

Sea Level Rise

Negotiators must focus more attention on sea level rise and adaptation finance to meet the needs of coastal and small island nations

- **Small island and coastal nations** face considerable risk from sea level rise and increased storm surge flooding
- **Many island nations** lack the funds to adequately implement adaptive measures against flooding
- **Negotiators partially addressed** the concerns of SIDS and coastal nations at risk for flooding and inundation, promising loss and damage funding with the final Sharm-El Sheikh Implementation Plan
- **Some emphasis** was placed on oceans in general, with sea level rise being part of this focus at COP27
- **Greater emphasis** should be placed on rising sea levels, failing coastal infrastructure, and at-risk coastal populations
- **More needs to be done** by wealthier nations to achieve the goal of providing \$100B a year to developing nations outlined in the Copenhagen Accord

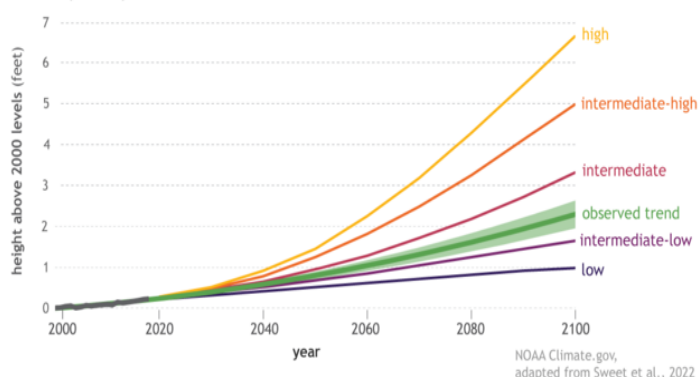
What is the issue?

Global sea levels have been rising at an unprecedented rate in the last century. Sea levels have increased more than 200 millimetres since 1900 and are expected to rise at an increasing rate in the future.¹ Sea level rise is caused by the thermal expansion of the ocean as it warms, as well as the melting of ice sheets and glaciers. Both factors are directly related to human greenhouse emissions.² When coupled with storm surges, sea level rise can also contribute significantly to coastal flooding.

At COP26, the Parties established the Glasgow-Sharm el-Sheikh work programme on the global goal of adaptation. This programme worked towards the implementation of the adaptation goals outlined in the Paris Agreement, support for adaptation in vulnerable countries, and the review of adaptation progress in the Global Stocktake.³ Last year, developed nations pledged to double finance for adaptation, but many nations are calling for even greater commitments.⁴ Adaptation finance will be key as nations prepare for the losses and damages incurred by rising sea levels.

The graphic below illustrates the potential projections of global sea level rise by 2100. Increasingly, observed trends indicate that sea levels will surpass the low and intermediate-low scenarios.

Possible pathways for future sea level rise



Why is this important?

Rising sea levels pose significant challenges to governments and societies around the world. Assuming a low-end estimate of 1 metre of sea level rise by 2100, hundreds of millions of people are expected to be displaced, with expected losses of 800 to 1000 billion USD by the end of the century.⁵ Furthermore, even if global warming is reversed by net negative greenhouse gas emissions, sea levels will continue to rise for decades,⁶ indicating that adaptation planning is critical even if emissions are decreased.

The funds promised by wealthy nations in the Copenhagen Accord are desperately needed by SIDS and developing nations on the coast to effectively implement adaptation measures. Many of these developing nations have failing or non-existent coastal infrastructure. As sea levels rise and the intensity of extreme weather events is expected to increase, these funds are essential to the survival and well-being of these nations. The creation of a loss and damage fund could also help fill the gaps in addressing countries impacted by sea level rise.

While developed countries have been slow to mobilize the necessary funds, a more robust climate finance plan is likely to be a key issue at COP27, with SIDS expected to be at the forefront of negotiations.

What happened at COP27 on this issue?

While most high-level negotiations focused on mitigation goals and climate finance, adaptation seemed to be a smaller topic of conversation at COP27. However, many small island nations and scientific delegations emphasized the importance of adapting to sea level rise, especially noting that many island nations are already experiencing severe inundation and that this trend is expected to continue.

Pavilions for SIDS and international organizations such as CARICOM hosted talks on regional and local sea level rise solutions. The Cryosphere Pavilion focused on the science behind glacial melting and sea level rise, presenting lectures such as “IPCC Projections and Planning for Extreme Sea Level Rise Risk.” The Ocean Pavilion focused on all issues related to the oceans and presented panel discussion such as “Building Coastal Resilience for Island States and Coastal Communities.” The Ocean Pavilion also emphasized the concept of blue carbon and the importance of coastal nature-based solutions to climate change. Sea greases, mangrove forests, and tidal marshes all provide significant benefits for the climate. These nature-based solutions act as carbon sinks by sequestering carbon at incredible rates. Additionally, they can help protect coastal communities against flooding, making them benefits to both mitigation and adaptation efforts.

In a significant move for climate finance, the Group of 7 implemented a new program called “Global Shield,” which aims to facilitate insurance and disaster relief funding for countries vulnerable to climate change. The program is in direct coordination with the Vulnerable 20 group of countries.⁷

In a decision entitled, “Long-term climate finance,” the Assembly urged developed country Parties to “fully deliver on the USD \$100 billion per year goal urgently.” The decision recognized that many developed countries are not meeting their promised pledges and noted with appreciation the contributions to the Adaptation Fund by those who are.⁸

A key result of CMA4 was the decision to create an official fund for loss and damage. This outcome means that for the first time, developing countries will begin to be compensated for losses and damages incurred by climate change, including loss of life, land, and property from sea level rise.⁹ The fund is set to become operational after COP28 and will focus on supporting the countries that are “particularly vulnerable” to climate change.

The culminating decision of COP27 was the Sharm-El Sheikh Implementation Plan. Adopted after days of intense negotiations, the plan re-committed the global community to the goal of limiting warming to 1.5 °C. The plan stresses the importance of facilitating the energy transition; however, the wording included the accommodation of “low-emission” energy, which some Parties may interpret to include natural gas. The document also recognized the importance of enhancing adaptive capacity and urged developed countries to scale up their “provision of climate finance, technology transfer and capacity-building for adaptation.” Finally, the plan explicitly encouraged Parties “to consider, as appropriate, ocean-based action.”¹⁰

Policy recommendations

1) Invest in nature-based solutions to coastal adaptation

Nature-based solutions, such as sea greases, mangroves, and marshes present uniquely beneficial opportunities for climate investment in coastal areas. Besides providing natural barriers against flooding, they protect biodiversity, improve local food security, and act as carbon sinks. This myriad of benefits means they should be a clear focus for future climate talks.

2) Create more accountability for emerging economies and developed countries in climate finance

Typically, developed countries have borne the greatest burden for climate finance. Larger emerging economies, such as China, India, and Brazil have historically contributed very little or not at all to adaptation funding. As the demand for adaptation finance increases, it will become necessary for these larger developing countries to contribute. Furthermore, many developed countries must face some sort of accountability for failing to meet their pledged contributions.

3) Place more emphasis on adaptation funding

There is still much greater support for mitigation finance than there is for adaptation funding. However, especially related to sea level rise, adaptation funding is key. Despite the future success or failure of reducing greenhouse gas emissions, sea levels will continue to rise. Adaptation funding will continue to be of the utmost importance, as millions more around the world are further endangered by sea level rise, in particular those residing in developing nations.

References

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