



COMMUNITY
FORESTS
INTERNATIONAL

10 School Lane, Sackville, NB E4L 3J9 www.forestsinternational.org info@forestsinternational.org

January 25th, 2017

Nairobi Work Program

LESSONS LEARNED AND GOOD PRACTICES IN MONITORING AND EVALUATING THE
IMPLEMENTATION OF ECOSYSTEM-BASED ADAPTATION.

PREPARED BY:

Community Forests Pemba (CFP) and Community Forests International (Forests intl.)

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	3
2. DESCRIPTION OF RELEVANT ACTIVITIES AND COLLABORATING PARTNER INSTITUTIONS:	3
3. COMMUNITY FORESTS PEMBA'S MONITORING AND EVALUATION PROCESS	4
4. MOBILE DATABASE MANAGEMENT SOFTWARE	5
Fig. 1 – FieldView Output List	5
5. MONITORING PROJECT OBJECTIVES	6
6. MONITORING AND EVALUATION OF OVERALL OBJECTIVES	6
Fig. 2 – FieldView Sample Survey	7
7. MONITORING AND EVALUATION OF SPECIFIC OBJECTIVES	8
Fig. 3 – FieldView Data Drop-Down	9
8. DESCRIPTION OF LESSONS LEARNED AND GOOD PRACTICES	10
9. DESCRIPTION OF KEY CHALLENGES	10
10. PLANNED NEXT STEPS	10

1. Executive Summary

In 2015 Community Forests Pemba (CFP) was awarded a 5 year project from the European Union's Global Climate Change Alliance (GCCA) to strengthen the climate change resilience of 18 target communities on Pemba Island, Tanzania. This project would see over 11,000 direct beneficiaries receiving training and demonstration in 12 adaptive livelihood activities over the 60-month duration of the project.

As this was a significant increase in the scope of CFP's work to date, management set about developing a new way to streamline collection and processing of comprehensive data on outcomes from those 18 communities.

The end result was a custom built, mobile tablet-based database management program called *FieldVIEW*. This program allows Project Staff to travel to the field with a tablet and input all data necessary to tracking both Overall and Specific Objectives for the project in real-time. This information is synched to a single centrally controlled and managed database at CFP headquarters, allowing for CFP's Data Officer to, at any time, view and assess project deliverables and outcomes.

Combined with a comprehensive survey questionnaire delivered before, during and at the end of project activities in each of the communities in which CFP operates, Project Staff and CFP management are better positioned than ever to determine if the climate change resilience of each target community is indeed being strengthened. Additionally, because this database management software is capable of easily compiling and presenting project results at any time, CFP staff are able to determine how and if socio-economic indicators of resilience are improving. This lets CFP staff, if need be, calibrate project activities throughout the project to ensure that Overall Objectives are being met, as outlined in the project's Logical Framework.

While CFP staff and management continue to refine the user interface of software and the delivery of surveys, the *FieldVIEW* database management program coupled to a mobile tablet device has become an invaluable way that CFP delivers and evaluates programming.

2. Description of Relevant Activities and Collaborating Partner Institutions:

Community Forests Pemba (CFP) was founded in 2008 to support community-led development on the island of Pemba, Tanzania by supporting grassroots tree-planting and climate change adaptation actions. CFP's formal mission is "[t]o foster environmental stewardship in Pemba by establishing community forests, promoting sustainable forestry

techniques, and initiating environmental education.” To achieve this mission, CFP addresses many other crosscutting issues including water, food, and energy security.

In 2015 CFP secured funding from the European Union’s Global Climate Change Alliance (GCCA) to strengthen the climate change resilience of 18 target communities on Pemba Island. To achieve this, 12 different climate change adaptation interventions are being piloted throughout the 18 target villages while providing adaptive livelihood training to villagers, strengthening natural resource planning capacity within villages and working with local, regional and national government agencies to strengthen technical and management capacity to improve climate change resilience.

Expected results and outcomes from this *Scalable Resilience* include, among other things, over half a million trees planted on degraded and underutilised land, the transfer of 200 ha of land into community ownership, and training over 11,000 individuals in adaptive livelihood activities, more than 50% of whom will be women.

Given the scope of expected results, CFP staff began building a Monitoring and Evaluation system that could not only track and evaluate Specific Objectives as measured by activity outcomes, but also would allow project staff to determine if the Overall Objective of strengthening the adaptive capacity of at-risk target communities throughout Pemba Island was being achieved.

3. Community Forests Pemba’s Monitoring and Evaluation Process

First and foremost, responsibility for Monitoring and Evaluation falls on CFP’s Data Officer. This officer is responsible for development of project M & E plans, data collection, data cleaning and providing evidenced-based results to project actions. Data is collected by all field team members using computer tablets. Every two weeks data from the tablets is synced digitally with a master copy that is backed up routinely to the internet. When syncing is complete, the updated system is deployed back onto the tablets for continuous monitoring.

Bi-monthly the data is used to develop both internal and external monitoring reports for review by Project Staff and external stakeholders.

CFP’s M&E process tracks:

- Inputs from CFP, including field visits, trainings and material support

- Outputs produced by community members, such as agroforestry cash crops and perennials and honey produced by beekeeping cooperatives
- Outcomes that result from the outputs, such as change in annual income, and change in the vegetable and fruit consumption

4. Mobile Database Management Software

Integral to the Monitoring and Evaluation process is the use of tablet-based database management software custom developed using the Filemaker software suite. Filemaker was selected for its compatibility with both PCs and tablets (iPads) and its ability to rapidly develop both front and backend systems. The custom database, known as Field Visit Information for Evaluating Work, or *FieldVIEW*, was developed by CFP’s Data Officer. The *FieldVIEW* database allows for the collection of data in the field as Project Staff implement project activities. Collection of data for the purposes of monitoring and evaluating progress towards both Overall and Specific Objectives has become a standard part of the workflow of CFP’s Project Staff.

Fig. 1 – FieldView Output List

The screenshot shows the FieldVIEW mobile application interface. At the top, there is a navigation bar with tabs for Home, Outputs (selected), Field Visits, Trainings, Surveys, Communities, Equipment, and Tables. Below the navigation bar, there is a search bar with a magnifying glass icon and a 'Reset' button. The main content area displays a list of outputs with columns for Date, Location, Activity, and Community. The list includes 14 entries, such as '16 Mar 2016 Kambini Group' with activity '05 - Fuel Efficient Cook Stoves' and community 'Kambini'. At the bottom, it shows 'Showing 571 / 571'.

Date	Location	Activity	Community
16 Mar 2016	Kambini Group	05 - Fuel Efficient Cook Stoves	Kambini
12 Sep 2014	Kambini Nursery	02A - Tree Nurseries	Kambini
14 Aug 2016	Kambini Nursery 1	02A - Tree Nurseries	Kambini
21 Aug 2016	Kambini Nursery 2	02A - Tree Nurseries	Kambini
05 Oct 2015	Kangagani nursery	02A - Tree Nurseries	Kangagani
29 Jul 2016	Khamis Bakar Hassan	01 - Agroforestry	Kambini
28 Jul 2016	Kibubunzi Catchment	10 - Community-Based Catchment	Kibubunzi
14 Nov 2016	Kidodi Nursery	02A - Tree Nurseries	Wingwi Kidodi
17 Feb 2016	Kisiwa Panza ICSEB	06 - Interlocking Compressed	Kisiwa Panza
11 Sep 2016	Kisiwa Panza Tree Nursery	02A - Tree Nurseries	Kisiwa Panza
03 Mar 2015	Kitchen garden Aisha Abdalla Ali	07 - Multi-Strata Kitchen Gardens	Hindi
17 Apr 2016	Kitchen Garden Ali Mohd Ali	07 - Multi-Strata Kitchen Gardens	Ndagoni
17 May 2016	Kitchen Garden Amina Ali Mbarouk	07 - Multi-Strata Kitchen Gardens	Ndagoni

FieldVIEW Outputs list for a variety of activities, including fuel efficient cook stoves, tree nurseries, agroforestry, and kitchen gardens

Data collected via *FieldVIEW* can be exported into a format (CSV file) that is compatible with most statistical software, allowing CFP's Data Officer to, throughout the project duration, easily evaluate the achievement of objectives, and adjust activities as needed.

Every two weeks Project Staff upload their data onto CFP's network. Each staff member has a location for uploading their data, which ensures that no data is overwritten and that there are no conflicting copies. Core to *FieldVIEW*'s functionality is the generation of reports on recorded data at any time, facilitating statistical evaluation of project results to allow CFP management to gauge their progress towards achieving project goals.

Given the volume of project activities, using mobile tablet devices coupled with a user-friendly database system like *FieldVIEW* has drastically improved CFP's ability to track and manage project activities and objectives while at the same time facilitating evaluation of results throughout the project.

5. Monitoring Project Objectives

Community Forests Pemba's Monitoring and Evaluation process was developed as an integral part of their larger program development and implementation process. As such it is designed to allow for the monitoring and evaluation, throughout the entire project duration, of both Overall Objectives and Specific Objectives.

Additionally, as new projects are tackled by CFP, *FieldVIEW* can quickly and easily be updated to track any new parameters as identified in project logical frameworks.

A description of the Monitoring and Evaluation process for the achievement of both Overall Objective and Specific Objectives follows below.

6. Monitoring and Evaluation of Overall Objectives

The Overall Objectives of CFP's GCCA2 project *Scalable Resilience: Outspreading Islands of Adaptation* are to: i) augment the adaptive capacity of at-risk target communities throughout Pemba Island; ii) support and incentivise adaptive livelihood activities; iii) promote gender equality; iv) improve food, water, land, energy and economic security; and v) pioneer scalable solutions to climate change vulnerability.

Monitoring and evaluating the achievement of Overall Objectives is more difficult than tracking specific project outputs. Determining if Overall Objectives have been achieved requires the direct qualification and/or quantification of approximations to the adaptive

capacity of at-risk communities, gender equality, food, water, land, energy and economic security and climate change vulnerability.

To this end, CFP staff designed a series of socio-economic surveys to be delivered to random community members to provide insight into conditions within target communities. As the Overall Objectives of the project were to improve conditions within entire communities and not just in the lives of direct beneficiaries, CFP staff felt that it was important to gauge the socio-economic circumstances within the larger target communities and how that changed following project interventions.

Surveys are in the form of questionnaires incorporated directly into *FieldVIEW* that were designed by both Project Staff and the Monitoring and Evaluation Officer. Surveys were developed specific for each activity and intended to ascertain socio-economic conditions within specific communities at the time at which surveys are taken. Questions relating to livelihood diversity, types of cooking fuel used and access to vegetables are just a few examples of the kind of questions asked during baseline surveys. Leading questions were avoided and where possible quantified responses were preferable to qualified responses.

Fig. 2 – FieldView Sample Survey

Sample of agroforestry survey questions from FieldVIEW

It was decided that there would be three times during which surveys would be delivered: a 'baseline' survey delivered before any project activities were undertaken within a particular

community; a 'monitoring' survey to be delivered mid-way through the project duration; and a final 'evaluation' survey at the end of the project term.

'Baseline' surveys delivered before project activities take place allow for CFP Project Management to determine baseline conditions against which later survey responses could be compared. This provides a baseline of conditions against which project staff can gauge the efficacy of project activities at achieving Overall Objectives.

Mid-term 'monitoring' surveys were designed as a check-in mid-way through the project duration. By delivering these follow-up surveys after some project activities have been delivered in some communities, CFP staff can determine if the project activities are leading to the desired outcomes. If, it is found that project activities are not achieving the desired outcomes (as listed in Overall Objectives), CFP management and Project Staff can alter project activities to better achieve Overall Objectives. In this way, monitoring surveys administered mid-stream are a particularly important part of CFP's monitoring and evaluation process.

'Evaluation' surveys delivered at the end of the project term provide the final evaluation of the efficacy of project activities achieving Overall Objectives. From these final survey responses CFP is able to determine whether or not the spirit of the project has been accomplished and Overall Objectives achieved.

In so much as was possible, all three surveys were designed identical, and room was made within the *FieldVIEW* program to allow for comments from survey respondents.

7. Monitoring and Evaluation of Specific Objectives

Specific Objectives of the *Scalable Resilience* project are to: i) innovate and demonstrate a comprehensive array of adaptive, appropriate technologies; ii) build capacity for community-led climate change adaptation action and innovation; iii) directly engage all levels of society including government in project activities; and iv) disseminate saleable solutions to climate change vulnerability regionally, nationally and internationally.

Specific Objectives less difficult to verify than Overall Objectives. As outlined in CFP's Logical Framework for the *Scalable Resilience* project, each Specific Objective is linked directly to specific deliverables. Each of these deliverables can be quantifiably verified at the time CFP Project Staff deliver project activities.

Similar to those community-targeted surveys used for monitoring and evaluation of Overall Objectives. CFP's Project Staff and Monitoring and Evaluation Officer developed these trainee-oriented surveys. These surveys were paired as separate baseline and follow-up surveys, allow Project Staff to gauge conditions before and after delivering any activities or interventions.

New trainees are registered within *FieldVIEW*. The registration process includes administering a baseline survey for the respective activity that the trainee will be implementing. At the halfway point, two years into the project, these trainees will again participate in surveys that ask nearly identical questions. Comparing the monitoring survey with the baseline survey will provide insight into the progress of the project and inform any necessary changes. At the end of the project the same trainees will be provided with an evaluation survey to gauge the final successes of the project.

In addition to surveys, *FieldVIEW* tracks trainings, field visits, and equipment distributed with date and time signatures. Each training includes the number of trainees who attended, training location and training topic. Following trainings, CFP also tracks the outputs produced by a trainee or a group of trainees. All records are stratified by recording staff, specific intervention, date and target community. Records can also be linked to specific community members, allowing for tracking of interactions with specific individuals through time to better understand how individual community members engage (or not) with a variety of CFP-delivered interventions through time.

Fig. 3 – FieldView Data Drop-Down

Showing 98 / 164

Editing Kitchen Garden data for the Mchoo (Nov-Dec) season of 2015.

For example, if CFP supports a kitchen garden trainee. *FieldVIEW* tracks the how CFP engages her through trainings, field visits and material support. It tracks how she used CFP support to develop a kitchen garden. It tracks the vegetables grown in the garden seasonally, and it tracks how her life improved (or not) through socio-economic surveys.

As with community surveys, room was made within the *FieldVIEW* platform for recording comments and qualified responses from project beneficiaries.

8. Description of Lessons Learned and Good Practices

The implementation of the *FieldVIEW* database management system coupled to mobile tablet devices has significantly improved CFPs Monitoring and Evaluation Process.

Before, it was difficult for CFP staff to collect information on project activities in a consistent and traceable way. Hard copies of data sheets collected in the field often encountered obstacles before being entered into any computer database. Once there, there were often incomplete or conflicting copies of field records.

Now, by making use of a single, standardised method for collecting data from in the field that is consistent across all staff data is able to be recorded and centralised through electronic uploads. CFP's Data Officer is able to oversee that process to ensure that once those uploads are made all information is ready to be combined with the rest of the database, allowing for easier and more effective comparison of field data.

9. Description of Key Challenges

One of the challenges CFP management and staff have encountered is related to training staff on the *FieldVIEW* platform. Because the program can be less than intuitive to use, training and troubleshooting was required to help get CFP Project Staff confident in its use.

Additionally, building *FieldVIEW* and its use into the daily workflow was and continues to be a challenge. This is especially true where Program Staff are not familiar with the use of tablet devices. This has consistently slowed the process of data entry for these staff members.

10. Planned Next Steps

As the *FieldVIEW* interface that Project Staff work with was constructed in house, the CFP management are constantly working to improve the navigation and registration of new participants aspects of the program. Making this system as user friendly as possible is imperative for the sustained use and success of the *FieldVIEW* platform. CFP will continue to

improve and refine the user experience, thus ensuring ongoing uptake of this now integral part of CFP's Monitoring and Evaluation Process.