



## Climate, Waterborne Disease, and Public Health in Eastern Russia

Andrew Tirrell

Water Diplomacy NSF/IGERT Program, Tufts University, Boston, United States ([andrewtirrell@g.harvard.edu](mailto:andrewtirrell@g.harvard.edu))

As global temperatures rise, waterborne diseases have expanded their ranges northward. Exposure to new diseases is especially threatening to isolated communities, whose remote locations and lack of health resources and infrastructure leave them particularly vulnerable. For this project, a time series analysis of existing data will be used to assess temporal and spatial associations between long-term, seasonal and short-term weather variability, and waterborne infectious diseases in several Siberian communities. Building on these associations, we will generate estimates of future changes in infectious disease patterns based upon existing forecasts of climate change and likely increases in extreme weather events in eastern Russia. Finally, we will contemplate the public health implications of these findings and offer appropriate policy recommendations. One of our policy aims will be to identify easily measured water quality indicators that may serve as useful proxies for environmental health in rural, especially indigenous, communities.