Forum: Environmental Assembly

Issue: Preventing Loss of Land due to Rising Sea Levels and Supporting Affected Areas

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I. Introduction

It is the year 2100. Over 200 million people lose their home and some possibly their life to a rise in sea level.[1]This is a possible, and likely, future we are expecting. It may seem very far away. One might say it is not today's problem, but that could not be more wrong. As we see with climate change, measures should have been taken long ago. Young activists, like Greta Thunberg, are standing up for the climate now. But these protests, this motivation should've been present a long time ago, when it was still much easier to change things.

Rising sea levels are one of the many big problems of global warming. Not only is this, among other things, affecting the environment, but it is also detrimental to those who live on the affected land. Since 1880 the global average sea level has risen about 8-9 inches. This may seem like a long time coming, but a third of this has come from just the last two and a half decades.[2]

Rising sea levels come from melting glaciers, ice sheets, and thermal expansion of seawater. This can cause flooding and destruction. So how can we change it? There are already many attempts and measures to stop climate change. And this is exactly how we can eventually stop the rapid rising of sea levels.

Reducing a member state's greenhouse gas emissions, buffers for coastal areas during storm or hurricane, less pollution, etc. would effectively slow down rising sea levels.

II. Definition of Key Terms

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[1] "Flooded Future" https://www.climatecentral.org/news/report-flooded-future-global-vulnerability-to-sea-level-rise-worse-than-previously-understood#:~:text=As%20sea%20levels%20continue%20to,below%20the%20high%20tide%20line. - Climate Central 2019

[2] "Climate Change: Global Sea Level" https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level#:~:text=Global%20mean%20sea%20level%20has,of%20seawater%20as%20it%20warms. - Climate.gov 2021

A. Chronic Floods

Chronic means persistent or constantly recurring. Chronic flooding means constant flooding in a specific area. It has been defined to be flooding that specifically occurs more than 26 times in a year.[3]Chronic flooding is caused by high tide (therefore “flooding”; “overflowing”) which is due to melting glaciers, etc. caused by global warming.

As mentioned, chronic flooding occurs more than 26 times a year. This differentiates chronic floods and floods. They can cause intense damage, seeing as the targeted area never fully recovers before the next wave hits. Not only does this endanger the people and animals in that area, but also destroys all cities and towns, essentially drowning said area.[4]

B. High Tide Line

The “High Tide Line” is defined by a line or mark left upon tide flats, beaches or shore objects. It is the maximum height reached by a rising tide. This means any water *over* the high tide line is “too high”. [5]

C. Displacement (Permanent, Temporary, Environmental…)

Displaced people are those moved from their original location (their home, country, etc.) due to certain reasons. As the name implies, permanent displacement is essentially permanent and there is therefore no way for the displaced people to go back to their home. This can happen due to several reasons, even political reasons, but often it is because their home was destroyed due to military conflict or environmental reasons.

Leading to another form of displacement, one this topic focuses on. Environmental displacement is displacement inflicted by environmental disasters. These could be floods, hurricanes, tornados, etc. Environmental displacement and global warming unfortunately go hand in hand. The environmental effects of global warming equally affect those who inhabit said environment.

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[3] “Underwater: rising seas, chronic floods, and the implications for U.S. coastal real estate” https://www.leonardodicaprio.org/underwater-rising-seas-chronic-floods-and-the-implications-for-u-s-coastal-real-estate/#:~:text=The%20study%2C%20which%20analyzed%20the,high%20tides%2C%20no%20storm%20required. - Leonardo Dicaprio Foundation 2018

[4] ^

[5] “Definition of Waters in the United States”https://www.nap.usace.army.mil/Portals/39/docs/regulatory/regs/33cfr328.pdf - nap.usace.army.mil

D. Inundation

"An overwhelming abundance of people or things". "Inundation" is a term that could be used in any context, but it is important to understand this term and terms like it whilst discussing this topic. An inundation can happen with mass migration. An abundance of refugees can be environmentally displaced. Displaced due to reasons such as chronic flooding.

Additionally "inundation" can be used as a synonym for "flooding". It will be mentioned in many articles about flooding and global warming.[6]

III. General Overview

A. Main Problems of Floodings/Chronic Floodings

There are many concerns related to global warming, specifically natural disasters such as floods. Seeing as these floods can wipe out coastal regions and consequently wipe out those inhabiting said area, these floods are very worrisome for unprepared areas.

a. Causes for Concern Amongst Civilian Population in Affected Area

Civilian populations lose their home, city, and sometimes their lives during natural disasters. A complete drowning of an area would mean permanent displacement. This does not only mean that these people lost their home, but they are now fugitives. This means that they have to emigrate into other countries. The refugee crisis would grow even more. Many more displaced persons would find themselves without a home at all.

Many member states have been trying to slow down the refugee crisis, but we have to put a stop to it either at the source or before it even happens. Concerning war-related refugees it is difficult to stop the crisis at the source without getting involved in the conflict, but an environmental-related crisis can be prevented. If member states work together to put the rising sea levels to a standstill millions of civilians will not be displaced.

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[6] "Inundation vs. Flooding" https://www.askdifference.com/inundation-vs-flooding/ - AskDifference 2018

b. Causes for Concern Amongst Affected Environment

Not only could this hurt people and animals, but it heavily affects the environment as well. Entire areas of land could be completely drowned out. As mentioned, this could lead to refugee crises, etc. Losing land entirely would be an intense set back. The world population is increasing and we can therefore not afford to lose land.

Coastal areas are slowly reducing in size due to the rise in sea level. This must be stopped if we are to prevent environmental disasters.

B. Future Concerns

Research shows that as of 2100 over 200 million people will have lost their home to flooding. Not only would this mean a destroyed home, but it could mean permanent displacement, seeing as the high tide could not only flood, but completely drown the area. We are talking 80 years in the future, but this is still our problem. As of now we can still stop this. We won't have that opportunity in the future.

Additionally, marine life could be harmed through these floods.

IV. Major Parties Involved

A. United Nations International Children's Emergency Fund (UNICEF)

UNICEF is taking many measures to help displaced women and children. Their main focus when it comes to environmental displacement is helping people after the fact. Being a UN organ and therefore a UN fund, UNICEF has many resources to help those in need.

Not only does UNICEF help environmentally displaced persons, but also refugees in general.[7]

B. The EU Floods Directive

The EU Floods Directive works with EU funds in learning more about the sources of floods and effectively stopping them. It requires member states to assess

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[7] "UN Agencies Aid Millions Affected by Flooding…" https://news.un.org/en/story/2017/08/563762-un-agencies-aid-millions-affected-flooding-landslides-south-asia - UN News 2017

which water courses or coast lines are at risk from flooding. Additionally, these member states should map out the flood extent and thus the assets and humans at risk. Following this they should take suitable measures to reduce flood risk and catastrophe.[8] [9]

C. India

Among many member states, India is one of the hardest-hit in terms of floods. Dams swept away, many casualties, etc. UN organizations such as UNICEF or the World Health Organization (WHO) have been aiding India, not only when it comes to natural disasters, but also the pandemic, etc.[10]

Few things can be done by India alone to stop the floods. River deepening or building flood walls, etc. could potentially slow it down.

D. Denmark

Denmark is known to be one of the main countries actively and effectively working against climate change and implementing adequate measures. Denmark is known for taking quite radical and aggressive measures against global warming. Their aim is to reduce 70% of their 1990 carbon emissions in 10 years.[11]

Being a very environmentally friendly member state, Denmark is taking a strong lead in the fight against climate change. As stated before, stopping floods means stopping climate change. Taking measures to slow down global warming will effectively slow down these floods and chronic floods.

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[8] "Flood RIsk Management" https://ec.europa.eu/environment/water/flood_risk/ - European Commission
[9] "The EU Floods Directive" https://ec.europa.eu/environment/water/flood_risk/3_compo.htm - European Commission
[10] "India Floods" https://www.bbc.com/news/av/world-asia-india-55970750 - BBC 2021
[11] "Denmark becomes a leader in climate change mitigation" https://www.brinknews.com/denmark-becomes-a-leader-in-climate-change/#:~:text=Denmark's%20parliament%20recently%20voted%20to,carbon%20from%20the%20Danish%20economy. - Brink News 2020

V. Timeline of Events

Date	Event
1963	Meeting with experts - concern relating to "immense flooding"
1965	Scientists on US President's Science Advisory Committee state concerns about a "greenhouse effect"
1968	Studies warn of possible collapse of Antarctic ice sheets
1986	Chernobyl reactor meltdown cripples plan to replace fossil fuels with nuclear power
1993	Greenland ice cores suggest that large changes in climate (on a regional scale) can occur in the span of one decade
2014	Rising Sea Levels - Pacific Islanders Alarmed
2015-2016	Drafting and signing of Paris Climate Agreement
2018	Greta Thunberg starts "Fridays for Future" and stands up to politicians around the world, speaking out against global warming

VI. Previous & Possible Solutions

A. Previous Solutions

There have been many attempts to help prevent disaster caused by high tide. This includes building seawalls and dams, using beaches and coastal areas as barriers, raising roads, and much more.[12]While all of these things are often effective to prevent catastrophe, they don't deal with the problem at its source. They don't prevent a rise in sea level, but just deal with the aftermath. Whilst this is also important, it is equally necessary to stop rising sea levels in general. Not only because they are constantly rising and a seawall for example won't always work, but also because there are already places being flooded and drowned where measures such as the ones mentioned above would not suffice.

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[12] "Solving for Sea Level Rise" https://medium.com/firststreet/solving-for-sea-level-rise-b95600751525 - First Street Foundation 2018

B. Possible Solutions

Possible solutions look similar. With the above mentioned measures such as building dams, etc. we can possibly help the future. It is however not a complete solution. The main solution to stop a rise in sea level is to stop global warming, the core of the issue. As touched on before, there are several ways of stopping global warming and effectively stopping a rise in sea level.

VII. Conclusion

"You know that with a sea-level rise of over 1.5 metres, hundreds of millions of people would be dead. They would simply be wiped out." President Mohamed Nasheed of the Republic of Maldives.[13]

Rising sea levels are bound to cause catastrophes. Environmental displacement, humans at risk, infrastructure at risk, and drowned cities. These are just a few of the outcomes of high tide. The need to stop rising sea levels, to stop global warming is urgent. Not only are people's lives at risk, but also the world as we know it. The animals, the environment, and the comforts of our home will all change drastically for the worse if we do not take measures now.

Now is the time to change these things for the better. We still have the opportunity to change the future. That opportunity won't last long if we do not act now. All member states are called upon to work together to tackle this issue.

VIII. Questions to Consider

- What can (any specific) member state implement right now in order to slow down flooding?
- What can be done to save or prepare a coastal area that will likely be hit by massive floods?
- Where (in what already implemented measures/laws, in what areas, etc.) can we reinforce and strengthen the fight against global warming?
- How do we implement long-lasting measures that can stop or slow down global warming and accordingly also slow down mass floods?
- What alliances can we make or strengthen in order to intensify the combined fight against global warming?

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[13] "Small Islands, Rising Seas" https://www.un.org/en/chronicle/article/small-islands-rising-seas

IX. Sources for further research

https://climate.nasa.gov/effects/#:~:text=Increased%20heat%2C%20drought%20and%20insect,coastal%20areas%20are%20additional%20concerns.
This source talks about the general effects of climate change. It is very interesting and educational.

https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level#:~:text=Global%20mean%20sea%20level%20has,of%20seawater%20as%20it%20warms.
Very interesting and informative. Shows good statistics related to rise in sea level.

https://sealevelrise.org/solutions/
Talks about solutions to rise in sea level.

https://www.chiefscientist.qld.gov.au/publications/understanding-floods/flood-consequences
Talks about consequences of flooding.

X. Works Cited & Bibliography

"Climate Change: Global Sea Level | NOAA Climate.Gov." *Climate.Gov*, Climate.gov, www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level#:%7E:text=Global%20mean%20sea%20level%20has,of%20seawater%20as%20it%20warms Accessed 27 Mar. 2021

Jackson, Randal. "The Effects of Climate Change." *Climate Change: Vital Signs of the Planet*, climate.nasa.gov/effects/#:%7E:text=Increased%20heat%2C%20drought%20and%20insect,coastal%20areas%20are%20additional%20concerns. Accessed 7 Apr. 2021.

"Report: Flooded Future: Global Vulnerability to Sea Level Rise Worse than Previously Understood." *Climate Central*, ClimateC, www.climatecentral.org/news/report-flooded-future-global-vulnerability-to-sea-level-rise-worse-than-previously-understood#:%7E:text=As%20sea%20levels%20continue%20to,below%20the%20high%20tide%20line Accessed 27 Mar. 2021.

"Sea Level Rise Is Inevitable." *The Conversation*, theconversation.com/sea-level-rise-is-inevitable-but-what-we-do-today-can-still-prevent-catastrophe-for-coastal-regions-124129 Accessed 7 Apr. 2021

United Nations. "Small Islands, Rising Seas." *United Nations*, UN, www.un.org/en/chronicle/article/small-islands-rising-seas. Accessed 27 Mar. 2021.