



INOMUN 2018

RESEARCH REPORT

RESEARCH REPORT COMMITTEE: UNITED NATIONS ENVIRONMENT PROGRAM

ISSUE: How to react to migrations caused by climate change?

CHAIRS: Julien Marécaux, Elise Magnier



• Introduction:

UNEP is a United Nations agency which was created in 1972 to manage all its environmental activities and actions to help developing countries creating responsible policies for the environment.

It has been scientifically proven that climate is changing everywhere around the world. This process is progressing ever more rapidly, more visibly and more alarmingly every year. 2016 was the world's hottest year since we started keeping record and the third consecutive year of record warmth. At the same time, migration is becoming a huge problem to solve. In 2016, aid organisations recorded some 5,000 people dying during dangerous crossings to Europe which is distressing.

Climate change is a risk multiplier, jeopardising the livelihoods of more and more people. Although understanding of the connection between climate change and migration has increased, many questions have yet to be answered. According to the Council Conclusions on EU Climate Diplomacy, adopted in June 2011, climate change is a global environmental and development challenge with significant implications related to security and migratory pressures.

However, the international community has not legally recognised these migrants yet: neither the UN Framework Convention on Climate Change nor its Kyoto Protocol includes any provisions concerning specific assistance or protection for those who will be directly affected by the effects of climate change. Terms such as "environmental refugee" or "climate change refugee" have no legal basis in international refugee law.

- **Timeline of events:**

1930s:

the rise of the dust bowl in the United States led to a displacement of 2.5 million people.

1960:

earthquake in Chile which resulted in 1700 deaths and 2 million people displaced.

1970:

Bhola Cyclone in Bangladesh, resulted in 500 000 victims and millions of people displaced.

1984-1985:

a severe drought in the Horn of Africa led to famine and killed 750 000 people and displaced millions of people.

1986:

Chernobyl nuclear disaster: 115 000 people originally displaced and 1.6 million people in the irradiated area.

1993:

the year of the sea level of reference. The sea level rise was at 1.7mm/year.

2004:

the earthquake and tsunami in Indonesia and in Indian Ocean resulted In 227 000 deaths and 1.7million people displaced.

2005:

Katrina hurricane in New Orleans, Gulf of Mexico, Florida, 80% of the city was flooded. The death toll in this disaster amounted to 1 800 deaths and 100 000 people were displaced.

2010:

an earthquake in Chile caused 600 deaths and 800 000 people displaced.

2011:

An earthquake and a tsunami in Japan, at Fukushima, caused a nuclear disaster: 18 000 deaths (earthquake + tsunami), 100 000 people displaced and 1 500 deaths during the evacuation (Fukushima)

2014:

Kiribati bought a 20km² island to the Fiji Islands to prepare evacuation.

2015:

COP21, the Paris Agreement on global warming, aiming to limit global warming to 2°C.

2017:

Sea level rise is at about 3.4mm/year and is 20 cm higher than 100 years ago.
Irma storm in St Pierre and Miquelon, Florida, the Caribbean... was particularly severe.
About 25 percent of the Earth's land, or 3.6 billion hectares, is desertified.

- **Expectations 2017-2100:**

2050:

Kiribati is expected to be uninhabitable, 110 000 inhabitants displaced

2050-2100:

- Bangladesh's capital city (Dacca) might be flooded, making 11 million people displaced, 40% of South territories flooded.
 - Jakarta in Indonesia will be flooded, 2 million people displaced
- The Netherlands, Guangzhou (China), New Orleans, New York City (USA), Abidjan (Côte d'Ivoire)... will be flooded (if the governments' plans are unsuccessful)
- By the 2050s, 50 per cent of agricultural land in Latin America will be subject to desertification.

2100:

sea level expected to be between 0.25m and 2m higher than now.

- **Key terms:**

1. **Intergovernmental Panel on Climate Change (IPCC):**

An international body for assessing the science related to climate change. It was set up in 1988 by the World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP) to provide policymakers with regular assessments of the scientific aspects of climate change, its impacts and future risks, and options for adaptation.

2. Climate change and global warming:

Climate change is the constant evolution of climate on earth depending on different factors as temperature, pollution, weather... It has been taken into consideration progressively by governments during the 20th century and is now one of the most important issues of the century.

Global warming is a tendency of climate change which causes the melting of glaciers, and thus the rise of the sea level.

3. Sea level and rising sea:

The sea level is the height of seas and oceans in the world. This level is rising as consequence of global warming; it is a phenomenon which will cause the flood of many islands and coastline territories during this century.

4. Migrants and refugees:

A migrant is a person moving from a country to another one for personal reasons (economic reason, personal reason, political reason...). A refugee is a person protected by a legal status given under conditions such as political refugees (fleeing war, a political system). People forced to migrate because of climate change do not have a legal status yet (they do not receive any help from any organisation).

5. Drought:

Crisis period in a definite area during which the water resources are not sufficient for the population's needs and the agriculture.

6. Land degradation:

Deterioration in the quality of land, its topsoil, vegetation, and/or water resources. A land is qualified as degraded when it has lost its fertility, when it is contaminated or polluted, and when its characteristics of soil are changed. It is caused by global warming, deforestation, urbanization, overgrazing...

• Background information:

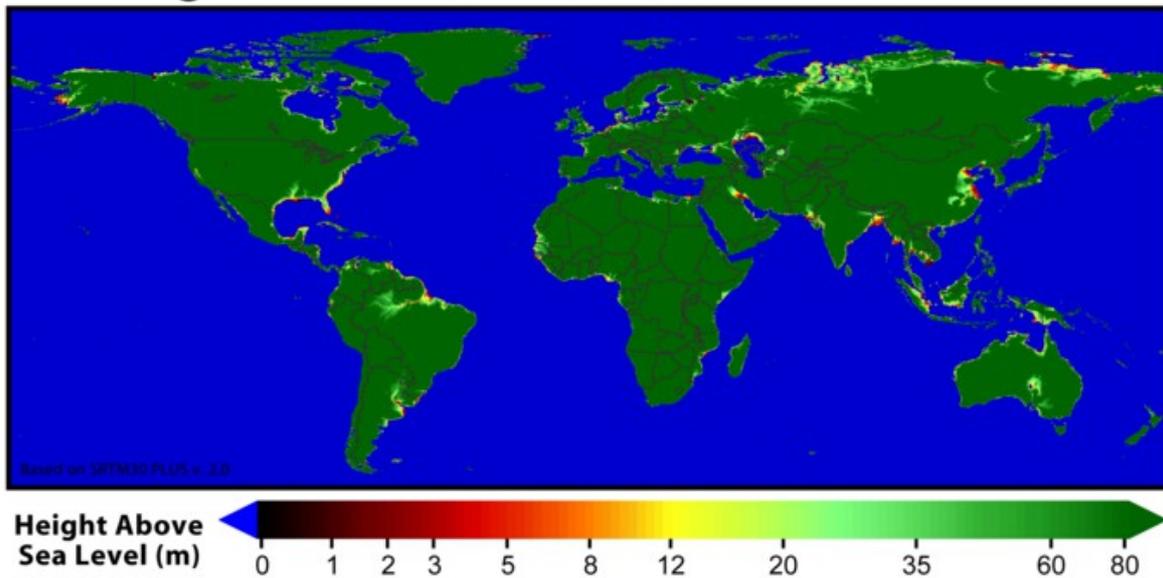
Since 2008, an average of **22.5 million people in the world have been displaced each year** after severe weather-related disasters like floods, hurricanes, wildfires, storms, and extreme temperature knowing that **4,6 million people have been internally displaced by war, conflicts and violence**. Climate change is worsening everyday making this number increase even more. Disasters doubled from 200 to 400 in two decades. Although sudden-onset natural disasters seem to be the cause of the mass migration, a larger number are expected to migrate due to slow-onset disasters and gradual environmental degradation such as reduction of soil fertility, desertification, coastal erosion and sea-level rise. These degradations and disasters are already impacting and will trigger systems of production, existing livelihood patterns, amongst many other phenomena and will emphasize the need to emigrate.

Different types of migrations should be expected depending on the triggering event: sea-level rise victims won't need the same help as droughts' victims. This is part of the difficulty of managing migrant flows and finding different solutions that can fit them.

Moreover, the relationship between environmental and climate change and migration is often complicated by the associations with other factors, such as population **growth, poverty, governance, human security and conflict**. It is a **multi-causal phenomenon**: even in cases where the environment is a predominant driver of migration it is usually compounded by social, economic, political and other factors. Displacement is often the only way people can survive. Migration, especially a mass influx of migrants, can affect the environment in places of destination. In particular, unmanaged urbanization as well as camps and temporary shelters may produce strains on the environment. In places of origin, on the other hand, out-migration may alleviate population and land use pressure, sometimes allowing a degraded local ecosystem to recuperate.

One of the main causes of environmental migration **is sea-level rise**. Sea-levels are expected to be rising by 0.18 to 0.6 meters between 1990 and 2100 according to the Intergovernmental Panel on Climate Change (IPCC). But the sea has already submerged some areas such as in Netherlands (MEDC), Bangladesh (LEDC), Pacific islands... For example, in 1995, Bangladesh's Bhola Island was half-submerged by rising sea levels, leaving 500,000 people homeless. Just for Bangladesh, scientifics predict that the country will lose 17 percent of his territory by 2050 caused by flooding, leading to about 20 million of climate refugees. Eleven countries have more than 10% of their land within 5m of mean sea level and a similar number have all of their territory below 5m. Five would be entirely threatened by just a 1m rise in sea level.

Regions Vulnerable to Sea Level Rise



<http://sb350.pbworks.com/w/page/5565710/Sea%20Level%20Rise>

To see the lands flooded according to different sea-level rises:

<http://flood.firetree.net/?ll=8.0000,0.2200&zoom=2>

<https://choices.climatecentral.org/#6/38.436/-76.014?compare=temperatures&carbon-end-yr=2100&scenario-a=warming-4&scenario-b=warming-2>

Sea-level rise is a unique environmental stressor because it permanently converts habitable land to uninhabitable water.

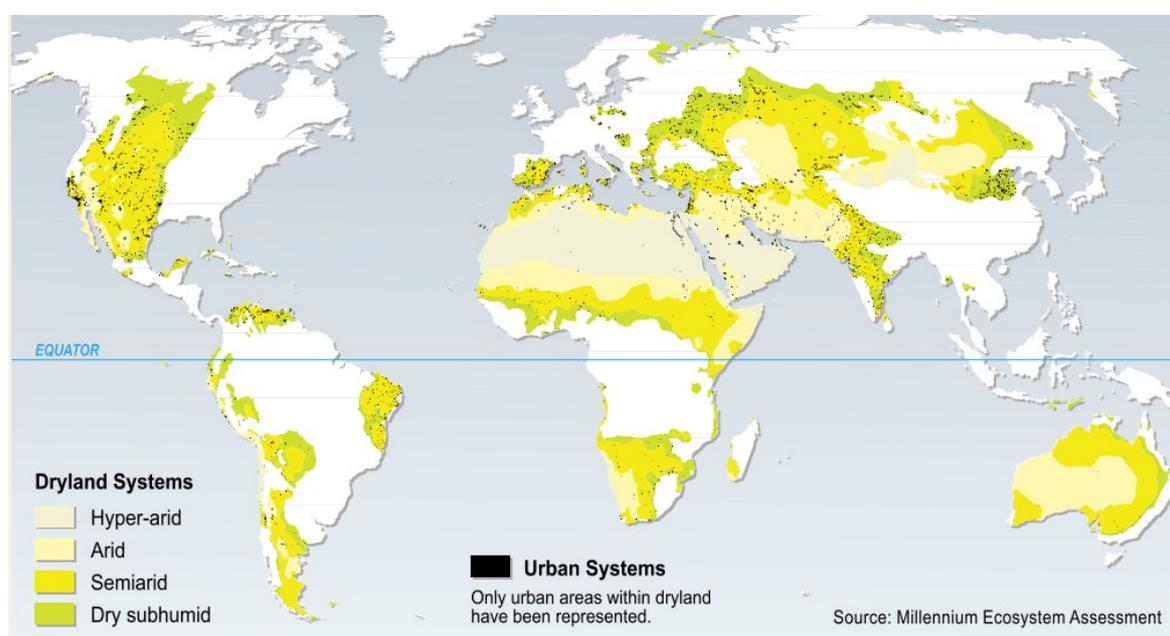
Sea-level rise isn't just flooding more and more lands it is also altering freshwater and making it more and more salty threatening agricultural lands and people's access to drinkable water. There is actually 20% of all irrigated land worldwide which are salt-spoiled soils: around 62 million of hectares, the size of France, are impacted. Salt-spoiled soils can't be cultivated as they were, making whole areas resourceless forcing its inhabitants to leave.

The Maldives (LEDC) are also really affected as an island nation of the Indian Ocean: at its highest point Maldives rises at 2.4 meters above the sea. Moreover, the melting of polar caps is making the water less salty as fresh water coming from the floes is mixing with salty water. This phenomenon is threatening the coral reefs, the fisheries and the whole ecosystem. These degradations make the land's existence in danger as first thousands of inhabitants will have to be relocated, and the two main industries tourism and fishing will be widely threatened.

Almost every coastal countries are concerned and even more a majority of cities as they are often located in low-lying areas, by a river or a sea and are extremely vulnerable to sea-level rise. Amongst them are New York, Shanghai, Hamburg, London, Bangkok, Mumbai, Jakarta, Manila...

It is first a coastal issue but it is also affecting landlocked lands like cities which will be certainly forced to welcome as they possibly can all refugees flying from devastated shores. However those welcoming lands are not prepared and often just can't home properly these mass populations.

While sea-level rise touches coastal populations, drought is making the inland population much more difficult and provokes mass migration. Drought is making crops growing impossible or low, making people move in order to survive. Desertification is the process of land degradation of arid, semi-arid and sub-humid areas due to several factors including climate change. Entire ecosystems are destroyed and turns into deserts when almost nothing can grow or live. This process is affecting topsoil, groundwater reserve, surface runoff, human, animal and plant populations. Desertification is partly caused by climate change but human activities such as deforestation, urbanization, overgrazing worsen the process. According the UN, an estimated six million hectares of productive land, an area almost half the size of England, is lost to desertification every year.



Overlap of Urban Areas with the Four Dryland Categories: Millennium Ecosystem Assessment. Ecosystems and Human Well-being: Desertification Synthesis. Washington, D.C.: World Resources Institute, 2005.

According to UNESCO, one third of world's land is threatened by desertification knowing that it houses around 2 billion people or 34% of the world's population. It is particularly worrying in Africa where 66% of the total land is arid or semi-arid. Moreover, desertification isn't just harmful but also expensive to the world: each year the world loses 42 billion US dollars to desertification and its effects. The UK's 2014 Ministry of Defence report estimates that by 2050, up to 135 million people worldwide could be displaced by desertification alone.

Rapid-onset disasters such as floods, cyclones and landslides are increasing, and these accelerate land degradation. But slow onset disasters, such as drought, desertification and land degradation, are the most devastating for the rural populations. These have lasting effects on their vital natural resources, on communities, whose hunger and unemployment force them to permanently migrate.

A study found that drier areas experienced higher levels of out-migration than wetter areas. For example, land degradation has been indicated as an important contributing factor to rural-urban migration in Mexico and to Mexico-U.S. migration flows where 700,000 to 900,000 migrate from Mexico's drylands annually according to the FAO. Studies by UNU EHS from Africa, indicate that land degradation and desertification contribute to worsening living conditions for both those who leave and those who remain behind.

For five decades the world has failed to check land degradation. Now, extremist groups and criminal gangs are exploiting the situation. They radicalize youth and children, and enslave women and girls for perverted, political ends. Between 1948 and 2011 the UN led 68 peacekeeping operations. A quarter of these missions are linked to natural resource conflicts which are causing migration. Today, they have consumed half of the total UN peacekeeping operations costs, some 42 billion dollars, according to UNEP's Disasters and Conflicts Programme.

The future impact of climate change as a cause for migration depends on several factors: the quantity of greenhouse gas emissions; the rate of future population growth and distribution; the meteorological evolution of climate change; the effectiveness of local and national adaptation strategies.

Few potential destination countries have policies to manage such flows of people, unless they migrate through the normal immigration policies that give preference to family reunification and employment-based admissions. With the exception of some discussions in Australia and New Zealand regarding admissions from the Pacific small islands developing States, no destination countries have considered establishing special labour admissions programmes for persons affected by loss of livelihood as a result of climate change or other environmental disasters.

Environmental migrants have very limited law protection which is partly why they are in such distress. Those moving across international borders as a result of hazard events are protected by international human rights law, which, however, does not entitle them to admission and stay in another country. They are not automatically protected by the 1951 refugee convention which is defying who can be considered as refugees and therefore grant asylum, unless they meet established criteria such as being also war victims or persecuted. In some cases, they might be in need of protection and assistance temporarily awaiting return but there are not such existing protections. Should a state lose its entire territory, one of the constituent elements of statehood, because of sea-level rise, it is not clear whether its statehood would continue to be recognized by the international community.

Not only could a population not be considered as a nation anymore because missing a territory but its inhabitants would not necessarily be legally accepted in another country. If this may seem really hypothetical, it has in fact recently become real for a Kiribati national. Also it is going to be the case for thousands of people during the next decades. These people cannot wait until the place where they live doesn't exist anymore and so the only solution for them is asking for asylum right to another country, usually a developed one able to welcome refugees.

However, since the 1951 refugee convention has not really been considering climate refugees' case, people asking for asylum right remain dependent on each country's policy. New Zealand and Australia were the first countries taking decisions concerning climate refugees: both refused to give asylum right, afraid that this could create a valid argument for other types of migrants and refugees. New countries will soon have to take decisions concerning this asylum right for climate refugees, unless an international decision is officially taken by the UN. Although a clarified international law for climate refugees is needed because it seems obvious that no country is likely to accept refugees before another country does the same as they do not want and cannot welcome all climate refugees alone.

• Possible Solutions:

1. helping local populations **to protect themselves from climate change** so that they will not be forced to migrate
2. helping people forced to migrate because of climate change, economically and technically **by welcoming them.**
3. defining under what conditions a person could be considered as a forced migrant because of climate change and **creating a legal status.**

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