CLIMATE ACTION PATHWAY

# Climate Resilience

Executive Summary

Global Climate Action
United Nations Climate Change

Marrakech Partnership
Global Climate Action

# VISION STATEMENT

**By 2050** we **all** live in a 1.5-degree warmer world where all regions, countries, cities, businesses communities and individuals

**THRIVE**

in the face of multiple risks, uncertainty and threats posed by climate change

This vision of climate resilience is to be achieved through three interdependent outcomes:

**Resilient people and livelihoods** When we live in a world where people most vulnerable to climate risks, especially those living in least developed countries and small island developing States, are resilient, prosper and thrive. Actions are taken so all benefit from early warning systems; decent, secure and green jobs; resilient value chains; social protection; and getting finance to where it matters: local communities. This helps achieve climate justice and a just transition for all with no one left behind.

**Resilient Businesses and Economies** Where all climate risks are fully understood by all businesses, investors and society. Actions are taken to manage these risks across and within sectors, with particular focus on cities, infrastructure, services (including energy, transport and industry), agriculture and food, water and natural ecosystems, and ocean and coastal systems. This includes delivering access to climate risk insurance for small, medium and large enterprises, and helping ensure trillions of US dollars in future investments are climate risk-informed and deliver social, environmental and economic impacts.

**Resilient Environmental Systems** Where nature, with its mosaic of terrestrial and marine ecosystems, is the first line of defence against climate risks of extreme events and disasters as well as long-term changes in climate. This means biodiversity and the natural ecosystems are protected to ensure the world has nutritious food, clean air, fresh water, fertile soils and pollination services. This is paramount if we are to secure resilient and sustainable development for human and planetary health and wealth and learn lessons from the COVID-19 pandemic.

This vision puts a **focus on people** as agents of change to act now and tomorrow to transform systems for an equitable, low-carbon, resilient and sustainable future. This will involve everyone, especially women, youth, indigenous peoples and those living with disabilities. It means helping shape **COVID-19 recovery investments** to build a low-carbon and resilient future.

This vision recognizes that building climate resilience requires **mitigation and adaptation actions that must be combined** to tackle the current and future impacts of climate change.

# SYSTEMS TRANSFORMATION SUMMARY

Urgent and coherent climate risk management measures, accompanied by mitigation actions, must be adopted by all public, private and community actors in order to achieve a 1.5-degree resilient world. Only with these actions will a transition to an inclusive, resilient and sustainable world be possible. This is an imperative for the most vulnerable people, many of whom are living in least developed countries and small island developing states.

Action needs to focus on sectors that are most impacted and which are crucial to people's lives, economies and the future of the planet. This includes the agriculture and food sectors, cities, infrastructure and services (energy, industry and transport), water and natural ecosystems, and ocean and coastal systems.

While it is important to focus on building the adaptation and resilience capacities[1] of all public, private and community actors, this is insufficient as there is no shared narrative and clear taxonomy of climate risk management interventions. Instead we have myriad interventions, tools, solutions, initiatives and partnerships that are often promoted as single "magic bullets" to build climate resilience against multiple or single climate risks.

This pathway, and the sector pathways, aims to address this by presenting a common and simple narrative on climate resilience that can drive the political and financial engagement needed to tackle the unfolding climate emergency. This narrative has been developed by the Marrakech Partnership for Global Climate Action's Climate Resilience Network.[2]

### *Steps to build climate resilience*

Building climate resilience involves all actors (governments, communities and businesses) having the capacity to anticipate climate risks and hazards, absorb shocks and stresses, and reshape and transform development pathways in the longer term. We propose six steps that sectors and actors need to take in developing climate resilience:

1. **Awareness-raising and advocacy** – Be clear that the future will not resemble the past; base this on science and examine different scenarios (e.g. 1.5-degrees and higher) and their impacts.
2. Carry out **climate risk assessments** at national, local (city/region), sectoral or organizational level and use a systems approach.
3. Develop and **implement appropriate actions** and interventions.
4. **Mobilize resources** – Build capacity and scale up actions.
5. **Monitor and track progress.**
6. **Share knowledge,** experiences and solutions.

### *Types of interventions to build climate resilience*

We have combined disaster risk reduction and management (including emergency preparedness and response) and climate change adaptation approaches to develop a suite of interventions to address climate risks and impacts across and within sectors. This suite of climate risk management

interventions or measures essential to drive climate resilience efforts and investments by all actors includes:

- Climate risk and vulnerability assessments, disclosure and monitoring
- Early warning systems and early action
- Preparedness: contingency plans/emergency response
- Climate risk governance and capacity-building
- Nature-based solutions used to reduce risks across sectors
- Climate-proofing infrastructure and services
- Risk transfer: insurance and social protection
- Sharing of knowledge and best practices on climate risk management
- Volume, quality and access of public and private finance

Climate risk management interventions needed to build climate resilience across sectors and systems are presented in the forthcoming Climate Resilience Action Table. More specific interventions are given in the sectoral action tables for land use (especially food and agriculture); human settlements (especially the built environment); energy, industry and transport; ocean and coastal areas; and water.

***How this climate resilience pathway aligns with other efforts***

This climate resilience pathway aligns with two significant efforts. First, it responds to the Call to Action: Raising Ambition for Climate Adaptation and Resilience from the United Nations Climate Action Summit. Second, it builds on the work of the Global Commission on Adaptation.[3]

The pathway aims to meet one of the priorities of the Presidency of the Conference of the Parties at its twenty-sixth session to advance action on adaptation and resilience. It aims to help take forward the action tracks of the Global Commission on Adaptation and the expected outcomes of the United Nations Climate Adaptation Summit in January 2021.

## MILESTONES TOWARDS 2050

| By 2021 | By 2025 | By 2030 | By 2040 |
|---|---|---|---|
| Put strategies in place to increase resilience of cities and informal settlements. | Put early warning systems in place for 1 billion people in developing countries. | Ensure actions make 600 million slum dwellers resilient and lift them out of poverty. | Ensure 4 billion people are more resilient to climate risks. |
| Ensure plans are ready for early action, forecast-based financing and risk finance. | Provide risk finance and insurance to 500 million vulnerable people. | Ensure 300 million smallholder farmers use resilient technologies and practices. | Ensure all businesses' value chains are resilient. |
| Develop actions to mainstream climate risks into value chains and infrastructure investments. | Put heatwave action plans in place in cities to support 1 billion people. | Make the annual investment Invest USD 6.9 trillion in infrastructure to climate-resilient. | Ensure floods have no impact on people's and business' abilities to thrive (deaths and economic losses avoided). |
| Ensure public and private leaders promote the use of nature-based solutions (NBS). | Use NBS to build climate resilience in all sectors. | Ensure agricultural supply chains worth USD 50 billion annually are climate resilient. | Ensure USD 97 trillion total investment in infrastructure is climate resilient and integrates NBS. |
| Increase engagement in the climate actions of women, girls, youth, people living with disabilities and indigenous people. | Ensure all climate actions are inclusive and integrate gender. | Ensure USD 1 trillion in private financing finances climate resilient investments. | |
| | Ensure 50 developing countries mainstream climate risks in their water resource and management systems. | Make all critical transport assets and systems climate-resilient through at least 2050. | |
| | | Restore 350 million hectares of deforested and degraded land. Ensure all people benefit from early warning systems and national plans to cope with climate disasters. Ensure all vulnerable people and places have access to risk finance and insurance. | |

## PROGRESS

We are not on track to take the actions required to adapt to the impacts of climate change and build long-term climate resilience. This is despite the evidence from reports by the Intergovernmental Panel on Climate Change (IPCC) and the Global Commission on Adaptation. The multiple climate risks and how these affects and threaten different livelihoods and locations remain not fully understood by many. Where there is sufficient awareness, there is still insufficient knowledge on what to actually do, resulting in limited action, or at worst inappropriate action.

This is changing as the increasing impact from climate-related disasters and stresses becomes more self-evident. This is resulting in an increased focus on building climate resilience, but it is urgent to build on this interest to accelerate innovations and investments into climate risk management.

It also means supporting and engaging rural and urban communities at the front line of climate change. Impact is often on the most vulnerable, including more than 880 million people living in informal settlements, where opportunities are few and access to basic services is scarce to non-existent. The needs of women, especially women in poverty, tend to go unrecognized, leaving them increasingly vulnerable and further behind educationally, economically and politically. This needs to change.

Local communities are increasingly undertaking measures to adapt to current changes and enhance their resilience to future impacts. When supported by local and national governments, this is building resilience. Supporting investment and targeting it effectively to benefit people and communities offers significant opportunities to help achieve the outcomes of this pathway.

## COVID19 AND CLIMATE RESILIENCE

The COVID-19 pandemic represents one of the most severe global disruptions of our time. Beyond the devastating direct health impacts and loss of life, the associated disruptions to societies and economies are unprecedented.

The pandemic has revealed the fragility of our social and economic systems when we are not prepared to manage risk. COVID-19 has exacerbated existing shocks and stresses, including those resulting from climate change. For example, Bangladesh, Fiji and India have all battled strong cyclonic storms whilst coping with COVID-19. The International Federation of Red Cross and Red Crescent Societies (IFRC) estimates at least 51.6 million people are doubly hit by climate-related disasters (floods, droughts and storms) and the COVID-19 pandemic.

The pandemic has also augmented stresses which communities have suffered, threatening to erode many of the development gains of past decades. To cope with this disruption, we are seeing many examples of community networks self-organizing to combat the spread of the virus and support the most vulnerable within their communities. This spontaneous, self-organizing community resilience is proving to be a crucial element in navigating this exceptional disruption.

This results in important lessons for advancing actions to build climate resilience. It is also a wake-up call to take action both to keep global warming to 1.5 degrees and to urgently build resilience to the impacts of climate change. Climate change is an existential threat to humans and the entire planet.

## FACTS & FIGURES

The world's climate is changing. The 2017 Atlantic hurricane season was the most devastating and costliest on record. In 2018, unprecedented cyclones hit Mozambique. In 2019, Chile storms flooded

the Atacama,[4] Hurricane Dorian wreaked havoc in the Bahamas, European heatwaves were hottest on record with 1,500 deaths in France,[5] and in India, 9 million people in Chennai faced severe water shortages from drought.[6] In early 2020, temperatures of more than 20 degree Celsius were recorded for the first time in the Antarctic, and the Arctic summer ended with very little sea ice.[7] Wild fires in California were the worst on record. Severe hurricanes and cyclones continued to hit many countries from Bangladesh (Cyclone Amphan) and Philippines (Typhoon Goni) to Hurricane Eta in the Caribbean. These facts, and the compelling scientific evidence[6] of the growing impacts from climate change across all sectors, mean that business-as-usual is no longer an option for any country, city, community, individual, business or financial institution.

**Without climate change mitigation and adaptation/resilience action, the impacts of climate change are predicted to:**

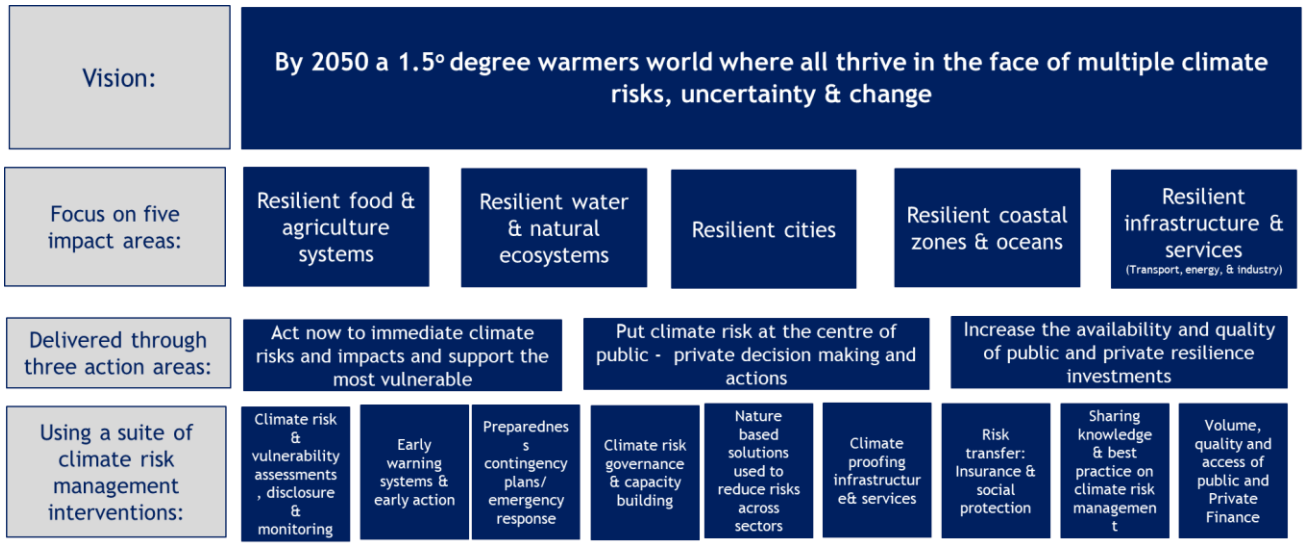
- Impact 80 per cent of the world's poorest who will be living in fragile contexts by 2030,[8] and put an extra 100 million people at risk of being pushed into extreme poverty by 2030, and 720 million by 2050.[9]
- Reduce agriculture yields by up to 30 per cent by 2050, affecting smallholder farmers the most,[10] and increase food prices by 20 per cent for billions of low-income people.[11]
- Increase the number of people who lack sufficient water[12] from 3.6 billion today to 5.0 billion by 2050.[13]
- Force hundreds of millions of people in coastal cities to move away from their homes, with a total cost to coastal urban areas of more than USD 1 trillion each year by 2050.[14]
- Raise sea level by 2.5 meters as a result of melting Antarctic ice – even if the Paris climate goals are met.[15]
- Increase the cost of climate-related disasters to a total of USD 2.7 trillion over the next 20 years, even though the cost of making infrastructure resilient is about 3 per cent of this.[16]

**Yet with action, a just transition is possible and it is estimated that:**

- Investing USD 1.8 trillion in adaptation and resilience from 2020 to 2030 can generate USD 7.1 trillion in total global net benefits.[17]
- Implementing effective disaster risk management actions would result in a 90 per cent decrease in people needing international humanitarian assistance by 2050 following climate-related disasters.[13]
- Thirty per cent of greenhouse gas emissions can be avoided by making food and agriculture systems more sustainable and resilient,[18] including reducing food loss and waste (which produce about 8 per cent of global emissions).[19]
- A transformation to healthier diets and sustainable food systems can reduce emissions, avert up to 11 million deaths per annum, lift 820 million people from undernourishment and 680 million people from obesity – avoiding USD 4.5 trillion per annum in costs from this double burden.[20]

# STRUCTURE OF CLIMATE RESILIENCE PATHWAY ACTION TABLE

The Climate Resilience Pathway is structured around delivering the overall vision and through three outcomes: resilient people and livelihoods; resilient businesses and economies; and resilient environmental systems. Under this, **five main impact areas** have been identified that require immediate action to put climate risk at the heart of decision-making with increased availability and quality of finance invested in a range of interventions. This framework is shown below.



# NOTES AND REFERENCES

[1] See UN Common Guidance on Resilience (2020 in press) and its essential preventive, anticipative, adaptive, absorptive and transformative capacities for managing multiple risks across systems.

[2] *The Climate Resilience Network (CRN):* The CRN is an informal group of organizations and institutions working around a common agenda and narrative focused on building resilience to climate risks. The network acts as a platform for information exchange and collaboration around key issues and to help organize coherent and complementary policy events on climate resilience. Through our multi-stakeholder partnership, we have successfully organized and convened global events to advocate and discuss climate resilience as a cross-cutting theme of the Marrakesh Partnership for Global Climate Action. The CRN network comprises over 70 public and private sector partners with a diverse geographical spread and expertise. We have been able to draw on the strength of this diversity to ensure interactive meeting formats, in-depth discussions across disciplines, and inclusive representation to sustain ambition on climate action even in the context of COVID-19.

[3] Adapt Now: A Global Call for Leadership on Climate Resilience. 2019. Global Commission on Adaptation.

[4] <https://www.aljazeera.com/news/2019/02/flooding-landslides-kill-peru-chile-190209085435131.html>.

[5] <https://www.bbc.co.uk/news/world-europe-49628275>.

[6] <https://www.ft.com/content/51007944-b456-11e9-bec9-fdcab53d6959>.

[7] Journal Nature. 2020. Anders Levermann, Postdam Institute for Climate Impact Research- Learning about Antarctica. <https://www.theguardian.com/environment/2020/sep/23/melting-antarctic-ice-will-raise-sea-level-by-25-metres-even-if-paris-climate-goals-are-met-study-finds>.

[8] Organisation for Economic Co-Operation and Development. 2018, States of Fragility 2018, OECD Publishing, Paris.

[9] Hallegatte, S., Bangalore, M., Bonzanigo, L., Fay, M., Kane, T., Narloch, U., Rozenberg, J., Treguer, D., Vogt-Schilb, A. 2015. Shock Waves: Managing the Impacts of Climate Change on Poverty, World Bank Climate Change and Development Series, World Bank Group.

[10] Porter et al. 2014. "Food Security and Food Production Systems." World Bank. 2013. Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience. Washington, DC.

[11] Nelson, C.C., et al. 2014. "Climate Change Effects on Agriculture: Economic Responses to Biophysical Shocks." Proceedings of the National Academy of Sciences of the United States of America 111: 3274–3279.

[12] Defined as being without water for at least one month per year.

[13] United Nations World Water Development Report 2018: Nature-Based Solutions for Water.

[14] Hallegatte, S., Green, C., Nicholls, R.J., and Corfee-Morlot, J. 2013. "Future Flood Losses in Major Coastal Cities." Nature Climate Change 3(9): 802–806.

[15] Journal Nature. 2020. Anders Levermann, Postdam Institute for Climate Impact Research- Learning about Antarctica. <https://www.theguardian.com/environment/2020/sep/23/melting-antarctic-ice-will-raise-sea-level-by-25-metres-even-if-paris-climate-goals-are-met-study-finds>.

[16] Global Commission on Adaptation. 2019. Adapt Now: A Global Call for Leadership on Climate Resilience.

[17] Global Commission on Adaptation. 2019. Adapt Now: A Global Call for Leadership on Climate Resilience. [13]
IFRC. 2019. Cost of Doing Nothing: The Humanitarian price of climate change and how it can be avoided.

[18] IPCC. 2019. Special Report on Climate Change and Land.

[19] Food and Agriculture Organization of the United Nations. 2017. Save Food for A Better Climate: Converting the food loss and waste challenge into climate action.

[20] EAT Lancet Commission on Food, Planet, Health. 2018. Healthy Diets from Sustainable Food Systems: Food Planet Health.