



**Update on the
School of Marine and Atmospheric Sciences
(SoMAS)**

**Paul B. Shepson, Dean
Feb. 12, 2024**





Stony Brook University
*School of Marine and
Atmospheric Sciences*



<https://www.stonybrook.edu/commcms/somas/about/strategic-plan>

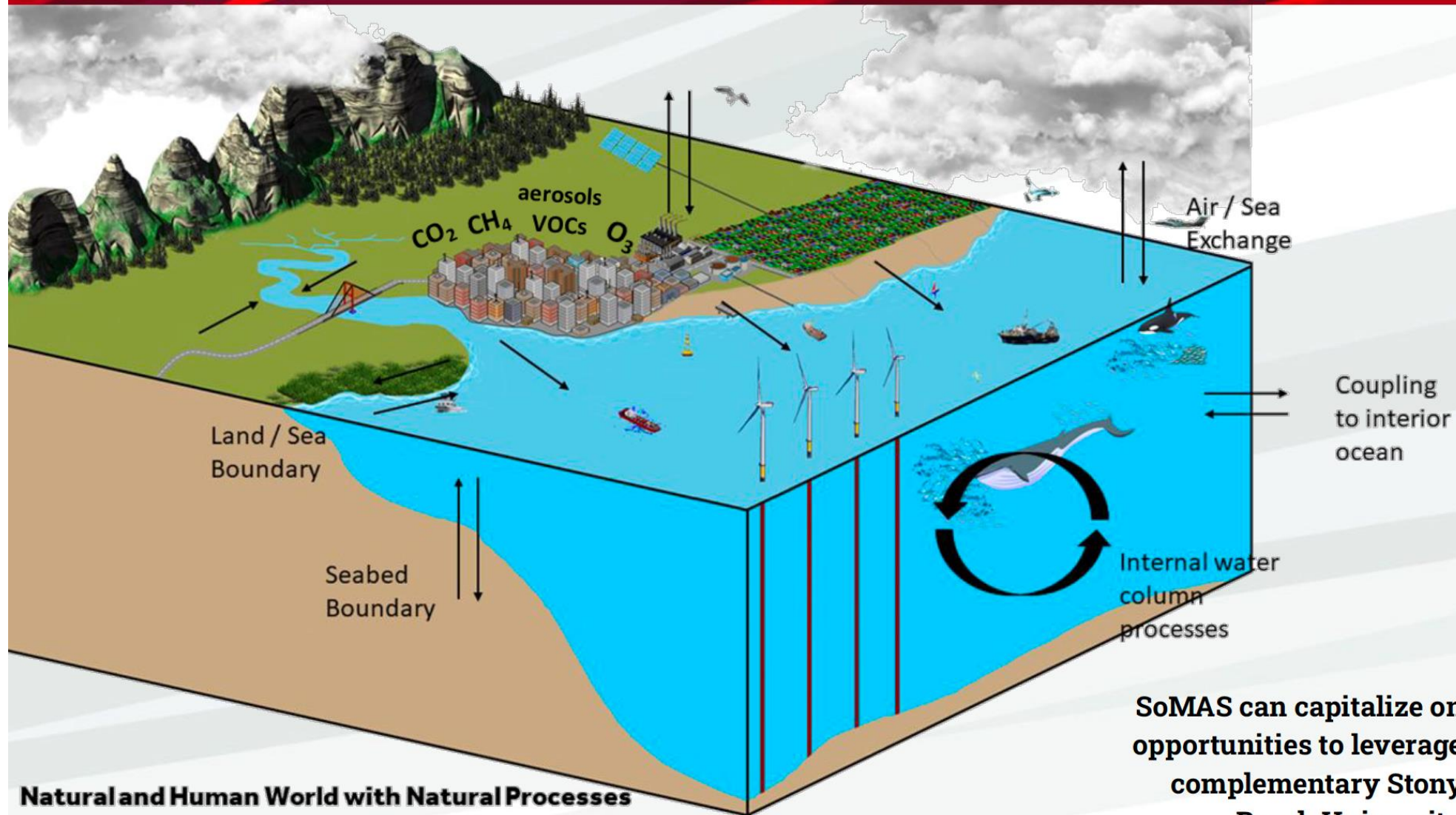
**A Vision for SoMAS Science, Education, and
Outreach Leadership, 2022-2027**

Vision

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

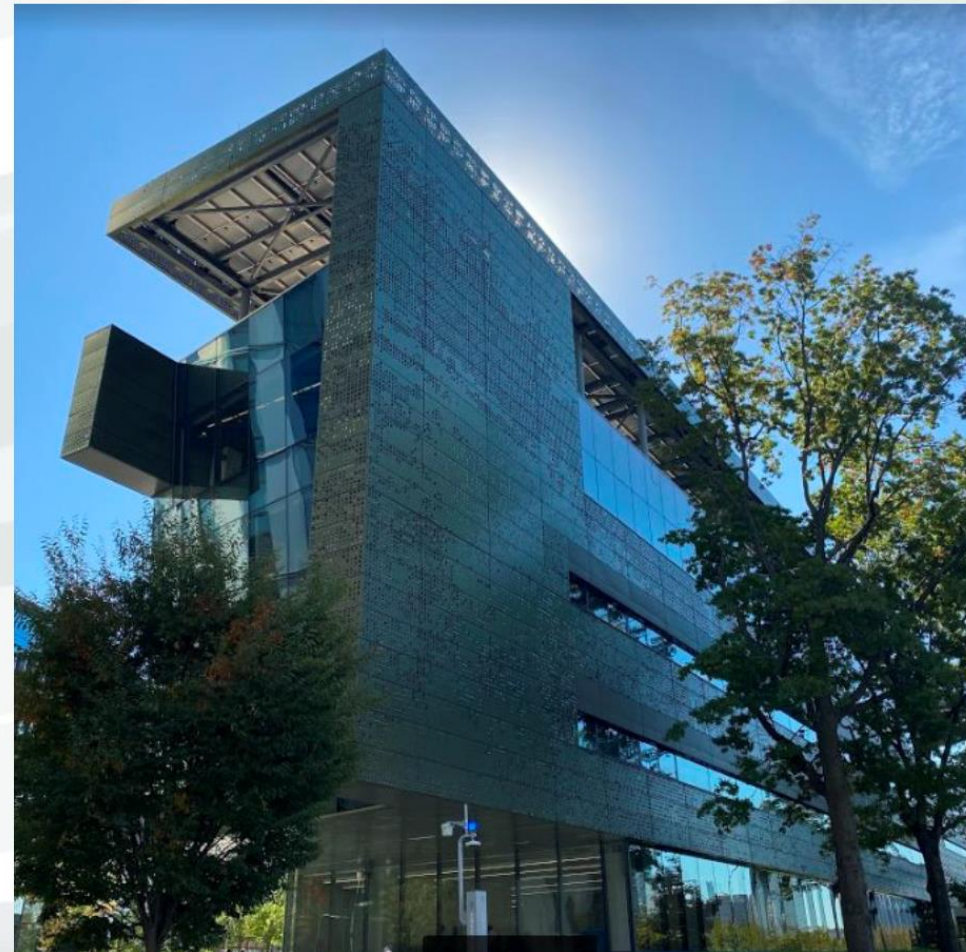
INFRASTRUCTURE: Develop a modern and inspiring home for SoMAS, and develop, maintain, and operate the facilities and vessels needed to enhance our leadership on coastal challenges.

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

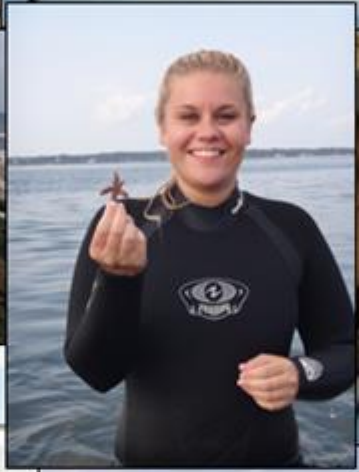
The new building will be a showcase for our values and commitment to sustainable and zero-carbon-emission building/energy management, and a dramatically reduced waste stream.



SCHOOL of MARINE and ATMOSPHERIC SCIENCES

SoMAS











Stony Brook University

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.



Stony Brook University

Flax Pond became a New York State
Tidal Wetlands Sanctuary in 2023



Ships

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



Our fleet of research vessels are
available for educational trips and
charters. For more information, visit
<http://somas.stonybrook.edu/outreach>



R/V PECONIC

Large Group
Research cruises,
Educational Trips





Stony Brook University

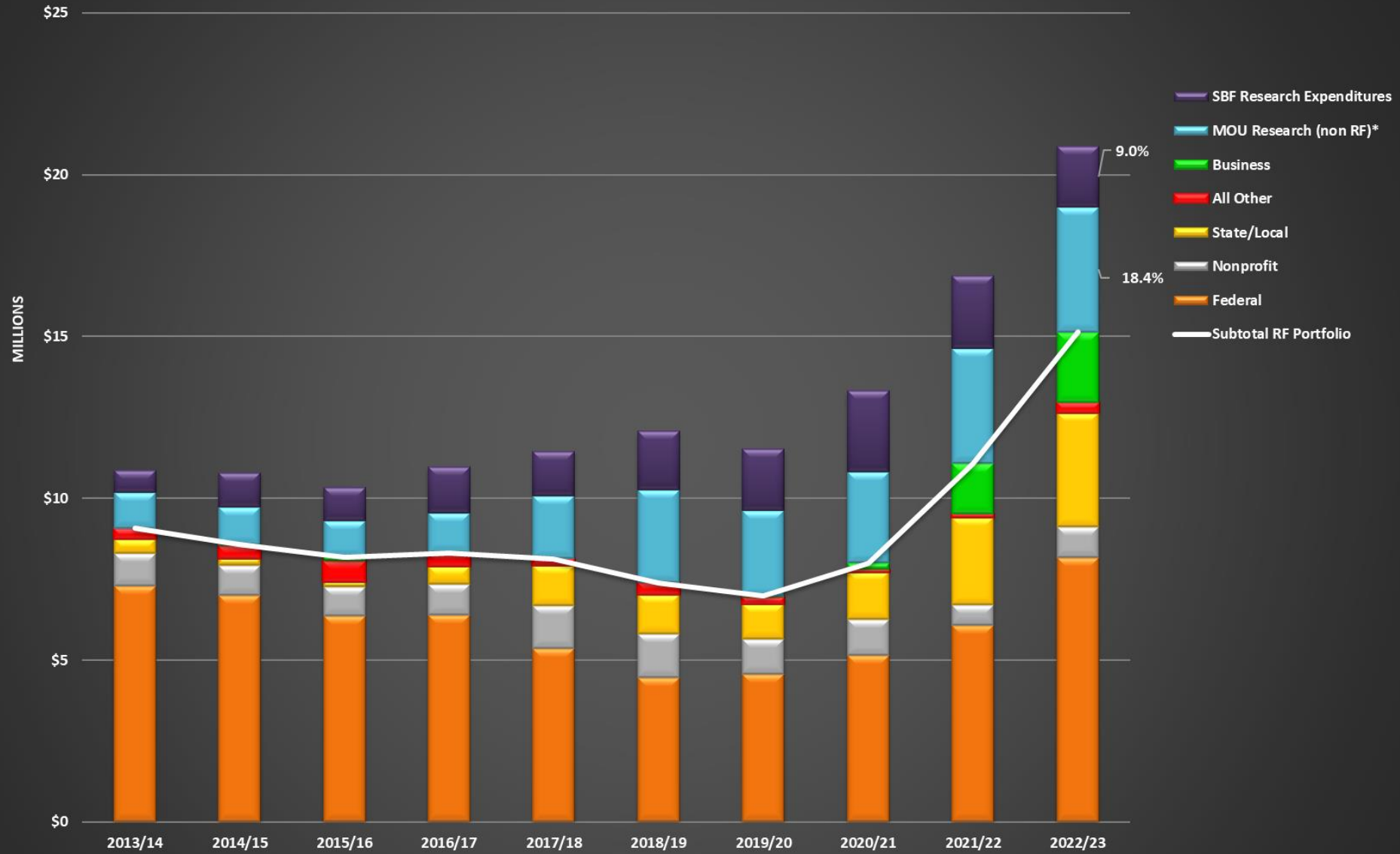
The R/V Seawolf



New SoMAS Research Vessel?



10-year Trend SoMAS Research Expenditures





Undergraduate Programs

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

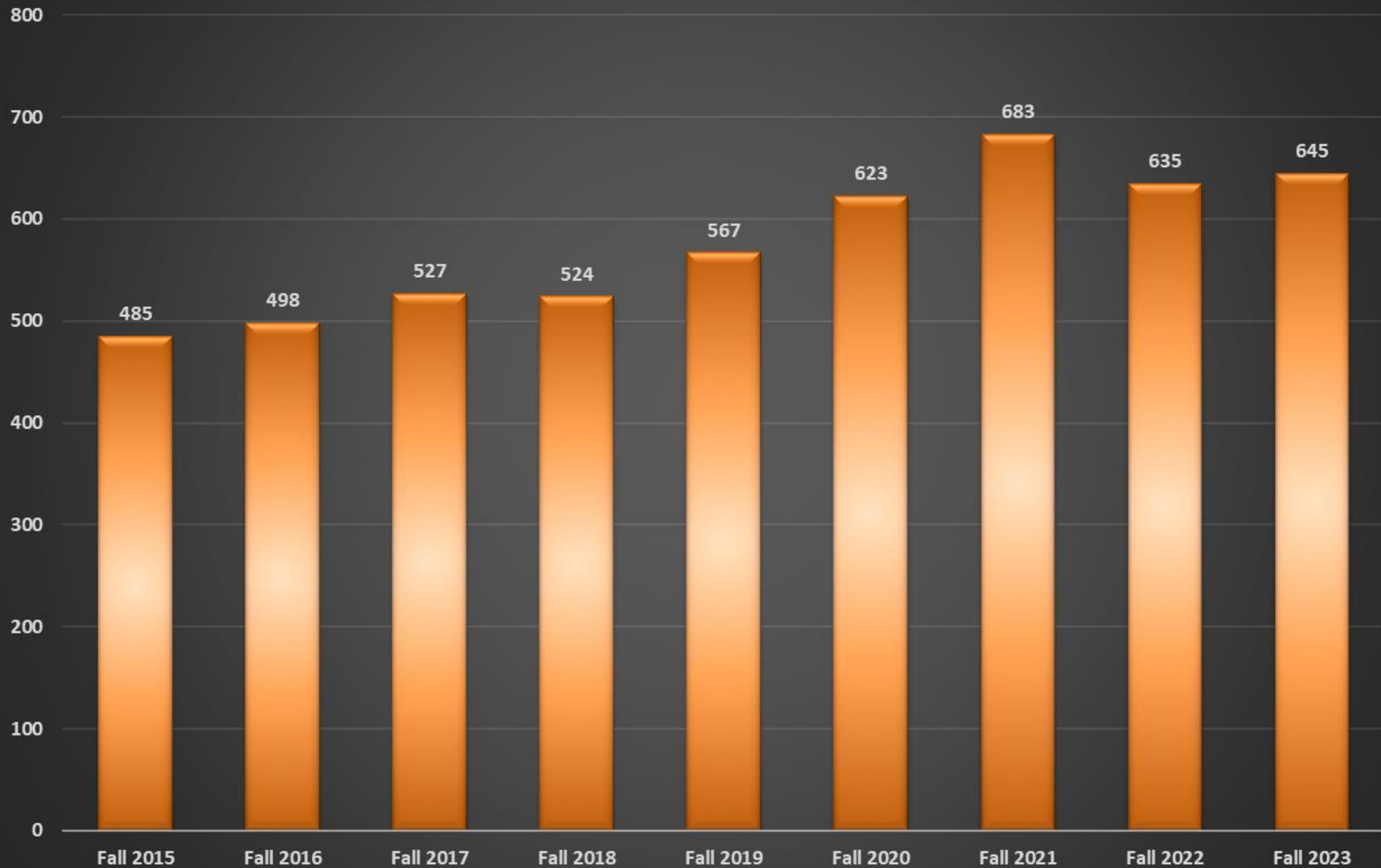
As of spring 2023, there are 754 full-time and part-time undergraduates in SoMAS programs.



Semester by the Sea (SBTS) is a key "total immersion" experience
For our students at 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**

New York Climate Exchange

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

Boston Consulting Group (BCG)

Giovanni Fassio, Principal

Georgia Tech

Dr. Chaouki Abdallah, Executive Vice President for Research

GOLES (Good Old Lower East Side)

Damaris Reyes, Executive Director

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










AFFILIATE PARTNERS









ADVISORY PARTNERS




COMMUNITY PARTNERS

American Geophysical Union	Educational Alliance	Queens Chamber of Commerce
American Museum of Natural History	Green City Force	Solar One Education
Association for a Better New York	Grow NYC	Staten Island Chamber of Commerce
Aspen Global Change Institute	Harvestworks	The Point Community
BEAM Center	Laborers' International Union	Development Corporation
Billion Oyster Project	Local 79	The Urban Assembly New York
Bronx Chamber of Commerce	Lower Manhattan Cultural Council	Harbor School
Brooklyn Chamber of Commerce	Manhattan Chamber of Commerce	The Waterfront Alliance
The Building and Construction Trades	Museum of the City of New York	32BJ SEIU
Climate Jobs NY	New York Building Congress	Variety Boys & Girls Club of Queens
Council of Greater New York	New York City Employment & Training Coalition	WE ACT for Environmental Justice
The Climate Museum		
Earth Matter NY	Nontraditional Employment for Women	

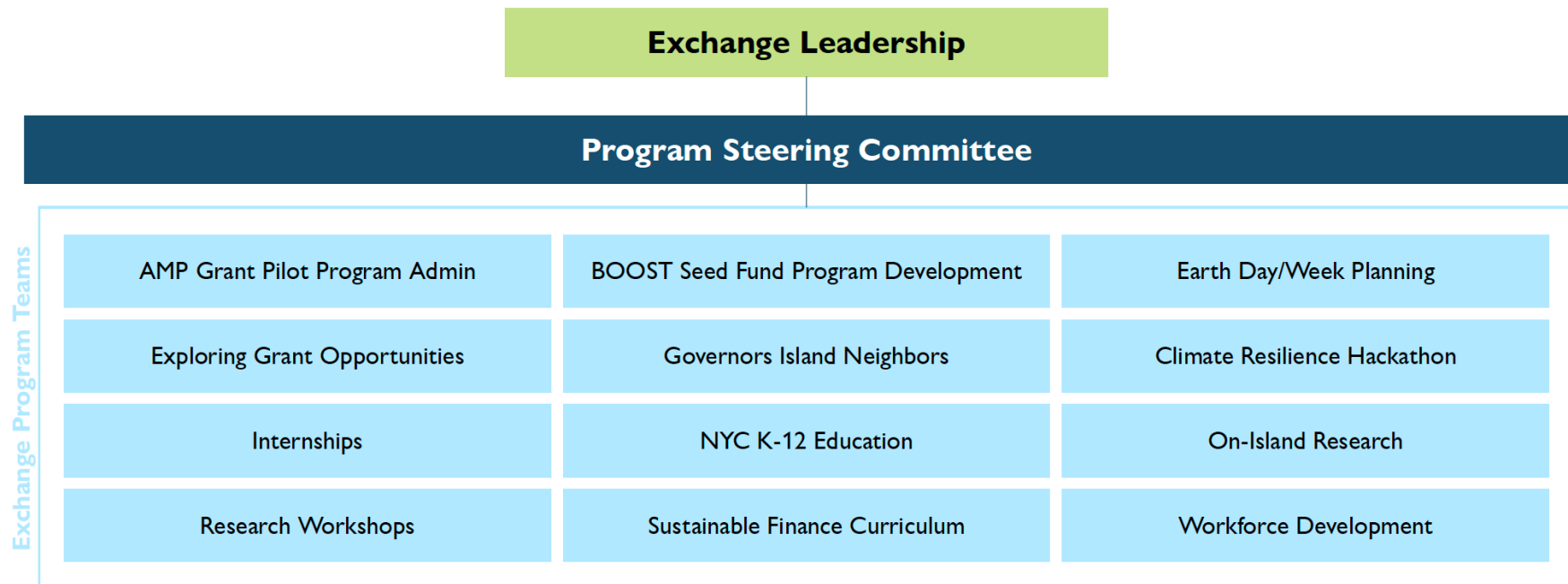
→ Serve as voting Board members, play an active role in governance and operations.

→ 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.



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**
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