



ADAPTATION FUND



UN-HABITAT

FROM **RISK** TO **RESILIENCE**

ADVANCING CLIMATE CHANGE ADAPTATION
IN ASIA AND THE PACIFIC

UN-HABITAT
REGIONAL OFFICE FOR ASIA AND THE PACIFIC - ROAP



We extend our sincere appreciation to the Adaptation Fund for its generous support and unwavering commitment to advancing climate change adaptation and building resilient communities across Asia and the Pacific.

From Risk To Resilience - Advancing Climate Change Adaptation in Asia and the Pacific

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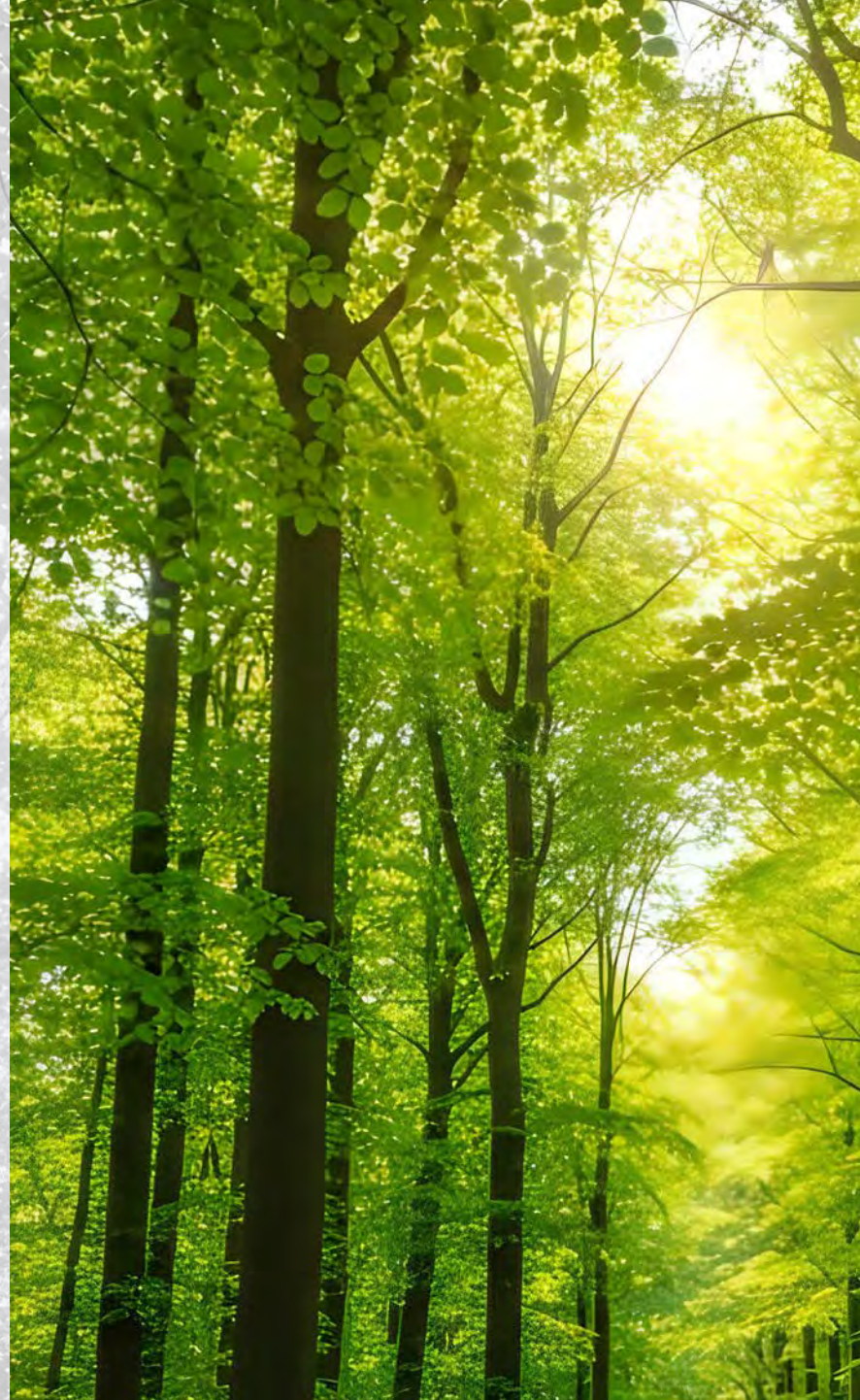
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FOREWORD



Kazuko Ishigaki

Regional Director
UN-Habitat ROAP

Climate change is one of the defining challenges for human settlements in Asia and the Pacific. Across the region, cities, towns, coastal areas, islands and rural communities are already experiencing its impacts through floods, droughts, storms, heat, coastal erosion, saltwater intrusion and growing pressure on basic services and livelihoods. These challenges are especially severe for communities living in vulnerable conditions, where climate shocks can quickly affect health, safety, income, and mobility, depriving dignity from people.

This overview presents UN-Habitat's Adaptation Fund portfolio in Asia and the Pacific, highlighting practical experiences from Cambodia, Fiji, Lao PDR, Malaysia, Mongolia, Pakistan, Solomon Islands, Sri Lanka and Viet Nam. Together, these projects show how climate finance can support concrete adaptation action where it matters most: in the settlements, neighborhoods and communities where people live.

The partnership between the Adaptation Fund and UN-Habitat has enabled locally grounded solutions that connect climate resilience with housing, basic services, infrastructure, ecosystems, livelihoods, and planning. It has also demonstrated the importance of working through strong partnerships with national governments, local authorities, communities, and civil society. National and local governments play a central role in guiding priorities, aligning projects with development and adaptation plans, supporting implementation, and sustaining results beyond the project period. Their leadership, combined with community knowledge and participation, is essential to ensuring that adap-

tation measures are relevant, inclusive, and durable.

At the center of this work is a shared commitment to people-centered adaptation. The projects presented here are not only about reducing physical exposure to climate risks. They are also about strengthening local capacities, improving everyday living conditions, supporting more resilient livelihoods, and enabling communities to participate in shaping their own future. The projects address urgent needs of community for enhancing their living environment while assuring long-term resilience through strengthening the capacity and governance of communities. This reflects UN-Habitat's broader commitment to inclusive, safe, resilient, and sustainable human settlements.

As climate risks continue to intensify, the lessons from this portfolio are increasingly important. They remind us that adaptation must be practical, inclusive, and locally owned. They also show that small-scale interventions, when connected to planning, institutions and community leadership, can contribute to wider transformation. We have witnessed that a meaningful drop has been steadily growing into a powerful current for sustainable urban development through mainstreaming climate risk.

UN-Habitat is grateful to the Adaptation Fund, national and local governments, community partners, and all stakeholders who have contributed to this work. We look forward to continuing this partnership and expanding efforts to support resilient human settlements across Asia and the Pacific, leaving no one and no place behind.

INTRODUCTION

Asia and the Pacific are at the forefront of the climate crisis. Across the region, climate change is no longer a distant projection but an everyday reality, experienced through stronger storms, heavier rainfall, prolonged droughts, coastal erosion, saltwater intrusion, landslides, floods, heat stress, water scarcity, and recurring disruption to housing, livelihoods, and basic services. These impacts are unfolding across diverse geographies: Pacific Island settlements exposed to cyclones and storm surges; coastal communities facing sea-level rise and erosion; inland towns affected by floods and drought; mountain and riverine settlements exposed to landslides and shifting rainfall patterns; and dense urban areas where heat, flooding, and pressure on infrastructure are increasingly felt in everyday life.



The human settlements dimension of climate change is central to this challenge. Climate impacts are not experienced only as environmental events; they are felt in people's daily lives through flooded homes, damaged sanitation systems, unsafe drinking water, disrupted mobility, lost income, heat-stressed neighbourhoods, and weakened social support systems. Vulnerable groups—including low-income households, women and girls, children and youth, older persons, persons with disabilities, migrants, displaced people, ethnic minority groups, and communities living in informal or underserved settlements—often face the greatest risks while having the fewest resources to recover. In this context, adaptation is not only about protecting infrastructure; it is also about safeguarding dignity, health, livelihoods, and the possibility of a safer future.

Together, the Adaptation Fund and UN-Habitat have helped translate climate finance into practical, settlement-level action across Asia and the Pacific. The projects presented in this publication span nine countries: Cambodia, Fiji, Lao PDR, Malaysia, Mongolia, Pakistan, Solomon Islands, Sri Lanka, and Viet Nam. They respond to a wide range of climate challenges, from coastal erosion and saltwater intrusion in Cambodia and Viet Nam, to vulnerability in informal settlements in Fiji and Solomon Islands, water scarcity and flood risk in Pakistan, rural and small-town resilience in Lao PDR, nature-based urban adaptation in Malaysia, climate-resilient ger area settlements in Mongolia, and livelihood and ecosystem resilience in Sri Lanka.

A defining feature of this portfolio is the central role of national and local governments. Adaptation Fund-supported projects are developed in alignment with national strategies, plans, and priorities, and are endorsed through national processes. In practice, this means that projects are not externally driven interventions imposed on communities, but collaborative efforts shaped in partnership with national institutions, local authorities, communities, and other stakeholders. National governments provide strategic direction and ensure policy alignment, while lo-

cal governments help connect adaptation priorities to the realities of cities, towns, districts, and settlements. Their knowledge of local conditions, service systems, planning processes, and community needs is essential to ensure that investments are relevant, sustainable, and able to inform future development.

This partnership-based approach also recognizes that effective adaptation depends on capacity development and co-creation. Across the portfolio, projects support national and local institutions in assessing risks, strengthening planning systems, coordinating implementation, applying environmental and social safeguards, and mainstreaming climate resilience in policies, infrastructure, and services. At the local level, authorities and communities work together to identify priorities, ground technical analysis in local knowledge, and develop solutions that is tailored into lived realities. This strengthens ownership and helps ensure that adaptation measures are not only technically sound, but also socially accepted, locally managed, and sustainable over time.

The projects presented in this publication demonstrate how this approach is applied in practice. In Cambodia and Viet Nam, small-scale infrastructure, water management, ecosystem restoration, and livelihood support help coastal communities respond to saltwater intrusion, flooding, and erosion. In Fiji and Solomon Islands, informal and vulnerable urban settlements are supported through community-led planning, improved basic services, and safer living environments. In Lao PDR, projects strengthen resilience in rural settlements, emerging towns, and vulnerable housing through improved water systems, planning, preparedness, and local capacity development. In Malaysia, nature-based solutions help reduce heat and flood risks in dense urban areas. In Mongolia, community-driven interventions in ger areas improve flood protection, sanitation, and climate-resilient housing. In Pakistan, urban communities and institutions work together to address water scarcity, flooding, and drought. In Sri Lanka, vulnerable rural and coastal communities in Mullaitivu are supported through livelihood resilience, water management, ecosystem protection, and community-based adaptation.

Several common themes emerge across these experiences. First, the projects prioritize vulnerable communities and settlements where climate risks already affected their safety, health, and well-being. Second, they combine

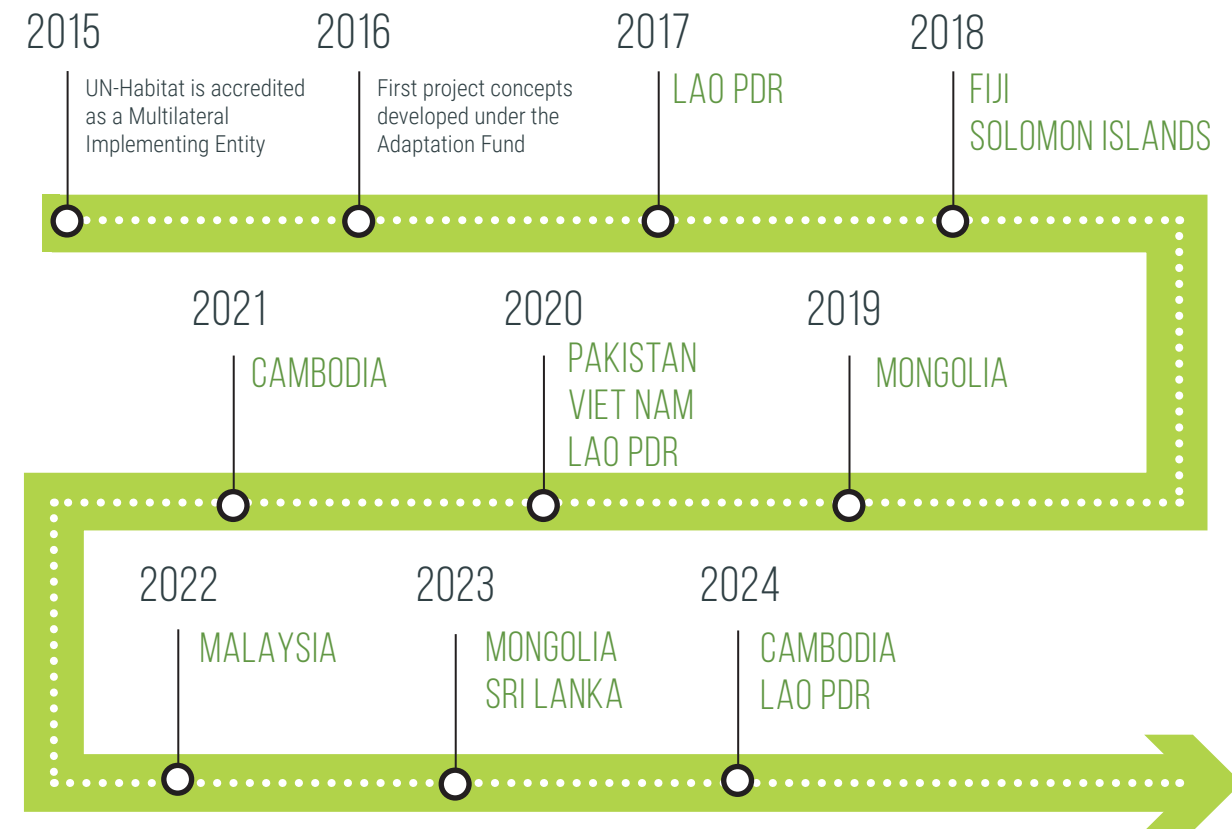
immediate adaptation measures with longer-term institutional strengthening, ensuring that infrastructure investments are linked to planning, maintenance, learning, and governance. Third, they promote inclusive participation, recognizing that communities are not only beneficiaries but also essential partners and agents for change in identifying risks, shaping priorities, and sustaining results. Fourth, they create opportunities for replication and scale by generating evidence, strengthening local systems, and aligning lessons learned with broader policy and investment pathways.

This publication brings these experiences together as a shared regional narrative. Each project summary highlights the climate challenges faced by communities, the objectives and approaches of the intervention, the partners involved, and the intended or achieved benefits for people, settlements, and institutions. Taken together, they show that adaptation becomes meaningful when it is rooted in everyday life: safer homes, more reliable water supply, improved sanitation, stronger drainage, healthier ecosystems, better preparedness, more resilient livelihoods, and more capable local institutions.

The lessons from this portfolio are clear. Climate adaptation in Asia and the Pacific cannot be separated from the future of human settlements. It requires investments not only in infrastructure, but also in governance, knowledge, participation, and long-term planning. It requires solutions that are technically sound, socially inclusive, and locally sustainable. Above all, it requires partnerships that connect global climate finance with national leadership and local action. The collaboration between the Adaptation Fund and UN-Habitat demonstrates how this connection can be made: by bringing together resources, expertise, and local knowledge to support communities that are not only better protected from climate risks, but also more inclusive, resilient, and sustainable.



ADAPTATION FUND—SUPPORTED UN-HABITAT PORTFOLIO IN ASIA-PACIFIC



 COUNTRIES COVERED
9

 PROJECTS
13

 TOTAL INVESTMENT
US\$ 78,093,412

 DIRECT BENEFICIARIES
527,561

 INDIRECT BENEFICIARIES
APPROX. **1.250,000**

 PARTNERS
NATIONAL GOVERNMENTS, LOCAL AUTHORITIES, COMMUNITIES, CIVIL SOCIETY, TECHNICAL PARTNERS



ADAPTATION FUND

SECTORS

 Urban Development

 Rural Development

 Disaster Risk Reduction

 Multisector Projects

CAMBODIA

01

CLIMATE CHANGE ADAPTATION THROUGH PROTECTIVE SMALL-SCALE INFRASTRUCTURE INTERVENTIONS IN COASTAL SETTLEMENTS OF CAMBODIA

Cambodia's southern coastal provinces of Kep and Preah Sihanouk are places where everyday life, local economies, and community well-being are closely tied to water. Communities depend on farming, fishing, tourism, and coastal ecosystems, but climate change has made these systems less predictable and more fragile. Heavier rainfall, prolonged dry periods, sea-level rise, storm surges, coastal erosion, and saltwater intrusion have placed growing pressure on settlements that already face gaps in drainage, sanitation, water supply, and other basic services.

For households, these changes have been felt through repeated disruption. Floodwaters and blocked drainage can quickly turn roads, yards, and shared spaces into stagnant pools, disrupting access to schools, markets, and health services, while creating clean-up and repair costs that many families can least afford. Where wastewater and solid waste systems are limited, heavy rainfall increases pollution and health risks, especially for children, older persons,

and people already living with illness. At the same time, drought and saltwater intrusion reduce the reliability of water for crops, livestock, and household use, undermining incomes and increasing food insecurity. These pressures fall most heavily on low-income households, women-headed households, women and girls with significant care and water-related responsibilities, young people, older persons, and persons with disabilities.

The project strengthened climate-resilient and adaptive development in Kep and Preah Sihanouk by helping vulnerable communities better withstand climate variability and reduce risks to homes, health, and livelihoods. It delivered an integrated package of practical investments and local capacity development to ensure that adaptation measures could be planned, managed, and sustained beyond individual infrastructure interventions.

Across the target areas, the project improved water security and flood risk management through climate-responsive



Building resilience along Cambodia's coast
means protecting water, livelihoods, ecosystems,
and the dignity of vulnerable communities



Kep and Preah Sihanouk
Provinces



National Council for Sustainable
Development (NCSD)



US\$ 5,000,000



31,260 direct female
beneficiaries



31,261 direct male
beneficiaries



57,113 indirect beneficiaries



Early warning system



Livelihood diversification
rehabilitation



Resilient housing and toilets



Reservoir, canal, embankment
and sluice gate rehabilitation



Mangrove restoration and eco-
system-based adaptation



5 wastewater treatment plants
rehabilitation



Community-based solid waste
and community-level waste-
water management



Green-grey coastal protection
infrastructure



Flood management and drainage
systems



Community capacity building
(People's Process)

upgrades to reservoirs, canals, embankments, and sluice gates. It also addressed everyday health and environmental risks by supporting wastewater treatment, drainage improvements, and measures to reduce pollution entering rivers, waterways, and coastal areas. In vulnerable settlements, climate-resilient housing and sanitation improvements helped families live with greater safety and dignity during extreme weather. These investments were complemented by early warning support, enabling communities to prepare in advance and reduce losses when floods or drought conditions were forecast.

The project also recognized coastal ecosystems as essential infrastructure for adaptation. Mangrove restoration and ecosystem-based management helped reduce erosion, buffer storm impacts, protect biodiversity, and sustain fisheries-based livelihoods. In Kep and Preah Sihanouk, targeted small-scale measures helped protect farmland and nearby settlements from saltwater intrusion. Training and knowledge-sharing activities strengthened local leadership and helped communities understand, maintain, and build on the improvements introduced through the project.

By the time of completion, the project had delivered lasting adaptation benefits for vulnerable coastal communities in Kep and Preah Sihanouk Provinces. Households benefited from safer living conditions, improved access to water and sanitation, reduced pollution and disease risks, stronger protection against flooding, drought, and saltwater intrusion, and healthier coastal ecosystems that support livelihoods. Equally important, the project strengthened local institutions and community capacity to maintain these improvements, apply lessons in other vulnerable areas, and move towards a safer, healthier, and more resilient future along Cambodia's changing coast.



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IN KEP AND PREAH SIHANOUK PROVINCES, **RESILIENT
HOUSING** IS MORE THAN SHELTER—IT PROTECTS
HEALTH, LIVELIHOODS, AND HUMAN DIGNITY

CAMBODIA

INCREASING CLIMATE RESILIENCE THROUGH SMALL-SCALE INFRASTRUCTURE INVESTMENTS AND ENHANCING ADAPTIVE CAPACITY OF VULNERABLE COMMUNITIES IN KAMPOT AND KOH KONG PROVINCES IN CAMBODIA

BUILDING CLIMATE RESILIENCE MEANS PROTECTING HOMES, LIVELIHOODS, AND ECOSYSTEMS TOGETHER

In Cambodia's southern coastal provinces of Kampot and Koh Kong, everyday life is closely tied to water, land, and coastal ecosystems. Communities depend on farming, fishing, tourism, and natural resources, but these livelihoods are increasingly threatened by heavier rainfall, prolonged dry periods, sea-level rise, storm surges, coastal erosion, and saltwater intrusion. In low-lying and exposed settlements, climate change is making water both less reliable and more hazardous.

For households, these risks are felt through repeated disruptions. Heavy rainfall can overwhelm drainage systems, flood homes and roads, and increase pollution where wastewater and solid waste services are limited. Drought reduces water availability for crops, livestock, and household use, while saltwater intrusion affects farmland, freshwater resources, and coastal livelihoods. Families with limited resources often face recurring repair costs, income losses, and health risks, making it more difficult to recover before

the next shock. These pressures are particularly severe for low-income households, women, young people, older persons, persons with disabilities, and communities that depend directly on climate-sensitive livelihoods.

The project seeks to strengthen climate-resilient development and increase the adaptive capacity of vulnerable communities in Kampot and Koh Kong provinces, enabling people and institutions to better manage floods, drought, saltwater intrusion, and related health and livelihood risks.

To achieve this, the project delivers an integrated package of small-scale infrastructure, ecosystem-based adaptation, livelihood support, and capacity development. It improves water security and flood risk management through the rehabilitation of reservoirs, canals, embankments, drainage systems, and sluice gates. It also supports wastewater treatment and solid waste management, helping to reduce pollution in rivers, waterways, and coastal areas while

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National level: Ministry of Environment, National Council for Sustainable Development; **Local level:** Provincial Department of Environment, Kampot and Koh Kong Provincial Administrations; **Community level:** Selected NGO(s) Community Based Organisations and citizen/women groups in target communities.
.....

improving public health and environmental conditions. In vulnerable settlements, climate-resilient housing and sanitation solutions help households live more safely and with greater dignity during extreme weather.

The project also works with coastal ecosystems as part of the adaptation response. Mangrove restoration helps reduce erosion, buffer storm impacts, protect biodiversity, and sustain fisheries-based livelihoods. At the same time, livelihood diversification activities support vulnerable households, including women and youth, in strengthening income opportunities in areas such as inland fisheries, fish processing, seaweed cultivation, mat-making, livestock rearing, and agriculture. These actions reduce dependence

on a single climate-sensitive livelihood and help families recover more quickly from climate-related shocks.

The initiative is being implemented in selected areas of Kampot and Koh Kong provinces, including Kampong Trach, Krong Kampot, Khemarak Phoumin, and Mondol Seima. It benefits vulnerable coastal, rural, peri-urban, and urban communities, while also strengthening the capacity of provincial authorities, local institutions, community-based organizations, citizen groups, and women's groups to plan, manage, and sustain adaptation actions.

Through this integrated and people-centred approach, the project contributes to safer settlements, cleaner waterways, stronger coastal ecosystems, more reliable water management, and more resilient livelihoods. Over time, communities are expected to face fewer losses from floods, drought, and saltwater intrusion, while local institutions will be better equipped to maintain improvements, replicate lessons, and support a safer and healthier future along Cambodia's changing coast.



Kampot and Koh Kong Provinces



Kampong Trach, Krong Kampot, Khemara Phoumin, Mondol Seima



US\$ 10,000,000



63,181 direct female beneficiaries



60,210 direct male beneficiaries



162,374 indirect beneficiaries



Early warning system for floods and droughts



Livelihood diversification rehabilitation



Resilient housing and toilets



Reservoir, canal, embankment and sluice gate rehabilitation



Mangrove restoration (coastal ecosystem recovery)



5 wastewater treatment plants



Drainage improvement and solid waste management (including filter nets)

A safe home is more than shelter—it is dignity, security, and hope in the face of climate change



FIJI

INCREASING RESILIENCE IN VULNERABLE INFORMAL URBAN SETTLEMENTS IN FIJI

In Fiji's informal settlements, resilience starts at home



Ministry of Housing, Ministry of Local Government, Ministry of Environment and Climate Change, Lami Town Council, Sigatoka Town Council, Nadi Town Councils, Lautoka City Council, Fiji Live and Learn, Habitat for Humanity, and Commonwealth Local Government Forum.

Situated at the geographic and cultural heart of the Pacific, Fiji also lies within the South Pacific cyclone belt, where climate pressures are intensifying alongside rapid urban growth. In towns and cities, many low-income families have established homes in informal settlements along riverbanks, coastlines, and other low-lying areas, where exposure to flooding, storm surges, extreme rainfall, and cyclones increasingly shapes everyday life. When heavy rains or storms occur, homes are inundated, access routes are cut off, and essential services such as water supply and sanitation are disrupted.

For households with limited resources, recovery is often incomplete before the next event occurs. Floodwaters can quickly overwhelm sanitation facilities and contaminate living environments, increasing health risks and compounding the challenges faced by families already living with insecure tenure, poor-quality housing, and limited access to basic services. These impacts are not experienced equally. They fall most heavily on those with the least capacity to absorb loss, including women and girls, children and youth, older persons, persons with disabilities, and households reliant on informal and climate-sensitive urban livelihoods.

The Fiji informal settlements resilience project responds to this reality by strengthening resilience in highly exposed informal urban settlements across Lami, Lautoka, Nadi, and Sigatoka. Across sixteen priority settlements, it focuses on communities facing persistent climate risk, where even moderate shocks can undermine safety, dignity, and well-being. Its objective is to increase resilience to climate change and disaster risks while strengthening the institutional and community systems needed to sustain and scale inclusive urban adaptation over time.

The project delivers an integrated package of actions that links immediate settlement-level improvements with longer-term resilience pathways. It strengthens the foundations for climate-responsive urban development by supporting national and municipal institutions to better

understand climate risks in informal settlements, integrate adaptation priorities into urban planning and decision-making, and work more effectively with communities on resilience actions. In parallel, it builds community capacity so that residents—particularly women, youth, persons with disabilities, and others facing heightened risk—can identify priorities, participate meaningfully in decision-making, and lead adaptation efforts within their own settlements.

Alongside these enabling actions, the project delivers tangible, community-driven resilience measures in locations where climate impacts are most acutely felt. These include improvements that reduce exposure to flooding and storm impacts, protect homes and shared assets, enhance drainage and environmental conditions, and strengthen natural systems such as mangroves and vegetated areas that help buffer settlements from climate hazards. The project also invests in learning and knowledge generation by documenting results, strengthening local and national knowledge systems, and supporting the replication of effective, people-centred adaptation approaches across Fiji and in other small island urban contexts.

Through this people-centred approach, the initiative aims to generate adaptation benefits that households can experience in everyday life: reduced flooding of homes and shared spaces; fewer disruptions to movement, services, and livelihoods during extreme weather; improved environmental conditions that lower health risks linked to water and sanitation; and stronger confidence that communities can cope with future shocks. At the same time, it reinforces collaboration among communities, municipalities, and national institutions, embeds climate resilience in urban planning and governance, and creates pathways for more inclusive and climate-resilient urban development in Fiji and across the Pacific.



Informal urban settlements in one city and three towns on Viti Levu



Drainage and flood management



Lami, Lautoka, Nadi, Sigatoka



Resilient housing



US\$ 4,235,995



Ecosystem restoration (including mangroves)



~3,059 direct female beneficiaries



Community-led planning



3,183 direct male beneficiaries



Local government capacity building



140,000 indirect beneficiaries



Early warning and preparedness



Climate-resilient settlement upgrading (16 settlements)



Livelihood diversification



LAO PDR

ENHANCING THE CLIMATE AND DISASTER RESILIENCE OF THE MOST VULNERABLE RURAL AND EMERGING URBAN HUMAN SETTLEMENTS IN LAO PDR

In southern Lao PDR, many rural villages and rapidly growing towns are situated along rivers, floodplains, and mountain slopes that have long supported daily life but also expose communities to climate-related stress. In recent years, climate change has placed increasing pressure on these settlements, with wetter wet seasons, prolonged dry periods, and more frequent and intense extreme events. Floods, droughts, storms, and landslides have become an increasing part of everyday risk, particularly in places where basic infrastructure and services are limited and adaptive capacity remains low.

For households, these pressures have translated into repeated disruptions and losses. Seasonal floods damage homes, latrines, roads, and community facilities, often cutting off access to schools, markets, and health services. Sanitation systems are frequently overwhelmed, contaminating water sources and contributing to outbreaks of diarrhoeal disease, dengue fever, and other climate-sensitive illnesses. During prolonged dry periods, water sources become unreliable or fail altogether, forcing families—most

often women and girls—to spend hours each day walking long distances to collect water. These recurring cycles of damage, recovery, and increased health risk place a heavy strain on already limited household resources and undermine livelihoods, safety, and dignity.

The project was implemented to enhance the climate and disaster resilience of the most vulnerable human settlements in southern Lao PDR by increasing sustainable access to basic infrastructure systems and services, with a focus on resilience to floods, droughts, storms, landslides, and disease outbreaks. In doing so, it contributed to national goals on poverty reduction, equitable access to services, and long-term development resilience by addressing climate risk through the systems on which people rely in everyday life.

The initiative delivered an integrated and mutually reinforcing package of actions. It strengthened institutional capacity at national, provincial, and district levels to identify climate risks in human settlements, prioritize adaptation

01



In vulnerable settlements, resilience means protecting lives through stronger services and local capacity

measures, and incorporate climate-responsive approaches into planning and implementation. At the community level, it supported participatory planning and local action by enabling residents to assess risks, develop community action plans, and improve practices related to water management, sanitation, drainage, and public health. These planning and capacity gains were paired with targeted last-mile investments in climate-resilient infrastructure, including improved water supply systems, flood-resilient sanitation, drainage improvements, and safer community and health facilities in high-risk settlements.

Project activities were implemented across the southern provinces of Attapeu, Sekong, and Saravane, areas characterized by high poverty levels, significant ethnic minority populations, and regular exposure to climate hazards. Within these provinces, the project focused on vulnerable rural villages and rapidly growing towns, particularly those located in flood-prone lowlands, along riverbanks, and below mountain slopes where risks were most acute. The primary beneficiaries were poor and highly vulnerable households, including ethnic minority groups, women and girls, children, older persons, and persons with disabilities, especially those living in settlements with limited access to safe water, sanitation, drainage, and health services.

By the time of completion, the project had delivered lasting adaptation benefits that continue to shape everyday life in the target settlements. Climate-resilient water, sanitation, and drainage systems reduced exposure to flooding and drought, lowered health risks associated with contamination and disease, and reduced the repeated recovery costs that households had long absorbed after each climate shock. Improved access to essential services enhanced safety, mobility, and dignity, particularly for women, children, and people with limited mobility. At the same time, strengthened institutional frameworks and community capacity improved preparedness, enabled faster and more coordinated responses to climate events, and created a more resilient foundation for future development.



Southern Lao PDR – Provinces: Attapeu, Sekong, Saravane (Salavan)



Phouvong, Samakkhixay, Sanxai & Xaysetha; Dakcheung & Kaleum; Samuoi & Ta Oi



US\$ 4,500,000



24,000 direct female beneficiaries



23,000 direct male beneficiaries



Ministry of Public Works and Transport Provincial Governments / Provincial Departments of Public Work and Transport in Attapeu, Sekong and Saravane Provinces



3 provincial & 8 district adaptation plans



Capacity building for approximately 90 officials & 189 communities



Climate resilient WASH & infrastructure in 189 settlements



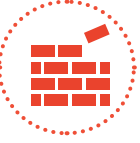
Community-led adaptation measures & long-term planning integration



Vulnerability assessments (3 provinces & 8 districts)



Community action plans



Resilient water, drainage, sanitation, and health infrastructure



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LAO PDR

BUILDING CLIMATE RESILIENCE IN VULNERABLE SETTLEMENTS IN ATTAPEU, SEKONG AND SARAVANE

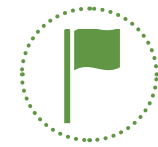
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Savannakhet Province



Sayphouthong Town, Sayphouthong District; Sethamouak Town, Phine District



US\$ 5,500,000



30,567 direct female beneficiaries



26,577 direct male beneficiaries



Climate-resilient water infrastructure



Knowledge and awareness sharing to support replication along the East–West Economic Corridor

In Lao PDR, small and emerging towns along the East–West Economic Corridor are growing rapidly while facing increasingly severe climate pressures. In Savannakhet Province, communities in Sayphouthong and Sethamouak are exposed to floods, storms, droughts, and changing rainfall patterns that damage infrastructure, disrupt services, and place livelihoods under strain. As these towns expand, the lack of resilient water systems, sanitation, drainage, and planned urban growth makes everyday life increasingly vulnerable to climate-related shocks.

For households, these risks are felt most directly through water. During floods, roads, homes, public buildings, water sources, and sanitation facilities can be damaged or contaminated, increasing the risk of diarrhoea, dengue fever, skin infections, and other health problems. During dry periods, rivers, wells, and other water sources become less reliable, forcing families to use unsafe water or spend more time collecting it. These burdens fall especially heavily on women and girls, who are often responsible for household water collection, food preparation, care work, and family health. In communities where poverty is high and many households depend on climate-sensitive livelihoods, repeated floods and droughts can quickly become long-term setbacks.

The project seeks to strengthen climate resilience in vulnerable small towns along the East–West Economic Corridor in central Lao PDR by providing climate-resilient water infrastructure and integrating climate adaptation into urban planning.

To achieve this, the project delivers an integrated package of planning, infrastructure, capacity development, and knowledge-sharing. It supports the preparation of town-level master plans that incorporate climate adaptation into infrastructure development, spatial planning, and land-use management. These plans help local authorities guide growth in ways that reduce exposure to floods, droughts, and other hazards, rather than allowing unplanned develop-



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ment to increase future risk. At the same time, the project strengthens the capacity of district, provincial, and national government staff to plan, design, manage, and maintain climate-resilient infrastructure.

Alongside these planning and institutional measures, the project delivers practical water infrastructure in the two target towns. By supporting safe, reliable, and year-round piped water supply, the initiative reduces dependence on unsafe rivers, wells, and seasonal sources while improving public health and daily living conditions. These investments are designed to keep basic services functioning despite current climate hazards and future changes in rainfall, flooding, storms, and drought. The project also places strong emphasis on inclusive participation, ensuring that women, ethnic minority communities, and other vulnerable groups are involved in identifying risks, shaping priorities, and benefiting from the improvements.

The initiative is being implemented in Sayphouthong Town in Sayphouthong District and Sethamouak Town in Phine District, both located in Savannakhet Province along the

East–West Economic Corridor. These towns were selected because of their high exposure to climate hazards, high poverty levels, limited basic services, rapid urbanization, and low institutional capacity. The project benefits residents who currently face inadequate water and protective infrastructure, including women and ethnic minority communities, while also strengthening the capacities of the authorities responsible for planning and managing resilient urban development.

Through this integrated and people-centred approach, the project contributes to safer, healthier, and more resilient small towns. Households gain more reliable access to clean water, women and girls spend less time collecting water, and communities face lower health risks during floods and droughts. Local institutions become better equipped to plan and maintain climate-resilient infrastructure, while lessons from the project can inform adaptation in other small towns along the economic corridor. Together, these changes help ensure that urban growth in Lao PDR supports safety, dignity, and opportunity in the face of a changing climate.



Safe, reliable piped water supply systems



Training for district, provincial, and national government staff



Town-level master plans integrating climate adaptation



Participatory planning with women, ethnic minorities, and vulnerable groups



Climate-resilient water infrastructure



© UN-Habitat/Lao PDR



Ministry of Public Works and Transport, Ministry of Natural Resources and Environment, Provincial Department of Public Works and Transport in Savannakhet Province, and Department of Natural Resources and Environment in Savannakhet Province

CLIMATE-RESILIENT WATER SERVICES
ARE KEY TO SAFER, HEALTHIER, AND
MORE **INCLUSIVE TOWNS** IN LAO PDR

LAO PDR

03

ENHANCING ADAPTIVE CAPACITY IN LAO PDR PROVINCES, AND BUILDING RESILIENT HOUSING IN VULNERABLE COMMUNITIES

A safe home is more than shelter—it is the
first line of defense against climate risks,
where resilience begins for every family

© UN-Habitat/Lao PDR

In Lao PDR, vulnerable towns and rural–urban settlements are facing increasingly severe climate pressures as floods, storms, landslides, droughts, and shifting rainfall patterns become more frequent and disruptive. These risks are particularly acute in communities where housing is fragile, basic services are limited, and local institutions have constrained capacity to plan for climate change. As towns expand and land use changes, households living in exposed areas face growing risks to their homes, health, livelihoods, and safety.

For many families, climate change is experienced through repeated damage and uncertainty. Floods and storms can destroy homes, damage possessions, interrupt livelihoods, and force people into temporary or unsafe shelter. In areas where houses are built with light materials such as bamboo, grass, plywood, or timber, families may rebuild in the same vulnerable way after each disaster because they lack the resources and technical support needed to improve their homes. Flooding can also increase health risks when water and sanitation conditions deteriorate, while weak early warning and evacuation systems make it harder for communities to prepare and respond. These impacts are felt most strongly by low-income households, women, children, older persons, persons with disabilities, internally displaced persons, returning migrants, and ethnic groups with limited access to decision-making and services.

The project seeks to strengthen climate resilience in vulnerable communities across six provinces in Lao PDR by enhancing provincial adaptation capacity and improving the resilience of housing, evacuation facilities, and local planning systems.

To achieve this, the project delivers an integrated package of actions that links safer housing, stronger planning, more capable institutions, and improved preparedness. It supports the rehabilitation of vulnerable homes and the construction of demonstration houses that show how local housing can be made more resilient to floods, storms,

heat, and other climate-related hazards. These housing improvements are intended not only to protect individual households, but also to spread practical knowledge on safer construction techniques that can influence future building practices in the target communities.

At the same time, the project strengthens community safety systems. It supports the assessment and improvement of community evacuation centres, including water, sanitation, and hygiene (WASH) facilities, so that people have safer places to shelter during extreme weather. It also strengthens early warning systems through new and upgraded meteorological and hydrological stations, helping authorities collect better data and provide communities with more timely information before floods, storms, or drought conditions intensify.

The initiative also works through planning and institutions. It supports town master plans that integrate climate risks into land use, spatial planning, shelter, and infrastructure development, helping local authorities guide growth away from high-risk areas and avoid creating new vulnerabilities. Coordination Centres for Adaptation and Disaster Risk Reduction strengthen local coordination and provide a practical basis for climate adaptation work. Training, technical guidance, and awareness-raising activities support provincial and district officials, carpenters, communities, and other local stakeholders in applying climate-resilient practices in housing, planning, and emergency preparedness.

The project is being implemented in vulnerable towns and districts across Bokeo, Vientiane, Bolikhamxay, Khammouane, Champasak, and Attapeu provinces. These locations were selected based on climate risk, poverty, housing conditions, limited adaptive capacity, and exposure to hazards such as floods, landslides, storms, and droughts. The project prioritizes vulnerable households and communities, while also strengthening the institutions responsible for housing, urban planning, climate adaptation, and disaster risk reduction.

Through this integrated and people-centred approach, the project contributes to safer homes, stronger local preparedness, better climate-informed planning, and more capable institutions. Families are expected to be better protected from repeated housing damage and displacement, communities will have safer places to go during emergencies, and local authorities will be better equipped to plan and sustain adaptation measures. Over time, these changes will help vulnerable settlements in Lao PDR move towards safer, healthier, and more resilient development in the face of a changing climate.

WHEN FLOODS AND STORMS SHAPE EVERY-DAY LIFE, PROTECTING PEOPLE MEANS RETHINKING HOW WE BUILD, PLAN, AND PREPARE—BEFORE THE NEXT DISASTER STRIKES



Northern–Central–Southern Lao PDR – Provinces: Bokeo, Vientiane, Bolikhamxay, Khammouane, Champasak and Attapeu



Pha Oudom (Bokeo); Viengthong & Xaychamphone (Bolikhamxay); Nongbok (Khammouane); Moonlapamok (Champasak); and Phouvong (Attapeu)



US\$ 7,561,131



17,294 direct female beneficiaries



24, 973 direct male beneficiaries



164,381 indirect beneficiaries



10,064 youth



Ministry of Public Works and Transport; Ministry of Natural Resources and Environment; Ministry of Education and Sports; Provincial Departments of Public Works and Transport (+NPSEs) and Provincial Departments of Natural Resources and Environment in Bokeo, Vientiane, Bolikhamxay, Khammouane, Champasak and Attapeu Provinces



Community awareness raising and knowledge sharing



Technical guidance on resilient housing, Housing, Land and Property, and evacuation



Climate-resilient housing reconstruction, rehabilitation and demonstration houses



Community evacuation centers with WASH facilities



Six Coordination Centres for Adaptation and Disaster Risk Reduction



New and upgraded meteorological and hydrological stations



Training for provincial and district institutions



Town master plans integrating climate adaptation and risk-sensitive land use

MALAYSIA

NATURE-BASED CLIMATE ADAPTATION PROGRAMME FOR THE URBAN AREAS OF PENANG ISLAND

On Penang Island in Malaysia, the urban areas of George Town and Bayan Lepas are facing climate pressures that are becoming increasingly visible in everyday life. Rising temperatures are intensifying the urban heat island effect, while heavier rainfall, expanding tar road surfaces, and ageing drainage systems are increasing stormwater runoff and flood risk. In these dense urban environments, climate change affects not only infrastructure and property, but also public health, local livelihoods, heritage areas, schools, workplaces, and the comfort and safety of daily urban life.

For residents, these risks are experienced through heat, flooding, and repeated disruption. In George Town, intense rainfall can overwhelm drainage systems and flood streets, homes, businesses, and areas to near the rivers, affecting mobility, damaging property, and increasing recovery costs. In the hotter parts of the city, shaded public space is limited, and heat stress affects older persons, children, outdoor workers, low-income households without access to cooling, and people with existing health condi-

tions. In Bayan Lepas, rapid urbanization and industrial development have increased the extent of hard surfaces and raised surface temperatures, affecting workers, school-children, and communities living near major transport, airport, and manufacturing areas.

The programme seeks to enhance urban resilience and reduce vulnerabilities affecting both people and ecosystems on Penang Island by using nature-based solutions to lower urban temperatures, improve stormwater management, strengthen social resilience, and build institutional capacity.

To achieve this, the programme delivers an integrated package of green infrastructure, flood management, social resilience, public health action, and institutional learning. It introduces tree-lined streets, pocket parks, green parking areas, green façades, green rooftops, and urban agriculture to reduce hard surfaces, expand shade, cool streets and buildings, and improve the quality of public space.

By integrating nature into the urban fabric, cities can reduce heat stress while improving the quality, resilience, and inclusiveness of daily life



Penang State – Penang Island, Malaysia



School-level climate awareness programme



Green parking spaces



Penang Island (urban focus areas): George Town (Timur Laut district) and Bayan Lepas (Barat Daya district) mukims (sub-districts)



Blue-green corridors for stormwater management



Green facades and green rooftops



US\$ 10,000,000



Upstream retention ponds



Urban agriculture programme



~343,739 (direct + indirect) beneficiaries



Vulnerability assessments and community action plans



Public health programme on heat-related illness



Women and girls resilience programme (training, leadership and climate adaptation support)



Tree-lined streets and connected urban canopies



Knowledge transfer platform for replication in Malaysia and Southeast Asia



10,000 students targeted through the Youth and Schools Programme



Pocket parks and greening of vacant spaces



Swales and infiltration wells

© City Council of Penang Island

These interventions are designed to make the city more comfortable and healthier, while also supporting biodiversity, social interaction, and everyday well-being.

Alongside urban greening, the programme strengthens stormwater management through blue-green corridors, upstream retention ponds, swales, and infiltration wells. These measures help slow, absorb, and store rainwater, reducing flood exposure while working with natural systems rather than relying solely on conventional drainage infrastructure. The programme also supports vulnerability assessments and local action plans in targeted communities so that adaptation priorities are shaped by the people most affected by heat, flooding, and environmental health risks.

Social resilience is a central part of the programme. School-based awareness activities help young people and educators understand climate risks and practical responses, while the women and girls programme supports groups facing higher vulnerability due to care responsibilities, income constraints, and unequal access to resources. The programme also strengthens understanding of climate-related health risks by supporting the monitoring of heat-related illness in selected hospitals, helping to address an important gap in data and awareness within Malaysia's climate and health response.

The initiative is being implemented in George Town and Bayan Lepas mukims, two urban areas with distinct but interconnected climate challenges. George Town combines heritage areas, dense mixed-use neighbourhoods, older populations, traditional communities, and flood-prone zones, while Bayan Lepas includes industrial areas, transport infrastructure, schools, migrant workers, and heat-stressed urban landscapes. By working across both areas, the programme demonstrates how nature-based adaptation can respond to diverse urban conditions. Through this integrated and people-centred approach, the programme contributes to cooler streets, reduced flood

risk, healthier public spaces, stronger community preparedness, and improved institutional capacity for climate adaptation. It also establishes Malaysia's first climate adaptation programme based on nature-based solutions, generating tools, evidence, and lessons that can be shared with other cities in Malaysia and across Southeast Asia. Over time, these changes help Penang Island move towards a greener, healthier, and more resilient urban future.

A MORE **RESILIENT** PENANG
IS ONE WHERE PUBLIC
SPACES ARE **COOLER**,
FLOODS ARE REDUCED, AND
COMMUNITIES ARE **BETTER**
PREPARED



Ministry of Natural Resources and Environmental Sustainability (NRES), Majlis Bandaraya Pulau Pinang (MBPP), Jabatan Pengairan Dan Saliran (JPS), Think City



MONGOLIA

FLOOD RESILIENCE IN ULAANBAATAR GER AREAS — CLIMATE CHANGE ADAPTATION THROUGH COMMUNITY-DRIVEN SMALL-SCALE PROTECTIVE AND BASIC-SERVICES INTERVENTIONS

01

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Ulaanbaatar City, Mongolia – Districts: Songinokhairkhan (north-west), Sukhbaatar (north-central) and Bayanzurkh (north-east)



Ten climate-vulnerable ger khoroos in Bayanzurkh, Songinokhairkhan and Sukhbaatar districts, Ulaanbaatar



US\$ 4,495,235



56,400 direct beneficiaries (54% women)



100,000 indirect beneficiaries



Municipality of Ulaanbaatar (MUB) and the Governor's Office, District Governors and Ger-Communities within Songino Khairkhan, Bayanzurkh and Sukhbaatar Districts; INGOs and LNGOs; Ministry of Environment and Tourism (MoET).

In Ulaanbaatar's rapidly expanding ger areas, climate change and urban growth have increased the frequency and severity of flooding. Many low-income households have settled in flood-prone locations along riverbanks, dry streambeds, and natural drainage corridors, where flash floods pose growing risks to lives, homes, infrastructure, and livelihoods. Flooding regularly damage housing and infrastructure while causing pit latrines to overflow, contaminating water and soil and creating additional public health risks. These impacts are often felt most acutely by women, children, older persons, and persons with disabilities.

To address these challenges, the Flood Resilience in Ulaanbaatar Ger Areas (FRUGA) project supported vulnerable communities to strengthen their resilience to climate-related flood risks through an integrated approach that combined community participation, climate information, infrastructure investments, and institutional capacity development. As Mongolia's first urban climate adaptation initiative financed by the Adaptation Fund, the project was implemented by UN-Habitat in partnership with national and local stakeholders.

A central element of the project was the application of UN-Habitat's People's Process, which placed communities at the centre of decision-making and implementation. Residents were organized into Primary Groups and Community Development Councils and engaged in climate risk assessments, identification of priority investments, selection of vulnerable beneficiary households, and oversight of local activities. Through this participatory approach, communities strengthened local ownership, social cohesion, and their capacity to identify and address climate risks collectively.

The project also contributed to strengthening the evidence base for climate adaptation planning in Ulaanbaatar. It supported the development of Mongolia's first Climate Change and Flood Simulation Model for the capital city,

alongside flood hazard and vulnerability mapping for target khorooos. These tools helped improve understanding of current and future flood risks, informed local planning processes, and supported the integration of climate resilience considerations into land-use management. A public smartphone application further increased awareness of flood-prone areas and encouraged informed decision-making among residents.

Alongside these planning and knowledge-building efforts, the project delivered community-prioritized investments designed to reduce flood impacts and improve living conditions. Drainage channels, flood protection walls, embankments, and earth drainage systems were constructed in vulnerable neighbourhoods, while climate-resilient household sanitation solutions helped reduce health risks associated with flood-related contamination. These interventions demonstrated the value of combining infrastructure improvements with community-led adaptation measures, particularly during the severe flooding experienced in Ulaanbaatar in 2023.

Beyond the physical investments, FRUGA strengthened collaboration between communities, district authorities, and the Municipality of Ulaanbaatar while enhancing local capacities for disaster risk reduction, climate adaptation, and resilient urban development. The experience generated through the project informed broader efforts to strengthen urban resilience in Mongolia and contributed directly to the design of the Ger Community Resilience Project (GCRP), which builds on and expands the community-based adaptation approaches piloted under FRUGA to address a wider range of climate risks across ger areas.

Resilience in Ulaanbaatar's ger areas means reducing flood risk while strengthening the services and systems families depend on every day



© UN-Habitat/Mongolia



Climate change and flood simulation model for Ulaanbaatar and Ger areas



4–4.5 km of flood protection and drainage infrastructure completed



Flood risk and vulnerability assessments



Community resilience action plans developed for all target khorooos



Flood risk maps and land-use plans for Ulaanbaatar, northern Ger areas, and seven target khorooos



Flood-resilient household sanitation facilities constructed



Community Development Councils and local community groups established



Flood protection infrastructure constructed or improved, including drainage systems and retention structures



221 hectares of Ger settlement areas protected from flooding



3 provincial & 8 district adaptation plans

MONGOLIA

GER COMMUNITY RESILIENCE PROJECT

Ulaanbaatar's rapidly expanding ger areas are among the city's most climate-vulnerable settlements. Many households live in low-lying valleys, steep hillsides, and areas with inadequate drainage, where increasingly intense rainfall, flash floods, permafrost degradation, and extreme temperature fluctuations place growing pressure on homes, infrastructure, livelihoods, and public health. Climate change is amplifying these risks, while limited access to basic services and resilient infrastructure leaves many communities with few resources to prepare for, withstand, and recover from climate-related shocks.

Building on the experience and lessons of the earlier Flood Resilience in Ulaanbaatar Ger Areas (FRUGA) project, the Ger Community Resilience Project (GCRP) supports vulnerable communities in strengthening their resilience to a range of climate hazards. Through an integrated approach that combines infrastructure improvements, improved sanitation, community participation, and institutional

strengthening, the project seeks to improve living conditions while enhancing the capacity of communities and local authorities to respond to current and future climate risks.

A central feature of the project is its community-led approach to adaptation. Residents work alongside local authorities, civil society organizations, and technical specialists to identify priorities, plan neighbourhood improvements, and guide local implementation processes. Community groups and local decision-making structures play an important role in ensuring that adaptation measures respond to local needs and contribute to long-term ownership and sustainability.

The project supports a range of practical measures to reduce climate risks and strengthen resilience at both household and neighbourhood levels. Flood protection infrastructure, including drainage systems, embankments,

02



SAFER AND HEALTHIER HOMES ARE KEY
TO HELPING FAMILIES IN ULAANBAATAR
FACE A MORE EXTREME CLIMATE



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Mongolia - targeting flood-prone Ger areas in two districts of Ulaanbaatar



Eight climate-vulnerable khoros in Sukhbaatar and Songinokhairkhan districts, Ulaanbaatar



US\$ 7, 965, 882



10,864 direct beneficiaries living in vulnerable ger settlements



55, 368 indirect beneficiaries



Capacity building for local government and communities



11 km of flood protection infrastructure (retention walls, drainage systems, and canals)



Flood risk and vulnerability assessments across 8 khoros



400 flood-resilient sanitation facilities for vulnerable households



Ecosystem-based adaptation: tree and vegetation planting



Integration of urban climate adaptation into national (NDC, NAP) and city-level planning

canals, retention basins, and related works, helps reduce exposure to flooding in vulnerable settlements. Improvements to household sanitation further support healthier living environments by reducing the risks associated with flood-related contamination and damage to sanitation facilities.

Alongside these investments, the project strengthens local capacities for disaster preparedness, climate adaptation, and community resilience. Training and knowledge-sharing activities support local governments, community organizations, and residents in understanding climate risks and participating in adaptation planning. Ecosystem-based approaches, including vegetation restoration and green infrastructure, are incorporated where appropriate to improve water retention, reduce erosion, and strengthen environmental resilience.

The initiative is being implemented across eight vulnerable khoros in Sukhbaatar and Songinokhairkhan districts of Ulaanbaatar, where flood exposure, infrastructure deficits, and social vulnerability intersect. Particular attention is given to women, children, older persons, persons with disabilities, and low-income households, who often experience the greatest impacts from climate-related events and face additional barriers to recovery.

By strengthening both community capacities and local infrastructure, GCRP contributes to safer neighbourhoods, healthier living conditions, and more resilient urban settlements. The project demonstrates how community-led adaptation, supported by effective partnerships and strengthened local governance, can help address climate risks while generating practical experience to inform wider resilience-building efforts in Mongolia's rapidly growing ger areas.



PAKISTAN

ENHANCE COMMUNITY, LOCAL AND NATIONAL-LEVEL URBAN CLIMATE CHANGE RESILIENCE TO WATER SCARCITY, CAUSED BY FLOODS AND DROUGHTS IN RAWALPINDI AND NOWSHERA

In the cities of Rawalpindi and Nowshera in Pakistan, rapid urban growth is unfolding alongside increasingly unpredictable climate conditions. Shaped by rivers and seasonal rainfall, these urban areas are experiencing more frequent and intense floods, as well as longer dry periods, creating a cycle of water scarcity and excess that disrupts everyday life. As urban populations expand, many households have settled in low-lying or poorly serviced areas, where climate risks are more acute and existing infrastructure struggles to meet growing demand.

For residents, these climate pressures are felt in immediate and practical ways. During heavy rainfall, floodwaters can submerge homes, damage roads and drainage systems, and contaminate water sources, leaving families without safe drinking water even as water surrounds them. During drier periods, the same communities face shortages that affect daily needs, from cooking and cleaning to small-scale livelihoods. Water systems become unreliable, and households are often forced to rely on unsafe or insufficient supplies. Repeated flooding damages infrastructure and erodes confidence in services, while poor waste management can clog drainage channels, worsening flood impacts and increasing health risks. For low-income households and those living in informal or underserved areas, these disruptions lead to recurring losses and difficult trade-offs between immediate recovery and long-term safety.

In response to these challenges, the initiative seeks to strengthen urban resilience to water-related climate risks by enabling communities and institutions to better manage both flooding and drought, while improving access to safe and reliable water in everyday life.

To achieve this, the project delivers an integrated package of actions that connects policy, capacity development, community engagement, and practical solutions. It strengthens institutional frameworks at national, provincial, and city levels, supporting authorities to better un-

derstand urban climate risks and integrate resilience into planning, water management, and disaster response systems. At the same time, it supports community leadership through participatory processes in which residents identify local priorities, build skills, and contribute to decisions that directly affect their neighbourhoods. This emphasis on inclusion helps ensure that vulnerable groups, including women, youth, and low-income households, are actively involved in shaping solutions.

Alongside these enabling efforts, the project supports targeted community-level interventions that address immediate challenges. These include simple and locally appropriate measures to manage water more effectively, such as capturing and storing rainwater for household and community use, thereby helping to reduce both flood impacts and water scarcity. These small-scale investments help stabilize access to water, improve hygiene conditions, and reduce pressure on overstretched systems. By focusing on practical and adaptable solutions, the project supports improvements that can be maintained locally and replicated in other settings.

The initiative is being implemented in selected communities in Rawalpindi and Nowshera, with a focus on areas where exposure to flooding, drought, and water insecurity is greatest. It targets urban communities where vulnerability is compounded by limited infrastructure and high population density. The project benefits residents living in these high-risk urban areas, particularly households with fewer resources to cope with repeated shocks. At the same time, it strengthens the capacity of municipal authorities, national agencies, and local organizations, fostering collaboration and improving coordination across different levels of governance.

As the project advances towards completion, learning, sustainability, and replication remain central to its design. By linking community-based action with institutional strengthening and national-level strategy development, the

initiative creates pathways for broader impact beyond the immediate project areas. The development of a national urban resilience approach to water management helps ensure that lessons learned can inform future policies and investments across Pakistan, supporting a more coherent and climate-responsive urban development pathway.

Through this integrated and people-centred approach, the project contributes to tangible improvements in daily life. Households are expected to experience more reliable access to water, reduced disruption from floods and drought, and safer living environments in which essential services continue to function during extreme weather. Health risks associated with contaminated water and poor sanitation are reduced, while the burden of repeated recovery is eased. Communities gain greater confidence and capacity to manage risks, and institutions become better equipped to respond to evolving climate challenges.



National level: Ministry of Climate Change – through establishment of PMU; NDMA, Ministry of Water Resources; Local level: Concerned provincial and district departments including Provincial and district disaster management authorities, Municipal Corporation Rawalpindi and Municipal Committee/Tehsil Municipal Administration Nowshera; Community level: Shehersaaz NGO, elected representatives and officials of target Union and Neighbourhood Councils, community based organizations and citizen/women groups in target communities.



Rawalpindi (Punjab Province) and Nowshera (Khyber Pakhtunkhwa Province), Pakistan



Women trained: 150 (community) 20 (district) 50 (national)



Rawalpindi district, Nowshera district



5,000 household flood-resilient rainwater harvesting systems



US\$ 6,094,000



15 community adaptation plans



Indirect beneficiaries:
~200,000 (community planning & awareness),
~222,200 (spillover from household interventions).
Up to ~1.2 million (city-level planning influence)



Capacity building for 600+ government officials and community members.



50 public water harvesting facilities



Three (03) city-level spatial strategies developed (against the original target of two (02), with one additional city-level spatial strategy developed for Islamabad).



~19,442 (Direct Household beneficiaries)



National urban climate policy and planning frameworks for flood and water scarcity resilience



19,443 (Direct Household beneficiaries)

In Rawalpindi and Nowshera, climate resilience is about safer water, stronger institutions, and communities better





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FOR A BETTER URBAN FUTURE


ADAPTATION FUND


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SOLOMON ISLANDS

ENHANCING URBAN RESILIENCE TO CLIMATE CHANGE IMPACTS AND NATURAL DISASTERS: HONIARA



© UN-Habitat/Solomon Islands

In Honiara, the capital of Solomon Islands, rapid urban growth is unfolding alongside rising climate risks in a fragile island environment. Informal settlements have expanded along coastlines, riverbanks, and steep hillsides—areas where residents are particularly exposed to flooding, storm surges, landslides, and other hazards that are becoming more severe as the climate changes. As a small island developing state, Solomon Islands is already highly vulnerable to climate variability, and in urban areas this vulnerability is intensified by limited infrastructure, insecure land tenure, and gaps in basic services.

For many households, these pressures translate into daily uncertainty. Heavy rainfall can quickly flood homes and wash away belongings, while storms and rising tides threaten coastal communities and disrupt livelihoods. Access to safe water, sanitation, and transport routes can become unreliable, particularly in informal settlements where infrastructure is limited. Families often find themselves repairing homes and recovering lost income after each event, with little opportunity to build safer conditions over time. Health risks also increase when floodwaters contaminate living areas and when basic services are disrupted. These challenges are not experienced equally; they place a heavier burden on those with the fewest resources, including low-income households, women and youth, older persons, persons with disabilities, and communities living in the most exposed locations.

This initiative seeks to strengthen the resilience of Honiara's most vulnerable communities by enabling them—and the institutions that serve them—to better anticipate, withstand, and recover from climate impacts and natural hazards.

To achieve this, the project delivers an integrated package of actions that connects planning, people, and place-based improvements. It strengthens governance and institutional capacity at the city level, supporting local authorities and partners to improve coordination in responding to climate

risks and to integrate resilience into urban planning and decision-making. At the same time, it supports community leadership by building skills, promoting participatory processes, and ensuring that residents in informal settlements can identify priorities and help shape adaptation solutions that reflect their lived realities.

Alongside these enabling efforts, the project supports tangible, community-driven interventions in high-risk areas. These include measures to reduce exposure to flooding and landslides, improve access within and between settlements, and enhance environmental conditions that support safer and healthier living. At the ward level, the project also supports initiatives that strengthen livelihoods, urban food security, and disaster preparedness, with particular attention to groups facing heightened vulnerability. Across all of these actions, simple and locally appropriate solutions are prioritized so that improvements are practical, sustainable, and directly beneficial to everyday life.

The initiative operates across the greater Honiara area, working at multiple and interconnected scales, from individual communities to wards and city-wide systems. It focuses on informal settlement communities identified as climate vulnerability hotspots, where exposure to hazards is greatest and where basic services are often limited. Across these areas, the project benefits households living in high-risk conditions, particularly low-income families and communities facing overlapping social, economic, and environmental challenges. It also strengthens the capacities of city authorities, national institutions, and local organizations, enabling more coordinated and inclusive responses to climate risks.

Learning, partnership, and sustainability are central to the project's approach. By linking community-level action with city-wide planning and institutional strengthening, the initiative supports longer-term change that extends beyond individual interventions. Knowledge generated through participatory processes and on-the-ground implementation



Honiara, Solomon Islands (Guadalcanal Island)



Honiara City (12 municipal wards), focusing on 5 vulnerable hot-spot communities: Ontong Java, Kukum Fishing Village, Aekafo Planning Area, Wind Valley and Jabros - as well as peri-urban Guadalcanal.



US\$ 4,395,877



Indirect beneficiaries: Honiara population (~87,000 residents)



Direct beneficiaries: ~6,000
Wider reach: >20,000 people through community and ward-level actions



Ward-level programmes targeting women and youth



Implementation of community-led resilient infrastructure (drainage, sanitation, water supply, housing upgrades, and flood management)



Ecosystem-based adaptation and urban agriculture



Development of climate-resilient community spaces and evacuation centres



Capacity building for communities, ward authorities, and city institutions



City-wide governance strengthening, policy integration, and knowledge management and sharing



Community climate action planning in five hotspot settlements



Honiara City Council (HCC), Ministry of Lands, Housing and Survey (MLHS), Ministry of the Environment, Climate Change, Disaster Management & Meteorology (MECDM), RMIT University, Melbourne, Australia, and World Vision Solomon Islands.



In Honiara's informal settlements, climate resilience is about protecting homes, strengthening livelihoods, and improving everyday living conditions

SRI LANKA

BUILD RESILIENCE TO CLIMATE CHANGE AND CLIMATE VARIABILITY OF VULNERABLE COMMUNITIES IN MULLAITIVU DISTRICT OF SRI LANKA

IN MULLAITIVU DISTRICT, CLIMATE CHANGE IS NOT A DISTANT CONCEPT BUT A LIVED REALITY SHAPED BY RECURRING DROUGHTS, FLOODS, AND COASTAL HAZARDS.

In Sri Lanka's northern Mullaitivu District, communities live in a landscape where livelihoods, settlements, and ecosystems are closely tied to seasonal rainfall, coastal waters, lagoons, irrigation systems, agriculture, and fisheries. The district is highly exposed to climate variability, including prolonged droughts, intense rainfall, flooding, strong winds, saltwater intrusion, coastal erosion, and waterlogging. These pressures are altering long-standing patterns of water availability, land use, and livelihoods, creating growing uncertainty for households whose daily lives depend on natural resources and small-scale production.

For families across Mullaitivu, climate change is experienced through repeated disruption. Periods of drought reduce access to water for household use, farming, and livestock, while heavy rainfall and flooding can damage homes, roads, sanitation facilities, irrigation systems, and community assets. Saltwater intrusion threatens freshwater bodies, agricultural land, and fisheries-based livelihoods, while coastal erosion and ecosystem degrada-

tion weaken the natural protection on which communities depend. Many households rely on agriculture, fisheries, and related informal livelihoods, making them especially vulnerable when weather patterns shift, crops fail, fishing becomes less reliable, or natural resources are degraded. These shocks are not isolated; they recur, often before families have fully recovered, leading to cycles of loss, reduced income, and growing pressure on health, safety, and well-being. The impacts are most severe for low-income households, women-headed households, farming and fishing families, children, older persons, persons with disabilities, and communities still facing the long-term social and economic effects of past conflict and resettlement.

In response to this context, the project seeks to support climate-resilient development and strengthen the adaptive capacity of vulnerable communities in Mullaitivu District by improving livelihoods, reinforcing small-scale protective infrastructure and ecosystems, and addressing capacity gaps that constrain local adaptation.



To achieve this, the project delivers an integrated package of practical investments, community capacity development, and institutional support. It strengthens climate resilience through small-scale infrastructure and ecosystem-based measures that help communities manage water, reduce exposure to floods and drought, and protect livelihoods. These include measures to prevent and control saltwater intrusion, rehabilitate minor irrigation tanks and related water systems, improve evacuation access, and provide disaster-resilient sanitation facilities in flood-prone, waterlogged, and inundated areas. Together, these interventions help protect freshwater resources, support agriculture and fisheries, improve hygiene and safety, and reduce the repeated losses that climate shocks impose on households.

Alongside these physical investments, the project supports climate-resilient livelihoods and community learning. It promotes sustainable agriculture, home gardening, drought-tolerant crop varieties, water conservation practices, and improved land management, helping farming families adapt production systems to changing climatic conditions. It also supports fisheries-related livelihoods and value addition, recognizing that income security is essential for resilience. Training and awareness-raising activities strengthen local understanding of climate risks, sanitation and hygiene, disaster preparedness, and adaptation practices, ensuring that communities are not only recipients of infrastructure, but active partners in maintaining and using it effectively.

The initiative is being implemented in selected Grama Niladhari Divisions within the Maritimé pattu, Puthukkudiyiruppu, and Welioya Divisional Secretariat Divisions in Mullaitivu District. These areas were selected because they combine high climate exposure, poverty, dependence on climate-sensitive livelihoods, and limited capacity to absorb repeated shocks. The project benefits vulnerable farming and fishing communities, including households affected by water scarcity, flooding, salinity, weak sani-

tation, and livelihood insecurity, while also strengthening the capacity of community-based organizations and local institutions to plan, coordinate, and sustain adaptation measures.

Through this integrated and people-centred approach, the project contributes to safer, healthier, and more resilient living conditions in Mullaitivu. Households are expected to experience more reliable access to water for livelihoods, reduced disruption from floods and drought, safer sanitation during extreme weather, improved protection against saltwater intrusion, and stronger agriculture- and fisheries-based income opportunities. Communities gain greater knowledge and confidence to manage climate risks, while institutions become better equipped to support locally grounded adaptation. Together, these outcomes help vulnerable settlements move towards a more secure and dignified future in the face of climate change and climate variability.



National level: Ministry of Environment;
Community level: Community based organizations in the target locations.

Adapting to climate change means strengthening both livelihoods and the natural systems that sustain them



Mullaitivu District, Northern Province, Sri Lanka



Small-scale climate-resilient infrastructure (saltwater intrusion control bund, rehabilitation of irrigation tanks, flood-resilient sanitation, evacuation routes, early warning, and disaster preparedness systems)



3 Divisional Secretariat (DS) Divisions in Mullaitivu District: Maritimé pattu, Puthukkudiyiruppu and Welioya



Climate-resilient agriculture and home gardening [drought-tolerant crops, water conservation, home gardening and mixed cropping systems (agroforestry)]



US\$ 2,000,000



Diversified and climate-resilient livelihoods (fish value addition, women-led home-based enterprises, business development)



Indirect beneficiaries: 16,304 people



Capacity building and training for communities, farmers, fishers, women and youth



Direct beneficiaries: 12,096 people



Ecosystem-based adaptation (mangrove restoration and community nurseries)



Priority target group: ≥40% Female-Headed Households



Participatory adaptation planning, risk assessments, and knowledge sharing (dialogues, workshops, media campaigns, and documentation)

VIET NAM

ENHANCING INCLUSIVE AND SUSTAINABLE ECO-HUMAN SETTLEMENT DEVELOPMENT THROUGH SMALL-SCALE INFRASTRUCTURE INTERVENTIONS IN THE COASTAL REGIONS OF THE MEKONG DELTA IN VIET NAM

In the coastal areas of Viet Nam's Mekong Delta, rivers, canals, groundwater, mangroves, and the sea shape both everyday life and local livelihoods. Communities in Bac Lieu and Tra Vinh are increasingly affected by sea-level rise, saltwater intrusion, drought, coastal and riverbank erosion, changing rainfall patterns, and flooding. As water resources become less reliable and coastal ecosystems come under increasing pressure, the relationship between settlements, livelihoods, and the natural environment is becoming more fragile.

For households in the target communes, these changes are felt most directly through water insecurity and the loss of natural protection. Saltwater intrusion affects groundwater and freshwater supplies, making safe water for drinking and domestic use harder to secure, particularly during the dry season. Coastal and riverbank erosion threaten homes, infrastructure, land, and ecosystems, while drought and changing rainfall patterns place further pressure on agriculture, aquaculture, and daily routines. Families with limited resources often have few affordable options for water treatment, storage, or safer settlement conditions. These

challenges are especially severe for poor and near-poor households, ethnic minority communities, women, children, and residents whose livelihoods depend on climate-sensitive farming, aquaculture, fisheries, and coastal resources.

In response to these risks, the project seeks to enhance inclusive and sustainable eco-human settlement development in the coastal regions of the Mekong Delta by combining small-scale infrastructure with community capacity development, local planning, and institutional support.

To achieve this, the project delivers an integrated package of actions that connects people, planning, ecosystems, and practical solutions. It strengthens institutional and community capacity so that stakeholders at national, provincial, district, and commune levels can better understand climate risks, assess vulnerabilities, and support local climate response actions. It also supports participatory action plans and strategies for eco-human settlement development, helping to connect community needs with local planning and policy processes. This approach responds to one of the key barriers identified by the project: the difficulty of





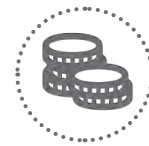
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Bac Lieu and Tra Vinh Province;
coastal regions of the Mekong
Delta, Viet nam *



Target districts: Vinh Trach Dong
(Bac Lieu), Long Hoa and Hoa
Minh (Tra Vinh)



US\$ 6,345,292



32,749 indirect
beneficiaries



16,612 direct male
beneficiaries



15,660 direct female
beneficiaries



Awareness raising, knowledge man-
agement, and regional replication of
best practices



Participatory eco-human settlement
and climate action planning at provin-
cial/district/commune levels



Capacity building for operation and
maintenance of infrastructure



Integration of climate adaptation into
policies and development plans



Institutional and community-level
capacity building (training, workshops,
planning toolkits, and climate risk
assessments)



Community-scale climate-resilient
infrastructure (water treatment systems,
rainwater harvesting, and coastal protec-
tion infrastructure)



Green coastal erosion rehabilitation
and control system (or more specific:
permeable T-groynes and mangrove
restoration)



UN-Habitat, Ministry of Resources and
Environment (MONRE), Ministry of Agri-
culture and Environment

* From 1st July 2025, Tra Vinh has been merged into Vinh Long province, and Bac Lieu has been merged into Ca Mau province. Similarly, Vinh Trach Dong is merged into Hiep Thanh Ward



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translating local experience and community priorities into higher-level planning and investment decisions.

Alongside these enabling actions, the project delivers small-scale protective infrastructure in highly vulnerable settlements. In Bac Lieu, where Vinh Trach Dong includes resettled and ethnic minority communities with limited access to clean water, the project supports water-related interventions such as rainwater harvesting and water treatment systems to improve access to safe water. In Tra Vinh, where Long Hoa and Hoa Minh face both freshwater shortages and coastal erosion, the project supports water treatment and erosion prevention measures that help protect communities, infrastructure, and ecosystems. These investments are designed to respond to the everyday realities of residents while strengthening the broader resilience of human settlements.

The project also places strong emphasis on awareness-raising and knowledge management. By developing guidance, training materials, planning tools, and local strategies, it helps communities and institutions understand how climate change affects water, land, housing, livelihoods, and ecosystems. Capacity development activities support local people, including vulnerable groups, to participate in planning processes and maintain adaptation measures over time. In this way, the project combines physical improvements with social and institutional learning, ensuring that adaptation is not limited to infrastructure but becomes embedded in local development practice.

The initiative is being implemented in selected communes in Bac Lieu and Tra Vinh provinces, particularly Vinh Trach Dong in Bac Lieu and Long Hoa and Hoa Minh in Tra Vinh. These areas were selected because of their exposure to sea-level rise, saltwater intrusion, drought, erosion, and rainfall variability, as well as underlying vulnerabilities such as poverty, limited access to basic services, gender inequalities, ethnic minority exclusion, weather-dependent livelihoods, environmental degradation, and limited adaptive

capacity at household, community, and governance levels.

Through this integrated and people-centred approach, the project contributes to safer and more resilient coastal settlements in the Mekong Delta. Households gain improved access to water, stronger protection from erosion, greater awareness of climate risks, and more opportunities to participate in local adaptation planning. Communities become better equipped to manage the pressures of saltwater intrusion, drought, and coastal change, while institutions gain practical tools and experience to replicate eco-human settlement approaches in other vulnerable areas. Over time, the project supports a development pathway that works with natural systems, strengthens local capacity, and protects dignity, health, and livelihoods in a changing climate.

STRENGTHENING RESILIENCE IN COASTAL VIET NAM BEGINS WITH WATER SECURITY, ECOSYSTEM PROTECTION, AND COMMUNITY-LED ADAPTATION



SCALING UP CLIMATE ACTION

The projects presented in this publication demonstrate that climate adaptation in Asia and the Pacific is most effective when it is practical, inclusive, and rooted in the places where people live. Across diverse countries and settlement types, the partnership between the Adaptation Fund and UN-Habitat has helped communities address climate risks not as isolated hazards, but as challenges that affect housing, water, sanitation, mobility, health, livelihoods, ecosystems, and local governance. From coastal settlements and informal urban neighbourhoods to small towns, ger areas, and rural communities, these initiatives show how targeted investments can reduce vulnerability while strengthening the systems that underpin long-term resilience.

A common thread across the portfolio is a shift from protection to transformation. Protective infrastructure, resilient water systems, drainage improvements, safer housing, early warning systems, nature-based solutions, and community preparedness remain essential. Yet the deeper value of these projects lies in the way they connect such interventions to planning, institutions, and local ca-

capacity. Communities are not treated only as beneficiaries, but as partners and agents for change in identifying risks, shaping priorities, implementing solutions, and sustaining results. Local and national authorities gain tools, knowledge, and experience that can inform future policies and investments. In this way, project-level action becomes a foundation for broader systemic change.

This direction is closely aligned with UN-Habitat ROAP's Regional Implementation Strategy 2026–2029. The Strategy calls for integrated, inclusive, and implementation-focused action across resilient housing and communities, universal access to basic services and infrastructure, transformed urban management, adaptive responses to demographic change, and the harmonized co-existence of cities and nature. It also reaffirms the importance of the People's Process: a community-centred endogenous approach that builds local capacity, supports self-reliance, and leaves a lasting impact beyond the life of individual projects.



The Adaptation Fund partnership has already provided strong examples of this approach in practice.

Looking ahead, the next stage of the partnership can build on these achievements by moving further from projects to systems, and from systems to pipelines. Recent climate and nature discussions within ROAP highlight the need to connect urban adaptation more directly with nationally determined contributions (NDCs), national adaptation plans (NAPs), disaster risk reduction priorities, and emerging climate finance pathways. They also point to important opportunities in low-carbon urban development, resilient housing, green buildings, energy efficiency, circular economy, sustainable waste management, blue-green infrastructure, cooling corridors, groundwater recharge, nature-based solutions, nature positive urban planning, coastal protection, and climate-informed mobility. Together, these themes suggest that future adaptation efforts should not only respond to current risks, but also help shape the urban and territorial systems that will determine future emissions, exposure, and resilience. Anticipatory approach for reducing future risk is essential for sustainable urban development, especially enhancing safety and security of vulnerable communities.

For the Adaptation Fund and UN-Habitat, this points to a clear shared agenda. Future cooperation can continue to support concrete, community-level adaptation while also strengthening the enabling conditions for scale: standardized tools and guidelines, stronger local institutions, bankable project pipelines, regional and global knowledge exchange, evidence-based monitoring, and partnerships that bring together governments, communities, civil society, academia, the private sector, and other United Nations agencies. In fragile and highly vulnerable contexts, deeper engagement with local organizations will be especially important to ensure that adaptation measures are trusted, locally sustainable, and responsive to lived realities.

The climate challenges facing Asia and the Pacific will in-

tensify in the coming years, but the projects presented in this publication show that vulnerability is not fixed. When climate finance reaches communities through inclusive planning, locally appropriate solutions, and sustained institutional support, adaptation can protect lives, improve services, strengthen livelihoods, and restore confidence in the future. The partnership between the Adaptation Fund and UN-Habitat has already helped demonstrate this potential across the region. Continuing and deepening this collaboration will be essential to help countries, cities, and communities advance climate-resilient development, protect those most at risk, and move towards a future in which human settlements are safer, healthier, more inclusive, and better prepared for a changing climate.

A better quality of life for all
in an urbanizing world



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