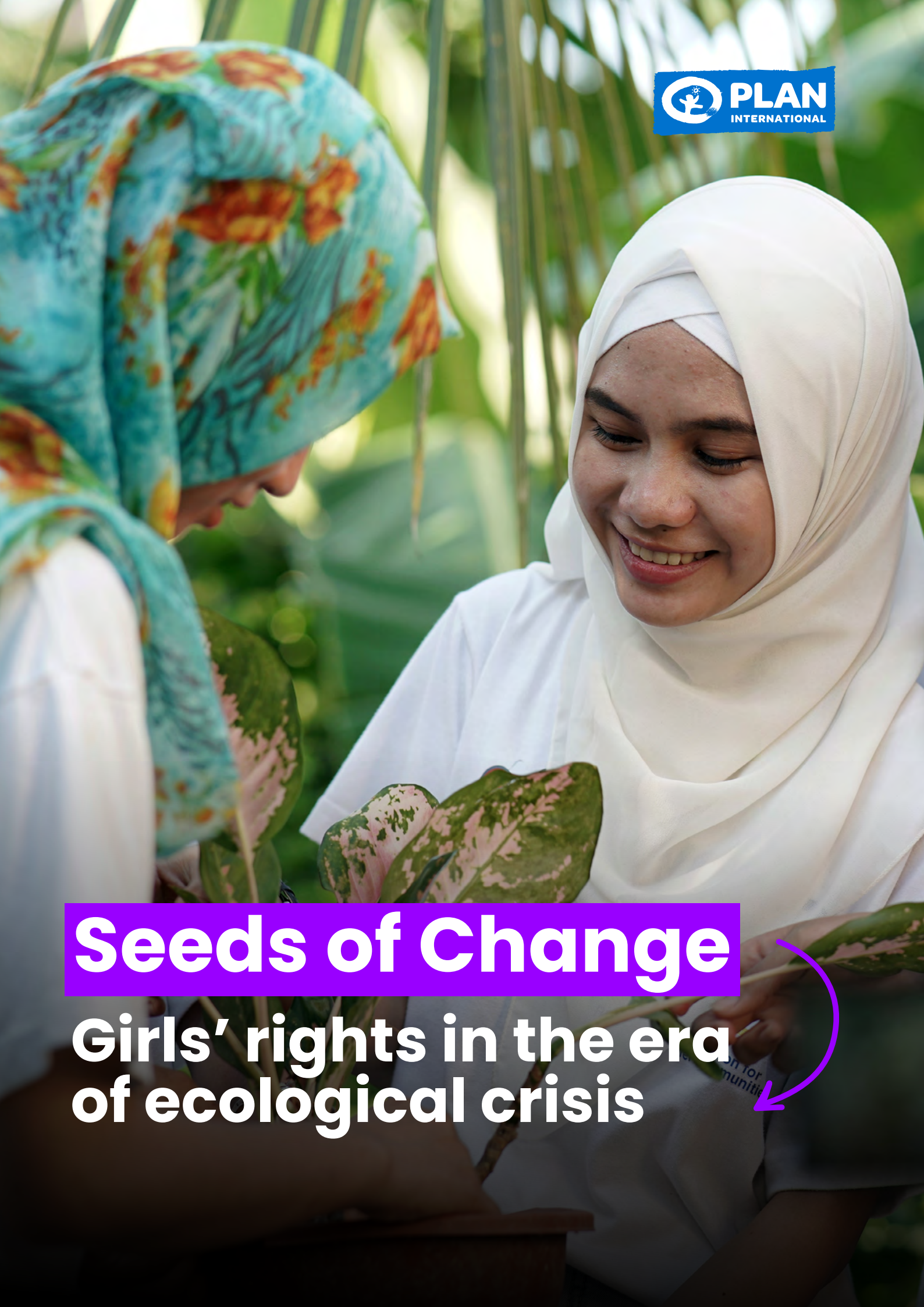

Seeds of Change

Girls' rights in the era of ecological crisis

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Foreword

The ecological crisis threatens life on Earth and is exacerbating existing inequalities, vulnerabilities, and poverty. As planetary boundaries are overshot, climate emissions rise, biodiversity diminishes, and 99 % of the global population breathes unsafe air, those already in vulnerable positions are disproportionately affected, particularly women and girls. By 2050, it's estimated that the climate crisis will push an additional 158 million women and girls into poverty and cause 232 million to face food insecurity.

The degrading environment undermines the realisation of human rights, such as the right to food, water, health, and protection against violence. Girls in low-income countries are particularly affected due to their gender, age, and lack of of resources, with over one billion children currently at extreme risk from the impacts of the climate crisis and worsening humanitarian emergencies around the world.

At Plan International we believe that sustainable solutions to the ecological crisis can be achieved only through gender equality and by recognising that healthy societies cannot exist without a healthy environment. Gender-transformative climate action is crucial for addressing both the climate crisis and the root causes of gender inequality, particularly for marginalised girls and young women. This means addressing structural drivers of gender inequality and exclusion by reshaping unequal power dynamics to realise girls' rights and rights of all young people, regardless of gender or intersecting identities. Our work on Nature-based Solutions, presented in this publication, aligns with this vision.

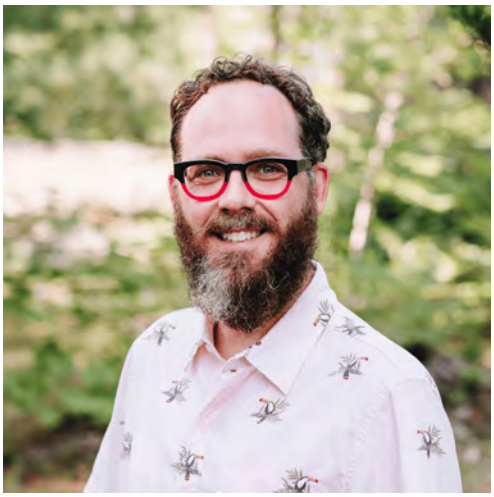
At the same time, we recognise the need for a holistic understanding in all decision-making processes. Building synergies between national strategies, action plans, and their implementation is the best way to avoid siloing, trade-offs, and maladaptation.

Although the challenges are immense, the good news is that solutions are within reach. I hope this report inspires all readers to strive for a world that respects planetary boundaries, upholds human rights, and ensures every girl has a seat at the table where decisions about their future are made.

Stu Solomon

Stu Solomon, Climate Lead, Plan International

"The time to act is now. The climate crisis is a heavy burden on children and youth, filling us with anxiety and fears for our future. How can we dream of a better tomorrow when it was destroyed yesterday?" **Ineza Umuhoza Grace**, impact-driven youth climate advocate and negotiator, Rwanda



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List of abbreviations

CBD	Convention on Biological Diversity
COP	Conference of the Parties
GBF	Kunming-Montreal Global Biodiversity Framework
GTA	Gender Transformative Approach
LLA	Locally Led Adaptation
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NbS	Nature-based solutions
NBSAP	National Biodiversity Strategies and Action Plan
UNCCD	The United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Key messages

An ecological crisis is threatening life on Earth, amplifying inequalities, and deepening global injustice. As a result, human rights are being undermined globally, and girls and other marginalised groups in low- and middle-income countries are particularly affected. Measures to counter these effects must be rapid, adequate, transformative, and aligned with the goals agreed upon in international conventions.

Holistic solutions are needed to avoid trade-offs and maladaptation. This requires policy coherence and increased synergies across national strategies, action plans and programme implementation.

Only a rights-based and gender transformative approach can sustainably address the ecological crisis. Without human rights and gender equality as the core principles of transformative change, solutions will replicate existing power imbalances and injustices that are at the root of the crisis.

Introduction

The world faces several serious and interrelated environmental challenges. Among these are climate change, land degradation, biodiversity loss and pollution. Combined, these constitute an ecological crisis that is threatening the health of ecosystems and human wellbeing. The scientific community and civil society are urgently calling for transformative measures to change course.

Despite contributing minimally to these overlapping environmental problems, girls, young women, and other marginalised groups in low- and middle-income countries bear the most severe consequences. These problems affect girls' health, limit their bodily autonomy, and make it harder for them to access essential services such as education, healthcare, employment and sustainable livelihoods. In many contexts, girls struggle to meet their basic needs for clean water, food and shelter. Yet, they are systematically excluded from decision-making processes that shape their futures. This affects girls in all their diversity and of all backgrounds.

The **Seeds of Change: Girls' rights in the era of ecological crisis** report sheds light on the impacts of interrelated environmental degradation and gender inequality, examining how ecological breakdown undermines girls' rights in low- and middle-income countries. The report also explores how nature-based solutions (NbS) can address the interlinked challenges of environmental sustainability, poverty and social inequality, highlighting Plan International's experiences in implementing gender responsive NbS. The report takes a view on the international policy frameworks and outlines policy recommendations calling for global responsibility and commitment from decision-makers, influencers and practitioners to advance a world where planetary boundaries are not crossed, and everyone can live with dignity, equality and respect.

Plan International's Gender Transformative Approach tackles the structural drivers of gender inequality and exclusion by reshaping unequal power dynamics to realise girls' rights in particular, and rights of all young people, regardless of gender or intersecting identities. In the Global Strategy "All Girls Standing Strong" (2023–2027), and by endorsing the eight principles of Locally Led Adaptation, the organisation commits to local leadership in planning and implementing adaptation. The eight principles align with Plan International's Gender Transformative Approach (GTA), to address environmental justice and structural inequalities that girls and other marginalised groups face.

Compiled by Plan International Finland, this report draws on global evidence and project-level case studies, connecting the ecological crisis with girls' rights. The report argues that without placing girls' rights and gender equality at the heart of environmental policy and action, efforts to address the ecological crisis will remain ineffective, unjust and unsustainable.

1. The ecological crisis: a human rights and gender crisis

The ecological crisis – which includes climate change, ecosystem degradation, biodiversity loss, resource overuse and pollution – presents not only an environmental emergency but also a profound human rights and gender emergency. As the risk of irreversible environmental change grows, the responsibility for and impact of this are distributed unequally across countries, communities and generations.

1.1. Interrelated environmental problems

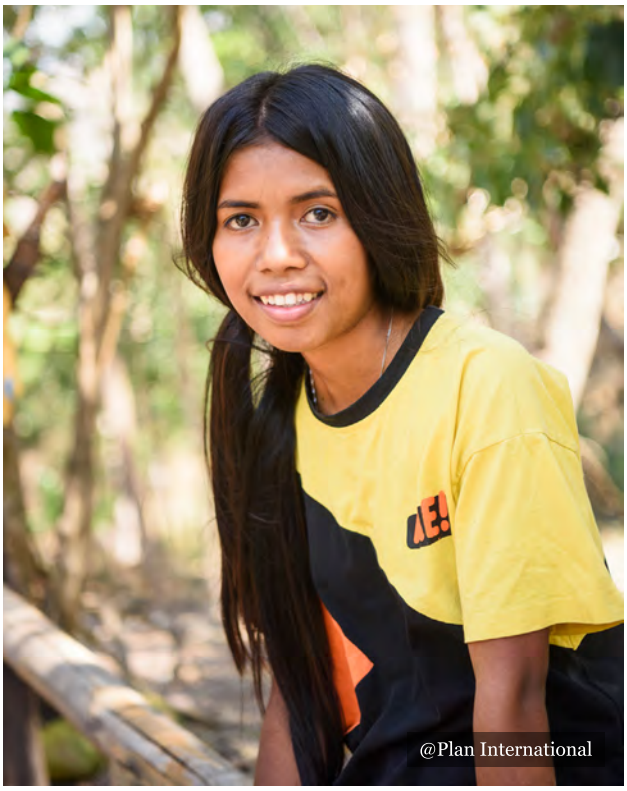
The ecological crisis is not a singular event, but a convergence of interlinked environmental challenges deeply connected with poverty and inequality. Together, these crises intensify vulnerabilities for those people who are already marginalised. The interconnected impacts of biodiversity loss, land degradation and climate change are significant and overlapping. Over the past two decades, extreme weather events like storms and heavy rainfall have increased by 40 per cent, leading to increased displacement, loss of life, damage to livelihoods, and destruction of infrastructure and cultural heritage.[1]

According to the Stockholm Resilience Centre, six out of nine planetary boundaries, including those related to climate change, freshwater use, land-system change and biosphere integrity, were already substantially breached as of 2023.[2] The concept of planetary boundaries defines limits for the impacts of human activities on nine critical and interconnected environmental processes, where crossing one boundary will also affect others.[3]

Climate change causes extreme weather events and slow-onset events such as biodiversity loss, salinisation and reduced freshwater availability.[4] Changes in land use, excessive chemical use, overfishing, and industrial farming compound these challenges and threaten ecosystem health and services. As a result, communities face growing threats to food security, human health and access to safe drinking water.[5] Moreover, pollution has emerged as the leading cause of premature deaths worldwide and harms ecosystems that are essential for building a climate-resilient future.[6]

The use of natural resources has increased threefold in the past 50 years and is still increasing by more than 2 per cent annually.[7] Despite clear warnings from the scientific community and widespread concern of civil society, carbon emissions continue to increase, resulting in record levels of heat year after year.[8] Biodiversity continues to diminish at a staggering rate: measured global wildlife populations have shrunk by an average of 73 per cent over the last half-century.[9] Pollution is not only a concern in low-income countries – 99 per cent of the world's citizens breathe polluted air, affecting health outcomes even in high-income countries.[10]

Several global tipping points that will lead to a shift in the state of critical Earth processes supporting human societies and local economies are dangerously close.[11] The collapse of the Amazon rainforest, melting glaciers or permafrost thaw could release vast quantities of greenhouse gases and accelerate global warming. The loss of coral reefs could cause the loss of livelihoods and protection for hundreds of millions of people living in coastal areas.[12]



Skills and confidence through conserving water sources in Aileu

15-year-old Teresa lives in a rural village in Aileu, Timor-Leste. After taking part in Plan International's Hakbi'it Joventude project, Teresa says her village is much happier and now has enough water to last them through the dry season. Teresa has participated in training to learn how to conserve water, plant trees, and build terraces to control soil erosion and landslides. She has developed new skills in sustainability and gained confidence in herself.

"As part of this project, we have learnt about water conservation. Not only that, we also planted trees at the water source that we have been conserving, and creating terraces. By doing this, it can prevent landslides that can destroy our water source and means we can fertilise the soil in our plantation whenever we need. For example, if we plant a tree now, in five or ten years' time our spring water won't dry out, but the volume of water will increase over this time. Taking part in the Plan activities has really increased my knowledge, and I have become more confident. Now I no longer feel afraid to stand in front of people, or in front of project staff, like before." – **Teresa**, 15, East Timor

1.2. Economic inequality and the ecological crisis

The ecological crisis is driven by human activities, especially the overuse of natural resources. According to the International Resource Panel of the United Nations Environment Programme (UNEP), global resource extraction has more than tripled since 1970 and is projected to rise by another 60 per cent by 2060.[13] Consumption patterns in high-income countries continue to drive the excessive use of resources. UNEP estimates that high-income countries produce ten times more emissions and use six times more materials per capita than low-income countries.[14] This rapid consumption is primarily driven by the globalised market economy. Many negative impacts caused by production, such as environmental and social costs, are often externalised from production costs and need to be addressed by other means.[15] This leads to resource depletion, environmental degradation and unfair labour practices.

Although the global economy continues to grow, it fails to meet the basic needs of many people. According to World Bank data, global poverty reduction has slowed to a near standstill, with 2020–2030 set to be a 'lost decade' for the global goals for eradicating poverty.[16] These injustices are not accidental; they are shaped by deep-rooted inequalities in power and economic systems. Global wealth remains highly concentrated: in 2021, the World Inequality Lab reported that the wealthiest 10 per cent of people held 76 per cent of the world's wealth, while the bottom half of the global population owned just 2 per cent.[17] These disparities are worsened by unequal exchange, whereby labour and resources in low-income countries are undervalued.[18] For instance, companies in high-income countries use cheap labour and resources in low-income countries to make a significant profit without sharing the value created back with the countries where raw materials and labour were originally sourced.

The global economic system, which is based on competition and profit maximisation, is incompatible with environmental sustainability and social equity goals. It is calculated that lifting 3 billion people above the line of $6.85 per day would increase global emissions by 46 per cent by 2050, if we follow the same patterns of economic growth and carbon intensity seen in the past decade.[19] Ensuring fairer distribution of resources while living within planetary boundaries requires a systemic transformation – one that prioritises equity, sustainability and human rights over narrow economic gains.

1.3. Human rights and gender in the ecological crisis

The ecological crisis amplifies gender and social inequalities and threatens critical human rights such as the right to food, water, health, and protection against violence. In the absence of social and economic safety nets, people who are already marginalised will suffer greater loss and damage than others, often leading to cycles of intergenerational poverty.[20]

The impacts of environmental hazards are gendered, and in many countries, girls and young women are increasingly affected by gender inequality, which is being intensified by the ecological crisis. Discriminatory social and gender norms mean that girls and women, as well as those marginalised by race, sexuality, gender identity, disability, ethnicity, and economic status, are often more affected by environmental stressors and have the fewest resources to cope.[21] Their exclusion from decision-making further compounds these challenges.[22]

TEXT BOX 1: DEFINITION OF MALADAPTATION

The Intergovernmental Panel on Climate Change (IPCC) defines maladaptation as actions that may lead to increased risk of adverse climate-related outcomes, including via increased greenhouse gas emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future. Most often, maladaptation is an unintended consequence.

Not all solutions to climate-related or environmental problems are socially just. For instance, while the shift to renewable energy is crucial for phasing out fossil fuels, the production of green technologies requires both natural resources and space. The large-scale industries and infrastructure in mining, energy extraction and energy plants can harm local communities and livelihoods by disrupting access to resources, leading to land grabbing and displacement, potentially deepening gender inequalities.[23] If solutions are not equitable or they shift harm onto others, they risk becoming maladaptive (Text Box 1).[24] When adaptation efforts do not consider gender and equity and are not informed by the needs of the most vulnerable, the likelihood of maladaptive outcomes increases.[25]

A rights-based and gender transformative approach plays a crucial role in responding to the ecological crisis. Without inclusive processes, the outcomes cannot be just or sustainable.[26] When climate and environmental actions are guided by principles of equity, participation and accountability, they are more likely to address the root causes of injustice and deliver long-term impact.

Caroline is at the centre of the Tumaini conservation group. @Plan International

Women lead the way in forest restoration

Women in Kenya's coastal regions face the dual burden of climate change and restrictive social norms. Although they are central to environmental stewardship, many are excluded from decision-making, bear the brunt of unpaid care work, and lack the time and opportunity to participate in climate solutions.

To address this, Conservation and Sustainable Management of Coastal and Marine Ecosystems (COSME) takes an eco-systems-based and gender responsive restoration approach to promoting climate justice. It is implemented in Kenya by Plan International and in Tanzania by the Jane Goodall Institute. The project empowers women as agents of change through the Gender Justice Journey, while actively engaging men as allies. Additionally, it partners with school-based conservation and agricultural clubs in 65 schools in Kenya and 45 Roots and Shoots clubs in Tanzania to nurture intergenerational climate action and participation in conservation.

The COSME project supports locally led ecosystem restoration with biodiversity co-benefits through three nature-based solutions: community-led mangrove restoration, terrestrial forest restoration, and sustainable seaweed farming. These are targeted so that women comprise at least 70 per cent of beneficiaries in all its interventions.

COSME's approach is community-led. Women are leading restoration activities and have taken up positions in Community Forest Associations and Beach Management Units. Men increasingly support women's involvement in household and community-level decisions.

"Through this project, we have learnt that when women are included, homes are more peaceful, incomes improve, and our forests and oceans are better protected," said Mohamed, a member of Amani Dzibwage group in Kwale. By shifting norms, building local capacity, and investing in women, the project is laying the foundation for gender responsive sustainable climate resilience.

*The current project is an expansion of previous COSME projects in Kenya, which started in 2017.

Conservation and Sustainable Management of Coastal and Marine Ecosystems (COSME)

Geographical location: Kwale and Kilifi Counties of Kenya, and Tanga and Pwani Regions of Tanzania

Partners: Plan International Canada, Plan International Kenya, Jane Goodall Institute of Canada, Cascadia Seaweed Corporation

Donor: Global Affairs Canada and individual Canadian donors

Duration: 2023–2026*

2. The impact on girls' rights

The ecological crisis affects girls' rights in multiple, intersecting ways. Girls in all their diversity and of all backgrounds face direct consequences to their health and wellbeing due to changing environments, as well as indirect impacts through shifts in social roles and family dynamics. Structural impacts are seen in the deterioration of essential infrastructure and reduced access to education and other basic services.

2.1. Individual-level impacts

As a result of environmental hazards, girls experience a range of physical and mental health effects, including increased exposure to vector-borne diseases, heat stress, food insecurity and unsafe water. High temperatures can lead to poor pregnancy outcomes and neonatal health issues, particularly for young mothers.[27] Climate-induced droughts and floods compromise access to clean water and sanitation facilities, making it difficult for girls to manage their menstrual hygiene and health.[28] This often restricts their mobility, limits their school attendance, and affects their dignity and wellbeing.

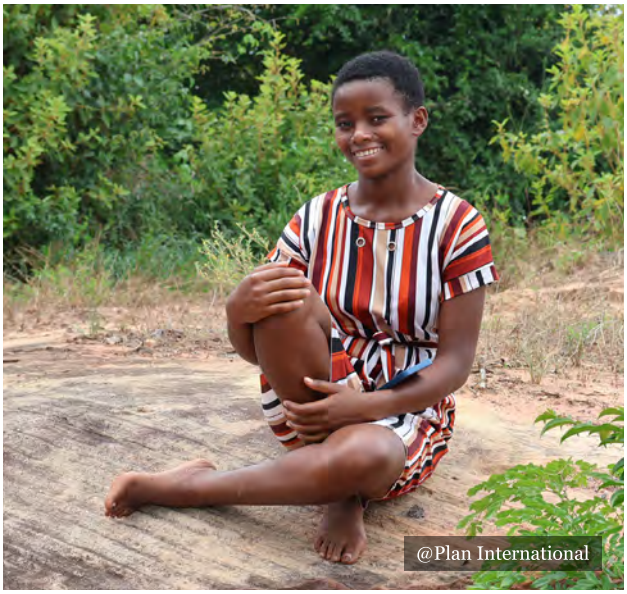
Pollution and environmental degradation, such as garbage-filled rivers, worsen the effects of climate change. Waterborne illnesses become more severe during heatwaves, and polluted and degraded rivers are less resilient to climate impacts, leading to increased flooding. Environmental degradation also increases girls' exposure to harmful pollutants and toxic chemicals.[29] Headaches, skin infections, faintness and increased risk of malaria were among the health issues associated with the deteriorating living environment of girls and young women in the Sahel.[30] At the same time, cultural stigma and limited mental health literacy prevent many girls from seeking help for emotional distress, trauma and anxiety related to environmental shocks.

In low- and middle-income countries, poverty is closely linked with higher exposure to air pollution and unsafe household cooking methods, which disproportionately affect girls and women due to their caregiving roles and time spent indoors.[31] Studies from Ethiopia and Uganda show that adolescent girls and young women face greater exposure to indoor air pollution than boys, increasing risks of respiratory illness and long-term health issues.[32]

2.2. Relational impacts

Girls in all their diversity experience the ecological crisis through changes in family dynamics, community roles and social expectations. During environmental shocks, such as floods, droughts and extreme heat, tensions within households and communities increase, often exacerbating existing gender inequalities.

The workload of girls increases during droughts, as they must travel longer distances to fetch water.[33] At times of resource scarcity, unequal power relations are maintained through gender-based violence, including limiting girls' and women's access to land, food and water.[34] Increased food insecurity can also put pressure on families to adopt negative coping strategies, such



Reclaiming land and the future for girls in Kilifi County

Rehema, 21, lives in Kilifi County, Kenya, where life is shaped by climate extremes. Long droughts dry up rivers and crops; sudden rains then carve deep gullies, turning dry riverbeds into deadly floods. Additionally, at times, elephants driven by drought from nearby forests destroy crops and cause temporary insecurity to the community.

With her parents away doing casual work and no steady income, Rehema had to stop her education, as the family's small earnings barely covered food. She lives with her grandmother and supports her seven siblings.

In her village, charcoal burning is a major source of income, including for Rehema's family, but through Plan International's Conservation and Sustainable Management of Coastal and Marine Ecosystems (COSME) Project, she began to understand how cutting trees fuels the crisis by degrading the land, hence worsening floods and drying streams. The project supported her and other members of the Dzikunze Binti Group, a support group for young women and teen mothers, to form a gender responsive savings group. With her first loan, she opened a small boutique and managed to repay the loan. Through Gender Justice Journey sessions that train community members on gender equity and inclusion, she found her voice. *"Now even older people listen to me, including men*," she says. "*I was chosen secretary of a new community group, something I never imagined."*

With proceeds from the shop, she hopes to pay her school fees and support her family to stop charcoal burning. She is also growing a fruit orchard at her home with the support of the project. Rehema dreams of going back to school and helping other girls in her village stay in school and learn how to protect their environment.

"We have seen what happens when we lose our trees. I want to be part of reclaiming not just the land, but the future for girls like me." – **Rehema**, 21, Kenya

as marrying their daughters early, to alleviate economic hardships.[35]

Due to prevailing gender and social norms, girls are often the first to drop out of school when families can no longer afford fees and other associated costs.[36] When livelihood losses force adult household members to migrate for income, caregiving responsibilities are often shifted to adolescent girls. As a result, adolescent girls must take on adult responsibilities, managing household duties or caring for younger siblings.

Although girls and women have fewer opportunities for formal political participation in relation to boys and men, many actively engage in environmental advocacy. However, environmental rights defenders often face growing threats, including gender-based violence. This violence is used as a tactic to silence women's leadership and activism, particularly in contexts where local communities resist large-scale extractive or polluting industries.[37]

2.3. Structural impacts

Deteriorating infrastructure, health and education systems due to the crisis disproportionately affect girls. Environmental hazards such as floods, droughts and extreme heat damage facilities, strain already fragile service delivery and disrupt essential services and supplies of medicines and contraceptives.[38] These disruptions disproportionately affect adolescent girls, who are the least likely to have the resources to adapt.

Health systems under climate stress have fewer resources and struggle to provide adolescent-friendly sexual and reproductive health services, leading to higher risks of early pregnancies, sexually transmitted infections, and unsafe abortions.[39] Pregnant girls and young mothers are especially at risk of poor birth outcomes,[40] including low birth weight, pre-term birth and pre-eclampsia.[41] Meanwhile, floods and storms close schools, destroy roads and make journeys to school more hazardous. School closures, often due to schools being repurposed as shelters or damaged by disasters, undermine girls' continuity of education and capacity to make informed life decisions.[42] Studies show that even temporary school disruptions can have lasting consequences.[43] Educated girls are more likely to delay marriage and childbirth and to participate in the labour market and in decision-making, increasing their economic and political participation.[44]

Displacement and migration break down traditional social safety nets.[45] Girls face disrupted access to sexual and reproductive health services, particularly in displacement settings or post-disaster shelters. Emergency shelters often lack adequate protection measures, leaving girls, young women, and other marginalised groups vulnerable to sexual harassment and abuse. The UN Committee on the Elimination of Discrimination against Women urges special consideration for the needs of displaced and disabled girls and women in climate and disaster risk reduction strategies.[46]

Project participants learn how to conserve mangrove ecosystems. @Plan International

Data on water pollution woke up the community

Rising temperatures, deforestation, water pollution, biodiversity loss, floods and drought are reducing agricultural productivity in Mulanje and Mzimba districts, undermining food security and livelihoods. Access to clean water is becoming more difficult, increasing the workload, especially for girls who are responsible for fetching water. Disrupted school attendance, early marriages and limited access to decision-making spaces are impacting girls' rights.

To better understand and respond to these challenges, local communities embraced the citizen scientist approach as a pathway to environmental stewardship, resilience building, and inclusive climate action. Plan International Malawi, in partnership with Mulanje Mountain Conservation Trust (MMCT), Total Land Care, and Earthwatch Europe (EE), utilised the approach in the Conservation Livelihoods in Malawi's Biosphere (CLIMB) project. The project adopted the Trainer of Trainers model, selecting and training young citizen scientists, ensuring a gender-balanced cohort of girls, boys, young women and young men. Their training covered basic environmental science, data collection techniques, and the use of simple monitoring tools, such as Secchi tubes for water clarity, chemical reagents for measuring phosphate levels, and printed survey sheets for observations.

Each month, these young people conducted water quality assessments in rivers and streams around Mulanje Mountain and Mtangatanga forest reserves. They then trained and led other community citizen scientists in conducting monthly water tests at 86 sites. The data collected was compiled by EE, providing insights into pollution sources and necessary interventions.

Findings from community water monitoring revealed a strong correlation between deforestation and the decline in water quality. While these issues had long been suspected, the data collected by the youth gave them weight and served as a wake-up call for the community. As one young woman shared, *"When we showed the results at a community gathering, people were shocked. They didn't realise how polluted our rivers had become until they saw evidence from their own children*".

Informed by these findings, the project expanded into restorative environmental actions. The actions included tree planting, forest co-management, recognising the role of traditional knowledge and shared responsibility in local forest management, and the use of energy-efficient cookstoves. These measures reduce pressure on the forest while improving indoor air quality, especially for women and children.

Mulanje demonstrates that localised, community-driven interventions can mitigate the worst effects of the ecological crisis. Beyond environmental impacts, the project is transforming social dynamics by placing young people, especially girls and young women, in leadership roles, challenging traditional notions of who are the knowledge holders and change makers in a locality.

Conservation Livelihoods in Malawi's Biosphere (CLIMB)

Geographical location: Mulanje and Mzimba Districts of Malawi

Partners: Plan International UK, Plan International Malawi, Earthwatch Europe, Mulanje Mountain Conservation Trust, Total Land Care

Donor: Jersey Overseas Aid (JOA)

Duration: 2022–2025

3. Solutions: gender transformative and locally led

Responding to the ecological crisis requires solutions that are not only environmentally sound but are also socially just. Gender transformative and locally led approaches recognise that those most affected, especially girls and marginalised groups, must be central to defining and driving solutions. Nature-based solutions (NbS) and locally led adaptation (LLA) offer practical frameworks to integrate equity, resilience and sustainability at scale.

3.1. Plan International's approach to addressing the ecological crisis

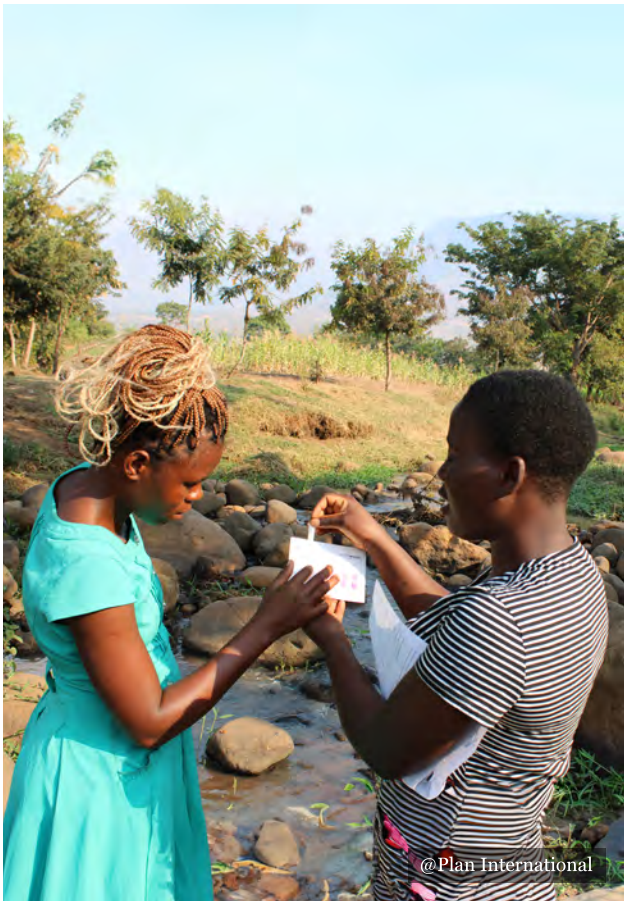
Plan International's commitment to advancing gender equality and children's rights positions the organisation as a key actor in addressing the ecological crisis. By adopting a Gender Transformative Approach (GTA) across all programming, advocacy and partnerships, the organisation challenges unequal power relations and addresses the root causes of gender inequality. The six core elements of the GTA (outlined in the Text Box 2), shape how Plan International designs, implements and evaluates its climate and resilience work through context-specific, inclusive solutions that strengthen community resilience while advancing gender and social justice. Plan International uses a Pathways to Resilience framework to identify and integrate resilience pathways into programming and strategic development.[47] It also endorses the eight principles of LLA (see Text Box 4), which further reinforces these efforts.

TEXT BOX 2: ELEMENTS OF PLAN INTERNATIONAL'S GENDER TRANSFORMATIVE APPROACH (GTA)

The six core elements of Plan International's GTA are:

1. *Addressing gender norms throughout the life-course;*
2. *Strengthening girls' and young women's agency;*
3. *Advancing both the condition and position of girls, young women, and women;*
4. *Working with boys, young men, and men to transform masculinities;*
5. *Ensuring inclusion and intersectionality;*
6. *Fostering an enabling environment for gender equality and girls' rights.*

The organisation's work at the community, national and global levels includes initiatives such as climate education, ecosystem-based livelihoods, safe school environments, and youth-led adaptation and advocacy. These efforts help to bridge gaps in participation, challenge harmful norms and support the most marginalised, particularly girls, in voicing their concerns, participating in adaptation actions and leading solutions to the crisis.



Journey from a data collector to an environmental advocate in Mulanje

At just 24 years old, Gorate, a young woman from Mulanje District in Southern Malawi, has become a respected voice in her community, not through politics or privilege, but through science. Gorate was trained as a citizen scientist in the Conservation Livelihoods in Malawi's Biosphere (CLIMB) Project to monitor water quality in her area, conducting monthly tests in nearby streams and rivers to measure turbidity, chemical levels, and visible pollution. Over the course of 12 months, Gorate's findings disclosed high phosphate levels, notable turbidity and plastic pollution. Equipped with this knowledge, Gorate didn't stop at data collection. She became a voice for action, sharing her findings at local meetings and engaging elders and peers alike. Her leadership inspired more young women to get involved in environmental protection, challenging gender norms that limit girls' political participation. Together with other CLIMB participants, Gorate raised thousands of seedlings to restore deforested slopes and riverbanks, and became an advocate for improved cookstoves that reduce dependency on firewood.

"I never knew how much our actions could impact the environment, but through the CLIMB [project], I have learnt the importance of protecting our forests and water sources. I'm proud to be part of a community that's taking action to ensure a sustainable future."

– **Gorate**, 24, Malawi

3.2. Nature-based and locally led solutions

A healthy environment supports people's wellbeing by providing essential ecosystem services. Mangroves protect coastal communities from storms, forests generate rainfall and store carbon, and wetlands purify water and sustain food production.[48] Nature-based solutions (NbS) build on this natural resilience by protecting, restoring and sustainably managing ecosystems to address key societal challenges such as climate change, disaster risk and biodiversity loss, while also promoting social inclusion and gender justice. Grounded in both scientific evidence and long-standing community practices, NbS are particularly effective in contexts where livelihoods have historically depended on a close relationship with nature. These solutions challenge the false dichotomy that human development must come at the expense of ecological health, instead offering integrated approaches that benefit both people and the planet.

The United Nations Environmental Assembly (UNEA) has recognised NbS as a powerful framework that links environmental, economic and social goals (Text Box 3).[49] By working with nature, rather than against it, NbS can be implemented across diverse landscapes, from rural to urban settings. Community-led reforestation initiatives, for example, not only improve biodiversity and enhance food security but also serve as platforms for empowering girls and women. Similarly, green urban infrastructure such as rooftop gardens, permeable pavements, and tree corridors improve air quality, reduce urban heat, and lower energy demands for cooling, contributing to both mitigation and adaptation efforts.[50]

TEXT BOX 3: DEFINITION OF NATURE-BASED SOLUTIONS (NBS)

The UNEA Resolution 2022 defines NbS as "Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits."

Evidence from the rural Global South underscores the value of NbS in building resilience. A review of 85 NbS interventions shows that most efforts led to improved ecosystem services, enhanced livelihoods and stronger community cohesion. Notably, 73 per cent of these interventions improved or restored regulating and supporting ecosystem services, 45 per cent of interventions led to diversified livelihoods or increased social cohesion, and 31 per cent improved local capacity to cope with and adjust to environmental changes.[51] These social outcomes showcase how environmental solutions can also be transformative in addressing systemic inequalities.[52] The International Union for Conservation of Nature (IUCN) Global Standard highlights the need for inclusive, participatory methods to co-create appropriate responses.[53]

Integrating gender equality from the outset is key to the success of NbS.[54] Promoting women's leadership, reducing unequal care burdens and recognising gendered knowledge systems are central to achieving long-term resilience. Studies have shown that knowledge about resource management is often gender-specific, shaped by distinct roles and passed down through generations.[55] This highlights the need to respect and incorporate indigenous and local knowledge alongside scientific insights.

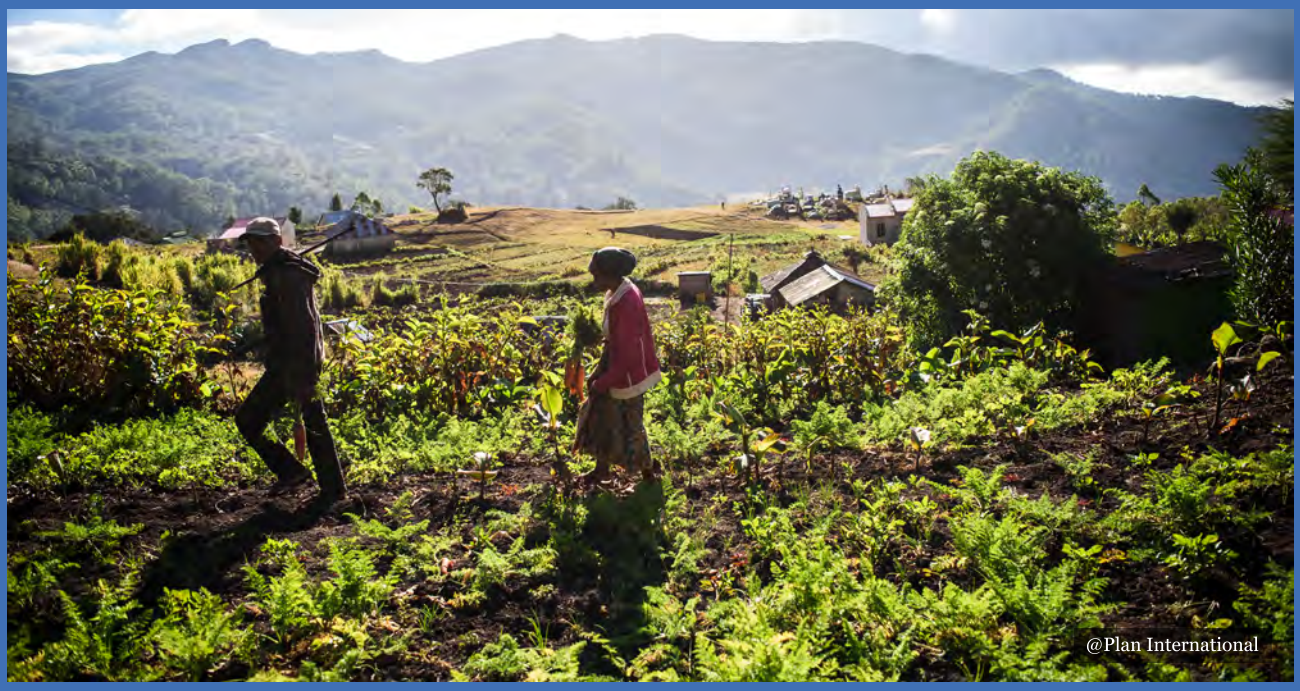
NbS are most effective when they reflect local priorities, make use of existing capacities, and are governed by transparent, accountable processes that share power and resources equitably.[56] This is where the principles of LLA come in. By placing decision-making power in the hands of those most affected by the ecological crisis, LLA ensures that solutions are not only relevant and sustainable, but also fair. When combined with NbS, LLA helps to create interventions that reflect the lived realities of girls and marginalised groups, allowing their voices and knowledge to guide the pathways towards resilience (Text Box 4).[57]

Plan International's work on NbS aligns with this vision. One of the five pathways in its resilience framework focuses on promoting a healthy natural environment, recognising that healthy societies cannot exist without a healthy environment.[58] However, more investment is needed to scale these practices, ensure accountability to local actors, and drive equity into environmental governance. Ultimately, the seeds of transformation lie in shifting power, recognising girls not only as those most affected by ecological breakdown, but also as critical agents of change for a more just and sustainable future.

TEXT BOX 4: PRINCIPLES OF LOCALLY LED ADAPTATION (LLA)

Principles for Locally Led Adaptation:

1. *Devolving decision-making to the lowest appropriate level;*
2. *Addressing structural inequalities faced by women, youth, children, people with disabilities, people who are displaced, Indigenous Peoples and marginalised ethnic groups;*
3. *Providing patient and predictable funding that can be accessed more easily;*
4. *Investing in local capabilities to leave an institutional legacy;*
5. *Building a robust understanding of climate risk and uncertainty;*
6. *Flexible programming and learning;*
7. *Ensuring transparency and accountability;*
8. *Collaborative action and investment.*



Protection of spring water makes water harvesting easier

Timor-Leste is an agrarian country where 66 per cent of households engage in subsistence agriculture, and 70 per cent of the population resides in rural areas. Rural livelihoods depend on natural resources, particularly water and land, which are increasingly under pressure due to environmental degradation and climate change.

In many rural areas, including in Aileu and Ainaro Municipalities, natural water springs are the main water source for household use and small-scale agriculture. However, communities face increasing water scarcity, especially during the dry season, due to inadequate water resource management, deforestation, unsustainable land use, population growth, and climate change. These issues threaten food and water security and the wellbeing of rural families, particularly women who collect water.To address these challenges, Plan International Timor-Leste, with partners Rural Youth Action (RYA) and Permatil, focused on spring water conservation and protection. The initiative uses rainwater harvesting by constructing artificial ponds and restoring natural ponds in upstream hilly areas. These ponds capture and retain rainwater during the rainy season, allowing it to gradually infiltrate into the soil and replenish underground aquifers, increasing water availability in natural springs during the dry season.The solution is supported by planting more than 5,000 trees in catchment zones to reduce evaporation, prevent soil erosion, and enhance biodiversity. Community mobilisation is central to the project, with an emphasis on inclusive participation. Women have taken leadership roles in water user groups and conservation activities, contributing labour, local knowledge, and taking part in decision-making, challenging traditional gender roles and promoting women's participation and leadership in natural resource management.

The initiative also integrated local customary law (*tara bandu*) and traditions, which govern natural resources. Community leaders and elders were engaged early to align NbS activities with traditional norms, ensuring cultural relevance and sustainability. Local communities have increased their awareness and capability to protect water springs and actively participated in planning, site assessments, implementation and knowledge-sharing. Many community members report improved water availability during the dry season, linked to the rainwater infiltration ponds in upstream areas.The project has established 42 ponds and 103 check dams in hilly areas, preserving 23 water springs and benefiting 1,067 households in Aileu and Ainaro.

Hakbi'it Joventude: Empowering women and youth through climate-smart regenerative agriculture, water resource management and livelihoods

Geographical location: Aileu and Ainaro municipalities in Timor-Leste

Partners: Plan International Timor-Leste, F-RYA and Permatil

Donor: DFAT (ANCP) Plan International Australia (PIA)

Duration: 2021–2025

4. Global policy landscape

Avoiding silos among the varied international conventions and frameworks aimed at addressing the ecological crisis requires sustained effort. A holistic approach to the pressing environmental problems requires finding synergy between the conventions as well as a broader systematic political alignment and commitment to realise agreed-upon targets. Nature-based solutions (NbS) offer a promising method to foster this alignment and generate co-benefits across climate, nature and development goals.

4.1. Synergies, gaps and gender in global frameworks

In 2023, the secretariats of the three Rio Conventions launched a Joint Capacity-building Programme to enhance synergies, collaboration, integrated planning, resource mobilisation, and the inclusion of indigenous and local knowledge.[59] The initiative builds on the 2023 "Joint Statement on Climate, Nature, and People" which emphasised that integrated and synergistic actions provide mutual benefits for resilience and livelihoods while reducing negative trade-offs.[60]

Notable indications of a holistic understanding are seen in the results of 16th Conference of the Parties (COP16), held in 2024 under the Convention on Biological Diversity (CBD): they highlight the interdependence of biodiversity loss, climate change, ocean acidification, desertification, land degradation, invasive species, and pollution. They stress the need for urgent, coherent, and balanced action to achieve the convention's objectives.[61]

TEXT BOX 5: THE RIO CONVENTIONS

In 1992, in Rio de Janeiro, the states of the world formed the **United Nations Framework Convention on Climate Change** and the **Convention on Biological Diversity** and called for negotiations on the **United Nations Convention to Combat Desertification**. This trio, called the Rio Conventions, emerged from an understanding of the interconnected nature of these pressing problems for humanity.

Gender and the role of local communities are also recognised in the key agreements under the Rio Conventions. The Paris Agreement stresses that adaptation should be gender-responsive and informed by traditional and local knowledge.[62] The Kunming-Montreal Global Biodiversity Framework (GBF) includes a target to ensure the participation of indigenous peoples, local communities, women, girls, children, and youth in environmental decision-making.[63] Moreover, the United Nations Convention to Combat Desertification (UNCCD) specifically emphasises rural women and the need to support their full participation in land restoration and governance, as well as highlighting the involvement of local communities.[64]

A call for political coherence, not just between the Conventions but more broadly in the decision-making, is also built into both the Paris Agreement and the GBF, as they require financial flows to align with environmental goals.[65] This includes phasing out subsidies that harm biodiversity[66] and scaling up investment in climate resilience.[67]

Overall, there are more than 500 international environmental conventions.[68] In addition to the Rio Conventions, some of the most important ones are the Basel, Rotterdam, and Stockholm Conventions, which address various types of pollution. With their combined secretariats and meetings, the conventions on pollution exemplify synergetic thinking.[69]

A rapid and adequate response to the ecological crisis requires not only increased synergies between the implementation of various conventions but, first and foremost, efforts to address the gaps in the realisation of already agreed-upon targets. Currently, Nationally Determined Contributions are not meeting the goals of the Paris Agreement. If the current NDCs are fully realised, they would lead towards a world that is 2.6°C warmer.[70] Only 14 per cent of countries met the CBD target on halving or reducing natural habitat loss – a target that was in place before the 2022 Kunming-Montreal Global Biodiversity Framework.[71] The world is not on track to achieve the UNCCD land degradation neutrality goal by 2030.[72] Recent difficulties in setting and meeting targets are evident in the GBF, where countries promised to renew their National Biodiversity Strategies and Action Plans (NBSAPs). However, by February 2025, three-quarters of countries had yet to do this, despite being months past the deadline.[73]

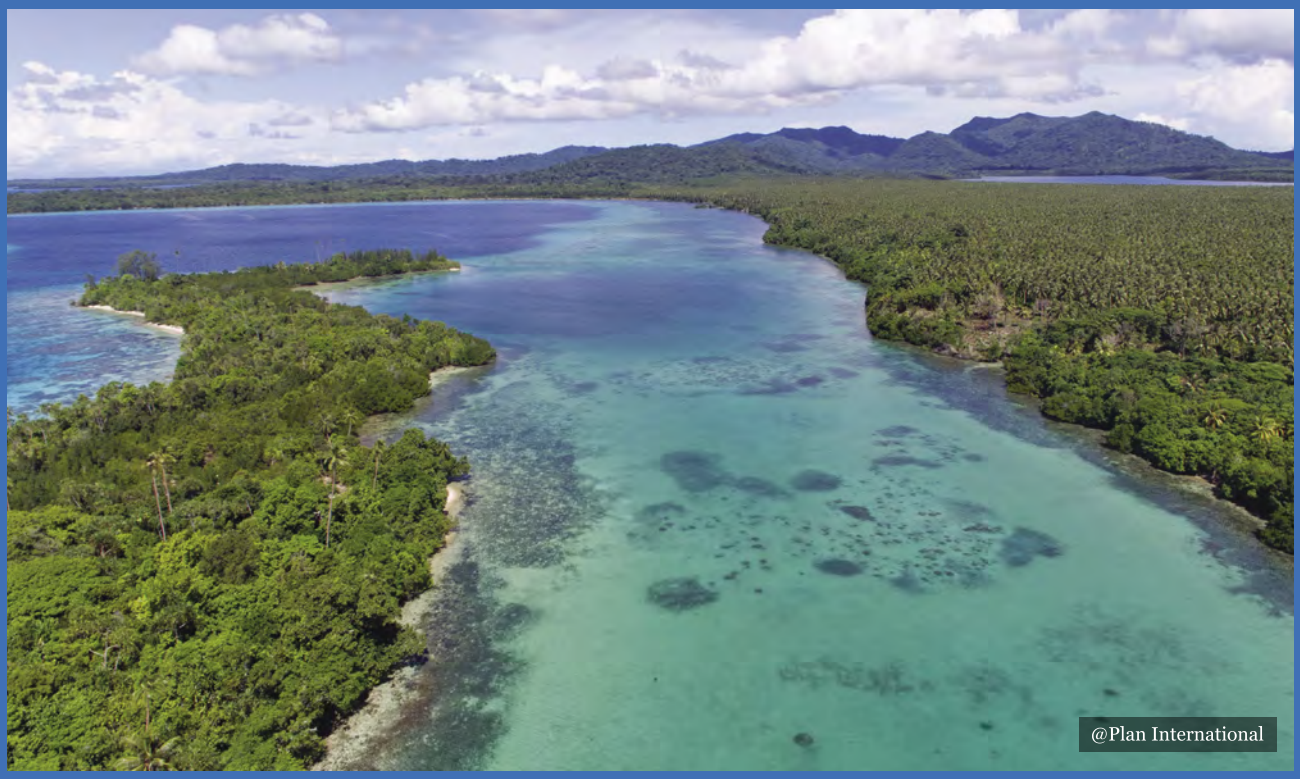
4.2. NbS in policy mechanisms and opportunities for finance and implementation

NbS is increasingly recognised across the conventions as a unifying strategy. The UN Climate Change website notes that "The biggest overlap in the work of all three Rio Conventions is in the field of nature-based solutions".[74] At United Nations Framework Convention on Climate Change (UNFCCC) COP27 in 2022, the Egyptian COP Presidency launched a partnership to increase progress towards the Rio Convention targets through NbS.[75]

NbS are mentioned in global frameworks:

- The GBF recognises NbS to strengthen biodiversity resilience in climate action.[76]
- The Global Goal on Adaptation calls for adaptation measures that scale up NbS.[77]
- A COP16 decision under the CBD urges parties to consider integrating NbS into their NBSAPs.[78]

Integrating NbS into Nationally Determined Contributions and National Adaptation Plans under the UNFCCC and NBSAPs provides a way to foster a synergistic approach. Accelerating finance for NbS in instruments related to the UNFCCC, CBD and UNCCD can foster synergies between them.[79] By centring community-led and gender responsive approaches, this financing can also address structural inequalities and ensure that the benefits of environmental action are equitably shared.



Women's environmental knowledge improves climate action

Women in the Pacific region are often excluded from planning and leadership roles in climate adaptation, particularly in nature-based solutions (NbS). Despite their central role in managing natural resources, women's contributions remain unrecognised in formal structures. This exclusion limits both the effectiveness of adaptation efforts and the potential for women to benefit from climate-related economic opportunities.

The Pacific Climate Champions project, launched in 2025 across Fiji, the Solomon Islands, and Papua New Guinea, aims to integrate women's leadership into the design and implementation of NbS. The project partners with and builds the capacity of three local civil society organisations (CSOs) to tailor interventions to each context. A key feature is the provision of leadership training for young women, creation of inclusive governance spaces and facilitation of their participation in climate decision-making. Women's groups have been formed or strengthened to oversee activities such as mangrove restoration, climate-smart agriculture, and slope stabilisation.

A strong element of the project is its integration of women's environmental knowledge into practical adaptation efforts through inclusive planning and governance. This approach reflects and respects lived experiences, centres indigenous knowledge and ensures long-term sustainability. It mirrors practices used effectively in other Plan International NbS projects, where combining technical solutions with local leadership and customary practices proved crucial to project ownership and success.

While the project has only just begun, women are increasingly involved in discussions around NbS activities in their communities and Plan International staff advocate for their inclusion within policy to governments and donors. The project's ultimate aim is to contribute to a replicable model for gender transformative NbS across the Pacific region, demonstrating that inclusive adaptation strategies yield both environmental and social benefits.

Pacific Climate Champions – Advancing Gender Equity through Nature-Based Solutions in the Pacific

Geographical location: Fiji, the Solomon Islands and Papua New Guinea

Partners: Plan International Australia, Plan Pacific, Bougainville Youth in Agriculture, Kastom Gaden Association, Partners in Community Development Fiji

Donor: DFAT (ANCP) Plan International Australia

Duration: 2025–2027

5. Recommendations

The ecological crisis undermines ecosystem health, amplifies inequalities and deepens global injustice. Countries must adopt rapid, adequate and transformative measures to respond effectively. Only by centring equity, inclusion and justice in environmental action can we truly address the root causes of the ecological crisis. Policy recommendations outlined below call for global responsibility and commitment from decision-makers, influencers and practitioners to advance a world where planetary boundaries are not crossed, and everyone can live with dignity, equality and respect.

1. Reduce emissions, pollution and protect ecosystems

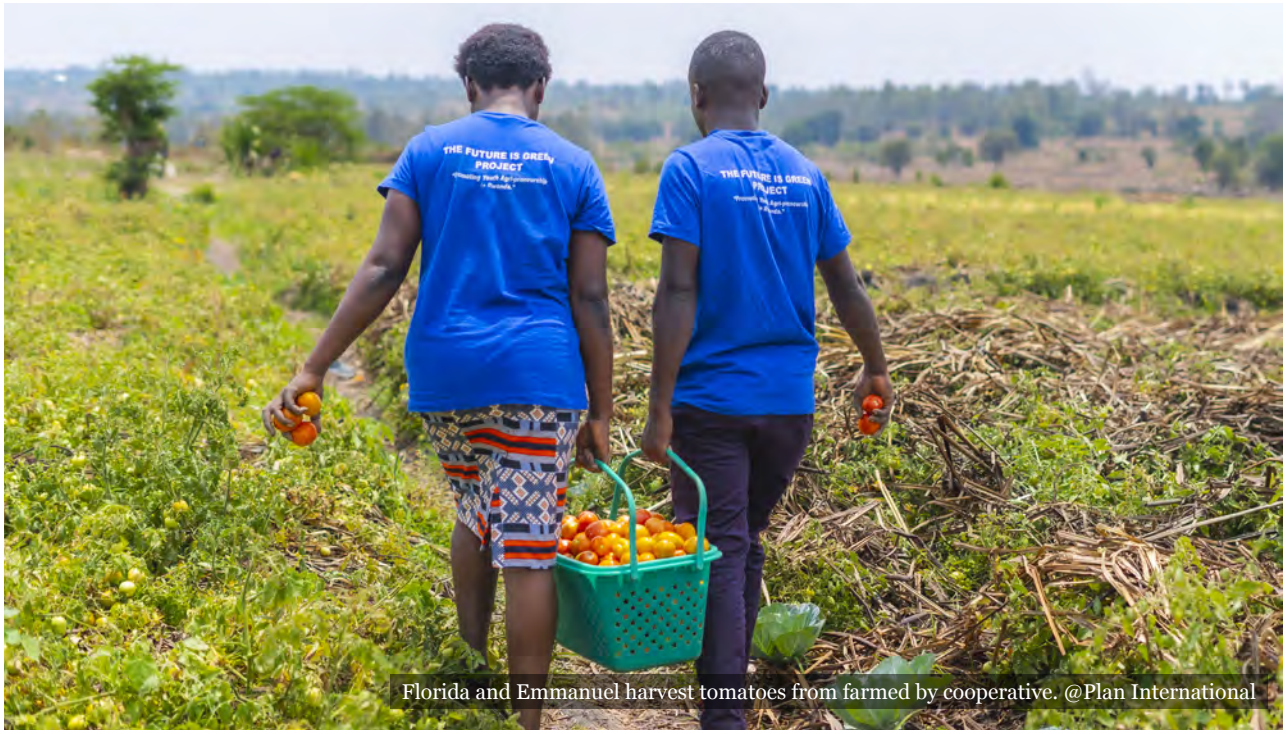
- Ensure that all policies are compatible with planetary boundaries.
- Make sure policies are coherent: solutions to one problem should not cause adverse effects elsewhere.
- Fund climate change mitigation, adaptation and biodiversity, and compensate for loss and damage at an appropriate level and in accordance with human rights and international law.
- Shift production and consumption systems to reduce the global ecological footprint, mainly in high-income countries.
- Move beyond gross domestic product (GDP) to measure progress. Adopt alternative metrics for ecological health, social equity and planetary boundaries.

2. Integrate national strategies under global policies

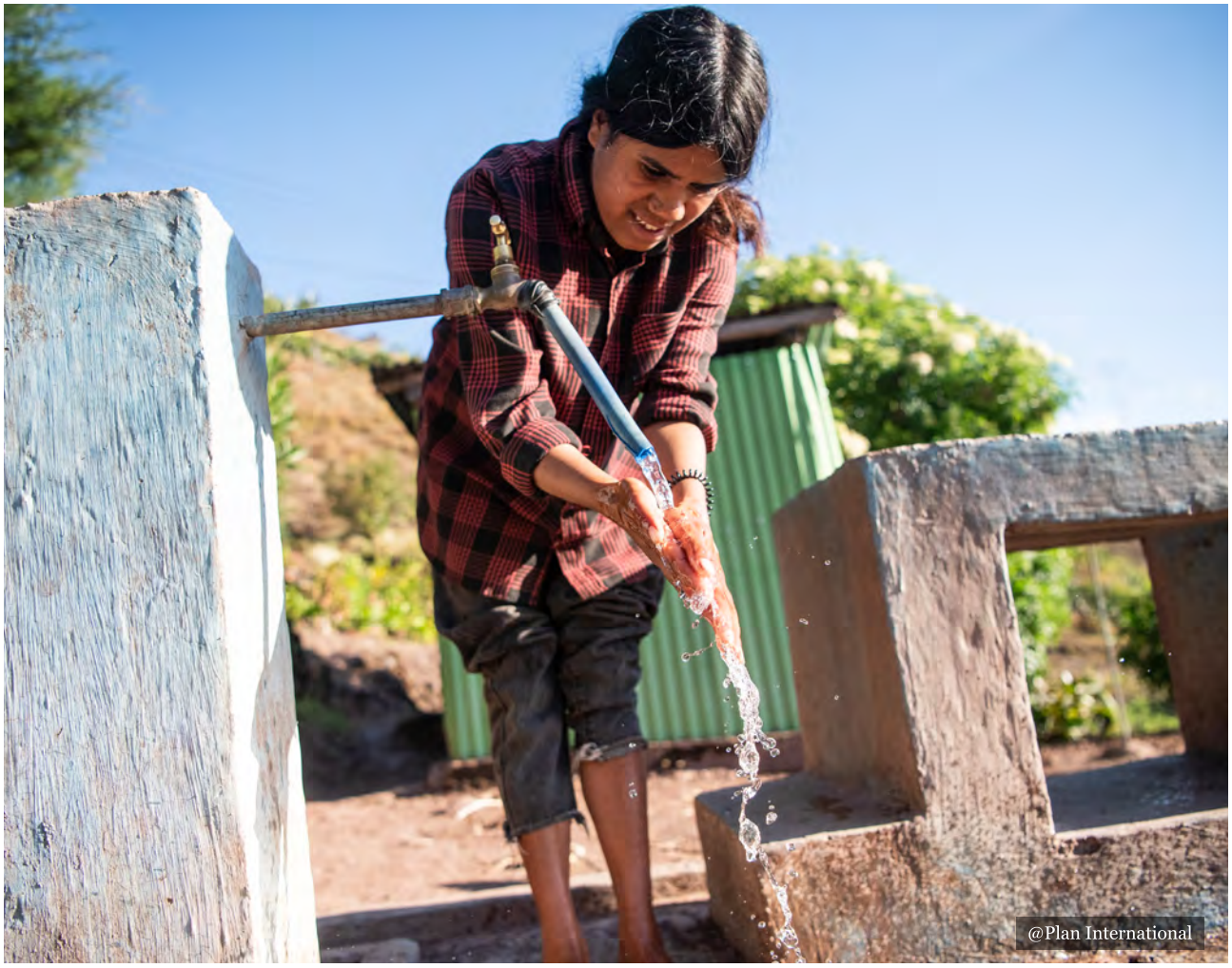
- Strengthen alignment between Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and NBSAPs to avoid siloed implementation and maladaptation.
- Mobilise international and domestic finance to support cross-sectoral strategies. Prioritise NbS as an entry point for integrated action across climate, biodiversity, and land.
- Encourage multilateral development banks and climate funds to support NbS-aligned projects that uphold gender equity and local leadership.

3. Advance a gender transformative, rights-based approach

- Ensure that all national strategies and action plans, such as NDCs, NAPs and NBSAPs, incorporate a rights-based, gender transformative approach and translate these into actionable policies at national and sub-national levels.
- Guarantee meaningful participation of girls, women, indigenous peoples, and local communities in the formulation, budgeting, implementation, and monitoring of environmental policies.
- Recognise diverse knowledge systems, including indigenous and local knowledge, as central to effective ecological governance.
- Collect and disaggregate data on the gendered and intersectional impacts of climate and biodiversity policies.



Florida and Emmanuel harvest tomatoes from farmed by cooperative. @Plan International



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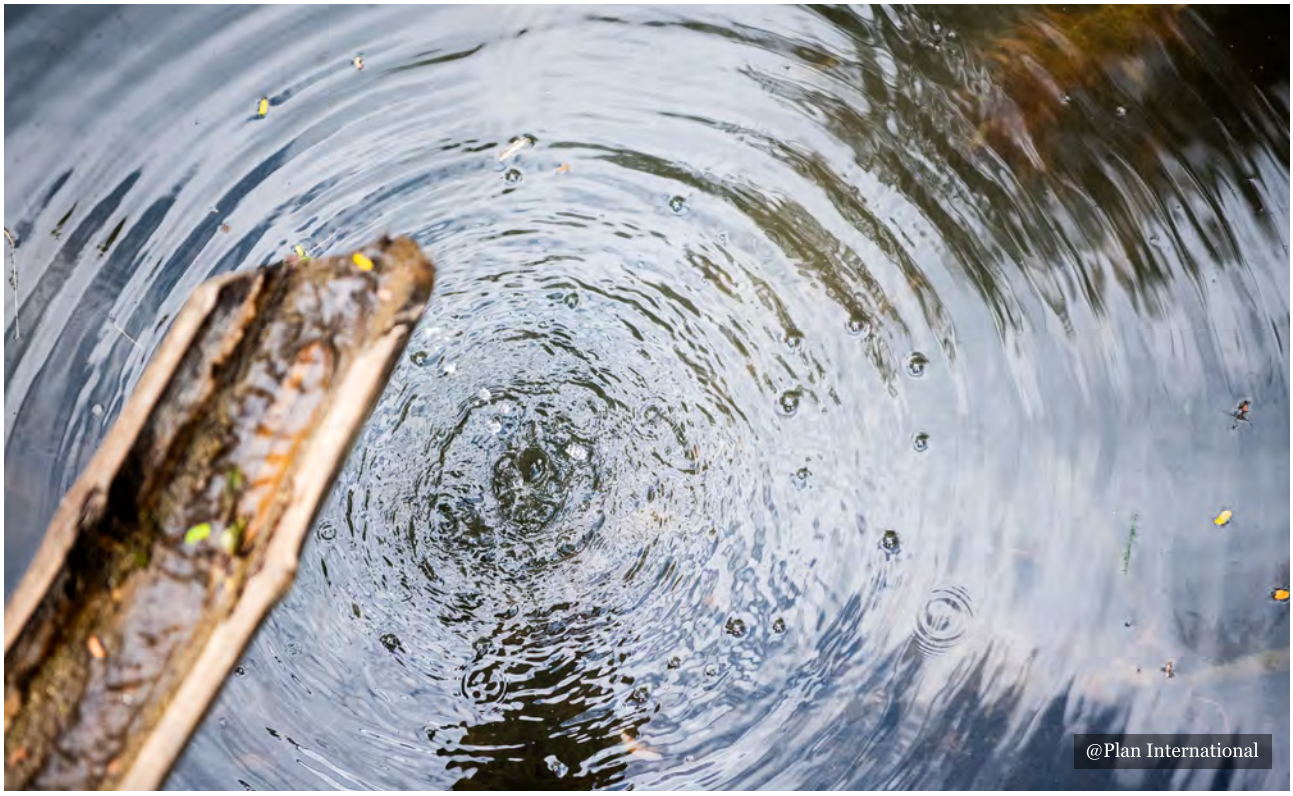

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