work toward developing sustainability-focused academic and research programs, like an undergraduate energy minor;
- Updated high-performance and healthy building standards and green lab operating and procurement guidelines to improve energy efficiency and sustainability throughout JHU's building portfolio;
- Development of a communication stakeholder strategy to ensure engagement solutions reach a universitywide audience;
- Assessment and development toward establishing a Campus as Living Lab model that engages JHU students in curricular and cocurricular opportunities for solving campusand community-based sustainability challenges;

■ Participation in the the draft process of an updated University Sustainability Plan through contribution of subject area expertise and strategic vision for the next chapter of sustainability at Johns Hopkins University.

As we look to the future, the SLC is motivated to strengthen Johns Hopkins' position as a leader in higher education sustainability and to merge academic and nonacademic functions into a strategic institutional vision. The SLC is reinforcing sustainability as a complementary priority that aligns with other institutional strategies and values and reinforces 10 x 2020 goals by promoting One University communication and collaboration on sustainability, facilitating joint academic and research activities across university divisions, and strengthening links with community and local civic partners.

SPOTLIGHT: EXPANDED STUDENT REPRESENTATION

In the 2020–21 academic year, the SLC is expanding its student participation from 15 to 28. Students from across campuses and degree programs will contribute to the SLC's efforts to engage a diverse group, representative of the variety of experiences, expertise, and interests of IHU affiliates.