



GREEN SHEET

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A vanishing paradise and the need for a global response to the challenges ahead

The Republic of Maldives in the Indian Ocean

CLIMATE REFUGEES AND CLIMATE JUSTICE

By Hugo Mailloux-Beauchemin

Sitting on the surface of the ocean and renowned for its white sand beaches, turquoise waters and extensive coral reefs, the beauty of the Maldives is inescapable. The Republic of Maldives in the Indian Ocean consists of 1,192 islands and draws over 600,000 tourists annually. With only 20% of its land area at an elevation higher than 3.3 feet above sea level, the Maldives is the flattest country on Earth. The lack of topography in the Maldives makes it one of the most vulnerable countries to rising sea levels. With a population of nearly half a million, nearly a third of which lives in the densely populated capital of Malé with an average elevation of zero feet above sea level, the Maldives is grappling with the reality that their home is literally sinking into the ocean.

Taking A Stand For a Sinking Country

Mohamed Nasheed, the first democratically-elected president of the Maldives in 2008, began a global campaign for climate reform and announced his plan for the Maldives to become the first carbon neutral country in the world. In a speech to the United Nations in 2009, President Nasheed put it plainly, “the threats posed to the Maldives from climate change are well-known... weather events will make it harder and harder to govern the country, until a point reaches when we must consider abandoning our homeland.” In November 2008, President Nasheed announced plans to look into purchasing new land in India, Sri Lanka, and Australia. As President, Mr. Nasheed embodied the no-nonsense political approach to discussing the threats of climate change in a frank and practical fashion, aiming to develop

plans for his country to face the challenge and encourage other world leaders to look more closely on an issue far from front-and-center of the world’s political agenda.

Human rights activist Amal Clooney represented Mr. Nasheed as his lawyer following his incarceration in 2015 (he was ousted in a



Amal Clooney (right) and Mohamed Nasheed (left) at a press conference in London in January 2016, photo by Alastair Grant, Associated Press

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military coup in 2012 that ushered in a return to an authoritarian government in the Maldives and an unfortunate reversal of his pioneering work in facing the threat of climate change in the Maldives). Mrs. Clooney made a passionate case for addressing the issues that Mr. Nasheed was tackling as President of the Maldives during her keynote address at the opening plenary of the Greenbuild International Conference in Chicago on November 14th, 2018 that four delegates from Rudolph and Sletten attended. She discussed this new classification of refugee, the “climate refugee”: someone who has been permanently displaced from their home due to the effects of climate change.

Supporting Climate Refugees

In her keynote address Mrs. Clooney noted that current estimates indicate that by 2050 there will be up to 143 million climate refugees in need of support. To put that number in perspective, the United Nations Refugee Agency (UNHCR) in June 2018 stated that we are currently witnessing the highest level of displacement on record with over 68.5 million people forcibly displaced worldwide; of that total, 40 million are displaced internally within their country, 25.4 million are refugees – half of whom are under the age of 18, and 3.1 million are asylum seekers. Roughly 57% of that population is made up of civilians from three countries: South Sudan, Afghanistan, and Syria. Making matters worse, nationalism and anti-immigration sentiment is on the rise around the world and, as a result, refugee admission in countries like the US are on the decline, dropping precipitously from a 1980 peak of 207,116 to just 22,491 refugees in 2018 according to the US Department of State, Bureau of Population, Refugees, and Migration.

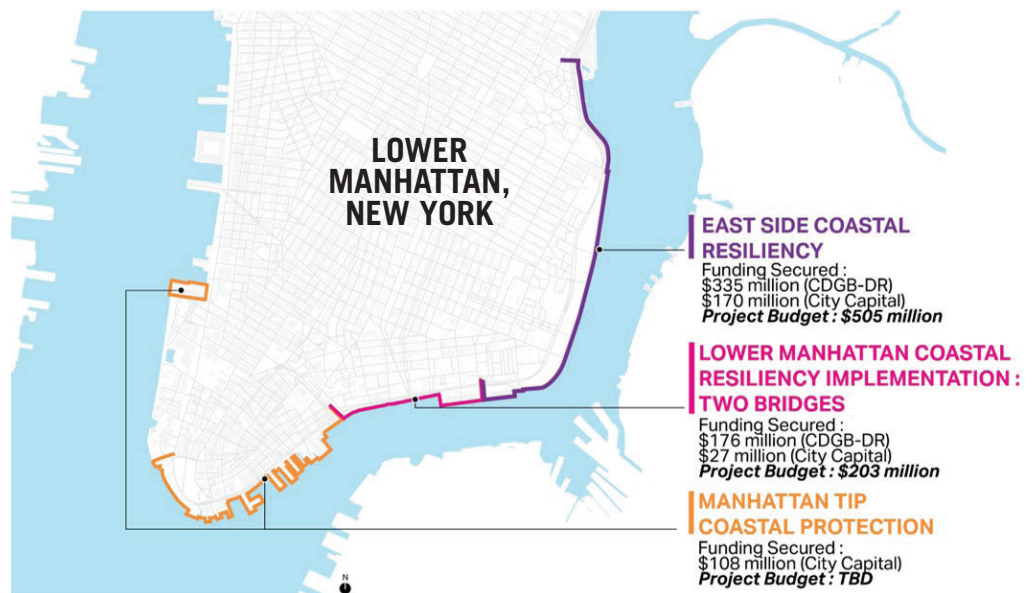
The sources of future climate refugees aren't confined to islands with low lying geography facing the challenges of sea level rise like the Maldives. As we've seen in recent years in the US, fires and floods have permanently destroyed communities and forced hundreds of thousands of Americans to have to rebuild their American Dream from scratch somewhere new. Across

the world, we've developed our major cities adjacent to bodies of water for obvious reasons that are, in hindsight, suboptimal long-term by making us more susceptible to the effects of climate change. In 2017, the United Nations predicted that almost two-thirds of the world's cities with populations of over five million are located in areas at risk of sea level rise. Cities such as New York, Miami, London and Tokyo are at the forefront of this challenge. No major city faces the wide range of natural disasters like Tokyo and its 9.2 million inhabitants. Typhoons, floods, heatwaves, landslides and earthquakes are all threats to Tokyo's future. Miami's porous limestone foundation, on the other hand, poses a unique problem: allowing the water table in the area to rise up through the ground during high tide and storm surges. The “BIG U” project in Lower Manhattan, New York calls for a billion dollar floodwall stretching 3.5 miles from West 57th street south to The Battery and up to East 42nd street that would protect ten continuous miles of low-lying and incredibly dense, vibrant, and vulnerable urban areas; a strategy that would be ineffective for Miami where hundreds of millions of dollars are being spent both publically and privately to raise the ground elevation of roads and buildings by roughly two feet. The design and construction industry is evolving to meet this new demand from cities investing heavily in climate-resilient infrastructure and housing.

Strengthening the Global Response

Infrastructure projects of this scale, however, are expensive and not guaranteed to work long-term. If there is one thing about climate change that everyone can agree on, it's the fact that it is incredibly complex and difficult to predict with much accuracy. Different experts who assess the same spectrum of climate change risks often reach very different conclusions on the speed of change, and there is deep uncertainty embedded in projections as near as 10 years into the future. The magnitude of the problem and the challenge associated with finding reliable and affordable solutions are an indication that future climate refugee crises are inevitable and infrastructure projects alone won't solve the problem. Going forward, since the number of forcibly displaced people is on the rise, exacerbated by climate change, cooperation on a global scale to handle those displaced will be more important than ever.

Efforts are being made in this very direction at the United Nations General Assembly through the Global Compact on Refugees that was affirmed on December 17th, 2018 and provides a framework for more predictable and equitable responsibility-sharing of refugees. Although not legally binding, there are currently 162 countries and 9,997 companies that are formally participating in this initiative whose four key objectives are to: 1) ease the



“BIG U” Storm Protection System, Lower Manhattan, New York



pressures on countries that host the refugees, 2) enhance refugee self-reliance by helping refugees live productive lives and reduce the risk of protracted stays and dependence on humanitarian aid, 3) expand access to third country resettlement options, and 4) support conditions in countries of origin so that refugees can return to a life of safety and dignity. Participants in the Global Compact are required to publish an annual Communication of Progress report that assesses the outcomes of actions being taken to support its ten principles. Delivering more comprehensive and predictable responses for refugees is a major step in addressing the challenges ahead.

Litigating For Climate Justice

In addition to efforts being made globally, efforts within the legal system are also showing signs of promise. In her keynote address, Mrs. Clooney discussed the concept of “climate justice”, and explained how climate change poses a legal threat to human rights in the 21st century. Climate justice is a term used for framing climate change as an ethical and political issue, rather than one that is purely environmental or physical in nature. Here in the US, Juliana v. United States is the highest profile, ongoing lawsuit that fits this definition. Filed in 2015, the lawsuit breaks new legal ground by asserting that children have a fundamental right to a climate system capable of sustaining human life, a right protected by both the due process and equal protection clauses of the U.S. Constitution, and violated by the

federal government authorizing greenhouse gas discharges and subsidizing fossil fuel extraction, development, consumption and exportation. If upheld on appeal in the Ninth Circuit Court of Appeals, the case could become a legal game-changer for the climate crisis and environmental law as a whole.

Supporting Our Institutions

Although the challenges associated with climate change are continuing to evolve, we find

hope in actions being taken on the local stage through major investments in climate-resilient infrastructure and housing, on the global stage through the Global Compact on Refugees, and in legal systems around the world framing the climate crisis as a human rights issue. All of these initiatives are positive steps forward in tackling the challenge of climate refugees and the fight for climate justice worldwide, and we must all acknowledge the growing need to support our local and global institutions in their effort to combat climate change.

Center For The Build Environment (CBE) Welcomes New Partner Rudolph And Sletten

CBE is a place where prominent industry leaders and internationally recognized researchers work to improve the performance of buildings by providing timely, unbiased information on building technologies and design and operation techniques.

Rudolph and Sletten’s commitment to efficient and sustainable buildings runs deep and is only reinforced with our joining of the CBE. The firm has worked on 19 million square feet and \$6 billion of sustainable projects over the past 30 years and counting.

“R&S has been dedicated to building high performance buildings for decades with an increased emphasis on environmental quality with the sustainable building movement. We consistently look to metrics and data to improve performance in our quest to ‘build it right the first time’ as coined by Ken Sletten. It’s clear to us that CBE brings analytical skill and data-driven study of design and construction to help us and our industry make these improvements more rapidly. It’s a natural alignment for R&S to partner with CBE and to be closer to this source of research and discovery,” says John Home, Vice President and Rudolph and Sletten’s Director of Sustainability.

“We joined CBE because, aside from just being sustainable and responsible builders, we also see ourselves as the individuals tasked with implementing and executing our owner’s and design partner’s visions. We are an integral part of the delivery of high performance buildings and felt it was our duty to join so many of our industry partners who are already members,” says Brian Entman, Technical Services Director. R&S is currently working or recently completed many projects with fellow CBE members. This partnership strengthens our alignment as we continue to drive design and construction innovation.

Learn more about CBE: <https://cbe.berkeley.edu/>

Rudolph and Sletten Sustainability Development Committee (SDC)

Our mission is to further develop Rudolph and Sletten as an industry leader in sustainable construction.

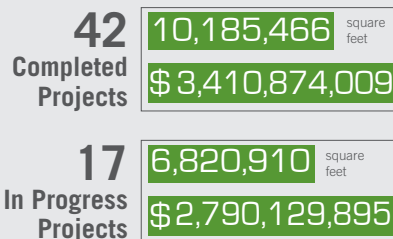
Sustainability Director:

John Home – Roseville

Committee Members:

Ben Hancock Kalie Ward
Mike Mohrman Brian Entman
Hugo Mailloux-Beauchemin

SUSTAINABLE PROJECT TALLY



Recently Certified PROJECT



UC San Diego
Koman Family
Outpatient Pavilion
166,242 sf / \$92,000,000

