



# Strengthening resilience to climate change in Malawi

**An evidence-based participatory approach  
to community-led adaptation**



## Abstract

In 2014, Plan International started to implement a seemingly »normal« development project in the community of Kakungu, Central Malawi. The main objective: Strengthening the resilience of the people of Kakungu to climate change effects and ensuring sustainable livelihoods. But the project followed a very unusual approach, for only the first Phase was planned. The project activities implemented during Phase 1 were evaluated on the basis of a counterfactual design, which should serve as a basis for Phase 2. In the remaining project period, the best practices from Phase 1 will be shared and transferred to other communities. It has turned out that there is not always a need for expensive technology or infrastructure. More often than not, a simple approach de-

veloped together with the community may suffice and may have a big impact. The following report describes how the experience gained from Phase 1 is being used in order to develop the following phase using participatory methods. Thanks to this project—funded by a private donor family—the community of Kakungu has become a role model, sharing their achievements with other communities now. For Plan International, this model project is another step towards evidence-based staged programming—which should be the rule, not the exception.

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With a new approach, Plan International strengthens the community of Kakungu to address climate change.  
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How a project on climate change prevention contributed to a much stronger, climate-conscious community and how it showcased what it means to be serious about evidence-based programming.

It all started with what seemed like an ordinary Plan International project. Called “Strengthening Kakungu community resilience to climate change through development of sustainable livelihoods”, it was to be implemented by Plan International Malawi in Kakungu, close to Lilongwe. The Kakungu community consists of 448 households spread across 16 villages. In the dry season, Kakungu’s predominant colors are brown and faded yellow with sprinkles of ocher green. Trees are scarce here, especially the high-grown ones with broad majestic treetops, which would offer shelter in the midst of the glaring sun. Most families live from farming and growing maize and tobacco. Due to heavy rains and extreme droughts taking turns in Kakungu, plants suffer, leaving little for the families to harvest.

Plan International wanted to foster sustainable livelihoods with the project; for the project team, this meant improved food and nutrition security among poor households. This was going to be achieved via optimized agricultural practices, better seeds, and improved nutrition practices so that acute malnutrition could be prevented. The activities were supposed to achieve the ultimate aim of reducing the impact climate change shocks like drought, heavy rain and flooding has on children, youth, women and men, as these conditions would destroy their harvest.



## A NEW APPROACH

The first project phase lasted five years, from early 2014 to April 2019, and was entirely devoted to the implementation of the planned activities. As standard as this concept was, the second phase proved to be quite unusual. Instead of having it all planned out—something most of the donors understandably expect from us—Plan International Malawi and Plan International Germany had only laid out the first phase and left the paragraph for the second phase almost blank. As a placeholder, they merely wrote “sharing and distribution of best practices identified during the first project phase”, meaning that if any of the activities from phase one turned out to have worked for Kakungu, Plan International wanted to inform other communities, NGOs and the government so that they could also benefit from that knowledge.

This was risky as it not only meant difficulty in estimating a budget for the second phase, it also made the project team highly reliant on a high-quality mid-term evaluation to inform them which of the project activities actually worked and which did not.

Fortunately, Plan International found a qualified consultancy firm, the Malawi-based Point Media Limited, to carry out the mid-term evaluation between May and June

2019. They proactively suggested conducting a counterfactual evaluation with a quasi-experimental design. The evaluation collected data for all project indicators and compared them with the baseline values to present a before-and-after picture of Kakungu. In addition, a community located outside the project area was surveyed as a comparison group so that the evaluation drew a with-Plan/without-Plan comparison (or a counterfactual comparison) as well.

In order to ensure reliable data, Point Media surveyed a representative sample of households in Kakungu (202 households) and 206 households from the comparison community. This comparison community should ideally have been similar to Kakungu, but without a development project. The community with socioeconomic, soil and weather patterns closest to those in Kakungu was, however, already benefiting from a government-supported project called “Sustainable Agriculture Productivity Program” (SAPP). Through this program, livestock and cash have been distributed, and improved crop varieties and irrigation supported. As can be seen in the results, the “contaminated” comparison community eventually turned out to be a well-suited yet ambitious benchmark.



## FINDINGS AND BEST PRACTICES



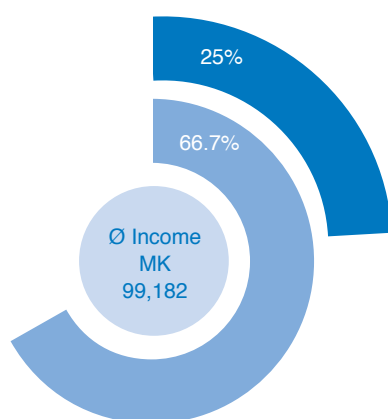
Kitchen gardens improved food security within the community of Kakungu. © Plan International

The data shows that households in Kakungu eat more, earn more and spend more than their counterparts in the neighboring community. Income levels are generally higher in Kakungu than in the comparison community, with Kakungu averaging at MK 99,182 compared to MK 85,220 in the comparison community. About 40% of households have food security in both Kakungu and the comparison community during harvest season, though Kakungu scores significantly higher during lean season, with 25% of the population having food security compared to 6.67% in the comparison community. Thus, we seemed to achieve our objective of building resilience among Kakungu households against heavy weather pat-

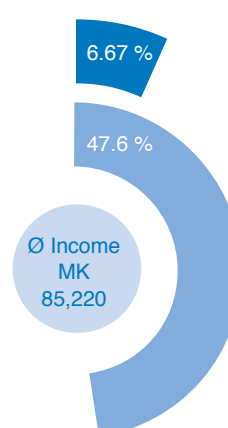
terns. But were the achievements equal between men and women? The findings show remarkable progress among Kakungu female-headed households compared with male-headed households, as well as with their counterparts in the comparison community. As an example, 66.7% of female-headed households in Kakungu provide at least three meals a day to their children under five years of age compared to 51.5% of male-headed households and 47.6% of female-headed households in the comparison group. Thus, the mid-term evaluation showed that, regarding most project indicators, Plan International has achieved or is well on its way to achieving the project objective.

### Population with access to food during lean season

Kakungu  
(with Plan International intervention)



Comparison community  
(without Plan International intervention)



■ Population being food secured during lean season

■ Female-headed households providing three meals a day

Additionally the mid-term identified many good practices the project team could build upon in the second phase:

#### **Blended manure making and utilization:**

An estimated 86% of households in Kakungu were using at least one of the improved agricultural practices that the project team showcased, which is about 20 percentage points higher than the baseline's 65%. While practiced by only about 11% of households, qualitative data revealed a profound and growing community appreciation of making manure. Blended manure, in particular, provides farmers with an alternative and cheaper source of fertilizer for increased yields. It should be noted that farmers can produce similarly large yields with this blended manure as with industrial fertilizer. They also prevent inorganic fertilizer, which is damaging the soil, from being spread.

#### **Involvement of community structures:**

The project progress can be highly associated with strengthened community structures, which were introduced by the project. The involvement of the Village Natural Resources Management Committee made it easier for tree planting and management to take its course whilst the presence of lead farmers made it easier for farmers to be guided on improved agricultural and post-harvest technologies. This was reflected in focus group discussions, where the majority of respondents mentioned that community structures that were trained through the project bridged the gap for farmers to access extension services.



Organic fertilizers are less expensive and protect the environment. © Alf Berg/Stiftung Hilfe mit Plan

#### **Village Savings and Loans:**

The active Village Savings and Loans Association (VSLA) membership at midline was found to be 181 people. Although membership was up from 163, the mid-term evaluation found the VSLA to be one intervention that has contributed to heightened income security in Kakungu, hence building resilience among many farming households. This is especially important among women. Indeed, VSLA loans have constantly been on the rise during the project cycle.



A Village Savings and Loans Association contributed to heightened income security in Kakungu. © Alf Berg/Stiftung Hilfe mit Plan



### Farmer Field School

The mid-term evaluation found evidence suggesting that Kakungu farmers' increased adoption of improved agricultural technologies could strongly be associated with the Farmer Field School approach, which has evidently been key in passing on knowledge and skills to and among lead farmers. The lead farmers and the Village Development Committee in particular drew upon and emphasized this association.

At this point, agricultural scientists might be a bit disappointed due to the lack of anything genuinely new. The project team did not come up with a special super-manure that makes plants grow twice as fast or a dose-controlled rainmaker that allows Kakungu to have a fourth and fifth growing season. And it's not as though the people in Kakungu have made it onto the Forbes list. In fact, they still struggle to market their agricultural products to bigger firms. It is not some ingenious gold standard that Plan International has developed to turn back time climate-wise. Instead, the team and the farmers found several practices that can contribute to mitigating the effect. You could imagine it as a puzzle, which the project team calls community-led agriculture: the best practices above are each individual pieces of this puzzle that only form a full picture when combined with each other.

#### Community-led climate change adaptation:

The agriculture, nutrition and income interventions all complement each other, hence closing potential gaps that could be created if a single intervention were implemented. For instance, as mentioned above, the livestock pass-on scheme complements the adoption



New agricultural practices help to increase yields.  
© Alf Berg/Stiftung Hilfe mit Plan

of blended manure while backyard gardens contributed to increased income, food and nutritional security. The project's comprehensive package fosters climate-smart agriculture and thus stood out.

## PARTICIPATORY PROGRAM PLANNING

To discuss the results of the mid-term evaluation, to share these results with other stakeholders and to plan the second phase (remember: up to that point it was blank), Plan International organized a review and planning workshop in Lilongwe. It took place only two weeks after the final evaluation report was delivered. The project team in Malawi invited a project coordinator and climate specialist from Plan International Zambia, an M&E specialist from Plan International Germany, the evaluation team, the private donor family and their consultant.

It was a good opportunity for the participants to also travel to and speak with the community, as well as witness any visible progress with their own eyes. This seemed important to the workshop participants as they only knew what worked according to data. But shouldn't the community also be asked for their qualified opinion of what worked for them? To prepare for the talk, the project team asked the community to answer the following questions: What went especially well? Who would you like to show this to? How do you want to continue? How would you keep yourself informed?

The community let us visit several community groups and demonstrated what they had learned from the project and how they further developed the practices with their knowledge and ideas. We visited a farmers group, a group of kitchen gardeners, a mother who owns livestock, the irrigation system, a youth farmer and a group of community nutritional technologists who showed us how to make soy milk, juices and nutritious porridge.

Talking with the community mostly confirmed the findings of the mid-term evaluation. But it also provided much more depth and reasoning as to why the practices were successful. And it complemented some more specific best practices. For instance, one woman showed Plan International a bowl with porridge that contained all five food groups: dairy, fat, protein (in this case fish), starchy food and fruits & vegetables (in this case leafy greens). Thanks to the project and her hard work, she now grows most of these things in her kitchen garden or gets them from her livestock. It might sound uncommon as a porridge recipe, but she emphasized the fact that babies in Kakungu love it. And that is all that counts in a community formerly affected by acute malnutrition of children under the age of five.



A woman presents a healthy meal. © Plan International

## SHARING



Lead farmers share their knowledge. © Alf Berg/Stiftung Hilfe mit Plan

Plan International knew now which practices should be spread in the second phase. Thanks to the farmers, Plan International also knew with whom they wanted to share it: other farmers in neighboring villages. This will be done with a participatory approach, whereby community members from Kakungu will be directly involved

and can talk about the change they experienced. The Kakungu community will act as a role model for other communities living under similar conditions. With a peer-to-peer approach, fellow farmers from neighboring communities will be trained to also adapt methodologies tested in Kakungu.



Farmers from Kakungu will also be directly involved in the production of radio programs, which will be broadcast regionally or nationwide, depending on the radio station. In Kakungu itself, »radio listener clubs« will be created where meetings will be held to listen to and discuss the programs together. This is also a means of ensuring the project successes from Kakungu in the long term, as there will continue to be regular contact with the topics and successful farmers from their own communities will be empowered as role models.

Through a »lead committee«, community members from Kakungu will support the establishment of new farmer field schools and organize open days in neighboring communities, where new methods will be demonstrated to a broad audience. Neighboring communities will also make educational visits to Kakungu to see the practical application of these methods and learn from their experiences.

To work out how Plan International wants to share the best practices with other parts of the country, the participants of the review and planning workshop split into groups and worked out a plan for sharing with other NGOs in Malawi, across the Plan International network and with Malawian government officials. Representa-



Farmers compare fields in which they used organic manure to fields in which they used chemical fertilizers.

© Plan International

tives of government agencies and local or international NGOs will also visit Kakungu to see the achievements in practice. In two workshops soon to be held, the project team will work intensively with staff from the government and NGOs on the project approaches and successes, and will thus be able to share their experiences. The project team will also be represented at relevant forums and events in the field of climate change adaptation.

## LESSONS LEARNED



The desperate need for firewood complicated the growth of shade-giving trees. © Alf Berg/Stiftung Hilfe mit Plan

The aim of the mid-term evaluation and the review and planning workshop was not only to find best practices, but also to learn lessons and receive recommendations on how Plan International can improve. One lesson learned was that fewer high-growing trees with majestic crowns were planted than the team had planned, and in some cases, these trees did not survive. It turned out that people planted these trees on private property, and the community woodlot originally designated for big trees was only scarcely vegetated—and with a fast-growing type of tree resembling a bush at that. The reason was the desperate need for firewood used for cooking, and thus the lack of patience to wait for a tree to be full-grown. In the review and planning workshop, the team decided to adjust tree-planting activities to also use long-lasting indigenous trees and fruit trees, fruits being an incentive for people to wait for the tree to be fully grown. The team is optimistic that this will help to grow more slowly growing trees and that someday, Kakungu will have more shaded areas.

As with the best practices that mesh well together like a puzzle, the project team wanted to make sure our measures for improvement interlock just as nicely in order to be effective. Thus, the choice for fruit-growing trees was complemented by another attempt at building energy-saving stoves that require a lot less firewood than conventional fireplaces. The project coordinator and climate specialist from Plan International Zambia, who was also present at the review and planning workshop, offered advice and best practices from a similar project in Zambia. She shared a clay recipe for building more

heat-resistant and at the same time heat-insulating ovens, which the team could share with the community to improve this component of the Kakungu project.

In addition, the irrigation system will be expanded in order to reach the entire target group planned for this purpose. The future functionality of the pass-on scheme for livestock and seeds is to be strengthened by supporting the community members in further planning. In addition, the savings groups will be informed about the possibilities and ways to establish cooperatives.

## EVIDENTLY MAKING IMPROVEMENTS



The project makes visible improvements for the people of Kakungu, especially for children, youth, women and the elderly.  
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And finally, the project team filled the blank paragraph of the second phase—with evidence.

The overall conclusion of the mid-term evaluation was that the project is evidently making improvements in income, food and nutrition security, including for groups such as children under five years of age, youth, women and the elderly. Project interventions in Kakungu have the potential for self-sustenance beyond the project period.

Self-sustenance is what we all strive for in development cooperation, but it is often not achieved. The following example, which we see as an unintended effect of the project, shows that chances are high for the community to have achieved it here in Kakungu once Plan International is phased out. Unintended effects aren't seen favorably since they are often negative. In the case of Kakungu, however, it was positive and showed what happens when a community tackles the major problems of climate change by coming together. The now



well-embedded community structures began addressing the next pressing issue, empowered by everything they already achieved: they managed to convince the government to build an early childhood development centre for the Kakungu community.

The project team is currently busy implementing all of the activities of the second phase together with the Kakungu community and neighboring villages. And to conclude, the team can highly recommend using the first phase of a project to gather best practices and use the second phase to implement them together with the most-experienced experts: the target group.

Some project managers and proposal writers might wonder by now which of the German donors would possibly allow such a project proposal with loose to no planning for the second phase? Curiously, the idea actually came from a donor—a private family—to whom Plan International and the project team are deeply thankful for having given them this opportunity and trust.

While Plan International cannot yet apply the same planning pattern with German government-funded projects, it will present this project to other private donors as a blueprint and continue lobbying for such a staged project-planning approach with public donors to make evidence-based staged programming the rule, not the exception.



Empowerment through farmer trainings.  
© Alf Berg/Stiftung Hilfe mit Plan

»We cannot remember when we were last in the clinic with our kids. It's history to us as we always eat nutritious food now. We are really grateful for the interventions brought by Plan International to us. We managed to produce 60 bags of maize last season even though the climate was not conducive for agriculture.«

Mr. & Mrs. Kachingwe, Farmers from Kakungu