

University of Illinois, Urbana Champaign
UP 438 Disasters and Urban Planning
Fall 2020
Tues.-Thurs. 3:30 - 4:50 PM

Department of Urban and Regional Planning
Instructor: Hugo Sarmiento
Email: hugos@illinois.edu
Office: Temple Hoyne Buell Hall, Room 230
Office hours: By appointment

TA: Desiree Pastrana Otero
Email: desiree5@illinois.edu
Office hours: By appointment

Syllabus

COURSE OBJECTIVES

The purpose of this course is to provide an introduction to the roles of planners in preparing for and rebuilding after disasters. The course emphasizes planning for climate change-related disasters. Planners are concerned with the long-term aspects of disaster: the processes of hazard mitigation, climate adaptation and post-disaster recovery.

The focus is mostly on planning in the U.S., within the context of national policies, though we will also cover the major international frameworks which guide international disaster risk reduction and climate adaptation policies. For understanding recovery after large disasters, we will include both U.S. and international cases.

The course will include basic readings on all the above topics, coupled with case examples, a hazard mitigation group project, and a group project on post-disaster recovery.

All course materials are provided through Illinois Compass. This will include all readings and a blog where you will post your responses to the reading questions.

COURSE COMPONENTS

- Readings, attendance, web postings, and participation in class discussions. (20%)
- Short essays (30%)
- Group presentation and report on a mitigation / adaptation methods topic (25%)
- Group presentation and report on a recovery case (25%)

GRADUATE AND UNDERGRADUATE STUDENT EXPECTATIONS

Please note the grading criteria for class assignments will differ for graduate and undergraduate level students. This will be applied to individual class assignments including the short essays and the individual component of the two group projects. An explanation of the grading criteria is provided in the assignment description section of this syllabus.

SCHEDULE

Week	Tuesday	Thursday	Readings
8/25	Introduction and overview	Defining disaster, climate change and phases of emergency management	<ul style="list-style-type: none"> Tierney, Lindell & Perry. 2001. Chapter 1.
9/1	Vulnerability and social roots of disaster	Resilience, adaptive capacity and social-ecological systems <i>Hand out Essay 1</i>	<ul style="list-style-type: none"> Tierney. 2014. Chapter 2, 6- 7. Wisner, et al. 2004. Chapter 2.
9/8	Community resilience <i>Introduce Mitigation / Adaptation Assignment</i>	Guest Speaker: Desiree Pastrana Otero Community resilience in Puerto Rico.	<ul style="list-style-type: none"> Burby et al. 2000. Santos-Hernandez. 2020.
9/15	Structure of US risk management system: Federal role, FEMA and HUD	Federal funding system for recovery and mitigation <i>Essay 1 Due</i>	<ul style="list-style-type: none"> Rubin. 2020. Chapter 3,4,5. Cutter. 2020. Boyd. 2011.
9/22	Flood mitigation planning National Flood Insurance Program	Guest speaker: Mary Richardson CHAMP / FEMA	<ul style="list-style-type: none"> Natural Resources Defense Council. 2017. King. 2013.
9/29	Adaptation planning United Nations Framework on Climate Change (UNFCCC)	Coastal adaptation planning Managed retreat	<ul style="list-style-type: none"> Gaul. 2019. Stults. 2017 Hino et al. 2017.
10/6	Mitigation presentations	Mitigation presentations <i>Mitigation / Adaptation Reports Due</i>	

10/13	Post-disaster Recovery <i>Introduce Recovery Assignment</i>	Guest speaker: Rob Olshansky – Post-disaster relocations	<ul style="list-style-type: none"> • Schwab. 2014. • Finn. 2020. • Olshansky. 2008.
10/20	Watch: “Trouble the Water”	Recovery case: Hurricane Katrina <i>Hand out Essay 2</i>	<ul style="list-style-type: none"> • Olshansky and Johnson. 2014.
10/27	Sendai Framework for Disaster Risk Reduction	Recovery case: 2011 Japan Tsunami	<ul style="list-style-type: none"> • Laurie and Olshansky. 2016. • Iuchi, et al. 2015. • Mochizuki. 2014.
11/3	Disaster capitalism	Puerto Rico revisited <i>Essay 2 Due</i>	<ul style="list-style-type: none"> • Adams. 2013. • Klein. 2007.
11/10	Climate justice and transformative resilience	Climate activism and grassroots mobilization	<ul style="list-style-type: none"> • Chu. 2017. • Anguelovski. 2016. • Burkett. 2018.
11/17	Post-disaster recovery presentations	Post-disaster recovery presentations	
11/24	Post-disaster recovery presentations	No class <i>Recovery Reports Due</i>	
12/1	Wrap up	Wrap up	

There is no final exam for this course.

READINGS

All assigned readings are listed below. Readings without web links are in pdf files on the Compass site.

Academic Literature

Adams, Vincanne. 2013. *Markets of Sorrow, Labors of Faith: New Orleans in the Wake of Katrina*. Duke University Press.

Introduction – Chapter 1.

Adger, Neil. 2006. Vulnerability. *Global Environmental Change*. 16 (2006) 268–281

Anguelovski et al. 2016. Equity Impacts of Urban Land Use Planning for Climate Adaptation: Critical Perspectives from the Global North and South. *Journal of Planning and Education Research*. Volume: 36 issue: 3, page(s): 333-

Berke, Phillip et al. 2015. Evaluation of networks of plans and vulnerability to hazards and climate change: a resilience scorecard. *Journal of the American Planning Association*.

Bolstad, Erika. 2016. Coastal Cities Look to Resilience Chiefs to Combat Climate Change. *Scientific American*, May 23, 2016. <http://www.scientificamerican.com/article/coastal-cities-look-to-resilience-chiefs-to-combat-climate-change/>

Boyd, Eugene. 2011. *Community Development Block Grant Funds in Disaster Relief and Recovery*. Congressional Research Service Report for Congress, Washington, D.C. Order Code RL33330, September 21, 2011. <http://www.fas.org/sgp/crs/misc/RL33330.pdf>

Burby, Raymond, Robert Deyle, David Godschalk, and Robert Olshansky. 2000. Creating hazard resilient communities through land-use planning. *Natural Hazards Review*, 1(2): 99-106.

Burkett, Maxine. (2018). Behind the Veil: Climate Migration, Regime Shift, and a New Theory of Justice. *Harvard Civil Rights-Civil Liberties Law Review*. Vol. 53

Chu, Eric. et al. 2017. Climate adaptation as strategic urbanism: assessing opportunities and uncertainties for equity and inclusive development in cities. *Cities*. 60 378–387. Elsevier Limited.

Cutter, Susan. 2020. “Tipping Points in Policy and Practice,” in Rubin, Claire and Cutter, Susan. Editors. *U.S. Emergency Management in the 21st Century: From Disaster to Catastrophe*. Routledge, New York.

- Cutter et al. 2008. A place based model for understanding community resilience to natural disasters. *Global Environmental Change*. 18. 598-606
- Cutter, Susan et al. 2003. Social Vulnerability to Environmental Hazards. *Social Science Quarterly*, Volume 84, No 2
- Finn, Donovan. 2020. "Hurricane Sandy," in Rubin, Claire and Cutter, Susan. Editors. U.S. Emergency Management in the 21st Century: From Disaster to Catastrophe. Routledge, New York.
- Gaul, Gilbert. 2019. The Geography of Risk: Epic Storms, Rising Seas, and the Cost of America's Coasts. Sarah Crichton Books, New York.
- Godschalk, David R. 2010. "Integrating hazards into the implementation tools of planning," Chapter 5 (pp. 47-58) in Schwab, James C., ed., *Hazard Mitigation: Integrating Best Practices into Planning*, Planning Advisory Service Report No. 560, American Planning Association, Chicago.
- Hillier, D., & Nightingale, K. 2013. How Disasters Disrupt Development: Recommendations for the post-2015 development framework. Policy & Practice. Retrieved from <https://policy-practice.oxfam.org.uk/publications/how-disasters-disrupt-development-recommendations-for-the-post-2015-development-306538>
- Hino, Myuki et al. 2017. Managed retreat as response to natural hazard risk. *Nature Climate Change*. Macmillan Publishers Limited.
- Iuchi, Kanako; Elizabeth Maly; and Laurie Johnson. 2015. Three Years After a Mega-Disaster: Recovery Policies, Programs and Implementation After the Great East Japan Earthquake. Pages 29-46 in *Post-Tsunami Hazard*, V. Santiago-Fandiño et al (eds.), Springer International.
- Johnson, Laurie A., and Olshansky, Robert B. 2016. *After Great Disasters: How Six Countries Managed Community Recovery*. Policy Focus Report, Lincoln Institute of Land Policy, Cambridge MA. https://www.lincolninst.edu/pubs/3679_After-Great-Disasters Chapter 1, Chapter 8.
- King, Rawle O. 2013. *The National Flood Insurance Program: Status and Remaining Issues for Congress*. Congressional Research Service report for Congress R42850, February 6, 2013. <http://www.fas.org/sgp/crs/misc/R42850.pdf>
- Klein, Naomi. 2007. The Shock Doctrine: The Rise of Disaster Capitalism. Picador, New York, New York.
- Lindsay, Bruce R. 2014. *FEMA's Disaster Relief Fund: Overview and Selected Issues*. Congressional Research Service, Report R43537. <https://www.fas.org/sgp/crs/homesecc/R43537.pdf>
- Masterson, Jaimie Hicks et al. (2014). "What is Resilience?" in Planning for Community Resilience: A Handbook for Reducing Vulnerability to Disasters
- Mochizuki, Junko. 2014. Decision-Making, Policy Choices and Community Rebuilding after the Tohoku Disaster. *Journal of Integrated Disaster Risk Management* 4(2): 103-118. <http://idrimjournal.com/index.php/idrim/article/view/85/Pages%20103-118>

Moss, Mitchell et al. 2009. The Stafford Act and Priorities for Reform. *Journal of Homeland Security and Emergency Management*.

Natural Resources Defense Council. 2017. Seeking Higher Ground: How to Break the Cycle of Repeated Flooding with Climate-Smart Flood Insurance Reforms. <https://www.nrdc.org/resources/seeking-higher-ground-how-break-cycle-repeated-flooding-climate-smart-flood-insurance>

Olshansky, Robert and Laurie Johnson. 2014. The Evolution of the Federal Role in Supporting Community Recovery After U.S. Disasters. *Journal of the American Planning Association*, 80(4): 293-304

Olshansky, Robert B., Laurie A. Johnson, Jedidiah Horne, and Brendan Nee. 2008. Planning for the rebuilding of New Orleans. *Journal of the American Planning Association*. 74(3): 273-287.

Olshansky, Robert B. 2009. The Challenges of Planning for Post-Disaster Recovery. in *Building Safer Settlements, Governance, Planning and Responses to Natural Hazards*. Urbano.

Pelling, M. (2010). *Adaptation to Climate Change: From Resilience to Transformation*. Routledge. Chapter 2.

Poland, Chris. 2009. *The Resilient City: Defining What San Francisco Needs From Its Seismic Mitigation Policies*, SPUR, February 2009. http://www.spur.org/sites/default/files/publications_pdfs/SPUR_Seismic_Mitigation_Policies.pdf

Rubin, Claire, editor. 2020. *Emergency Management: The American Experience 1900-2010*. Third Edition. Fairfax, VA: Public Entity Risk Institute. Chapter 3 – Chapter 5.

Rubin, Claire. 2006. *Timeline: 100 Years of Seismic Safety in California*. Prepared for California Seismic Safety Commission. http://www.seismic.sdsu.edu/pdf.files/100_Years_Seismic_Safety.pdf

Santos-Hernandez, Jennifer, et al. 2020. “Hurricane Maria in Puerto Rico,” in Rubin, Claire and Cutter, Susan. Editors. *U.S. Emergency Management in the 21st Century: From Disaster to Catastrophe*. Routledge, New York.

Schwab, James, editor. 2014. *Planning for Post-Disaster Recovery: Next Generation*, Chicago, Illinois: American Planning Association, Planning Advisory Service Report 576. https://www.fema.gov/media-library-data/1425503479190-22edb246b925ba41104b7d38eddc207f/APA_PAS_576.pdf Executive Summary, Chapter 1.

Shi, L., Chu, E., Anguelovski, I. et al. 2016. Roadmap towards justice in urban climate adaptation research. *Nature Climate Change* 6, 131–137 doi:10.1038/nclimate2841

Stults, Missy. Integrating climate change into hazard mitigation planning: Opportunities and examples in practice. *Climate Risk Management*. Volume 17, 2017, Pages 21-34

Sylves, Richard and William Cumming. 2004. FEMA’s Path to Homeland Security. *Journal of Homeland Security and Emergency Management*.

- Tierney, Kathleen J., Michael K. Lindell, and Ronald W. Perry. 2001. *Facing the Unexpected: Disaster Preparedness and Response in the United States*. Washington, D.C.: Joseph Henry Press.
Chapter 1.
- Tierney, Kathleen. 2014. *The Social Roots of Risk: Producing Disasters, Promoting Resilience*. Stanford CA: Stanford Business Books.
Chapter 1, Chapter 3, Chapter 6-7.
- Torsell, Carolyn V., and Jared C. Nagel. 2017. *Federal Disaster Assistance Response and Recovery Programs: Brief Summaries*. Congressional Research Service Report for Congress, Washington, D.C. Order Code RL31734, July 18, 2017. <http://fas.org/sgp/crs/homsec/RL31734.pdf>
- Wiley, Kip. 2000. *A History of the California Seismic Safety Commission, SSC 2000-04*, December 2000. Look at pages 9-45. http://www.seismic.ca.gov/pub/CSSC_HISTORY.pdf
- Wisner, Ben. et al. (2004) *At Risk: Natural hazards, people's vulnerability and disasters*. Second Edition. Routledge. Taylor & Francis Group.
Chapter 2.

Institutional Literature

- 44 CFR Secs 201 and 206, Hazard Mitigation Planning and Hazard Mitigation Grant Program_ <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=e63c0b17b2c76390184c081f4e63611d&rgn=div5&view=text&node=44:1.0.1.4.53&idno=44>
- City of New Orleans. 2015. *Resilient New Orleans*. Read Executive Summary, pp. 4-5, and skim the rest. [http://resilientnola.org/wp-content/uploads/2015/08/Resilient New Orleans Strategy.pdf](http://resilientnola.org/wp-content/uploads/2015/08/Resilient-New-Orleans-Strategy.pdf)
- FEMA. 2017a. *Pre-Disaster Recovery Planning Guide for Local Governments*. FEMA Publication FD 008-03, February 2017. Pages 1-28. <https://www.fema.gov/media-library-data/1487096102974-e33c774e3170bebd5846ab8dc9b61504/PreDisasterRecoveryPlanningGuideforLocalGovernments-Final50820170203.pdf>
- FEMA. 2017b. *Community Recovery Management Toolkit*. Web-based collection of resources, last updated August 2017. <https://www.fema.gov/national-disaster-recovery-framework/community-recovery-management-toolkit>
- FEMA. 2014. *Resilience and Climate Change Adaptation*. Federal Insurance and Mitigation Administration.
- FEMA. 2013. *Local Mitigation Planning Handbook*, Introduction, Task 3, Task 5, Task 6, Task 9, and Worksheet 6.1. http://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf
- HUD Office of Policy Development and Research. 2015. *Evidence Matters*, Winter 2015. http://www.huduser.org/portal/periodicals/em/EM_Newsletter_winter_2015.pdf
Federal Disaster Policy: Toward a More Resilient Future, pp. 1-13.
Preparing for the Next Disaster: Three Models of Building Resilient Communities, pp. 19-30

Jha, Abhas K, Jennifer Dwayne Barenstein, Priscilla M. Phelps, Daniel Pittet, and Stephen Sena. 2010. *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*, World Bank, International Bank for Reconstruction and Development, Washington D.C. (Introductory notes and guiding principles).

Full report is at <https://www.gfdrr.org/sites/gfdrr.org/files/SaferHomesStrongerCommunitites.pdf>

Illinois Department of Natural Resources. 2001. *Floodplain Management Quick Guide*.
http://www.dnr.illinois.gov/WaterResources/Documents/Resman_ILFPMQuickGuide.pdf

IPCC. 2018. Special Report on Global Warming of 1.5 °C (SR15). Retrieved from:
<https://www.ipcc.ch/sr15/>

IPCC. 2014. Fifth Assessment Report (AR5). Summary for policy makers.

National Earthquake Hazards Reduction Program, 2016, *About Us*.
<http://www.nehrp.gov/about/history.htm>

New Orleans Redevelopment Authority (NORA). 2015. Year in Review.
<http://redevelop.nola.gov/NORA-YiR-2015.pdf>

UNISDR. 2015a. Sendai Framework for Disaster Risk Reduction 2015-2030 - UNISDR. Retrieved November 24, 2017, from <https://www.unisdr.org/we/inform/publications/44983>

ASSIGNMENTS

Readings and Participation

Students are expected to complete all readings prior to class, and are expected to contribute to class discussions with comments and questions.

Everyone should be prepared to participate in class discussions.

Short Essays

To ensure that each student understands the basic elements of mitigation and recovery, short essays will be assigned. Graduate students will be assigned three short essays. Undergraduate students will be assigned two short essays. For each essay, the instructor will distribute a question or situation, to which students will provide concise written responses in two to four pages. These will give each student an opportunity to show that they absorbed, integrated, and made sense of the material covered in class and readings.

Report on Mitigation / Adaptation Actions

In groups, students will research ways to mitigate the effects of disasters as applied to six selected cities. Each group will make a presentation to the class, proposing the highest priority mitigation methods for two types of natural hazards in their city. For the written component of this assignment students will be expected to produce a report with analysis of how mitigation and adaptation measures are integrated into the city's planning. Graduate students will be expected to produce an eight page report and undergraduate students will be expected to produce a six page report.

Report on a Post-Disaster Recovery Case

In groups, students will research the recovery process following a large U.S. or international disaster that occurred within the past two decades. Each group will prepare a presentation to the class and submit a report summarizing their findings. For the written component of this assignment graduate students will be expected to produce a ten page report and undergraduate students will be expected to produce a eight page report.

Student Conduct and Accessibility

Disability Services: This course will accommodate students with documented disabilities. Please refer to the Disability Resource Guide (<http://www.disability.illinois.edu/disability-resource-guide>) for more information and inform the instructor of any requests at the beginning of the semester.

Academic Integrity: The UIUC Student Code (<http://www.admin.illinois.edu/policy/code>) requires all students to support academic integrity and abide by its provisions, which prohibit cheating, fabrication, plagiarism, and facilitation of these and related infractions. According to Section § 1-401, “students have been given notice of this rule by virtue of its publication” and “regardless of whether a student has actually read this rule, a student is charged with knowledge of it.” The provisions of the Student Code are applicable to this course. *In written work, all ideas (as well as data or other information) that are not your own must be cited.*

Diversity: The Department of Urban and Regional Planning (DURP) is committed to creating an environment of inclusion and opportunity that is rooted in the very goals and responsibilities of practicing planners. Conduct that interferes with the rights of another or creates an atmosphere of intimidation or disrespect is inconsistent with the environment of learning and cooperation that the program requires. By enrolling a course in the Department of Urban and Regional Planning, students agree to be responsible for maintaining a respectful environment in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. We will be governed by the University Student Code. Please see the *Student Code Article I—Student Rights and Responsibilities* for further details (<http://admin.illinois.edu/policy/code>).

Counseling: The UIUC Counseling Center is available to help students develop coping skills in order to address emotional, interpersonal, and academic concerns. If you have personal issues that are impeding your studies, I encourage you to contact them at <https://counselingcenter.illinois.edu/>.

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Diversity: The Department of Urban and Regional Planning (DURP) is committed to creating an environment of inclusion and opportunity that is rooted in the very goals and responsibilities of practicing planners. Conduct that interferes with the rights of another or creates an atmosphere of intimidation or disrespect is inconsistent with the environment of learning and cooperation that the program requires. By enrolling a course in the Department of Urban and Regional Planning, students agree to be responsible for maintaining a respectful environment in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. We will be governed by the University Student Code. Please see the *Student Code Article I—Student Rights and Responsibilities* for further details (<http://admin.illinois.edu/policy/code>)..

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