

# Rising tide of migration accompanies sea level rises, as predicted

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“As the Marshall Islands and several other small island states around the world struggle with saltwater intrusion into their fields and a dwindling fresh water supply, a future abroad is beginning to creep into the minds of local residents,” Eric Holthaus writes for Columbia Law School Magazine. Credit: UNDP

In 1990, some of the world's foremost scientists joined together to produce a United Nations–sponsored research document on climate change that, at the time, struck many as both unflinchingly dire and

patently hyperbolic. The experts' big-picture assessment could not have been more stark: Humanity was running on borrowed time.

The Intergovernmental Panel on Climate Change, a U.N.-designated scientific research initiative, chronicled the myriad ways human activities affect the composition of our atmosphere, warning of unprecedented forest fires, coastal flooding, desertification, and glacial recession—among many other impacts—should unfettered fossil fuel use continue. "These changes could initiate large migrations of people, leading over a number of years to severe disruptions of settlement patterns and social instability in some areas," the group of scientists wrote in the panel's first comprehensive assessment that year.

Fast-forward to 2016, and not only is it obvious that the U.N. panel was correct, but it is also indisputable that we have since made things worse. Four other assessments and more than a quarter-century later, global carbon emissions are still soaring—up more than 60 percent, and in line with what is considered a worst-case scenario. Last year was the planet's hottest on record—perhaps the hottest since the invention of agriculture 10 millennia ago. The increasing frequency and intensity of weather-related disasters is straining countries' resources, with the most serious consequences befalling developing nations. In Europe, meanwhile, a refugee crisis has been making headlines for months, spurred in part by conflict partially linked to a record-breaking multi-year drought in Syria.

At first glance, it seems we may be starting to see the beginnings of the migrant flows those scientists warned us of in the '90s. And, during the past decade, analysis of the links between [climate change](#) and population displacement has become a focal point for the experts leading Columbia Law School's Sabin Center for Climate Change Law. This past summer, Michael B. Gerrard, the Andrew Sabin Professor of Professional Practice and faculty director of the Sabin Center, briefed the United Nations Security Council on the growing climate-linked migration crisis

in a closed-door meeting. He suggested a forward-looking approach: an "international process of sound planning before a grave crisis actually begins." But, he emphasized, the clock is ticking.

According to a recent study compiled by 30 research groups from around the world, land degradation and desertification alone may force tens of millions of people from their homes within the next decade. There has also been an increasingly dire stream of scientific findings that show global sea levels may rise much more quickly than previously predicted. Dr. James E. Hansen, who, as director of the Climate Science, Awareness and Solutions program at Columbia University's Earth Institute, works with Gerrard and his Law School colleagues, notes that the resulting surges of migration and related conflicts would threaten the fabric of civilization. And according to Sabin Center Executive Director Michael Burger '03, there is no time to waste in addressing that potential reality. "This problem," he says, "although it's happening now, already, is just going to get worse as the years go on."

To make matters worse, even though human migration has long been considered one of the most important and best-predicted impacts of climate change, Burger adds, "the United Nations Framework Convention on Climate Change is just beginning to look at the issue. At the moment, there is no specific plan to deal with climate migration or climate-induced displacement."

This past autumn, a graphic photo of a young Syrian boy—drowned on a beach in Turkey after a harrowing attempt by his family to escape a nightmarish war—overwhelmed the world's senses like a punch to the gut. The moment was a deeply personal, tragic, and urgent slap in the face for those who had been paying little attention to what has become Earth's largest forced mass movement of people since World War II.

The Syrian conflict is driving much of the current round of mass

migration, but there's something worse looming: If the consensus science on climate change is correct, the current migration crisis is just the beginning. While it is perhaps good news that there are some options on the table for dealing with this escalating problem, the bad news is that none of them are very close to gaining meaningful traction with the international community—yet.

During his recent presentation to the U.N. Security Council, Michael Gerrard outlined options for action available under Article 39 in Chapter VII of the U.N. Charter. The article states that the council "shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken . . . to maintain or restore international peace and security."

The council, Gerrard says, is able to evaluate whether climate-related displacement poses a genuine threat to peace, and, if so, initiate plans for minimizing and coping with large-scale refugee issues. When the council first debated the broader risks of climate change, including forced migration, in 2007, it was a controversial decision. Developing countries feared the council might not adequately represent their concerns. Now, though, it has become increasingly accepted that small island states, in particular, face an existential risk due to climate change and that the Security Council could play a key role in encouraging action. "This effort could also spark recognition of the need for significantly greater efforts at mitigation," Gerrard notes. "Climate change offers the Security Council the opportunity to be proactive in preventing threats to the peace."

At the same time, the specter of a world pushed to the brink by a surge of climate migrants demands an anticipation of the special rights of the displaced, the obligations of high-emitting countries to facilitate resettlement, and enforcement of these rights and obligations by the

international community. The problem is, even though greenhouse gas emissions are unequivocally causing harm, it is impossible to assign blame to an individual act resulting in a specific forced migration. For instance, Michael Burger notes that, in the case of Syria, decisions about why, when, where, and how a displaced family chooses to move are highly complex. "While you can say that climate change is making migrations far more likely," he says, "very rarely will you be able to say any particular migration is solely ascribable to climate change."

That makes for "a wicked problem," says Jessica Wentz '12, associate director of the Sabin Center, and at least partially explains why the international community has been reluctant to take up this issue in any meaningful way. She believes a new protected status applying specifically to environmental migrants might help secure the rights of people forcibly displaced in the future by rising seas or megadrought. Such a protected status could eventually provide a pathway to citizenship in a foreign country following a climate-related disaster or a slow-onset event, such as sea level rise.

Another potential idea for addressing the various layers of this issue is the establishment of a climate change displacement coordination facility, which Wentz and Burger described in a September 2015 white paper as an entity that could assist future climate change migrants in resettlement and, perhaps, in receiving compensation. Though a coordination facility is unlikely to gain the authority to impose responsibilities, it could help develop the legal framework through which countries could negotiate future migrant flows. Wentz says the creation of such an entity is "nothing at all like a silver bullet, but it's a step in the right direction."

Along with the leaders of other poor and vulnerable countries, the president of central Pacific island nation Kiribati has called for essentially a global system of reparations that takes into account the "loss and damage" that climate change is already causing. At the U.N. climate

conference in Paris late last year, Kiribati and Fiji announced an agreement that, in principle, would allow the more than 100,000 residents of Kiribati to attain residency in Fiji should rising sea levels make their homes uninhabitable. In Bangladesh, where an estimated 200,000 people are made homeless by erosion each year, the country has already started a bold plan to reclaim land from the surrounding waters to aid in resettlement. Meanwhile, future migrants fleeing rising seas in the Maldives and Tuvalu may not have a homeland to return to, and the potential for multifaceted impacts caused by forced migration in other nations looms large.

"Displacement of populations and destruction of cultural language and tradition is equivalent in our minds to genocide," said Tony de Brum, then foreign minister of the Marshall Islands, in a 2015 interview with Radio New Zealand. At a 2014 summit on climate change at the U.N. headquarters in New York, Marshallese poet Kathy Jetnil-Kijiner brought world leaders to tears with a heartfelt story about her hopes for her daughter's uncertain future.

"I think the countries of the world need to start thinking seriously about how many people they're going to take in," says Michael Gerrard. "The current horrific situation in Europe is a fraction of what's going to be caused by climate change." In 2011, Gerrard helped organize a high-level conference at Columbia Law School on the legal implications of sea level rise in small island states.

Now, as a result of follow-on work, Gerrard has devised a proposal: This century's climate migrants should be provided permanent residency abroad in a manner proportionate to historical national emissions. That means the United States, which holds the dubious honor of being the world's largest historical emitter of greenhouse gases, would be on the hook for millions of displaced people in just the next few decades. But considering the response to an influx of just a few thousand refugees

from the current Syrian conflict, providing safe harbor for orders of magnitude more from inundated Pacific Islands or parched African farmland seems almost unthinkable.

In an op-ed published by The Washington Post in 2015, Gerrard made a forceful case that the United States bears a unique moral responsibility to confront the climate migrant crisis with a compassionate and welcoming resettlement policy. "International law recognizes that if pollution crosses national borders, the country where it originated is responsible for the damages," he wrote. "That affirms what we all learned in the schoolyard: If you make a mess, you clean it up." Under a worst-case-scenario estimate, the U.S. would be responsible for taking in a whopping 67 million people during the next 35 years, more than 20 percent of America's current population. The best way to preclude such potentialities, Gerrard says, "is radical, rapid reductions in greenhouse gas emissions."

Jessica Wentz notes that although Gerrard's proposal might never reach the status of enforceable international law, "it's a tool other folks can use to critique government action"—or lack thereof, in this case.

International [human rights](#) law might also provide a vehicle for compelling or critiquing government action in this context. Wentz and Michael Burger recently teamed up with the United Nations Environment Programme (UNEP) on a report describing how climate change will adversely affect the enjoyment of human rights, and how this translates to corresponding governmental obligations to implement mitigation and adaptation measures—including measures aimed at preventing displacement and providing assistance to those who are displaced as a result of climate change.

In Wentz's words, the new UNEP report makes the argument, based on international case law, treaty text, and consensus declarations, that "countries may have obligations not just with respect to their own

citizens, but also these extraterritorial obligations to protect the human rights of citizens in other countries." Of course, any requirement to fulfill these obligations is relatively useless without an effective enforcement mechanism. For that, Wentz suggests a "name and shame" approach, in addition to reliance on international and domestic human rights tribunals.

The United States, for its part, seems to be playing a proactive role on climate migrants—at least in terms of official rhetoric. "We have climate refugees today," said U.S. Secretary of State John Kerry at a recent meeting on global ocean policy in Chile. "I think it's just a matter of time before it fits in under a category and countries have . . . legitimately incorporated it into our policy."

For the especially vulnerable Marshall Islands, the exodus to the United States may have already begun. Gerrard offers an anecdote of Springdale, Arkansas—the headquarters of poultry giant Tyson Foods and impromptu home to thousands of Marshallese. There is a long, tortured history of U.S. influence in the Marshall Islands (the islands fell under U.S. control during World War II and were later used as a nuclear weapons testing ground), and, as a result, Marshallese have preferred immigration status here. Decades ago, a few Marshallese seeking more stable income secured jobs at the Tyson plant in Springdale, and the effect snowballed. Gerrard says families moving to Springdale did not leave the Marshall Islands because of sea level rise, though "the expected submersion of the islands, I think, made them more likely to come."

As the Marshall Islands and several other small island states around the world struggle with saltwater intrusion into their fields and a dwindling fresh water supply, a future abroad is beginning to creep into the minds of local residents. "One thing I've learned in the work that I've done is that a place becomes uninhabitable well before it's submerged," says Gerrard. And, in total, climate change may displace up to a quarter-

billion people by 2050, according to research cited by the Office of the United Nations High Commissioner for Refugees. That means, within our lifetimes, climate change could become a human rights emergency that grinds global governance to a halt. How the global community chooses to address this seemingly inevitable problem will help define international relations for the rest of this century.

From a legal perspective, the looming crisis raises an interesting, though morbid, question: What happens when these island nations, for all practical purposes, cease to be? Under current international law, a country's exclusive economic zone—for which it retains rights to benefit from fishing, mineral exploration, and tourism, for example—is measured from its coastline. If an island disappears because of sea level rise, will its economy also be wiped from the map? Will citizens of a former island nation, scattered throughout the world, still be able to advocate as a collective within the United Nations? Where would their "capital" be?

These are the sorts of questions that keep Gerrard and his colleagues up at night. When asked about James Hansen's research, which projects that multi-meter [sea level rise](#) is likely this century, much earlier than previously thought, if we proceed in a business-as-usual scenario, Gerrard's tone turns somber. "If this is true, then the sovereignty problem occurs much faster," he says. "But if it's true, the sovereignty of small island nations is the least of our problems."

Provided by Columbia University

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