



UNEP & Climate Adaptation What We Do



The Challenge

Climate change is already impacting every country on earth. According to a [2023 report](#) from the Intergovernmental Panel on Climate Change (IPCC), increased weather extremes have already exposed millions of people to water and food insecurity, and the cascading impacts have led to higher mortalities and conflict. Climate change is not a future prospect. It is here and now.



Building the resilience of local communities in Zambia through the introduction of ecosystem-based adaptation into priority ecosystems, including wetlands and forests. Photo: UNEP/Georgina Smith

only around **5%** of the world's annual climate finance of **USD 1.3** trillion is currently committed to adaptation, with around **90%** devoted to mitigation.

During the Paris Climate Accord in 2015, world leaders agreed to a historic deal by committing to limit the rise in global temperatures to “well below” 2 degrees Celsius, preferably under 1.5 degrees Celsius (compared to pre-industrial levels), and to put into place plans and actions for tackling the climate crisis. Now, nine years later, although progress is being made, the global temperature has increased by **1.45 degrees Celsius**, while carbon dioxide and other greenhouse gas emissions are still steadily rising.

UNEP's [Adaptation Gap Report 2023](#) points to a study that indicates that the 55 most climate-vulnerable economies

alone have already experienced loss and damage of more than \$500 billion in the last two decades. The world's most vulnerable populations, who have contributed the least emissions, will be hit the hardest from the resulting impacts on food, water and jobs. It is now clear that cutting greenhouse gas emissions is no longer enough. We must also adapt to a changing climate that is already here.

However, only around 5% of the world's annual climate finance of USD 1.27 trillion is currently committed to adaptation, with around 90% devoted to mitigation (i.e. reducing atmospheric greenhouse gases). The UN Secretary

General António Guterres has been urging world leaders to redress this balance, and ensure 50% of climate finance is committed to adaptation and building resilience.

The UN Environment Programme's extensive

experience and expertise in climate adaptation will be vital for guiding these new investments to protect everyone from an ever-looming climate breakdown and ensure that no one is left behind in the race to build resilience.

UNEP's Medium-Term Strategy 2022-2025

UNEP's Medium-Term Strategy 2022-2025 outlines three planetary crises: pollution, nature and climate. The Climate Action objective is defined as “where net zero greenhouse gas emissions and resilience towards climate change are achieved.”

The Climate Action programme in particular will focus on UNEP's comparative advantage to achieve three 2025 outcomes:

Outcome 1: Decision makers at all levels adopt decarbonization, dematerialization and resilience pathways

Outcome 2: Countries and stakeholders have increased capacity, finance and access to technologies to deliver on the adaptation and mitigation goals of the Paris Agreement.

Outcome 3: State and non-state actors adopt the enhanced transparency framework arrangements under the Paris Agreement.

UNEP's work in climate adaptation places a large emphasis on the power of ecosystems and nature-based solutions for protecting people from extreme weather. This work is further strengthened by UNEP's lead role in the UN Decade on Ecosystem Restoration, and its global mandate to protect, manage and restore ecosystems all over the world. Therefore, while UNEP's adaptation programming primarily contributes to the above Climate Action pillar, it also supports all three outcomes under the Nature Pillar.

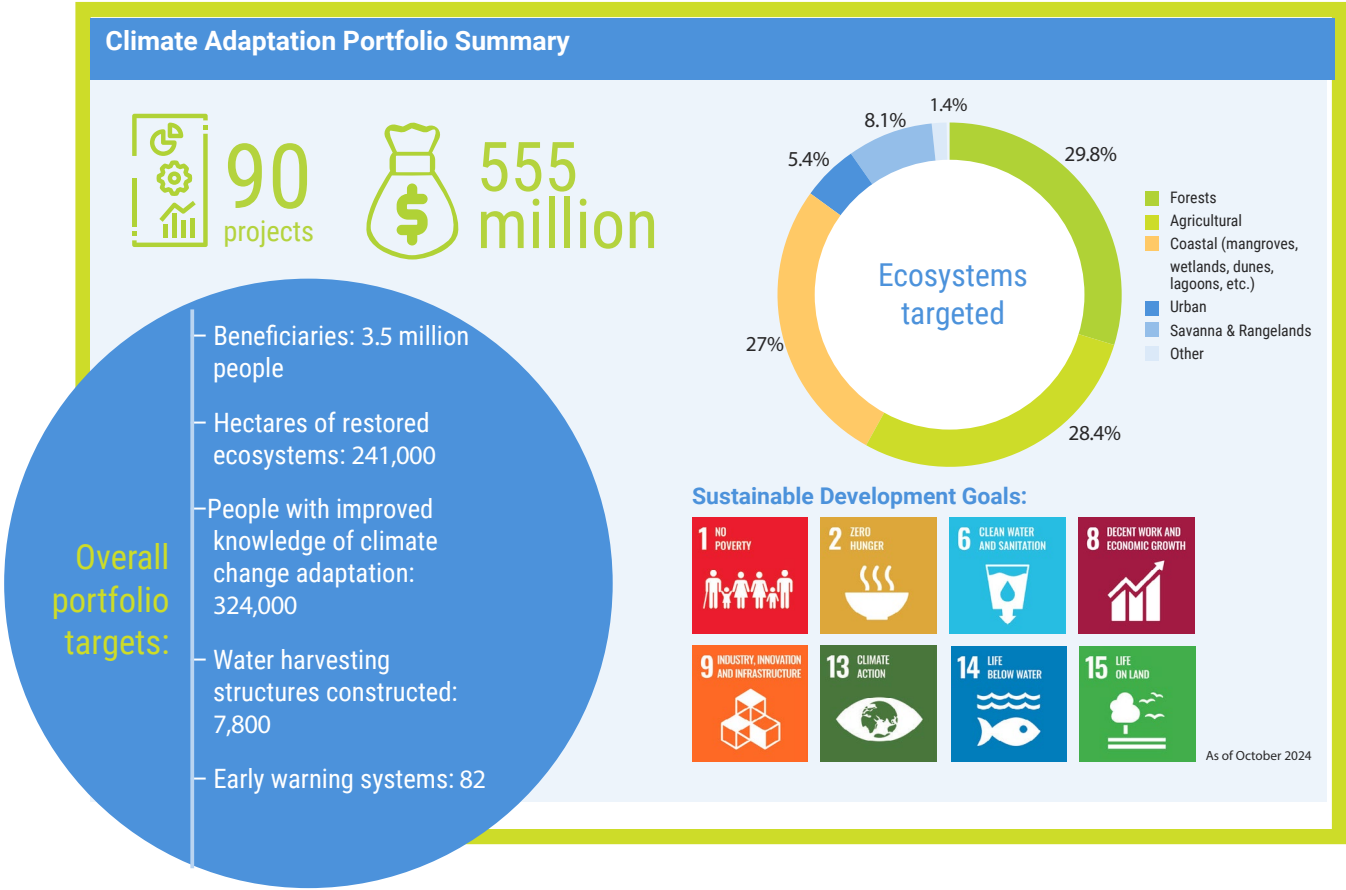
For People and Planet

The United Nations Environment Programme strategy for tackling climate change, biodiversity and nature loss, and pollution and waste from 2022–2025.

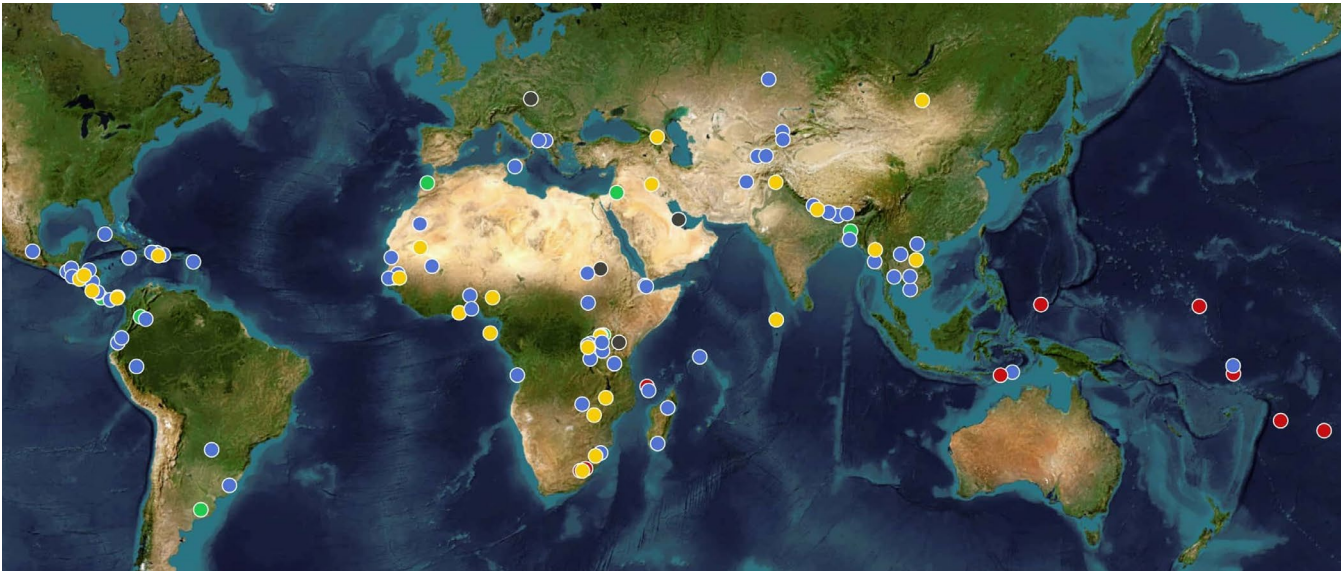


Climate Adaptation Project Portfolio Summary

Since 2010, UNEP has assisted almost 90 projects on climate change adaptation in over 50 countries. As of 2024, the in-field projects aim to benefit a total of 3.5 million people, restore at least 241,000 hectares of land, improve climate adaptation knowledge of 324,000 people and 131 institutions, and build over 7,800 water harvesting structures and 82 early warning systems. Find the full project list here.



UNEP's climate change adaptation projects



Project Type : National Adaptation Plan Ecosystem-based Adaptation Early Warning Systems NDC Action Other

Key Areas of Work

UNEP is aiming to achieve the Climate Action objective defined in the Medium-term Strategy through a multi-pronged approach, including areas of work such as:

1. Science, Analysis & Partnerships
2. Ecosystem-based Adaptation
3. Early Warning Systems & Climate Services
4. Adaptation Finance
5. Supporting National Adaptation Plans
6. Water Services and Security
7. Cities and the Built Environment

1.Science, Knowledge & Partnerships

UNEP generates a wide range of science, knowledge products, and analyses to support countries in their efforts to build climate resilience. For instance, UNEP's Adaptation Gap Report series focuses on finance,

technology and knowledge gaps in climate change adaptation. Furthermore, using knowledge and evidence from practice, UNEP engages and mobilizes stakeholders to influence national and global climate change policies and decision making processes.

With 90 climate adaptation projects, UNEP produces and shares knowledge of adaptation solutions and best practices by collecting lessons learned and case studies, such as A Decade of Ecosystem-based Adaptation or Financing Ecosystem-based Adaptation in Cities: A Case Study from Mexico.

UNEP's climate adaptation resources and multimedia – whether it is key adaptation reports, practical guides, implementation protocols, briefing notes or toolkits – can be found easily online at: <https://www.unep.org/topics/climate-action/adaptation/climate-adaptation-resources-multimedia>



Climate Adaptation Knowledge Platforms & Initiatives

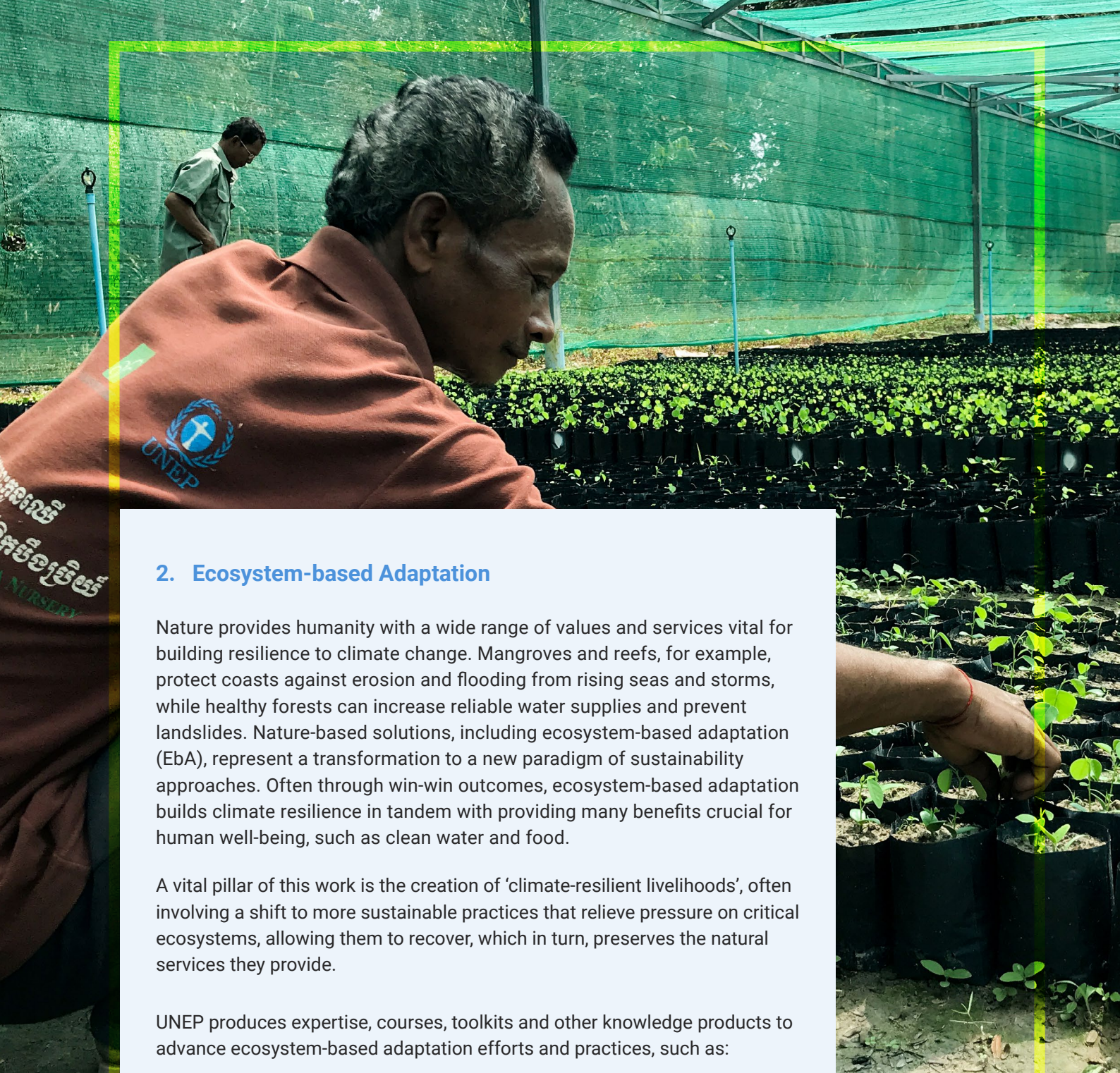
Global Adaptation Network

Founded in 2010, the Global Adaptation Network (GAN) provides a worldwide platform to distribute and exchange climate change adaptation knowledge. As an umbrella organization spanning most continents, GAN is composed of many regional networks and partners, each of which provides knowledge services in their respective regions. These regional networks are:

- REGATTA - Regional Gateway for Technology Transfer and Climate Change Action in Latin America and the Caribbean (Latin America & the Caribbean)
- EBAFOSA - Ecosystem-based Adaptation for Food Security Assembly (Africa)
- APAN - Asia-Pacific Adaptation Network (Asia Pacific)

World Adaptation Science Programme

The World Adaptation Science Programme (WASP) is a UN-led initiative that bridges adaptation knowledge gaps by delivering science products and services to policy and decision-makers. The programme focuses on topics such as adaptation effectiveness, finance, Loss and Damage, and the Global Goal on Adaptation. WASP co-produces UNEP's Adaptation Gap Report and co-hosts the biennial Adaptation Futures conferences, attracting around 1,500 experts globally. Its governance includes a Management Group, Science Committee, and Policy and Finance Committee, with four Working Groups. Overseen by GCF, GEF, IPCC, UNEP, UNESCO, UNFCCC, UNU, and WMO, the WASP Secretariat is hosted by UNEP.



2. Ecosystem-based Adaptation

Nature provides humanity with a wide range of values and services vital for building resilience to climate change. Mangroves and reefs, for example, protect coasts against erosion and flooding from rising seas and storms, while healthy forests can increase reliable water supplies and prevent landslides. Nature-based solutions, including ecosystem-based adaptation (EbA), represent a transformation to a new paradigm of sustainability approaches. Often through win-win outcomes, ecosystem-based adaptation builds climate resilience in tandem with providing many benefits crucial for human well-being, such as clean water and food.

A vital pillar of this work is the creation of ‘climate-resilient livelihoods’, often involving a shift to more sustainable practices that relieve pressure on critical ecosystems, allowing them to recover, which in turn, preserves the natural services they provide.

UNEP produces expertise, courses, toolkits and other knowledge products to advance ecosystem-based adaptation efforts and practices, such as:

- [A Decade of Ecosystem-based Adaptation: Lessons from UNEP](#)
- [Adopting a Human Rights-based Approach to Ecosystem-based Adaptation and Ecosystems](#)
- [The Ecosystem-based Adaptation Briefing Note Series](#)
- [Guidelines For Integrating Ecosystem-based Adaptation Into National Adaptation Plans](#)



Enhancing climate change resilience of rural communities living in protected areas of Cambodia.

Photo: UNEP/
Hannah McNeish

UNEP's projects in ecosystem-based adaptation



Ecosystem Type: Forest Coastal Urban Lakes and Lagoons Multiple Ecosystems

3. Early Warning Systems & Climate Services

The Early Warnings for All initiative (EW4All) was launched by the UN Secretary-General in November 2022 at COP27. The Initiative calls for the whole world to be covered by an early warning system by the end of 2027. UNEP is one of the implementing partners under the initiative.

Just 24 hours warning of an approaching storm or heatwave can reduce the consequent damage by **30 per cent**. UNEP works all over the world to increase access to high-quality weather and climate information, forecasting and early warning systems (EWS) to strengthen disaster preparedness and improve local adaptation efforts. These early warnings in turn underpin evidence-based policy and action. Therefore, UNEP helps countries to build automatic weather stations, and strengthen media and local communication networks to ensure climate forecasts reach vulnerable communities.

For example, a transformative programme was initiated by UNEP and partners in 2020 to establish integrated climate and ocean information services and EWS in five Pacific island countries. The USD 49.9 million programme, funded by the Green Climate Fund, will empower vulnerable populations with timely and accurate predictions of hazards to inform decision-making and actions that reduce climate risks and impacts. UNEP's work on EWS is an important contribution to achieving the

target set by the UN Secretary General to protect every person on the planet with EWS within five years (one-third of the world's population are still not covered by EWS). Furthermore, in developing countries, spending USD 800 million on EWS could avoid USD 3–16 billion per year in losses.

4. Adaptation Finance

In partnership with the Global Environment Facility, the Green Climate Fund, and the Adaptation Fund, UNEP helps countries all over the world to access finance for adaptation. In 2024, the total value of the adaptation project portfolio rose to USD 550 million.

In addition to its adaptation project portfolio, UNEP and IUCN launched the **Global EbA Fund** in 2021 to provide targeted and rapid support mechanisms through seed capital for innovative approaches to ecosystem-based adaptation. Furthermore, UNEP and the Climate Technology Centre and Network (CTCN) are working together to administer USD 5million to innovative adaptation practices through a small grants programme known as the Adaptation Fund Climate Innovation Accelerator (AFCIA).

UNEP also works on models for ‘blended finance’ approaches that:

- explore joint adaptation-mitigation approaches to create investable programmes using cross-subsidization approaches;

- leverage private sector finance through the design of appropriate risk mitigation instruments (e.g. insurance, guarantees, etc.) to create bankable, scalable and replicable programmes;
- create the enabling policy and regulatory environments to establish the fiscal incentives for private sector participation across value chains linked to adaptation action (e.g. subsidies for climate smart technologies).

In 2024, the total value of the adaptation project portfolio was **\$550m**

The **UNEP Finance Initiative** – a global partnership established by UNEP and the financial sector – is helping financial institutions across banking, investment and insurance to accelerate access to adaptation finance, building on our work to build awareness and capacity on climate risk assessments. In 2023, UNEP FI published **Climate Adaptation Target Setting Guidance** for banks and is now helping banks worldwide to use this guidance. UNEP FI is also leading a coalition of **Development Finance Institutions** to scale adaptation finance in the Global South, while the Principles for Sustainable Insurance host the **V20 Sustainable Insurance Facility** to help bridge the protection gap and expand access to adaptation finance across the Global South.”

UNEP's National Adaptation Plan projects



5. Supporting National Adaptation Plans

UNEP helps countries to design National Adaptation Plans (NAPs), which seek to reduce vulnerability to climate change impacts by building adaptive capacity and integrating adaptation into policies and planning at all levels. NAPs are widely seen as one of the most important mechanisms for building climate-resilient development, and as such, UNEP is currently supporting more than 24 countries with NAPs. With this support, new NAPs have now been published in Zimbabwe, Costa Rica, Iraq, Mongolia and Nepal.

In 2023, UNEP published a report to capture lessons and case studies from this area of work, titled **National Adaptation Planning: Emerging Lessons Learned From UNEP Projects**.

The NDC Action Project is a UNEP initiative that helps 10 partner countries translate their Nationally Determined Contributions (NDCs) into concrete strategies and actions, ready for implementation and financing. NDCs represent the commitments of each country to reduce greenhouse gas emissions and adapt to the impacts of climate change.



6. Water Services & Security

To help countries meet the water-related Sustainable Development Goals, UNEP seeks to facilitate measurable and substantive **progress on water management** and freshwater issues at global, regional, and national levels. This includes **helping countries** understand and determine the state of freshwater bodies, supporting the implementation of plans and policies around water resources, monitoring and addressing water quality and pollution, and developing and

disseminating decision support tools that support progress on these targets

Through its climate adaptation project portfolio on the ground, UNEP is helping governments to build water security infrastructure for climate-vulnerable communities from Jamaica to Tanzania, whether its solar-powered wells, boreholes, conservation ponds, and crucially, rainwater harvesting systems. A total of around 7,800 water harvesting structures are being constructed through these projects, along with **guidance on their usage**.

Building the resilience of local communities in Zambia through the introduction of ecosystem-based adaptation into priority ecosystems, including wetlands and forests. Photo: UNEP/ Georgina Smith

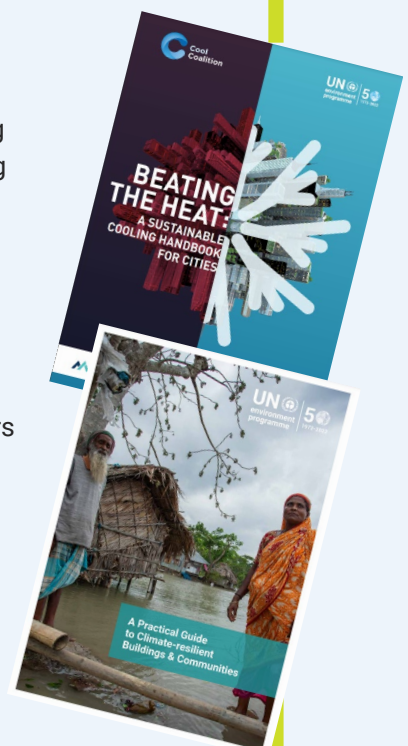
7. Cities and the Built Environment

UNEP is helping cities build climate change resilience through the restoration of urban ecosystems, encouraging governments to integrate sustainability into city adaptation plans, investing in urban flood defence technologies, introducing loan schemes to help communities ‘hurricane-proof’ their homes, and producing practical guidance and expertise through publications such as the **Practical Guide to Climate-resilient Buildings & Communities** or the **Beating The Heat: A Sustainable Cooling Handbook for Cities**.

Through its Generation Restoration project, UNEP is working with 23 cities to accelerate nature-based solutions by providing direct funding, technical assistance, and peer-to-peer platforms that will reach 75 million urban dwellers across 19 countries.

UNEP leads global initiatives and programmes that aim to reduce climate impacts in urban environments, such as the **Global Alliance for Buildings & Construction (Global ABC)**, the **UrbanShift** initiative, the **Urban Nature Programme**, or the **Cool Coalition**, which publishes UNEP’s spotlight **Global Cooling Watch** reports.

The UN Secretary-General’s Call to Action on Extreme Heat brings together the diverse expertise and perspectives of ten specialized UN entities, including UNEP, in a first-of-its-kind joint product, underscoring the multi-sectoral impacts of extreme heat, which especially impacts cities and urban areas.



UNEP's approach to promoting greater investment in nature for adaptation

Strengthened UNEP footprint in UNFCCC governance processes



Advocacy and knowledge generation on the value of investing in nature for adaptation



Direct country-level action on investing in nature for adaptation



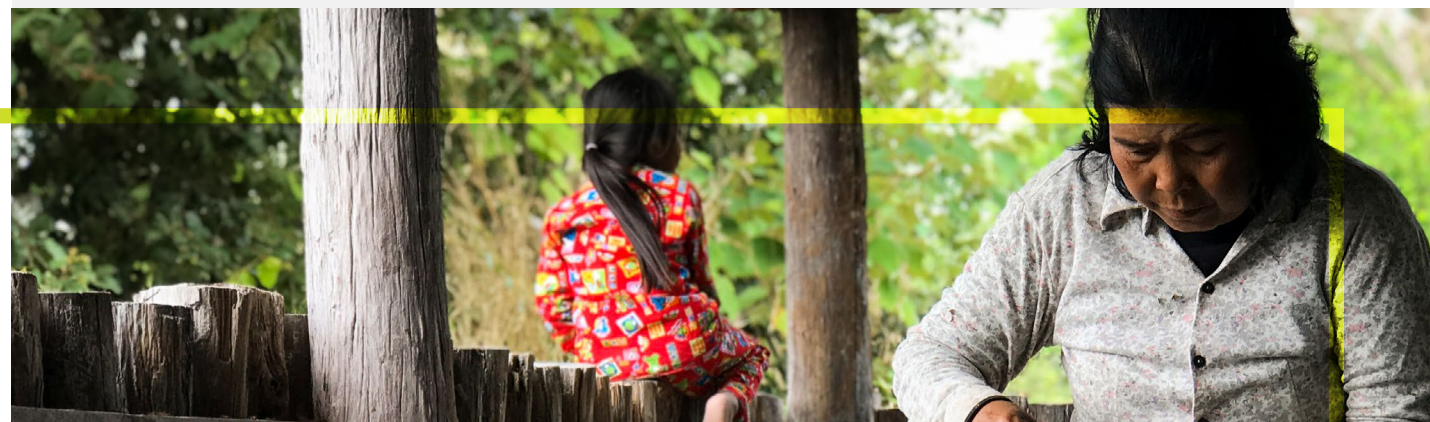
Accelerated country-level action on investing in nature for

Impact

SDG progress accelerated

Vulnerability levels reduced

Global climate change stabilized in part due to EbA



Gender Mainstreaming

Gender equality is essential for adaptation progress. In many developing countries, women tend to have primary responsibility for the management of household water supplies, energy and sanitation. Due to cultural and social norms, they tend to be more undernourished than men, despite producing a significant proportion of food in the developing world. Access to land tenure and the benefits from extractive resources are often restricted, and, in many places, women's ability to fully participate in decision-making is limited. The impacts of climate change can amplify these existing gender inequalities. UNEP ensures that country-level adaptation action empowers and benefits both women and men, guided by UNEP's Environmental and Social Sustainability Framework and the UN's guiding principles and standards on ensuring human rights. UNEP advocates setting aside a specific amount of funds for gender-related activities in all its projects.

People living near a community-protected area in Cambodia make roof fronds out of leaves, toothpicks and sticks as part of a project supported by UNEP and partners to help people build alternative livelihoods and decrease logging. Photo: UNEP/Hannah McNeish

Further Resources:

- UNEP's climate adaptation web portal
- Global Adaptation Network
- Adaptation Gap Report 2023
- The Global EbA Fund
- Adaptation Fund Climate Innovation Accelerator
- UNEP's Six Sector Solutions
- Smart, Sustainable and Resilient cities: the Power of Nature-based Solutions
- Climate Technology Centre and Network
- Climate adaptation resources & multimedia

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