Update on the School of Marine and Atmospheric Sciences (SoMAS)
Paul B. Shepson, Dean
Feb. 12, 2024
Be a world-class integrative program in marine, atmospheric and sustainability research and education, committed to a culture that promotes academic excellence, diversity, equity, and inclusion.
Global Leadership in the Study of Coastal Processes

Natural and Human World with Natural Processes

40% of the global human population lives within 60 miles of the coast.
26% of all biological diversity is in coastal waters.

SoMAS can capitalize on opportunities to leverage complementary Stony Brook University programs
**The Need**

The goal for the next five years is to make SoMAS a world leader in coastal ecosystems and associated processes in natural and built environments to tackle crucial problems, such as climate change and its impacts, and to develop and train the next generation of stewards in these areas. State-of-the-art facilities are an essential component of our resource needs to meet our goals. The conditions of our existing buildings hamper our abilities to capitalize on our strengths, to recruit and retain the best students, staff, and faculty, or to reach our full potential. Our strategic plan includes a roadmap for creation of a new building that will not only provide the facilities we need to meet our strategic goals, but will also support our leadership and vision, showcase sustainable design, and improve connectivity with the rest of campus. SoMAS’ diffuse layout on south campus with restricted collaborative space limits interactions among SoMAS students, staff, and faculty, as well as with other SBU academic units. We herein present our case for the integral connection between state-of-the-art facilities and our aspirations for world renowned leadership status in marine, atmospheric, and sustainability sciences.

**Our Vision**

The new building will be a showcase for our values and commitment to sustainable and zero-carbon-emission building/energy management, and a dramatically reduced waste stream.
2023 SoMAS Profile

44 tenured/tenure-track faculty including
3 endowed chairs; 1 endowed professor; 4 SUNY Distinguished Professors
11 research professors
16 adjunct faculty,
7 affiliated faculty
3 lecturers
~130 graduate students
~750 undergraduate students,
9 majors
Two campuses
Seven research vessels
Two flowing seawater laboratories
Facilities

Flax Pond Marine Lab

New shellfish hatchery completed with ~$9M from NY State and Stony Brook funding.
Flax Pond became a New York State Tidal Wetlands Sanctuary in 2023
RESEARCH VESSELS

**R/V PRIVATEER**
Oceanographic Sampling, Diving, Fisheries.

**R/V SEAWOLF**
All Types of Oceanographic and Fisheries Work

**R/V SHINNECOCK**
Shallow Water Oceanographic & Fisheries Sampling

**R/V PAUMANOK**
Offshore Oceanographic sampling, Diving operations

**R/V DONALD W. PRITCHARD**
All Types of Oceanographic Work & Shallow Water Fisheries

**R/V PARKER**
Underway Sampling Fisheries work & Diving operations

**R/V PECONIC**
Large Group Research cruises, Educational Trips

Ships

Our fleet of research vessels are available for educational trips and charters. For more information, visit [http://somas.stonybrook.edu/outreach](http://somas.stonybrook.edu/outreach)
New SoMAS Research Vessel?
SoMAS offers the following undergraduate degree programs:

B.S. Atmospheric and Oceanic Sciences
B.S. Coastal Environmental Studies*
B.S. Marine Sciences*
B.S. Marine Vertebrate Biology
B.A. Environmental Studies*
B.A. Environmental Design, Policy, and Planning*
B.A. in Sustainability Studies*
Minor in Geospatial Science
Minor in Climate Solutions (9 Departments)

* Minor also offered

As of spring 2023, there are 754 full-time and part-time undergraduates in SoMAS programs.
Semester by the Sea (SBTS) is a key "total immersion" experience
For our students at Southampton (SBS)
Total UG Majors (Fall enrollments)
New Degree Programs in SoMAS

Climate Solutions Minor

**Climate Solutions (CLI)**
Climate Solutions Minor is intended to provide a coherent foundational knowledge about climate change and skills to work on mitigation and adaptation solutions. This new knowledge and these skills will deepen and strengthen students’ major education by offering a transdisciplinary understanding of the forces that have created the climate crisis, possible solutions offered by various fields, and the socio-economic and political forces that have made the solutions to this crisis so difficult.

There is a
Natural Sciences Path
Engineering Path
Social Sciences and Humanities Path
New Degree Programs in SoMAS

B.S. in Climate Science

Program Description

The Climate Science program aims to prepare students to be climate professionals who can help develop and implement strategies for mitigation of, as well as adaptation to, adverse impacts of climate change. Students will learn basic scientific information on processes in the atmosphere and the ocean that drive climate change and are informed about current and anticipated climate impacts and possible mitigation and adaptation strategies. Students learn about threats to coastal environments, economic and social impacts of climate and how the various aspects of climate have evolved over the history of the Earth.
New Degree Programs in SoMAS

We are working on a 3+2 BS/MPH in

Climate Change and Human Health BS/Masters in Public Health
A collaboration between SoMAS and PPH.

We propose to create a combined 3+2 BS/MS program in "Climate Change and Public Health" to train the next generation of students prepared to meet the public health needs related to climate change. This program will be:

1. Cross-cutting and multidisciplinary, in that the students will become experts in a range of interconnected fundamentals, from the physical basis of climate change, to the impacts of a range of environmental risk factors related to global health in infectious diseases and cardiopulmonary diseases that are exacerbated by climate change.

2. Innovative and unique, building on existing SBU strengths that when combined respond to the new range of public health risks.

3. Fantastic preparation for students to enter a growing job market in a range of public health fields impacted by climate change.

4. Easy to implement since it connects and builds on existing programs, courses and faculty members from the SoMAS, RSOM, College of Arts and Sciences (e.g. Political Science, Ecology and Evolution), Program in Public Health, and the School of Social Welfare.

The Overarching Learning Outcomes for the Proposed Degree Program:

- Develop a breadth of knowledge, understanding and future development in global health issues and climate change.

- Interpret and draw conclusions from data analysis techniques, statistical methods and GIS approaches used for studying and solving public health challenges due to climate change.

- Refine the necessary scientific writing and communications skills needed for the health-care related workforce.
We are enthusiastically contributing to the proposed new Climate Communication track in the Science Communication M.S. in the School of Communication and Journalism
On April 24, 2023, the Governors Island Trust and Mayor Eric Adams announced that SBU will serve as the Anchor Institution for the climate solutions center on Governors Island, the New York Climate Exchange (NYCE)

What is the NYCE?

The New York Climate Exchange will be a first-of-its-kind international center for developing and deploying dynamic solutions to our global climate crisis, while also acting as a hub for New Yorkers to benefit from the new green economy.

It is an independent 501(c)(3) non-profit organization with an Exchange Board
Core Board Members:

Current staff:

CEO: Stephen Hammer

Kevin Reed - Interim Director of Academic, Research, and Commercialization Programs

Andrew Winters – Director of Planning and Development

Stony Brook University
Maurie McInnis, President
Justin Fincher, Vice President for Advancement
Judith Greiman, Chief Deputy to President and SVP of Government and Community Relations
Jed Shivers, SVP for Finance, Administration and IT
Errol Cockfield, Partner at Brunswick Group

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GOLES (Good Old Lower East Side)
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IBM
Justina Nixon, Vice President and Chief Impact Officer at IBM

Pace University
Marvin Krislov, President

Pratt University
Frances Bronet, President

Simons Foundation
Euan Robertson, Chief Operating Officer

University of Washington
Maya Tolstoy, Maggie Walker Dean of the UW College of the Environment
The Exchange: A Globally-Facing Climate Pioneer

**Mission:** To confront urgent climate impacts and issues of environmental injustice, breaking down silos through an innovative, scalable, and sustainable model that will rapidly develop new urban climate solutions.

**OUR PARTNERS**

**CORE PARTNERS**
- BCG
- GE
- IBM
- Pace University
- Pratt Institute
- Spry Brok University
- University of Washington

**AFFILIATE PARTNERS**
- Duke University
- Marist College
- Moody's
- RIT
- Rochester Institute of Technology
- Stanford University
- University of Oxford

**ADVISORY PARTNERS**
- Brookhaven National Laboratory

**COMMUNITY PARTNERS**
- American Geophysical Union
- American Museum of Natural History
- Association for a Better New York
- Aspen Global Change Institute
- BEAM Center
- Billion Oyster Project
- Bronx Chamber of Commerce
- Brooklyn Chamber of Commerce
- The Building and Construction Trades Climate Jobs NY
- Council of Greater New York
- The Climate Museum
- Earth Matter NY
- Educational Alliance
- Green City Force
- Grow NYC
- Harvestworks
- Laborers’ International Union
- Local 99
- Lower Manhattan Cultural Council
- Manhattan Chamber of Commerce
- Museum of the City of New York
- New York Building Congress
- New York City Employment & Training Coalition
- Nontraditional Employment for Women
- Queens Chamber of Commerce
- Solar One Education
- Staten Island Chamber of Commerce
- The Point Community Development Corporation
- The Urban Assembly New York
- Harbor School
- The Waterfront Alliance
- 32BJ SEIU
- Variety Boys & Girls Club of Queens
- WE ACT for Environmental Justice

Serve as voting Board members, play an active role in governance and operations.

Non-voting members, representation on various committees of the Board.
# Program Priorities and Updated Workstream Structure Rollout

The current Program Steering Committee will advise Exchange Leadership on programming priorities and provide feedback to all Exchange Program Teams as they work toward their defined goals over the next 6 months.

## Exchange Leadership

## Program Steering Committee

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WE'RE HIRING!

You must be able to work in the United States as The Exchange does not yet have visa-sponsoring capabilities.

The Exchange is currently hiring for the following positions:

**Director of Community Initiatives**  
Please click below for more information.  
[Click here](#)

**Director of Programming Innovation and Acceleration**  
Please click below for more information.  
[Click here](#)

**Director of Climate Finance Initiatives**  
Please click below for more information.  
[Click here](#)

**Research Associate**  
Please click below for more information.  
[Click here](#)

**Chief Advancement Officer**  
Please click below for more information.  
[Click here](#)
Summary

• SoMAS is in a substantial growth period, in part due to enthusiastic efforts, in part due to local and national scale opportunities related to climate change, renewable energy, and challenges in coastal environments, and our geography.

• We have tremendous opportunities to help lead SBU in realizing its potential as SUNY's "Flagship Campus"

• While engaging our students in problem solving in the field, we prepare them to lead the world in meeting the challenges of the 21st century.

• Our strengths, and focus on climate change and coastal environments will enable us to help SBU lead in the pursuit of the goals of the New York Climate Exchange