



Impact Brief 2022

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Improving Community Resilience Through Climate-Smart Agriculture and Good Natural Resource Governance

Impact and Lessons from the CARE-WWF Alliance Project in Nachingwea District, Tanzania

CARE-WWF Alliance Project: Context and Objectives

Nachingwea, a district in the uniquely biodiverse Ruvuma landscape, is one of Tanzania's poorest regions. Its communities rely largely on subsistence farming and are increasingly subject to the impacts of climate change, such as erratic rainfall resulting in droughts and floods.

Women are especially vulnerable to these events due to the gender roles and socioeconomic marginalization that reduce their access to information, resources, and decision-making power—and thus, their ability to contribute to climate change resilience.

Climate change also affects food security. In a 2016 baseline survey, under 1% of households reported enough nutritional diversity in their diet; 8% reported inadequate dietary diversity; and 91% reported very inadequate dietary diversity.

The CARE-WWF Alliance project sought to address these environmental, economic, and social challenges through an integrated initiative that promoted climate-smart poverty alleviation approaches to natural resource management and economic development. The project ran in six villages from December 2015 to June 2019 to achieve the following objectives:

- **Resilient agriculture.** Poor smallholder farmers, especially women, adopt climate-smart agricultural practices, increasing production of nutritious food and reducing impacts on water, soil, and forests.
- **Financial inclusion and diversified livelihoods.** The rural poor, especially women, engage in diversified, sustainable livelihood activities to earn and save more income.
- **Sustainable community-based conservation.** Community-based organizations enable local, sustainable management of Miombo woodlands, freshwater resources, and wildlife.



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Above: Melania Joseph, a member of one of Mbondo's agriculture and savings groups, cares for her home garden to improve her family's nutrition. Pictured at top: Khadija Mbogo (foreground) and other members of the Umumbo Farmer Field and Business School group celebrate their collective success at improving crop yields in the face of climate change.

- **Inclusive and effective governance.**

Poor women and other citizens hold community and district authorities (duty-bearers) accountable for decisions that affect ecosystem integrity as well as their livelihoods and well-being.

Monitoring, Evaluation, and Learning Methods

This brief presents key impacts and lessons drawn from various monitoring, evaluation, and learning methods implemented through the project. After a mixed-methods baseline quantitative household survey of 30 clusters randomly selected from 126 villages, including all six project villages, an independent endline survey evaluated households from three project villages regarding changes in natural resource management agricultural practices, and their well-being, among other things. Quantitative methods at baseline and endline were complemented by key informant interviews and focus group discussions with local participants, district government officials, and Village Natural Resource Committees (VNRCs) to gain qualitative insights into why and how change happened.

In addition, to identify lessons learned and inform project adaptations, CARE-WWF Alliance staff, stakeholders, and partners shared their perspectives at annual reflection meetings. CARE and WWF-Tanzania led an internal assessment of achievements, staff lessons, and programmatic gaps to develop the project exit strategy, and presented these insights alongside the independent final evaluation at a project closeout event with government and community representatives. Finally, an informal follow-up conversation in June 2020 allowed CARE and WWF staff and a key government partner to assess the sustainability of key project benefits.

Key Impacts

Climate-Smart Agriculture for Increased Yields and Improved Nutrition

Through an experiential Farmer Field and Business School (FFBS) approach, small-scale producers (64% women) improved production of their cash crop,

sesame, over three agricultural seasons.

Using climate-smart agriculture (CSA) rather than traditional practices, farmers enjoyed an average 94% increase in crop yields. Communities recognized the nutritional and income advantages and resolved to share these practices with nonparticipating farmers.

The Alliance also collaborated with the Tanzania Official Seed Certification Institute to train four farmers as Quality Declared Seed producers, resulting in the production of 3,084 kg of improved sesame seed by June 2019. These seed multipliers expanded districtwide access to climate-resilient, nutrient-rich seeds beyond the mere 10% recorded at baseline. The Alliance also shared nutrition knowledge with FFBS members and community-based health workers.

The Alliance's train-the-trainer approach extended its work in food and nutrition security beyond the communities immediately impacted, strengthening CSA capacity among ward-, district-, and national-level agricultural officers; their subsequent advocacy increased the budget allocation for an accelerated

rollout of Tanzania's CSA Guidelines across the district. Moreover, leveraging experiences with sesame and other legume value chains, the Alliance helped the Tanzania Food and Nutrition Center develop its Integrated Nutrition Training Manual, now used in health centers across the country to improve nutrition outcomes.

Financial Inclusion for Diversified Livelihoods

With Alliance support, 918 members (73% women) across 45 Village Savings and Loan Associations saved US\$33,156 in just one year. **This average savings of \$36 per member is meaningful given the median monthly income of under US\$22 for Tanzanian farmers.**

Stronger finance, business, and marketing capacities, and greater access to savings and credit, contributed to the establishment of 47 small- and medium-scale enterprises (SMEs)—such as resilient seed multipliers or producers and sellers of natural soaps, batiks, ornaments, and other crafts. Fifty-three percent of the SMEs were headed by



Members of Umoja Village Savings and Loan Association discuss and plan a shared purchase to expand their bargaining power with the seller.



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Umumbo Farmer Field and Business School members harvest cassava and pigeon peas, which were inter-cropped to increase soil fertility, productivity, and, by extension, nutrition security.

women and 40% were environmentally sustainable. One seed multiplier who learned CSA practices secondhand through Alliance-trained producers estimated that he earned an additional \$1,185 in 2019 alone, almost 350% of the median income for Tanzanian farmers.

Community-Based Conservation for Sustainable Development

In Tanzania, village land use plans (VLUPs) and natural resource management are the foundation for sustainable livelihoods; by 2019, the Alliance had ensured that all six villages had VLUPs. The plans designated 41,597 hectares (102,788 acres) for natural resource management: 2% for wildlife management areas and 98% for participatory forest management (PFM), with four villages implementing PFM through approved sustainable timber harvesting plans.

After earning US\$31,306 from PFM in two years, the communities of Mbondo and Majonanga made investments of \$16,559 in 10 community-prioritized development activities; reinvested

\$11,039 in PFM; and allotted the remaining funds to the district's environmental support activities. The realization of development priorities, like building a preschool and ensuring health insurance for vulnerable elders and youth, cemented local understanding: Sustainable natural resource management is the foundation for sustained human well-being.

Improved Governance for Ownership and Accountability

In Nachingwea, the Alliance helped achieve good governance—political and institutional processes and outcomes necessary to achieve development and human rights goals—in many ways. To increase local ownership by citizens and accountability among regional leaders, the Alliance supported the legal registration of 11 conservation community-based organizations (CBOs). This enabled their eligibility for technical support from district environmental officers and loans from the Community Development Office. Implementation of the Community Score Card, a social accountability tool, in all six villages was another key success (see sidebar).

IMPROVED PARTICIPATORY FOREST MANAGEMENT THROUGH THE COMMUNITY SCORE CARD

Implemented seven score cards over 18 months, resulting in 54% fulfillment of score card agreements by

- involving community members and government leaders from six villages
- repeating score card process biannually to ensure proper plan execution and opportunities for improvement

Mitigated common conflicts due to

- financial mismanagement
- competition between village leaders
- lack of support for the VNRC

Improved transparency and accountability in village and natural resource governance by

- enabling citizen monitoring of revenue use for community development initiatives
- increasing transparency of conservation program costs and revenues

Shifting Gender Roles for Women's Advancement

Expanding women's ability to claim their rights is another component of good governance. In Nachingwea, 59% of inhabitants—mostly women and girls—fetch water from boreholes reliant on groundwater. Yet in 2016, only 1% of the six villages' population had access to clean water. To address this, 10 water sources were prioritized for repair by 2019, which expanded clean water access to 2,275 people (21% of the population). This not only contributed to improved health, but also freed up women's time for participation in other activities.

By 2019, communities recorded a 35% increase in women's leadership in natural resource CBOs, and almost half of the 55 Alliance-supported CBOs implemented a gender mainstreaming strategy to increase equity in decision-making. Furthermore, the Alliance supported an awareness campaign about women's rights and gender-based violence reaching 438 community members. Twenty-two male champions were trained as advocates for

women's rights, linked with paralegal centers throughout Nachingwea, and connected with the police force to support prosecution of gender-based violent crimes. Married couples shared stories of increased harmony, and villages reported fewer domestic violence cases per month.

Mitigating Shocks and Stressors for Increased Resilience

Communities in Nachingwea adopted activities that increased their social and ecological resilience, including adopting CSA, savings programs, natural resource management practices, and access to credit. **The Alliance directly supported 1,183 people to adopt at least two best practices, indirectly reducing the vulnerability of close to 5,000 people.** The Alliance again adopted a train-the-trainer approach to strengthen local adaptability to climate change. Government officials and community members across six districts and four villages engaged in scenario planning, using weather forecasting to mitigate the impacts of an increasingly variable climate.

Key Lessons

Joint planning and implementation strengthen the capacity of government partners

District and local authorities' continuous involvement was crucial to project success. Local officials planned with the Alliance and informed project priorities, such as expanding sesame production and improving cassava's climate resilience. Alignment and buy-in around shared objectives, budget transparency, and trust enabled officials to lead or participate in project activities. In turn, the Alliance often acted as capacity-builder rather than direct implementer, supporting the government's engagement with existing CBOs through resources to strengthen their operations and linkages, and their ability to advance social equity and environmental sustainability goals.

"The government plays a role in supporting communities to meet their needs, and together with the Alliance a lot has been achieved in a short time ... [with] a massive contribution to the development of Mbondo. In that community, they have reduced hunger, improved infrastructure, and increased agricultural production. To date, Mbondo is the leader in sesame production in the region." —Raphael Ajetu, Nachingwea District Agriculture Officer

Inclusive stakeholder engagement accelerates ownership of processes

Conservation-based revenue generation quickly spurred a greater sense of community ownership of natural resource protection. Rather than engage in conservation out of fear of being arrested or fined, citizens discovered that inclusive and sustainable practices can generate enduring benefits. Alliance support established a virtuous cycle of PFM practices, sustainable timber sales, and reinvestment in community priorities, enabling autonomous funding of sustainable development.

"The community now knows how important forests are and their value. As a result, they are all working to protect it and ensure they are maintaining it." —Said Malemla, Village Natural Resource Committee member, Mbondo



Rehema Salumu (right), a community-based paraprofessional and certified seed multiplier, works with a member of the Upendo Farmer Field and Business School to bundle sesame harvested from their communal plot.



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Husuda Lukanga, accountant for the Mbondo Village Natural Resource Committee, shows off the community forest that the committee is managing. Income generated through sustainable harvesting has been critical to reinvesting in participatory forest management and community development priorities.

The Alliance's focus on inclusive, transparent governance was also critical to success. The Community Score Card process revealed that leaders were communicating inconsistently with villagers, but also that the two groups had much in common. Community members and government officials alike hailed the score card as foundational to improved relationships and multi-level governance. Even after project exit, transparent reporting on revenues continues to enable greater accountability on the use of those resources for community development priorities.

Local ownership is an exit strategy

Through each project stage—planning, implementation, and adaptive management—the Alliance focused on participatory governance, involving government and community partners in both successes and opportunities for improvement. At project closeout, this involved designing an exit strategy that transferred responsibilities to local ownership.

For example, when a new chairperson of the Mbondo VNRC proposed detrimental changes to how the committee functions, members used their Alliance training to resist, and called on district leadership

for support. When an internal assessment identified value chain support as an area for improvement, the Alliance supplied the necessary cassava processing machines to a Mbondo producer association, and community-based paraprofessionals call upon district agriculture officers to maintain them. These strong linkages and trusting relationships, facilitated with support from the Alliance, will keep project benefits flowing in the region.

Ongoing Learning Opportunities

The CARE-WWF Alliance's work in Nachingwea surfaced several questions that remain relevant to the design, implementation, and impact of integrated conservation and development programming. These include

- How did the project integrate conservation and development interventions? Did these approaches add value?

- How did the project advance the rights and empowerment of marginalized women and poor citizens? What was the impact on gender and power dynamics in households and within natural resource management CBOs?
- How and why were promoted approaches adopted at different levels (by households, communities, districts, or landscapes) where CARE and WWF did not work directly? What were the outcomes? Are there lessons for how projects might strategically leverage such naturally occurring spillover to increase impact at scale?

The Alliance continues to explore these questions and build on the Nachingwea pilot's achievements through larger-scale, integrated programming farther north in the Southern Agricultural Growth Corridor of Tanzania.

For more information about the CARE-WWF Alliance:
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