

Why is sea-level rise important?

Sea-level rise is one of the most urgent climate threats, causing flood inundation, coastal erosion, shoreline retreat and saltwater intrusion. These impacts affect global shorelines, coastal infrastructure, and communities. About 10% of the world's population, roughly 770 million people, live in coastal areas less than 5 meters above the high tide line. A significant reduction in greenhouse gas emissions and effective adaptation action is needed to limit the risk from rising sea levels.

What is adaptation?

Adaptation is action taken to reduce the impacts experienced from climate change. Adaptation can take many forms across communities, regions, and countries; there is no “one-size-fits-all” solution. Adaptation can include building flood defences, redesigning communication systems, and restoring coastal habitats. Adaptation is a critical component of long-term responses to climate change to protect people, livelihoods, and ecosystems.

The map provides an example of an adaption option that has been implemented in each location, and many are considered across the globe.

US



Some US cities are building “living shorelines” from rocks, shells, and native plants to reduce coastal erosion while maintaining natural shoreline processes.

Arctic



As sea ice melts and sea level changes in the Arctic, new areas will be accessible and trade routes will open. Policy can be implemented to govern this.

UK



The UK invests in sea walls, flood barriers and levees to protect people and infrastructure from coastal flooding and erosion.

China



To make urban areas more resilient to floods, “sponge cities” absorb excess floodwaters, and release it slowly during drier periods.

South-East Asia



Rising seas make hurricanes and other storms more dangerous. Mangroves trap sediment and protect the coast against large waves and storm surges.

Pacific Islands



Saltwater intrusion damages crops and contaminates fresh water sources. To combat water and food insecurity, farmers are growing more salt tolerant crops.

Australia



Beaches and dunes are receding as sea level rises, so they are replenished with sand and grasses to minimise the impact of storm surges.



Scan the QR code to learn more about Looking North: the UK and the Arctic - GOV.UK (www.gov.uk)



Scan the QR code to learn more about IPCC's Sixth Assessment Report (AR6)



Scan the QR code to learn more about UKCP18 sea-level projections

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