2012

Lesson Learning Report: HKI

shiree

where EEP / shiree works

(District and Upazila Coverage)

Innovation Round 1 & 2

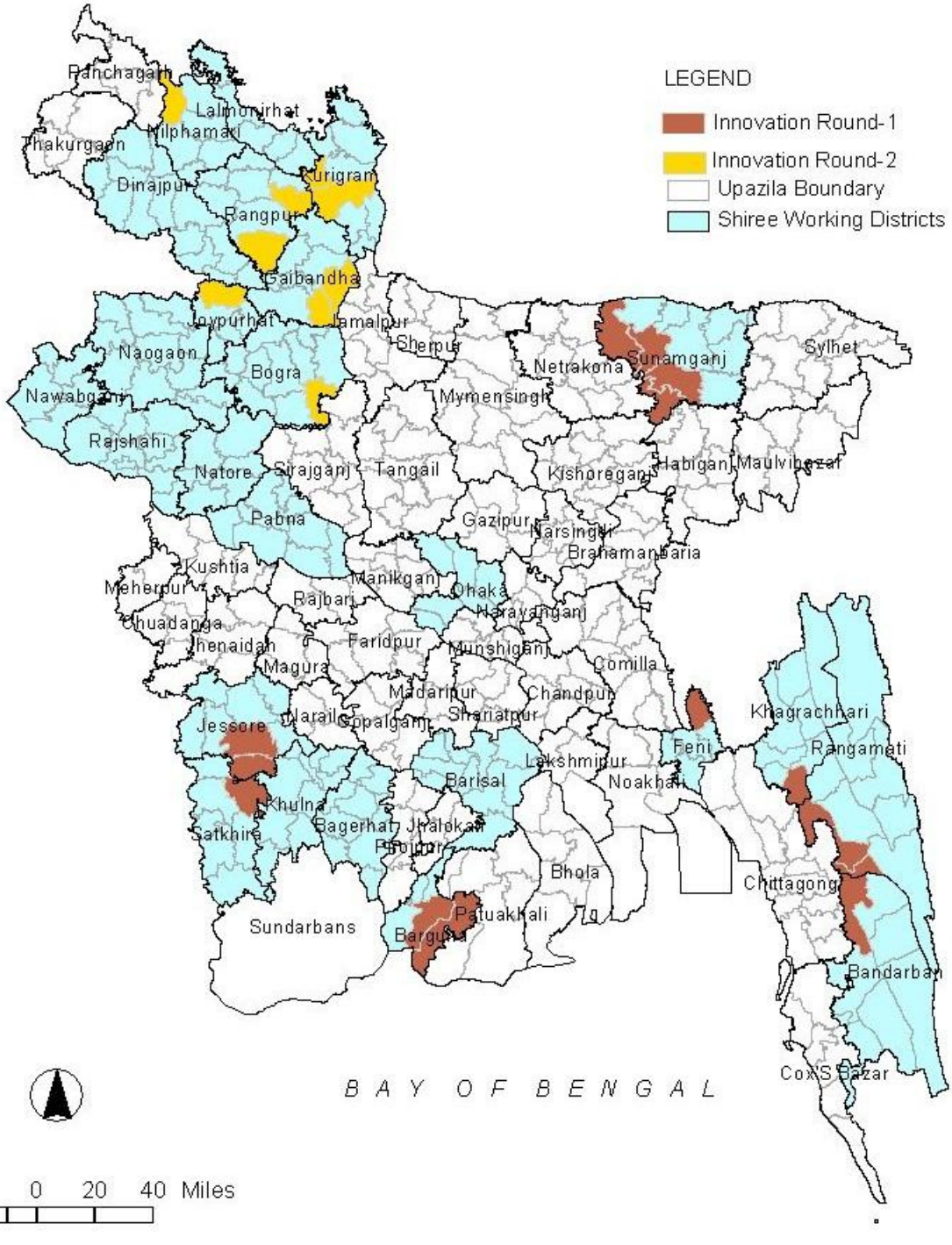


Table of Contents

Introduction

ECONOMIC EMPOWERMENT OF THE POOREST (SHIREE)

The Economic Empowerment of the Poorest (EEP) Project is a partnership between UKAID from the Department for International Development and the Government of Bangladesh that aims to take one million people out of extreme poverty by 2015. The programme has adopted the name *shiree* meaning steps in Bangla, reflecting the approach towards helping people to progress out of poverty. There are two *shiree* challenge funds, the Scale Fund and the Innovation Fund. Both are distributed to NGO implementing partners via a competitive process with selection made by an Independent Assessment Panel. The Scale Fund supports proven approaches to addressing extreme poverty while the Innovation Fund enables innovative approaches to be tested and enhanced in implementation. Scale Fund grants are typically of the order of £3million, covering around 10,000 direct beneficiary households each. Innovation Fund grants are also substantial, averaging £300,000 and up to 1,000 households. In August 2012 there were 36 active sub projects, 9 Scale Fund and 27 Innovation Fund working with over 200,000 households.

Inherent in the inclusion of an Innovation Fund in programme design is the objective that these projects will be closely and continuously monitored and evaluated with successes scaled up, either directly utilising available shiree resources, or indirectly for example through other funding routes or by influencing the design of other projects and programmes.

The shiree programme also has a mandate to research the dynamics of extreme poverty and of the effectiveness of interventions designed to address extreme poverty. This research and the learning from shiree projects feeds a growing stream of pro extreme poor advocacy activity, including the development of a Manifesto for the Extreme Poor[1]. The big objective of this work is to make a significant contribution towards the eradication of extreme poverty in Bangladesh by 2021.

INNOVATION ROUNDS ONE AND TWO

The Innovation Fund is distributed via themed bidding rounds. Round One focussed on peripheral or marginalised regions exhibiting a high incidence of extreme poverty. The result of the competitive process was 6 projects located in: the Haors (CNRS, HSI), the Chittagong Hill Tracts (Greenhill, HKI), the Southern Coastal belt (Shushilan) and one in the border area of Feni District (Aid Comilla). The theme for Round Two was innovative approaches towards addressing seasonal hunger (Monga) and resulted in a further 6 projects (Action Aid, MJSKS, SKS, NDP, HSI, Puamdo) located in Monga prone regions of the North West. While the Round Two projects were initially for two years they were later extended by a year to bring them into synch with the three-year Round One projects[2]. This gave Round Two projects more time to test and establish the intervention model and allowed for a common evaluation process.

[1] See: http://www.shiree.org/
[2] Except Puamdo ends Jan 2013

The total value of 6 Round One contracts was £1,541,283 with 7,000 beneficiaries. Round Two value was £1,794,863 with 5,465 beneficiaries.

THE LESSON LEARNING REPORTS

This is one of 12 lesson learning reports, one for each of the Innovation Round One and Two projects. The reports have been produced for three main reasons: firstly to capture and to make available the significant learning from each individual project, secondly to provide an impact assessment that can inform decisions regarding the potential scale up of project activities, thirdly to provide a vehicle for a process of interaction, reflection and appreciative dialogue between the shiree team, NGO project staff and beneficiaries, hence generating learning and helping the formulation of ideas that build on project experience even prior to the publication of the report. Each report follows a similar structure that reflects the key elements of this intensive and interactive process that spanned over 6 months.

12 individual reports have been produced rather than a single report with tables comparing NGOs. This was a deliberate choice. Each project is delivered in a different context, with a different client group (although all extreme poor), differing geographic, social and economic conditions. Furthermore each project has faced a range of external shocks (from flash floods to communal conflict) during implementation. While a similar methodology was adopted in preparing each report (see below) it is not possible to simply rank the projects in terms of impact from most to least successful. Rather the complexities of each context and the implementation challenges faced by each project need to be considered case by case. The success of any one project was heavily influenced by project design (i.e. the nature of the innovation), but perhaps to an even greater extent was contingent upon the changing circumstances of implementation and the success of the project teams, working with shiree support to adjust, evolve and enhance the project as it rolled out. Hence each report is quite long and contains a full description of how the project developed over time as well as the evaluative reflections of the implementing team and beneficiaries.

THE PROCESS LEADING TO THE REPORT

A similar process was followed during the preparation of each report. **Chapter One** was drafted to summarise the narrative of the project from design and inception through to completion. This chapter draws on the initial project memoranda as well as the output of several independent (SILPA) or Internal (Internal OPR) reviews conducted during the course of the project. NGOs were asked to submit relevant documents to inform this chapter and the chapter was reviewed and endorsed by each NGO prior to finalisation. **Chapter Two** reports the output of an Impact Survey conducted according to a standard methodology for all 12 projects. This survey was undertaken by trained enumerators under the guidance of the University of Cambridge adopting a similar methodology to that used for the Scale Fund CMS3 instrument.[3] In all but one case[4] the baseline census (CMS1) is used for before and after intervention comparisons. **Chapter Three** summarises the output of two Focus Group Discussions conducted with project beneficiaries. **Chapter Four** reports on a lesson learning workshop with the NGO team – during which the outputs of the Impact Survey were shared. The **Conclusion** is a comparison between

[3] See: http://www.shiree.org/extreme-poverty-monitor/#.UGp4U03A-a8

[4] HKI conducted its own baseline and did not undertake CMS 1

final project achievements and the original logical framework. **Annexes** include an analysis of the outcome of the **CMS2** mobile phone based "monthly snapshot" monitoring pilot[5] and **CMS4** beneficiary responses, the **discussion guide** used for the Focus Group Discussions, a summary of the **project exit strategy**, a brief sub project **financial profile,** a **case study,** and HKI's **Final Evaluation Report.**

In all cases the report has been shared in draft, at several stages, with the concerned NGOs, feedback has been received and appropriate adjustments made. In a few cases an additional Annex has been included to provide a space for NGOs to provide an **alternative perspective** on any specific report findings with which they disagree.

The reports are quite long but they are also rich in content and we hope and expect that readers, especially development practitioners, will find them of real value.

[5] Itself a significant process innovation

Chapter One: Summary of Project 2009-2012

DOCUMENTS CITED

- Project Memorandum, 2009; shiree and HKI
- Inception Report, 2009; shiree and HKI
- Innovation Fund Output-to-Purpose Review, 2010; shiree
- Quarterly Change Reports and Self Review Reports; shiree
- HKI Contour Farms Report; HKI
- SILPA 1.5 Review, 2010; shiree
- HKI Making Markets Work for Women Final Evaluation Findings

INTRODUCTION

CMS 6: Summary of HKI Interventions

Beneficiary Information	2009	2010	2011	2012	Cumulative	Target (according to log frame)
BHH selection complete	-	450	-	-	450	450
BHH profiles (CMS 1) complete	-	-	-	-	-	-
BHH who dropped out or migrated	-	-	-	-	-	-
BHHs receiving asset transfer	-	450	(450)	-	450	450
BHHs receiving cash transfer	-	-	-	-	-	-
BHHs receiving IGA/skill training/other capacity building	-	450	(450)	-	450	450
Total value of assets/cash distributed					2,785,041	
NOTE: this data is collected and reported by the NGOs to shiree as CMS 6 (reporting requirements to the Government of Bangladesh)						

Goal

The Goal of the project is to reduce extreme poverty and hunger in the proposed working area. The project will enable the British and Bangladeshi Governments to fulfil their commitment to the UN Millennium Development Goals, and specifically for shiree, Goal 1 (eradicate extreme poverty & hunger) and Goal 2 (achieve universal primary education), by 2015.

Purpose

The M^2W^2 project aims to increase the income-generating capacities and opportunities of women from 450 extreme-poor Jhum cultivating households in 30 hard-to-reach communities to lift and keep them out of extreme poverty. Based on the typical household size of 5 in the CHT area, the project is estimated to reach a total population of 2,250 direct beneficiaries. A 30 percent increase in household expenditures and incomes (based on average figures at baseline) will be used as graduation measures. The minimum threshold for graduation will be daily

expenditures of more than 28 taka per capita. In addition, improvement in household nutritional status (as measured by a 10 percent increase in weight-for-age and 30 percent improvement in dietary diversity for women) will indicate graduation from extreme poverty. Based on evidence from previous projects in the CHT, we anticipate that beneficiaries will earn minimum 500 taka per month from their agricultural activities.

Major Activities

Working with 450 extreme poor households from indigenous communities engaged in traditional jhum agriculture, the project set out to introduce contour farming (ploughing across the slope following its elevation contour lines), basic crop technologies and high value crops to the region. Furthermore, the intervention would introduce novel value added post-harvest processing techniques such as solar driers, spice grinders, canning and innovative transport solutions such as donkeys.

This project aimed to address the critical issues of participating in markets and accessing services while simultaneously building human, social, and physical capital to allow the extreme-poor greater resilience to livelihood shocks and more equitable participation in household and community decisions. Specific activities were to include transfers of training and tools for contour farming to beneficiaries with a general orientation on contour farming, erosion control and resource management techniques for the entire community. In addition, contour farming demonstration plots were to be introduced and a few high-value crop varieties such as long grain sticky rice, sesame, olives, blackberries, orange trees, pineapples, grapes, and intercropped maize piloted.

A key element of the project was the formation of Marketing Committees (MCs) which were the intended vehicle for group training on contour farming, improved agriculture production, post-harvest processing, as well as business skills (including numeracy, business management, pricing, negotiation, and book-keeping). This modality was to be complimented by the provision of expert technical advice to improve yields through raised bed technology, intercropping, trough irrigation, integrated pest management and the use of organic fertiliser.

Project Outputs

1. Introduction to and training of BHH on contour farming techniques
2. Introduction to improved agricultural production technologies
3. Introduction to and training of BHH on simple post-harvest processing and storage techniques
4. Provision of transportation assets to MCs to facilitate improved market linkages
5. Strengthening long-term income and livelihood security by improving household nutrition and access to health services

YEAR 1: SEPT 2009-AUGUST 2010

Helen Keller International (HKI) and local partner IDF (Integrated Development Foundation) implement the shiree IF 1 project 'Making Markets Work for Women (M^2W^2)' in Lakkicchari

Upazila of Khagrachari District within the Chittagong Hill Tracts. The M²W² project tests a number of innovations in agricultural practices and market access while seeking to strengthen long-term income and livelihood security by improving household nutrition and access to health services.

In the first year of operation the project successfully targeted and verified beneficiaries. Using a participatory wealth-ranking exercise project staff initially identified 527 villagers in 29 paras (villages) who met the essential criteria for project inclusion. Of these, 450 households were selected and organised into 33 groups by location of residence or 'marketing committees'. The project team completed a programme of intensive staff orientation, secured land access for participants, established 15 demonstration plots, created 30 marketing committees, completed an in depth social analysis, marketing assessment, environmental appraisal, anthropometric baseline survey, strategic planning workshop and gender training module.

M²W² was singled out for praise by the independent SILPA 1.5 review, conducted after HKI had done its own baseline, which noted that "HKI are leading IR1 partners in the foundations they have laid for their project and lessons must be learnt from their considered approach." SILPA 1.5 identified a highly competent staff, a fully engaged partner NGO (IDF) and efficient backstopping by HKI as critical factors in this early success.

With the exception of contractual reporting requirements HKI elected to undertake all monitoring and evaluation (M&E) activities outside of the shiree change monitoring system (CMS). As the only partner to withdraw from CMS the comparisons that can be made between M²W² and other projects within the portfolio are limited. However, it should be noted that HKI operated a robust and meaningful M&E system; including standard quantitative monitoring covering food security, nutrition and gender issues as well as a series of stories developed using the 'most significant change methodology'. SILPA 1.5 highlighted that in year one HKI were the only IF 1 project to possess a clear sense of direction in relation to monitoring.

The inception report and SILPA 1.5 identify a number of challenges faced by the project and highlight several areas where lessons can be learnt. Early issues included the use of the project office which was made difficult as the building was still under construction. Furthermore, it was the only one available in the town closest to beneficiaries, rather than the larger towns where more development projects are based. The procurement of plant seeds was also more difficult than anticipated due to a lack of quality sellers in the region which meant the search had to be widened to larger markets including Dhaka.[6]

The political volatility of the Chittagong Hill Tracts posed a more significant barrier to project progress particularly in the start-up period; various reports note that many project activities were delayed or postponed due to security concerns stemming from political unrest in the region.[7] HKI and project staff responded to this formidable challenge appropriately, seeking to maintain neutrality whilst fostering close ties with local government and key powerbrokers. In their inception report HKI notes worrying escalations in tension between the military supported Bengali population and indigenous tribal groups, they allege that "indigenous people are

[6] Response from HKI: the project was able to provide seed and agricultural equipment on time.
[7] Response from HKI: despite the volatile political situation, project staff were able to negotiate with local political leaders to ensure project activities continued.

unofficially banned from truck-driving positions, and from using Bengali-run transportation. Thus, they are resorting to more distant markets but travelling on foot". It is clear that the project began operations in a challenging political environment.

A further issue came to light when the rollout of HKIs existing nutrition education module, and other essential training, was hampered by the realisation that the costs budgeted as a stipend for BHH attendance at meetings were insufficient. Taking into account the remote location of many BHH, the difficulty in accessing transport and the costs of lost labour the planned compensation of 20 taka (per beneficiary, per meeting) was increased to 50 taka through the re-allocation of surplus funds. Project staff noted that other donors in the area (particularly UNDP) were paying stipends at a high rate, contributing to the raised expectations for financial compensation among project participants.

In common with several shiree projects, M²W² found that facilitating land access for BHH was a challenging process. The availability of land in the CHT is often less pressured than in plain-land Bangladesh. However, the project still found the process to be difficult and noted that negotiations over forest land and ownership are often extremely sensitive, especially against the background of political tension and violence that existed in the region during 2009/10. Despite these challenges, the project was able to facilitate significant increases in land access, with 63% of households reporting an increase of 51 or more decimals of land, and only 2% of households reporting no increase. Other households were able to increase their access to land through rental.[8]

From relatively early in the project it became evident that several planned activities relating to output 4 (group-managed transportation assets) would be either more difficult, or less appropriate, to implement than was envisaged in the project memorandum. For example, original plans to procure 5 bull led carts were abandoned when it transpired that most beneficiaries were sufficiently close to roads (3-4km) for motorised transport to be appropriate.

Similarly, the planned inclusion of 20 donkeys as a transport asset encountered a number of difficulties. BHH were unfamiliar with donkeys, animals which are not traditionally used in Bangladesh, and were reluctant to choose them as an asset when other groups were offered motorised alternatives. Furthermore, since donkeys are seldom found in Bangladesh, the project had difficulty in procuring the animals and eventually had to look abroad. Despite the fact that M²W² were cautious in their 'rollout' of donkeys[9] and that qualitative monitoring shows many beneficiaries have come to value their donkeys, the need for veterinary care and skilled animal husbandry raises some questions over the sustainability of introducing an animal species, which in this context, was relatively uncommon. For these reasons, HKI took extra precautions – working with the Donkey Sanctuary Institute to provide training on donkey feeding, housing, handling and restraint, harness, health and disease and sending a government veterinarian to India for training so that they could provide care for the donkeys. At the second of two trainings, participants from two of the three villages said both their donkeys were well-adjusted and providing them with significant value, while one of the three villages found just one of their two donkeys difficult to handle (an issue that was resolved with additional training). While introducing donkeys was certainly not a simple intervention, M2W2 demonstrated that

[8] See HKI supplementary findings for further details.
[9] 6 donkeys were transferred in 3 clusters.

this solid training and capacity building approach enabled it to be successful and add value for beneficiaries in terms of accessing markets in remote, hilly areas.

In addition to the difficulties surrounding the transfer of donkeys as a productive asset, limitations to the suitability of another major project innovation – contour farming – also emerged. Soil scientists of the Bangladesh Agricultural Research Institute, a partner of the M^2W^2 project, as well as a consultant hired by the project, confirmed that contour farming was the correct strategy for this area and worked to develop a detailed protocol. As noted in the NGO lesson learning workshop, HKI was the first to introduce contour farming in the CHT and local elites and government have recognized that successful orientation of BHH to contour farming is a significant, positive change which will benefit the hills in the long run and help protect soil fertility.

The evidence from the first year of the intervention suggests that HKI effectively managed an ambitious project with multiple innovations. This was accomplished in the challenging environment of the CHT where the project dealt well with political instability, remote working areas, linguistic and cultural barriers. However, it seems that many of the innovations labelled as central to the project (especially the use of donkeys) were perhaps not as well conceived as they should have been. This finding perhaps indicated naivety in the design of the project. Having said this, in the 2010 OPR shiree acknowledges the inherent tension in balancing the "desire to fully test an innovative project that may have a risk of failure, with the duty to demonstrably improve the lives of beneficiaries involved."

YEAR TWO: SEPT 2010-AUGUST 2011

Agricultural activities progressed well during the second year of operations as did BHH training in HKI's core competencies of health and nutrition. However, internal shiree monitoring in the form of a 2010 OPR (output to purpose review) revealed that project progress slowed during this period and that project direction became somewhat blurred, especially in regard to the more innovative aspects of the project related to marketing, value added processing and transportation.

The OPR notes that in August 2010 the innovations of contour farming and donkey transportation were still under review with the possibility of being dropped whilst others related to post harvest processing (canning and solar driers etc) were yet to be initiated. Furthermore, the report questioned whether the project team, whilst hard working and large in number, possessed the expertise necessary to fully monitor and assess the success of interventions. An increased need for marketing capacity during this period was seen to be crucial as agricultural IGAs came to fruition. The project was advised to strengthen the levels of marketing support, economic analysis and value chain analysis offered to beneficiaries. This was carried out by extending participation from a national market specialist and bringing in expertise from a volunteer farmer from the US through the farmer-to-farmer programme. This is an example of additional technical resources HKI has leveraged to ensure M2W2 produces solid, replicable models.

Reports suggest a lull in momentum within the project during this period. Having shelved or amended many elements of the project which were found to be inappropriate once in a field context, or difficult to implement, the project appeared to slow with the OPR calling for "new

innovative thinking to get the project back on track". The OPR team found that a lack of creativity and engagement with the original project concept by staff meant the project lost direction and drifted towards safer, easy to implement and less innovative activities. After a successful inception period the project began to struggle with some of the perhaps flawed innovations laid down in the project memorandum. Reports suggest this may have contributed to a sense of confusion among project staff as to the aims and strategic direction of the project. Unfortunately this translated into a poor understanding among beneficiaries of the project as a whole, the value of inputs, BHH entitlements and future plans.

YEAR THREE: SEPT 2011- SEPTEMBER 2012

HKI's review of the project's marketing component that was conducted 10 months prior to the project completion comments on the breadth of the project stating 'the project has to implement a huge number of tasks within a very limited time'. Indeed, several internal and external reports point to the projects breadth variously as indicative of either a holistic approach or over-ambition considering the resources available and challenging context of the remote and politically volatile Chittagong Hill Tracts.[10]

In the third year of operation M²W² continued to have difficulty in driving effective marketing and business practices with one internal HKI report citing that BHH 'Marketing Committees' (MC) still required significant capacity building. However, practical steps were taken towards addressing this issue with individual field officers being partnered to some of the strongest MC leaders to work together in progressing the marketing of key crops amongst beneficiary groups.

The marketing and sale of processed foods, a core area of innovation within the project, also ran into trouble in the final year of operations. A number of beneficiaries were able to produce processed foods using processing equipment such as solar driers and jar technologies which MCs had received as asset transfers. Amongst others, BHHs produced chutneys and banana and potato chips. However, aside from informal sales, the more lucrative formal market occupied by supermarkets and 'mega malls' is protected by a raft of legislation intended to protect the consumer. For example, processed food manufacturers in Bangladesh are required to obtain Bangladesh Standards and Testing Institution (BSTI) registration. It can be a costly and long process to obtain licensing and manufacturers must meet strict quantity requirements and quality assurance standards. It was therefore decided that without secured future funding it would not be advisable for the enterprise to be pursued as it left both HKI and BHH open to significant liability. At the same time, there was a significant local market for fresh vegetables, with the market committees' assessments finding that restaurants report a frequent shortage of fresh vegetables, and local vendors often buy vegetables from distant areas. Local sale of vegetables was thus identified as a less-risky, more sustainable option for BHHs.

The M²W² project and beneficiaries encountered a number of problems which are mirrored across the shiree portfolio, namely those which affect agricultural interventions, which many

[10] Response from HKI: Regular Marketing Specialist carried out several marketing activities with project beneficiaries such as seasonal market survey, linkage event with vendors, seed suppliers and wholesalers, group marketing, record keeping, pricing, negotiation, market information, etc. To strengthen this effort HKI hired a highly experienced marketing volunteer from the US through a farmer-to-farmer program. Through their joint initiative, project beneficiaries have achieved success at the end.

projects include. One notable issue was the volatile price of turmeric. In 2009/10 the price of turmeric was extremely high and many beneficiaries reaped significant profits. However, more recently the price of turmeric has plummeted, some suggest because of uncontrolled Indian, Thai and Chinese imports. M²W² worked hard to mitigate the effects of the price drop by encouraging the processing of turmeric to increase value and negotiating bulk buying contracts early in the season to gain a competitive price.

Whilst turmeric prices had an impact across the portfolio, one crop emerged as a potentially sound investment in the CHT. A special variant of maize was adopted and grown by 120 HKI BHH, the crop is well suited to the terrain and producers are currently able to yield a good profit. The strong value of the crop in the CHT is thought to be due to the increase in the number of poultry farmers in the region whom use maize as a primary source of chicken feed. Other issues raised by beneficiaries during CMS4 monitoring, which HKI opted into during the latter half of 2011, included poor sanitation and lack of clean water, poor access to government safety nets, illness and attacks by wild monkeys on crops.

In order to safe guard against additional asset and income loss, in the third year HKI provided additional poultry support to all 450 BHHs as a supplementary IGA.

In the final quarter of the project, HKI drafted its exit strategy to plan for the phase out of project activities. This strategy included a refresher training on contour farming management as well as a gender awareness training for staff and community members. Furthermore, in April 2012 there was untimely heavy rainfall in the CHT which caused damage to the early sown seeds of some beneficiaries. Through an assessment, it was found that the total number of beneficiaries affected were around 135. Considering the high level of damage, the beneficiaries received an additional 4 items of seed.

CONCLUSION

Helen Keller International have without doubt facilitated demonstrable improvements in the lives of their beneficiaries, indeed in late 2011 during CMS4 monitoring 32% of BHH from the sample indicated that their life was much better and 38% slightly better than three months previously. In late 2011 internal HKI monitoring towards log frame indicators found that in the first two years of the project, 91% (target 100%) of BHH saw a 30% rise in income in at least one season, 66% of women (target 30%) saw a mean increase in dietary diversity, 85% (target 90%) adopted at least one improved land management technique and 51% (target 90%) adopted at least one improved food processing technique. These findings two years into the project indicate that the project was "on track" to meet its targets. HKI's final evaluation also found a significant impact on nutrition, food security, income and women's empowerment:

- 98% of BHHs had a 30% increase in income in at least one season, and 98% of BHH had a 30% increase in expenditure in at least one season (target: 100%)
- 94% increase in mean woman's dietary diversity score (target 30%). While at baseline almost 70% of the beneficiaries consumed two or fewer food groups per day, at end line, 80% consumed at least four food groups and 16.4% and 3% had increased their dietary diversity score (DDS) to 5 and 6, respectively. The percentage of people with a DDS of only 1 dropped from 17.5% to 0%.
- 96% increase in mean household WFP FCS since baseline (target 30%). While 92% of beneficiaries had a poor diet at baseline, by end line no household received a poor score.

Additionally, while one of the women with a child under two years reported eating more food during pregnancy at baseline, by end line, 45% of women reported greater food consumption during pregnancy.

- 90% of women report that spouses give increased support on household work (target 90%).
- At end line households have sufficient food (defined as three full-stomach meals per day for all family members) to eat for approximately 11½ months over a 12-month period. At baseline, households had only an average of 7 months of sufficient food.
- Over the course of the project, global stunting among children age 6-59 months fell from 54% to 36%.

It is probable that many of the gains the project has achieved can be attributed to the 'routine' livelihoods approach that underpins many of shiree's projects and not the innovations the M²W² project set out to test. Whilst HKI and the project team did pursue several innovative components it is clear that a more rigorous research and analysis during planning phases could have prevented poor outcomes during implementation, by either preventing the selection of inappropriate interventions or better guiding their modification pre-implementation.

The M²W² project and this report offer an opportunity for many lessons to be learnt. Perhaps most importantly the experience of this project underlines the need for strong management and strategic direction as a foundation to cope with failed innovations. Shiree must work to ensure that partner NGOs understand that in a project designed to test an innovation, failure, if properly documented is not necessarily a bad thing.

ISSUES REGARDING SCALABILITY

Market access in the CHT is limited due to the remoteness of many beneficiaries.[11] Additionally, many of the products BHHs were producing as part of the HKI project had limited marketing channels despite high national demand (i.e. turmeric).[12] At a scaled-up level this may present further difficulties and prevent the success of the interventions, unless a scaled up project is able to facilitate BHH access to additional marketing channels.

The original innovation of using donkeys for transportation of goods was unsuccessful at a small-scale level due to the fact that donkeys are not commonly found in Bangladesh nor are people accustomed to working with them, which may present further problems at a scaled up level. It should be noted however that HKI did manage to distribute 6 donkeys in the Khagrachari community and trained several beneficiaries on donkey rearing and its benefits. Additionally, now that HKI have documented the process and trained communities and government services, the intervention may be more prepared for scale up.

[11] Response from HKI: remoteness is a common phenomenon overall in CHT but it was not mentioned that only a certain % of beneficiaries were lived in extreme remote areas. As per shiree BHHs selection criteria of the extreme poor, the project effectively selected extreme poor HHs from those highly remote areas. HKI's project interventions have encouraged other NGOs to reach those remote areas. The project should not be deprived of scale up only for remote issues.

[12] Response from HKI: from our market survey report it was revealed that maximum consumers prefer CHT products due to its pure and organic quality. Everyday CHT products are raising expectations of consumers for pesticide-free products. At a scaled-up level more opportunities will be created.

There is also the problem of land access, across Bangladesh and particularly in the CHT. Therefore, providing land to a larger number of beneficiaries may be difficult in a scaled-up project. However, it should be noted that HKI has been relatively successful in catalyzing land for their beneficiaries.

Chapter Two: Endline to Baseline Findings

INTRODUCTION

A total of 12 projects have received funding under Innovation Fund Round One and Two and the project period will come to a close at the end of September 2012.[13] The present section seeks to provide the efficiency and effectiveness of these innovation modalities in uplifting people from extreme poverty in the given communities and regions through comparing present socio-economic conditions with baseline information using specific indicators.

Objective: The objective of the Endline Study is to assess the change in socio-economic status of the project beneficiary households since the baseline in 2009.

Study design: From each organization 64 representative sample households were randomly selected to carry out an endline study. Taking advantage of the uniqueness of the household identities, the same 64 households were selected from the baseline database to compare change. It is important to note that the baseline study was a census.

Field Work: A total of 28 enumerators, 9 Research Assistants from Scale Fund organizations, 3 M&E/MIS personnel, and 1 Bengali Young professional, under the guidance of a researcher from Cambridge University carried out the data collection for the endline study in 30 days from 16th March 2012. The entire study was managed by the Decision Support Unit at shiree and for the purpose of smooth implementation considering travel time and availability of accommodation and.; accessibility of sample households, the study team was divided into two smaller teams. The two smaller teams collected the data after 14 days of orientation on the questionnaire and methods.

Trained enumerators carried out interviews primarily of household heads on their socio-economic conditions using a pre-tested semi-structured questionnaire focusing on the following indicators:

- Demographic characteristic
- Household Assets
- Household income
- Household expenditure
- Loan and saving status
- Access to safe water, sanitation, electricity
- Housing condition
- Food security
- Access to safety net

The endline questionnaire was developed by a faculty member of Cambridge University. As the baseline questionnaire is to some extent different to the endline study questionnaire, data analysis has been done only on the common indicators existing in both of the questionnaires.

[13] Except: Greenhill ends June 2012, ActionAid Oct 2012, PUAMDO Jan 2013

Constraints: It should be noted that the data for the endline study for all the projects was collected during the same time period, but the baseline data was collected phase by phase at different times and seasons. Moreover, the data collected for the endline study was conducted by more trained enumerators in comparison to the data collectors of the baseline information. Therefore, the data may contain seasonal variations particularly related to economic activities in the rural context where agriculture is the single largest employment sector. It may also contain some variation due to the different levels of perceptions of data collectors.

HKI did not carry out CMS1. As a result it is not possible to compare endline with CMS1. Moreover the baseline study carried out by HKI does not provide enough opportunity to compare with endline as most of the information is based on only yes and no answer. However, in few cases some comparison is possible. Under this circumstance, the present section mostly provides information only on endline findings except a few cases where baseline information is made available from HKI's baseline report.

Organization of the chapter: The report does not aim to compare effectiveness of innovation projects to each other but rather the socio-economic changes of BHHs of specific projects since baseline. Therefore, an analysis of each project has been done separately considering the fact that each project is different in terms of modalities, locality and targeted communities. In the following section findings from HKI's project is presented.

HOUSEHOLD BASIC DEMOGRAPHIC CHARACTERISTICS

Table 1.1: Basic socio-demographic characteristics according to sex of household head.

Category	Baseline		Endline	
	N	%	N	%
Male headed household	-	-	54	84.4
Female headed household	-	-	10	15.6
Both	-	-	64	100

Endline findings indicate that head of 16% households are female and 84% are male.

Household size

Table: 1.2: Distribution of household average size according to sex of household head.

Baseline						Endline					
Male		Female		Both		Male		Female		Both	
Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
-	-	-	-	4.36	1.50	4.46	1.48	3.20	9.20	4.27	1.47

The mean household size during baseline was 4.36 which increased to 4.46 in endline. The endline findings further indicate that mean household size of male headed household is 4.46 while it is 3.20 for female headed households.

OCCUPATION

Table 2.1: Change in primary occupation of household head.

Occupation	Baseline		Endline	
	N	%	N	%
Agricultural day labour	-	-	1	1.6
Other Day labour	-	-	3	4.7
Domestic maid	-	-	-	-
Rickshaw/van/boat/bullock/push cart	-	-	-	-
skilled labour (manual)	-	-	-	-
Fishing in open water	-	-	-	-
Petty trade	-	-	1	1.6
Other business	-	-	1	1.6
Begging	-	-	-	-
Others	-	-	4	6.3
Transport worker (bus and truck)	-	-	-	-
Does not work	-	-	-	-
Housewife	-	-	-	-
Own agriculture	-	-	54	84.4
Cottage industry	-	-	-	-
Livestock/poultry	-	-	-	-
Service	-	-	-	-
Total	-	-	64	100

The endline findings of the primary occupation of beneficiary household heads indicate that 84% of household heads pursue their own agriculture as their primary occupation and 6% are involved in the 'other' category of work. The rest are engaged in other labour (5%), petty trade (2%), other business (2%) and agriculture day labour (2%) related activities.

The endline findings further indicate that 86% of household heads have an additional occupation other than primary one.

Table: 2.2: Distribution number of other occupations of household head according to sex of HH head.

Number of other jobs	Endline					
	Male headed household		Female headed household		Both	
	N	%	N	%	N	%
0	5	9.3	4	40	9	14.1
1	21	38.9	4	40	25	39.1
2	19	35.2	1	10	20	31.3
3	6	11.1	1	10	7	10.9
4	2	3.7	-	-	2	3.1
5	1	1.9	-	-	1	1.6

Total	54	100	10	100	64	100
Test	X^2=7.950, p= 0.159					

NB: Number of occupation other than household main occupation.

INCOME

Table 3.1: Mean distribution of household monthly income (cash and kind).

Baseline		Endline		Differences		Test
Mean	SD	Mean	SD	Mean	SD	
1028.32	406.99	20763.92	15893.24	19735.6	15486.25	-

Endline findings indicate a considerable change in income. The mean income at the baseline was 1,028 BDT and SD 407 BDT while at the endline the mean monthly income is 20,764 BDT and SD is 19,736 BDT. The mean increase in income is 19,736 BDT. Here income includes both cash and in kind.

However, table 3.2 provides information of cash and in kind income separately. The mean monthly household cash income at the endline is 17,252 BDT and in kind income is 3512 BDT.

Table 3.2: Mean distribution of household monthly income

Variables /Categories	Baseline		Endline		Differences		Test
	Mean	SD	Mean	SD	Mean	SD	
Cash income	-	-	17251.58	14524.15	-	-	-
Kind income	-	-	3512.34	4054.65	-	-	-

Moreover, at the endline the daily per capita mean cash income is 148 BDT and the daily per capita in kind income is 29 BDT.

Table 3.3: Mean distribution of household monthly regular case income per capita/day.

Variables /Categories	Baseline		Endline		Differences		Test
	Mean	SD	Mean	SD	Mean	SD	
Cash income	-	-	147.86	138.41	-	-	-
Kind income	-	-	29.30	29.10	-	-	-

<u>Income change in percentage</u>

The baseline information of 64 sample households is not available so the information based on following table cannot be given.

CHANGE IN POVERTY THRESHOLDS

Table 3.6: Distribution of household poverty level according to cash income per capita/day and sex of household head.

Variables (sex)	Baseline								Endline							
	Extreme poverty		Poor		Non poor		Total		Extreme poverty		Poor		Non poor		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	-	-	-	-	-	-	-	-	7	13	2	3.7	45	83.3	54	100
Female	-	-	-	-	-	-	-	-	1	10	-	-	9	90	10	100
Total	-	-	-	-	-	-	-	-	8	12.5	2	3.1	54	84.4	64	100
Test									X^2=0.474, p=0.789							

NB: Inflation adjusted to 2011 according to rural food index inflation 12.03%

After inflation adjustments for 2011, the percentage of households remaining below the extreme poverty line (daily per capita income below 48 BDT) at the endline is 13%. However, 84% have crossed not only the extreme poverty line but also the poverty line and their daily per capita income is more than 55 BDT. The percentage of non poor households increases further if in kind income is included along with cash income. At the endline 91% of households fall under the non poor category and the percentage of households earning less than 48 BDT has dropped to 6%.

Table 3.7: Distribution of household poverty level according to total income (cash & in kind) per capita/day.

Variables (sex)	Baseline								Endline							
	Extreme poverty		Poor		Non poor		Total		Extreme poverty		Poor		Non poor		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	-	-	-	-	-	-	-	-	3	5.6	2	3.7	49	90.7	54	100
Female	-	-	-	-	-	-	-	-	1	10			9	90	10	100
Total	-	-	-	-	-	-	-	-	4	6.3	2	3.1	58	90.6	64	100
Test									X^2=0.638, p=0.727							

NB: Inflation adjusted to 2011 according to rural food index inflation 12.03%

EXPENDITURE

Table 4.1: Mean distribution of household monthly expenditures.

Baseline		Endline		Differences		Paired t-Test
Mean	SD	Mean	SD	Mean	SD	
1194.14	1787.52	13243.14	14224.35	12049.00	12436.83	-

Endline findings indicate that the mean monthly household expenditure is 13,243 BDT and SD is 14,224 BDT. Here expenditure means cash expenditure and includes irregular expenditure such as house repairing, purchasing of furniture etc. The daily per capita expenditure at the endline is 65 BDT.

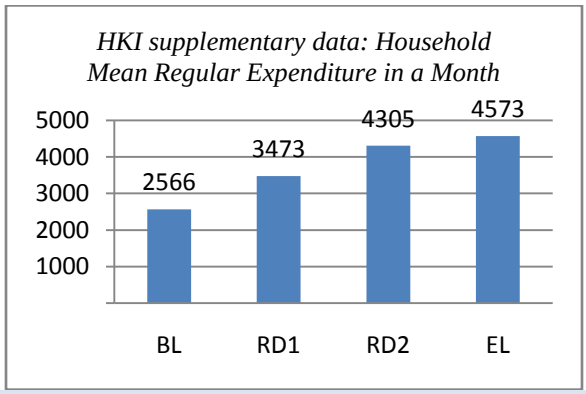
Table 4.2: Mean distribution of household monthly regular expenditures per capita/day.

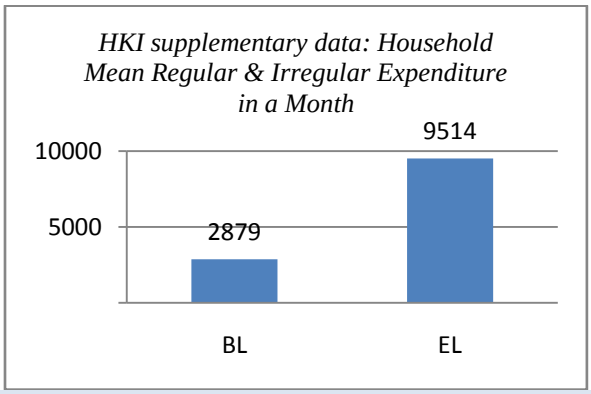
Baseline		Endline		Differences		Test
Mean	SD	Mean	SD	Mean	SD	
9.60	13.98	64.82	68.22	55.22	54.24	-

Percentage increase in expenditure

The baseline information for 64 sample households is not available so the information based on following table cannot be given.

However, HKI analysis found an increase in both mean monthly regular expenditure (4573 BDT at endline while at baseline it was 2566 BDT) and irregular expenditure, which was collected over three seasons and 3 times higher during endline.





ASSETS

According to the endline, 94% of households have livestock, of which 13% have 1, 11% have 2 and 70% of households have more than 3 livestock respectively. Moreover, 88% of households have more than 3 poultry and 97% have more than 3 working equipment.

Table 5.1 Ownership of asset household according to household head categories in percentage

Assets type	**Number of items**	**Baseline**						**Endline**					
		Male		**Female**		**Both**		**Male**		**Female**		**Both**	
		N	%	N	%	N	%	N	%	N	%	N	%
Livestock	0	-	-	-	-	-	-	3	5.6	1	10	4	6.3
	1	-	-	-	-	-	-	7	13	1	10	8	12.5
	2	-	-	-	-	-	-	7	13	-	-	7	10.9
	3+	-	-	-	-	-	-	37	68.5	8	80	45	70.3
	Total	-	-	-	-	-	-	54	100	10	100	64	100
Poultry													
	0	-	-	-	-	-	-	3	5.6	3	30	6	9.4
	1	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	1	1.9	1	10	2	3.1
	3+	-	-	-	-	-	-	50	92.6	6	60	56	87.5
	Total	-	-	-	-	-	-	54	100	10	100	64	100
Working equipment	0	-	-	-	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	2	3.7	-	-	2	3.1

Assets type	Number of items	Baseline						Endline					
		Male		Female		Both		Male		Female		Both	
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3+	-	-	-	-	-	-	52	96.3	10	100	62	96.9
	Total	-	-	-	-	-	-	54	100	10	100	64	100
Household belongings	0	-	-	-	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-
	3+	-	-	-	-	-	-	54	100	10	100	64	100
	Total	-	-	-	-	-	-	54	100	10	100	64	100

HKI's baseline and endline surveys collected rigourous information about livestock, poultry, productive assets and household appliances. HKI also found increases across asset types (though the final figures are more modest than what is reported in shiree's monitoring). Livestock included cows, oxen, buffallos, goats, sheep and pigs while poultry referred to chickens, pigeons, ducks and others. Productive assets were considered as various types of fish traps, carts, sewing machine, trees, grinding machines (dheaki), back strap looms, plough, hunting traps, other agricultural tools, bamboo buckets and weighing scales. Household assets included radios, mobile phones and silver and gold jewelry. Data show the numbers of assets rented and/or owned have increased since baseline with a more remarkable change in asset ownership compared to asset rental.

Table 6: Household Asset Ownership According to Number of Items

Assets type	Number of items	Baseline		End line	
		Own	Rent	Own	Rent
Livestock	0	68.70%	67.30%	17.70%	75.90%
	1	19.80%	17.60%	17.30%	9.10%
	2	6.00%	9.30%	17.50%	7.00%
	3+	5.60%	5.80%	47.50%	8.00%
Poultry	0	36.90%	36.90%	6.10%	6.10%
	1	22.40%	22.40%	0.70%	0.70%
	2	22.40%	22.40%	1.80%	1.80%
	3+	18.20%	18.20%	91.40%	91.40%
Productive assets	0	1.30%	98.70%	1.60%	87.70%
	1	9.80%	0.40%	0.20%	3.40%
	2	18.40%	0.90%	0.20%	1.80%
	3+	70.40%	0.00%	98.00%	7.00%
Household appliances	0	77.30%	100.00%	39.10%	95.90%
	1	10.20%	0.00%	18.90%	1.60%
	2	4.40%	0.00%	10.00%	0.70%
	3+	8.00%	0.00%	32.00%	1.80%

The value of assets

Table 5.2: Mean asset value of asset transferred from shiree supported project

Variables /Categories	Endline					
	Male		Female		Both	
	Mean	SD	Mean	SD	Mean	SD
Shiree livestock	698.15	654.30	650	685.16	690.63	653.86
Agriculture	6875.72	1777.66	7166.8	2926.11	6921.20	1973.06
Business support	552.04	1164.57	-	-	465.78	1087.09
Capital IGA	2529.30	2647.35	3533.5	2853.96	2686.20	2682.29
Khas land (decimal)	-	-	-	-	-	-
Lease or mortgaged land	-	-	-	-	-	-
Total	10655.20	3555.08	11350.30	4238.61	10763.81	3641.94

The value of assets was not collected during the baseline survey. Furthermore, the endline information includes the value of assets transferred under the projects. As a result, it is very difficult to mention anything about change in value of asset since the baseline.

Nevertheless, general shiree selection criteria is that all beneficiary households did not own assets that value more than 5000 BDT and the mean asset value of HKI project transferred assets is 10,764 BDT and the present mean asset value of HKI beneficiary household is 183,274 BDT.

Table 5.3: Mean distribution of household's according to assets mean value and sex of HH head.

Variables /Categories	Endline					
	Male		Female		Both	
	Mean	SD	Mean	SD	Mean	SD
Livestock	38102.41	36604.71	26745	22896.27	36327.81	34919.74
Working equipment	1782.96	1060.59	1595	1571.35	1753.59	1141.83
Household belongings	24454.26	47187.41	13240	9111.34	22702.03	43610.97
Total	201742.59	563660.35	83549	54318.57	183274.84	519205.94

HOUSEHOLD SAVINGS AND LOAN

The HKI baseline report indicates that 46% of households had savings averaging about 100 BDT. At endline, 98% of BHHs have savings of which 38% have between 1000-5000 BDT, 17% have between 5001-10,000 BDT, and 16% have savings between 10,001-15,000 BDT. Additionally, 14% of households have savings of more than 20,000 BDT.

Table 6.1: Distribution of households reporting to have savings as per household head.

Category (BDT)	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
0	-	-	-	-		53.6	-	-	1	10	1	1.6
<1000	-	-	-	-	-	-	5	9.3	2	20	7	10.9
1000-5000	-	-	-	-	-	-	22	40.7	2	20	24	37.5
5001-10000	-	-	-	-	-	-	9	16.7	2	20	11	17.2
10001-15000	-	-	-	-	-	-	8	14.8	2	20	10	15.6
15001-20000	-	-	-	-	-	-	2	3.7	-	-	2	3.1
20000+	-	-	-	-	-	-	8	14.8	1	10	9	14.1
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=7.967, p=0.241					

HKI's monitoring did assess levels of saving at baseline and endline. At baseline, more than half of the beneficiaries had no savings. By the endline evaluation, 23% reported having savings (Table 5). Approximately half of the beneficiaries now have at least 1000 BDT in savings.

Table 5: Amounts of savings		
	Baseline	Endline
0	53.8%	23.0%
<1000	45.6%	16.4%
1001-5000	0.7%	50.5%
5001-10000	0%	7.0%
10001-15000	0%	3.2%

In regards to taking loans, at the endline 17% of households informed having a loan.

Table 6.2: Distribution of households having loans

Sources of loan	Baseline					Endline				
	Yes		No		Outstanding mean (BDT)	Yes		No		Outstanding mean (BDT)
	N	%	N	%		N	%	N	%	
Informal without interest	-	-	-	-	-	4	6.3	60	93.8	2,025
With interest informal loan	-	-	-	-	-	3	4.7	61	95.3	13,000
Formal loan with interest MFI	-	-	-	-	-	-	-	-	-	-
Formal loan with GoB	-	-	-	-	-	-	-	-	-	-
Loan from shomity or CBO With interest	-	-	-	-	-	4	6.3	60	93.8	6,362.5
Other loan	-	-	-	-	-	-	-	-	-	-

HOUSING CONDITION AND ACCESS TO WATER SUPPLY, SANITATION AND ELECTRICITY

Change in wall and roof material of house

Table 7.1 Distribution of households according to wall construction materials and sex of household heads.

Materials (walls)	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
Grass/jute stick/ leaves/plastic	-	-	-	-	-	-	-	-	-	-	-	-
Bamboo	-	-	-	-	-	-	53	98.1	9	90	62	96.9
Wood	-	-	-	-	-	-	-	-	-	-	-	-
Mud	-	-	-	-	-	-	1	1.9	-	-	1	1.6
Tiles	-	-	-	-	-	-	-	-	-	-	-	-
Tin/CI sheets	-	-	-	-	-	-	-	-	-	-	-	-
Cement/brick	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	1	10	1	1.6
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=5.643, p=0.060					

Endline findings indicate the walls of almost all houses are made of bamboo and 55% of roofs are made of Tin/CI sheet and 41% are made of Grass/jute stick/leaves/plastic.

Table 7.2 Distribution of households according to roofing materials and sex of household heads

Materials (roof)	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
Grass/jute stick/ leaves/plastic	-	-	-	-	-	-	22	40.7	4	40	26	40.6
Bamboo	-	-	-	-	-	-	3	5.6	-	-	3	4.7
Wood	-	-	-	-	-	-	-	-	-	-	-	-
Mud	-	-	-	-	-	-	-	-	-	-	-	-
Tiles	-	-	-	-	-	-	-	-	-	-	-	-
Tin/CI sheets	-	-	-	-	-	-	29	53.7	6	60	35	54.7
Cement/brick	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=0.618, p=0.734					

The house ownership table indicates that at the endline only 2% of households have their own houses on their own land while 98% have constructed their house on khasland.

Table 7.4: Ownership distribution of houses according to sex of household head.

House ownership	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
Owned	-	-	-	-	-	-	1	1.9	-	-	1	1.6
Rented	-	-	-	-	-	-	-	-	-	-	-	-
Parent	-	-	-	-	-	-	-	-	-	-	-	-
Parent in law	-	-	-	-	-	-	-	-	-	-	-	-
Live rent free with family	-	-	-	-	-	-	-	-	-	-	-	-
Live rent free with non family	-	-	-	-	-	-	-	-	-	-	-	-
Own house on khas land	-	-	-	-	-	-	53	98.1	10	100	63	98.4
Someone else's land	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=0.188, p=0.664					

Access to safe water

The endline findings in regards to access to improved water sources indicates that 84% collect water from wells and the rest collect water from hand tube wells (9%) or other sources (5%).

Table 7.5: Distribution of households according to sources of drinking water and sex of household heads.

Sources of drinking water	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
Piped	-	-	-	-	-	-	-	-	-	-	-	-
Hand tube well	-	-	-	-	-	-	4	7.4	2	20	6	9.4
Open well	-	-	-	-	-	-	47	87	7	70	54	84.4
Pond-river	-	-	-	-	-	-	1	1.9	-	-	1	1.6
Rain water	-	-	-	-	-	-	-	-	-	-	-	-
Purchased water	-	-	-	-	-	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	2	3.7	1	10	3	4.7
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=2.616, p= 0.455					

Sanitation

The endline findings indicate that nearly 58% of households defecate in pit latrines and 11% have ring-slab latrines. However, at the endline, 8% of households reported having hanging latrines and 14% defecate in open spaces.

Table 7.7: Distribution of households according to place of defecation and sex of household heads.

Place of defecation	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
Open spaces	-	-	-	-	-	-	9	16.7	-	-	9	14.1
Hanging latrine	-	-	-	-	-	-	4	7.4	1	10	5	7.8
Pit latrine	-	-	-	-	-	-	29	53.7	8	80	37	57.8
Ring/slab latrine	-	-	-	-	-	-	7	13	-	-	7	10.9
Complete Sanitary	-	-	-	-	-	-	-	-	-	-	-	-
Others (Offset)	-	-	-	-	-	-	5	9.3	1	10	6	9.4
Total	-	-	-	-	-	-	-	-	-	-	-	-
Test							X^2=4.050, p=0.399					

Electricity

In regards to access to electricity, the endline findings show that no households have electricity connections except 9% of households who have solar power facilities.

Table 2.8: Distribution of households according to connection of electricity and sex of household heads

Type of electricity connection	Baseline						Endline					
	Male		Female		Both		Male		Female		Both	
	N	%	N	%	N	%	N	%	N	%	N	%
No electricity	-	-	-	-	-	-	49	90.7	9	90	58	90.6
Connected to main line	-	-	-	-	-	-	-	-	-	-	-	-
Connected to other house	-	-	-	-	-	-	-	-	-	-	-	-
Connected to generator	-	-	-	-	-	-	-	-	-	-	-	-
Solar power	-	-	-	-	-	-	5	9.3	1	10	6	9.4
Others	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	54	100	10	100	64	100
Test							X^2=0.005, p=0.941					

CONCLUSION

The endline findings indicate that the situation of HKI beneficiary households have improved in the area of income, assets and savings and see significant improvements in nutrition and food security. However, still 6% beneficiary households falls under extreme poverty line. This should not be taken as diminishing the success of the project as it is largely a reflection of the level of extreme poverty of those enrolled on the programme who, despite significant improvements in their livelihood, remain below the HIES threshold which, in 2010, accounted for 17.6% of the entire population.

Chapter Three: Beneficiary Focus Group Discussion

INTRODUCTION

Part of the lesson learning process is to hear from the beneficiaries on how they perceive the impact of the interventions on their livelihoods. For HKI, two Focus Group Discussions were conducted in which approximately 21 female beneficiaries were interviewed to gauge their experiences with the interventions. Each FGD took two to three hours and was conducted by a three-person team: one shiree Programme Manager; one shiree Young Professional; and one Research Assistant[14] for help with translations. The discussions focused on discovering key findings relevant to economic empowerment given the geographical and social contexts of the working area.

As the FGDs were conducted in similar settings and the interventions were the same, the findings have been summarized as one.

BEFORE INTERVENTION

The beneficiaries were living in a state of destitution and extreme poverty before they joined the HKI project. They often had to go hungry because they could not afford enough food. They could not afford to send their children to school. With poor sanitary facilities, they were prone to illness and disease. They had bad household relations and often argued with their spouses. They had intentions to improve their livelihoods, but with no capital to invest of start earning they had no way of improving their situation. They had no work or no technical knowledge and were not informed about local services. During the rainy season it was very difficult to find work and if they did manage to find some form of income it was usually very physically demanding labour.

DAY ONE FGD 1 AND 2

Number of Beneficiaries: 21 female

Location: Koilas para and Morachengimukh

After Intervention.
The beneficiaries have learnt a lot about agriculture and other technical IGA trainings such as processing jelly and jams as well as livestock. With this training they now know how to make these products, farm and take care of livestock. They have also received all the necessary agricultural tools and some processing technology to enhance their production.

HKI supported them to setup group marketing to sell their products in bulk. If they have a large amount of one product, then the buyer will come to their village to purchase their product to later sell at the big market. This saves them travel time and generally results in better market prices.

[14] Due to the local dialects of the CHT, the Project Manager from Tarango (a shiree pNGO) joined the FGDs to assist with the translations. In this case, a Research Assistant was not required.

Health and Nutrition.
They have improved food intake and always have enough to eat. They feel stronger and are not as sick as before. They also have access to health services when required. They have been taught about health issues and where available services are in case of any illness or health problem. HKI also taught them how to cook nutritiously and how to diversify their diets through improving their cooking techniques. They all grow a variety of vegetables for self-consumption.

Access to Services.
Their children are all in school now and receive school stipends for attending class. They have also formed linkages with local services such as the livestock department, health clinics and education facilities. They have a nearby health clinic and they all have health care. For one group, there is a local health worker available in the village. For the other group, however, they have to travel into town to reach any public services. Both groups have poor access to drinking water, a major constraint in the CHT. They have to travel far to get pure drinking water and the line is often very long.

Market Access and Mobility.
Before working with HKI they had never been to the market and did not have the confidence to travel. Their mobility, market access and community engagement have all increased due to trainings. Now they frequently travel to different markets. One woman even went to Dhaka to sell her products and visited other farmers to learn and share best farming practices. They all go to the village and market on a weekly basis and their spouses encourage them to travel. They have been taught how to effectively bargain with market actors and are able to receive fair market prices now. They always look to see how much other people are selling their products for and compare prices before choosing who to sell to, this way they are ensured the best market prices for their products. They have also been trained to measure weight with their hands, which also helps them avoid exploitation on prices.

Gender Empowerment and Decision Making.
Before many of them suffered abuse from their husbands but now they have become aware of gender equality and women are more empowered making for a balanced home environment. One woman said that if her husband tried to beat her now she would hit him back!

They all have increased confidence in local markets and feel that they can move wherever they want now. They feel empowered and informed. In decision making, they get support from group as well as their spouses. They are always invited to different community meetings and events now and are actively involved in their children's education. They have also helped lessen the amount their husbands drink.

They all agreed that they would not have benefited had their husbands received the IGAs. Their husbands would have likely spent the money on alcohol rather than invest it and they probably would have become less empowered. Also, in the CHT the military cannot forcibly take anything from women but they can from men. As such, their earnings would be more susceptible to robbery or confiscation if the men had control over the IGAs. Men are also deprived of fair market prices by the military, whereas women are not and instead have the ability to bargain with market actors and get better prices.

Knowledge of Land Entitlements.
In the CHT, the headmen have the authority to distribute 5 acres of land to beneficiaries if it is available. Many headmen are not aware that they have this authority to distribute land. HKI helped connect them to the para leaders so that they could receive land they are entitled to. With the land they received, they have been able to begin farming and crop cultivation. Many of the beneficiaries have gone on to buy more land to further their assets and increase their cultivation.

IGA Suitability and Innovation.
In the CHT there are some highly nutritious fruits and natural plants that are usually wasted or never used. They are now collecting these high-value fruits to make organic jams and pickles. They have received training on how to grow different types of saplings, such as mango, banana and pineapple. Value-added processing has done well for them. Contour farming has also been a successful intervention for them as it increases soil fertility and helps conserve the land. They would recommend their IGAs to other poor people, especially maize cultivation. Other community members are already adopting their methods in contour farming, maize and vegetable cultivation.

It was a joint IGA process where they took part in HKI's IGA training and were also able to include some of their chosen IGAs. Different IGAs had varied impacts on their livelihoods. At one point, turmeric was doing really and then at another point chicken rearing was generating a high income. As they are all involved in multiple IGAs if one is not doing so well then they have other IGAs to sustain the gains made. For some of the women, however, they would prefer to work with their husbands on the IGAs to maximize gains. They also agreed that the IGAs would not be appropriate for the elderly or disabled.

Resiliency and Economic Security.
They have received multiple IGA training so they can work year round and ensure diverse income sources. They also all have considerable savings and have set up a group savings scheme with interest rates for borrowing at 1,500 BDT. This is working very well to collectively increase their savings. They have all been able to reinvest their earnings in multiple IGAs and other valuable assets such as land.

The biggest environmental threat they have to their livelihoods are heavy rains, poor access to irrigation, and wild monkeys that occasionally destroy their crops.[15] During the lean period, they preserve rice, vegetables and some livestock to cope during this period. Their savings and extra assets are also available in case of an emergency or unexpected shock.

Sustainability.
They are all enthusiastic that when HKI leaves, they will continue to do very well with their livelihoods and will continue to prosper. They are confident that they will be able to meet their basic needs in the future. They are all conscious of future planning and investing in their children's education and health.

[15] This is only a threat for a certain number of beneficiaries.

Chapter Four: NGO Lesson Learning Workshop

INTRODUCTION

Part of the lesson learning process is to capture the experiences of the field staff involved in the innovation project. The field staff provides an essential view on the successes and challenges faced in the implementation of the innovation. They have worked closely with the beneficiaries and have had to mitigate the effect of a number of both small and large challenges on the livelihoods of the beneficiaries. In order to capture their experiences with the project, shiree held a day-long workshop with all project field staff present. The agenda consisted of:

1. Exploring challenges
2. Exploring successes
3. Summarising key lessons learnt
4. Review of the original innovation
5. Identifying potential challenges if the project were to go to scale
6. Discussing NGO feedback on report findings
7. Exit Strategy (see Annex)

CHALLENGES

All field staff from HKI M2W2 Project were asked to identify three challenges they felt they innovation project faced in the last three years. The challenges identifies were as follows:

Access to Services:

- Political tensions in the area kept beneficiaries from accessing markets
- There was a lack of technical services available, particularly for donkeys
- The beneficiaries struggled to sell produce locally; but once political relationships and market linkages were formed they were able to overcome this

Targeting and working with the Extreme Poor in the CHT:

- At first, beneficiaries did not want to work with M2W2 because of negative misconceptions that they would have to return the money when the project was finished; however, this was cleared up and only a problem at the project's inception
- Targeting only extreme poor female beneficiaries was difficult
- High levels of illiteracy among beneficiaries caused problems with maintaining basic accounting for the IGAs
- Disseminating the project's message and goals to the beneficiaries was challenging
- There was a lack of confidence among beneficiaries to take part in the IGAs
- Scattered households, remoteness, poor communication and lack of land were all problematic in working with the beneficiaries

Intervention Challenges:

- The traditional way of thinking concerning agricultural practices made it challenging to introduce modern technologies and farming methods
- Beneficiaries were not aware of how to preserve seeds for the next season

- Ensuring year-round vegetable cultivation due to lack of fertile land and irrigation as difficult
- Ensuring hygienic practices in food processing was also challenging
- Group marketing and ensuring regular group meetings and trainings due to the remote and scattered layout of the households was difficult
- Group cohesiveness did not come easily and there was a general lack of interest to work in a group on contour farming
- Some beneficiaries faced problems with wild monkeys attacking their gardens, crops and sometimes themselves
- Husbands did not always allow their wives to attend trainings and meetings
- Introducing a new animal species to the beneficiaries, particularly donkeys and getting the women familiar with them was a major challenge for HKI
- Introducing new, high demand crops to the beneficiaries was complicated

SUCCESSES

All field staff were asked to identify three successes of the project over the last three years. The successes identified were as follows:

Intervention successes:

- They were able to change and adapt the beneficiaries' agricultural practices and introduce new varieties and technologies
- Introduction of sweet potato was very successful in improving nutrition and it has a high market demand
- They successfully introduced a group management method as well as group savings which they can keep in a shared bank account
- The perception of community members also changed; they have adopted similar agricultural practices and livestock techniques as the beneficiaries now
- Beneficiaries are no longer day labourers, rather they are asking other people to work for them, indicating a big change in intra-household perceptions
- Successful orientation of beneficiaries and community members to contour farming which will benefit the hills in the long run and help protect soil fertility; HKI was the first to introduce this method which will be a big change to the Hills in conserving the land; this has been recognised by local elites and government
- Poultry mortality rate has decreased and production rates have increased because they have introduced a new system where they separate the chicks from the mothers to increase production; it has been found that the mothers lay more eggs when they are not with their chicks

Access to Services:

- The beneficiaries were able to gain access to open land
- HKI successfully involved local elites and government officials to become sensitized toward the extreme poor
- Food security and nutrition have now been assured
- Increased access among beneficiaries to local government services, such as health clinics, BARI, local seed vendors and BADC

- There has been an increase in the rate of school attendance among children
- Local animal vaccinators are now available for the community and beneficiaries (one of the interventions was to train local vaccinators in the villages)
- Market systems have been successfully formed with whole sale markets and bigger city markets; other markets have been established for value added products (i.e. banana chips)

KEY LESSONS LEARNT

Based on the challenges and successes realized by field staff, they were then asked to reflect on the key lessons learnt over the last three years. Their responses were as follows:

Key lessons learnt on the innovation/intervention:

- On understanding the environmental context, the soil condition was too loose so they had to change from terraced farming to contour farming; now this farming technique can be applied all over the CHT as it protects against soil erosion and maintains fertility
- Separating the mother hens from her chicks resulted in increased production
- To fully understand the market context you need to talk to different vendors and compare prices, then you can plan where to go to get the best prices
- Maize has been found to be in demand in the CHT as poultry feed and for self consumption; it is also very climate friendly in the CHT context
- By establishing a group marketing committee they have been able to regulate what they plant (maintaining variety) and sell and when, resulting in effective group decision making
- Prices of processing equipment is too high and this would be better to provide on a group-basis rather than to an individual; it has also been found that group-based IGAs are stronger in sustainability and outcome; but a mix of individual and group IGAs is a good model to allow BHHs to do both
- Value processing can add three to four times value by just applying small processing techniques (i.e. turmeric grinding)

Key lessons learnt on working with the extreme poor:

- If you can convince the extreme poor to work as group and increase their confidence they can significantly increase their livelihoods

REVIEW OF THE INNOVATION

HKI submitted its original concept note at the beginning of 2009 and the final project proposal was won as a contract a few months later. However, as challenges arose due to unpredictability or a lack of understanding of a number of factors, such as environmental or social contexts, alterations to the original innovation had to be made in order to maximize gains made by the beneficiaries and ensure their climb out of extreme poverty. Part of the lesson learning process is to reflect on changes to the original innovation and most importantly look at *why* those changes took place and what it can tell us about the innovation.

During the lesson learning workshop, HKI was asked to reflect on how the innovation has changed since the original project proposal was submitted in 2009. It was found that the innovation went through a number of changes particularly in the first year. The main change

from the original concept note was switching from terrace farming to contour farming. The number of donkeys was also decreased from 20 to 6 due to lack of necessity and feasibility of donkeys. HKI had initially planned to bring donkeys from Rajasthan but due to legal constraints they were unable to import them and instead they had to get them from Bandarban. They also wanted to introduce transportation vehicles but due to budgetary constraints and the geographical context they had to change it to power tillers and trolleys. Another change to the original concept note was that poultry was introduced as a secondary IGA.

CHALLENGES: TAKING THE INNOVATION TO SCALE

HKI was asked to identify challenges they may face if they were to take their innovation to scale. They agreed that they would need increased technical expertise to support project activities. They would also require intensive training on contour farming. The remoteness and lack of mobility of the CHT would remain a big challenge if the working area were to be expanded, although with an effective strategy it could be overcome. Furthermore, it would be essential to mitigate potential constraints from political unrest by establishing good relationships with the local elites and government actors. In relation to project activities, increased technical expertise would be needed to cover the diverse number of activities and it would be better to involve beneficiaries' spouses in project activities.

Conclusion: Progress Against Logical Framework

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
Goal: Government of Bangladesh MDG targets 1 and 2 on income poverty reduction and hunger achieved by 2015.	Reduction in the proportion of people living in extreme poverty from 28 percent in 1991/92 to 9.5 percent by 2015, in line with PRSP targets.	Government of Bangladesh, National MDG Report, UNDP and World Bank statistics.		
Purpose: Elimination of extreme poverty for 450 households in 30 remote tribal communities of Khagrachari District by 2015.	450 EPHH (2250 people) have a 30 percent increase in income above baseline average; 450 EPHH have a 30 percent increase in per capita daily expenditures; 450 EPHH have a 10 percent improvement in weight-for-age scores and 30 percent improvement in dietary diversity by EOP.	Baseline and EOP household income survey and expenditure survey; Baseline and EOP data on weight-for-age and dietary diversity.	HKI endline survey data shows that 98% of HHs have a 30% increase in income 98% of HHs have a 30% percent increase in per capita daily expenditures. 94% of HHs have significant improvements in dietary diversity above the baseline where as the target was 30%.	Building skills, productive asset base, health service access, and gender equity enables resilience to health and price shocks.
Immediate objective: Income-generating capacities and opportunities for women	90 percent of beneficiaries (405 HHs) adopt one improved land-management technique,	Land use survey at baseline; KAP survey at baseline	It has been seen from HKI end line data 100% BHHs adopt one improved land	Asset transfer and training will encourage women to take up middle-

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
from 450 EPHH sustainably improved.	one improved food processing, and one improved post-harvest storage technique. 600 households use Marketing Committees to sell produce at a fair price 90 percent of Marketing Committee members earn minimum 500 taka per month from their agricultural activities by EOP 90 percent of women report having sole decision-making control over their own earnings 90 percent of women report that spouses give increased support on household work	and end-line; Income and expenditure survey; Satisfaction survey; Site observations; Baseline and end-line social analysis	management technique, one food processing and one improved post-harvest storage technique. 98% of MC members are use marketing committees to sell their produces at a fair price. 100% of MC members earned more than 500 taka per month at the end of the project period. 90 percent women reported that they received support on household work from their spouses as per HKI end line survey data.	women and producer roles in their households.
Outputs: **O1:** Information and assets for ecologically appropriate land management systems disseminated to 30	2500 community members and 30 headmen/kariburi receive training on erosion control, contour farming, and hillside irrigation. 450 HHs receive lumber,	Training attendance records; Training manual samples in local languages; Invoices for equipment.	All beneficiaries along with community members and headman/karbari received intensive expert training on erosion control, contour	Community members and local authorities will be receptive to land management innovations.

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
remote tribal communities.	tools, and expert training on constructing terraces and irrigation systems in terraced farms. 90 percent of trainees are knowledgeable about reducing soil erosion, creating terraces, and building irrigation troughs. 30 communities receive support to form Resource Management Committees.	External reports of contour farm consultant KAP survey Key informant interviews with kariburi/headmen MSC reports	farming, integrated pest management (IPM), inter cropping, fruit sapling plantation and hill side irrigation and become knowledgeable on these subjects. 450 BHHs have received agricultural tools such as machete, spade, irrigation pump, and expert training on constructing hedge rows (contour farming) and irrigation systems in terraced farms. 90 percent of trainees are knowledgeable about reducing soil erosion, creating hedge rows, and building irrigation troughs. 30 communities receive support to form Resource Management Committees.	

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
O2: 450 extreme-poor households given inputs, equipment, and training on market-oriented food production.	450 extreme poor HHs (EPHH) receive packages of high-quality seeds, saplings, fertilizer, watering cans. 450 EPHHs are knowledgeable on use of integrated pest management, organic fertilizer, raised beds, seed storage, and intercropping. 450 EPHHs receive market information on planting and selling varieties at time of year when local price will be highest	Invoices from seed purchases. Equipment distribution records. KAP survey. External site visits. MSC reports Marketing Committee sales records Market survey records	450 BHHs are given on intensive training on market oriented food production and provided agricultural inputs such as veg. seeds, fertilizer, watering cans. Field cash crop like turmeric, ginger, taro seeds. 450 BHHs have received training on IPM, organic fertilizer, raised beds, seed technology and storage, intercropping. Several linkage events were organized for 450 EPHHs with market actors, vendors, and seed suppliers to use market information and production planning and selling of their produce at higher price.	Better production and storage techniques and support from project management will mitigate any output problems due to floods, pests, and/or drought.

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
O3: 450 extreme-poor households given inputs, training, and equipment on post-harvest storage, processing, and packaging.	450 EPW receive training on use of solar driers, spice grinders, canning equipment, and hygienic packaging. 30 Marketing Committees receive training on adding market value to bulk produce through processing and packaging. 90 percent of HHs report higher annual yields, due to less spoilage and better storage	Equipment distribution records. KAP survey. Site visits. MSC reports Sales records and yield records of Marketing Committees.	450 BHHs are given training on post-harvest processing; value adding, hygienic packaging. High value processing equipment turmeric cleaning machines, grinding machines and solar driers provided to all BHHs as cluster basis to add value of their products. In addition, slicer, juicer, canning jars, poly bags, pan fry provided to beneficiaries.	
O4: 30 marketing committees (MCs) formed and provided with transportation asset, business skills, and marketing information.	450 MC members receive training on numeracy, business management, pricing, negotiation, and book-keeping skills. 30 Marketing Committees receive a livestock asset or power tiller vehicle to transport produce to markets. 30 MCs know how to set fair prices, record	Invoices from asset purchases. Meeting minutes. MSC reports MC logbooks and records. KAP survey. MC profit and loss sheets.	All 450 MC members received training on numeracy skills, business planning and management, pricing, negotiation, and book-keeping skills. 5 power tillers with trolley sets and 6 donkeys provided to cluster basis to transport produces to the markets.	Communities will repair bamboo bridges and potholes in feeder roads to allow carts to pass. MCs will choose a mode of transport that is appropriate for their terrain. Training provided by HKI to DLS will

Objectives	Verifiable Indicators	Means of verification	Progress to date	Assumptions
	transactions, and adjust production according to market demand. 30 MC leaders receive training on care/repair of assets.	Financial visits and observations of asset condition.	Record –keeping materials such as trunk, scale, calculator, register book, pen, etc. provided to 30 MC levels. Turmeric mills operator received training on care/repair of assets.	reduce risk of livestock disease and loss. Marketing Committees will agree on group payment mechanism to cover fodder and fuel costs of asset.
O5: 30 communities provided with nutrition education, gender awareness for men, and UNDP and government health services.	600 EPHH receive bi-monthly Essential Nutrition Actions training. 90 percent of women report that UNDP and Civil Surgeon services have been organised in their communities twice yearly. 450 men receive quarterly gender-awareness sessions on sharing household work, supporting women's income activities	Baseline and EOP nutrition survey and KAP survey Meeting attendance records Immunisation and de-worming records. Activity records of UNDP/Civil Surgeon Office. Baseline-end-line social analysis MSC reports	30 community members are provided training on nutrition education and gender awareness for men. HKI endline survey data shows that 86% of BHHs received health services from UNDP and govt. health department. 90% of beneficiaries said that they have received support from their spouses on household work and income activities.	

Annex: CMS 2 and CMS 4 Findings

BASELINE SUMMARY

Household Target:	**450**			**(No.)**	**(%)**
CMS1 data available:	-		**Total Household Members**	1,980	-
Average HH Income:	1,034	*Tk. per month*	**Average HH Size:**	4.4	-
Average HH Expenditure:	1,248	*Tk. per month*	**Male Headed HH**	-	-
Average HH Land:	-	*decimal*	**Female Headed HH**	-	-
Khasland	-		*No of under 5 children*	23	5
Owned land	0.26		*No. of under 18 girls*	-	-
Not Owned land	0.25		*HH having disabled member*	-	-

SUMMARY OF CMS 2 AND CMS 4

This annex provides a brief summary of change using findings from CMS 2 pilot study conducted from June 2011 through January 2012.

CMS 2 is a monthly snapshot that allows tracking of household livelihoods and of events capable of impacting these livelihoods. It uses innovative mobile phone technology to collect data with the survey being delivered by NGO staff during their normal round of BHH visits. The survey is short and simple, focusing on beneficiary self-assessment of change using a multiple-choice format. The data collected from HKI beneficiaries was a part of the pilot study of CMS2. Therefore, the data only tracks an average of 20 BHHs over a 7 month period from June 2011-January 2012 and change from intervention impact cannot be accurately monitored using only this tool.

Chapter Two provides a more accurate quantitative summary of intervention impact using an endline to baseline comparison of key indicators- income, expenditure, savings, assets, health and confidence.

CMS 2 METHODOLOGY

The CMS-2 pilot questionnaire used a 5-point scale for responses to questions on the following indicators: income, expenditure, health status, and self-confidence. The questions asked the beneficiary to assess the change in each indicator with qualitative responses. In order to take average readings across the project the qualitative responses were converted into quantitative ones. The weights range from +2 to -2 and are equivalent to the qualitative responses, as shown in the table below:

Income	Decreased a lot	Decreased a little	Remained the same	Increased a little	Increased a lot
Expenditure	Decreased a lot	Decreased a little	Remained the same	Increased a little	Increased a lot
Health	Significantly deteriorated	Deteriorated	Remained the same	Improved	Much improved
Self-Confidence	Highly decreased	Slightly decreased	Unchanged	Slightly increased	Highly increased
Weighted Scale	**-2**	**-1**	**0**	**1**	**2**

For questions on savings and assets, the CMS-2 questionnaire responses were binary, with only two possible answers. The questions asked whether the beneficiary had savings or had purchased any assets in that month. The weighted score are equivalent to the qualitative responses, as shown in the table below:

Savings	Have cash savings	No cash savings
Asset	Bought an asset	No asset bought
Weight Score	**1**	**0**

To obtain a monthly value for each of the six variables the weighted average was taken for each one. For example, the monthly income variable for HKI would be the sum average of all the converted responses given for income.

An 'Economic' index was created as a composite of four of the above variables: income, expenditure, cash savings and asset bought. The monthly scores from each of the economic variables can be added together to give a monthly economic composite value for each beneficiary. The absolute maximum score is +6 and the absolute minimum score can be -4. Hence the formula:

Economic = Income + Expenditure + Savings + Asset Bought

A monthly Economic index value for HKI beneficiaries is then calculated by taking the sum average of all of the 'Economic' scores. The scale is then converted to qualitative responses based on the weighted score given equivalent to the maximum and minimum possible scores:

Decreasing Fast		Decreasing Slowly		Same	Improving Slowly			Improving Fast		
-4	-3	-2	-1	0	1	2	3	4	5	6

A 'Socio-Economic' index was created as a composite of all six individual variables. The monthly scores from all of the variables can be added together to give a monthly socio-

economic composite value for each beneficiary. It uses the same formula as the Economic index and adds the extra two variables: health status and confidence. The absolute maximum score is +10 and the absolute minimum score can be -6. Hence the formula:

Socio-Economic= Income+ Expenditure+ Savings+ Asset Bought+ Health+ Confidence

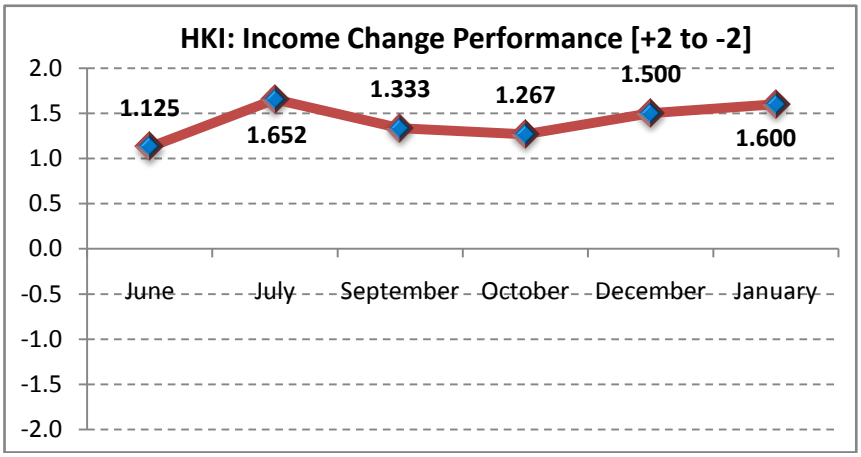
A monthly Socio-Economic index value for HKI beneficiaries is then calculated by taking the sum average of all of the 'Socio-Economic' scores. The scale is then converted to qualitative responses based on the weighted score given equivalent to the maximum and minimum possible scores:

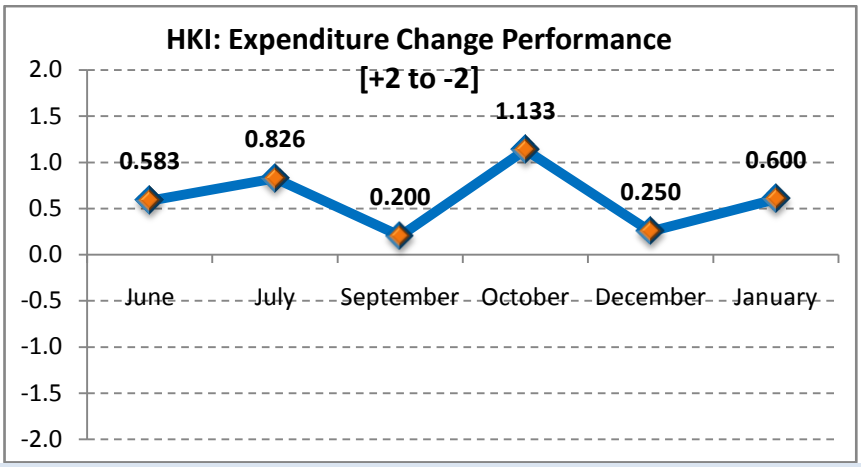
Decreasing Fast				Decreasing Slowly				Same	Improving Slowly					Improving Fast				
-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

SUMMARY FINDINGS FROM CMS 2

Row Labels	Income [+2 to -2]	Expenditure [+2 to -2]	Health Status [+2 to -2]	Confidence [+2 to -2]	Economic [+6 to -4]	Socio-Economic [+10 to -6]	No of Visits
HKI	**1.392**	**0.598**	**0.902**	**1.588**	**3.265**	**5.755**	
June	1.125	0.583	0.458	1.125	2.750	4.333	**24**
July	1.652	0.826	0.783	1.739	3.478	6.000	**23**
September	1.333	0.200	1.067	1.600	3.000	5.667	**15**
October	1.267	1.133	0.533	1.533	3.800	5.867	**15**
December	1.500	0.250	1.900	1.950	3.300	7.150	**20**
January	1.600	0.600	0.200	1.800	3.800	5.800	**5**

INCOME AND EXPENDITURE: CMS 2

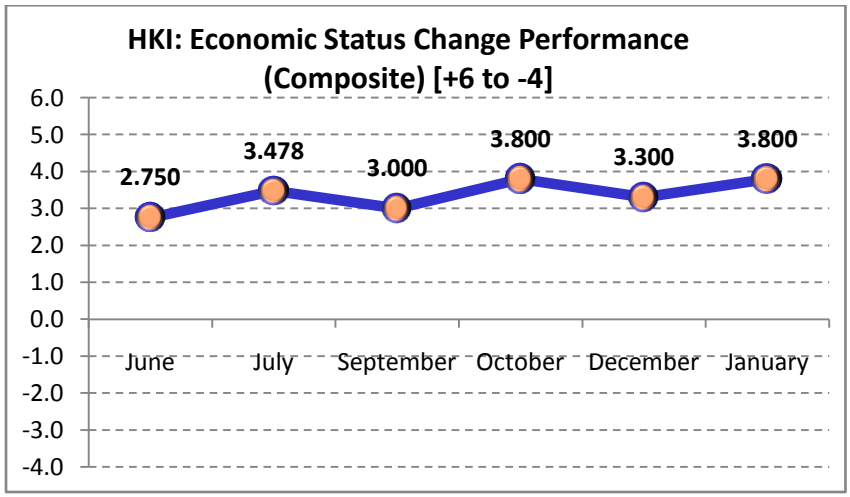




CMS 2 indicates a small to notable positive change in income from June 2011 through January 2012, with an increase in the rate of change since monitoring began.

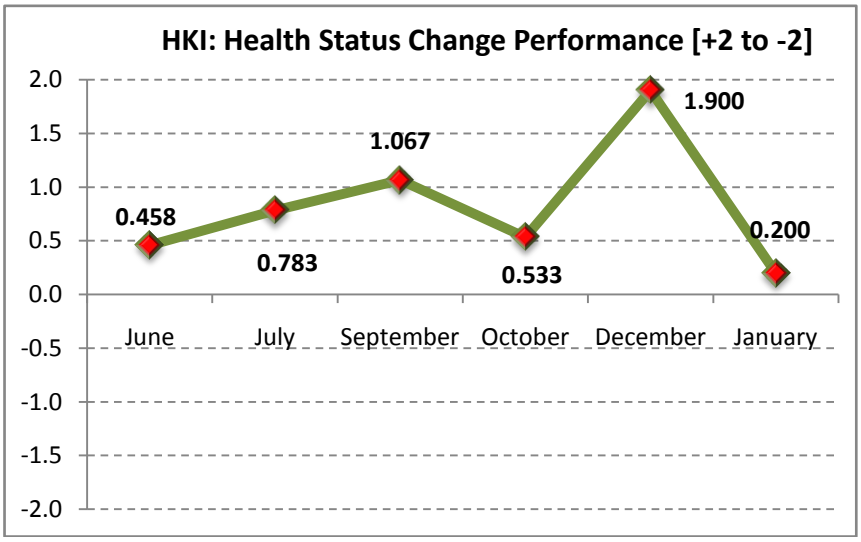
Change in expenditure is more eradicate than income with large variations in that rate of change month to month. On average, BHHs reported slight positive increases in expenditure over the 7 month monitoring period.

ECONOMIC STATUS: CMS 2



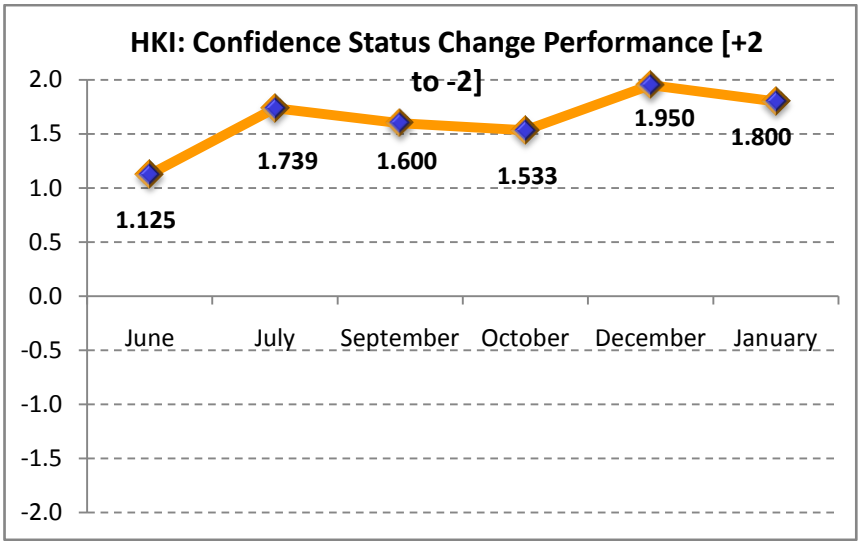
CMS 2 findings for composite changes in economic status, including: income, expenditure, cash savings and assets bought show positive changes from June 2011 through January 2012 with an increase in the rate of change from 2.8 to 3.8 over the 7 month monitoring period.

HEALTH STATUS:



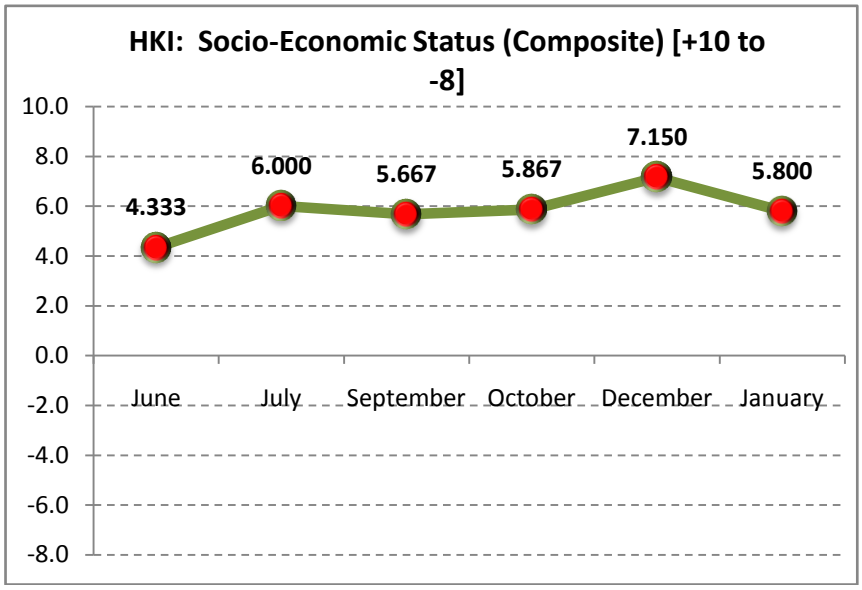
CMS 2 indicates a small to notable positive change in health status from June 2011 through January 2012. However, the rate changes dramatically between September 2011 and January 2012, with a large decrease in change between December and January from 1.9 to 0.2, indicating a possible drop in health status for some BHHs.

CONFIDENCE STATUS:



CMS 2 indicates a small to notable positive change in confidence from June 2011 through January 2012, with an increase in the rate of change since monitoring began from 1.1 to 1.8.

SOCIO-ECONOMIC STATUS:



CMS 2 findings for composite changes in socio-economic status, including: income, expenditure, cash savings, assets bought, health and confidence show notable positive changes from June 2011. BHHs experienced a steady increase in socio-economic status moving from 4.3 to 5.8 over the 7-month monitoring period. December 2011 through January 2012 showed a slight decrease in change from 7.2 to 5.8, correlating with similar decreases in health and confidence during that month.

Annex: FGD Questionnaire

Aim: To reflect the BHHs' view on project's success and impact of interventions

- 1st year BHHs
- 5 to 8 beneficiaries for in-depth analysis (different locations)

Process in selecting households:

1) One where someone mentioned an interesting success story and why

2) One where it failed or did not work so well

Preamble: Thank you for taking the time to sit and speak with us today. We would like to talk to you about your experience participating in the SKS project and to understand what worked and what didn't work in the intervention. We are interested to know how the interventions have or haven't impacted your lives in different areas, what challenges you have faced over the last two-three years, and how you envision your future now that you have been a part of this project. Try to think of what you had before you joined this project and what you have now after two-three years of training and support. We will be asking questions regarding changes in your income, assets, savings, health, food intake, ability to overcome shocks (environmental or health related), relationships with key people – friends, family, moneylenders, shopkeepers, UP chairman/members, political figures – and overall well-being.

We are the students and you are the teachers today – only you know the truth and details of how the intervention worked for you. What we learn today will not directly change your position; however it will be used to improve other extreme poor programmes and better shape the way NGOs and the government work with the extreme poor. Our learnings will hopefully influence the government to sponsor programmes that actually work for the poor and improve their lives.

It is also important to understand that "*This is a safe place to share your thoughts and feelings in regards to the HKI project and nothing you say will impact your relationship with the project field staff.*"

FGD Questionnaire:

Exploring IGA Impact

1. What was your life like one year before you joined the project? What is your life like now? Why?
2. What type of intervention(s) did you receive from the project/NGO? What is the status of your IGA now?
3. How was the IGA chosen for you? Did you ask for it or was it selected by the NGO?
4. Did you receive any previous experience or exposure to the intervention? If not, did you receive training? By whom?
5. What was your income, assets and savings before the interventions? Were there any changes in income, assets, and savings due to interventions?
6. *Where do you sell your produce? Do you get fair prices? (specific to type of IGA)*

7. Will you continue with the same types of IGAs?
8. What would you say worked best about the intervention you received? Why? What worked least well? Can you discuss why it didn't work? Would any of you have preferred to have another type of IGA? If yes, why?
9. What have been some of the key challenges you have faced during this project (regarding the implementation of the IGA)?
10. Would you recommend this IGA to other people? Why/why not? Will you be continuing with this IGA post-project involvement?
11. How long have you spent on this IGA and how has this impacted your daily routine? Did you have to give up other paid work or do less work at home? (Opportunity cost)
12. How suitable is this IGA for FHHs? Disabled? Elderly? If not, why?
13. (**For women**) If a husband operated the IGA, in what ways did his wife benefit and in what ways did she fail to benefit? What would happen if a husband or son who managed the asset later left this wife?

Other Indicators

14. What has been the community's perception of your involvement in this project? Has it improved or worsened your engagement within the community? Explain how and why it changed and what it means for you and your family.
15. How has this intervention impacted your resiliency- your ability to cope during the lean period? How has it affected your ability to respond and recover from environmental shocks?
16. Has the health conditions of your HH improved over the project period? Explain.
17. Do you have better access to health care services than before the intervention?
18. Have your food habits changed since you joined this project? Explain.
19. In general, what has this project intervention meant for you and your family? How have your kids benefitted or not?
20. *Do you feel you are more or less mobile than before?* Specific for FHHs.
21. Confidence- How mentally strong did you feel before the intervention? Do you feel more confident now? In what area are you confident and why?
22. Do you feel assured you can meet your basic needs regularly in the coming year? Why or why not? Do you feel you can prosper beyond your meeting your basic needs in the coming year? Why?
23. Empowerment- In negotiation with your husband, has your power in decision making improved since the intervention? In what areas and why? In what areas has your decision making not improved? Why?
24. Has your power in negotiations with family, community members, shopkeepers, employers, patrons, moneylenders, political official changed? If so how and why? Please explain.
25. Security/resiliency- Do you feel you are more or less able to cope with shocks? What kind of shocks and why?
26. Sustainability- Do you feel you need further assistance, such as safety net support? Why?
27. How has your future planning changed? Has your future outlook changed? How and why?

28. What has your relationship been like with the field staff? Do you feel the NGO staff respect you? Have they ever been rude to you? *This question should not be asked in front of the NGO staff to ensure honest answers.*
29. Has your access to local services improved? For example, access to sanitation and education services?

Annex: Exit Strategy

OBJECTIVE OF EXIT STRATEGY:

i) Achieve sustainability of the project purpose so that it would able to contribute in achieving the goal;
ii) Guide all concerned in strengthening capacity of group and individual so that extreme poor households can lift themselves from poverty line.

Component of exit strategy	Descriptions	Comments/Action to take
Marketing committee establishment	HKI has formed 31 marketing committees from its project beneficiaries. This committee was involved with all kinds of project activities like production plan, agricultural inputs distribution, marketing of products, asset management, poultry vaccination, contour farm management, etc. We have established these committees as a platform of group members to conduct all activities together. We have provided necessary training to all MC groups so that they can run their activities as usual after ending the project.	Every group has a constitution and necessary logistics available.
Accessibility of open land	HKI has organized regular quarterly meeting with headman and karbaries on land issue. As a result, M2W2 project beneficiaries got remarkable access to the open land which has helped them to increase their income status and to get rid from their extreme poverty. The beneficiaries are now closely linked with the headman/karbaries and headman/karbaries are committed to extend their all out support to the beneficiaries in future.	Written contract could be more supportive to ensure land access.
Establish contour farm demonstration plots	To protect soil erosion and increase soil fertility HKI has established 30 contour farm demonstration plots to alert community people on sustainable land management technology, soil erosion and fertility. HKI has taken a lot of initiatives to demonstrate contour farming which is recognized now at the local level as improved agricultural practices. It is now proven to the beneficiaries that hedge rows can protect soil erosion as well as soil fertility which are supportive for frequent cultivation in the same land all year. From this benefit the beneficiaries will promote contour farming in future.	HKI is in progress to publish a practical contour farming guideline for the beneficiaries which will be effective in their contour farming. BARI and DAE can provide technical support to promote this practice. BHHs list has been provided to the DAE and BARI to ensure technical support and follow up.

Component of exit strategy	Descriptions	Comments/Action to take
Community asset management committee	HKI has transferred a number of valuable assets at community level like 3 turmeric grinding mills, 2 cleaning mills with sheds, 5 power tillers with trolley sets and sheds, 10 irrigation pumps. In addition, it has provided 6 donkeys as a pack of hill transportation to the far remote communities. For every asset there is an asset management committee consisted with five members and headed by MC leaders. A social contract was signed during transferring these assets and necessary guideline is developed to maintain and management of the assets. The committees are formally responsible to manage all the things in terms of maintenance service ensuring to their belonging beneficiaries.	Asset management committees will be provided operational guidelines and more orientation on operations. Local elites and headman/karbaries will be included with these management committees. Signing of a social contract during hand over of the assets has been ensured and HKI has plan to facilitate another final meeting with the management committees to give them full ownership and management responsibilities of those assets to the steering committees of each asset.
Market linkages with local and district level vendor	HKI has developed category leaders for every lead product. The category leaders have received a number of training, exposure visits and seasonal market survey. A comprehensive marketing strategic plan for 2012 is also developed and oriented to the MC leaders and category leaders. The MC leaders have been linked with different market actors at sub-district and district level markets, district marketing officer, local research institution, etc. For processed food items some external sources are identified in the big cities like Dhaka and Chittagong and beneficiaries are now practicing for more perfections as per the requirement of the mega malls. We are hopeful that before ending of the project some beneficiaries will have access into some mega malls in Chittagong. After phasing out the project we strongly believe that the linkage between the beneficiaries and different stakeholders will be functional due to their mutual benefit.	Some more initiatives will be taken on product branding under the banner of M2W2 project. For vegetable and poultry marketing space will be searched in the district market with the help of DAMO. For maize marketing PSO BARI-Khagrachari has commitment to link with the poultry feed companies. For processed food marketing colourful and attractive labelling, different pack size for different level customers will be initiated. In each case beneficiaries will be closely involved with all these initiatives.
Accessibility of services to local govt. line departments	The local govt. departments like DLS, DAE, UP, Upazilla Parishad have been closely involved with the project. The UNO is also concern about M2W2 project. They have participated in our different programs. The DAE and DLS officials have extended their support and co-operations to our	Ensure frequent access of the beneficiaries to local DLS for useful vaccinations. Recently HKI organized a vaccinator refresher training cum linkage event between

Component of exit strategy	Descriptions	Comments/Action to take
	beneficiaries. We have developed some para vaccinators and they are mostly dependent on the local DLS office. The vet surgeon and vet assistant have visited our remote field locations to vaccinate the donkeys and poultry birds. This rapport has been developed with a view to make an effective linkage between service providers and beneficiaries. We think the linkage has been developed effectively and it will work in the future.	vaccinators and DLS officials. Moreover, HKI will submit a BHHs and vaccinators list to local DLS.
Accessibility of health services from UNDP and Upazilla health complex	We have ensured 280 health cards from UNDP. The card holders are getting the basic health services from UNDP-CHTDF run mobile health clinic beside the other beneficiaries have been counseled to get health facilities from govt. health department. Our field officers have facilitated to make this card available with our beneficiaries. They are now well aware of getting the services from UNDP and govt. health department.	The far remote people will have to be paid more attention for rendering health facilities from all possible sources. HKI will facilitate the local UNDP partner ALAM to ensure they are aware of health card holding beneficiaries. HKI will work to provide more health cards for the beneficiaries. A set of group lists will be provided to ALAM and UNDP for their services and follow up.

Annex: Financial Overview

Budget Line	Total Contract budget	Total Expenditure as on Jun'12
Human Resource Cost	8,315,903	7,598,962
Travelling Cost	2,901,660	2,625,678
Vehicles & Equipment	893,627	893,627
Office Rent & Utilities	383,422	372,956
Administration cost	772,947	651,731
Operational Cost	1,287,007	990,690
Direct Delivery to Beneficiaries	12,425,452	11,320,520
Total Direct Cost	26,980,018	24,454,166
Contingencies	138,264	-
Management Cost(Over head)	4,047,003	3,668,125
Total Cost	31,165,285	28,122,291
No of Beneficiaries		*450*
Total cost per BHH		*69,256*
Direct cost per BHH		*25,231*

Note: Amount in BDT

Annex: Case Study

I am one of the extreme poor living in Roctochhari para. My family comprises my husband, one son, and one daughter. We are a landless family; we usually cultivate about 40 decimals of paddy land through share-cropping system, where we have to provide 50% crops to the land owner. We do not have a bull of our own, so we had to rent a bull for preparing the land, and usually we repay the hired fees by providing crops after the harvest. In this way, after harvesting, we can keep only one-third of the harvested crops for ourselves. This leaves us with about one and half months of food for household consumption. So for the rest of the year, we didn't have any food security, and our only resort is trying to earn from day labour just to meet the family demand. We did not get sufficient time to grow any vegetables at their homestead, so we had to buy vegetables from locality and market. In this situation, I could not even mange to buy clothes for my kids to go to school.

During the last season, the M²W² project field officer advocated with the community leaders for me to use a hilly slope of open land for cultivation. This year, I was able to cultivate 110 kg of turmeric seed. I received 30 kg of seeds from M²W² project and managed 80 kg on my own. I harvested turmeric during mid-December and got very good production. After keeping around 80 kg seeds for replanting, I sold rest of the turmeric to local vendor and received 18,000 taka ($233 USD). Then I bought rice paddy worth 8000 taka ($103 USD), which is enough to meet my family's demand for six month period. With the rest of the amount, I am planning to purchase calf.

Annex: Supplementary Findings from HKI

Final Evaluation Report

MAKING MARKETS WORK FOR WOMEN (M^2W^2)

Helen Keller INTERNATIONAL

Table of Contents

ACRONYMS

BHH	Beneficiary Household
CHT	Chittagong Hill Tracts
DFID	UK Department for International Development
FANTA	Food and Nutrition Technical Assistance
FCS	Food Consumption Score
HFP	Homestead Food Production
HH	Households
HKI-Bangladesh	Helen Keller International - Bangladesh
IGA	Income Generating Activity
IDF	Integrated Development Fund
IPM	Integrated Pest Management
LRU	Learning and Reflection Unit
M^2W^2	Making Markets Work for Women
M&E	Monitoring and Evaluation
MAHFP	Months of Adequate Household Food Provisioning
MC	Marketing Committee
MDGs	Millennium Development Goals
MSC	Most Significant Change
NGO	Non Governmental Organization
PMP	Project Monitoring Plan
RD	Round
Shiree	Stimulating Household Improvements Resulting in Economic Empowerment
TOT	Training of Trainers
UK aid	United Kingdom Assistance for International Development
UNDP	United Nations Development Programme
WHO	World Health Organization

INTRODUCTION

In 2009, Helen Keller International (HKI) initiated Making Markets Work for Women (M^2W^2), a three-year development project, funded by the UK Department for International Development (DFID) Challenge Fund1, in the Chittagong Hill Tracts (CHT) of Bangladesh. The M^2W^2 project has built upon HKI's existing work and partnerships with the local Integrated Development Foundation (IDF).

The overall goal of the M^2W^2 project is elimination of extreme poverty for 450 households in 31 remote tribal communities within Khagrachari District by 2015. Part of Shiree, a program supported by the DFID, M^2W^2 aimed to achieve this goal through five major interventions contributing to the MDG of reducing the proportion of people living in extreme poverty from 28% in 1991/92 to 9.5% by 2015.

The profile of extreme poverty in the CHT differs significantly from the patterns in urban or plain-land areas of Bangladesh. The extreme-poor participants in remote areas of the CHT have been selected through participatory wealth ranking, which was cross-referenced with a household survey to confirm eligibility for the project. The responses given by participants were adapted to create objectively verifiable indicators according to Shiree suggestions. The baseline survey was piloted to adjust income and asset cut-off criteria. Tribal leaders were informed of the project goals and activities to secure general support. While M^2W^2 targeted the extreme poor as its direct beneficiaries, many other members of the community were able to benefit indirectly.

To better understand the dynamics of the target communities and minimize potential friction resulting from the project, HKI conducted a baseline analysis of the project focusing specifically on social issues posing the greatest threat to the empowerment of extreme-poor women. These included the insecurity of land tenure, challenges of group-based decision making, and the potential social backlash from spouses and/or community elites. Discussions with communities pointed to a strong tradition and firm belief in social solidarity and collective decision-making, yet the extreme poor were marginalized from many community processes. Directly empowering the extreme poor may unleash a potential backlash from more elite groups in the communities. Given the vital role of and universal respect for the traditional leaders, the success of the M^2W^2 project depended largely on the ways it engaged community leaders to understand the aims and broader benefits to the community.

Most community members' reported that women's visibility and participation in community life has increased over the years and that they now accord more respect. However, extreme-poor women remain excluded from many aspects of community life because of economic marginalization and a lack of useful skills. The project directly aims to change this dynamic through skills training and decision-making practice.

In terms of the M^2W^2 project's proposed agriculture and marketing changes, it was clear that land disputes and land loss remained critical constraints during and beyond the project, and this issue must continue to be addressed. The attitudes of jhum cultivators suggested they were receptive to new production techniques including fixed-plot and contour farming, composting,

and post-harvest processing. Like others, they seem to actively seek new livelihood options, which enable them to maintain their agriculture-based lives while also increasing their income.

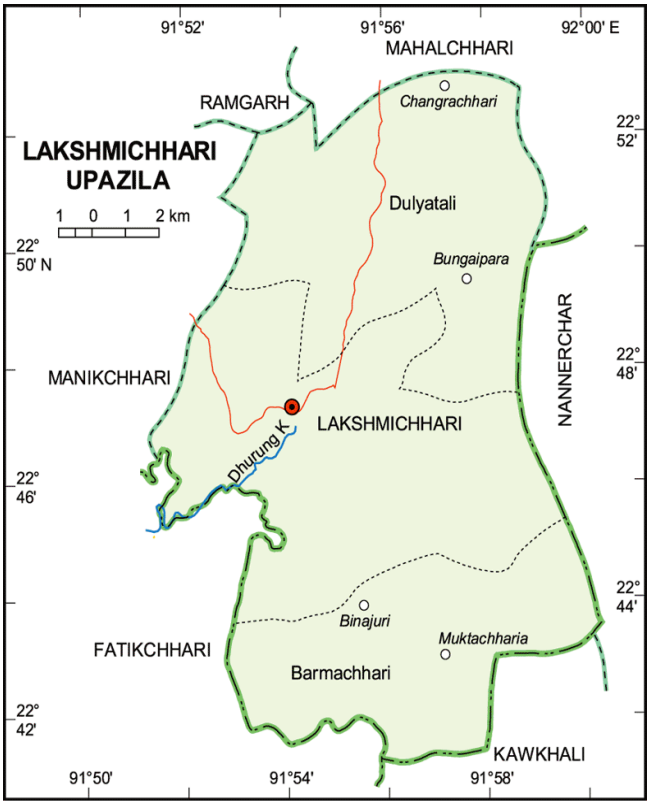
METHODOLOGY

The agriculture-based project was designed to support extreme poor women farmers to adopt sustainable, market-oriented production practices. The project's market-oriented approach assisted beneficiaries to form Marketing Committees (MCs) and provided each group with transportation assets. One woman from each group was trained as a "middle woman" and was supported to establish links with market vendors and improve her marketing skills and use of market information.

OUTPUTS

The goals of the project are outlined in the following five interventions:

Figure 1: Operational areas of M²W²



1: Information and assets for ecologically appropriate land management systems disseminated to 31 remote tribal communities.

2: 450 extreme-poor households given inputs, equipment, and training on market-oriented food production.

3: 450 extreme-poor households given inputs, training, and equipment on post-harvest storage, processing, and packaging.

4: 31 marketing committees (MCs) formed and provided with transportation assets, business skills, and marketing information.

5: 31 communities provided with nutrition education, gender awareness for men, and UNDP and government health services.

SELECTION OF PARTICIPANTS

The areas where the intervention would take place were selected using updated World Food Program (WFP) upazilla-wise poverty maps of Bangladesh from 2005, coupled with data from the Bangladesh Bureau of Statistics (BBS) regarding the percentage of the population living below the upper and lower poverty lines. The extreme-poor participants in the remote areas

were selected through participatory wealth ranking, which was cross-referenced with a household survey to confirm eligibility for the project. Inclusion criteria mandated that participants have a daily per capita expenditure of less than 22 taka per day ($0.31)[16].

PROJECT EVALUATION

In an effort to assess the impact of project objectives, an evaluation survey was conducted in mid May 2012. The results of the survey provide answers to key questions related to lessons learned concerning best practices and sustainability and lead to recommendations for future programming. This report reviews the progress made against each indicator and examines the implications of these findings with a discussion of the strengths and limitations of the programmatic approach.

The end-line survey was designed to obtain information that can be compared directly with the results from the baseline survey (and, where possible, with rounds of monitoring as well). To this end, the end-line questionnaire included the same questions and response categories as the baseline survey. Some additional questions from the monitoring rounds were included to measure additional indicators of household agricultural best practices, processing and spousal support.

This report presents data from a number of sources. Both qualitative and quantitative data are included from regular program monitoring and from surveys undertaken at baseline and end line. Each data source is described in further detail below.

QUALITATIVE DATA

Over the course of the program period, HKI and partner NGO (pNGO) staff undertook several qualitative research studies. These included a Most Significant Change (MSC) story, an annual review workshop, and Focus Group Discussions (FGD). FGDs were conducted in April 2012. The last annual review workshop took place in July 2012. An MSC story can be found in Appendix 1.

PROGRAM MONITORING DATA

From the beginning, M²W²'s M&E system was designed as a rolling census of all 450 households in 31 village/paras of M²W² project areas. Two rounds of data were collected during the program period. The first round was collected from May to October 2011 and referred to as Seasonal Monitoring 1 (rd1). Seasonal Monitoring 2 (rd2) took place between November 2011 and April 2012. HKI and IDF staff came together to review monitoring data and reflect on the program's strengths, challenges, and lessons learned while planning future activities. Portions of feedback from the review workshop were included in the monitoring report completed after rd1.

[16] Conversion rate: $1=70 taka

SURVEY DATA

The general end line survey took a much broader view of the program than the baseline survey, with questions on demographics, socio-economic status, household food security, dietary diversity, gender and decision making, and anthropometry of women and youngest child under two. It followed a pretest-posttest experimental research design with the questions, structure, and technical approach based largely on the baseline survey.

The survey used structured questionnaires that were designed and developed by HKI in English and subsequently translated into Bangla. At both baseline and end line, the questionnaires were converted to an electronic format and published on a Personal Digital Assistant (PDA).

Below are the specific components of the surveys:

Demographics: Basic background information of respondent and family, including: level of education; livelihoods and income; specific information on children under 24 months of age.

Household Income, Expenditure and Asset Ownership: Detailed information on seasonal agricultural activities; improved cultivation practices; food processing; land management; household production of fruits and vegetables; poultry raising; market approach.

Household-Level Food Security and Dietary Diversity: This section provides details on diet diversity and quality. Categories based on the Dietary Diversity Score (DDS) and two additional indicators of household food security were measured: the Food Consumption Score (FCS) and the Month of adequate food provision (MAHFP). The FCS provides a more accurate measure of the quality of the household diet, and the MAHFP provides information about household vulnerability to food insecurity during times of stress.

Maternal and Child Health Care Practices: This section includes information about antenatal care, breastfeeding and infant feeding practices, child vaccination coverage, prevalence and treatment of common childhood illnesses, and care-seeking practices for those illnesses.

Anthropometry: Weight, height and age measurements for children 6-24 months (information collected in the survey of households with under-2 children).

Self-efficacy: Includes information on self-efficacy and response: spouse support in daily household work.

TRAINING, COORDINATION AND SUPERVISION

A team of five mixed-gender pairs of data collectors and a field supervisor conducted data collection. All data collectors attended a training led by HKI's Research Officer and supported by the Learning and Reflection Unit in Dhaka. The training was conducted over five days, from May 8 to May 14, 2012. The last day was used for field practice and pre-testing of the M^2W^2 end line survey instrument. Actual data collection took place from 15 May 2012 to 29 May 2012. The Field Supervisor (FS) conducted spot observations to assess the skill of the data collectors by

randomly re-interviewing some respondents to verify reliability and validity and performing random field editing to ascertain completeness and consistency.

All teams were able to communicate via cell phones with the FS. The FS visited each team regularly in the field to provide quality control of survey procedures. The HKI Field Supervisor and Research Officer were ultimately responsible for supervision and data quality control issues, respectively.

A questionnaire field guide, field manual, birth calendar and anthropometric guide were also developed to ensure that all five survey teams approached the collection of quantitative data in the same consistent manner.

DATA ANALYSIS

All information was recorded directly into personal digital assistants (PDAs). The data analysis was performed using statistical package SPSS version PASW Statistics 17 and Stata Version 11.0. The nutritional data analysis was performed using WHO Anthro software.

LIMITATIONS

The data collection process was challenging. Some of the villages visited were located far into the hill. Given the poor quality of the roads, villages were often reached by foot. Travelling to several of the more remote sites required survey teams to walk miles each way across flooded terrain. Other limitations include the following:

1. Two day transport strike in CHT.
2. No one at home.
3. Mother went to hospital for delivery.
4. Migration.

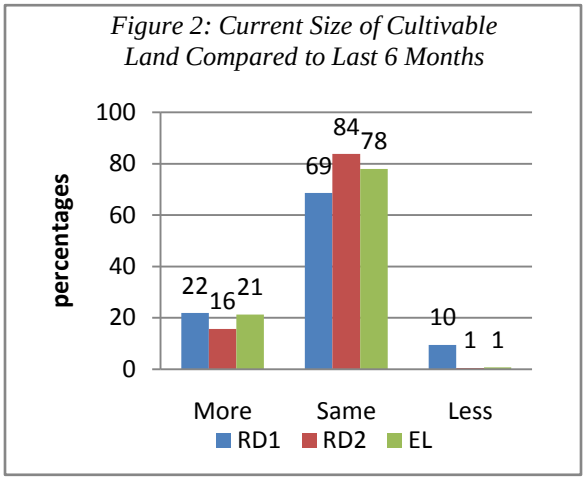
A record was kept of how many households were skipped and for what reason. Of the ten HHs skipped, nine were due to migration.

PROGRAM OUTPUTS

Output 1: Information and assets for ecologically appropriate land management systems disseminated to 30 remote tribal communities.

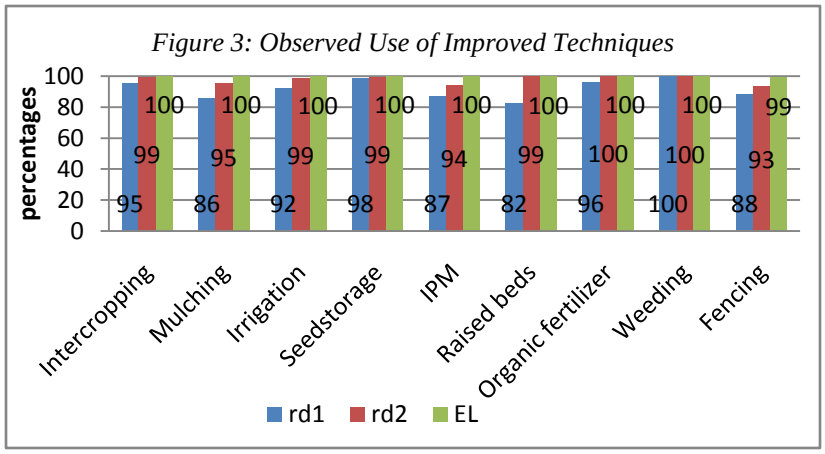
M^2W^2 with working partner Bangladesh Agricultural Research Institute (BARI) research center, which is a resource for appropriate seeds, technologies, and technological advice, developed a model of multi-strata intercropping, in which fruit trees or pineapples are planted on the contour of the hill, while the top can be used for jhum crops and vegetables in 30 communities for 450[17] beneficiary households. Where possible, an artificial dam can be created between hills, providing year-round irrigation. Intercropping fruit trees and vegetable or jhum cash crops will allow women to realize immediate incomes and meet food needs, as well as to build up intermediate and longer-term economic gains from the more profitable fruit crops.

[17] Indirect beneficiaries may be around 2500 as per PMP.



Thirty headman/kariburi also received training on erosion control, contour farming and hedgerow and hillside irrigation under the M²W² project. Beneficiaries received initial and refresher trainings and equipment throughout the project. To understand how M²W² participation affected their access to resources and the pressures they face related to the land acquisition, beneficiaries were asked whether the current size of land they cultivate has changed in the last six months. Figure 2 shows that about 78 % have the same amount of land as they had at the beginning, while 21 % of beneficiaries stated that they have gained access to more land area for farming at the end of the project. This extra land was made accessible through various means such as simply clearing more open land for use, taking a lease, sharing a relatives' land, accessing khash land, or renting land in exchange for rice. About 1% percent reported that their land size was reduced compared to 10 percent in RD1 monitoring. This small decrease in land use may be due to the continuing negotiations by M²W² staff with headmen and kariburi for open land and informal written agreements with the headman/ kariburi, the landowner, and the beneficiary to guarantee their access through the duration of project.

Output 2: 450 extreme-poor households given inputs, equipment, and training on market-oriented food production.



In the end line survey, beneficiaries' individual plots were critically observed by the data collectors for evidence of nine improved practices including fencing, weeding, use of fertilizer, and appropriate intercropping and seed storage.

Figure 3 illustrates that almost every new practice was adopted by 100% of the beneficiaries. The practices of adapting the use of raised beds and mulching were further promoted after receiving round one monitoring results indicating the need to improve soil quality and agricultural productivity. These tremendous result were found mainly because all 450 BHHs and 31 contour farm beneficiaries received fertilizer, high-quality vegetable seeds/seedlings (including maize, paddy, turmeric, potato) and pineapple, mango, banana and papaya saplings during each planting season. The seeds were selected based on the interest of MCs and a participatory market survey carried out with each group.

Along with the necessary inputs, beneficiaries received training and follow-up on crop production and land management. Gardening around the homestead entailed many new agriculture techniques and practices for most of the beneficiaries. The RD1 and RD2 monitoring surveys provided up-to-date information on whether the trainees adopted the new techniques taught by the program.

Table 1: Source of seeds

	Buy from market	Buy locally	Harvest own seeds	Other (IDF)
BL	62.4	78.3	21.9	0.5
EL	32.4	68.9	6.4	91.3

At baseline, 22% (Table 1) of respondents had used saved seeds as a source of seed from their own stock to replant in subsequent seasons while in end line it was only 6.4 percent which points to the fact that people were able to use higher quality seeds obtained from IDF and elsewhere. The endline survey shows that 100% of beneficiaries are practicing seed storage (Figure 3), which is be a significant step toward self-sufficiency in subsequent growing seasons.

Output 3: 450 Inputs, training, and equipment on post-harvest storage, processing, packaging

Under Output 3, the beneficiaries were taught post-harvest grading, sorting, and processing techniques to improve presentation and market value of their goods. Linkage events were also organized with vendors, pikers, wholesalers, retailers, and sales and display centers to establish the promotion of the sale of processed foods. The end line survey assessed the beneficiaries' adoption rates of these practices. Figure 4 shows that about 95% of beneficiaries practiced grading and sorting of their vegetable produce before taking it to market. This finding did not change much from the two rounds of data collection. Pineapple processing for market increased from 19% at baseline to 33% by the end of the project. (Figure 5).

Figure 4: Vegetable Processing for Market

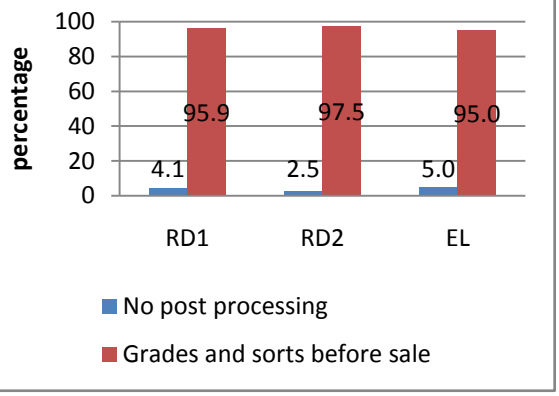


Figure 5: Pineapple Processing for Market

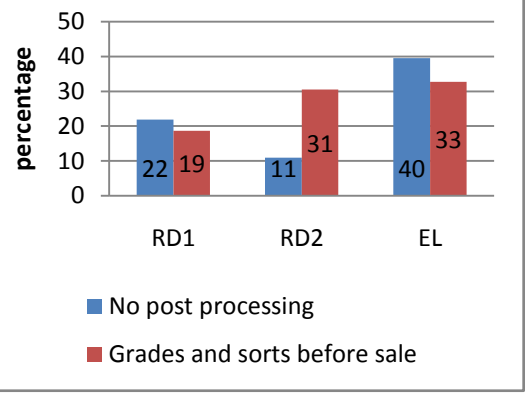


Figure 6: Turmeric Processing for Market

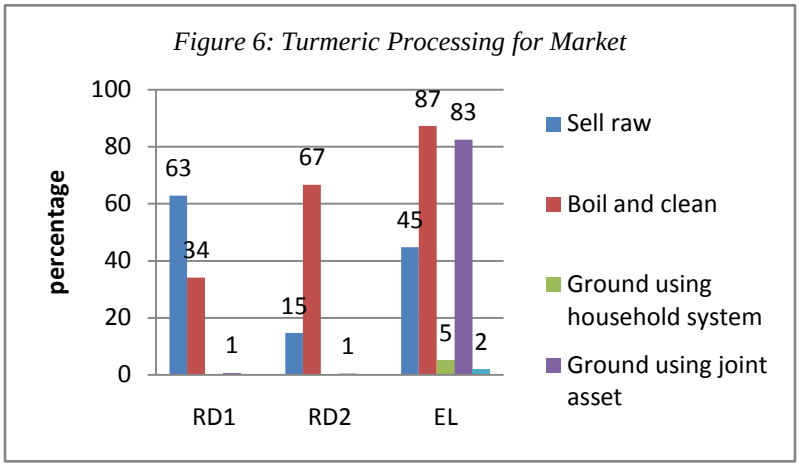


Figure 6 shows that, at end line, 87% of beneficiaries were boiling and cleaning the turmeric (rather than selling it raw) to obtain a better price in the local markets. Beneficiaries reported that they were selling both raw and processed turmeric at the time of the end line survey. Multiple responses were allowed during end line questioning for this question. Since turmeric was the main cash crop produced by the beneficiaries, turmeric grinders and training to use these machines were given to an Asset Management committee formed by the MCs and project staff members.

Table 2: Reasons for Losses

	RD1	RD2	EL
Harvested produce had gone bad before sale	70.3	43.7	21.4
Harvested produce sold at reduced price because of partial spoilage	66.8	35.7	20.0

Despite the improved post-harvest practices, the end line survey reveals that beneficiaries are still experiencing significant losses due to pests and the inability to get produce to market in a timely manner. Table 2 shows that a fifth of the beneficiaries experienced some sort of production and post-harvest losses.

While the total volume of damaged produce is low, the beneficiaries were still reluctant to sort out the few damaged pieces before selling them. At end line, 20% beneficiaries sold their harvested produce at reduced price due to partial spoilage. Despite these difficulties, the beneficiaries reported that current sales are higher than in the past due to improved post-harvest processes. Data has also showed that the average number of hours spent working in the contour farming (group) plot is about 3 hours compared to less than 1 hour in baseline indicating that these group plots are of worth to the beneficiaries.

Output 4: 30 Market Committees formed and provided with transportation assets, business skills, and marketing information

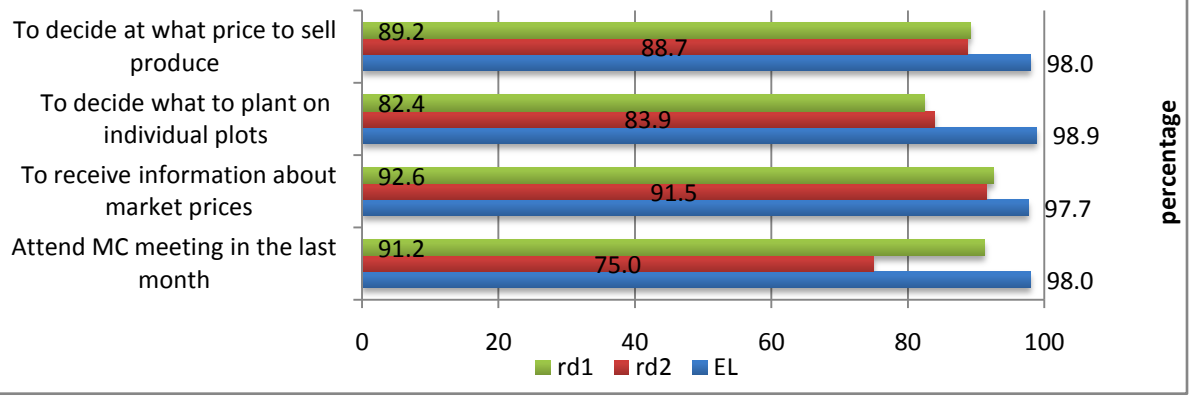
The M^2W^2 project was designed as a complex intervention, with a number of innovative components that challenge existing practices related to agriculture, organization of marketing, and the role of women which all represent a significant change for extremely isolated clusters of communities who have little experience with markets and are troubled by on going political unrest and land issues.

The marketing component was designed to "establish advisory and supply mechanisms for innovative crops for sale and to facilitate training for improving market timing through varieties and storage, value-added processing, and micro-enterprise development." Through

exposure visits, the Marketing Groups were to strengthen beneficiaries marketing skills and develop their capacity to use market information to maximize income gained from surplus produce sales. As part of developing a market information system, MCs maintained a register system to characterize current smallholder market systems and to develop a market data collection system. M²W² marketing officers were trained to collect and disseminate monthly market data - commodity prices, products sold, and local distribution channels at local, regional, and wholesale levels. Market data from other sources were used for comparison and a monthly market analysis was implemented to guide strategy development with dissemination of market data back to the community. The program middlemen in the vegetable marketing channels received and utilized this information. Most local vendors and consumers are also aware of the consumer and producer prices and these prices usually do not fluctuate widely. Moreover, with accessibility of cell phones, much of the market information is now easier to gather with a direct call to the market rather than through program staff.

To measure whether households were using the marketing committee approach and how the groups might have had an impact on purchasing power, end line surveys included several questions on the groups' activities and individuals' level of market knowledge. The proportion of respondents who said they got up-to-date price and demand information from the marketing groups also increased by end line. Figure 7 show that MCs played an important role in beneficiary's sales strategies. About 98% of beneficiaries attended the last Marketing Committee monthly meeting. About 98.9 % of them reported this meeting helped them decide what to plant in their individual plot. Over 97.7% also received information from the MC on market prices.

Figure 7: Households Using Marketing Committees



The overarching goal of M²W² was to give extreme-poor women skills and support to improve their market participation. To accomplish this, M²W² provided master training including numeracy, business planning and management, pricing, bookkeeping and negotiation skill development. The percentage of respondents who reported knowing how to use market price and demand information also increased as households received training and education on these topics through the MCs.

Overall, the data seemed to show an increasing trend toward the utilization of marketing groups, and increasing confidence in the ability to use market information for increasing household income. The success of the project rested heavily on the motivation and interest of

the target populations working together in groups, their willingness to take risks and adapt different practices, and on the stabilization of the political situation.

The M²W² project distributed five power tillers with trolley sets to clusters of MC groups, and six donkeys had been distributed to three remote clusters as a transportation asset at the remote places. End line data shows that about 72% of beneficiaries used joint transportation asses to send good to market while in RD1 and RD2 it was 7% and 53%, respectively. Table 3 looks at how beneficiaries are transporting their produce to market. Data shows that 17.1 % of households were hiring transport to carry goods to local market compared to 36.6 % in baseline. The end line data also shows that 67.4% used trolleys to transport their produce to the market.

Table 3: Transportation Methods for Taking Produce to Market

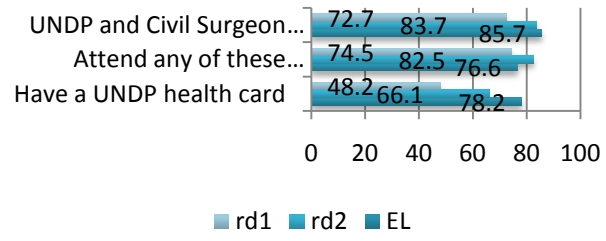
	Trolley attached with a power tiller (provided by IDF)	Shoulder carry/on foot	Hire another to take on motor vehicle	Use a donkey	Other
BL	.0%	63.4%	36.6%	.0%	.0%
EL	67.4%	1.6%	17.1%	13.2%	.7%

The average number of times women go to market to buy goods is 4 compared to 3 in baseline. In contrast, average number of times women go to market to sell goods is 5 compared to 2 in baseline. It is hopeful that selling practice has been increased more than buying practice.

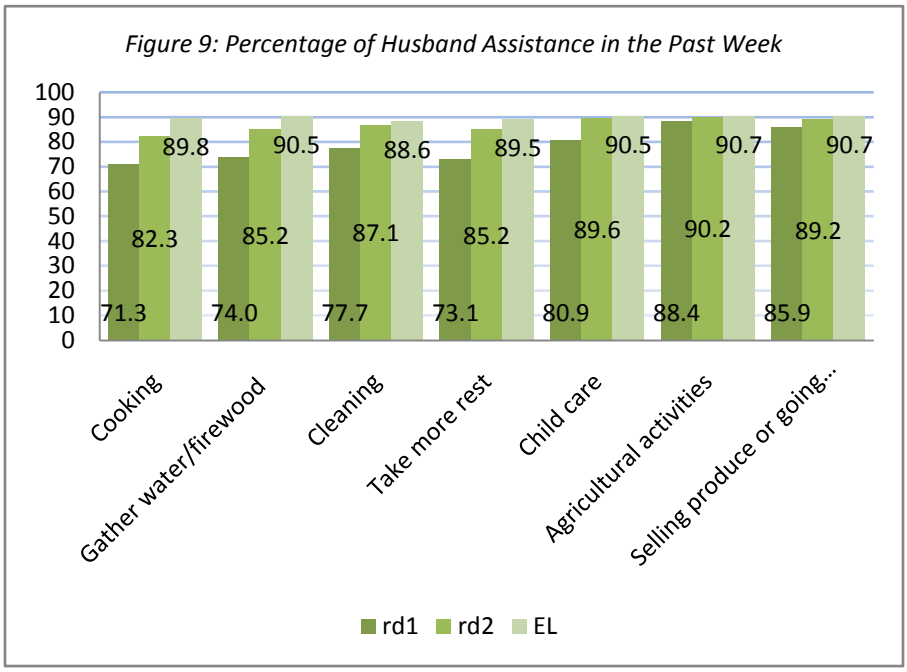
Output 5: All communities provided with nutrition education, gender awareness for men, UNDP, govt. health services

M²W² Field Officers received TOT training on Essential Nutrition Actions from the HKI nutrition team. In addition, the Hill District Council community health workers and government health assistants were trained by HKI and provided with the names of all beneficiary households. Figure 8, below, suggests that this linkage has enabled the beneficiaries to obtain satellite health services provided by government and UNDP health workers.

Figure 8: Organization and Use of UNDP and Civil Surgeon Services



About 85.7 % of beneficiaries reported that UNDP or Civil Surgeon services were organized in their community in the past six months. This is close to the program target of 90%. Almost 76.6% reported that they themselves had attended any of these programs, and 78.2% had received a UNDP health card for the first time. For remote, marginalized community members, this represents a significant improvement in access to free, critical services.



Alongside the nutrition training, the M²W² team organized gender education training for the women's spouses and other male community members to encourage an environment recognizing women's multiple contributions to the household and community and to provide support in the household for 'reproductive' or domestic tasks for the women's economic empowerment and self-efficacy. By dividing training into three parts—conducting a daily schedule of men's and women's activities, mapping household asset management patterns, and looking at how women's and men's work is valued differently—remarkable changes occurred in the level of support from husband's. The endline data (Figure 9) show that majority of the beneficiaries' spouses are now involved in some household support, including cleaning (88.6%), gathering firewood (90.5%), cooking (89.8%), and allowing their wives to take rest (89.5%). However, it is clear that the majority of spouses are mainly involved in supporting the agricultural and marketing activities, which may be a concern for intrahousehold income control.

RESULTS

4.1 Demographics

Demographic information of M²W² households was collected during baseline and end line. The survey gathered data on age, religion, ethnicity, marital status, educational attainment and household size of all participants. Of the 450 project participants, a little less than half are aged between 25 and 34 (Table 4). This was likely due to exclusion/inclusion criteria: only households with young children were selected and households having older children were excluded. The mothers of young children in Bangladesh fall predominantly in the 21 - 30 age category. The average family size of participants grew from four at baseline to five by the end of the project.

Table 4: Age Distributions of M²W² Beneficiaries

	15-24	*25-34*	*35-44*	*45-54*	*55-65+*
BL	24.2%	42.4%	21.3%	9.6%	2.4%
EL	15.2%	45.2%	21.8%	13.9%	3.9%

At baseline, most of the participants, 91%, were married while divorced and widowed participants represented 2% and 7%, respectively. In comparison, at end line, 98% of women were married while divorced and widowed participants totalled 1% each.

During baseline it was found that ethnic group is a direct predictor of religion. Because of this finding, the end line survey did not ask for information on religion and ethnicity. The ethnic diversity of the population and corresponding variety of languages and belief systems had implications particularly for the communication between staff and group members and the cooperation among Marketing Committee members. The training component of M²W² has helped the different groups work together with more collaboration and understanding.

Education attainment has improved somewhat since the baseline survey when 92 percent of individuals reported having no education and 89 percent reported having received at least some education. The literacy rate was similarly low at baseline. While reading, writing and counting abilities were assessed at baseline, only the counting ability of beneficiaries was measured at end line. Counting ability was calculated on the basis of beneficiary's ability to fill in the blanks for subtraction and multiplication problems. Each question was broken down into three categories: cannot count, can count but cannot write and can count and write.

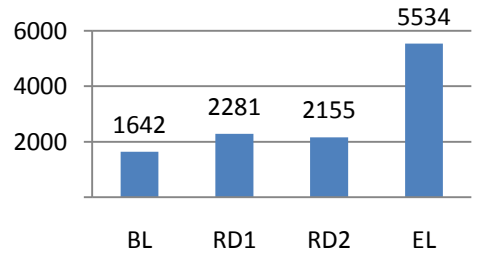
The project required a minimum knowledge in mathematical calculations because of its market-oriented approach. Introductory training on counting and educational kits were provided to beneficiaries during the training period to improve their literacy. Educational kits included items such as paper and pencils. End line data show that low numeracy rates remain and continue to present critical barriers to market participation and empowerment for the extreme-poor. Project staff and Market Committees worked hard to overcome these challenges to strengthen group work and record keeping during project implementation. The percentage of participants reporting no mathematical ability reduced by four percent from baseline to end line, moving from 94% to 90%. Similarly, those with low mathematical ability decreased from 4% to 2%. Those reporting a moderate mathematical ability increased from 2% to 8%.

4.2 HOUSEHOLD INCOME, EXPENDITURE AND ASSET OWNERSHIP

Income

M²W² aimed for an average 30% increase in beneficiary incomes from baseline to end line. Figure 10 looks at average increases in income from all sources during three stages of project duration. The income sources included agricultural production, loans, day labor, poultry rearing, handicrafts, remittances, and sales of bamboo and forest products. Data show that the average income of households nearly quadrupled, from 1642 taka at baseline to 5534 taka during end line. The sources of income also shifted, with agriculture accounting for a greater percentage of all income at end line.

Figure 10: Household Monthly Mean Income (TK)



According to data, 98% of households have achieved a greater than 30% increase in income in all three seasons (summer, winter and rainy) compared to baseline. The relatively greater increase in incomes during the summer and rainy season reflect an adoption of homestead gardening techniques, which allow beneficiaries to produce and sell agriculture products year-round, and consequently account for greater increase in expenditures relative to the same season at baseline. This is because beneficiaries are

trained in sustainable agricultural techniques and post-harvest processing technologies, which aim to improve yields and incomes from produce.

Expenditure

Daily per capita expenditure of less than 22 taka per day ($0.31) was one of the defining selection criteria for participation in the project. Data on expenditure was collected from participants by asking them to recall seasonal intermittent expenses made on agricultural inputs, health expenses, livestock purchase, loan repayment, educational fees, clothing, rents and yearly festivals. Recurrent expenses such as *chada*, gifts, savings, food, tobacco, kerosene, stationeries, hygiene items and routine medication etc. were requested on the basis of the amount expended on them in the past month. Figure 3 below shows the range of household mean monthly regular expenditures. The mean monthly regular expenditure was found to be Tk. 4573 at end line while at baseline it was Tk. 2566. Information was also collected on household's irregular expenditures over the last three seasons. Figure 12 shows that average regular and irregular monthly expenditures were nearly 3 times higher during end line.

The monitoring round did not collect information concerning seasonal irregular expenditures. This is related largely to limited or diminished land access. Information on 'faltering' households was collected from Round 1 monitoring and review workshops. The names of these "faltering" households were provided to Field Officers, who were then able to provide closer follow-up (including additional poultry support and IGA activities) to help these households achieve the goals of the project.

Figure 11: Household Mean Regular Expenditure in a Month

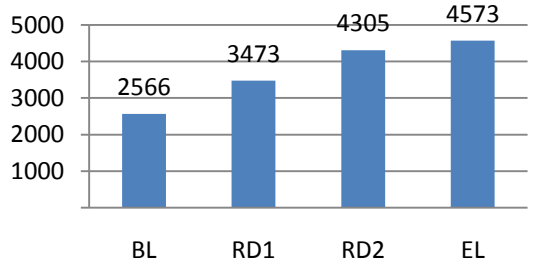


Figure 12: Household Mean Regular & Irregular Expenditure in a Month

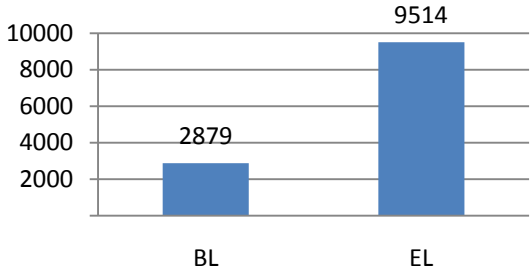


Table 5: Amounts of savings

	BL	EL
0	53.8%	23.0%
<1000	45.6%	16.4%
1001-5000	.7%	50.5%
5001-10000	.0%	7.0%
10001-15000	.0%	3.2%

At baseline more than half of the beneficiaries had no savings. By the end line evaluation, 23 percent reported having savings (Table 5). Approximately half of the beneficiaries now have at least 1000 Tk. in savings.

Asset Ownership

The number of household assets, as opposed to current income, is used as a measure of household wealth. This indicator provides an indication of the longer-term economic condition of the household. Households that have been able to accumulate a large number of assets have enjoyed substantial periods of income greater than that needed to meet the basic consumption needs of household members. Alternatively, households with few assets have income adequate only for meeting basic subsistence requirements, or have recently suffered economic shocks that required them to dispose of assets to meet their consumption needs.

Table 6: Household Asset Ownership According to Number of Items

Assets type	Number of items	Baseline		End line	
		Own	Rent	Own	Rent
Livestock	0	68.70%	67.30%	17.70%	75.90%
	1	19.80%	17.60%	17.30%	9.10%
	2	6.00%	9.30%	17.50%	7.00%
	3+	5.60%	5.80%	47.50%	8.00%
Poultry	0	36.90%	36.90%	6.10%	6.10%
	1	22.40%	22.40%	0.70%	0.70%
	2	22.40%	22.40%	1.80%	1.80%
	3+	18.20%	18.20%	91.40%	91.40%
Productive assets	0	1.30%	98.70%	1.60%	87.70%
	1	9.80%	0.40%	0.20%	3.40%
	2	18.40%	0.90%	0.20%	1.80%
	3+	70.40%	0.00%	98.00%	7.00%
Household appliances	0	77.30%	100.00%	39.10%	95.90%
	1	10.20%	0.00%	18.90%	1.60%
	2	4.40%	0.00%	10.00%	0.70%
	3+	8.00%	0.00%	32.00%	1.80%

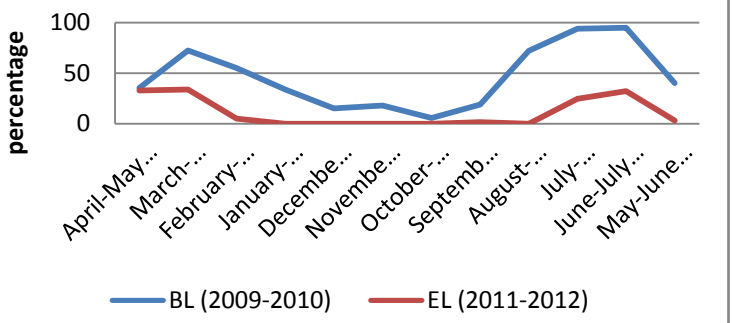
Baseline and end line surveys collected rigourous information about livestock, poultry, productive assets and household appliances. Livestock included cows, oxen, buffallos, goats, sheep and pigs while poultry referred to chickens, pigeons, ducks and others. Productive assets were considered as various types of fish traps, carts, sewing machine, trees, grinding machines (dheaki), back strap looms, plough, hunting traps, other agricultural tools, bamboo buckets and weighing scales. Household assets included radios, mobile phones and silver and gold jewelry. Data show the numbers of assets rented and/or owned have increased since baseline with a more remarkable change in asset ownership compared to asset rental. Increased expenditure resulting from increased income has strengthened the purchasing power of households. As a result, beneficiaries are gaining ownership of additional assets. The surveys did not collect information on household belongings such as furniture, kitchen utensils, etc. but from informal observations, it was found that household items have increased in comparison to baseline. An interesting result found that at baseline 95% of beneficiaries did not have access to a cell phone while 32% of beneficiaries now own one or more cell phone. The subsequent mobile access allows beficiaries to enhance communication facilities with market committees and other group leaders.

4.3 HOUSEHOLD-LEVEL FOOD SECURITY AND DIETARY DIVERSITY

HKI used three scales/tools in the M²W² baseline survey to measure household food security: Months of Adequate Household Food Provisioning (MAHFP), Dietary Diversity Score (DDS) and Food Consumption Score (FCS). Recall of the last 12 months was used to measure seasonal access to sufficient food and dietary diversity questions were used to measure utilization.

Months of Adequate Household Food Provisioning

Figure 13: Households Reporting Food Insecurity



A population is defined as food secure if food is accessible, available and appropriately utilized by all people at all times. The MAHFP scale asks the respondents to recall the number of months over the past year when the household did not have enough food to meet their needs. MAHFP is a tool used to judge in which months a family is not able to meet their food needs. Each month they are not able to meet their needs is noted. The MAHFP coverts this to a simple score, but for the process of M²W² we also plotted the results on a graph to see the seasonal variation and the impact this would have on project activities. "Measuring the MAHFP has the advantage of capturing the combined effects of a range of interventions and strategies, such as improved agricultural production, storage, and interventions that increase the household's purchasing power."[18] At end line, it was found that households have sufficient food to eat for approximately 11½ months over a 12-month period. At baseline, households had only an average of 7 months of sufficient food. Enough food to eat is defined as three full-stomach meals a day for all family members. From Figure 5 above, it is clear that during the months of intense food security (July to November) project activities were able to greatly decrease the percentage of households without enough food. This is indicated from the gap in the lines between July and November. Data show that the Bengali months Kartik and Ashin are reported as the most food insecure months. However, it is clear from the figure that despite the seasonal fluctuations of poverty and flooding, project activities remain successful.

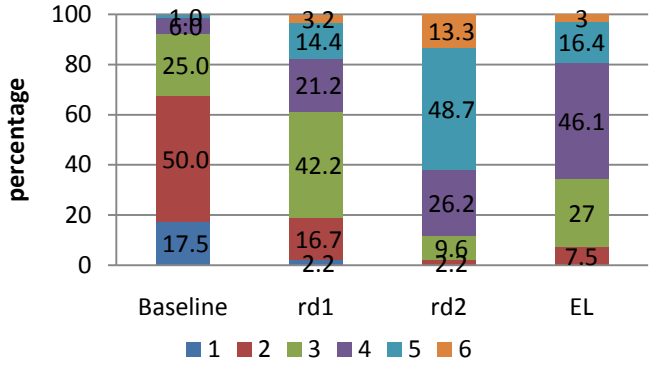
Dietary Diversity Score

There are two summary indicators for household nutrition: Dietary Diversity and Food Consumption scores. Both use recall of food consumption, however, dietary diversity only considers the number of different foods consumed. The different food categories consumed are added together and the result is a Dietary Diversity Score (DDS). For example, if the mother reported eating cereals, legumes, fish, and oil, her individual DDS (IDDS) would be four.

[18] Bilinsky, P and A Swindale. Months of Adequate Household Food Provisioning (MAHFP) for Measurement of Household Food Access: Indicator Guide. Washington, D.C. Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2008.

In this survey, foods were categorized into six groups: all starchy staples, all lentils, all dairy, animal protein, vegetables, and fruits. The DDS reflects the number of different food groups consumed in a day. A higher DDS is an indicator of greater micronutrient intake and better nutrition.

Figure 14: FANTA 2 6-group Indicator Individual Dietary Diversity Score (IDDS)



Dietary diversity was shown to improve remarkably over the three-year project period. Figure 14 shows that, at baseline, almost 70% of the beneficiaries consumed two or fewer food groups per day. During end line, 80% consumed at least four food groups and 16.4% and 3% had increased their DDS to 5 and 6, respectively. The percentage of people with a DDS of only 1 dropped from 17.5% to 0%. The goal of seeing a 30% increase in average individual DDS has been surpassed.

Figure 15: Mean Individual and Household Dietary Diversity Score (DDS)

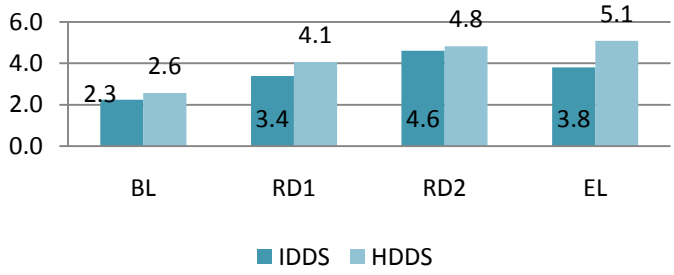


Figure 15 shows that both individual and household dietary diversity scores (IDDS and HDDS) improved over the life of the project. While IDDS is measured using a 24-hour recall, HDDS uses a 7-day recall so the two are not comparable on the same scale.

Food Consumption Score

To measure the quality of food consumed at the household level, the World Food Program (WFP) developed a tool called the Food Consumption Score. The FCS accounts for the nutritional value of foods consumed in addition to the number of diverse types of food consumed; it is considered to be a food security proxy measure of dietary quality. The FCS was assessed over a seven-day recall period, using the mother's recall of household food consumption data.

The FCS modifies the dietary diversity score with the addition of assigning weights to the food consumed. The weights are based on their respective nutritional values. Because the FCS accounts for the nutritional value of food in addition to simply the number of different types of food consumed, it is considered to be a more accurate measure of dietary quality compared to the stand alone DDS.

Dietary diversity, using the FCS method, was assessed using a seven-day food consumption recall, which asked respondents (mothers) to report the total number of days in the week preceding the survey that her household consumed the certain food groups.

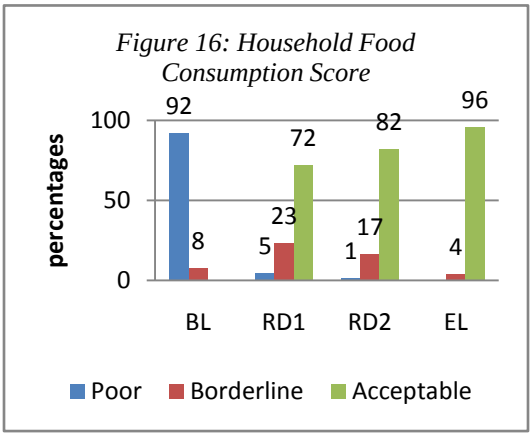
The specific weights used to compute the FCS are shown in Table 7. Greater weight is given to more nutritious foods, such as high-protein animal products.

Table 7: Food Weights for FCS

Foods	Weights
Cereals	2
Roots/tubers	2
Legumes/pulses	3
Milk/milk products	4
Eggs/poultry	4
Meat	4
Fish/sea food	4
Oil/fat	0.5
Sugar/honey	0.5
Fruits	2
Dark green leafy vegetables	3
Other vegetables	2

The FCS scores fall under three categories: "poor," "borderline" and "acceptable." "Poor" FCS scores indicate that households were not able to eat staples and vegetables on a daily basis. "Borderline" FCS scores indicate that the respondent's household consumed mainly staples and vegetables with frequent consumption of oil and pulses. "Acceptable" FCS scores indicate the regular consumption of diversified, nutrient-rich foods, including staples, pulse, meat, egg, milk, Vitamin-A rich fruits and vegetables and edible oil.

Figure 16: Household Food Consumption Score



FCS was shown to improve remarkably over the three-year project period. Figure 16 indicates that 92% of beneficiaries had a poor diet at baseline. By end line, no household received a poor score. This result meets the target of having 95.9% of beneficiaries experience a 30% increase in WFP food consumption, which indicates a substantial improvement in food security.

4.4 MATERNAL AND CHILD HEALTH CARE PRACTICES

Maternal Nutrition

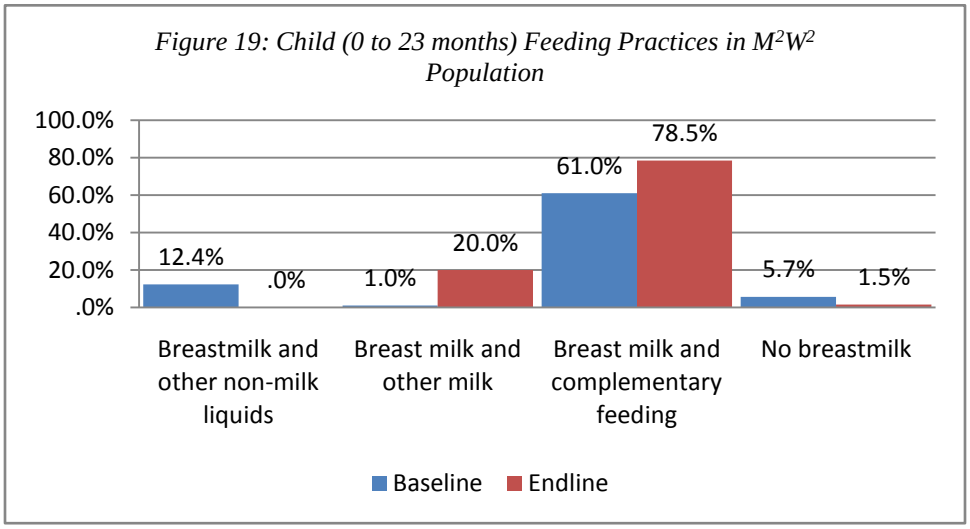
Data show that 66% of women received postpartum Vitamin A supplementation by end line while only 13% received it at baseline. The receipt of iron/folic acid supplements increased by more than thirty percentage points from 10% at baseline to 48% at end line though by the time of the end line survey the anemia status of women had not changed much (Figure 17). None of the women with a child under two years reported eating more food during pregnancy at baseline but by end line, 45% of women reported greater food consumption during pregnancy. About 19% of the mothers surveyed reported receiving de-worming treatment or antenatal care during their last pregnancy compared to 0% percent at baseline.

Nutrition and child feeding practices

HKI's goal for the M²W² project was to not only increase food security at the household level—in terms of food availability, but also to increase utilization, which means improving the quality of dietary intake. The purpose of helping households increase their food production was, ultimately, to help them diversify their diets, particularly to increase consumption of micronutrient-dense fruits, vegetables and animal-source foods. In addition to the agricultural trainings, women group members attended regular courtyard sessions on nutrition topics, including how to prepare nutritious meals, the role of micronutrients, proper pregnancy care and nutrition, and training on exclusive breastfeeding. A full nutrition survey, including anthropometric measures, was carried out at the beginning and end of the project.

Other factors that influence child nutrition outcomes are maternal and child nutrition practices, particularly appropriate infant and young child feeding (IYCF) practices. HKI promotes the Essential Nutrition Actions package of seven proven interventions that have the greatest impact on reducing child mortality. These actions include exclusive breast feeding for zero to six month olds, adequate and appropriate complementary feeding for six to 24 month olds, recuperative feeding during illnesses, adequate diets for pregnant women, and the use of micronutrients, particularly iodine, vitamin A and iron. The questionnaire asked about these practices, as well as the prevention of malaria, which is prevalent in the CHT. Child fheeding practices were assessed through participants' recall of their child's diet from the preceding day. Figure 19 illustrates that about 78% were introduced to complementary feeding at the appropriate age of six months. It was also noted that only 27% of children received de-worming medication in the last six months.

Figure 19: Child (0 to 23 months) Feeding Practices in M²W² Population

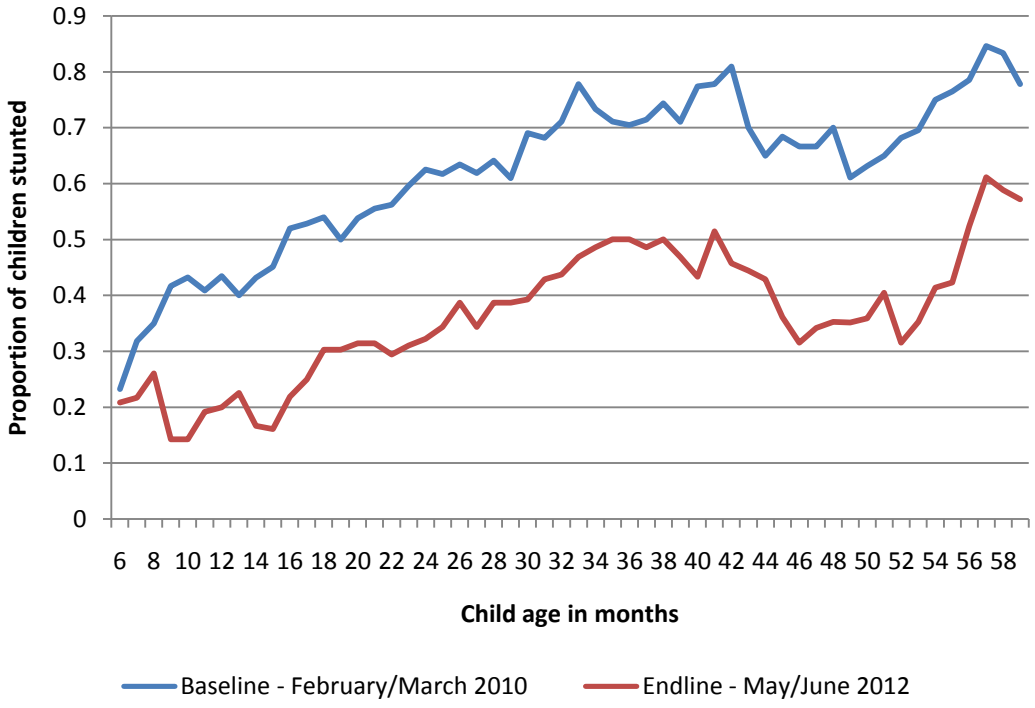


4.5 ANTHROPOMETRY

A major focus of the M²W² end line survey was assessing the nutritional status of children. Anthropometric measures are used to assess the nutritional status of children in a population and to detect chronic and severe malnutrition rates. They also help reflect on the combined impacts of all program interventions. During the end line survey, children 0-59 months of age were measured in terms of the three standard indices of physical growth: height for age, weight for height, and weight for age. They were assessed by the degrees of standard deviation using WHO recommended cut-offs. These measures provide the following specific information about the nutritional status of children.

The survey revealed that 54% of the examined children suffered global stunting at baseline and, of those, 19% were severely stunted. By end line global stunting had reduced to 36% and severe stunting had reduced to 16%. These results suggest that levels of chronic malnutrition responded quickly to the intervention as expected. Figure 20 shows the change in stunting across age groups.

Figure 20: stunting by age (6-59 month children)



4.6 SELF-EFFICACY

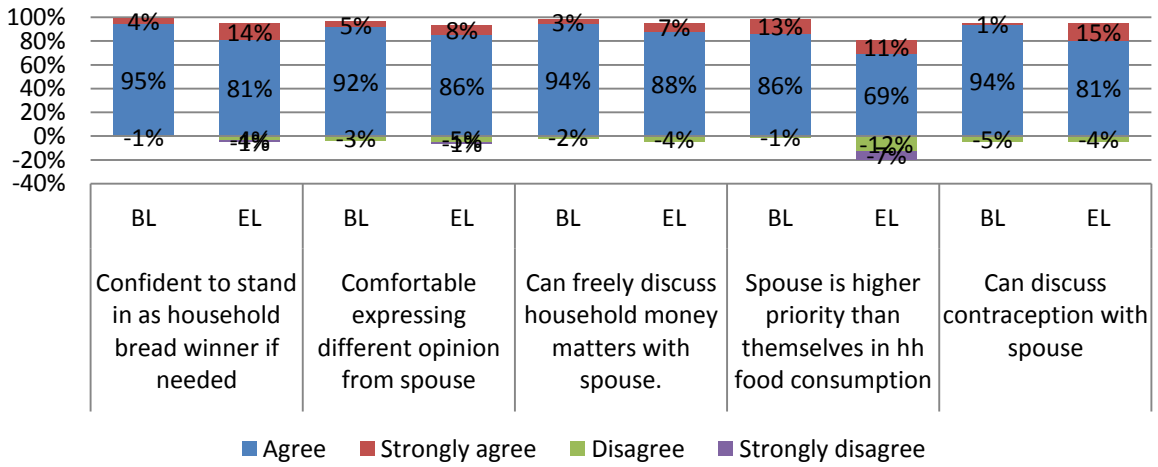
A second goal of the M²W² project was to economically empower women within their households and communities. To accomplish this, M²W² focused steadily on gender discrimination, which contributes to extreme-poverty and exclusion from markets and other opportunities. In addition to the baseline gender attitudes and capabilities section, a "self-efficacy" section was used to determine if there have been changes resulting from gender trainings and supplementary support (including assets, skills building, group support, and mentoring) to enable women to participate equally in markets and in household decision making and to retain control over their income. The questions, with responses given on the Likert-scale, asked about a range of practices and attitudes that reflect gender norms, including mobility, ability to get spousal support for household work, control over earned income, and beliefs about how food should be distributed within the household during food shortages.

Intra-household influence

In terms of intra-household bargaining power (Figure 21), end line data showed that respondents seemed to have higher levels of comfort with expressing opinions (even if they disagreed with their spouse) and discussing money matters and family planning issues than at baseline. About 95% were confident that if their spouse was not earning income for a period of

time, they themselves would be able to provide food for the family for up to four weeks. Data show that this overall response of strong agreement has increased over the period of project. This finding represents the high participation of both men and women in wage labor activities, and it highlights the important role of women's Jhum cultivation to the family's food security. Despite their contributions to the family, almost all women (99%) at baseline either agreed or strongly agreed that during periods of food shortage, their husbands should eat more meals because they were assumed to work harder. By end line, this proportion dropped to 80%. Intra-household influence by married women is closely tied with traditional values and, therefore, difficult to change. This set of findings reflects the unappreciated value of women's contributions to the household, a gendered belief that they themselves have internalized.

Figure 21: Intra-household Influence of Married Beneficiaries

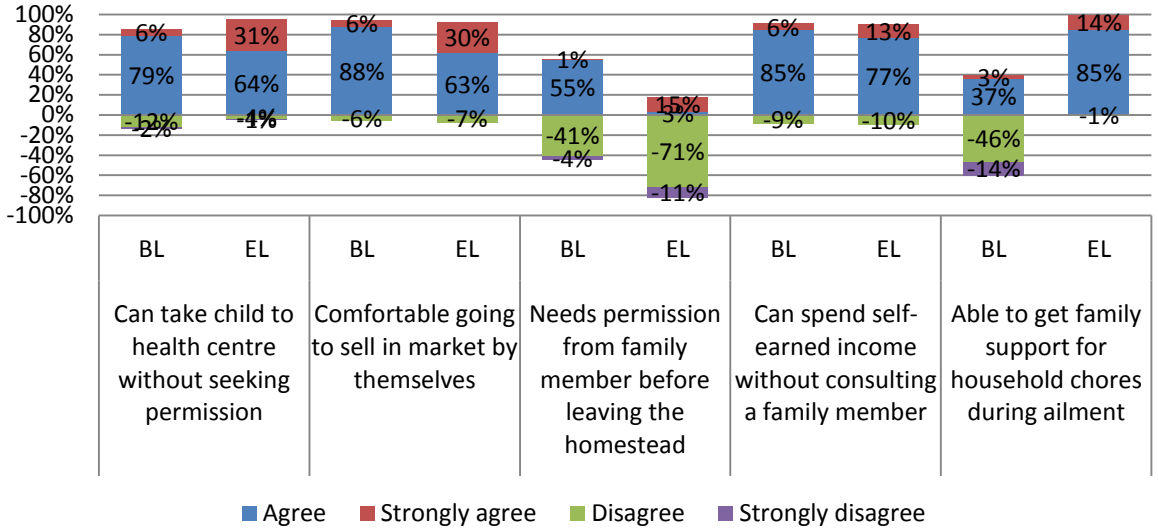


Mobility and control over income

The mobility of women in the Chittagong Hill Tracts is distinctly different from that in the plain- lands of Bangladesh, where the Islamic practice of *purdah* restricts women's movement. Figure 22 shows data from the end line survey depicting over 93% of respondents 'agreed' or 'strongly agreed' that they could access markets without asking permission compared to 94% in baseline yet, 82% said that they 'always' seek a family member's permission before leaving the homestead compared to 56% in baseline. At end line, 95 % of respondents reported that they could take their child to the health centre without asking for permission while at baseline, only 85% of the women reported being able to do so.

There was also a sharp increase in the confidence level of beneficiaries demonstrated by the large gains in the 'strongly agree' category across indicators of mobility and decision making power. Despite their increased involvement in marketing and freedom of movement, beneficiaries are still not able to spend their own earnings as they chose without first asking permission. A remarkable change has been noted in the beneficiary's belief that their family members would willingly help them with household work in times of sickness with a jump of over fifty percentage points from 40% at baseline to a significant 99% at end line.

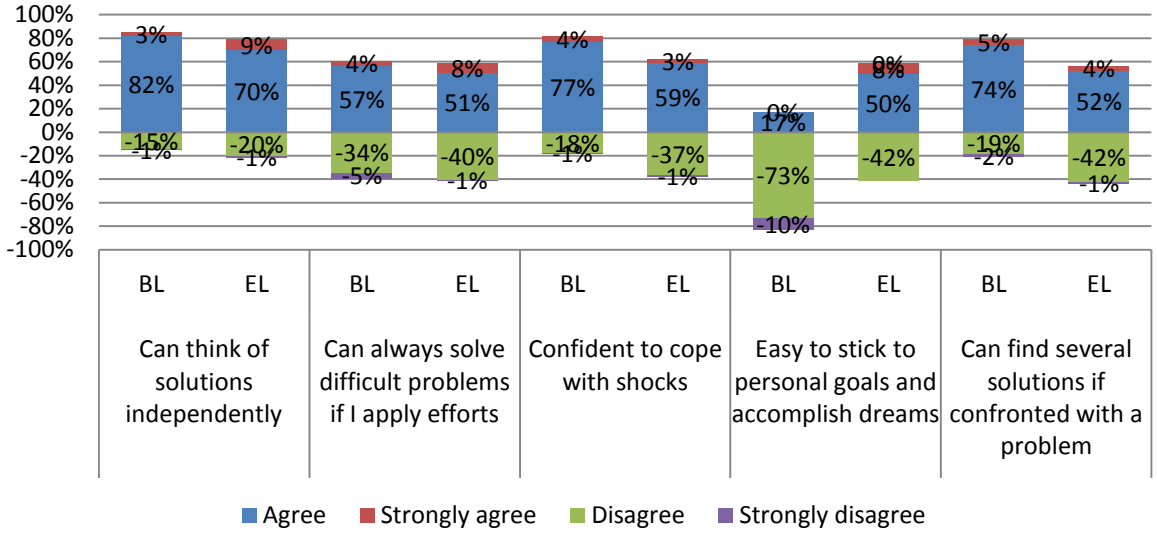
Figure 22: Mobility and Decision Making Control Over Income



Problem solving confidence

Respondents were also asked about their self-confidence in their ability to solve problems on their own. The questions were repeated in several variations to assess the relative degree of confidence in different situations. In this area, data showed that beneficiary's confidence in being able to think of a solution when faced with a problem, if they invested necessary effort' has not changed much compared to baseline. This may be because of increased joint decision-making processes of beneficiary households as already reported in the husband's support section. However, the number of those who 'agreed' or 'strongly agreed' that they could cope effectively with unexpected events has significantly decreased. Despite these apparent setbacks, 58% 'agreed' to be able to achieve their personal goals and dreams, while only 17% in baseline expressed either agreement or strong agreement about doing so. These findings are represented by figure 23 below. This last section illustrates how gender norms permeate the community and household, preventing women from receiving full support or recognition for their contributions, or even from being educated in the first place. It also is a reflection of the limited coping strategies available to the extreme-poor.

Figure 23: Problem Solving Confidence



Appendix 1: Most Significant Change Story[19]

My name is Dhanalata Chakma; I come from an extremely poor family of the Morachengi Mukh Para. I am a mother of three daughters. My eldest daughter is mentally immature, and she cannot speak except a few words. My second daughter goes to primary school. Before I became a member of the M²W² project, my family was living in darkness and total despair. We were living in extreme poverty. With only our day-labor wages, we could not afford to feed our daughters and buy for them clothes. At times, I felt like committing suicide, because I could not face poverty any longer. Because I was away at day labor, I did not have time to produce our own vegetable garden next to our house and did not take it seriously.

Then in the last season, I received 30 kgs turmeric seeds and other vegetable seeds from the M²W² project. I built a vegetable garden, a pumpkin garden next to my house with the help and advice from the field officers. From the abundant produce of my vegetables in the garden, I had enough vegetables to feed my family and was able to sell some in the market. I saved 11,000 taka ($142) from selling my vegetables in the markets. At the same time, I practiced jhum cultivation [field crop cultivation]. With the help from field workers of the project, I was able to secure open land for cultivation from the village kariburi [tribal leader]. After procuring 40 kgs of turmeric from other sources and putting it together with the 30 kgs turmeric seed I received from the project, I harvested the crop at the end of January after cultivation which gave me a very good yield.

From selling some of the harvest, I earned 16,000 taka ($207), and I stored 240 kgs turmeric seeds to plant for the next season. I earned 27,000 taka ($350) from selling vegetables and turmeric altogether. From my total earnings, I used 14,000 taka ($181) to secure a mortgage on

[19] Helen Keller International. (August 2011). *Most Significant Change: Stories of a Development* Process: Bulletin No 3. Bangladesh. Helen Keller International.

40% of the cultivated land for the next three years. With the remaining money, I purchased two bundles of tin [for a roof], enough food crops to eat for three months, and seed to cultivate in the mortgaged land during the winter season.

The next season, from the seed that I planted in the winter season on the mortgaged land, I grew enough food crops to feed my family for six months. I received a batch of different vegetable seeds for the winter and another 25 kgs of turmeric seeds form the project to plant in the monsoon season. I sowed the turmeric seeds received from the project near my house and planted the 240 kgs that I had saved from the previous season on the mortgaged land. Because I had been so successful in producing vegetables in the last season, I decided to cultivate another pumpkin field during the monsoon season.

In addition to this, I built another vegetable garden together with my husband. The neighbors all look at our gardens when passing by the road; they are amazed and interested in making their own vegetable gardens.

I left my work as a daily wage laborer and now I can spend my time in taking care of my vegetable gardens and transporting the produce to the markets for sale. The project gave me 600 taka ($8) to purchase chickens last May. I bought three chickens with this money and used my own money from vegetable sales to buy another chicken with chicks. Now these chicks have grown big and if I sell them, I will be able to get 6000-7000 taka ($78-90). Now I have admitted my children to school and can afford to buy clothes for them. I feel very fortunate and mentally at peace with the change in our present living condition.

shiree
House 5, Road 10, Baridhara
Dhaka 1212, Bangladesh
Phone: 88 02 8822758, 88 02 9892425
E-mail: info@shiree.org

www.shiree.org