

SAMUEL D. BRODY, Ph.D.

A person wearing glasses

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**Experience Profile**   
Samuel D. Brody, Ph.D. is a Senior Fellow at The Water Institute of the Gulf. He is a Regents Professor and holder of the George P. Mitchell ’40 Chair in Sustainable Coasts in the Department of Marine and Coastal Environmental Science at Texas A&M University, Galveston Campus. He is also the Director of the Institute for a Disaster Resilient Texas and Director of Center for Texas Beaches and Shores, an adjunct professor in the Department of Civil and Environmental Engineering at Rice University, and was the Lead Technical Expert for the Governor’s Commission to Rebuild Texas in response to Hurricane Harvey. In 2016, Dr. Brody was appointed to the Urban Flood Study Committee by the National Academy of Sciences.

Dr. Brody’s research focuses on coastal environmental planning, spatial analysis, flood mitigation, climate change policy, and natural hazards mitigation. He has published numerous scientific articles on flood risk and mitigation, and the book, *Rising Waters: The causes and consequences of flooding in the United States* published by Cambridge University Press. Dr. Brody teaches graduate courses in environmental planning, flood mitigation, and coastal resiliency and has worked in both the public and private sectors to help local communities adopt flood mitigation plans. For more information, please visit [www.tamug.edu/ctbs](http://www.tamug.edu/ctbs) or [www.tamug.edu/IDRT](http://www.tamug.edu/IDRT).

**Professional Experience**

Texas A&M University

* *Co-Director – Institute for Sustainable Coastal* 2012-2017

*Communities*

* *Professor – Galveston & College Station* 2009-Present
* *Director – Center for Texas Beaches and Shores* 2009-Present
* *Acting Director – Hazard Reduction & Recovery* 2008-2009

*Center*

* *Associate Professor – College Station* 2006-2009
* *Co-Director – Center for Texas Beaches and* 2006-2008

*Shores*

* *Director – Environmental Planning and* 2005-Present

*Sustainability Research Unit*

* *Assistant Professor – College Station* 2002-2006

Florida Atlantic University

* *Visiting Scholar – Department of Urban and* 2007

*Regional Planning*

Washington/Baltimore Regional 2012 Coalition

* *Consultant* 2001-2003

University of North Carolina

* *Project Director – Center for Urban and* 1991-2001

*Regional Studies*

* *Research Assistant – Center for Urban* 1991-2001

*and Regional Studies*

* *Teaching Assistant – Department of City and* 1998

*Regional Planning*

Harpswell 10, Inc.

* *President* 1997-Present

Woods Hole Oceanographic Institution

* *Project Director – Marine Policy Center* 1997-1998

Maine State Planning Office/ME Coastal Program

* *Coastal Policy Analyst* 1997

University of Michigan

* *Research Assistant II – School of Natural* 1996-1997

*Resources and Environment*

Gulf of Maine Council on the Marine Environment

* *Consultant* 1996-1997

The Food Channel

* *Environmental Correspondent* 1995-1996

Planning Decisions Inc.

* *Research Analyst* 1995

Canyonlands National Park

* *Park Ranger/Environmental Interpreter* 1993

U.S. Department of Justice: Environmental Enforcement

Section

* *Paralegal Specialist* 1992-1993

Market Decisions Inc.

* *Planning Assistant* 1991

The Chesapeake Bay Foundation

* *Research Assistant* 1990

**Selected Projects (continued on page 2)**

***Partnership for our Working Coast (2019-current).*** Convened an environmental competency group consisting of local stakeholders and coastal scientists to identify nature-based solutions and beneficial use for dredged material. This research uses participatory modeling and social return on investment methods to guide the competency group and co-develop beneficial use projects that will maximize regional social-ecological resilience. Funded by Shell, Chevron, Danos, Greater Lafourche Port Commission and National Fish and Wildlife Foundation.

***Assessing Risk and Resilience in Coastal Louisiana (2019-2020).*** An integrated risk mapping model was developed to capture how social and physical interventions designed to reduce the susceptibility and exposure of communities and engineered systems to coastal hazards can improve the resilience of these systems. The final framework was used analyze the quantitative interactions among infrastructure, environment, and society in southeast Louisiana and measure the relative effects of different types of investments. The final data model incorporated stakeholder engagement outputs to identify local variations in resilience. Funded by the Walton Family Foundation and the Foundation for Louisiana.

**Company Role**

Senior Fellow

**Project Role / Focus Areas**

* Environmental planning
* Urban flood mitigation
* Climate change policy
* Natural hazards mitigation
* Flood risk management

**Education**

* Ph.D. – Environmental Planning, University of North Carolina-Chapel Hill - 2002
* M.S. - Natural Resources Policy and Planning, University of Michigan - 1996
* Graduate Diploma – Environmental Studies, University of Adelaide, Australia - 1995
* B.S. - Environmental Studies/Anthropology, Bowdoin College - 1992

**Publications**

1. Gori, Avantika, Blessing, R. Juan, A., **Brody, S**., Bedient, P. (2019). Characterizing urbanization impacts on floodplain through integrated land use, hydrologic, and hydraulic modeling. *Journal of Hydrology* 568: 82-95.
2. Blessing, Russell, **Brody, S.D**., Highfield, W.E. (2019). Valuing Floodplain Protection and Avoidance in a Coastal Watershed. *Disasters* 43(4): 906-925.
3. Highfield, W., **Brody, S.D**. (2017). Determining the Effects of the FEMA Community Rating System Program on Flood Losses in the United States. *International Journal of Disaster Risk Reduction* 21: 396-404.
4. **Brody, S.D**., Wilson, M., Lindell M., Highfield, W., Blessing, R. (2016). Understanding the motivation of residents to voluntarily purchase federal flood insurance. *Journal of Risk Research*.
5. **Brody, S.D.**, Sebastian, A., Blessing, R., Bedient, P. (2015). Case study results from southeast Houston, Texas: identifying the impacts of residential location on flood risk and loss. *Journal of Flood Risk Management*.
6. Davlasheridze, Meri, Atoba, K.O., **Brody, S.D.**, Highfield, W.E., Merrell, W., Ebersole, B., Purdue, A., Gilmer, R. (2019). Economic Impacts of Storm Surge and the Cost-Benefit Analysis of a Coastal Spine as the Surge Mitigation Strategy in Houston-Galveston Area of Texas in the United States. *Mitigation and Adaptation Strategies for Global Change* 24: 329-354.
7. **Brody, S.D.**, Highfield, W., Blessing, R., Makino, T., Shepard, C. (2017). Evaluating the Effects of Open Space Configurations in Reducing Flood Damage along the Gulf of Mexico Coast. *Landscape and Urban Planning* 167: 225-231.
8. **Brody, S.D.**, Highfield, W., Blessing, R. (2015). An Empirical Analysis of the Effects of Land Use/Land Cover on Flood Losses along the Gulf of Mexico Coast from 1999 to 2009. *J. of the American Water Resources Association (JAWRA)* 51(6): 1556-1567.
9. **Brody, S.D.**, Blessing, R., Sebastian, A., Bedient, P. (2013). Delineating the Reality of Flood Risk and Loss in Southeast, Texas. *Natural Hazards Review* 14:89-97.
10. **Brody, S.D.**, Highfield, W. (2013). Open Space Protection and Flood Losses: A National Study. *Land Use Policy* 32:89-95.
11. Blessing, Russell, Sebastian, A., **Brody, S.** (2017). Flood risk delineation in the U.S.: How much loss are we capturing? Natural Hazards Review 18(3): 04017002, DOI: 10.1061/NH.1527-6996.0000242.
12. **Brody, S.D.**, Lee, Yoonjeong, Highfield, Wesley E. (2016). Household adjustment to flood risk: A survey of coastal residents in Texas and Florida. Disasters 41 (3), 566-586.
13. **Brody, S.D.**, Sebastian, A., Blessing, R., Bedient, P. (2015). Case study results from southeast Houston, Texas: Identifying the impacts of residential location on flood risk and loss. Journal of Flood Risk Management. DOI:10.1111/jfr3.12184.
14. **Brody, S.D.**, Highfield, W., Blessing, R. (2015). An empirical analysis of the effects of land use/land cover on flood losses along the Gulf of Mexico coast from 1999 to 2009. J. of the American Water Resources Association (JAWRA) 51(6): 1556-1567, DOI: 10.1111/1752-1688.12331.

**Synergistic Activities**

* Lead Technical Expert, Governor’s Commission to Rebuild Texas (2017-2019).
* Committee Member & Co-author, Urban Flood Study, National Academies of Sciences, Engineering, and Medicine (2017-2019).
* Research Review Board member, DHS Science and Technology Directorate Relational, Adaptive Processing of Information and Display Relational (RAPID) Apex Program (2015-present).
* Director, National Science Foundation Flood Risk Reduction International Research and Education Program (2015-present).
* National Science Foundation, Hazard Enabling Program Fellow, Mentor, Co-PI Advisory Committee (2003-present).

**Selected Conference Proceedings and Presentations**

1. The Galveston Bay Region as an International Test Bed for Flood Risk Reduction (Presentation). 8th Annual Conference on Hurricanes, Major Disasters, Coastal Protection and Rapid Recovery in Texas and the Gulf Coast Region, Houston, TX, August 5, 2016
2. NSF PIRE Flood Risk Reduction Program: A U.S.-Dutch Research and Education Partnership (Presentation). Avoiding Disasters Conference: How to Reduce Impacts from the Next Big Storm, Houston TX, April 26, 2016.
3. Flooding and Coastal Resiliency: The Houston-Galveston Region (Presentation). Annual TX APA Chapter State Planning Conference, Galveston, TX, October 8, 2015
4. Predicting Urban Growth in Vulnerable Coastal Environments (Presentation). Shell Center for Sustainability Workshop: How Sustainable is the Texas Coast? Are we in a "state of denial"?, Houston, TX, October 29, 2014.
5. Putting Social-Cultural Values on the Map: Cross-Disciplinary Collaboration on Building Resilience in Coastal Louisiana. Society for Applied Anthropology Annual Meeting. Mar 30, 2017. Santa Fe, NM.