

# Anamaria Bukvic, Ph.D.

## Research Assistant Professor

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## AFFILIATED FACULTY

- **Coastal@VT**, Virginia Tech (co-lead)
- **Center for Gerontology**, Virginia Tech
- **Global Change Center**, Virginia Tech
- NRT: Disaster Resilience and Risk Management (DRRM) Graduate Education Program

## EXPERTISE

Coastal hazards, adaptation, resilience & vulnerability ■ Population displacement & relocation

## EDUCATION

- **PhD Planning, Governance, and Globalization** August 2012  
Urban Affairs and Planning, Virginia Tech
- **Master of Community Planning** June 2006  
School of Planning, University of Cincinnati
- **PhD Environmental Genetics and Molecular Toxicology**  
2001-2004, *suspended*  
Environmental Health, University of Cincinnati
- **Master of Science** March 2002  
Biological Sciences, University of Cincinnati
- **Bachelor of Engineering** January 1998  
Landscape Architecture, University of Zagreb, Croatia

## EMPLOYMENT

- **Research Assistant Professor**, Virginia Tech, Geography, Blacksburg, VA, 2015-present
- **Visiting Assistant Professor**, Virginia Tech, Urban Affairs & Planning, Blacksburg, VA, 2012-15
- **Adjunct Faculty**, Virginia Tech, Urban Affairs and Planning, Blacksburg, VA, 2011-2012
- **Teaching Assistant**, Virginia Tech, Urban Affairs and Planning, Blacksburg, VA, 2008-2011

## TEACHING

- GEOG 4984/5984 Climate Change & Societal Impacts, Fall 2017 – new course, participated in 2017 Resilience Research & Design Collaboratory (*described under teaching advancement*)
- NR5114 Global Issues in Natural Resources, Center for Leadership in Global Sustainability, including *International Field Experience*, Croatia program (**Project title**: Sustainable utilization of the River Sava for hydropower production), May-June 2017
- UAP 3354 Environmental Policy and Planning, Fall & Spring 2012-2015
- UAP 4364 Environmental Policy Seminar: Coastal Adaptation, Spring 2014
- UAP 4384 Pollution Control Policy and Planning, Fall & Spring 2013-2015
- UAP 5064 Advanced Pollution Control Policy and Planning, Fall & Spring 2013-2015

## TEACHING ADVANCEMENT

- Participation in the 2017 Resilience Research & Design Collaborative Laboratory: Tidewater Collaboratory in partnership with the City of Hampton, Wetlands Watch, Virginia Sea Grant, and United States Green Building Council Hampton Roads, funded by Adiuvents foundation (**Project title:** Neighborhood level resilience to coastal flooding in the City of Hampton, VA)
- Development of Transboundary resource negotiation game: the River Sava and hydropower exploitation in Croatia for the Executive Master in Natural Resources (XMNR, the Center for Leadership in Global Sustainability) Negotiation Game simulation, September 8-10, 2017, Arlington, VA)

## PUBLICATIONS

- de Sherbinin, A., Bukvic, A., Rohat, G., Gall, M., McCusker, B., Preston, B., Apotsos, A., Fish, C., Kienberger, S., Muhonda, P., Wilhelmi, O., Macharia, D., Shubert, W., Sliuzas, R., Tomaszewski, B., & Zhang, S. (2018). Climate Change Vulnerability Mapping: A Systematic Review and Future Prospects. *WIREs Climate Change* (invited, submission planned for October)
- Bukvic, A., Gohlke J., Suggs, J. (2018). The health and wellbeing risk to older residents residing in flood-prone coastal communities. *International Journal of Environmental Research and Public Health*, special edition on *Extreme Weather Events and Health* (invited, submission planned for October)
- Bukvic, A. & Harrald, J. (2018). Rural versus urban perspective on coastal flooding: the insights from the U.S. Mid Atlantic communities. *Climate Risk Management* (under revisions)
- Bukvic, A., Zhu, H. Lavoie, R., & Becker, A. (2018). The role of proximity to waterfront in the relocation decision-making post-Hurricane Sandy. *Ocean and Coastal Management* 154, pp. 8-18, DOI: 10.1016/j.ocecoaman.2018.01.002
- Bukvic, A. (2017). Towards the Sustainable Climate Change Population Movement: the Relocation Suitability Index. *Climate and Development*, 10(4), 307-320, DOI: 10.1080/17565529.2017.1291407
- Bukvic, A., & Owen, G. (2016). Attitudes towards relocation following Hurricane Sandy: should we stay or should we go? *Disasters* 41:1, DOI: 10.1111/disa.12186
- Bukvic, A. (2015). Identifying Gaps and Inconsistencies in the Use of Relocation Rhetoric: A Prerequisite for Sound Relocation Policy and Planning. *Mitigation and Adaptation Strategies for Global Change* 20(7), pp. 1203-1209, DOI: 10.1007/s11027-013-9532-5
- Bukvic, A., Smith, A., & Zhang, A. (2015). Evaluating Drivers of Coastal Relocation in Hurricane Sandy Affected Communities. *International Journal of Disaster Risk Reduction*, pp. 215-228, DOI: 10.1016/j.ijdrr.2015.06.008
- Bukvic, A. (2015) Integrated Framework for the Relocation Potential Assessment of Coastal Communities (RPACC): Application to Hurricane-Sandy Affected Areas. *Environment, Systems, and Decisions* 35(2): pp. 264-278, DOI 10.1007/s10669-015-9546-5

## SPONSORED RESEARCH

- **Center for Gerontology Faculty Affiliate Research Development Grant: ElderSTRONG;** Virginia Tech; Bukvic A. (*recipient*); Improving health and wellbeing outcomes of older residents living in high-risk coastal communities (\$5,000, 2016)
- **NSF CRISP Type 1/Collaborative Research; Team:** Rhode-Barbarigos L. (PI), Zuo, W., Chao, S. (University of Miami) & Saad, W., Bukvic, A. (Virginia Tech); Human-Centered Computational Framework for Urban and Community Design of Resilient Coastal Cities (\$500,000, 2016-2018)

- **Institute for Society, Culture, and Environment;** Virginia Tech; Bukvic, A. (PI); Perceptions of relocation among decision-makers in Virginia and Eastern Shore's coastal communities (\$2,770, 2015) & Relocation potential in Hurricane-Sandy affected areas (\$6,000, 2013)
- **NSF Rapid Response grant:** Weiss, R. (PI), Irish, J., etc.; Community relocation and recovery post-Hurricane Sandy (\$3,500, 2013)

### AWARDS, SCHOLARSHIPS, AND FELLOWSHIPS

- Curriculum Development Grant, Global Education Office, Virginia Tech, March 2016
- Richard E. Zody Award for Outstanding Dissertation in Planning, Governance, and Globalization, Blacksburg, VA, April 2013

### PEER-REVIEWED CONFERENCE ORAL PRESENTATIONS

- **Bukvic, A.** & Suggs, J. 'Aging in Miami-Dade County: vulnerability of older adults living in flood prone areas', American Association of Geographers Annual Meeting, New Orleans, LA, April 10-14, 2018
- **Bukvic, A.,** Suggs, J., & Gohlke J. 'Aging in flood-prone coastal communities: assessing the health and safety risk for older residents', Social Coast Forum, Charleston, SC, February 5-8, 2018
- Garland, A. (Applied Research in Environmental Science Nonprofit Inc.), Brower, F. (N Slope Borough Risk Management), **Bukvic, A.** (Virginia Tech), Kelman, I. (University College London), et al. 'PERCIAS Applied Theater (Perceptions of Risk, Communication, Interpretation, and Action in Social-Ecological Systems) in Barrow, Alaska'. 77th Annual Meeting of the Society for Applied Anthropology (Risk and Disaster TIG), Santa Fe, March 28-April 1, 2017
- **Bukvic, A.** 'Barriers to and opportunities for relocation along the Mid-Atlantic coast from stakeholders perspective'. ECSA 56 Coastal systems in transition: From a 'natural' to an 'anthropogenically-modified' state, Bremen, Germany, September 04-07, 2016
- **Bukvic, A.** 'The Relocation Challenges in Coastal Urban Centers: Options and Limitations'. 6<sup>th</sup> International Disaster and Risk Conference IDRC, Davos, Switzerland, August 28-September 01, 2016
- **Bukvic, A.,** Smith A., & Zhang, A. 'Who, when, and why of coastal relocation: post Hurricane Sandy'. Social Coast Forum, NOAA, Charleston, SC, February 09-11, 2016
- **Bukvic, A.** 'Assessing relocation potential in Hurricane Sandy affected coastal communities' Global Risk Forum, International Disaster Risk Conference, Davos, Switzerland, August 24-29, 2014
- **Bukvic, A.** 'When we run out of options: communicating the worst case scenario' Social Coast Forum, NOAA, Charleston, SC, February 18-20, 2014
- **Bukvic, A.** 'Should we stay or should we go now: Post Hurricane Sandy' Joint AESOP/ACSP Congress: Planning for Resilient Cities and Regions, Dublin, Ireland, July 15-19, 2013
- **Bukvic, A.** 'Visualizing the worst case scenario: gaining acceptance for retreat' National Adaptation Forum, Denver, CO, April 2-4, 2013
- **Bukvic, A.** 'Scenario Planning for Climate Change Relocation: When, Where, and How?' 2012 Adaptation Futures International Conference, Tucson, AZ, May 29-31, 2012
- **Bukvic, A.** 'Towards the Sustainable Migration: the Relocation Suitability Index.' Planet under Pressure, London, United Kingdom, March 26-29, 2012
- **Bukvic, A.** 'Planning for Climate change Migrations' 26<sup>th</sup> Annual GSA Research Symposium, Blacksburg, VA, March 24, 2010

## **INVITED PANELS AND PRESENTATIONS**

- Assessment of climate change vulnerability mapping. Socio-environmental Synthesis Center (SESYNC), Annapolis, MD, February 17-19, 2016; May 8-10, 2017
- Policy and planning mechanisms for coastal relocation: barriers and opportunities. Beyond Toolkits: Adaptation strategies and Lessons. Hampton Roads Sea Level Rise/Flooding Adaptation Forum, Suffolk, VA, October 30, 2015
- The next step in mitigation and adaptation research: integration, communication, and participatory learning. Mitigation and Adaptation Research Conference. Mitigation and Adaptation Research Institute, Suffolk, VA, August 11-13, 2015
- Forging Research on Resilience. Ridenour Faculty Fellowship Conference. Virginia Tech Research Center, Arlington, VA, October 23&24, 2014
- Ecosystems or the Built Environment for Coastal Resilience: How do we decide and what matters? Normative Aspects of Resilience, Global Forum on Urban and Regional Resilience, Virginia Tech Research Center, Arlington, VA, October 12-14, 2014
- Building Functional Resilience: Integrating Ecosystems, Environment, and Natural Resources into Disaster Risk Reduction. Global Risk Forum, International Disaster Risk Conference, Davos, Switzerland, August 24-29, 2014
- Foresight Scenario Symposium on Environmental Security, Woodrow Wilson Center and GlobalInt, Washington D.C., May 20, 2014
- Ridenour Faculty Fellowship Conference (panel organizer & panelist), School of Public and International Affairs, Blacksburg, VA, April 25-26, 2013
- Climate Refugees Roundtable (panel organizer & moderator), the Lyric, Blacksburg, VA, April 22, 2012

## **MEDIA COVERAGE**

- *Hampton Daily Press*, Students combat sea level rise, Dietrich, T., February 08, 2018. Available at <http://www.dailypress.com/news/science/dp-nws-student-flooding-hampton-20180201-story.html>
- *Virginia Tech News*, Virginia Tech students develop strategies to address flooding and sea-level rise in the city of Hampton, January 24, 2018. Available at <https://vtnews.vt.edu/articles/2018/01/cnre-tidewatercollaboratory.html>
- *Virginia Tech News*, Following UN report, Virginia Tech expert calls for 'forward-thinking visioning' to mitigate effects of climate change, November 7, 2016. Available at <https://vtnews.vt.edu/articles/2016/11/unirel-bukvic-unreport.html>
- *Virginia Tech News*, Virginia Tech awarded grant to help fortify coastal cities against natural disasters, Izlar K., November 2, 2016. Available at <https://vtnews.vt.edu/articles/2016/11/110116-eng-coastalinfastructure.html>
- *The Nation*, To Adapt to Climate Change, Retreat is Necessary, Tempus, A., October 31, 2016. Available at [www.thenation.com/article/to-adapt-to-climate-change-retreat-is-necessary/](http://www.thenation.com/article/to-adapt-to-climate-change-retreat-is-necessary/)