

**Graduate School of Architecture, Planning and Preservation**  
**Program in Urban Planning-Columbia University**

**SYLLABUS PLA6607.001**

**Environment, Climate Change and Vulnerability of Cities: Our New “Normal”**

Course: PLA 6607 - 3 points

Prof. Marcela Tovar-Restrepo

Fall 2016

Days: Thursdays 4-6 pm

Room: 201 Fayerweather

**COURSE DESCRIPTION**

Climate change (CC) constitutes one of the most urgent issues of our time. It has worldwide implications -from the exacerbation of poverty, to the loss of environmental, political, economic and social security-. Climate change threatens both industrialized and less industrialized world regions. Vulnerable social groups in precarious positions bear the burden of phenomenon like: displacement, interethnic and social conflicts, alteration of food production patterns and livelihoods, and spread of diseases among others. This course explores the vulnerability of urban populations making emphasis on context specific impacts in low and middle-income nations. Using case studies we will analyze how climate change impacts different social groups in our cities, identifying adaptation and mitigation strategies being currently implemented. Tools to draw on climate change scientific data and the uncertainty inherent in future projections, will be provided. Students will have the opportunity to study and engage to climate change and development international processes like: the Conference of the Parties to the United Nations Framework Convention on Climate Change 21<sup>th</sup> Session (COP-21) or Post-2015 agendas such as the Sustainable Development Goals (SDGs).

Students will have the opportunity to attend the Climate Week - United Nations Events taking place in NY from Sept. 19-25/2016 (see: <http://www.climateweeknyc.org>).

**INSTRUCTOR**

**Marcela Tovar-Restrepo**, PhD, is lecturer at in the Graduate School of Architecture, Planning and Preservation at Columbia University. She obtained her PhD in Anthropology at the New School for Social Research (N.Y.) and her Master on Urban Development Planning at University College of London. She conducts research on diversity, gender and development in Latin America. In the U.S.A. she has served as Director (a) of the Latin American and Latino Studies Program at Queens College–CUNY (2008-2011) and taught at Lang College–New School (Urban Studies Program). In Latin America, she has taught and worked as

policy-maker in Colombia and Chile for more than ten years. Besides teaching, Dr. Tovar-Restrepo has served as international consultant mainstreaming cultural and gender rights into policy-making processes at different UN instances like the Commission of Sustainable Development (CSD) - DESA, UNDEF, IPU and the Permanent Forum for Indigenous Issues. She has also served as technical advisor and researcher for International cooperation agencies (GTZ, AECID), governments, social movements and NGOs in areas such as gender and ethnic diversity, environment and human rights and conflict. She is the Chair of the Board of Directors –WEDO, NY.

## **REQUIRED PRESENTATIONS & ESSAY**

Individual IN-CLASS PRESENTATIONS. Students will select one or two main topics of our course based on their main interests. Each student will make a 10-15 mins. in-class presentation based on the readings assigned for the topic they have selected. These presentations are intended to introduce the topic for out class and kick-off the collective discussion.

FINAL ESSAY. The final essay will be a maximum of 7,000 words, *excluding* bibliography, graphic materials and tables, and appendixes. The project requires a robust bibliography (including when appropriate academic, journalistic, and institutional data) and supporting graphic materials. Students will need to show a critical understanding of climate change as a cross-cutting issue in urban planning.

## **Evaluation**

|  |          |
|--|----------|
| Midterm<br>pts.                                | 15       |
| Individual in-class<br>presentation(s)<br>pts. | 20       |
| Final<br>presentation                          | 20 pts.  |
| Final report<br>pts.                           | 25       |
| Participation and attendance<br>pts.           | 20       |
| TOTAL  | 100 pts. |

## OFFICE HOURS

TBA

**CLASS SCHEDULE AND READINGS** (Most of the readings will be posted on courseworks however in case they are not, students are responsible for finding their readings at the library).

### Introduction

1. **9/8/16. What is climate change? How does it impact cities in high-income and low-income countries? What can urban planners do?**

#### *Required Reading*

Global Report on Human Settlements 2011: Cities and Climate Change, Policy Directions. Chapters 1 and 7. United Nations Habitat. Site: [www.unhabitat.org](http://www.unhabitat.org) (Links to an external site.)

NY Times:

[http://www.nytimes.com/2015/03/29/upshot/how-idealism-expressed-in-concrete-steps-can-fight-climate-change.html?hpw&rref=science&action=click&pgtype=Homepage&module=well-region&region=bottom-well&WT.nav=bottom-well&\\_r=1&abt=0002&abg=0](http://www.nytimes.com/2015/03/29/upshot/how-idealism-expressed-in-concrete-steps-can-fight-climate-change.html?hpw&rref=science&action=click&pgtype=Homepage&module=well-region&region=bottom-well&WT.nav=bottom-well&_r=1&abt=0002&abg=0) (Links to an external site.)

The guardian:

<http://www.theguardian.com/environment/2015/mar/08/how-will-everything-change-under-climate-change>

### **PART I: Climate Change, Cities and Urban Planning**

2. **9/15/16 Urban Politics of Climate Change: International Platforms for Urban Action**

#### *Required Reading*

Tovar-Restrepo, M., Reckien, D., Creutzig, F., Fernandez, B., Lwasa, S., M., McEvoy, D., Satterthwaite, D. "Climate Change, Equity and Sustainable Development Goals: An Urban Perspective", Forthcoming in *Environment and Urbanization* (In Print) – *DO NOT CIRCULATE* -

Intergovernmental Panel on Climate Change-Fifth Assessment Report: Impacts, Adaptation, and Vulnerability (2014). Pls. take a general view to the Doc. and focus **only** on the summary for policymakers posted at: <http://www.ipcc.ch> (Links to an external site.)

### **Further Readings**

Aromar, R. et al. Towards transformative adaptation in cities: the IPCC's Fifth Assessment. Environment and Urbanization April 2014, 26: 11-28

Aguilar, Lorena. Missing in Discussions of Climate Change: Women (2014) in [http://www.huffingtonpost.com/lorena-aguilar/missing-in-discussions-of\\_b\\_5092088.html](http://www.huffingtonpost.com/lorena-aguilar/missing-in-discussions-of_b_5092088.html)

Satterthwaite, D. "Getting local governments, residents and enterprises to respond to the new IPCC assessment". Environment and Urbanization April 2014, 26: 3-10

Climate Change and Cities. First Assessment Report of the Urban Climate Change Research Network. Ed. Cynthia Rosenzweig, William D. Solecki, Stephen A. Hammer and Shagun Mehrora. Cambridge University Press, 2011 (e-Book in Clio Cat). Pages 1-15

### **3. 9/22/16. FIELDWORK – CLIMATE WEEK IN NY**

Please see:

<http://www.climateweeknyc.org/events/>

Students shall select and attend one event during this week. Every one shall send the instructor a one-page report about the event including a picture (s). These contents will be discussed during the following class.

### **4. 9/29/16. Resilience vs Sustainability?**

### ***Required Reading***

Pelling, Mark. Adaptation to Climate Change: From Resilience to Transformation. Part II: The resilience: transition transformation framework pg. 53-68. Routledge 2011 (e-book in CLIO Cat)

Michaela Hordijk, Liliana Miranda Sara, and Catherine Sutherland. Resilience, transition or transformation? A comparative analysis of changing water governance systems in four southern cities. Environment and Urbanization April 2014 26: 130-146, first published on March 7, 2014 (Case Studies: Guarulhos, Arequipa, Lima and Durban)

Action - Case Study in Mozambique: <http://cdkn.org/resource/urban-planning-mozambique/> (Links to an external site.)

### **Further Reading**

Aditya Bahadur and Thomas Tanner. Transformational resilience thinking: putting people, power and politics at the heart of urban climate resilience in Environment and Urbanization, April 2014, 26: 200-214, first published on March 3, 2014 (Case study: 2 cities in India)

100 Resilient Cities by Rockefeller Foundation: [http://www.100resilientcities.org/#/\\_/](http://www.100resilientcities.org/#/_/)

United Nations System Chief Executive Board for Coordination. (2013). United Nations

Sustainable Development Solutions Network - SDGs – Guide:

<http://unsdsn.org> (Links to an external site.)

What are the SDGs? SDG – 11: Sustainable Cities and Communities

<http://www.undp.org/content/undp/en/home/sdgoverview/post-2015-development-agenda.html> (Links to an external site.)

## **PART II: Social Dimension of Climate Change**

### **5. 10/6/16. Identity, Power and Intersectionality**

### ***Required Reading***

Kaijser, A. and Kronsell, A. 2014. Climate change through the lens of intersectionality, *Environmental Politics*, 23:3, 417-433

Chandra Russo, C. and Pattison, A. 2016. "Climate Action Planning: An Intersectional Approach to The Urban Equity Dilemma" in *Systemic Crisis of Global Climate Change*, Phoebe Godfrey and Denise Torres (Ed.). London: Routledge

UNICEF. 2015. Unless we act now: The impact of climate change on children: Intro. (Presenter must select 2 Chp) (Access on-line):

Enarson, E. and Pease, Bob. 2016. "The Gendered Terrain of Disaster: Thinking about Men and Masculinities" in *Men, Masculinities and Disaster*. London: Routledge. pp.3-21

### **Further Readings**

IUCN. 2015. Roots for the Future: Chp. 9 Into the Cities. (Access on-line)

Chant, S. and McIlwaine. 2016. *Cities, Slums and Gender in the Global South*. London: Routledge (Intro and Conclusions)

### **6. 10/13/16. Social Justice: A Methodological Guideline and a Framework for Pro-poor Asset Adaptation**

### ***Required Reading***

Moser, C. "A Conceptual and Operational Framework for Pro-poor Asset Adaptation to Urban Climate Change". In *Cities and Climate Change*. Ed. Daniel Hoornweg, Washington, D.C.: World Bank, 2011:225-255 (e-book in Clio Cat)

Moser, C and A Stein (2011), "Implementing urban participatory climate change adaptation appraisals: a methodological guideline," *Environment and Urbanization*, Vol 23, No 2, pages 463–485.

Stein, A. and Moser, C. Asset planning for climate change adaptation: lessons from Cartagena, Colombia in *Environment and Urbanization*, April 2014 26: 166-183

## **7. 10/20/16. Climate Change and Social Roles: Why Gender Needs to be Prioritized?**

Gender, Urbanization and Climate Change. DPU-Bartlett Development Planning Unit (23:15)

<https://www.youtube.com/watch?v=scNcKMXCgkE>

Huraera, J. Adapting the built environment: the role of gender in shaping vulnerability and resilience to climate extremes in Dhaka. *Environment and Urbanization* April, 2014 26: 147-165

Khosla, P. and Masaud, A. “Cities, Climate Change and Gender: A Brief Overview”. In *Gender and Climate Change: an introduction*. Ed. Irene Dankelman, London: Earthscan, 2011:55-72

### **Further Readings**

Moser, Caroline and Stein, Alfredo. 2016. “Challenging stereotypes about gender vulnerability to climate change: Asset adaptation in Mombasa and Cartagena” in *Gender, Assets Accumulation and Just Cities. Pathways to transformation*, Caroline Moser (Ed.) London: Routledge PP.181-197

Hasnain, T. 2013. *Climate Change is Supplementing Violence against Women*

Access: <http://envirocivil.com/climate/climate-change-supplementing-violence-women/>

THI DIEU My PHAM AND THI THU SUU LAM. 2016. *Gender needs and roles in*

*building climate resilience in Hue City, Vietnam*. Working Paper Series: 33. Asian Cities Resilience. Access: <http://pubs.iied.org/pdfs/10780IIED.pdf>

Nelson, V, K Meadows, T Cannon, J Morton and A Martin (2002), “Uncertain predictions, invisible impacts and the need to mainstream gender in climate change adaptations”, *Gender and Development* Vol 10, No 2, pages 51–59.

Levy, C. Travel choice reframed: "deep distribution" and gender in urban transport. *Environment and Urbanization*, 2013 25: 47

## **PART Iii: Climate Change Governance: Strategies, City Plans and Institutions**

### **8. 10/27/16. Climate Change Planning: City Plans of Action**

#### ***Required Reading***

Zaidi, Z. and Pelling, M. 2015. Institutionally configured risk: Assessing urban resilience and disaster risk reduction to heat wave risk in London, *Urban Studies*

Special issue: Governing for urban resilience, [May 2015](#); Vol. 52, No. 7 ([Links to an external site.](#))

Gunel, G. 2016. "The Infinity of Water: Climate Change Adaptation in the Arabian Peninsula" in Climate Change and the Future of Cities: Mitigation, Adaptation, and Social Change on an Urban Planet, *Public Culture*, Volume 28, Number 2 79, May 2016, Eric Klinenberg, (Ed) pp. 291-315

Jorgelina Hardoy, J. et al. 2014. Institutionalizing climate change adaptation at municipal and state level in Chetumal and Quintana Roo, Mexico. *Environment and Urbanization*, April 2014, 26: 69-85

#### **Further Readings**

Brody, S. et al. Moving from agenda to action: evaluating local climate change action plans, *Journal of Environmental Planning and Management* Vol. 53 issue 1, pp. 41-62, 2010

Bassett, E. and Vivek, S. Innovation and Climate Action Planning Perspectives From Municipal Plans, *Journal of the American Planning Association* Vol. 76, Issue 4, pp. 435-450, 2010

Ken Reardon and John Forester (ed). 2016. Rebuilding Community after Katrina: Transformative Education in the New Orleans Planning Initiative, Temple University Press, Philadelphia.



## **10. 11/3/16 Climate Change Planning for a Prosperous City**

Guest Speaker: Shunondo Basu - Energy analyst and Meteorologist at Bloomberg L.P

Climate change is already affecting cities around the globe and will continue to do so in ways not seen previously. Shifting weather patterns to greater frequencies of prolonged heat waves and cold snaps are among the phenomena being observed. Human populations and the cities they live in will have to adapt to these changes in order to ensure a sustainable future of growth and prosperity. This presentation will illustrate how climate change needs to be mainstream in economic planning.

### **Required Readings (TBA)**

## **9. 11/10/16. MIDTERM**

## **11. 11/17/16. U.S. Cities: What is happening in NYC? Rebuilding by Design Experience**

In the fall of 2014, Rebuild by Design, an initiative of President Barack Obama's Hurricane Sandy Rebuilding Task Force, convened an international working group of experts to advance a global conversation on resiliency, design, and politics. Our guest speaker will present their work and achievements during the last years.

**Guest Speaker: Tara Eisenberng - Rebuilding by Design (TBC)**

### ***Required Reading (TBA)***

## **12. 11/24/16 No Class – Thanksgiving**

## **13. 12/1/16. Adaptation and Mitigation Strategies in Different Scenarios**

### ***Required Reading (Select two)***

Koslov, L. 2016. "The Case for Retreat" in *Climate Change and the Future of Cities: Mitigation, Adaptation, and Social Change on an Urban Planet*, *Public Culture*, Volume 28, Number 2 79, May 2016, Eric Klinenberg, (Ed) pp. 359-387

(Case: Long Island – NY)

Aggarwal, R. M. Strategic Bundling of Development Policies with Adaptation: An Examination of Delhi's Climate Change Action Plan. *International Journal of Urban Research*, Vol 37, Issue 6 pp. 1902-1915, Nov. 2013

Wagenaar, H. and Wilkinson, C. 2015. Enacting Resilience: A Performative Account of Governing for Urban Resilience in *Journal of Urban Studies* - Special issue: Governing for Urban Resilience, May 2015; Vol. 52, No. 7 ([Links to an external site.](#))

(Case: Melbourne)

World Resources Institute:

- Ross center for Sustainable Cities (Case-Studies):

<http://www.wri.org/our-work/topics/sustainable-cities> ([Links to an external site.](#))

- Mitigation: Measurement, Reporting and Verification Post- COP 21:

<http://www.wri.org/resources/charts-graphs/3-types-measurement-reporting-and-verification-mrv>

### **Further Readings**

Wamsler, C. and Brink, E. Moving beyond short-term coping and adaptation. *Environment and Urbanization*, April 2014 26: 86-111

Bulkeley, H. Local Government and the Governing of Climate Change in Germany and the UK. *Urban Studies*, Nov. 2006 vol. 43 no. 12, pp. 2237-2259

Krellenber, K. and Hansjurgens, B. (Ed.) *Climate Adaptation Santiago*. Springer, 2014 - Chp.: TBA (e-book in Clio Cat)

Smith, Neil. (2006). "There's No Such Thing as a Natural Disaster" Understanding Katrina: Perspectives from the Social Sciences. <http://understandingkatrina.ssrc.org/Smith/> (reader)

**14. 12/8/16. final Presentations**