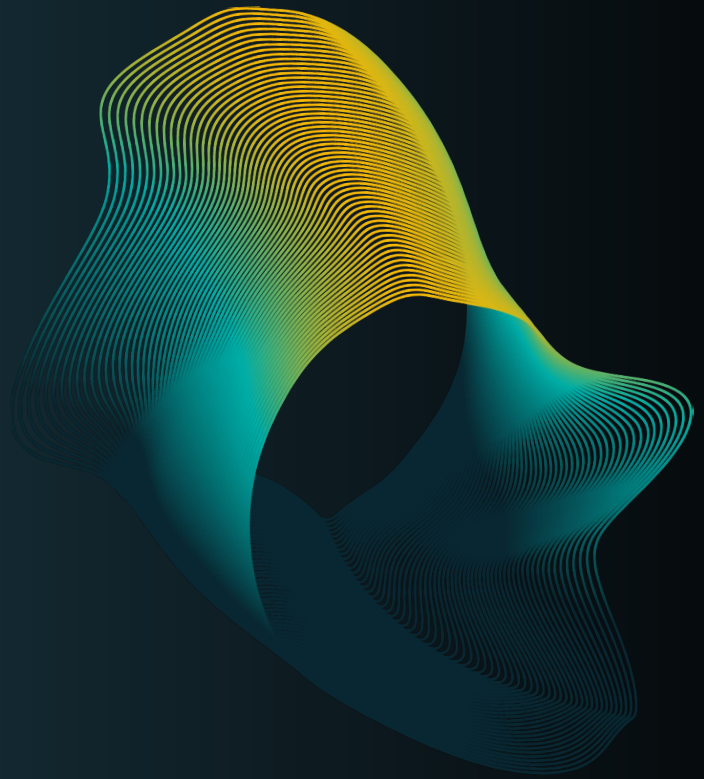
Conceptual Frameworks for Climate Action: Climate Justice, Digital Finance and Climate Finance Flows



The Climate Landscape Series

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BFA GLOBAL

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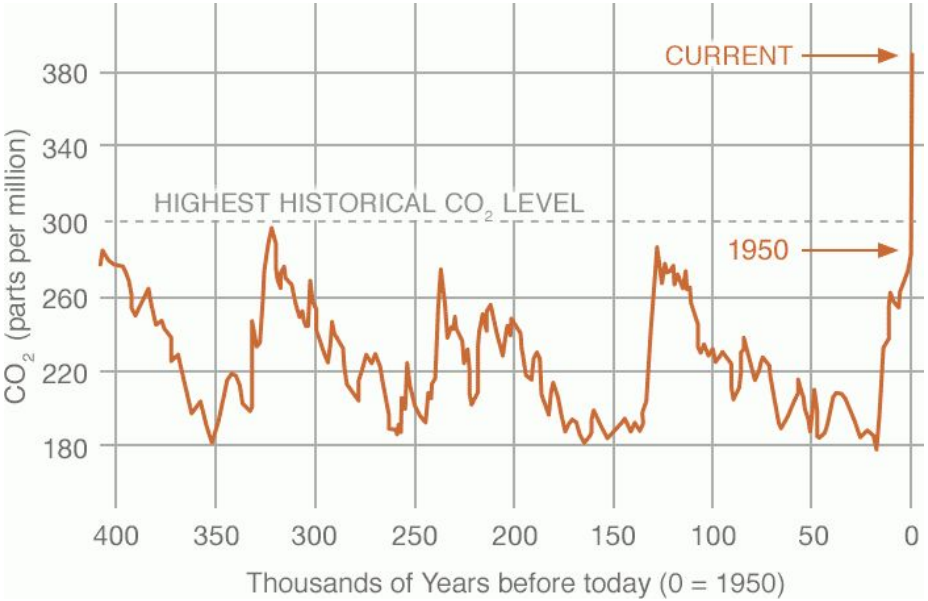
Our Climate Landscape Series Decks

- **Conceptual Frameworks for Climate Action:** Climate Justice, Digital Finance and Climate Finance Flows
- **Climate Finance Taxonomies**: Frameworks for the current landscape
- Climate Change and **Gender**
- **Climate Innovation**: Climate Smart Essential Services & The Opportunity for Philanthropy
- **Climate Resilience Insurance**: Learnings, Gaps, Opportunities
- **Inclusive Climate Finance**: G2P Programs
- Building an **Inclusive Voluntary Carbon Market** for **Resilient Communities**
- **Climate Finance**: Data and Data Platforms

Climate change and climate justice: Key concepts

Climate change is here for the long run

Atmospheric CO2 Levels Over Time



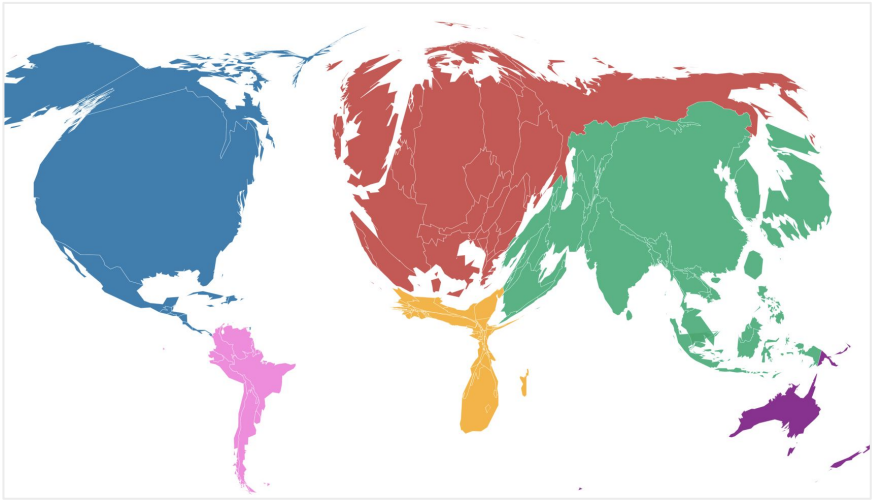
- Climate change **mitigation** seeks to reduce future emissions, or remove historical emissions to bring down the amount of carbon in the atmosphere.
- Climate change **resilience and adaptation** seeks to help those impacted by the already changing climate prepare for shocks, bounce back, rebuild, or adjust their lives and livelihoods.
- Even if we stopped all emissions today we would still need to invest in adaptation because temperature will continue to rise and remain elevated for centuries.

Source: NASA

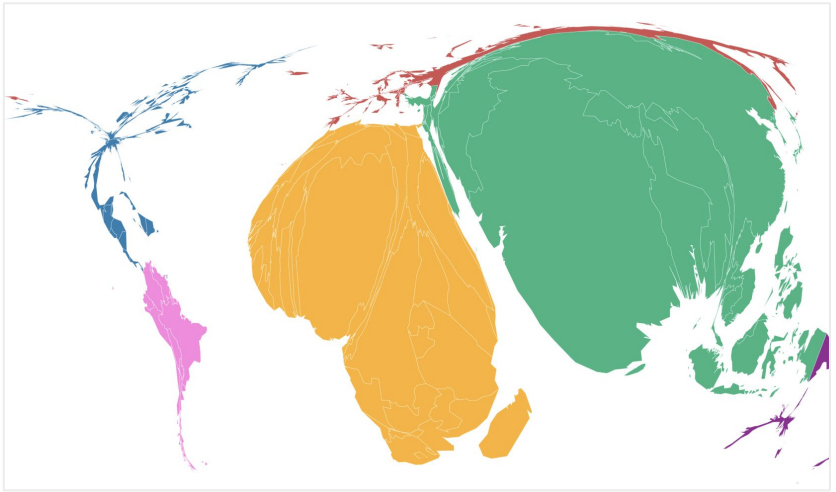
Climate justice views climate change as a human rights and social justice issue

Contrasting historical greenhouse gas emissions with vulnerability to climate change, the maps reveal a disparity between developed regions' environmental impact and the heightened risk faced by less developed areas. This discrepancy underscores climate justice concerns, emphasizing the need to prioritize the rights of those disproportionately affected by climate impacts.

RESPONSIBILITY FOR HISTORICAL EMISSIONS



4BN[1] PEOPLE VULNERABLE TO CLIMATE CHANGE



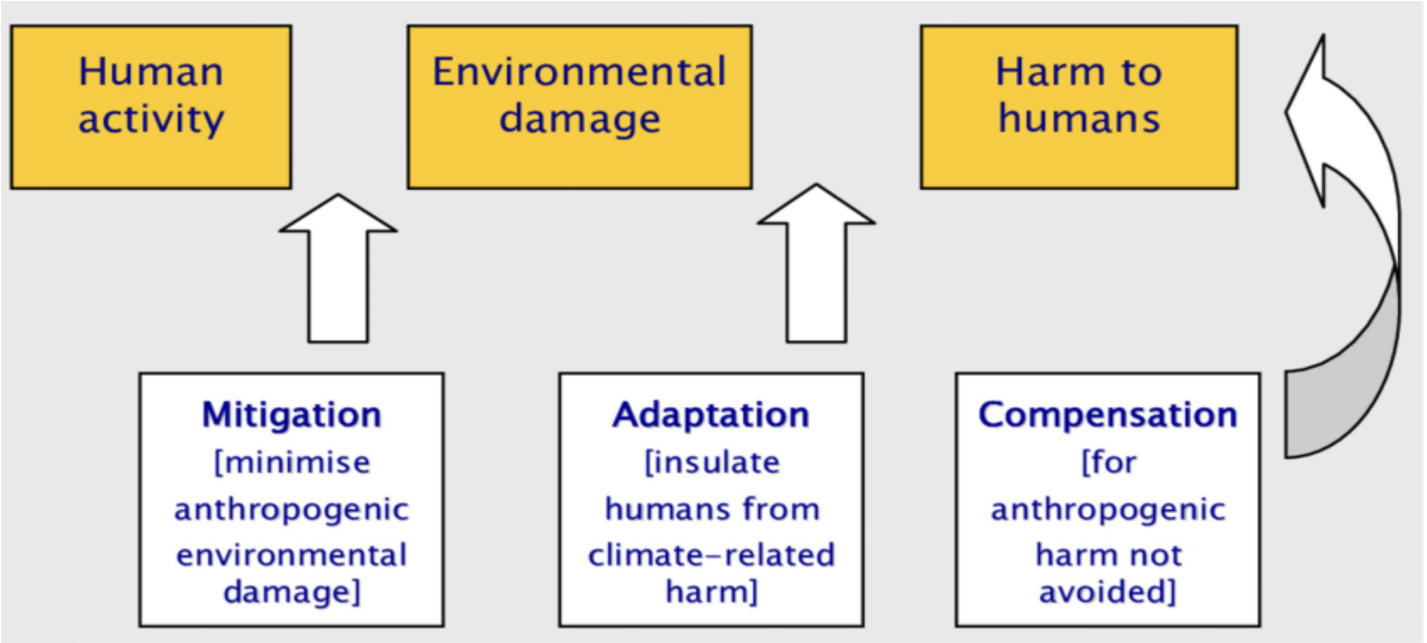
"Climate justice insists on a shift from a discourse on greenhouse gases and melting ice caps into a civil rights movement with the people and communities most vulnerable to climate impacts at its heart."

- Mary Robinson, Mary Robinson Foundation for Climate Justice

[1] Calculations from McKinsey and the UN Race to Resilience team

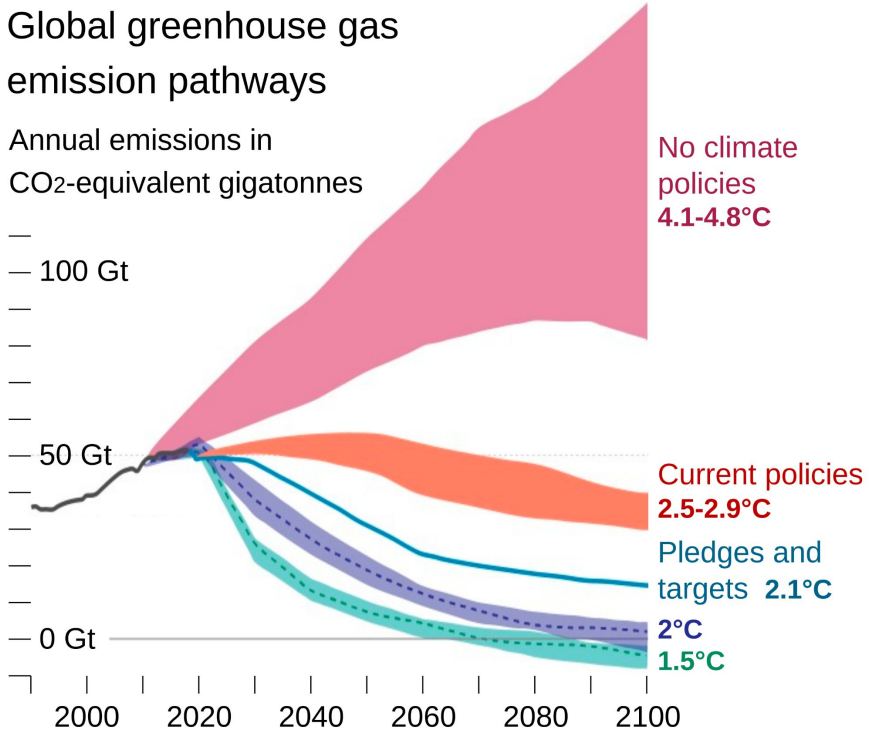
The causal chain of climate change

This graphic illustrates the direct link between human activities and their environmental consequences, framing the importance of proactive measures to mitigate and adapt to climate change. It serves to emphasize that, without action, the cycle will result in significant harm to humanity, necessitating costly compensation.



Source: Ethical interventions in the causal chain of climate change, Seumas Miller

We are very likely to miss the 1.5°C Paris Goal



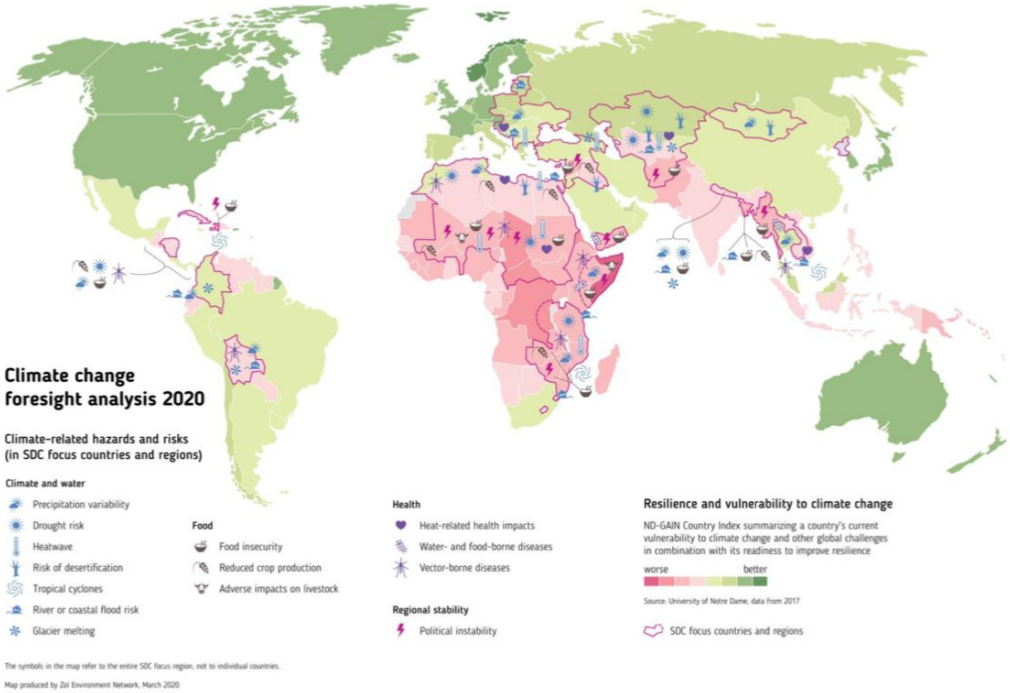
The world is facing a dire climate crisis, with current emissions reduction efforts falling short of the targets needed to limit global temperature rise to **1.5°C** above pre-industrial levels. Instead, the planet is careening towards a **2°C** or higher increase, a threshold that will unleash catastrophic consequences on the most vulnerable populations.

Sources for more information:

- NYTimes
- The Economist

Source: Chart from Wikipedia

Climate change is having dire effects on vulnerable populations



Climate change impacts are concentrated on the most vulnerable

The rapidly changing climate has had a great impact on Africa, hitting the continent harder than any other region. Unpredictable rainfall patterns, extreme weather events, and rising temperatures have created many challenges.

In the past two years alone, East and Southern Africa, as well as Syria, have been ravaged by sequential disasters, such as devastating droughts followed by extreme rainfall. These climate-induced calamities have had a wide ranging and compounding effects, fueling conflict, driving migration, and endangering public health.

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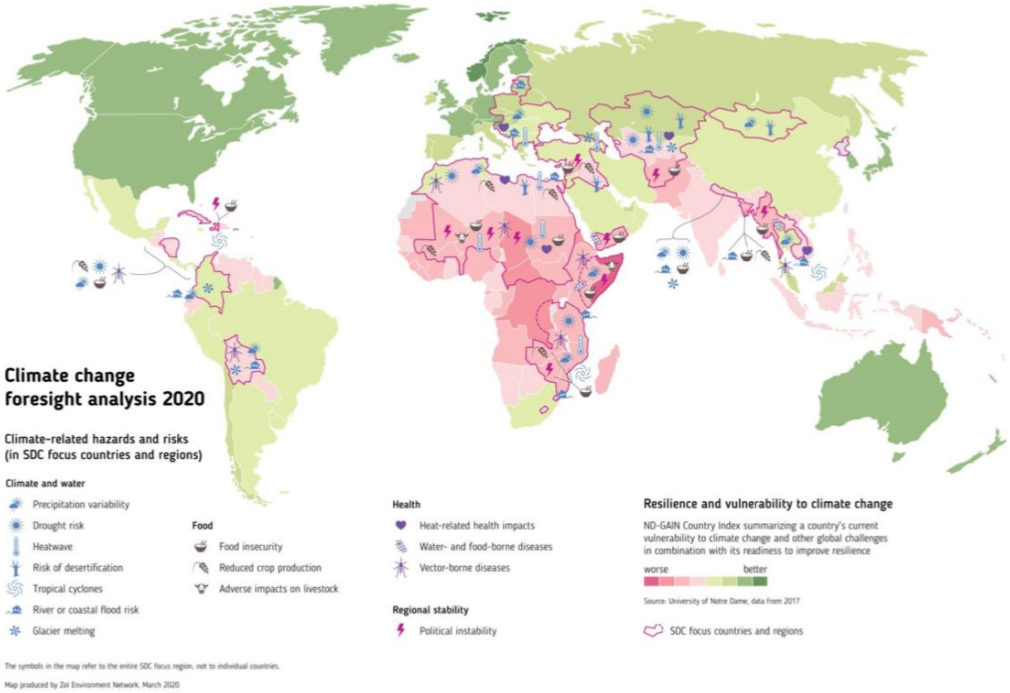
Source: Image from SDC Climate change foresight analysis 2020

Climate change is having dire effects on vulnerable populations



The consequences have been particularly dire for the most vulnerable populations, with an estimated 100 million people at risk of being pushed into extreme poverty by 2030, largely due to food insecurity.

Women have also been disproportionately affected socially, economically and politically, and due to poverty traps, the poor have lost more to climate change impacts and struggle to rebound (e.g., during a drought in Ethiopia poorest 40% lost 60-80% of their assets while wealthiest lost just 6%)

Source: Image from SDC Climate change foresight analysis 2020

Three segments of populations are extremely vulnerable to climate change impacts

URBAN POOR

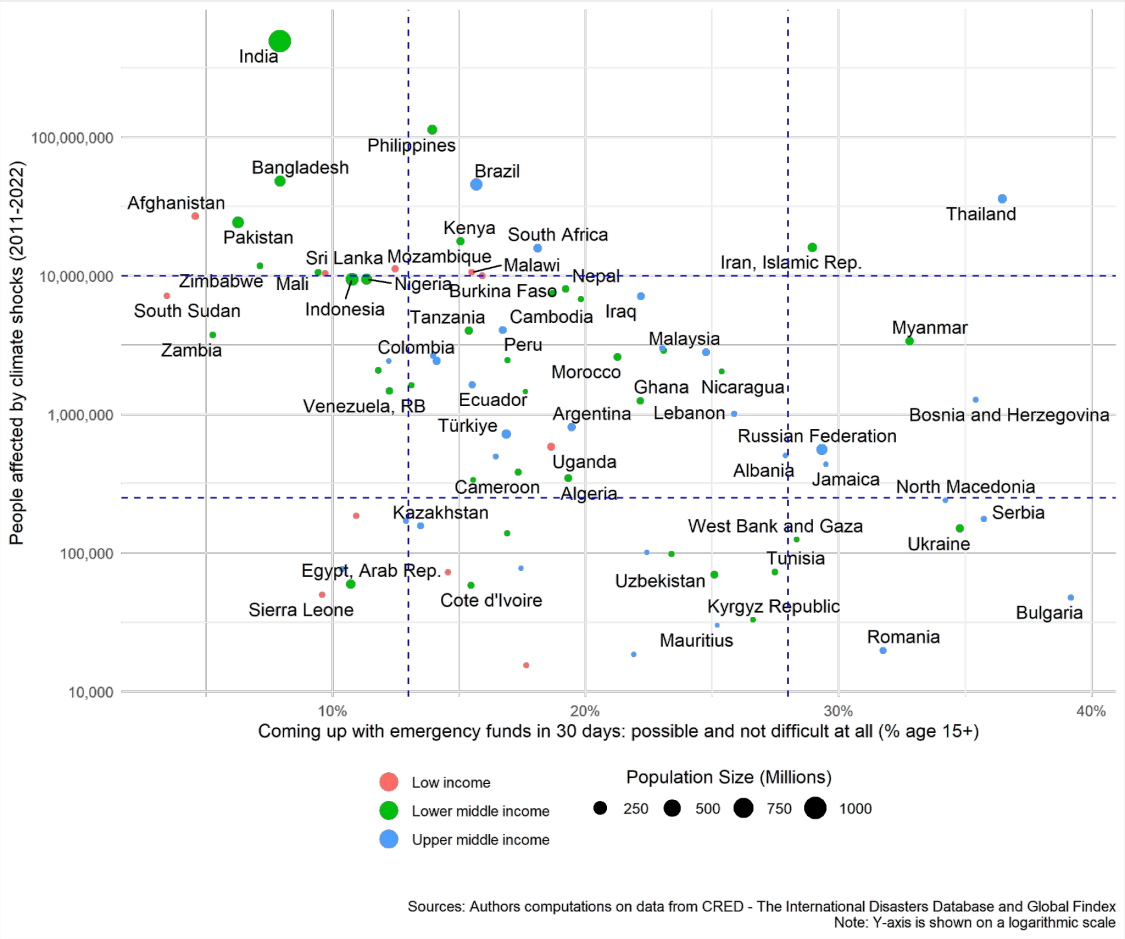
- Urban settlements will be exposed to the worst heat extremes
- Settlements are built on slopes, lack sewage and drainage, with weak materials, poor ventilation, and overcrowding
- Tend to work in informal economy, lacking safety nets, benefits, and other protections

FARMERS + PASTORALISTS AND MIGRANT WORKERS

- Crops destroyed by pests, or floods, or lack of rainfall some of these being long-run changes (i.e. sea level rise in Bangladesh generating urban migration)
- Low yields lead to unsustainable resource use and poverty traps
- 65% of poor working adults depend on agriculture for their livelihoods

COASTAL POPULATIONS + FISHERS

- Increasing global temperatures mean that 570 cities and 800 million people will be exposed to rising seas and storm surges, primarily in East and South Asia
- Fishers incomes are seasonal and dependent on climate conditions

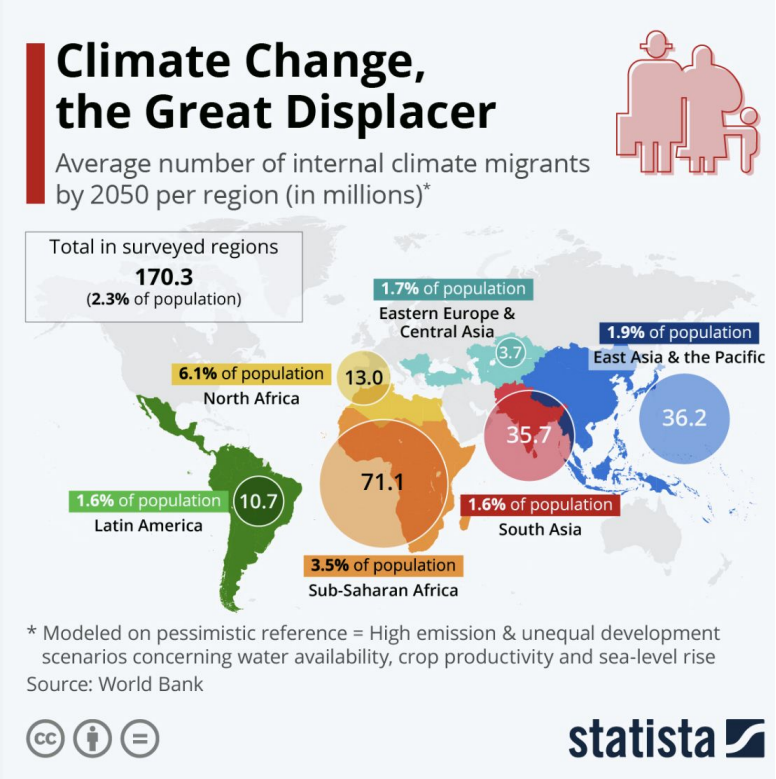


Sources: Authors computations on data from CRED - The International Disasters Database and Global Findex
Note: Y-axis is shown on a logarithmic scale

The graph depicts the relationship between the number of people affected by climate shocks from 2010 to 2022 and the capacity of populations in various countries to mobilize emergency funds within 30 days. The size of the dots represents the population size, while their color indicates the country's income level. Countries such as India and the Philippines, with large populations and lower income levels, face greater challenges in financial resilience against climate shocks. This data is crucial for understanding climate justice, as it highlights the unequal distribution of financial capabilities to cope with climate change. Countries with lower incomes often have less capacity to respond to climate impacts, despite contributing less to global emissions, underscoring the need for equitable climate action and support for vulnerable communities.

Center for Financial Inclusion, **Exploring the Intersection of Climate Shocks and Financial Inclusion**, Feb 2023

Internal migration will be accelerated



Opportunity or threat?

How do we ease this mega transition?

Source: Economist, Statista

"Climate-related hazards continued to be a major driver of new displacement in Africa. Chronic floods and droughts, sea level rise, and extreme weather events all influence displacement patterns within borders and across international borders. In 2021, around 14.1 million people were internally displaced in Sub-Saharan Africa, including around 11.5 million due to conflict and violence and 2.5 million due to disasters."

Source: World Meteorological Organization (Sept. 2022)

Who is who in the climate leadership space?

As the world grapples with the escalating climate crisis, a coordinated global response driven by a shared commitment to safeguarding our planet is imperative. At the forefront of these efforts are several influential organizations and initiatives that shape our understanding of climate change and chart the course for collective action.

United Nations Framework Convention on Climate Change

Treaty guiding international action and negotiations against climate change.

ipcc
INTERGOVERNMENTAL PANEL ON climate change
WMO UNEP

Principal body assessing and synthesizing worldwide climate change information.

CIFAR ALLIANCE

Global network advancing impactful climate solutions for vulnerable people and the planet.

CLIMATE POLICY INITIATIVE

Advisory group improving energy and land use policies through insights for policymakers.

Who is who in the climate leadership space?

IFAD

ASAP+ Program supporting smallholder farmers' adaptation to climate change through finance.

RACE TO RESILIENCE

Global campaign bolstering resilience against climate risks for vulnerable populations.

WORLD RESOURCES INSTITUTE

Research institute dedicated to global environmental sustainability.

GLOBAL CENTER ON ADAPTATION

Fosters adaptation strategies, knowledge sharing, and global partnerships against climate impacts.

The Lightsmith Group

Invests in climate-adaptive businesses in vulnerable sectors.

CATALYST FUND

Invests in climate-adaptive businesses in Africa. One of top 4 most active investors in Africa in 2023

Key insights of Climate Action and Climate Justice

- Direct Climate Action can be categorized as Mitigation, Adaptation & Resilience and Compensation (or Loss & Damage).
    - Many interventions can have positive effects on more than one category. For instance, replanting mangroves captures carbon, creates new livelihood opportunities and protects against storms and sea-level rise.

- Climate justice views climate change as a human rights and social justice issue. Climate justice presents an opportunity for leadership.

(contd…)

Key insights

- Africa is hit hardest by temperature increases, unpredictable rainfall, and extreme weather. Impacts have knock-on effects: conflict, migration, public health, etc. Women are the most vulnerable socially, economically, politically. It creates poverty traps as the poor lose more to climate change impacts and struggle to rebound (e.g., during a drought in Ethiopia the poorest 40% lost 60-80% of their assets while wealthiest lost just 6%)

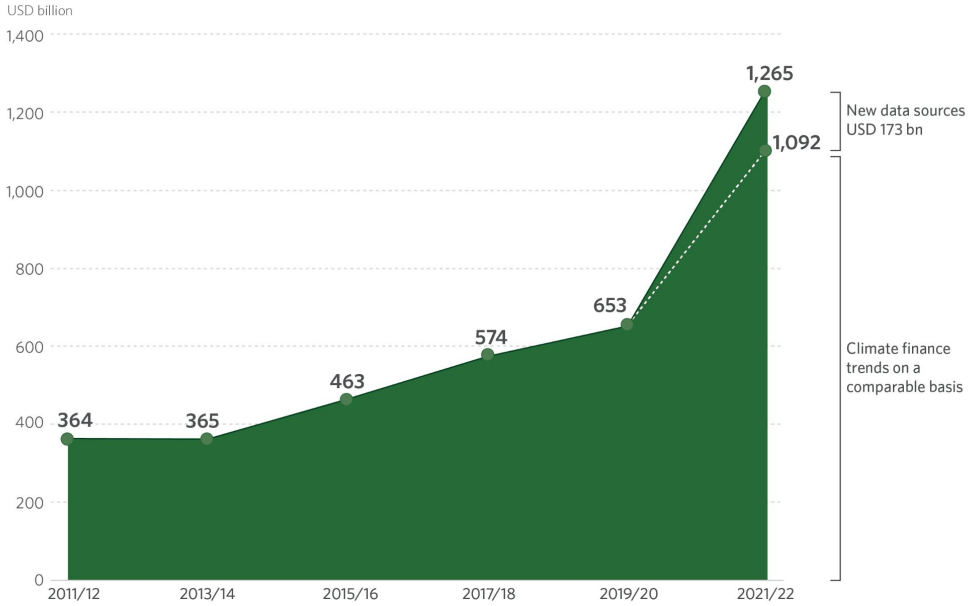
- Vulnerability is the result of high exposure and low preparedness. Three sectors are more vulnerable to climate change, the urban poor, farmers, pastoralists, migrant workers and coastal populations. Within these sectors women are disproportionately affected.

Climate Finance Flows

The data presented in these slides offers a snapshot of the current state of climate finance, a crucial element in the global effort to combat climate change. It charts the flow of funds across various initiatives, from mitigation and adaptation projects to groundbreaking carbon removal technologies. This overview prompts us to question whether the financial response matches the urgency and scale required to address the crisis effectively, and it challenges us to ensure that these investments are both impactful and equitable. In short, it serves as a call to action for enhanced and just allocation of resources in the fight against climate change.

Climate finance flows

Figure ES2: Global climate finance in 2011-2022, biennial averages



Source: Climate Policy Initiative

7 Key Observations

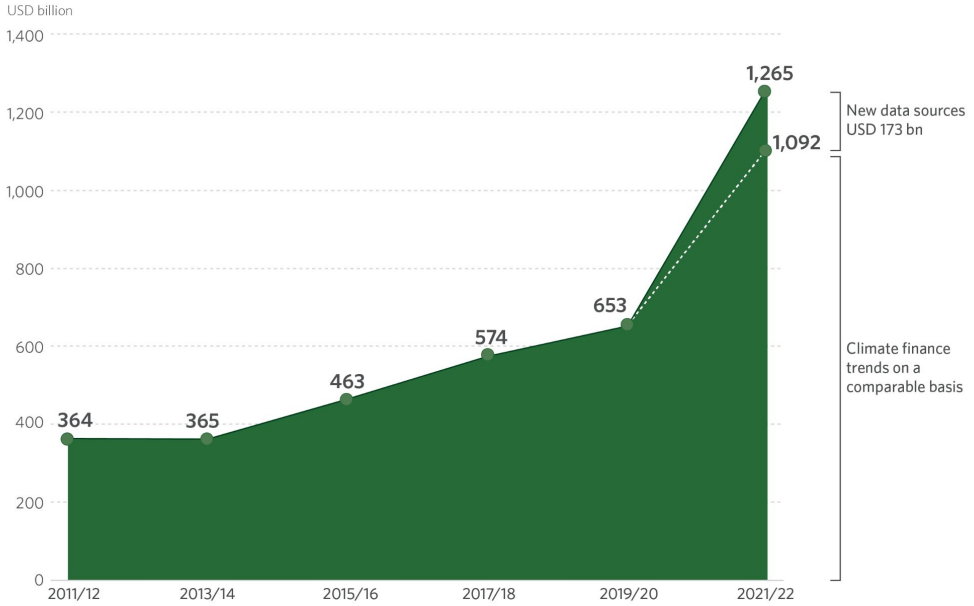
- **Significant increase in climate finance**: Annual flows reached USD 1.3 trillion in 2021/2022, doubling from 2019/2020 and driven by mitigation finance
- **Geographic concentration**: China, the US, Europe, Brazil, Japan, and India received 90% of increase
- **Adaptation finance lagging**: Despite reaching an all-time high, adaptation finance is still far short of estimated needs, with public actors dominating
- **Future finance needs**: Annual climate finance needs require a multi-fold increase in investments and innovative financing strategies

(contd…)

Source: Climate Policy Initiative, Global Landscape of Climate Finance 2023

Climate finance flows

Figure ES2: Global climate finance in 2011-2022, biennial averages



Source: Climate Policy Initiative

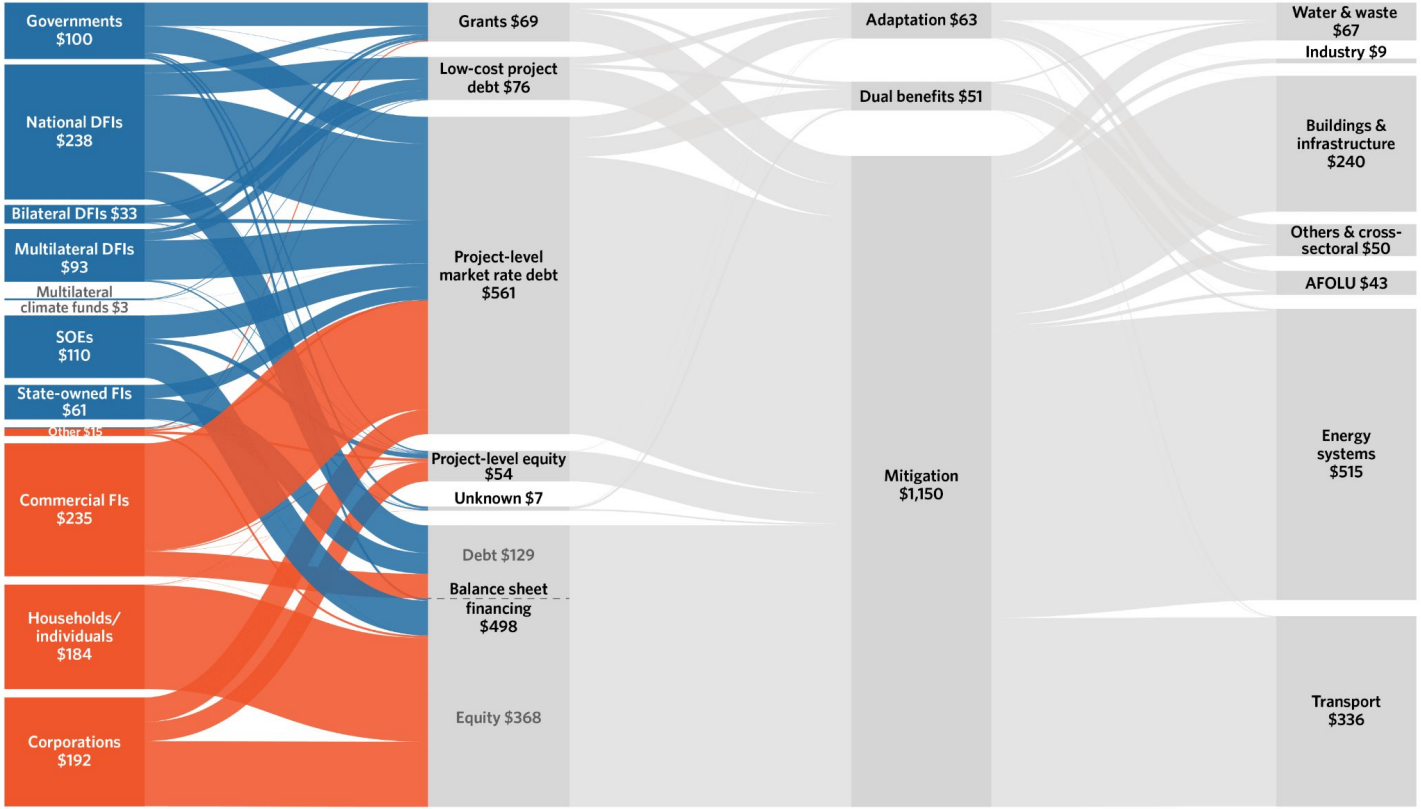
7 Key Observations

- **Private sector investment** is increasing, but not at the scale and speed necessary
- **Continued fossil fuel support** remains a barrier to achieving global climate goals
- **Data on finance flows is improving** but less is known about the impact and outcome of deployed climate finance.

Source: Climate Policy Initiative, Global Landscape of Climate Finance 2023

LANDSCAPE OF CLIMATE FINANCE IN 2021/2022

Global climate finance flows along their life cycle in 2021 and 2022. Values are averages of two years' data to smooth out fluctuations, in USD billions.

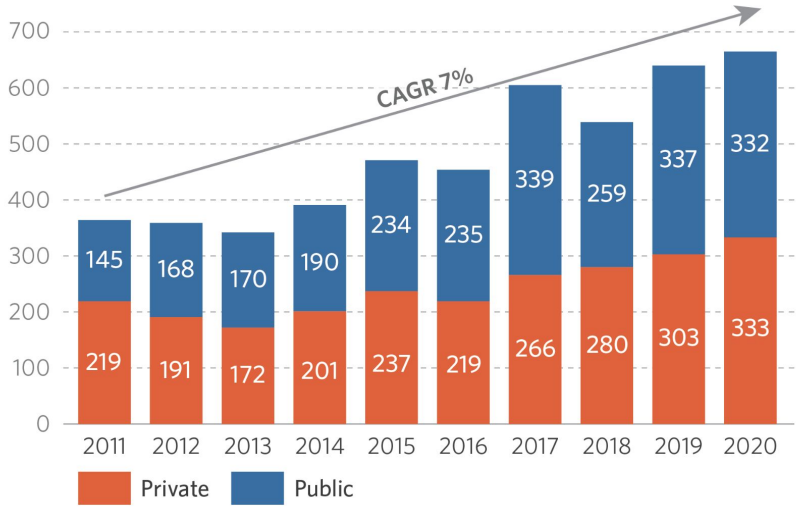


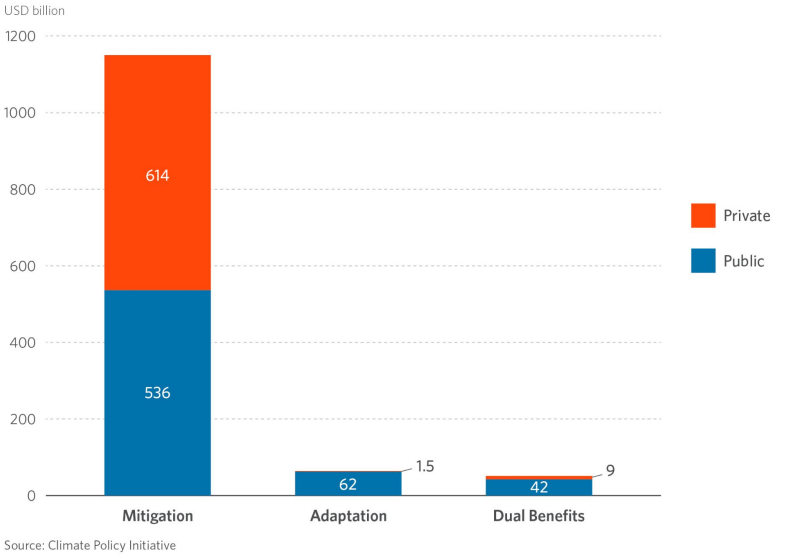
CLIMATE POLICY INITIATIVE

Source: Climate Policy Initiative, [Global Landscape of Climate Finance 2023]

Climate finance growing but mostly for mitigation

Global climate finance continues to be channelled primarily towards mitigation efforts. In 2021/2022, 91% of total climate finance went towards mitigation, which is a slight increase from 89.7% in 2019/2020. The investment gap, however, remains considerable: mitigation finance needs to surpass USD 8.4 trillion per year between now and 2030, and to rise to USD 10.4 trillion per year in the following two decades.



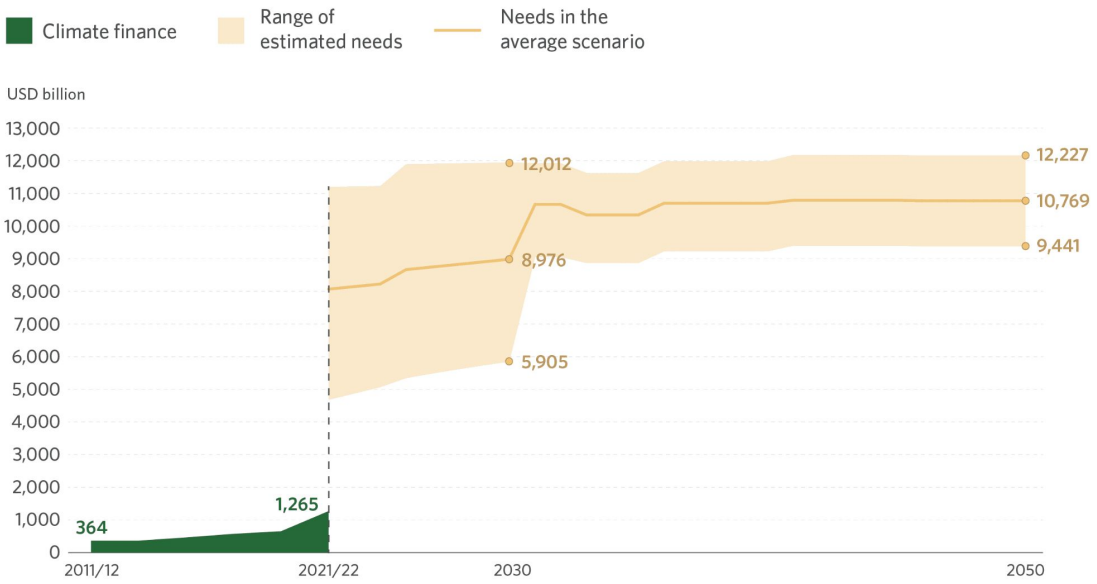


Source: Climate Policy Initiative, [Global Landscape of Climate Finance 2023]

Still a major gap between flows and needs

There still remains a significant gap between current climate finance flows and projected needs to effectively address climate change. Climate finance needs to ramp up rapidly from $8.1 trillion annually by 2030 to over $10 trillion per year between 2031-2050, a fivefold increase, to mitigate the worst climate change impacts.

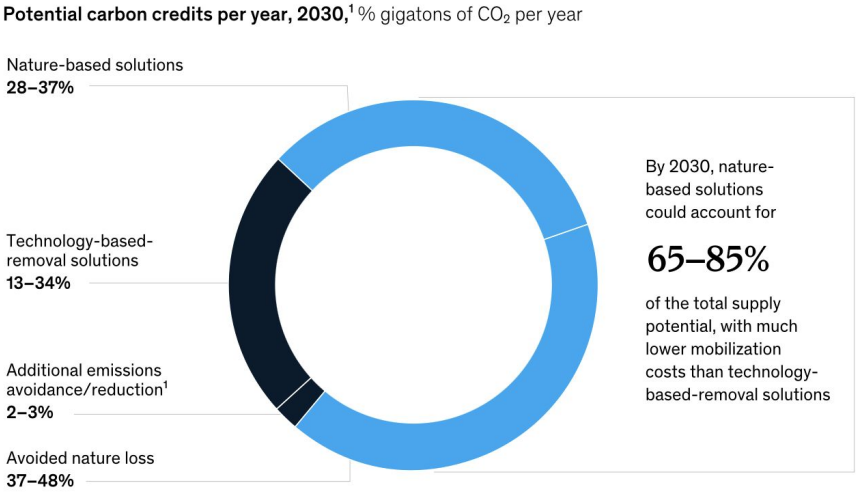
Figure ES3: Global tracked climate finance and average estimated annual needs through 2050



Source: Climate Policy Initiative

Carbon markets could power adaptation

Nature-based solutions could account for 65 to 85 percent of total supply potential by 2030.



Nature-based solutions are projected to grow into a $50-100 billion annual market by 2030. These solutions work particularly well in emerging markets, which have more biodiversity and cheaper labor costs. However, to be inclusive and ensure widespread adoption, digital financial services (DFS) and affordable monitoring systems (MRV) will be needed.

Source: CIFAR's Opportunity Brief, Morgan Stanley, McKinsey

Microsoft's leading carbon removal program

As one of the first companies sourcing carbon removal, Microsoft prioritizes approaches that deliver substantial environmental benefits, maintain openness about their methods and impacts, and foster collaborative knowledge-sharing to advance the carbon removal industry as a whole.

We highlight some of Microsoft's new additions to their carbon removal portfolio, so far, Microsoft has contracted carbon removal credits from 21 projects representing more than 1.5 million metric tons of carbon dioxide (mtCO2), meeting their fiscal year goal 7.

(contd…)

Source: FY22 additions to Microsoft´s carbon removal portfolio

Microsoft's leading carbon removal program

Their portfolio is once again heavily weighted towards low-durability natural solutions, representing more than 99 percent of total purchase volume.

Source: FY22 additions to Microsoft´s carbon removal portfolio

Microsoft's leading carbon removal program (2)

Microsoft

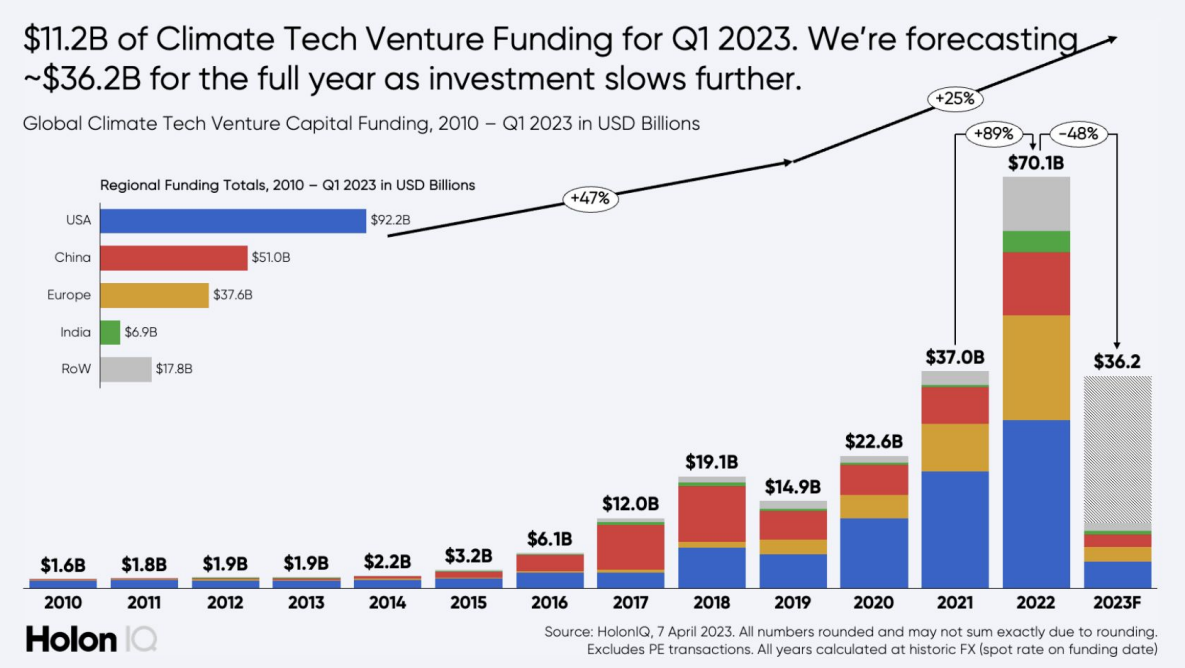
Carbon removal projects

Contracted projects | Worldwide map | Proposal details

Contracted 21 Projects — Proposed 106 Projects

Categories	Total contracted
Biochar	10,626
Bio-oil	200
CO2 utilization	100
Coastal blue carbon	10,000
Forestry	1,283,758
Soil	200,000
Total	**1,504,684**

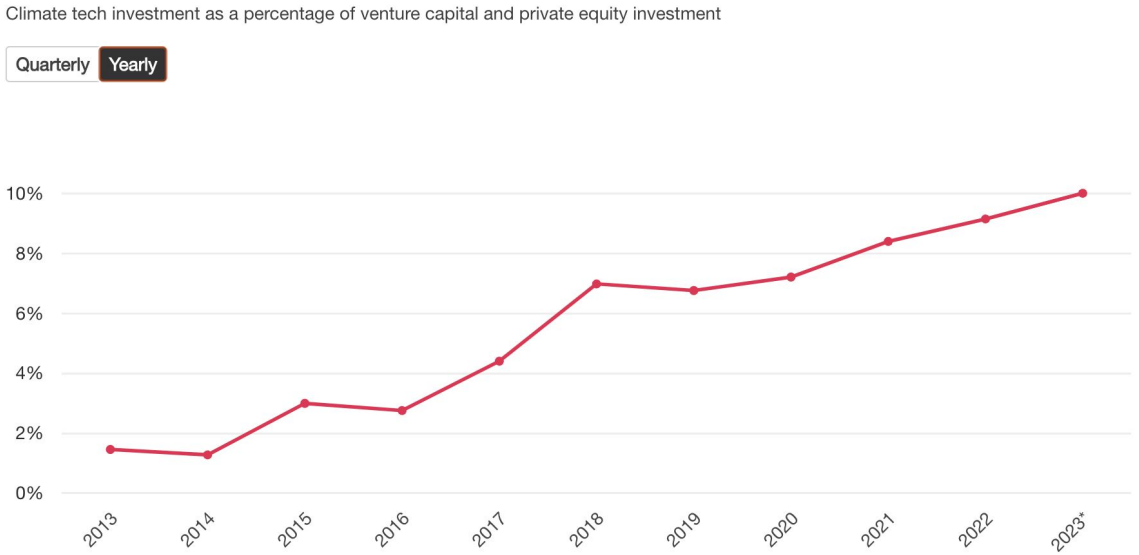
Source: FY22 additions to Microsoft´s carbon removal portfolio



The data on Global Climate Tech Venture Capital Funding indicates a steady increase in investment over the years, with a peak in 2021. However, there's a forecasted decline in funding for 2023. Notably, the USA and China lead in contributing to climate tech ventures. These figures reflect not only financial investments but also the growing importance of climate-related innovations in addressing global challenges.

10% of all VC Investment goes to Climate Tech

Venture capital (VC) investment plays a crucial role in fostering innovation, driving economic growth, and addressing pressing global challenges like climate change. 10% of all VC investment goes to climate tech, highlighting the growing importance of financing startups that develop innovative solutions aimed at mitigating or adapting to the impacts of climate change.



Source: PWC's State of Climate Tech 2023

Key insights

- Global climate finance has nearly **doubled** in the last decade, but challenges remain. While renewable energy investments grow, adaptation finance lags, and ongoing fossil fuel support hinders our global climate goals. Despite improved finance flow data, we need clearer insights into the real-world impact of these funds.

- Four billion people are at risk from climate change, with potential setbacks to decades of development progress. Particularly, Africa, contributing to just **4%** of global emissions, faces extreme vulnerability, with nearly half its GDP at climate risk. Global stakeholders are prioritizing resilience, promising over **$100 billion** to climate finance this year, including **$30 billion** for Africa. Yet, there's a vast financing gap, with Africa needing **$50 billion** annually for adaptation until 2030.

(contd…)

Key insights

- Is there an opportunity for New Money to complement? Carbon markets and Climate Tech spillovers might make a decent contribution.

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Thank you!

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