Disrupting the status quo

Reconstruction, recovery and resisting disaster risk creation

9th International i-Rec Conference
University of Florida, June 5-7, 2019

PRESENTING
The 9th International i-Rec Conference!

Thank you so much for joining us for the 9th International i-Rec Conference at the University of Florida in Gainesville!

The i-Rec conference series is a long-standing forum for discourse among the disaster reconstruction and recovery research, policy and practice community. We are delighted to be able to host i-Rec in the United States for the first time ever.

In the context of massive global challenges caused by rapid human development, we are gathering around some of the most pressing but under-represented, misunderstood and divisive topics in disaster studies.

We assert that **status quo** practices, policies and solutions are not getting us where we need to go. Despite commitments to reduce risk, we are too often actually **creating risk**.

As co-chairs, we envisaged that the 2019 i-Rec would challenge traditional academic norms, by also offering alternative submission types and a range of creative activities to inspire delegates. Alongside traditional academic papers, we invited participants to write in media communication style in less than 1000 words - you can enjoy some of the excellent short submissions that we received in this conference magazine. We are also excited to bring to you poetry, films, short stories and photography as part of the event!

As a future-oriented conference in disaster research, we positioned ourselves to pay particular attention to the Disaster Risk Creation paradigm. The accepted proposals tend to examine disasters with a root cause lens and to embed them in a nuanced understanding of a global productive system and capitalist society. In all of this, our critical concern lies with the underrepresented, the marginalized and the oppressed who are disproportionately affected by disasters.

We hope that you will find the discussions this week inspiring, uplifting, and challenging. We have invited keynote speakers from outside of our academic field, to offer several different perspectives and (hopefully) to spark some entirely new ideas among delegates!

Finally, we are deeply grateful to the University of Florida (UF) and the recently founded Florida Institute for Built Environment Resilience (FIBER) for hosting the conference. Thank you to i-Rec for entrusting us with the responsibility to co-chair, and to everyone that has contributed to making it happen.

We look forward to getting to know you all better and building on our shared vision and passion for disaster research!

Dr Jason von Meding, Dr Ksenia Chmutina,
Dr Emmanuel Raju, Dr Giuseppe Forino
Conference Co-Chairs

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#irec2019

A Gator Nation Welcome!

Chimay Anumba
*Dean, College of
Design, Construction
and Planning*

Dear i-REC 2019 Attendees,

I am delighted to welcome you to the University of Florida, a Top 10 public research university in the USA. The College of Design, Construction and Planning (DCP) is very pleased to support this conference as it addresses issues that are not just topical but have the capacity to affect the quality of life for millions of people around the world.

Our recently established FIBER brings together high caliber researchers from all of the disciplines represented within DCP (architecture, construction management, interior design, landscape architecture, and urban and regional planning). They develop collaborative teams to investigate the wide range of issues associated with enhancing resilience, developing innovative solutions that will have a lasting impact.

I hope that your deliberations will be productive and that you will leave the conference with new ideas and new friends. Please take time while you are here to enjoy our beautiful campus and explore some of the attractions that Florida has to offer.

Chimay J. Anumba

David Hulse
*Director, Florida
Institute for Built
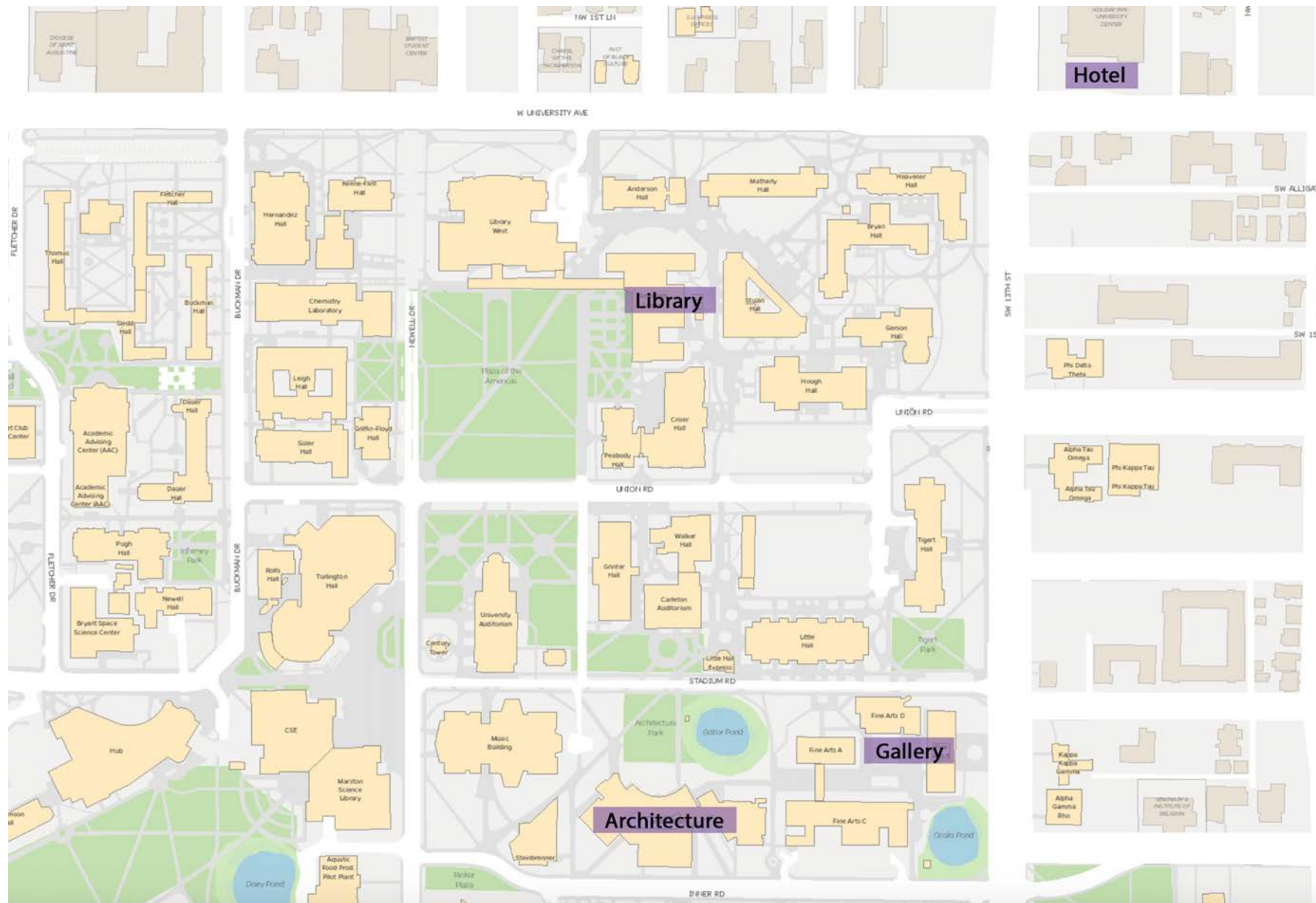Environment Resilience*

Dear i-REC 2019 Attendees,

Welcome to Gainesville and the University of Florida. As a recent arrival to this area myself, I hope you'll enjoy the warmth and hospitality of the people, and the diversity of local cuisine as much as I have.

The Conference Organizers have created a rich set of opportunities to interact with global partners by bringing together experts on contemporary research and practice in disaster reconstruction and recovery, and our new Florida Institute for Built Environment Resilience (FIBER) is proud to be involved. With a mission to advance knowledge of resilience and empower people to thrive in a complex and changing world, the faculty, post-docs and students of FIBER look forward to the discussions, collaborations, and new knowledge to come.

Again, on behalf of FIBER, welcome to Gainesville, and enjoy the Conference.

Finding your way around i-Rec 2019

Wednesday 5th June, 2019

Time	
1:00pm - 5:00pm	Pre-conference research networking meetings (by invitation)
5:00pm - 7:00pm	**Registration** **Location: Foyer, Holiday Inn**
7:30pm - 9:30pm	**Conference Welcome Reception & Registration** **Location: Holiday Inn**

Thursday 6th June, 2019

Time		
8:00am - 9:00am	**Registration** **Location: UF CAMPUS Smathers Library**	
	Conference Opening & Plenary I **Location: UF CAMPUS Smathers Library Room 100**	
9:00am - 9:20am	**Welcome** from Conference Chairs, *Chimay Anumba* (Dean of College of Design, Construction and Planning) and *David Hulse* (Director of Florida Institute for Built Environment Resilience)	
9:20am - 9:40am	**Keynote Speaker**, *Anita Anantharam*, Center for Gender, Sexualities, and Women's Studies Research, University of Florida	
9:40am - 10:30am	**Getting to know disaster scientists** facilitated by *Jason von Meding and Ksenia Chmutina* (hosts of Disasters: Deconstructed Podcast) Featuring: *Sandeeka Mannakkara* *Aaron Opdyke* *Diana Contreras* *Thomas Johnson*	
10:30am - 11:00am	**Morning Tea** **Location: UF CAMPUS Architecture Building (Room 310)**	
11:00am - 12:30pm	**PARALLEL SESSIONS** **Location: UF CAMPUS Architecture Building**	
	Marginalization, access and disrupted lives **Location: Architecture Building - Room 312** Chairs: Gonzalo Lizarralde & Wesley Cheek	**Transforming the places we live in** **Location: Architecture Building - Room 314** Chairs: Mittul Vahanvati & Giuseppe Forino
	Disrupting Slow Disasters of Abandonment in Semiaquatic Territories: (In) Visibilization Strategies around De/Colonial Delinking? *Johannes Waldmueller*	Temporary Shelter in Slums: A roof for my country *Mirian Sayuri Vaccari, Mohammad Mojtahedi and Martin Loosemore*

	Resilient and Equal: a community built through education *José Rubens Morato Leite and Valeriana Augusta Broetto*	**Considering the potential health risks related to South Africa's informal backyard rentals for future research and policy** *Louis Lategan, Markus Zietsman, Shayne Erasmus, Juanee Cilliers, Mario Wolf and Christian Springer*
	Disaster Management and the "Whole Community" Approach in the US: Assessing Local Government Preparedness Efforts around Community Needs for Language Access Services *Tianyi Xiang, Brian J. Gerber and Fengxiu Zhang*	**We said, they said: Disconnected narratives in disaster risk reduction in Colombia** *Gonzalo Lizarralde, Benjamin Herazo, Lisa Bornstein and Adriana Lopez*
	Life on the banks of risk: Who cares and Why care? *Emmanuel Raju*	**Urban water management practices of Khulna city: Hydro-Social contact for transformation towards Water Sensitive Cities** *Rumana Asad, Jason Von Meding and Iftekhar Ahmed*
	Who benefits from calling disasters 'natural', and why are academics doing it? *Terry Cannon*	**Post-earthquake L'Aquila: birth of a smart city. A destroyed city, or a «do-as-you-wish» city** *Isabella Tomassi*
12:30pm - 1:30pm	**Lunch** **Location: UF CAMPUS Architecture Building - Room 310**	
12:30pm - 1:30pm	**Lunchtime Discussion** **Location: Architecture Building Room 314** Facilitated by *Ksenia Chmutina and Jason Von Meding* **Lost in Translation? Decolonizing disaster terminology** We invite participants to explore meanings and definitions of terms that are commonly used in disaster discourses and discuss what can go wrong when we work outside of the English language and beyond a Western context of development.	
	Plenary Session II **Location: UF CAMPUS Smathers Library Room 100**	
1:30pm - 1:40pm	**Reporting on morning parallel sessions**: *Session chairs, 5 minutes each*	
1:40pm - 2:00pm	**Keynote Speaker**: *Bruce Gagnon*, Veterans for Peace	
2:00pm - 3:00pm	**RADIX (Radical Interpretations of Disaster) Panel Discussion: Understanding Disaster Risk Creation** Facilitated by *Terry Cannon* Featuring: *Ksenia Chmutina* *Anthony Oliver-Smith* *Isabella Tomassi* The goal of the session is to highlight the importance of understanding political, economic and social causation of disasters linked to natural hazards, and how people's vulnerability is generated through the operation of systems of power relating to class, gender, ethnicity, sexuality, age and (dis)ability. This is again vital, as there are significant reversions to the phrase "natural disasters" among donors and international agencies, and even many academics.	

3:00pm - 3:30pm	**Afternoon Tea** **Location: UF CAMPUS Architecture Building - Room 310**
3:30pm - 5:00pm	**PARALLEL SESSIONS** **Location: UF CAMPUS Architecture Building**

	Restoration and recovery of place **Location: Architecture Building Room 312** Chairs: Jo Rose & Yusuf Haji	The economics of disaster risk **Location: Architecture Building Room 314** Chairs: Lisa Bornstein & Thomas Johnson
	Reviewing Housing Reconstruction Frameworks: Stages, Scales and Dimensions *Mittul Vahanvati and Aaron Opdyke*	Approaching a disaster capitalism index: Post-disaster processes in Chile *Vicente Sandoval, Claudia Gonzalez-Muzzio, Carlos Villalobos, Juan Pablo Sarmiento and Gabriela Hoberman*
	8 Years of Displacement: Evacuation and Recovery Processes for People from Fukushima Since the 2011 Great East Japan Earthquake, Tsunami, and Nuclear Meltdown *Elizabeth Maly*	Disaster risk management and international trade *Hugo Cahueñas*
	Understanding the role of knowledge sources in housing self-recovery processes in the Philippines *Eefje Hendriks and Aaron Opdyke*	The New Silk Road: toward large-scale disaster risk creation? A case study of SEZs in Vietnam *Giuseppe Forino, Hang Thai, Jason von Meding, Nga Duong, Hai Nam Dao*
	Big data, Complex Science… But How do we Tell the Story? *Jeff Carney*	Risk Creation in the Privatization of Housing and Sheltering solutions for Refugees *Faten Kikano and Gonzalo Lizarralde*
	Rebuilding streets or rebuilding emergencies? Reflections on public open spaces and urban vulnerability to earthquakes *Monia Del Pinto, Ksenia Chmutina, Lee Bosher and Falli Palaiologou*	

6:00pm	**Shuttles to Conference Dinner from Holiday Inn (1250 West University Ave)**
6:30pm - 10:00pm	**Conference Dinner** **Location: Florida Museum (3215 Hull Road)**

	Friday 7th June, 2019
8:00am - 8:45am	**Registration** **Location: UF CAMPUS Smathers Library**
	Plenary Session III **Location: UF CAMPUS Smathers Library Room 100**
8:45am - 8:55am	**Reporting on Thursday afternoon parallel sessions**: *Session chairs, 5 minutes each*
8:55am - 9:15am	**Keynote Speaker**, *Heidi Harmon*, Mayor of San Luis Obispo, CA

Time		
9:15am - 9:30am	**Poetry reading**, *Isabella Tomassi*	
9:30am - 10:30am	**JUST-SIDE Network - Bridging Law, Territorial Justice and Spatial Data in Tackling Socio-environmental Vulnerabilities in Brazil** Facilitated by *Larissa Verri Boratti* A case study of disaster, climate change, urban-environmental policies and the exposure to disaster risks in Florianopolis, Brazil *Fernanda de Salles Cavedon Capdeville, Larissa Verri Boratti, Heidi Michalski Ribeiro, Valeriana Augusta Broetto, Tônia Andrea Dutra Horbatiuk, Marina Demaria Venâncio, José Rubens Morato Leite, Kaliu Teixeira, Eduarda Muccini, Leatrice Faraco Daros* Public management as a risk causator in Brazilian metropolis: the case of Florian*ópolis* *Jose Silva and Jose Leite* Social and environmental injustices against indigenous peoples: the Belo Monte Dam case *Heidi Michalski Ribeiro and José Rubens Morato Leite*	
10:30am - 11:00am	**Morning Tea** **Location: UF CAMPUS Architecture Building - Room 310**	
11:00am - 12:30pm	**PARALLEL SESSIONS** **Location: UF CAMPUS Architecture Building**	
	Approaches to embed knowledge in practice **Location: Architecture Building Room 312** Chairs: Emmanuel Raju & David Hulse	**Communicating differently about risk** **Location: Architecture Building Room 314** Chairs: Ksenia Chmutina and Jason von Meding
	Improving disaster resilience through effective building code compliance *Amarachukwu Nwadike, Suzanne Wilkinson and Charles Clifton*	In this session we will discuss writing sci-comm and op-ed, communicating to various audiences, eliminating jargon, telling stories, connecting with readers Authors featured in i-Rec magazine: *Thomas Johnson Jason Von Meding Monia Del Pinto Ksenia Chmutina Lee Bosher* and special guests *Ann Christiano and Annie Niemand, Center for Public Interest Communications*
	Integrated Viewpoint for housing recovery program by categorizing of public housing provision after disaster *Kenji Koshiyama*	
	Participatory Assessment of Seismic Risk and Resilience in San Jose, Costa Rica *Diana Contreras, Mabe Villar-Vega, Lorena Romero, Douglas Salgado and Rolando Castillo*	
	A Collaborative Approach towards Building Resilience: Developing an Inter-City Resilience Network *Elrasheid Elkhidir, Sandeeka Mannakkara and Suzanne Wilkinson*	
	WASH in a war zone: a model for a sustainable water, sanitation and hygiene system in a protracted conflict *Jo Rose and Yusuf Haji*	
12:30pm - 1:30pm	**Lunch** **Location: UF CAMPUS Architecture Building - Room 310**	

	Plenary Session IV **Location: UF CAMPUS Smathers Library Room 100**
1:30pm - 1:40pm	**Reporting on Friday morning parallel sessions:** *Session chairs, 5 minutes each*
1:40pm - 2:00pm	**Keynote Speaker,** *José Rubens Morato Leite*, Federal University of Santa Catarina, Brazil
2:00pm - 3:00pm	**9th i-Rec student competition - IATROGENESIS** Judging panel discussion and results
3:00pm - 3:30pm	**Afternoon Tea** **Location: UF CAMPUS Architecture Building - Room 310**
3:30pm - 5:00pm	**PARALLEL SESSIONS** **Location: UF CAMPUS Architecture Building**

Impacts and methods of participation **Location: Architecture Building - Room 312** Chairs: Lee Bosher & Sandeeka Mannakkara	Resisting risk creation in development **Location: Architecture Building - Room 314** Chairs: Isabella Tomassi & Gonzalo Lizarralde
Participatory Mitigation Actions due to Seismic Hazard in Roads and Transportation Systems *Diana Contreras*	Investigation of the effect of Sponge City Concept in reducing urban flood inundation reduction in an urban area of China - Shanghai as a case study of the Sponge City Program *Shuxian Feng and Yamamoto Toshiya*
The Paradox of Community Involvement: Rebuilding Minamisanriku *Wesley Cheek*	Urban shrinkage and sprawl after disasters : Fragmented cities following the Great East Japan Earthquake and Tsunami *Tamiyo Kondo*
Localisation - A tool for vulnerability reduction *Oluwadunsin Ajulo, Jason Von-Meding and Patrick Tang*	A South African perspective: The inclusion of Disaster Risk Management as part of Spatial Planning education *Zinea Huston, Elizelle Juaneé Cilliers and Louis Lategan*
Effect of Affected People's Lifestyle and The Formation of Post-Disaster Human Settlements *Haleh Mehdipour*	Unpacking disaster politics in Italy: ten years of recovery after four major earthquakes (2009-2019) *Sara Bonati, Giuseppe Forino and Gianmaria Valent*
Evaluating Risk from a Holistic Perspective to Understand Risk Creation: A Methodological Approach at Global Level *Mabel Cristina Marulanda, Omar Dario Cardona, Paula Marulanda and Martha Liliana Carreño*	Environmental crisis: towards an integrated approach *Jose Silva*

	Conference Wrap Up **Location: UF CAMPUS Fine Arts Gallery**
5:00pm - 5:30pm	**Reporting on Friday afternoon sessions, closing comments, awards, opening of photography exhibition, invitation to film night and Saturday excursion**

5:30pm - 6:30pm	**Opening of i-Rec Photography Exhibition** Curated by *Lee Bosher, Jason von Meding and Ksenia Chmutina*
6:30pm - 8:00pm	**Dinner break**
8:00pm - 10:00pm	**Film Night** A collaboration with Cinema Verde (environmental film festival), featuring i-Rec participants and other filmmakers **Location: Holiday Inn Pool Deck**

Saturday 8th June, 2019	
7:45 - 8:00am	**Depart Holiday Inn for High Springs**
8.30am - 10:00am	Breakfast in High Springs
10:00am - 12:00pm	Historic Tour
12:00pm - 1:00pm	**Lunch at Ichetucknee Springs**
1:00pm - 5:00pm	Leisure Activities, Ichetucknee Springs (tubing) & Gilchrist Blue Springs State Park
5:00pm - 5:30pm	**Return to Holiday Inn**

Post-colonial Resiliences

British colonial legacies and Disaster Risk Reduction in the Caribbean

Dan Sage, Chris Zebrowski and Ksenia Chmutina
Loughborough University

In September 2017, the Caribbean was hit by some of the most ferocious Category 5 hurricanes the region has ever seen. Amongst those most affected by Hurricanes Irma and Maria were the British Overseas Territories (BOT) of Anguilla, the British Virgin Islands and the Turks and Caicos Islands. In the weeks that followed, the British response to the disaster was heavily criticised for being both slow and under-resourced. With Brexit renewing conversations about the contemporary relationship between the UK, the Commonwealth and its overseas territories, such events throw into sharp relief how colonialism and imperialism continue to have important implications for contemporary Disaster Risk Management (DRM) in the Caribbean and beyond.

As the site of the first European landing in the Americas in 1492, the Caribbean quickly became a vital arena to sustain and protect colonial circulations of goods, money and slaves from across the world. From the 16th to the 19th century, up to 5 million African slaves were estimated to have been transported into the Caribbean, with almost half of these sent to British territorial possessions. Although slavery was abolished in these territories in the 1830s, descendants of slaves long remained indebted to undertake low wage agricultural labour for mostly white landowners. Social inequalities and injustices fuelled independence movements across many British territories

from the 1960s to 1980s – yet several islands, and over 140,000 Caribbean people, remain to this day located in British Overseas Territories: Anguilla, British Virgin Islands, Cayman Islands, Montserrat and Turks and Caicos Islands.

Take, for instance, Anguilla, the oldest British Caribbean territory that resisted becoming part of newly independent state of St Kitts and Nevis in the early 1980s. Anguilla's economy is dominated by luxury tourism, offshore banking, and fishing. And yet, despite its status as a tax haven for over 3,000 offshore corporations – as revealed by the Panama Papers – when Hurricane Irma's 185mph winds hit Anguilla, about a

quarter of the population were living below the poverty line and on a GDP per capita of less than half that of St Kitts and Nevis. Although only one death was reported, Hurricane Irma damaged 90% of government buildings and infrastructure, including the only ferry port, desalination plant and island hospital. Repairs exceeded the annual £200m government budget, and the UK government provided access to loans and aid. Much of the aid was spent on deploying two Royal Navy vessels, 2000 military personnel and emergency provisions. However, the scale and slowness of this response was criticised, especially in comparison to other nearby European territories. Dorothy Hodge, the former UK representative to Anguilla, described the response as 'pathetic' and 'disgraceful'.

After Irma, the Government of Anguilla published a White Paper protesting to the UK government about its repeated refusal to support investment in more resilient and self-dependent infrastructure; longstanding lack of support to assist efforts to diversify the economy (away from tourism); tendency to encourage debt dependant recovery and reconstruction (despite a previous bar on debt for capital projects); and the lack of local input into UK aid and grant decisions. Although the White Paper only refers to slavery and colonialism once, with reference to the need to ensure equality for all Anguillans, it is surely impossible to understand these vulnerabilities without reading them alongside the historical context of Caribbean colonial dependency.

A local population descended from slaves is here protesting about how they experience increased vulnerability to disasters because of the island's role in not only sustaining, but protecting, flows of goods and capital that largely benefit European political and economic elites, whether to enjoy tax avoidance or luxury holidays. A few months after the Hurricane, tourist websites showcase Anguilla's 'almost complete recovery', pointing to the reconstruction of luxury villas. But whose resilience does this demonstrate? More critical discussion inside and outside academia is needed on how and why the resilience of (neo)colonial capital and, largely White, consumers effaces the resilience of local populations.

As Anguilla demonstrates, contemporary Caribbean vulnerabilities to disasters are the product of long historical processes of exploration, invasion, conquest and colonisation that subsequently provided the structure for contemporary structures of governance, social hierarchies and models of economic development. In this context, policies of development and disaster risk reduction need to incorporate the complex causes of vulnerability on these islands, or risk exacerbating inequalities, or even reproducing colonial era patterns of displacement, dependency and disadvantage – thus reproducing vulnerabilities. However, evidence in Caribbean DRM suggests a challenging picture: Caribbean countries are overrepresented amongst the top 50 riskiest

places in the world and the frequency and intensity of climate-induced hazards that affect the Caribbean are only set to increase. With climate-related disasters swiftly becoming a 'new normal' in the Caribbean, a better appreciation of the interplay between (post-)colonial studies and disaster studies is desperately required. The hurricanes that devastated Puerto Rico in recent years were followed by a series of excellent articles situating Puerto's Rico's vulnerabilities to such events within historical and contemporary policies of US imperialism.

Subsequent conversations have also sought to discuss the status of US overseas territories as revealed by these events. But despite the historical legacy of British colonialism and renewed interest in the Commonwealth associated with Brexit, there has been scarce academic research or journalism into BOTs. In order for DRM to be effective in the Caribbean, there is an urgent need for the research that not only assesses efficacy and progress, but also how historical legacies (including colonialism) continue to shape the operating context. At the same time, research should be attentive to the different ways in which resilience is manifest (across social, cultural or religious spheres) to complement or compensate for weak state structures. The BOTs of the Caribbean thus appear as a fascinating and important empirical site for understanding the complexities of DRM in the contemporary world.

CAPITALISM, COLONIALISM, CRISIS AND CARE:

THE RESPONSE OF HEALTH CARE WORKERS AFTER HURRICANE MARIA

Skye Niles, University of Colorado Boulder
Santina Contreras, The Ohio State University

Crisis and care

In our study, we wanted to understand how health care workers responded to the crisis in the face of weak government support and widespread damage to key social services and health care infrastructure. We interviewed health care workers, including doctors, medical outreach workers, and medical directors, to find out what kinds of challenges they faced after Hurricane Maria, what actions they took to provide health care to communities in need, and what strengths they drew upon to face the immense challenges after the hurricane.

We found that the political and economic factors that contributed to the crisis also shaped the kinds of challenges health care workers faced and the strategies that they used to address these difficulties. Health care organizations formed private, non-profit, and community partnerships rather than rely on federal government support, conducted long-term medical outreach to reach isolated people and medically underserved communities, and provided free medical and non-medical services for months after the storm.

Private, non-profit, and community partnerships

Facing deficiencies in government support and disaster relief, health care organizations made private, non-profit, and community partnerships to respond to the health care needs of local communities. The majority of organizations had to wait weeks for support from FEMA to receive support such as generators to power their clinics, and even though health facilities were prioritized in terms of restoring electric grid power, it was sometimes months before power was restored.

Several organizations made direct contracts with local gas stations to secure diesel fuel for their generators to continue to power their clinics. Other clinics were able to partner with non-profit and private organizations to get solar panels and generators donated. In one case, the health care organization waited months to receive a regular supply of water at their clinic and emergency room, and could only continue operations by hiring trucks to bring in water in tanks.

Medicines were also in short supply, so many organizations relied upon non-profits to keep adequate medical supplies on hand. Unable to receive timely help from the government, one organization coordinated directly with private pilots to fly medicines from the United States to their clinic. Health organizations creatively mobilized existing support networks and forged new partnerships in order to provide their clinics with necessary medical supplies and power, so they could continue to provide health care services.

Long-term outreach

The majority of the health care workers and organizations that we interviewed engaged in long-term outreach to communities after the hurricane. Even prior to Hurricane Maria's landfall, there were many medically underserved areas in Puerto Rico, and these service gaps were made worse as many clinics were damaged and forced to close after the hurricane. As a result, many people lacked access to urgent medical care as well as regular preventative care and medications for conditions such as high blood pressure and diabetes. Furthermore, many health care workers discussed how social support networks were disrupted due to migration and displacement from both the hurricane and Puerto Rico's financial crisis, contributing to social isolation.

In response, health care workers organized long-term outreach missions to isolated communities lacking access to medical
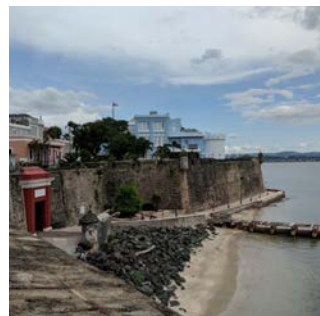
clinics. The majority of health care organizations we spoke with engaged in door-to-door outreach to provide medical care to people who were isolated and home-bound. Some health organizations used all-terrain vehicles in order to reach remote areas that were isolated due to damages to roads, providing medical evaluations, medicines, and psychological care as need both in community centers and in people's homes.

These outreach activities continued for many months after the hurricane, as people continued to wait for basic services such as power and water to be restored, roads, to be repaired, and federal disaster relief funds to be distributed. Because of the high rates of poverty in Puerto Rico, lack of social safety nets, and slow dispersal of disaster relief funds, many health care organizations provided free services to communities after the hurricane. This support included both medical and non-medical needs.

Unmasking problems

Our research brings attention to how health care providers provided care after the storm in response not only to Hurricane Maria but to decades of colonial rule and extractive capitalist policies. Several of our interview respondents commented on how Hurricane Maria "desenmascaró" ("unmasked") the poverty and deep challenges of Puerto Rico. As Puerto Rico continues to rebuild and recover, the actions of health care workers provide testimony to the need for a critical look at how colonialism and neoliberal capitalism affected the crisis in Puerto Rico. The hurricane revealed the need to address the unequal treatment of Puerto Rico, its colonial status, and the urgency for investment in social services, community development, greater social safety nets, and increased political power.

* this article has been shortened for print - fuill version at irec2019.org *

I-REC 2019 PHOTOGRAPHY EXHIBITION
Perspectives of Disaster Risk

Opens 7th June

Curated by:

Lee Bosher
Loughborough University

Ksenia Chmutina
Loughborough University

Jason von Meding
University of Florida

Researchers and practitioners often compose photographs related to their work in disaster risk reduction. We had the idea to use this unique conference to showcase some of the most striking images generated by the i-Rec community.

The main theme of the conference is to 'disrupt the status quo' – a status quo exemplified by the typically emotive imagery used in the media that focuses on disasters as "events" and the resulting impacts. We envisaged an exhibition that went beyond this superficial layer of story, visually and conceptually.

We are humbled and ever so excited by the response to our call for entries. The exhibition showcases 39 photographs from 18 photographers based all over the world.

As you will see, the collection highlights the often subtler deep rooted issues that lead to disasters – e.g. how disaster risk is created, the tensions between development and environmental fragility, and the legacies of poorly conceived post-disaster reconstruction.

Not only do they illustrate how the creation of risk appears to have become inevitable within our current political, economic and societal systems, but they capture the community solidarity and hope that is the essence of those challenging systemic injustice.

Each photographer has contributed a thought-provoking 100 word narrative to accompany each photograph. Please take the time to learn about the story behind the image.

Thank you all so much for your support and participation. See you at the exhibition launch!

Lee, Ksenia and Jason

The i-Rec 2019 Photography
Exhibition will open on the
evening of June 7th, in the
Fine Arts Gallery.

*The full collection and the
accompanying narratives from
photographers are not to be
missed!*

"A Comedy of Errors"

An Environmental Metaphor
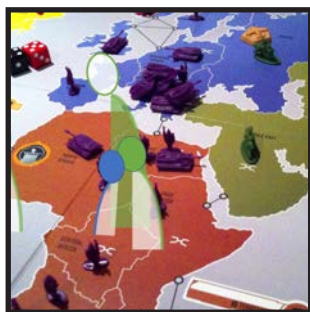
By Elisabeth Marlow, Ksenia Chmutina and Andrew Dainty

Photo sources: https://bit.ly/2HhIWCt and https://bit.ly/2vVnrRl

This is a story about a couple (*Policy* and *Practice* (wife) of the Environment) with two sets of male identical twins: *Sustainability (policy, practice*) and a younger 'servant' pair- *Resilience (policy, practice)*. The family gets separated on their way to New York City after getting hit by a storm. As they cling to their boat wreck, the parents drift apart. *Policy* saves *Sustainability practice* and *Resilience policy,* and *Practice* saves *Resilience practice* and *Sustainability policy. Policy* returns home, vowing to find *Practice*.

He spends several decades searching and returns to NYC for one final try – this time with the now grown-up *Sustainability practice and Resilience policy.* The King's (US President's) laws are aggressive towards migrants but upon hearing *Policy's* story the King grants him a day to find *Practice* with the assistance of the Mayor (NYC Mayors office).

Meanwhile, *Policy's* twin starts an independent search and unknowingly meet *Practice's* twins separately in as they search for one another. The play pursues these cases of mistaken identity. *Resilience practice* has become the more dominant twin, with a successful business and little time to listen to the mistaken twin, *Sustainability policy,* who tries to explain that he is not *Sustainability practice*.

With his search time nearly over, *Policy* has not still not found *Practice* and is about to be cast adrift by the Mayor when a reunited *Sustainability practice* and *Resilience policy* come to his rescue and are able to unite the family!

This is a familiar experience to many of those who are trying to understand and adopt resilience and sustainability today.

Family History

Five decades of modern environmental knowledge exists. America's Modern Environmental Movement was mobilised by knowledge on population, ecology and events of the time: Nuclear testing at Bikini Atoll and the Lucky Dragon Oil Disaster. The combination of environmental knowledge, disaster and practice action led to the enactments of the Clean Air Act, Clean Water Act and NEPA, and eventually by 1993 the focus shifted onto the built environment practice which created Leadership in Energy and Environmental Design (LEED) and formed the US Green Building Council to create more environmentally responsible buildings.

The Separation

NYC's sustainability policies and Mayor Bloomberg gained prominence through Clinton's Climate Initiative (CCI) involvement in C40 Cities. Then two events occurred in close succession: '9/11' and Storm Sandy. NYC found itself having to tackle natural hazards and human threats at once. The impact shifted the focus from sustainability to resilience. The 100 Resilient Cities Competition aimed at 'building resilience' in urban environments was launched and there was a change of governance leadership.

The rise of Resilience Practice

This shift between policy and practice is common; NYC decision making practice reflects that global governance manages resilience and sustainability separately. C40 Cities report on how city mayors collaborate to enforce carbon emission reduction policies, and city resilience frameworks rate risk.

This global position on policy creates funding streams for local governance so that it is increasingly difficult to manage climate change policies, sustainability practice and generate resilience together. In NYC - despite its overarching One NYC plan - decisions are made between two separate Mayoral Offices: Sustainability and 'Recovery and Resiliency'.

Until recently FEMA funding streams targeted flooding and recovery, but funds are being increasingly restricted as federal policy has shifted. This begs the question: did resilience come to prominence due to disaster events and recovery funding? As Resilience funding increases, there has also been a need for it to become accountable and outcomes more measureable. This surge for measurement frameworks in practice starts to support a position that resilience has become too complex for quantification. Insurance costs and recovery from 'disaster' is also getting more expensive, so planning for prevention needs more consideration - hence measuring 'risk' in cities.

Mistaken Identities

NYC practice argues that design practice is confined by their contract 'scope of works' (and scale of impact within that contract) and mnemonic practice of legalities, emphasising the need to be more trans-sectional. This argument evolved from the 1990s with the Egan and Latham Report. This means more team working with less silos and more team responsibility from the outset to solve problems about risk and resilience to promote 'systems' thinking'.

Sustainability has often been perceived as expensive because the costs keep of the innovation that will help getting beyond the targets and reducing costs is constantly increasing. Built environment codes of practice are considered 'out of date' or not enforced correctly. Most documentation is focused on management of water and energy targets - but not sustainable practice.

In this context resilience is about building safety and managing flood risk, while sustainability is about energy use and power infrastructure. Neither has anything to do with a broader sustainable development agenda. Funding created from city tax revenues places sustainability and resilience in conflict with each other because of institutional budgetary concerns and agendas.

Family Reconnection?

Today's the real risk to sustainable development and resilient cities is being created by political jurisdiction, mnemonic decision making of design and planning codes of practice and little relationship between knowledge and practice – and this in itself is a disaster. The interplay between resilience and sustainability is reminiscent of Samuel Hays' description of the conversations between John Muir and Gifford Pinchot about 'conservation' and 'preservation' in the book 'A history of environmental politics since 1945'.

Is it time to simplify and unite the *Sustainability and Resilience* twins to address the SDGs through everyday convergence of policy and practice?, Can we use existing systems to work better together, override poor decision making and reduce the fracturing identities of both concepts?

In *A Comedy of Errors*, this case of mistaken identities in the Environment family was resolved. They were reunited and lived happily ever after. Can we learn from their story? After all, Greta Thunberg's generation demands change.

Striving for Adequate Shelter in Cox's Bazar

Thomas Johnson, University of Newcastle
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Everybody has the right to adequate housing. It is recognised in international legal instruments, and includes the right to live in peace and dignity, with security of tenure. But in places like Cox's Bazar region, where more than 900,000 Rohingya refugees reside, this right is not being met.

And this leads to all sorts of problems for those denied. Without adequate housing, residents are at a higher risk to structural hazards, disease vectors, harassment and extreme weather. Additionally, psychological harm can result from culturally inappropriate housing or living situations that compromise the dignity of occupants.

Admittedly, achieving the right to adequate housing is inherently difficult when populations are unsettled (displaced temporarily or permanently) due to disasters, conflict or other upheaval. Often, those affected are left in uncertain and protracted living arrangements. This period of uncertainty often demands transitional shelter solutions.

Quality shelter in transition is always difficult to achieve. Why is this?

Adequacy as defined in SPHERE and other guidelines

An intractable question continues to be, "how do we determine what is adequate?" Chapter 4 of the Sphere Handbook sets out minimum standards for shelter - including obvious requirements, such as protection from heat, cold, rain, wind - and other threats to health such as the structural hazard of the building itself and disease vectors like rodents or parasites. But it also includes access to safe drinking water, energy for cooking, sanitation and washing facilities, site drainage and emergency services.

The Sphere Handbook includes guidelines on site planning for settlements. Perhaps most relevant to the Cox's Bazaar context, the guidelines include a minimum surface area of 45m2 per person to ensure there is space for necessary roads, firebreaks, water storage, sanitation facilities etc. According to Sphere, an adequate shelter should offer a covered floor area of at least 3.5m2 per person. The design should also be capable of withstanding the wind-loading of known climatic conditions.

Other guidelines published by the International Organization for Migration (IOM) and the United Nations High Commissioner for Refugees (UNHCR) do not quantify minimum standards. However, they similarly highlight the

importance of the achieving adequacy in the areas of access, risk, durability, site size, sustainability and cultural appropriateness.

In Cox's Bazar - and unfortunately in many transitional shelter contexts - such minimum standards are unattainable. This is due to complex local conditions such as the availability of suitable land, availability of material and labour, government restrictions, lack of funding or time pressures.

Is shelter for refugees and local residents in Cox's Bazar "adequate"?
In the context of the Rohingya Refugee Crisis in Ukhia and Teknaf, Bangladesh, it is exceptionally difficult to meet such standards for adequacy. The dilemma is so pressing that humanitarian organisations, in an effort to meet a desperate shelter deficit, must consider redefining "adequate shelter" in the specific context.

Bangladesh is one of the most densely populated countries in the world. With the recent influx of over 700,000 refugees, suitable land was hard to come by. The mega camps of Ukhia and Teknaf are situated in what was once a hilly forest. Most of the vegetation in the area has been stripped and many areas of the camps are situated on hazardous slopes with a gradient greater than the 6% guideline.

The land available in the camps simply does not allow for the recommended 45m2 per person, while the covered area in the shelter rarely meets the 3.5m2 per person guideline. These issues also persist outside of the camps, with many permanent residents falling below such minimum standards.

On top of this, organisations have to consider government restrictions, limited suitable construction material and lack of skilled labour. Trying to balance these considerations makes it nearly impossible to construct shelter that can withstand the average maximum wind speeds that arrive with monsoon and cyclone seasons.

In 2015, 2016 and 2017 the recorded wind gust speeds in the region reached 148, 130 and 65 km/h respectively. The bamboo and tarpaulin shelters in the refugee camps of Teknaf and Ukhia are estimated to resist wind gust speeds of 40km/h.

In 2019 the transitional shelter within the refugee camps will be upgraded with the distribution of tie down kits and wall bracing kits, this is expected to increase the wind resistance to 60 km/h. With this wind speed being exceeded in three of the last four years, can it be considered adequate?

Problems run deeper
Many at-risk occupants consider whatever shelter they may have to be adequate as long as it provides an immediate sense of

privacy and protection. But this may still fall well short of meeting minimum standards.

Forcibly displaced populations, and those on whom loss of home has otherwise been inflicted, suffer psychological injury. This can influence some towards risk averse and short sighted decision-making. Long-term and profitable options may not seem feasible and attainable for those in desperate need. Decisions relating to the improvement of shelter, such as increasing the durability of the building, are not likely to have a tangible impact in the short-term.

We can't simply keep redefining adequacy depending on what is achievable. Adequate shelter should be a sacrosanct human right, and redefining adequacy undermines this right. Affected populations may, in desperate times, accept shelter solutions that are not conducive to wellbeing.

But this cannot be used as an excuse to ignore the structural reasons that society does not find a way to provide adequate shelter for all - whether displaced or not. In Cox's Bazar and in many communities hosting displaced people, many local residents do not meet minimum standards either. Ultimately, a lack of adequate shelter is about spiraling global inequality. This is therefore an ethical and moral dilemma for us all.

Postemergency punk

by:

Isabella Tomassi
ENS de Lyon

Emigrante in fuga da itaca distrutta
all'avventura ero partita
alla conquista della conoscenza
eterna praticante dell'arte del bagaglio
diventato fagotto, diventato ricordo
                        minuzioso
preso a casaccio, selezionato
dalla mente presente
in punta di piedi
tra il prima e il dopo
portato dalla magnifica
schiuma di una parola ritrovata,
pesca fruttuosa.

L'hanno presa i porci
la mia Aquila e i suoi
castelli intorno,
i campi di fagioli, le terre montagnose;
i crolli hanno mostrato
le sue vergogne:
i tribali accoppiamenti con
il Signore, quello che salva
con miracoli inauditi
e quello che da sempre
educa ad accettare le
paure sconvolte di una
società che non ragiona
sul fare comune.
L'analisi ferma alla propaganda,
la complessità reducta ad
unam ovvero la grettezza
al potere! I soliti vecchi
a promettere un futuro
che non vedranno.
Contraffare la realtà come fosse la somma
delle necessità
così, fare la propria casa

è la sfida di chi osa
il semplice coltivare
di chi finora ha imparato
ad accumulare, senza
dissipare le voci
cantanti dei cinesi,
la révolution dei francesi
di tutto un po', mattoni
d'ogni genere sfidando il cantico egocentrico
delle sirene e la loro
voglia di trattenerci
irretiti nel sogno
fuori misura di una
pace persi
in altura.
Al rientro Penelope aveva
finito la sua tela
Argo perso la sua fede
tutti gli odissei dispersi,
allora, hanno cambiato
il logos del loro viaggio
che non è più un attracco
né
una locuzione ma una
ricostruzione.

L'angoscia dell'impossibile
ritorno, del silenzio profondo
e proprio in quel baccano
far rinascere il grano
col pane che gli gonfia il petto
i crochi a tingere le prime gelate
senza contrattazione con i sassi
a parte il ripararsi in tholos
messi in vendita da miopi
sciacalli di spazi,
le radici nelle unghie

le rosee aurore tra le braccia
non ascoltare più alcuna minaccia
ma con qualunque corteccia fare breccia
nella feccia
e da lì in poi ritrovare le grotte strofinare la
sorte
sul culo del generale la mano morta, di nuovo
seri
senza varietà senza clown senza città.
In quest'isola termica il valore non è la
rendita
in quest'isola elettromagnetica il valore non è
la tecnica
in quest'isola geometrica il valore non è la
mimica
in quest'isola panica il valore è la mantica
in quest'isola segnica dò valore alla logica
in quest'isola agricola dò valore alla ritmica
ma su quest'isola già presa dalla camorra
ce la prenderemo con il primo che corra
tra le braccia di quei porci per le c.a.s.e.
senza pronunciare una frase, sin dalla prima
fase, occultando a sé stessi che quelli non
avrebbero comprato ciò che non fosse stato
messo al mercato: i direttori d'accademia
i paesani possidenti i cavatori conniventi i
dirigenti ammaestrati da sindaci rimbambiti
giù nella valle la tensione spezza i fili non
regge più i contesti s'insinua sotto le vesti e le
porteresti con te sotto gli ulivi nei tuoi ritiri
e chi dell'isola guardava i destini e ha creduto
ugualmente ha lasciato fare ciecamente?
Ritorno ad una domanda essenziale che
aveva spinto col maestrale come me e te sul
banale come te e me insieme sul mare.

Emigrants fleeing from destroyed Ithaca
I'd left for the adventure
for the conquest of knowledge
eternal practitioner of the art of luggage
become a bundle, become a memory
                                    meticulous
haphazardly selected
from the present mind
tiptoed
between before and after
brought by the magnificent
foam of a rediscovered word,
fruitful fishing.

The pigs took it
my Aquila and the
castles around him,
the bean fields, the mountainous lands;
the collapses showed
her shame:
the tribal pairings with
the Lord, the one who saves
with unheard miracles
and what has always
educated to accept the
shocked fears of a
society that does not reason
on common deeds.
Analysis stops to propaganda,
complexity reducta ad
unam or pettiness
to power! The typical oldies
promising a future
that they won't see.
Counterfeiting reality as if it were the sum of
necessity
so, make your own home

it's the challenge of those who dare
the simple cultivate
of those who have learned so far
to accumulate without
dispelling the chine's
voices singing,
the French révolution
a bit of everything, bricks
of every kind challenging the egocentric song
of the sirens and theirs
want to detain us
get caught up in the dream
out of size by one
peace lost
in high sea.
On the way back, Penelope had
finished her canvas
Argo lost his faith
all the odysseys scattered
then, they changed
the logos of their journey
which is no longer a docking
neither
a phrase but a
reconstruction.

The anguish of the impossible
return of profound silence
and just in that racket
to revive the grain
with the bread that swells his chest
the crocuses that dye the first frosts
without bargaining with stones
apart from sheltering in tholos
put on sale by short-sighted people
jackals of spaces,
the roots in the nails

the rosy auroras between arms
no longer hear any threat
but with any bark make a breach in the dregs
and from then on find the caves rub the lot
on the ass of the general the dead hand,
serious again
without variety without clowns without town..
On this thermal island the value is not rent
on this electromagnetic island the value is not
the technique
on this geometric island the value is not
mimicry
on this panic island the value is the divine
on this semantic island I give value to logic
on this agricultural island I give value to
rhythm
but on this island already taken by the
Camorra we will take it with the first to run
into the arms of those pigs for the c.a.s.e.
without pronouncing a phrase, from the
first phase, hiding from themselves that they
would not buy what had not been put on the
market: the academy directors the villagers
possessor the miners conniving the leaders
trained by mayors dumbed down the tension
in the valley breaks the threads no longer
holds the contexts creeps under your clothes
and you would take them with you under the
olive trees in your retreats
and who of the island looked at the destinies
and believed equally he left to do blindly?
Back to an essential question that had pushed
like mistral like me and you on the obvious
like you and me on the sea.

"Let's talk about Menstrual hygiene"

Charting recent discourse and action in South Asian culture and mass media

Sneha Krishnan
London School of Hygiene & Tropical Medicine

"Shh! Don't speak loudly, people will hear!"

"I cannot touch a jar of pickle when I am menstruating"

In 2019, "Period. End of Sentence", won the short documentary award at the Oscars. It follows the work of Muruganantham, known as Pad Man, who created a machine that makes affordable, biodegradable pads from locally sourced materials, helping girls and women gain independence and stay in education. Laughs, side looks and giggles ensue when we broach the subject of menstruation with adolescent girls and boys, sometimes even women's groups. The above quotes are commonplace in context of Eastern India, where I undertake these discussions. People are often not ready to talk about issues that concern the female species. When disasters impact communities, women's access to private spaces to tend to their menstrual hygiene needs are increasingly researched. There are several initiatives recently that are trying to address the issue of

menstrual hygiene, for instance a virtual conference on menstrual hygiene in schools, which are hardly in a position to be conducted and address emerging needs during and after disasters.

Ignoring menstrual management needs may not only impact their health but also their usual daily activities, including education, income and domestic duties. For instance, an inability to manage menstruation in schools due to inadequate toilet and bathing facilities is cited as one of the top reasons for girls' absenteeism, typically leading to them falling behind with their studies and eventually dropping out altogether.

We often discuss this with adult women, or young girls- what happens "un dino" or "those days", or "masik" during their "monthly" or recently discussed as "mahavari" or " monthly routine" by Indian actor Akshay Kumar in the well-acclaimed Hindi film, Padman.

It portrays the story of a small-town entrepreneur, who cares for and wants to make it easier for his wife to be comfortable on days she menstruates, however there were many criticisms against its portrayal of characters,

as well as sustainability of solutions offered. The challenge lies in going beyond providing sanitary napkins to these women. There are cultural taboos, beliefs and widespread myths that need to be tackled, besides looking for sustainable, environmental-friendly and low-cost options.

For instance, Government of Nepal banned chaupadi in 2005, and made it a criminal offence in 2017, an yet this social tradition – where menstruating women and girls in western Nepal are forced to sleep outside their house, often in a cowshed – persists and is magnified during disasters.

This portrayal of menstrual hygiene is strikingly absent in any discourse on non-feminist literature, we find all the women protagonists as non-menstruating: just like we never see them in a toilet. Erasure of this basic natural aspect of cis-gendered women's lives signifies the cultural exclusion and misogyny faced by the transgender and non-binary populations .

The problem with equating menstruation with womanhood is that it conflates biology with gender, which marginalizes trans and non-binary people. A recent study on disabled persons found that strategies

for menstrual hygiene management applied by carers of persons with intellectual impairments include limiting the disabled person's movements when menstruating and suppressing their menstruation. The evidence regarding what happens to these marginalised groups after disasters is rarely documented.

In her new book, The Managed Body: Developing Girls and Menstrual Health in the Global South, Chris Bobel who has over 20 years of experience researching menstrual health, tackles several myths on menstruation, literally from investigating where the statistics arrive from, to practices and products used, and beliefs that menstrual blood makes a girl unclean, that menstrual pain isn't as bad as women claim, and hence until we make menstruation neutral any changes and solutions offered will not be lasting.

Hence there is an urgent need to emerge out of the forced silences, discuss openly, and remove any stigma revolving menstruation and periods through constructively challenging social constructs and working with traditional and indigenous leaders to enable women and adolescent girls not suffer any negative consequences while menstruating.

Power, Prestige & Forgotten Values:

A Disaster Studies Manifesto

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We want to inspire and inform more respectful, reciprocal and genuine relationships between "local" and "external" researchers in disaster studies. This Manifesto calls for rethinking our research agendas, our methods and our allocation of resources.

We recognise that, while every researcher in our globalised system struggles with complicity and contradiction, the manifesto reflects principles that we as a collective aspire to. It is not by any means a claim of having achieved these objectives in our past work.

We, the undersigned, are committed to these principles and call others to join us in putting our words into action.

1. Our concerns

1.1 Disaster studies is *not always informed by local realities:* researchers are sometimes operating from a cultural deficit, and the everyday risk that people experience is ultimately inappropriately articulated.

1.2. Consequently, disaster studies often lead to 'discovery' that is the *common knowledge of people who live with risk.* At worst, this can become an intellectual conquest - research done ABOUT people experiencing risk, rather than BY, WITH and FOR them.

1.3 Methodologies are broadly embraced which were inspired by Enlightenment thinking and implemented by researchers from countries steeped in such traditions. *Even the language that we use* (today, mostly academic English), our prevailing narratives, our cultural lenses and the framing of our research problems rely heavily on Enlightenment origins as opposed to local and indigenous ontologies and epistemologies. These are well reflected in expectations of peer reviewers of proposals and publications.

1.4 The *impact and success of research is generally measured* based on the priorities of institutions valuing Enlightenment-type thinking including the agenda/values/reporting needs of similarly thinking funding agencies and donors.

1.5 The research agendas in disaster studies is too often driven by *fleeting institutional interest* in concepts, buzzwords, industry and political agendas that appear to present the greatest opportunities for research funding. In addition, mechanisms for funding tend to favour research proposals that serve a *neoliberal status quo,* promote interests outside of the local (studied) contexts and ultimately fall short scientifically and ethically.

1.6 Agendas are also formed by *foreign policy and development aid interests,* and often take the form of research grants that promote diplomatic and trade interests of donors irrespective of others' needs. Capacity building projects can be neo-colonial. There is a lack of resources available for research FOR and BY local people.

1.7 External "experts" taking the lead (and the credit) for researching "vulnerable" "others" is *widely normalized.* In such instances people who are subjected to these investigations and local researchers that should actually be leading such work are disempowered and patronised. This unhealthy approach is modelled by many experienced researchers, universities and donors.

1.8 Individual researchers are often motivated not only by funding opportunities, but also by the chance (and pressure) to develop and publish ostensibly unique findings in ostensibly high-impact journals - and *the perceived prestige that follows* - based on research of "the vulnerable", the exotic, the Other, who do not necessarily get to hear of the research outputs.

2. The future we want

2.1 We want disaster studies to *model respect for and trust in local researchers*, their knowledge and abilities, no matter where they come from. Those who are usually researched or who are currently used to assist outside researchers recognise that they can and should lead research and that their knowledge and skills are as valuable as those from other places in the world.

2.2 We want *local researchers to study their own localities at risk* and local disasters wherever they happen. Local researchers tend to know local contexts better than anyone else and thus should become principal investigators of any research project that deals with risks and disasters. They should lead academic and non-academic publications, both oral and written.

2.3 We want outside researchers to come and support locally-driven initiatives *only when needed.* When such collaboration is warranted, local researchers and/or local people must retain power in leadership and decision making, including through genuine participatory research led by people at risk where there is no local research capacity. Collaboration between local and outsider researchers should advantageously build on pre-existing partnerships and dialogue while seeking mutual interest in new partnerships and dialogue.

2.4 We want local research epistemologies and indigenous constructs of disasters to be central to our field, to better reflect diverse local realities. Local researchers should thus *value local ontologies and epistemologies*, whenever appropriate, to decolonise disaster research and move beyond the Enlightenment-based sources, concepts, methodologies and languages that dominate the field. Local and non-local researchers should be encouraged and supported to not only publish in international journals, but also to value local publications, both as an outlet for their research and as a reference for their studies.

2.5 We want our field to reaffirm that disaster research carries a political agenda, that is *to address the root causes of vulnerability and recognise the capacities of local people*. Our research should therefore be geared towards reducing the risk of disaster, rather than towards building academic reputation. Putting local researchers at the forefront of scholarship should be the first political and symbolic move in this direction, recognising that disaster research is neither apolitical nor detached from historical heritages.

2.6 We want our field to *not only get our stories right, but also to tell them right*. The dissemination of research outputs and outcomes must occur in a way that demonstrates collaboration, local leadership and appreciation for local knowledge and ways of collecting and presenting knowledge. We should also share and present knowledge in languages accessible to people who can/want to make use of this knowledge. Our peer reviews of publications should thus be sensitive to non-Enlightenment-based ontologies and epistemologies.

3. How do we get there?
Change HOW we research:
3.1 Stop assuming the role of "expert" as part of research on local conditions and people outside of our own culture and instead ensure that local researchers and people experiencing risk can tell their own stories and develop their own methods, in their own ways, for their own purposes. Disaster studies research can then push against normative approaches that largely benefit external scholars and rather promote the idea that research should be undertaken principally for the local benefit.

3.2 Research should be framed from locally appropriate, culturally grounded perspectives and methodologies which must be similarly developed and critiqued. It is still largely assumed that Enlightenment-based ideas about science are fundamental and rational, thus assuming superiority and a mission to 'bring progress'. The 'progress' however is ill-fitting and ignores local social and institutional practices. This epistemological shift should feature in our routine research chores such as the peer review of proposals and publications.

Change WHAT and WHO we research:
3.3 Encourage and promote local researchers to lead the development and design of research proposals based on local priorities, theorising local issues and making best use of local capacities–always with critiques.

3.4 Do not always prioritise research adopting Enlightenment-based research approaches and do consider local and indigenous ontologies and epistemologies. The epistemologies and ideologies that underpin disaster studies research are important because they frame the questions that

are asked, determine the sets of methods that are employed, and shape the analysis.

Change WHO does the research:
3.5 Foster the leadership of local institutions (regardless of the ranks in the international leagues), including local funding agencies, and encourage local researchers to lead research endeavours, from designing proposals to collecting and analysing data as well as authoring publications. This will help to minimise the frequent 'discovery' of what is new for the external scholar but is common knowledge of those to those who live in the context.

3.6 Employ methods that enable and encourage local people to lead and critique enquiry and local scientific endeavours that provide maximum benefit to local researchers and the people who are the subjects of research.

4. Join us and commit to:
4.1 Develop a research agenda that reflects local realities, priorities, and critiques while recognising that local groups often differ in their views and interests.

4.2 Respect and build upon what local researchers have achieved already, rather than only "external" scholarship.

4.3 Lobby for change in research agendas through our publications, peer-reviewing, networks and professional time servicing our field.

4.4 Promote and lobby for more local funding opportunities to support our research so that external funding only top these up when needed.

4.5 Fit into, and pursue local research agendas and work within local/indigenous epistemologies where appropriate.

4.6 Ensure that research is done with the benefit of those being researched as a central aim.

4.7 Actively pursue network building with institutions and individuals everywhere (and those often the subject of our research).

4.8 Seek and involve these researchers in projects in our own homes, as co-principal investigators, encouraging their critiques of and advice regarding work and approaches in our homes.

4.9 Commit to support and publish in journals everywhere. Open access also matters - make sure that scholars around the world can use your work while being careful not to perpetuate inequities through only using pay-to-publish-open-access journals.

4.10 Create opportunities for non-English publications in disaster studies.

4.11 Encourage and promote locally-led publications and presentations, academic and non-academic.

We hope that you will join us! Disaster studies needs to become more inclusive and collaborative. If we are successful, disaster studies might contribute more fully to disaster risk reduction. We can't afford to wait.

Online at https://www.ipetitions.com/ petition/power-prestige-forgotten- values-a-disaster

REBUILDING STREETS OR RE-CREATING EMERGENCIES?:

REFLECTIONS ON PUBLIC OPEN SPACES AND URBAN VULNERABILITY TO EARTHQUAKES

Monia Del Pinto, Ksenia Chmutina, Lee Bosher and Falli Palaiologou, Loughborough University

August 2019 marks 3 years since a major seismic sequence hit four regions of Central Italy (2016) flattening, among others, the historical centres of Amatrice and Arquata del Tronto. The earthquakes were a harsh reminder of the high seismicity of the central Apennines as well as the vulnerability of historical settlements in the region.

Shocking images of the events (similar to recent predecessors in L'Aquila 2009 and Emilia 2012) showed debris and ruins – the result of an extremely fragile building stock – and revealed the catastrophic earthquakes' broader impact. Pre-existing economic and social conditions common to the mountainous areas of the Apennines were exacerbated, such as increasing depopulation and the consequent deterioration of social and physical structures. Post-disaster recovery in the region, delayed by contrasting political decisions and bureaucracy, is invariably centred on the physical reconstruction of settlements. The aim is to increase their future resilience through structurally safe buildings. However, a building-focused approach suggests a simplistic perception of both vulnerability and cities, considering the former as a matter of material fragility - overlooking, among others, its social aspect and its progression even in the stage of post-disaster recovery - and the latter as a mere collection of structures.

Yet, a city is more than a collection of structures, though this sometimes prevails in the public perception of urban space. A shift in perspective can reveal that the unbuilt component -i.e. the spaces we walk through, made of streets and squares - plays a crucial role to bond together what actually "makes" a city: humans and buildings. Social interaction, encounter, movement happen through space - such as in market squares, where trading, socialisation and cultural exchange take place - and our ability to memorise the urban environment is linked to its spatial properties and street layout. We map out the city in our mind through knowledge of what is visible and accessible; likewise, buildings are held together, positioned in a specific layout and mutually related to creating urban sceneries thanks to space.

This poses two central questions: *in an emergency is it possible to easily identify open areas to walk and reach? If not, is the city layout to blame, or is the problem more about the way the city is regulated and managed?*

In Italy, the system of Urban Public Open Spaces is not a focal issue within planning processes and this lack underlies the 2013 Charter of Public Spaces, drawn up by the Italian National Institute of Urban Planning (INU). The aim is to define features, functions and meanings, management and use of public spaces, including the publicly accessible open areas within a city. INU is a nationally accredited Institution promoting and coordinating

urban studies and its contribution in preparation for UN-Habitat 2016 – in partnership with other international institutions- resulted in key statements highlighting the lack of consideration given to Public Spaces in the national and global policy arena.

The aim of INU in drawing the Charter of Public Spaces was to fill an acknowledged gap in the operating regulatory landscape on planning, and in doing so has shown the large divergence between policy and practice in Italy. Italian norms in planning date back to 1942 and 1968 and reflect the rationalist approach of the time. This was based on quantitative standards allocating a given ratio of space per capita or in proportion to building density and providing an overly simplistic conception of urban spaces: *streets, parks and squares are treated as mere distance between buildings, voids, or leftover areas.* The recent devolution of responsibilities from central to local institutions resulted in an increasingly fragmented landscape of planning regulations. It brought little or no changes, being that codes still centred on buildings, with spaces left in the background.
In emergency planning, the scenario is not much different: the Italian National Civil Protection's guidelines to draw up mandatory municipal emergency plans indicate essential criteria to follow in seismic zones. However, the recommended individuation of key evacuation corridors and open gathering areas - as important as highlighting crucial buildings along the routes - is left to municipalities and is rarely undertaken.

Effective proposals to integrate space in emergency planning – first anticipating, and then complementing the civil protection guidelines - have come from academics and practitioners, whose voices have been heard by policy-makers only in the wake of past disasters. An example is the concept of MUST (Minimum Urban STructure, an "emergency infrastructure" made up of urban spaces and relevant buildings, designed to enable a city to efficiently perform during an earthquake emergency) developed after the 1997 Umbria Earthquake and
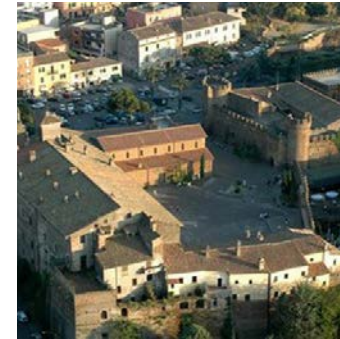
is currently embedded in the planning policies of the Region. MUST has proven its function in the city of Norcia during the 2016 Earthquake. Unfortunately implementation is long overdue in Umbria municipalities, alongside other Italian regions.

A look at the seismic hazard distribution in Italy alongside a fragile historical building stock should be enough to acknowledge the need to supplement current DRR measures by integrating - or rethinking - spatial planning in relation to disaster risk. Instead, what seems to characterise contemporary DRM and Urban Planning trends, starting within post-disaster reconstruction, is a persisting dichotomy between built and unbuilt, between ordinary and emergency planning. There are numerous local variations in governance and some virtuous examples such as Norcia. But these are insufficient to lead an actual change before the next seismic crisis puts to test the outcomes of the current efforts.

The Italian case is a representative example of immobility that must be addressed urgently, beginning with post-disaster reconstruction in Central Italy: restoring the status quo, either neglecting open spaces' inherent capacity or protracting the pre-existing segregation between Disaster Risk Reduction and Urban Planning, means contributing to rebuilding the foundations for future vulnerabilities.

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Play i-Rec Bingo!

Presenter goes blatantly over time	PowerPoint uses Comic Sans	(Chairperson's) phone goes off mid panel	You have no idea what they are talking about	Someone in the audience shouts, "smash the patriarchy!"
Chair: "unfortunately, we do not have time for questions"	Presenter reads without looking up	"It depends on how you define resilience"	Female scholar gets 'mansplained'	PowerPoint slides nobody can read as text is too small
"this is a two-part question" (bonus for 3 parts or more, mark another square!)	Someone in the audience falls asleep	Presenter uses the term 'natural disasters'!	Someone answers phone and has a conversation during the session	Unnecessary use of Latin
"Oh dear… it looks like I am running out of time"	Presenter calls audience to action, "WHO IS WITH ME?"	Presenter reads directly from PowerPoint slides	Questioner answers own question	Presenter gives a raised fist / power fist
You spot a manel (all-male panel)	You are in the wrong room and find out mid-way	Attempt to play an embedded/ external video goes wrong	'Question' from the audience that is not a question	PowerPoint used without being put into presentation mode

Name:

[Please show completed sheet to a Conference Co-Chair! The first delegates to complete the sheet will win a prize!]

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