



Evaluation of a community managed forest project:

Humbo, Ethiopia

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In my father's time, there was a huge forest including fruit trees. We used to go to the mountain to collect fruit to eat and to sell. We also used to go and hunt wildlife and this was a benefit. When the trees were dense, downstream it was like a paradise. But it was lost during the communist regime. It was a crazy history. But because of the project – these things are coming back. Not [just] one, [but] many of them have come back and even the fruit trees are coming back. Now the forest is protected, the lost life is coming back and we are expecting things to go well....

Community Elder, Humbo Community Managed Natural Regeneration project, Ethiopia, March 2010

Reviewers: Irene Guijt
Rema Saraswathy

Introduction

This paper reports on the experience of leading an evaluation of the Humbo Community Managed Natural Regeneration (CMNR) project, implemented by World Vision Ethiopia. It is the first successful carbon project in Ethiopia and the first forestry Clean Development Mechanism (CDM) project in Africa. After four years of forest management by the community, the change was impressive; a vibrant green blanket of vegetation on communal lands that had been barren for decades. This was a 'first' in the CDM space in Africa and there was growing excitement among project sponsors about the success and the potential of the model – restoring forest and using carbon income for community development. All eyes were on Humbo; the 'evaluation stakes' were high! It was not without some trepidation that I took on the role of lead evaluator.

Findings were that the forest was being effectively protected and managed by the community and that the increase in vegetation cover was associated with decreased wind and water erosion and a return of wildlife and plant species that had not been seen in the area for decades. Other benefits included the spread of Farmer Managed Natural Regeneration (FMNR) practices from communal forestland to farmers' individual fields, and a growing sense of pride about having achieved such dramatic change in the landscape and the national and international recognition that this brought to their community. Also there was great anticipation of the community development possibilities that would result from the income stream from the sale of carbon credits.

The evaluation identified next steps for the project, which were: to address inequalities in the project benefits, especially for women and other marginalised groups; and to seek expertise to assist with management of wildlife alongside cropped land and village habitations. Furthermore local food and farming systems were not well adapted to increasingly unreliable rainfall in the area. Finally, the Humbo project had drawn a high level of national and international attention, with the increasing number of visitors providing scope to develop local ecotourism.

This paper first describes the context of the project and the evaluation, highlighting the tensions around agreeing on purpose and evaluation goals, and explaining how limitations on fieldwork influenced the evaluation design. Evaluation objectives are described and methods explained along with limitations. The paper also makes a recommendation about what should be undertaken in the final Humbo evaluation, scheduled for 2014.

Many firsts for Humbo

Humbo is not only Ethiopia's first Clean Development Mechanism project, but also Africa's first large-scale afforestation/reforestation project registered under the [United Nation Framework Convention on Climate Change \(UNFCCC\)](#). The project is expected to sequester over 880,000 metric tonnes of CO₂e over 30 years. This project will generate 338,000 tonnes worth of carbon credits (by 2017), of which the World Bank's Bio Carbon Fund will purchase about half. The Humbo project is the first in Africa to generate temporary Certified Emission Reductions (tCERs), the Kyoto-compliant asset from land use activities, setting an example for similar projects to be scaled up across the continent.

Context

The Community Managed Natural Regeneration (CMNR) project is the first successful carbon project in Ethiopia, as well as the first forestry Clean Development Mechanism (CDM) project in Africa (see Box 1). The project is re-establishing biodiverse native forest through protection and management of a 2,728ha area of communal forestland. This project has direct climate change mitigation outcomes, removing Green House Gas (GHG) through carbon sinks generated by increasing forest biomass. The Humbo community manage income generated through sale of Certified Emission Reductions (CERs)¹ for their own poverty reduction initiatives.

The project commenced in 2006 and the evaluation was carried out in 2009. When the evaluation was commissioned, there had been considerable attention and talk of success because the physical increases in vegetation were impressive and it was a 'first' in the CDM space in Africa. There was growing excitement among project sponsors about the potential of the model for restoring forest and using carbon income for community development.

However, at this point there were still important knowledge gaps both for the project locally and for scalability elsewhere. There were potential governance issues pending the start of the carbon income, and heavy carbon compliance monitoring requirements had tended to overshadow

¹ The project will be issued with 73,339 Certified Emission Reduction units (CERs) for the period 2006 - 2011 <<http://cdm.unfccc.int/Projects/DB/JACO1245724331.7/iProcess/RWTUV1326405659.28/view>>. Humbo Assisted Natural Regeneration project design document <<http://cdm.unfccc.int/Projects/DB/JACO1245724331.7/view>>

monitoring of community development outcomes. World Vision, the organisation managing the Humbo project, saw the evaluation of the model as a necessary step before scaling up would be possible, but also as an opportunity to 'showcase' the project and leverage its success to attract new donors.

Ideally, the evaluation would have been outsourced to an independent consultant – but a limited evaluation budget did not accommodate this. Also it was generally agreed that this evaluation represented an important opportunity to build experience and knowledge 'in-house'. Therefore a team of World Vision staff were engaged in the task. I, a World Vision Australia evaluator with a background in agriculture, was appointed to lead the work. Other members of the core evaluation team were technical specialist Paul Woods of World Vision Australia, and technical specialists Assefa Tofu and Hailu Tefera of World Vision Ethiopia.

The implementing office, World Vision Ethiopia, produced the Terms of Reference (TOR) for the evaluation. In World Vision, scoping out an evaluation TOR is an inclusive process, with consultation of stakeholder groups and inclusion of their learning needs and organisational priorities. This is an important step and is vital to foster ownership of the future evaluation findings by all stakeholders. However stakeholders' priorities are often diverse and a large number of questions may be generated. The first TOR for the Humbo evaluation outlined expectations to combine the midterm evaluation of the project with a forest carbon compliance measurement of above and below ground biomass – a highly technical and specialised activity. In addition, there was an expectation to also evaluate an adjoining project, measure all project indicators and report effectiveness, efficiency and impact, with a recommendations focus. In all, the TOR outlined 18 evaluation objectives.

Many evaluations deal with large number of diverse objectives from different stakeholders. Seasoned evaluators understand that trying to respond to all of these is impossible, stretching evaluation resources too thinly and harming final results. They also understand well the practical limitations of evaluation tools and process. Time available for fieldwork is short and much needs to be accomplished: evaluation and data entry tools need to be piloted and refined, community participants engaged in the process, enumerators and data entry staff recruited and trained, stakeholders met and interviewed, group discussions carried out, and a household survey implemented. It is a busy schedule that requires focussed management and tight evaluation boundaries.

Part of the role of lead evaluator is to sift through and prioritise learning needs, and to design an evaluation that responds to these within the set limitations. In the case of Humbo, the carbon measurement and the second project evaluation were excluded, and four key learning themes or objectives were prioritised and outlined in an evaluation plan.

Evaluation objectives

The purpose of the midterm evaluation was to provide specific, actionable and practical recommendations for the next phase of the project and for potential scale up of the approach elsewhere. Objectives were grouped into four programmatic themes and encompassed by the following key evaluation questions (KEQ):

- Programme theory KEQ - Do the underlying theory of change and the assumptions that underpin the project logic appear to be valid and based on outcomes at this stage?
- Participation, equity & governance KEQ - Does the project approach encompass key stakeholder knowledge and participation in project design, implementation and management?
- Partnership outcomes KEQ - What are the partnership outcomes for the community, WVE, WVA and the World Bank?
- Sustainability: What is the likelihood that project social and environmental benefits will continue in the future?

Approach

The evaluation design was guided by World Vision's Design, Monitoring and Evaluation (DME) framework, which endorses a mixed methods approach. Quantitative methods included a questionnaire-based household survey and qualitative methods included key informant interviews and group interviews, site visits and GPS photography. Data were predominantly primary with some secondary data collected from the baseline survey for comparative purposes.

The analytical approach used in this case can be described as a Triangulation Design (Creswell and Plano Clark, 2007). The purpose of this design is to obtain different and complementary data around the same topic. The benefit of this is to bring together the differing strengths and non-overlapping weaknesses of quantitative methods and qualitative methods.

Ideally the qualitative and quantitative data collection would be carried out in stages. For example, an initial qualitative scoping stage to describe the situation and inform household

survey question design, would be followed by collection of quantitative data using the survey tool. The results of quantitative analyses are then followed up with further qualitative inquiry to verify results and seek additional explanation. Also, with the challenges of translation and interpretation, evaluation tools require testing to ensure that questions and design are reliable. However, this is not really feasible within the setting of a project evaluation. The ideal approach was certainly not possible within the time and budget constraints of the Humbo evaluation. So quantitative and qualitative data tools were designed concurrently and data were collected at the same time.

The fieldwork schedule, tools for the household survey and question guides for the qualitative activities were drafted several weeks prior to commencement of fieldwork to ensure a broad range of stakeholders had the opportunity to influence tool development. This was also essential for logistical support to be confirmed well ahead of schedule.

Fieldwork lasted for three weeks. Week one was used for further negotiation on the tools with local staff and an inception meeting where community stakeholders and government partners appraised the evaluation questions and added their own ideas. In Week two, the household survey was piloted and refined, enumerators were trained and they commenced the data collection. During this week, the core evaluation team carried out interviews and group discussion and site visits. In Week three, preliminary data analysis was carried out and results presented back to community and government partners and recommendations were captured. The preliminary findings were then presented to a number of senior staff in the National Office and final recommendations were discussed.

The lead evaluator undertook responsibility for data analyses and putting together the draft report. However, other work commitments meant only a day or so per week could be allocated to the task – and so the process dragged out over months. Analysis included comparing characteristics and outcomes for project and non-project groups, and gender and age disaggregated groups, using both quantitative and qualitative data sets. Throughout this time, World Vision stakeholders were eager to know the results of the Humbo evaluation and it was a frustratingly slow process for them. The first complete draft of the report was not ready until six months after fieldwork took place. The draft document was circulated to the core evaluation team for their edits and assistance in clarifying the findings and recommendations. The final report was released in September 2010 (Kaboré, Woods, Tofu and Tefera 2010).

Methods

Household survey

A draft of the household survey was prepared by the author and circulated to colleagues in World Vision Australia and World Vision Ethiopia several weeks prior to fieldwork. It contained about 40 questions on household demographics, farmer education and training, crop and livestock resources, inputs and outputs assets, tree ownership and management, group membership and knowledge of FMNR techniques.

The plan was to use multistage cluster sampling methodology to select households within the project area. However, local project stakeholders felt that sampling needed to be purposive and target project beneficiary households. A purposive approach is sometimes appropriate, but in this case it would have been methodologically limiting, because we wanted to explore the degree of dissemination or 'spill-over' of promoted practices from direct beneficiaries to the broader community. It was agreed that sampling would be done within the project area in both direct and indirect beneficiary households, and in a community with similar characteristics from outside the project area.

A second issue was the selection of questions in the survey tool, with broad focus on household characteristics rather than just project indicators. The number and the nature of questions on a household survey is difficult to balance and there are always trade-offs. The interviews should be able to be completed – in the author's view – in an hour or less, and this means a strict limit on numbers and types of questions. The temptation is to prioritise measuring project indicators at the expense of collecting information on household characteristics. However, it then becomes difficult to test whether results that appear in the data are due to the project intervention or due to household or respondent characteristics. In this case, a compromise was reached where both context and project indicators questions were included. The final household survey included 70 questions and yielded a rich data set. However, the time and resources for enumeration, data entry, analysis and reporting of this large data set were considerably increased.

Sample size and method

The selection of sampling technique depends on a number of factors including available resources, the nature of the research question, availability of good sampling frames and the desired level of accuracy (de Vaus 1995). In this case, the main drivers of sample size and method were time,

budget and local resources. Multistage cluster sampling was used, and sample size of 380 households was calculated using 95% CI and 5% error. Normally, for multistage cluster sampling a design effect of 2 would be applied and the minimum sample therefore would be 760 households. However, this was not possible within the constraints of the evaluation resources. The sample of 380 households was divided into 30 clusters, and villages were selected by systematic sampling from a complete list of all villages in the project area. Individual households were then selected using systematic selection from a complete list of households in each village. An additional 50 households were surveyed from the area adjacent to the project area and they were selected in the same manner.

Data collection and management

The first quantitative data were collected using a paper-based household survey questionnaire administered in Amharic by pairs of enumerators, with one asking questions and one recording responses. The enumerators were local to the area and had some formal education but most had no experience with survey enumeration. Novice enumerators were paired up with experienced ones and everyone was supervised by WV staff. The enumerators and supervisors piloted the survey template and a feedback session allowed us to adjust and further clarify questions.

Experienced personnel at the location of data collection are the best people to undertake data entry for a survey of this scale. In the Humbo evaluation, two data entry clerks were available but the rate of data entry proved to be too slow. A team of postgraduate researchers in Addis Ababa subsequently entered the data.

Raw survey data were entered into spreadsheets with variables in columns and cases in rows. Data were cleaned and analysed in Excel and SPSS for descriptive and correlation analysis. For numerical variables, two sample t-tests were used to determine significant differences in means and Pearson's *r* for correlations.

Qualitative data

The bulk of the qualitative data was collected using observations, key informant interviews and translated group interviews. Questions and protocols were drafted by the evaluation leaders and then refined for each stakeholder group by the evaluation team during the tools development phase.

Group interviews

Typically in evaluations of development projects, Focus Group Discussions (FGD) are used to elicit topical information from different segments of the community. However, what happens in practice may not constitute a FGD. There is often little control over who attends and who does not attend. Sampling is opportunistic, even if parameters are given – the community self-selects and the numbers and people who attend can vary widely from one location to the next. It is difficult to find local residents with high level interpretation, translation and facilitation skills, who can also reliably record verbatim comments. Even where this is possible, local cultural norms mean that participants may expound their views in long narratives about the project, irrespective of what the 'focus' of discussion is. One or two extrovert individuals may dominate feedback.

These limitations were certainly apparent in the case of the Humbo evaluation. So, rather than claim the use of FGDs, we settled for the term 'translated group interviews'. Essentially the WVE technical specialists, (who were fluent in English, Amharic and Wolaita) led discussions with the groups, translating questions into the local language and responses into English. Notes were recorded in English and later typed up and coded in NVivo.

Group interviews were undertaken with leaders and regular members of Forest Development and Protection Co-operatives and with other community members who were not part of a Forest Development and Protection Co-operative. Separate group interviews were held with women and men. Separate group interviews were also completed with traditional community leaders (men and women elders), plus *Kebele*² Cabinet members, teachers and high school children and government staff from the Woreda Administration.

Key informant interviews

Key informant interviews were carried out using question guides tailored to different respondents: residents from the Humbo community, and staff members from World Vision Australia, World Vision Ethiopia, the World Bank and the Ethiopian government. The interviews were conducted face-to-face or over the phone, in the local language and in English. Responses were recorded by hand, and later typed and coded in NVivo.

Qualitative analysis

NVivo software was used to code text from notes recorded during the key informant interview,

² A Kebele is the smallest administrative unit of Ethiopia similar to a ward or a neighbourhood.

group interviews, as well as the evaluation inception and exit workshops. The coding framework aligned to the key evaluation themes of programme theory, partnership, participation and sustainability. Approximately 30 emergent themes were also identified and coded.

Reporting

The final report was over 100 pages and included detailed description of household characteristics, analysis on each of the four key evaluation questions and an appraisal of the success of the intervention against the backdrop of the local farming system, the key determinant of household food security. Results from the household survey, from interviews and observations demonstrated a rich picture of change and highlighted the achievements of the Humbo communities.

The results of the mid-term evaluation report informed the next phase of the Humbo project and scaling up of the approach elsewhere within Ethiopia. For example, at the time of the evaluation it was agreed that addressing gender issues was to be given high priority in the next phase. It was also recognised that observations about physical changes to land, improved biodiversity and water supply needed to be quantified. World Vision and an external consultant are developing simple field tools for community monitoring of such physical changes.

As the project had such a high profile and the evaluation report was so long, we needed to produce a report summary for broader circulation. The full evaluation report was summarised into a 10 page 'corporate glossy' brochure presented in five short sections with selected results shown in attractive graphics, along with and photographs and quotes. The brochure has been widely circulated and used by World Vision to inform audiences interested in corporate social responsibility, leveraging carbon funds for community development and those seeking evidence of benefits arising from the promotion of farmer-managed natural regeneration.

Some stakeholders contested the content of the final report on the mid-term evaluation for Humbo because it included detailed descriptions of the local social and farming systems. They would have preferred to leave this lengthy and fairly technical part of the analysis out of the report. However, the lead author saw this information as relevant because – notwithstanding the success of the project in restoring forest cover and generating carbon income – only viable local farming systems can form the foundation for success for these rural communities. The communities of Humbo remain highly vulnerable to food shortage. Fundamental issues within the farming system needed to be

described, alongside the success of the carbon project.

Next steps

The Humbo CMNR project is due for evaluation in 2014. To do justice to this innovative project and story of transformational change, will require considerable commitment and investment by project stakeholders. There are information gaps that will need to be filled in addition to measuring effectiveness in terms of programme theory, participation, partnerships and sustainability - as was done in the mid term review. These gaps include - local governance and sustainability of carbon income and associated monitoring requirements, gender outcomes, child wellbeing in terms of improved child nutrition and value for money (cost benefit analysis). Also, forest, soil and water quality and biodiversity need to be measured and reported.

To seek to answer all of the above will not be possible within the usual time and budget constraints of organisational DME and would present us with the same problem faced in the mid term review – namely the risk of stretching evaluation resources too thinly. An alternative approach – such as outsourcing this as a research piece to a University department or research/evaluation group – might be preferable. It is recommended that the final evaluation or study of Humbo incorporates the following:

- Led by reputable external evaluation or research group
- Employs multidisciplinary team to cater for the diverse topics
- Guided by steering committee of community, project and partner representatives
- Iterative approach to design of the evaluation/study, key questions and tools
- Input from development statistician in research design, tools and analyses
- Longer timeframe for design and fieldwork
- Increased budget scope.

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