



Responding to climate change



LOCATION: Programmes in Kenya, East Africa



PROJECT NAME: Nyatike Area Programme, South West Kenya and BORESHA EC funded project, Mandera North East Kenya



GOAL: Improved household food security – part of a wider programme focussed on the sustained wellbeing of children, especially the most vulnerable (Nyatike). To promote economic development and greater resilience, particularly among vulnerable groups (BORESHA).

Overview

More than half of Kenyans are living in poverty, unable to meet their basic needs.¹ In recent years Kenya has experienced low and irregular rainfall, prolonged droughts, frequent floods, mud slides and locust swarms that continuously threaten the lives and livelihoods of families.

These challenges create health risks, food insecurity, conflict and violence, displacement, disruption to education and loss of lives – driving communities to acute poverty. Flooding and drought are experienced in counties right across Kenya, from Kisumu in the south west to Kilifi on the east coast, Turkana in the north west and Mandera in the north east.

Changes in rain patterns are severely affecting small holder farmers' income and ability to feed their children – most of whom are already vulnerable and poor families. They are heavily dependent on rainfall to grow their agricultural crops, or feed their livestock. As rainfall becomes more erratic, less frequent, but often more intense – and without access to quality seeds or drought resistant varieties – harvests fail, making farmers evermore vulnerable. In turn, children in these areas become more vulnerable to secondary impacts, including

child labour and child marriage. A report published in 2020 by World Vision International and Overseas Development Institute demonstrated that climate change has strong links to violence against children and that “Child marriage often increases in crisis contexts, such as recurrent droughts and crop failures”.²

Although Nyatike and Mandera are at opposite sides of the country, and are very different in terms of the types of livelihoods pursued by the local communities, they are both among the most vulnerable areas of Kenya due to climatic conditions and high levels of poverty that make it difficult for many to recover from one shock before the next one hits.

World Vision's response

Our approach prioritises helping the most vulnerable families out of extreme poverty and strengthening the livelihoods of the rural poor, so that they can provide for their own children. This includes strengthening food production, restoring environments, managing natural resources, access to markets and financial services. We work in ways that help households and communities adapt and respond to climate change and disasters.



THE STORY OF NYATIKE

When World Vision started working in Nyatike, (in south west Kenya), in 2004, our baseline survey showed that the community wasn't producing enough food to feed themselves well. There were poor agricultural practices and rampant livestock diseases due to inadequate support services.

We used a combination of approaches to improve livelihoods in the community.³ As the programme went on we increasingly focussed on resilience to the effects of a changing climate; with **climate smart agriculture** techniques and environmentally sound principles and practices, including:

Coping with floods and water conservation – communities were supported to start rainwater harvesting and sustainable natural resource management.

Crop diversification and intercropping techniques – by growing pulses (soya, mung beans), farmers increase the variety of crops that they're growing, so even if conditions aren't good for some crops, there's a chance that others will be successful. Additionally, pulses put nitrogen into the soil, increasing its fertility for the next growing season.

World Vision in Nyatike has also been working with ICRAF (the World Agroforestry Centre) to promote **agroforestry**; cultivating trees alongside crops and pastures. This helps to reverse land degradation, maintain healthy soil and provides new business opportunities using tree-based products (such as fruit, honey and fodder).

TOP RIGHT: Naaman, 13, with his mother Pamela in Kenya holding their recent maize harvest. **BOTTOM RIGHT:** Naaman's neighbour Peter, a Farmer Managed Natural Regeneration (FMNR) champion, who taught him and his family sustainable farming techniques.

¹According to the Kenya **Comprehensive Poverty Report** of 2020.

²Pereznielo et al (2020) – Ending violence against children while addressing the global climate crisis.

³World Vision's approach to economic development – wvi.org/economic-development/our-approaches

Naaman's story

13-year-old Naaman is inquisitive and determined. He saw his widowed mother, Pamela, struggling to feed the family with the small amount of maize and beans she could grow. She was sometimes forced to look for casual – and potentially dangerous – work at the local gold mines. But Naaman also saw his neighbour, Peter's, flourishing trees and crops. So, he decided to ask Peter how he did it.

Peter, is a Farmer Managed Natural Regeneration (FMNR) champion in his village. With training from World Vision, he's restored his land by regenerating indigenous trees and using more sustainable farming techniques.

After school and at weekends, Naaman learnt from Peter and soon saw the benefits.

“I have seen our trees grow bigger and we also get fruit to eat such as guava [and] avocado.”

With the new methods they've learnt, Pamela and Naaman's last maize harvest filled three and a half bags of maize, rather than the usual two. With better soil, Pamela is in a better position to feed her children and make sure they can go to school.





ABOVE: Naaman, 13, practicing FMNR techniques he learnt from his neighbour.

Results

In July 2020, we evaluated the Nyatike Area Programme and found that the proportion of households using climate smart agricultural techniques rose from 45% in 2016, to 62% in 2020. During the same period, World Vision Kenya found that, across all their technical programmes, households adopting climate smart agriculture techniques increased from 23% to 73%. Nyatike Area Programme therefore saw less of an increase than some other Area Programmes, but there has still been a significant uptake.

Nyatike Area Programme evaluation also showed that 62% of households are now able to provide well for their children, which was a considerable increase from the 25% at the 2009 evaluation. Whilst other aspects of the programme also impacted livelihoods, such as savings groups, this figure closely tracks the proportion of households adopting climate smart agriculture, suggesting that this approach contributes to improving food security, resilient livelihoods and income alongside reducing carbon footprints.

What have we learnt in Nyatike?

While climate smart agriculture and agroforestry techniques have been adopted by many households in Nyatike, and more families are now better able to provide for their children, others still face barriers.

The proportion of households in poverty has reduced from 68% in 2009, to 43% in 2020, but only 2.5% are achieving high crop, livestock or aquatic production.⁴ This could be due in part to the extreme challenges of improving agriculture-based livelihoods in a semi-arid region with a changing climate, or problems with access to markets or financial services, but in areas like this, climate smart practices should be incorporated into programmes from the start.

CONTINUING WORK TO ADDRESS THE CHALLENGES

The Kenyan Government's, Lower Kuja Irrigation Development Project, is designed to improve irrigation in Nyatike Sub County, and control excess water from the rivers, to reduce flooding and improve production and has seen farmers in some parts of Nyatike increase rice production. Whilst the Nyatike area is only partly covered by this project it is also part of an on-going 'Regreening Africa'⁵ project, a European Union-funded project, managed by the World Agroforestry Centre (ICRAF), with World Vision as the lead agency in Kenya. This project will continue until 2022 providing further support to households as they adapt to climate change, build resilience and minimise emissions, while also promoting agroforestry, FMNR and climate smart agriculture.

⁴High crop, livestock or aquatic production is where this is the main source of livelihood and production is for home consumption and for the market.
⁵regreeningafrica.org/where-we-work/kenya

THE STORY OF BORESHA

Mandera Triangle encompasses north-eastern Kenya, south-eastern Ethiopia and south-western Somalia.

World Vision's work in Mandera began in 2017. The region is known for its instability, influx of refugees, recurrent conflicts including extremist violence and climate shocks, as well as being home to one of the most underprivileged and marginalised populations within Africa. With few income opportunities, widespread poverty and increasing incidences of violence, more families have become displaced or migrated. All these issues have been exacerbated by drought, food insecurity, malnutrition, disease outbreaks, livestock deaths and limited profits from agriculture.

In the Boresha project we have been working with communities to rehabilitate earth pans – man-made lakes or reservoirs – to collect rainwater during the rainy season. Rainwater collects in the pans, reducing flooding during heavy rains and providing water for livestock and agriculture during the dry seasons. In Kiliwehri, the long rains of April-May 2020 flooded the earth pan and damaged one of the banks. However, the Community Disaster Risk Reduction Committee along with 45 young, local volunteers, quickly put measures in place to stop flooding, by diverting the water and using sandbags to shore up the damaged bank. As the rains continued to pound the area, we also arranged for the pan walls to be professionally repaired and strengthened.

Similar activities took place in Malkamari in August 2020, where the earth pan was lined with a high-density liner, having been desilted earlier in the year. The liner stops seepage, keeping more water available for longer during the dry season. The lining of the water pan was completed in time for the October/ November rains. For the local community, this improves their access to water, and women and girls – who traditionally collect water – are safer, as they don't need to make long, remote journeys every day.

RIGHT: Before: Earth pan rehabilitation in Malkamari. BELOW: After: The Malkamari earth pan in use during drought in 2020.

The project in Mandera also excavated several underground rainwater storage tanks. One of these tanks was constructed in Shangala community, 14km away from the nearest water source and regularly hit by drought. Lidoy, a member of the Community Disaster Risk Reduction Committee, said:

“The water tank has helped us improve the hygiene and sanitation of the community as they are now able to clean more often and time that used to be wasted in search of water is being put to better use. Women were burdened with fetching water from a long distance but now look healthy and energetic.” Lidoy told us.

Communities in Mandera are largely livestock keepers, so they're also vulnerable to the impact drought has on livestock, including the death of animals. We have been working with a local insurance provider to raise awareness of livestock insurance, which compensates policy holders who lose livestock due to drought, so they can replace their lost livestock.





ABOVE: A farmer in Kenya herding his family's cattle in a vast range of land.

Results

In total through the protection of water sources this project has improved the water supply of nearly 20,000 people. This was especially important during the COVID-19 pandemic.

851 livestock insurance policies have been taken out, covering 7,646 animals. So far, 226 households have received pay-outs from their insurance policy to compensate for livestock lost during a disaster. This is helping ensure families can continue to farm and have a vital source of income.

22 community-based Disaster Risk Reduction committees have been formed across Mandera, and as one member shares:

“We have learnt how to plan for effective mitigation measures and we now appreciate that when the little community-owned resources are pooled together, the community can successfully address problems affecting them.”

What have we learnt in Mandera?

A recent evaluation of the project showed that awareness of livestock insurance has increased from 51% to 80% though only 24% of farmers are actually taking out a policy. The evaluation found that this was mainly due to people feeling they did not have sufficient information, did not need livestock insurance, or that it went against their religious or cultural beliefs. However, those who did take out insurance indicated that it had helped them avoid heavy losses during the dry season.

There were some challenges with the insurance service provider, including the failure to pay the insurance agents' commission, affecting their motivation. And during

the last drought, the insurance provider didn't deliver compensation within the agreed time. However, the evaluation showed that, even if this could have been better, it did not significantly contribute to the low uptake of the livestock insurance. Also, during the course of the project, the speed of pay-outs improved, building confidence and acceptance of insurance.

The insurance is provided by a private sector company, with World Vision raising awareness amongst the communities participating in the project. The insurance provider will continue to operate in the area even after World Vision leaves, raising awareness and helping communities in Mandera be more resilient to drought.

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At World Vision, our focus is on helping the most vulnerable children, in the most dangerous places, overcome poverty and injustice. Inspired by our Christian faith, we've worked together with communities, partners, local leaders and governments, for over 70 years, so that children – of all faiths and none – are empowered to experience fullness of life. World Vision UK is a registered charity no. 285908, a company limited by guarantee and registered in England no. 1675552. Registered office as above.

COVER: Naaman, 13, with his mother Pamela in Kenya. All photos: © 2019/2020 World Vision