




EU-UNEP CLIMATE CHANGE AND SECURITY PROJECT

BUILDING RESILIENCE TO CLIMATE-RELATED SECURITY RISKS IN NORTH DARFUR, SUDAN



adelphi 

Practical ACTION

CLIMATE CHANGE AND SECURITY CONTEXT

The impacts of climate change are highly visible in Sudan. Across the country, temperatures have risen by between 0.8 and 1.6 degrees Celsius since the 1960s and rainfall has become more variable. In Darfur, rainfall has declined by between 10 and 30 mm per decade during the rainy season. These dynamics are likely to be exacerbated in the future, as climate projections suggest that average annual temperatures will rise by 0.5-3 degrees Celsius by 2050, and rainfall is estimated to continue decreasing.

In combination with environmental degradation and a growing population, climate change is contributing to shrinking the natural resource base which underpins livelihoods for farmers and pastoralists in the region, driving increased competition over land and water. Farmers, who depend on reliable and predictable weather patterns, are less productive than in previous years. Pastoralists have watched once reliable water sources and fertile grazing areas dry up in some areas, while insecurity has made other areas inaccessible. To compensate for faltering livelihoods, fertile land and available water sources are highly sought after. Conflicts between farmers and herders tend to occur when animals encroach into fields and damage crops, or when crops are cultivated on migratory routes or animal grazing land.



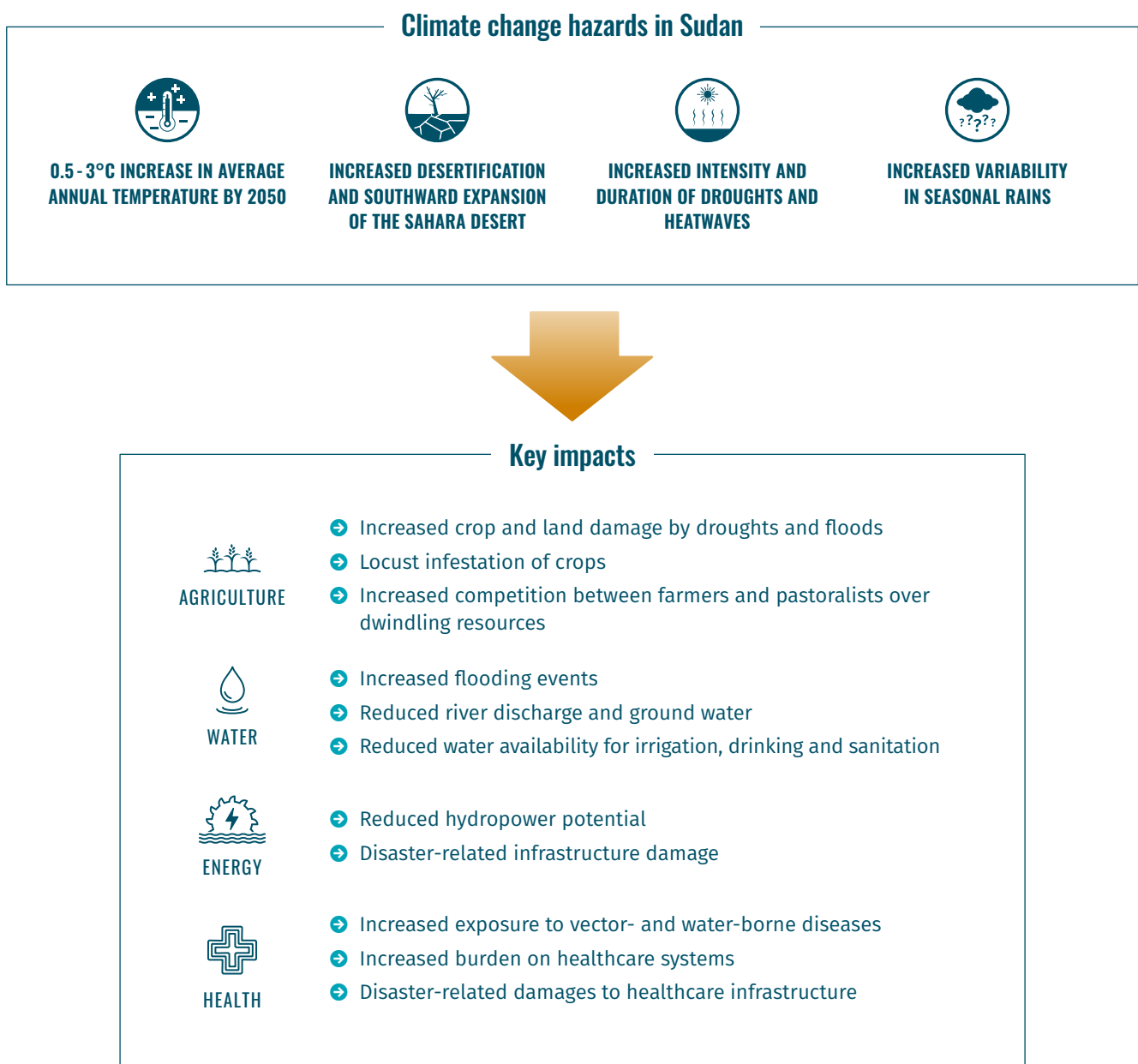
Map: North Darfur State in western Sudan is experiencing multiple climate change hazards.

For a more comprehensive analysis of the links between climate change, peace and security in Sudan, see the [Climate Fragility Risk Brief](#) for the country.

In North Darfur, these tensions over natural resources are exacerbated by economic and governance challenges. Following two decades of conflict between armed opposition groups and the government, peace in Darfur remains tenuous. In this fragile context, the failure to adequately address loss of livelihoods and growing competition over natural resources can undermine trust in the government and traditional authorities, and reinforce longstanding economic, political, and social grievances.

Climate change, natural resource scarcity, and Darfur’s history of conflict impact human security and resilience in the region. These impacts do not affect everyone

equally. Gender inequality and social norms or expectations impact how different groups are affected and who has a say in shaping response. For example, despite playing important roles in natural resource management, women are often marginalized in economic structures and excluded from environmental governance mechanisms and decision-making processes. Building peace and resilience to climate-related security risks therefore requires an integrated and inclusive approach, designed to leverage the knowledge and capacities of all groups to jointly develop sustainable solutions to mutual environmental and security challenges.



Sources: Eltoun and Dafalla 2014; GoS 2007; Osima et al. 2018; USAID 2016; and World Bank 2020c, adapted by adelphi.

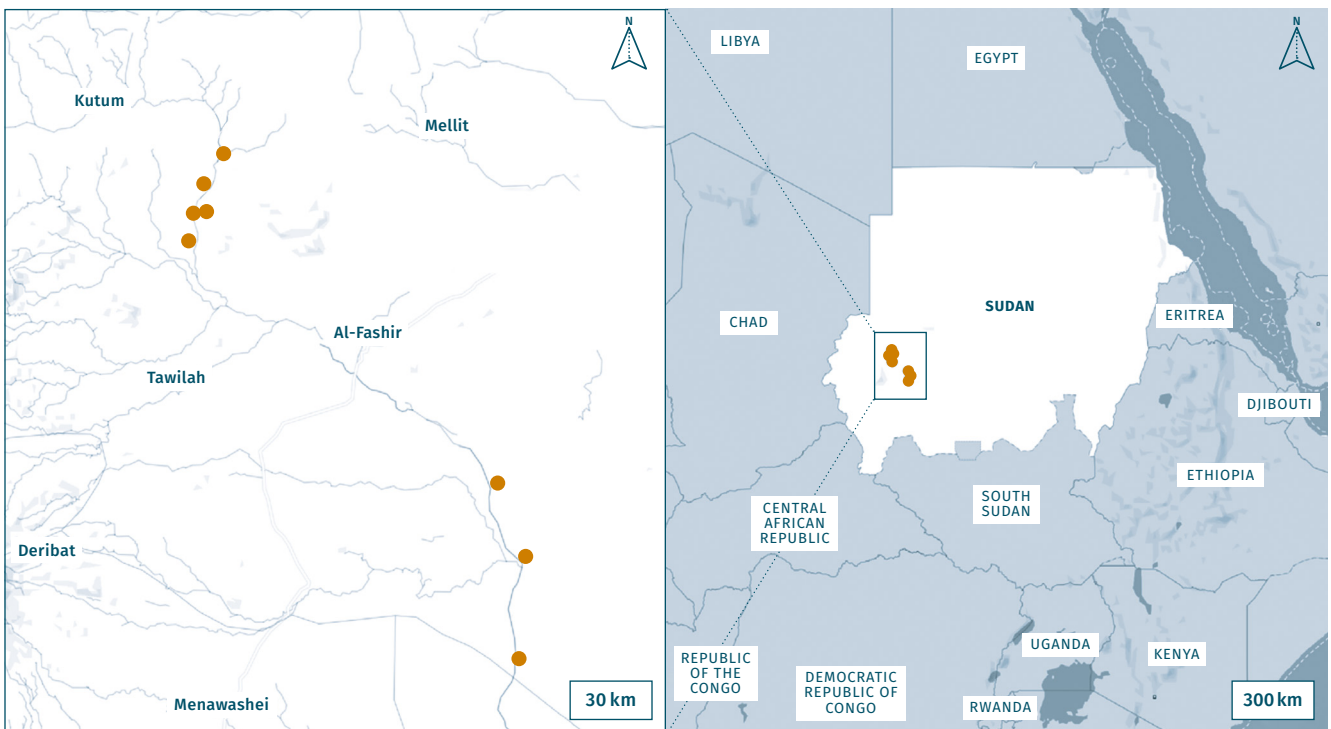
A CLIMATE SECURITY PILOT

In 2018, the EU-UNEP partnership on Climate Change and Security established a pilot project in the Wadi El Ku catchment area of North Darfur State, Sudan. Seeking to address the underlying drivers of conflict in the region, the pilot used a combination of climate change adaptation and peacebuilding activities to promote more effective and equitable management of shared natural resources between and among different groups. Specifically, the project aimed to achieve three core objectives:

- STRENGTHEN LOCAL GOVERNANCE MECHANISMS FOR INCLUSIVE NATURAL RESOURCE MANAGEMENT, DIALOGUE AND MEDIATION;
- ENHANCE RELATIONSHIPS, SOCIAL COHESION, AND TRUST BETWEEN COMMUNITIES; AND
- PROMOTE SUSTAINABLE AND CLIMATE-RESILIENT LIVELIHOOD OPTIONS FOR VULNERABLE GROUPS.



The pilot was implemented by Practical Action Sudan in eight communities identified as particularly vulnerable to linked climate change and security crises, in partnership with adelphi who provided analysis and guidance on integrating climate change and peacebuilding approaches.



Map 1: Location of the CCFR pilot communities in El Fasher, North Darfur State, Sudan.

The project developed a suite of guidance materials to support the integrated design of pilot initiatives in Sudan and in Nepal where a second pilot project was implemented simultaneously. These tools and resources were updated after finalization of the pilot projects to document learning and support the design and implementation of future climate-security programmes.



MAIN ACTIVITIES AND RESULTS

1. Strengthened capacity of communities to mediate disputes through inclusive natural resource-related governance mechanisms



To strengthen communities' capacity to prevent and peacefully resolve conflicts over land and water, the project established Natural Resource Management and Peacebuilding Committees (NRMPBC) in each of the eight villages. The committees included representation from both farming and pastoralist communities, as well as men and women that received training in mediation and conflict resolution delivered through a partnership with the University of El Fasher.

Committees and their members were able to prevent disputes from escalating into violence, particularly those that regularly occur between farmers and pastoralists when animals destroy crops or when crops are cultivated on established migratory routes (Box 1). In some villages, these committees are now tasked with mediating other social disputes and conflicts that do not concern natural resources, such as marriage disputes and theft, demonstrating broader impacts for peace.

In an impact evaluation conducted at the end of the project, community members reported a significant decrease in violent disputes during the years of project implementation (Figure 1). In particular, community members underscored the effectiveness of community-led mediation processes. Locally grounded, inclusive mediation mechanisms were described as leading to solutions with consensus that enable sustainable peace, as compared to the court system, characterized as expensive processes that often fail to address underlying grievances.

Box 1: Community-led conflict resolution in Um Esher, Sudan

In the village of Um Esher, a nearby settlement of pastoralists was accused of stealing an animal from the village, creating significant tension. Applying skills in mediation and conflict resolution acquired through the project, the Natural Resource Management and Peacebuilding Committee intervened. After a detailed fact-finding mission within the settlement area, the Committee learned that the accused were not responsible for taking the animal – the animal had indeed passed by the village but had continued onwards. The Committee then facilitated a two-week mediation process between the two villages which eventually led to a joint resolution. This was lauded as an important success, as these types of conflicts had previously often escalated quickly into violence.

Number of violent disputes

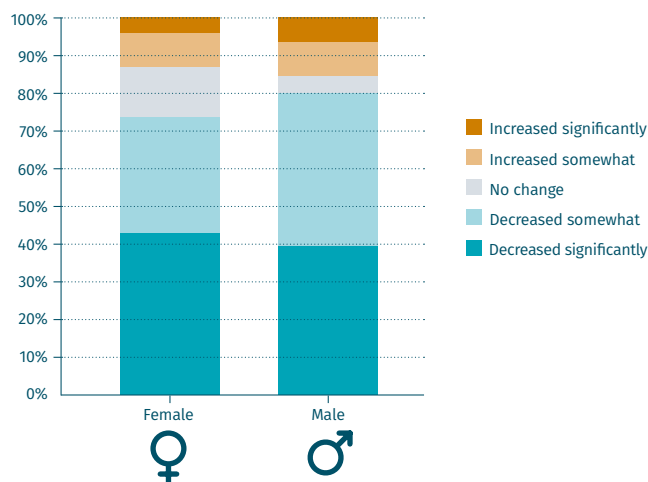


Figure 1: Community members report a significant decrease in violent disputes over natural resources since the start of the project (household survey, Feb 2021).

2 Joint management of contested migratory routes re-established through a participatory process to identify challenges and devise solutions

During the migratory seasons (July-August and November-December), conflicts often erupt along migratory routes. In the past, migratory routes were jointly managed by farmers in the region and pastoralists, who rely on the routes to access available grazing areas and water sources. However, these traditional mechanisms have become dysfunctional or no longer exist, and many rules and regulations are not properly implemented.

To address these challenges, the project supported a participatory process to re-establish the joint management of migratory routes in the project area. The process brought together pastoralists, farmers, and government representatives to assess challenges leading to conflict, identify conflict hotspots along the routes, and develop joint solutions for conflict prevention. Key results of the process were:

- JOINT IDENTIFICATION AND DEMARCATION OF CONFLICT HOTSPOTS ALONG 30 KILOMETRES OF MIGRATORY ROUTES (SUCH AS IN AREAS WITH SIGNIFICANT AGRICULTURAL ACTIVITY)
- EXPANSION OF MIGRATORY ROUTES FROM 50 TO 150 METERS WIDE
- DEVELOPMENT OF A JOINT ACTION PLAN FOR CONFLICT PREVENTION
- IMPROVED ACCESS TO WATER AND VETERINARY SERVICES ALONG THE ROUTES

100% OF PARTICIPANTS ENGAGED IN MIGRATORY ROUTE PLANNING ACTIVITIES REPORTED POSITIVE OR VERY POSITIVE INTERACTIONS WITH OTHER COMMUNITIES OR LIVELIHOOD GROUP ACCORDING TO A HOUSEHOLD SURVEY ON FEBRUARY 2021



This process not only improved the management of migratory routes, but also helped to rebuild relationships between communities in the area. The process culminated in two large social events, in which farmers and pastoralists came together to celebrate their achievements through dialogue, dance and music. During the final evaluation, community members and government representatives alike could not overstate the significance of these events, as they represented the first-time pastoralists and farmers came together in a social setting.

Community members have reported that conflicts between farmers and pastoralists have reduced markedly since the joint activities and social event, and that there has been an increase in positive interactions between farmers and pastoralists in different contexts, for example in sharing tea at local markets and joining communal events such as marriage ceremonies and funerals.

Photo: Painted pole demarcating the migratory route indicating an area with low conflict risk. © UNEP



3. Enhanced inclusion of vulnerable and marginalized groups through improved and climate-resilient livelihood options

In participatory planning processes, community members stressed that sustainable livelihoods are essential for preventing conflict between natural resource user groups whose livelihoods are increasingly threatened by the changing climate. Building on and complementing natural resource governance and conflict resolution interventions, livelihood activities aimed to support farmers to be more productive and efficient in smaller areas of land on the one hand, while improving pasture area and essential services along migratory routes for pastoralists on the other.

Climate-resilient livelihood activities specifically targeting marginalized groups, such as women or displaced populations, served not only to enhance food or economic security for the entire communities, but also to establish more inclusive social environments for vulnerable groups. Across project communities, for example, livelihood activities together with improved conflict management capacities helped to create a conducive environment for the peaceful return of nearly 450 households during the project period.

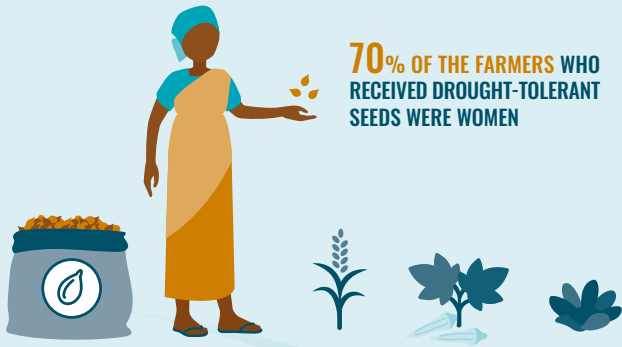


FROM THE AWARENESS AND TRAINING OUR COMMUNITIES RECEIVED IN THE FIELD OF CONFLICT RESOLUTION AND JOINT ANIMAL MIGRATORY ROUTES MANAGEMENT – PARTICULARLY OUR YOUNG MEN AND WOMEN – WE DECIDED TO CONVENE ONE SOCIAL EVENT IN OUR VILLAGE OF ED ALBAIDA. [...] AS THE NATIVE ADMINISTRATION LEADER, I WELCOMED OUR GUESTS, NOMADIC PASTORALISTS FROM SOUTH AND EAST DARFUR, TO LIVE WITH US AND SHARE OUR RESOURCES FOR PEACEFUL CO-EXISTENCE AND GOOD RELATIONSHIPS BOTH SOCIALLY AND ECONOMICALLY.

IBRAHIM ALI DAWALBAIT, TRADITIONAL LEADER IN ED ALBAIDA VILLAGE

Photo: Fields supported with climate-smart agricultural techniques. © Maxime Paquin, UNEP





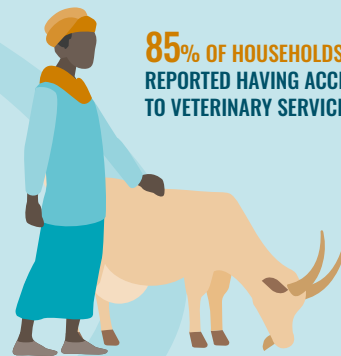
70% OF THE FARMERS WHO RECEIVED DROUGHT-TOLERANT SEEDS WERE WOMEN

Strengthened climate-resilient agricultural practices

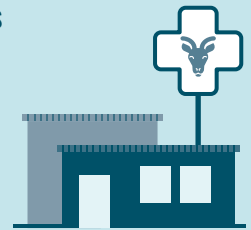
A key focus of the project was to diversify crops towards more drought-resistant varieties. This was done through capacity building of agricultural extension workers and the provision of improved seeds in collaboration with the Ministry of Agriculture. Some 70 percent of the farmers who have received drought-tolerant seeds were women. Several women reported the skills and resources provided by their project improved economic status and social status within their communities.

Improved access to veterinary services

To improve animal health for pastoralists and farmers, the project trained para-veterinary workers through the Ministry of Production and Economic Resources, and established community-owned animal drug centres. At project closure, 85 percent of households reported having access to veterinary services.



85% OF HOUSEHOLDS REPORTED HAVING ACCESS TO VETERINARY SERVICES



4 RAIN GAUGES WERE INSTALLED IN FOUR TARGET COMMUNITIES

Enhanced weather information

To improve access to weather information, the project supported the installation of 4 rain gauges in target communities designed. Community members were trained to read the device and send data to the state's Meteorology Centre, which broadcasts information on the radio together with additional weather information and forecasts, as well as information on which crops to plant and when.

Rehabilitation of community forests

Together with the National Pasture and Forest Cooperation, the project helped to establish four community forests that provide multiple livelihoods and environmental benefits, such as gum Arabic, as well as protection against soil erosion and positive long-term impacts on the local climate.



4 COMMUNITY FORESTS WERE ESTABLISHED IN FOUR COMMUNITIES

By implementing these activities in close collaboration with local institutions and government partners, livelihood interventions served not only to enhance resilience to climate change but also to rebuild relationships and trust between the government and local communities. Government representatives and community members alike underlined the project's positive role in facilitating this process.

“THERE WAS NO RELATIONSHIP BETWEEN THE COMMUNITY AND THE GOVERNMENT BEFORE THE PROJECT, BUT NOW THE RELATIONSHIP IMPROVED BECAUSE GOVERNMENT REPRESENTATIVES FROM THE MINISTRY OF AGRICULTURE AND THE NATIONAL PASTURE AND FOREST COOPERATION PARTICIPATED IN THE IMPLEMENTATION OF PROJECT ACTIVITIES AND VISITED THE FIELD TO MEET THE COMMUNITY.”

COMMUNITY MEMBER IN UM ESHERA

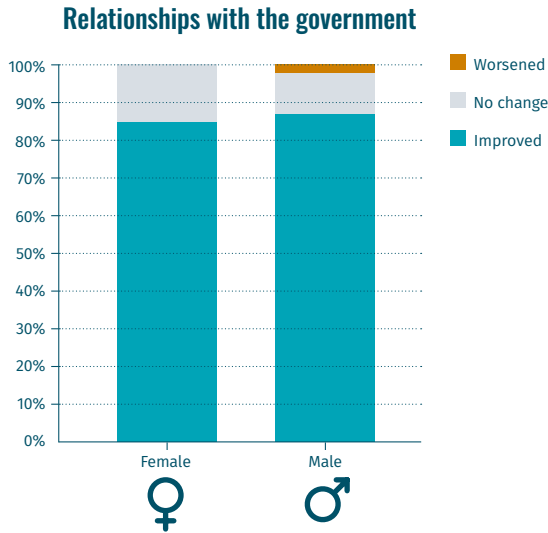


Figure 2: Community perception of change in the relationship between communities and local government at end of project (household survey, February 2021).

NEARLY 90% OF COMMUNITY MEMBERS REPORTED THAT RELATIONSHIPS WITH THE GOVERNMENT HAD IMPROVED DURING THE PROJECT PERIOD



Photo: Women tending to crops in Sudan. © Maxime Paquin, UNEP



LESSONS LEARNED

In contexts experiencing multiple and linked environmental, climate and security challenges, this pilot project demonstrated the added value of combining climate change adaptation and peacebuilding activities.

The project's integrated approach yielded positive results for livelihoods, natural resource management and climate change adaptation, as well as for social cohesion, governance, dialogue, and mediation.

THREE TIPS FOR CLIMATE SECURITY PROGRAMMING IN ALL CONTEXTS	
1 CONFLICT-SENSITIVITY	To avoid unintended consequences that could inadvertently escalate conflict risk, project design and implementation should be grounded in a nuanced and detailed understanding of underlying conflict dynamics and inclusive, participatory processes.
2 LOCAL CLIMATE-SECURITY AWARENESS AND CAPACITIES	Building the awareness and capacities of implementing partners and beneficiaries are necessary to: <ul style="list-style-type: none">➔ Assess the complex interactions between climate change and conflict,➔ Effectively combine governance and peacebuilding activities with more technical interventions, and➔ Monitor and evaluate progress towards both climate change adaptation and peacebuilding impacts.
3 DIVERSE EXPERTISE	Including peacebuilding and climate change adaptation expertise in the implementation team from the onset is important to avoid siloed approaches.

Photo: Group of farmers gathered for a project meeting in North Darfur. © Maxime Paquin, UNEP



SEVERAL IMPORTANT LESSONS EMERGED FOR DESIGNING AND DELIVERING CLIMATE CHANGE AND SECURITY PROGRAMMING IN SUDAN OR IN OTHER SIMILAR CONTEXTS.



- ✓ **Climate change adaptation and resilience-building interventions can be used as a platform for dialogue and relationship building between conflicting groups when delivered in a conflict-sensitive way.** In the project region, natural resource management and livelihood activities brought together farmers and pastoralists to devise mutually beneficial solutions to joint environmental challenges, facilitating more meaningful and regular exchanges between groups and laying the foundation for building more inclusive and equitable natural resource governance mechanisms. Bottom-up, solution-oriented processes helped to reframe climate and environmental challenges as opportunities for collaboration. A nuanced and detailed understanding of underlying conflict dynamics in the area and an inclusive, participatory approach to project design and implementation were key factors in the project's success.



- ✓ **Inclusive and community-based natural resource governance mechanisms can play essential roles in preventing and resolving conflicts.** Establishing natural resource management and peacebuilding committees in each of the project villages – and building their capacities for mediation and conflict resolution – significantly contributed to preventing disputes from escalating into violence. In the project area, these mechanisms provided an alternative to costly processes in court. The committees' success is marked by their capacity to address underlying grievances, as they are invested in repairing damaged relationships between parties rather than simply conducting damage control. Such capacities for conflict resolution were also used beyond addressing natural resources-related conflicts, thus having broader stabilizing effects for communities.



- ✓ **Combing interventions focused on governance, mediation and dialogue with more technical climate change adaptation activities created added value for both conflict prevention and climate action.** When environmental degradation and natural resource scarcity are key drivers of conflict, solutions cannot be derived from dialogue and mediation alone, and often require investments in suitable infrastructure or sustainable livelihoods. At the same time, when new infrastructure is developed or ecosystems restored, their sustainability is often contingent upon ensuring community ownership and local capacity to fairly and effectively manage new investments. By balancing and combing peacebuilding activities with more technical climate change adaptation and livelihood interventions, the project was able to multiply the impact of its investments. For example, a new environmentally friendly water station was constructed with input from the joint migratory route planning processes during which pastoralists and farmers agreed on the best use of funds and the most critical location for a water station, while natural resource management and peacebuilding committees supported by the project were established to manage use and access to the water source. It is important to recognize where projects require specific expertise or extended timelines for their successful implementation (see "Community Forests").



- ✓ **Including the government in project delivery can help to rebuild trust and contribute to the sustainability of project results.** Following years of armed conflict, rebuilding trust between communities and the government was a clear project objective. At the start of the project, a technical committee was established, consisting of representatives of different government departments, to provide oversight on project implementation. The committee was deeply involved in all aspects of project delivery. Whenever possible, activities were delivered directly by government partners (such as trainings or seed distribution). At the project closure, community members and government representatives alike stressed the importance of newly established relationships both between communities and government as well as between relevant government departments. These relationships and the new governmental capacities will sustain project activities after the project conclusion.



- ✓ **In conflict-affected and climate-vulnerable contexts, natural resource-related and climate change adaptation interventions offer a chance for strengthening the leadership of vulnerable and marginalized groups.** Project results demonstrated that engaging women in sustainable livelihoods and climate change adaptation initiatives can lead to gains beyond women's economic empowerment, including improvements in social status or leadership within community structures. However, fully leveraging opportunities for strengthening the inclusion of marginalized groups requires an intersectional lens to be applied at all levels of project design and delivery. This requires specific gender expertise to inform the integrated analysis that underpins the project as well as in project design and implementation. Specific attention should be paid to fully engaging women in conflict mediation and peacebuilding structures.

Photo: Group of farmers in North Darfur. © Maxime Paquin, UNEP





Photo: Women planting a community forest in North Darfur. © Practical Action.

Supporting Community Forests

Several specific lessons emerged for supporting community forests. While successful community forests can offer significant environmental and economic benefits, these were some of the most challenging project activities. Three key challenges include:

- limited availability of land and the potential to exacerbate land disputes;
- the long timeframe of establishing a community forest: it can take up to ten years until the community sees significant benefits, which has proven to be particularly complex in a post-conflict context where people tend to plan months ahead, not years; and
- the significant work involved in caring for seedlings, including watering them and protecting them from animals, in a context where people have limited time to spend on activities beyond immediate livelihood needs.

With these challenges in mind, future projects seeking to invest in community forests should:

- ENSURE A SUFFICIENTLY LONG PROJECT TIMEFRAME
- PROVIDE LONG-TERM SUPPORT TO THE COMMUNITY SO THEY CAN ENSURE PROTECTION OF THE FOREST ALONGSIDE THEIR NORMAL LIVELIHOOD ACTIVITIES
- INCLUDE SHORT-TERM LIVELIHOODS SUPPORT TO PROVIDE IMMEDIATE BENEFITS
- ESTABLISH COMMUNITY FOREST GOVERNANCE SYSTEMS FROM THE ONSET.

ABOUT THE PROJECT

This pilot project was implemented under the EU-UNEP partnership on Climate Change and Security, established in 2017, with the aim of collaborating to develop integrated approaches to climate-conflict analysis and deliver actions on the ground to address emerging climate-related security risks. Building on the findings of the report commissioned by the Group of Seven (G7), "[A New Climate for Peace](#)," the five-year EU-UNEP Climate Change and Security project (2017-2022) aimed to strengthen the capacity of countries and international partners to **identify environment and climate-related security risks at global, national and community levels, and to programme suitable risk reduction and response measures.**

Implemented by UNEP, this project was supported by the EU Instrument contributing to Stability and Peace (IcSP). To deliver the project, UNEP worked hand in hand with the German think-tank adelphi on analysis, advocacy and capacity development. At national and community levels in Sudan, the project was implemented through Practical Action, in close collaboration with local, state and national authorities.

For more information see: unep.org/climatesecurity