

Good COP, Bad COP: A Critical Analysis of Adaptation and Resilience at the Conference of Parties

Climate change is having a significant impact on a global scale. Extreme weather events, including fires, floods, and heat waves, are more prevalent in our everyday lives. Subsequently, people across the world are experiencing economic, social, and environmental consequences. In light of this, improving global action on adaptation and resilience is of utmost concern (Sharm-El-Sheikh Adaptation Agenda, 2022). The Conference of Parties (COP), which brings together all parties annually to debate combating climate change, is essential for enacting new policies and guaranteeing that the earth's temperature does not rise above 2 degrees Celsius above pre-industrial levels. COP27, like previous COPs, recognised the need for immediate action to build a more resilient society capable of combating climate change and adapting to its risks. This report will assess how adaptation and resilience have been delivered in past COP meetings while discussing their prospects.

According to the UNFCC (2022), adaptation is defined as 'adjustments in ecological, social, or economic systems in response to actual or anticipated climatic stimuli and their effects.' Whereas climate resilience refers to the capacity to foresee, plan for, and react to hazardous events, trends, or disturbances linked to the climate (Centre for Climate and Energy Solutions, 2021). The Adaptation and Agriculture Day at COP27 was held on November 12th, 2022, and addressed crucial ways for nations to think about overcoming climatic problems. It is evident that countries must adapt to climate change to guarantee the security of resources and the safety of the population (Sharm-El-Sheikh Adaptation Agenda, 2022). A coordinated effort from all parties, including stakeholders, organisations, and the government, is required to manage and execute strategies for successful adaptation to climate

change. However, there is no set method for adapting, and it differs from nation to nation based on geography. It can include everything from drought-resistant agriculture to flood defences (UNFCCC, 2022). As society has evolved with technology and infrastructure over the years, so have the recommendations at each COP on how we can adapt.

COP3 was held in Kyoto and introduced the Kyoto Protocol, which 192 parties signed on December 11th, 1997, and entered into force on February 16th, 2005. In summary, this protocol calls for reductions in greenhouse gas (GHG) emissions in accordance with individual country targets while also asking that countries implement mitigation policies and report on progress (UNFCCC, n.d.). The first commitment period (2008–2012) saw a five per cent reduction in emissions compared to 1990 levels, demonstrating notable progress. However, the protocol has been criticised because, historically, climate change responsibility was placed on the country due to its level of development, with developed countries leading in reducing emissions (Ivanova, 2016). Less developed nations were given smaller goals, which led to the perception that they were receiving a free pass and lacked a straightforward solution. Developed countries now account for less than 35 per cent, and developing countries account for 65 per cent of global emissions (Canete, 2015), resulting in an overall decrease in motivation to act (Ivanova, 2016).

Furthermore, the Doha Amendment to the Kyoto Protocol established the second commitment period, adopted on December 8th, 2011, from 2013 to 2020. During this period, parties committed to reducing GHG levels by eighteen per cent below 1990 levels (UNFCCC, n.d.). Adaptation featured strongly in COP3 as the Adaptation Fund (AF) was founded to finance adaptation projects in developing countries (UNFCCC, n.d.).

COP27 saw progress made on adaptation and resilience because of the AF. In 2012 a project in Egypt was funded using US\$10 million from the AF to build resilience from rising temperatures by enhancing food and water security (Adaptation Fund, 2022). This was achieved using innovative farming techniques such as improved irrigation systems and heat-tolerant wheat. Furthermore, early warning systems have been introduced to reduce losses because of extreme weather, which has positively impacted the lives of forty-nine vulnerable communities in the region, boosting incomes by 30-35% (Adaptation Fund, 2022). Due to its high success, the project aligns with Egypt's National Climate Adaptation Plan and has been mirrored in a further fifteen new communities (Adaptation Fund, 2022)

Research by Convenska et al. (2020) criticised the AF's responsiveness to developing nations while noting that the organisation is "technically adequate." The study discovered that the AF Board does not follow COP advice on adaptation priorities after conducting interviews with the AF board and examining project analysis and adherence to AF guidelines. COP is seen as a platform for developing nations to express their concerns and demands for adaptation. Failure to include COP guidance in the AF could pose challenges for countries to apply for financial aid. The research also discovered that while the AF ensured capacity-building was a part of adaptation projects, it did not support initiatives solely devoted to it. While numerous nations have stated that capacity building is imperative for effective adaptation, concentrating only on one type of adaptation is constricting. This illustrates how the AF falls short of meeting the various adaptation requirements of developing nations.

COP13, held in 2007, introduced the Bali Road Map, which included the Bali Action Plan (BAP) and comprised five main topics; shared vision, mitigation, adaptation, technology and finance (UNFCCC, n.d). Although the BAP included all of

the major talking points that pointed to success, it was intended to be a two-year procedure that would have been finalised at COP15 in Copenhagen.

COP15, held in Copenhagen in 2009, was regarded as a 'low point' in the history of the climate regime (Savaresi, 2016). The Copenhagen Accord was deemed a failure as countries were expected to recognise the negative implications of rising temperatures, but no legally binding agreements were made to address it (Guardian, 2009). It outlined voluntary efforts for countries to acknowledge, but vulnerable countries were expecting binding targets to ensure the world temperature does not exceed 1.5°C. Considered to be insufficient, COP15 paved the way for countries to recognise that global goals and targets would be the way to reduce emissions and adapt to climate change (Ivanova, 2016). The Copenhagen Accord does reflect progress in one aspect, namely finance. The agreement recognises the need for significantly more financial resources to support mitigation and adaptation, and it sets a target of raising \$100 billion annually by 2020 to help developing nations (Klein, 2010). Unfortunately, as shown in figure 1 below, this target has not been met. While

it shows a promising increase each year, it is still disappointing to see that the goal was never met.

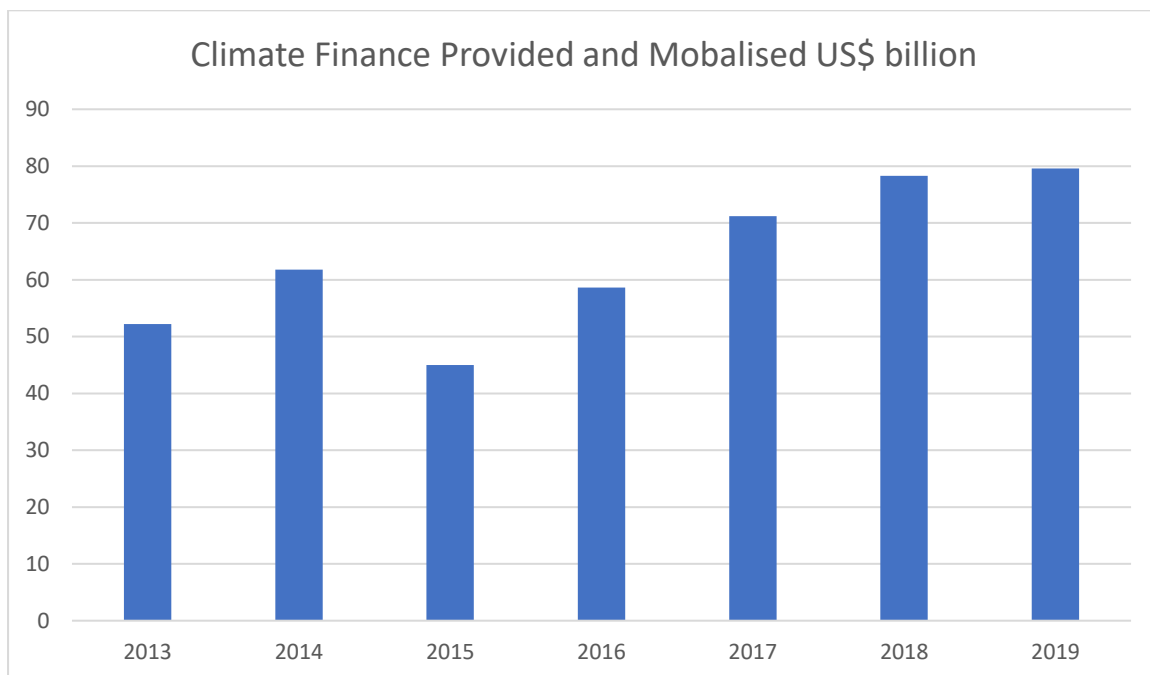


Figure 1 Source House of Commons Library, 2021

Furthermore, it mentions the provision for developed countries to finance \$30 billion for adaptation and mitigation between 2010-2021, prioritising the least developed countries. Some negotiators have expressed doubts, though, that the money mentioned in the Copenhagen Accord will materialise and, if it does, that it will be new and additional money due to the non-binding nature of the agreement, the money's ambiguous provenance, and the history of pledges that were not kept (Klein, 2010). Countries anticipated a structured path following the BAP two-year plan coming to fruition in Copenhagen. However, it fell short of expectations, causing trust in the COP to be questioned and criticised.

Following on from the problematic COP15, COP16 was held in Cancun and saw an immediate shift in how adaptation and resilience were to be tackled. The Least Developed Countries Expert Group (LEG) has been providing support to least

developed countries (LDCs) since its establishment in 2001 and has recognised the importance of adaptation in addressing climate change (UNFCCC NAP Progress Report, 2021). Therefore, an important component of COP16 was the introduction of the National Adaptation Plan (NAP) to enable LDCs to identify and develop adaptation plans. A NAP has two main objectives: to make LDCs more resilient and adaptable to decrease their vulnerability to the effects of climate change and to incorporate climate change adaptation into new and existing policies, plans, and strategies in all sectors at various levels (UNFCCC NAP Progress Report, 2021). Based on data made available to the LEG as of October 14, 2021, 129 of the 154 developing nations had engaged in at least one activity pertaining to the process of creating and implementing NAPs, 61 of which are receiving assistance from the Green Climate Fund (GCF) and a total of 26 completed NAPs have been submitted (UNFCCC NAP Progress Report, 2021). Figure 2 displays the nations by shade, with darker shades indicating those with an NAP, lighter shades indicating those in the process, and no shades indicating those not yet in the process.

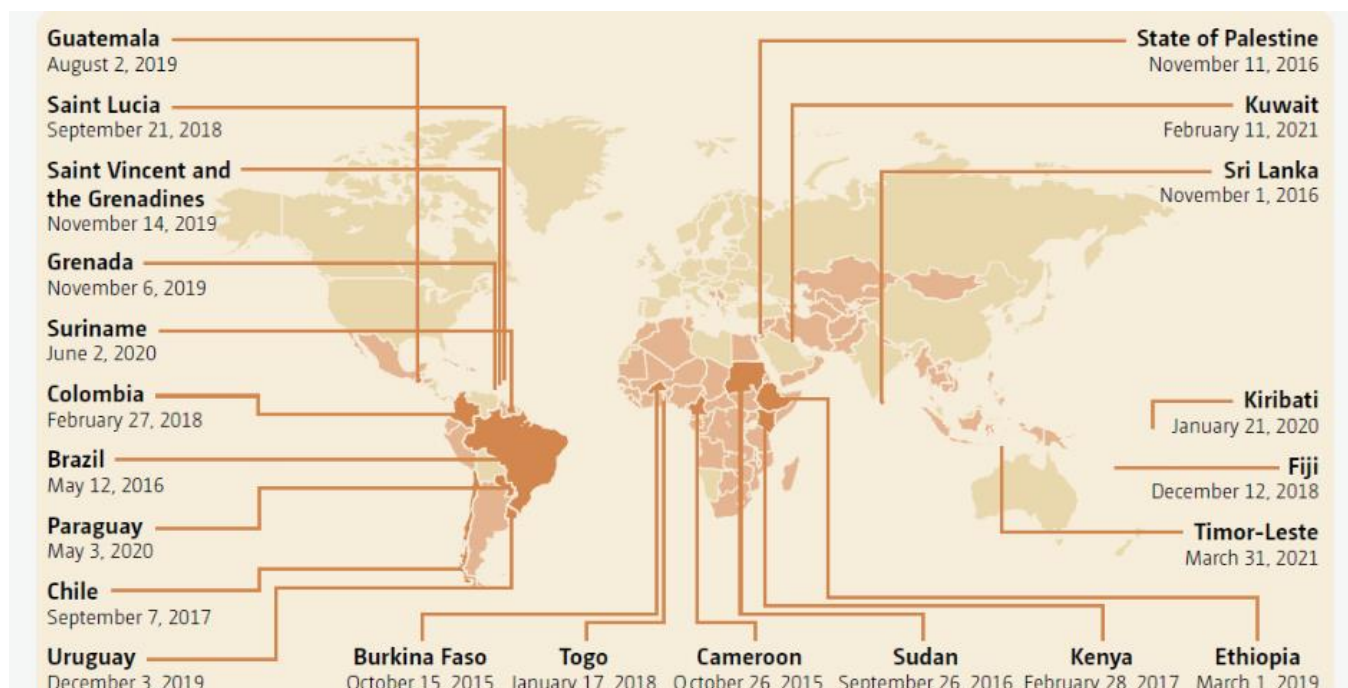


Figure 2 UNFCCC NAP Progress Map, 2021

Furthermore, governments decided to create the Green Climate Fund (GCF) at COP16 to increase the supply of long-term funding for developing nations. The fund will assist initiatives, policies, and other programmes in developing nations. Under its Readiness and Preparatory Support Programme, GCF continues to increase its assistance to emerging nations. While another 31 adaptation planning proposals were in different stages of review as of July 31st, 2022, the GCF had approved 84 adaptation planning proposals (Green Climate Fund Report, 2022). Furthermore, in a report from 2022, the GCF acknowledged the critical milestone of reaching USD 10 billion in funding approved with a total number of 200 projects approved. These projects are expected to decrease 2.1 billion tonnes of carbon dioxide from the atmosphere. The report also noted the increase in support for developing countries in producing their NAPs through the designated adaptation funding stream, as 64% of funding is allocated to LDCs (Green Climate Fund, 2022). The Green Climate Fund considers adaptation a major part of the response to climate change and endeavours to have an effect in eight areas of mitigation and adaptation outlined below in Figure 3.



Figure 3 Green Climate Fund Eight Impact Areas (Source: Green Climate Fund, 2023)

The eight result areas serve as reference points for the GCF and its partners in ensuring a proactive strategy when establishing programmes and projects while considering the requirements and objectives of individual countries. The result areas were selected because each has the potential to significantly affect mitigation and adaptation (Green Climate Fund, n.d). These result areas all intertwine. For example, infrastructure can be linked to transportation, water, health etc., meaning that a failure in one area can impact them all. For example, Barbados is attempting to increase food production as an adaptation strategy. This project seeks to increase access to water by investing in the circular economy using carbon-neutral, climate-resilient water and energy management technologies that guarantee water is protected, managed, recycled, reused, and conserved. The initiative will help to improve health, well-being, and productivity (Green Climate Fund, 2022).

Although COP16 was held 13 years ago, it provided nations with guidance on how to adapt, write adaptation plans, and acknowledge the issue. Providing nations with clear objectives and targets to work towards alongside monitoring progress will ensure that countries successfully adapt and become resilient to climate change. COP 16 was an essential building block in the journey of adaptation and resilience to climate change portraying a great success in providing nations with a clear framework for tackling the problem.

Paris hosted COP21 in 2015, and it was a huge triumph. The internationally recognised Paris Agreement, signed by 196 parties, ensures global accountability for climate change. It satisfies the fundamental standards for an international treaty's effectiveness stated by academics, researchers, and the UN Secretary-General: universal commitments to emissions reduction, openness and responsibility, financial resources, and high compliance rates (Ivanova, 2016). With a goal of 1.5°C above pre-industrial levels, this legally binding agreement mandates that all nations now contribute to achieving goals and keeping the global temperature below 2°C. (Art. 2.1) however, each individual country sets their own emission targets. Working on a five-year cycle, the Paris Agreement implements increasingly more ambitious targets, and since 2020, countries have submitted Nationally Determined Contributions (NDCs). These NDCs include ways in which countries must 'build resilience and adapt to the impacts of climate change' (UNFCCC, 2023). Additionally, COP21 created a legally binding framework for tracking, reporting, and measuring progress. This framework was designed 'with in-built flexibility, considering Parties' different capacities and building upon collective experience' (Art 13.1). Furthermore, countries must regularly report on the implementation of NDCs (Art 13.7) and mandate a technical expert review (Art 13.11). However, this has been critiqued. Faulker (2016) noted that the

agreement did not deliver the precise regulations to control the tracking, reporting, and verification of emissions, nor did they ensure that those commitments and policies would be implemented nationally. Furthermore, even though countries are obligated to submit NDCs every five years, there are no penalties for not meeting the set targets, as NDCs are not legally binding (Ivanova, 2016). COP21 has been regarded as a success. It presents prospects for developing and implementing strategies to work creatively with ecosystems, increase efficiency, and create new technologies to lower emissions and increase resilience across nations. It put into place everything that the Copenhagen Accord could not (Ivanova, 2016). The Paris Agreement offers a framework for those nations that require it to receive financial, technical, and capacity-building assistance. Providing financial help to less developed countries is paramount in adapting to climate change, as large-scale investments are essential in providing countries with the tools to reduce emissions (UNFCCC, 2023).

COP26, held in Glasgow in 2021, emphasised adaptation and resilience throughout the conference, and the Resilience Hub was established. It was the first occasion at COP that resilience had a physical home (Resilience Hub Synthesis Report, 2022). In addition, the Race to Resilience programme was established to enhance resilience for four billion people from vulnerable groups by 2030 (Race to Resilience, 2021). The campaign's goal is to inspire an uptick in global ambition for climate resilience by prioritising people and the environment in the pursuit of a resilient world where we not only survive but also flourish in the face of climate shocks and stresses. The partnership focuses on frontline communities, transforming urban spaces to clean cities, equipping local farmers with the tools to adapt, and protecting coastal communities from climate shocks (Race to Resilience, 2021). As part of the COP26, a project named Restore Africa was launched with a USD\$150 million finance

package in order to restore 1.9 million hectares of agricultural land and improve the lives of 1.5 million farming communities across Kenya, Ethiopia, Uganda, Malawi, Tanzania and Zambia (Race to Resilience, 2022). According to United Nations Environment Programme estimates, 319 million hectares of Africa are at risk of desertification, and more than 25% of the continent is becoming unusable for agriculture due to degradation (Race to Resilience 2022). Therefore, projects such as Restore Africa are paramount in investing in sustainable farming practices and new technology. In partnership with Race to Resilience is RegionsAdapt. Launched in Paris at COP21, this initiative has 77 signatory regions across five continents, impacting over 300 million people (Regions4, n.d). By joining this initiative, governments will assist in planning, implementing, and reporting on their adaptation plans. For instance, with help from RegionsAdapt, Catalonia imposed a Global Adaptation Indicator to monitor progress, and since 2017 has reported an 8.5% increase in adaptation (RegionsAdapt Progress Report, 2022).

Adaptation and resilience were further elevated by COP27 with the launch of the Sharm-El-Sheikh Adaptation Agenda (2022), presenting thirty global adaptation targets for 2030 to increase resilience for four billion people. It notes that adaptation and resilience implementation is lagging compared to mitigation; however, building resilience starts with implementing local adaptation strategies that consider local communities and geographies. In order to achieve this, there needs to be an effort across all sectors to build climate-resilient development in what the Intergovernmental Panel on Climate Change (IPCC) calls transformative solutions. In addition, COP27 implemented the Marrakech Partnership, which supports the Paris Agreement in collaborating with multiple sectors to act on climate change. As part of the Sharm-El-Sheikh Adaptation Agenda, the Marrakech Partnership defined five key impact

systems as guidance towards a more resilient world. These impact systems include; resilient food and agriculture systems, resilient water and natural systems, resilient coastal and ocean systems and resilient infrastructure systems. Within these impact systems lies a set of measurable and trackable targets with built-in flexibility for local applications. Focusing on agriculture briefly, it is apparent that climate change poses a significant risk to food security due to extreme weather events. The Sharm-El-Shaikh Adaptation Agenda focuses on four aims; climate-resilient sustainable agriculture, reduction of food waste, healthy alternative proteins and an increase in the consumption of whole foods. While these aims are achievable, they require considerable investment and policy action, applicable across all five identified impact systems. COP27 partnered with the World Health Organisation (WHO) to launch a new Initiative on Climate Action and Nutrition (I-CAN) which will endeavour to integrate the global delivery of nutrition, sustainable food systems, and climate change adaptation and mitigation policy action to support outcomes that are advantageous to both parties in both directions. The Sharm-El-Sheikh Adaptation Agenda is the first global strategy to unite states and non-state actors around a standard set of 30 adaptation outcomes by 2030; this agenda has begun 25 new collaborative actions that will be finalised by COP28 (Resilience Hub Synthesis Report, 2022).

The UNFCCC produced a report in 2006 entitled Technologies for Adaptation to Climate Change, in this report details methods in which countries were advised to adapt, including in the agriculture sector. Figure 4 below displays the suggestions, which can be argued as vague and lacking structure.

Response strategy	Some adaptation options
• Use different crops	• Carry out research on new varieties
• Change land topography to improve water uptake and reduce wind erosion	• Subdivide large fields • Maintain grass waterways • Roughen the land surface • Build windbreaks
• Improve water use and availability and control erosion	• Line canals with plastic films • Where possible, use brackish water • Concentrate irrigation in periods of peak growth • Use drip irrigation
• Change farming practices to conserve soil moisture and nutrients, reduce run-off and control soil erosion	• Mulch stubble and straw • Rotate crops • Avoid monocropping • Use lower planting densities
• Change the timing of farm operations	• Advance sowing dates to offset moisture stress during warm periods

Figure 4 Examples of Adaptation Options for Agriculture (UNFCCC, 2006)

Point one suggests using different crops and researching different varieties; whilst this suggestion is the basic concept of adaptation and building resilience, it is not a concrete plan to propose to vulnerable communities without resources and investment. While this report was written in 2006 and technology has advanced significantly since then, it can be argued that if more was done, such as engaging with local communities to leverage local knowledge and establishing funding streams to support new ideas, we could live in a more resilient society today.

Furthermore, COP27 brought attention to a key issue that had little attention in COP26: adaptation finance. According to the COP27 Resilience Hub Synthesis Report (2022), adaptation funding streams to developing countries should be at least five to ten times lower than they should be. The Sharm-El-Sheikh Implementation Plan suggests the need for USD 4-6 trillion annually to support climate-resilient pathways (Resilience Hub Synthesis Report, 2022). COP26 acknowledged the need to identify new financial instruments; a year later, the barriers were identified at COP27. As Barbados' Prime Minister identified, one method to support this idea would be to provide low-cost, long-term capital to low-income countries following disasters (Resilience Hub Synthesis Report, 2022). At present, a significant portion of climate funding is loaned, contributing to problems for debt-ridden nations suffering from rising energy costs and recession. New initiatives such as Debt for Nature Swaps aim to free up monetary assets so governments can increase resilience without triggering an economic downturn or compromising spending on other economic priorities. Creditors will waive their debt in exchange for the government agreeing to decarbonise the economy or invest in climate-resilient infrastructure (International Monetary Fund, 2022).

Moreover, the International Monetary Fund (IMF) has suggested decarbonising the energy sector and investing in adaptation while supporting budgetary spending in countries with solid public financial management and policy credibility. Swaps should be linked to readily monitored metrics like carbon emissions or deforestation (International Monetary Fund, 2022). This has proven to be successful; in Belize, the Debt for Nature initiative has already reduced 16% of debt and 25% of debt to GDP (Resilience Hub Synthesis Report, 2022). In addition,

this has provided cash generation to conservation projects such as protecting coral reefs, mangroves, and seagrass (International Monetary Fund, 2022).

Vulnerable countries will likely pay USD290-580 billion annually in damages caused by climate change (BBC, 2022). COP27 reached a breakthrough regarding loss and damage by setting up a new fund for vulnerable communities harmed most by climate disasters (UNFCCC, 2022). Whilst this is positive, it can be argued that implementing a global Polluter Pays Principle could be more effective. However, as previously stated, the countries causing the most pollution are low-income, which would be exacerbated if they were forced to pay a penalty instead of investing in a solution. Instead, imposing a climate damages tax on large-scale polluters and redirecting the funds to climate change adaptation would establish responsibility and accountability.

Additionally, polluters' funds would be a lifeline for climate-vulnerable nations. Long-term financing would enable them to engage in resilient infrastructure that would safeguard them from extreme events like hurricanes and floods, as well as strengthen public health systems and advance them towards a more developed world (BBC, 2022).

To conclude, progress in adapting to climate change and enhancing resilience is needed, and this is achieved by multiple sectors working in synchronisation. There needs to be a collaboration between innovation, government, policy, finance, and technology to adapt successfully to climate risks and become a more resilient world. However, current adaptation and resilience are not keeping up the same pace with the increased climatic risks. The United Nations Development Programme Call for

Action (2022) report states that it has been estimated that the real cost for adaptation in developing countries is around USD300 billion a year. It is critical that we invest in adaptation and resilience to avoid the need for relief funding to address the damages and recover losses caused by climate change. With this in mind, efforts must be improved globally to improve adaptation financing, whether it be public or private sector investment, along with imposed penalties for companies contributing to high pollution levels.

A real turning point in how climate change is regarded is the Paris agreement; this turning point in history shone a bright light on what needs to be done globally and put pressure on countries to oblige to play their part. Placing binding, flexible legal targets whilst also placing responsibility for individual countries is the pinnacle of the progression of climate change (Ivanova, 2016).

Furthermore, to become a more resilient society, integrating climate risks into policy-making and long-term planning is fundamental. Including long-term strategies for resilience in NAPs and NCDs will not only prevent future financial burdens but will also improve development and, thus, finances in the long run. Moving forward in future COP meetings, there needs to be accountability for not meeting imposed targets as well as stricter monitoring and measuring for past targets. Much like the imposed five-year cycle of the Paris Agreement, targets progress needs to be identified and problems need to be rectified early on.

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