



Society for Risk Analysis New England Chapter

2016-2017 Event Series

MEETING ANNOUNCEMENT

Tuesday, March 21, 2017

Refreshments: 5:30 pm – 6:00 pm

Presentation: 6:00 pm – 6:30 pm

Discussion: 6:30 – 7:00 pm

PREPARING FOR MASS RELOCATION FROM DISASTERS

VICKI BIER, PH.D.

UNIVERSITY OF WISCONSIN-MADISON

Location

Health Effects Institute

75 Federal Street, #1400

Boston, MA

Please RSVP by Friday, March 17th to Sonja Sax (ssax@ramboll.com) or Jeff Cegan (Jeffrey.C.Cegan@usace.army.mil).

Space is limited, so reserve your seat today. For more information on SRA-NE, please go to: <http://sra.org/sra-ne>



Society for Risk Analysis New England Chapter

PREPARING FOR MASS RELOCATION FROM DISASTERS

The Japanese nuclear disaster and Hurricane Katrina both make clear that displaced persons can be a problem in the developed world, not only in the developing world. Large numbers of people may need to relocate for extended periods for reasons ranging from nuclear accidents to natural disasters to terrorism to climate change. Moreover, displaced persons who are not political refugees have few legal protections.

This talk will: (1) highlight the fact that mass relocation can be a problem for the developed world; (2) review the impacts of such relocation events; (3) discuss characteristics that can lead relocation events to differ from each other; and (4) identify future research needs. The focus throughout is on the relocation, not on any physical damage. Disasters that require relocation can cause significant economic impacts due to business interruption and loss of housing, even if they do not cause extensive loss of life or property damage. Costs of relocation and disaster housing are typically among the largest impacts of a disaster. Unfortunately, disasters in populated areas can easily result in the need to relocate over a million people.

Relocation events can differ significantly from each other. For example, consequences can be nonlinear in both the magnitude and the duration of relocation. It is also important to consider whether the relocation is due to a one-time chance event (such as a nuclear-power disaster or a terrorist attack), or a growing threat (e.g., flooding due to sea-level rise), and whether the area will eventually be repopulated, or remain uninhabitable. Costs also depend on the nature of the assets that are interdicted (e.g., loss of unique production capabilities). Finally, distributional effects are important, with increased housing prices causing hardship to low-income renters. Future research is thus important in better preparing for mass relocation.



Society for Risk Analysis New England Chapter

ABOUT THE PRESENTER

Dr. Vicki Bier is a Professor in the Department of Industrial and Systems Engineering at the University of Wisconsin-Madison, where she also holds a joint appointment in the Department of Engineering Physics, and directs the Center for Human Performance and Risk Analysis. Dr. Bier received a B.S. in Mathematical Sciences from Stanford University in 1976, and a Ph.D. in Operations Research from the Massachusetts Institute of Technology in 1983. Dr. Bier's current research interests focus on problems of security and critical infrastructure protection. Dr. Bier has been a member of the Homeland Security Advisory Committee of the U.S. Environmental Protection Agency's Science Advisory Board. Her areas of expertise are in risk analysis, decision analysis, and operations research. Dr. Bier's work has been supported by: the U.S. National Science Foundation (NSF); the U.S. Department of Homeland Security (DHS) through the National Center for Risk and Economic Analysis of Terrorism Events (CREATE), the National Center for Food Protection and Defense (NCFPD), and the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD); the U.S. Nuclear Regulatory Commission (NRC); the Idaho National Laboratory (INL); the U.S. Department of Energy (DOE); the National Aeronautics and Space Administration; and the Electric Power Research Institute. Dr. Bier is a recipient of the Women's Achievement Award of the American Nuclear Society, and the Distinguished Achievement Award of the Society for Risk Analysis, and is a past president of the Decision Analysis Society. Dr. Bier has published more than 60 peer-reviewed papers in journals such as *Operations Research*, *Risk Analysis*, *Decision Analysis*, and the *European Journal of Operational Research*, among others, and has edited or coauthored four scholarly books. Her research on homeland security has been highlighted in *USA Today*. She is an associate editor of *Decision Analysis*, has served as engineering editor for *Risk Analysis*, and has reviewed proposals for the NSF, the DOE, the U.S. Civilian Research and Development Foundation, and the International Science and Technology Center, among others.



Society for Risk Analysis New England Chapter

GETTING TO THE EVENT

Directions to the Health Effects Institute can be found at: <https://www.healtheffects.org/directions>

From the MBTA Subway (on foot):

The office is two blocks north of South Station, connecting you to the Red Line, Silver Line, and the Commuter Rail. Two blocks to our west is Downtown Crossing, connecting to the Red and Orange Lines. Three blocks to our west is Park Street, connecting to the Green Line. (See the [map of the downtown Boston area subway system](#).)

Driving Directions:

From Logan Airport

Take the Sumner Tunnel to I-93 South; then follow the directions below for From Points North. With light traffic, this is a ten-minute trip; at busier times, such as Friday evenings, plan on an hour. The Silver Line bus connects Logan International Airport to South Station, which is two blocks from our office. (See the [street map](#) to make your way from South Station to our offices.)

From Points North

From points north of Boston, take I-93 South into the city. After entering the Central Artery Tunnel, stay to your right, following signs for Exit 23/Purchase Street and South Station. Take the Purchase Street exit and drive southwest on Purchase Street until you come to Summer Street. Turn right onto Summer Street, and take the first right onto High Street. Then take your first left onto Federal Street. There is a public garage that abuts 75 Federal Street on the left. (See the [street map](#) for additional details.)

From Points South

From points south of Boston, take I-93 North into the city. Take the South Station exit, staying to the right for the ramp to downtown Boston/Kneeland Street. At the end of the ramp, take a left onto Kneeland Street. Drive west along Kneeland Street and take your third right onto Lincoln Street. Drive north on Lincoln Street for 4-5 blocks until you come to Summer Street. At Summer Street, take a right and then an immediate left onto High Street. Follow the directions above from High Street to our offices.

From Points West

Take the Mass. Pike (I-90) east to Exit 24 A-B-C. Exit to the left, following the signs for I-93/South Station/Quincy. Take Exit 24-A to South Station, staying to the right for the ramp for downtown Boston/Kneeland Street. At the end of the ramp, take a left onto Kneeland Street. Follow the directions above from Kneeland Street to our offices.