



Synthesis Report: Impact Evaluation Report

For the Microfinance Project of the United Nations Development Program; the Delta, Dry Zone and Shan State in Myanmar



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SYNTHESIS REPORT

IMPACT EVALUATION

of

the UNITED NATIONS DEVELOPMENT PROGRAM/MYANMAR's

MICROFINANCE PROGRAM

in

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I retain responsibility for the contents of this report and for the three survey reports upon which it is based. Any opinions expressed or errors are my own and not the responsibility of UNDP, Pact or any of the others whose assistance is acknowledge. I believe that the report accurately assesses the impact of microfinance and offers some direction for future program expansion and improved coverage of the population needing access to microfinance services.

Miami, FL, USA
January 22, 2012

Acronyms

ACTED	Agency for Technical Cooperation and Development (France)
AMDA	Association of Medical Doctors of Asia
AS	Accounting System
BOD	Board of Directors
CBLF	Community Based Loan Funds
CGAP	Consultative Group to Assist the Poorest
CBO	Community Based Organization
CSO	Central Statistical Organization
Deft	Design Effect (statistics, sampling)
FGD	Focus group discussion
FSS	Financial Self-Sufficiency
FSU	First Stage Unit (sampling)
GRET	Group of Research and Exchange of Technology (NGO)
HDI	Human Development Initiative
ICT	Information, Communication and Technology (ICT)
IHLCA	Integrated Household Living Condition Assessment Project (UNDP)
INGO	International Non-Governmental Organizations
Kyat	Myanmar Currency 800 Kyat = US\$ 1
LIFT	Livelihoods and Food Security Trust Fund
MAC	Microfinance Advisory Committee (proposed, quasi-BOD)
MADB	Myanmar Agricultural Development Bank
MER	Monitoring, Evaluation and Reporting (unit of UNDP)
MFI	Microfinance Institutions
MFP	Microfinance Project
MFWG	Microfinance Working Group
MES	Monitoring and Evaluation System
MIS	Management Information System
MMK	Myanmar Kyat (800 Kyat = US\$ 1)
MOU	Memorandum of Understanding
OSS	Operational Self-Sufficiency
PPS	Probability-Proportional-to-Size (sampling)
SRG	Self-Reliance Groups
SSU	Second Stage Unit (sampling)
TSU	Third Stage Unit (sampling)
UNDP	United Nations Development Program
USAID	United States Agency for International Development
ViCO	Village Credit Organization
VMO	Village Microfinance Organization
VSLF	Village Savings and Loan Association (promoted by CARE)
WORTH	Women's Empowerment Program

Executive Summary

The Microfinance Program (MFP) which began in 1997 and which has been implemented in three regions (Delta, Dry Zone and Shan State) by Pact exclusively since 2006 calls for periodic impact evaluations to determine the contribution of the program to improving the welfare of the people whom the program serves. An impact evaluation was carried out in 2007. The current impact evaluation builds on the previous evaluations and reports on the status and evolution of program impacts on clients and non-clients in villages and townships covered by the program at the time of the evaluation (2011). Data collected for this evaluation will also serve as a baseline when the program's impact is evaluated again around 2014.

This report is a synthesis of the three surveys carried out to determine program impacts:

1. **Qualitative Survey:** Based on focus group discussions and key informant interviews in 12 microfinance and 12 non-microfinance villages distributed equally over the three regions.
2. **Panel Study 2007-2011:** 536 of the original respondents to the 2007 impact survey (85%, including both clients and non-clients in villages served by the MFP) were reinterviewed in 2007 providing information on the main issues addressed by the evaluation. This survey made it possible to determine changes over time and between the two categories of respondents.
3. **Cross-Sectional Study:** UNDP drew a sample of microfinance and non-microfinance villages in all three regions and 3600 client and non-client households were enumerated collecting the same information as in the Panel Study. This survey allowed comparisons between clients and non-clients and between villages served and those not served by the program.

The qualitative survey provided the eyes and the ears for the evaluation since because of travel restrictions for foreigners in Myanmar still in place at the beginning of 2011, the extensive field work involving interactions with target populations that normally precedes quantitative surveys was not possible. The two quantitative surveys tested the hypotheses thus developed and include insights obtained qualitatively and which are reflected in the synthesis report which follows and in the two quantitative reports which measure changes between clients and non-clients and their evolution over time.

Findings

The Microfinance Program has had a very positive impact on the lives of the clients it serves. It also appears to be contributing to an increase in the level of economic activity of villages where it operates by providing more employment and better services to non-clients. Greater income generated by microfinance-related development has measurable effects on the standard of living of clients both compared to that which they enjoyed in the past and compared to non-clients. These conclusions are derived from the three surveys which are unequivocal and mutual supportive on this point. Because of their design, survey results probably provide a minimum estimate of the impact of the program on clients compared to non-clients; future studies with slightly different designs are expected to show that quantitative impacts attributable to the program are in fact greater than those reported here.

Microfinance is instrumental in improving income, food security, education, housing and quality of life of women served by the program. The way it works is as follows. The MFP makes loans available to women on favorable terms which allow them to establish and build up small businesses of their own. Using the profits from these initial businesses to set up and operate additional businesses. These businesses in their totality provide an income stream and one which is separate and additive to that coming from their husband's. Higher household income from multiple sources increases family welfare and protects it from the risk of external shocks. Larger incomes and the availability of loan products to meet a variety of needs allow client households to take advantage of opportunities as they arise and to confront challenges to the family budget coming from health emergencies or necessary social expenditures.

Businesses: MFP clients' access to capital through loans from the program opened the doors to doing business. Nearly 60% of women engage in agriculture as their main business, which they are able to do better, on a larger scale and more profitably because of larger agricultural loans than in the past. However, many more clients are engaged in trading as a second business than in 2007 and the proportion of women clients whose primary business in 2011 is trading is four times that of non-clients. Women are able to engage in lucrative businesses because of their ability to obtain the capital necessary to do so from the MFP. Very few clients engage in low-paid casual labor than before and in far lower proportion than non-clients (11% versus 18%), and four times as many non-client women as clients declare themselves to be dependents (10.1% versus 2.4%). Women are more independent as a result of the MFP.

Agriculture as a Business: Nearly two thirds of clients and non-clients alike are farmers but clients own 1.1 acres more land on average than non-clients and 8% of clients have bought land since the MFP started but only 3% of non-clients have bought, and the amount of land bought is 1.1 acres more than non-clients. Almost 95% of clients but only 83% of non-clients use improved seeds and other inputs. Clients plant an average of 4.8 acres of land compared to 4.2 acres for non-clients. They are able to farm more intensively and get better yields and higher net returns because 87% of clients but only 29% of non-clients can obtain loans for agriculture. Over 80% of clients' loans come from the MFP at low interest rates and just 10% from moneylenders at high rates whereas most non-clients getting loans at all, obtain them on unfavorable terms such that finance costs cut substantially into profits. All these differences are significant at >0.95.

Employment Opportunities: More intensive farming by clients has increased the demand for labor in microfinance villages assisted by pump irrigation in some places. Despite mechanization of land preparation with small tractors, it has pushed up wages and provided gainful employment for unemployed youth giving them the chance to earn a living without leaving their home villages and employment for poor, casual laborers who thus benefit indirectly from the MFP as a result of more intensive farming.

Assets: Profits from these businesses have allowed them to accumulate assets. In 2007 clients' total assets were 11% higher than those of non-clients and 22% higher than non-client's assets in 2011. The most notable increase in clients' assets between the two years are found in household durables (75%) and transportation (212%) and differences between client and non-client asset levels are substantial and very significant (0.999 significance level). These differences are the results of higher income due to the MFP.

Food security: Higher incomes have permitted client households to equip themselves with basic items such as cooking pots, blankets, etc. They have also resulted in improved food security for clients compared to non-clients. Qualitative survey respondents report that clients' have greater food security than non-clients, the ability to buy food in slightly larger quantities and store it for longer periods, stocks of gold and other assets to meet food shortages, and the income necessary to buy food when needed, which is becoming increasingly common as the way in which food shortages are dealt with. Food quality is also better with 12 percentage points more clients than non-clients having had a source of protein (meat or fish) in all three meals the previous day.

Education: Higher incomes allow families the luxury of keeping their children in school longer instead of pulling them out to work in the fields, and they provide the resources necessary to cover the costs of their education. Dramatic increases in transport now allow children to reach middle and high schools outside their villages. Client children average half a year more school than non-client children (sig. 0.99).

Health: Clients are better able than non-clients take proper care of family health due to higher incomes, reserves of gold and other assets, and access to MFP health loans. Faced with an acute illness, 69% of clients but only 42% of non-clients deal with the challenge using their own resources, 7% of clients but only 5% of non-clients can sell assets. Conversely, only 7% of clients versus 18% of non-clients are

forced to borrow from a moneylenders and only 7% of clients versus 23% of non-clients need to get assistance from friends and relatives for help. These differences are significant at the 0.95 level.

Ownership Assets: Housing has improved substantially as a result of the MFP. 52% of clients versus 40% of non-clients have roofing sheets instead of thatch roofs, 59% of clients but only 28% of non-clients had floor of preferred materials (wood or concrete) and double the percentage of non-clients than clients had least preferred dirt floors. If micro-hydropower plants brought in by donors and unrelated to the MFP are excluded, twice as many clients (27%) as non-clients (13%) have electricity from the public system, generators, and hook ups to neighbors, all sources that are dependent in one way or another on income. The percentage of clients cooking with electricity or fuel efficient stoves is higher for clients than non-clients. Differences are significant at the 0.999 level. In one village, 10 clients even have refrigerators.

Summary of Impacts: The microfinance program has had strong, measurable and statistically significant impacts on the lives of clients and has increased employment in MFP villages over non-MFP villages.

Recommendations:

Donors:

Expansion of the Microfinance Program will have major and positive impacts on the income of new clients, the lives of families served, and local economy of communities and regions served. Expansion can be achieved by densification (serving communities in areas already targeted but not currently being served by the program, including taking over less successful microfinance operations of other operators), lateral expansion to cover contiguous regions within or near townships already served, and incorporation of new areas. All three means should be promoted. Planning parameters should take account of increased loans size and longer average loan terms for long-term clients. Dialogue with Government should include encouraging competing Government programs to follow generally accepted practices for microfinance. Villages covered by the MFP could make effective use of non-microfinance interventions by donors.

MFP:

MFP can be rightly proud of its accomplishments and positive impacts. However, a number of improvements could be made to the program in terms of adaptations to the health loan based on borrower comments reported here, larger size for some loans, longer term and different repayment terms for others, creations of one or more rural electrification loan products, and loans with two-year terms for machinery. Specific consideration should be given to land-leasing in agricultural loans to encourage intensification of cash-crop production and employment creation. Loans for agriculture should allow for financing the cost of planting commercially viable trees; the Forestry Department should relax rules prohibiting cutting.

Baseline surveys should be carried out in new areas added and results compared with those observed here.

Post-Disaster:

The role of microfinance in post-disaster emergency response as well as recovery has yet to be fully appreciated. Donors should carefully examine how the MFP engaged in a strategy which minimized losses of staff, equipment, property and cash, how it responded to the emergency by returning savings, writing off loans and reopening operations within 6 months after the disaster. While survivors still remember the crisis following Cyclone Nargis, they should be engaged in discussions on how the program could have better served their needs in the immediate post-disaster and later recovery stage, how the recovery stage could have been moved forward, and how donors could have channeled more resources than they did into cash grants. Of particular interest should be the MFP's approach on housing materials.

The report concludes that additional opportunities exist for the MFP to expand voluntary savings among current and potential clients and recommends that the MFP actively develop a strategy to promote voluntary savings both to satisfy client needs and as a source of additional funds for its lending program.

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Microfinance Impact Evaluation

1. Background on the Microfinance Program

The Sustainable Microfinance to Improve the Livelihoods of the Poor Project, commonly called the **Microfinance Project (MFP)**, is implemented under UNDP's Human Development Initiative (HDI). It is the successor to two previous UNDP-funded microfinance projects: Sustainable Livelihoods through Microfinance to the Poor (1999-2002) and Sustainable Livelihoods through Microcredit to the Poorest (1997-1999). The projects focus on 3 geographic areas: the Delta, the Dry Zone and Shan State. All three projects were executed by UNOPS and subcontracted to implementing agencies.

In all four implementing agencies were involved in various phases of UNDP's long-term support to microfinance. Between 1997 and 2005, Pact worked in the Dry zone while the French NGO GRET worked in Shan State. Microfinance in the Delta Zone was managed by the Grameen Trust (Bangladesh) between 1997 and 2002 and was taken over by EDA Rural Systems (India) between 2003 and 2005. Starting in 2006, UNDP choose Pact as the sole agency responsible for implementing the program in all three zones and for unifying the approach under a common methodology. In January 2009, Pact signed an agreement with UNDP and began executing the Microfinance Program directly, replacing UNOPS as the Executing Agency.

1.1 Summary of the Evaluation Terms of Reference

Impact evaluations of the MFP project on clients and communities were carried out in 2004 and 2007 confirming the positive impact of the project. This 2011 impact evaluation is part of an overall evaluation plan for the project under which impact assessments are carried out every three years in order to measure project impacts on the welfare of client households. The current impact evaluation will serve as a baseline for future impact evaluations likely to take place in 2014 and beyond. The TOR supposed that the households surveyed in 2007 would form part of the sample, which turned out not to have been the case since the sample was drawn and a contract signed between UNDP and a local data collection firm nearly a year before the arrival of the international consultant. After discussions between Pact and UNDP for which the consultant provided technical background, the decision was made to carry out a separate panel study of the same respondents enumerated in the 2007 impact study based on virtually the same household questionnaire as was used in the original survey. This survey generated comparable data to those obtained from the cross-sectional survey which used the same questionnaire and survey methods (see below). The panel study makes possible the measurement of changes in some major indicators which have occurred since 2007. The 2011 cross-sectional survey of 3600 households in microfinance and non-microfinance villages will provide a baseline for future surveys and for measuring differences between villages served and those not served by the microfinance program. These surveys were to be supplemented by qualitative data from focus group discussions and key informant interviews in selected target and comparison villages.

1.2 Audiences: UNDP, Other Donors, Pact, Clients, NGOs and Government

There is growing interest in microfinance and a greater recognition of its value in helping low-income people to achieve improved food security and a better standard of living for themselves and to improve educational opportunities for their children. In her recent landmark trip to Myanmar, US Secretary of State Hillary Clinton promised a very large assistance package in which microfinance figures prominently as one of the main pillars of the development strategy for the United States. The United Nations under the leadership of UNDP has pioneered microfinance in Myanmar and supported it over the years. The Myanmar Microfinance Program constitutes the 25th largest microfinance institutions in the world. Steps are underway to formalize the program as a microfinance institution rather than as a donor-managed

program. Results of this evaluation will be of interest to donors who have provided funding over the years to help the program expand. Their assistance will be even more essential now that the program has the full support of the Myanmar government which is interested in seeing its coverage expanded and its outreach extended to new regions of the country. Other NGOs and banks setting up and institutionalizing their own microfinance programs may also find this evaluation of interest. Government, Government-owned banks and the various departments interested in providing rural credit may also be interested in the results of the evaluation to guide their efforts toward the provision of effective and viable rural financial services which complement and do not undercut other microfinance programs and institutions.

1.3 Objectives for the Evaluation

The main objective for the evaluation is to measure the degree of achievement of the project's expected outcomes including improvements in: housing and household assets, self-owned businesses, food security, health, education, etc, relationship with informal borrowing, levels of debt, coping strategies on vulnerable issues, land and intensity of farm production, women's empowerment, and communication and cooperation with communities.

The main focus of the evaluation is on evaluating the impacts of the Microfinance Program at the household and village levels. An additional focus arose with the occurrence of Cyclone Nargis in May 2008 which calls for the assessment of the disaster's impact on the Microfinance Program itself and the Program's contribution to rebuilding Delta communities served by the program in the aftermath of the Cyclone.

1.4 Methodology and Changes from Original Design

The issues to be addressed by the impact evaluation required three types of analysis: 1) qualitative appreciation on all major points of interest rose in the TOR, 2) analysis of changes over time and 3) cross-sectional analysis of differences between clients and non-clients. A single survey would have been unable to answer all these questions, especially given the restrictions on travel by foreigners prevailing in Myanmar in the first half of 2011. With major support from UNDP and contributions from Pact, three surveys were carried out. They are described in summary form below in terms of goals, sample selection survey execution and main results to be obtained from each. Reports on these surveys can be obtained from UNDP.

A theoretical understanding of major issues to be covered is needed prior to a quantitative survey so that researchers can develop hypotheses that the quantitative survey will then allow to be tested quantitatively. Normally, this step involves extensive fieldwork by principal researchers prior to the design of the survey. In Myanmar in 2011, it was not possible for a foreigner to carry out extensive fieldwork in areas where the MFP was working. The alternative chosen, based on discussions with UNDP, was to commission the same firm carrying out the quantitative surveys to obtain the kind of qualitative information that was needed by means of discussions and interviews in a sample of the microfinance and non-microfinance villages included in the cross-sectional survey.

The Terms of Reference make clear the desire for measuring change over time for key variables for both clients and non-clients. The results of the 2007 survey which formed the basis for the previous impact evaluation were presented as examples in the TOR and, though not explicitly stated, the underlying assumption appears to have been that these data would provide at least a partial baseline to measure change over time. However, the 2007 respondents were not included in the sample chosen for the 2011 cross-sectional survey. Discussions were held with UNDP on this subject. I recommended that a separate survey be carried out to reinterview 2007 respondents for a panel study which would provide over time comparisons for the same sample, a powerful research tool for measuring change. This recommendation

was accepted and a separate survey was carried out by the same company already carrying out the cross-sectional survey.

The cross-sectional survey was designed to measure differences between microfinance clients in villages where the MFP operated and non-clients in villages where the MFP did not operate. The large sample size $n = 3600$ was designed to be statistically significant down to the level of each of the three regions. This large sample could allow comparisons for 2011 between clients and non-clients in the townships where UNDP was operating.

In both the panel survey and the cross-sectional survey, the sample was divided three-quarters to one-quarter in favor of microfinance clients over non-microfinance clients. The reason behind this choice is not clear; including equal numbers of clients and non-clients would have been more efficient and made analysis and presentation of results easier. The same questionnaire was used in both surveys, first to allow for comparisons between 2007 and 2011 in the panel study and to allow for comparisons between panel survey and cross-sectional survey results. The questions were asked in the same way to the greatest extent possible as they were in 2007 in both panel and cross-sectional villages. Some categories were updated (cassettes replaced by CDs/DVDs, etc). Two-year retrospective questions were dropped in favor of changes with respect to baseline data, where it existed. Some data did not exist because questions in 2007 were not asked in absolute terms but in terms of change over the two-year recall period. Spending and income questions which 1) take a long time and 2) require more highly trained enumerators were also dropped in order to keep overall interview time down to one hour on average; data quality deteriorates when interviews go beyond one hour due to respondent and interviewer fatigue. More concentration was put on assets which are more easily measured and which serve as a good proxy for income.

1.5. Description of the Three Surveys

Thus, three separate surveys were carried out in order to provide answers to the questions posed in the terms of reference. These surveys are discussed in slightly greater detail here. Full details can be found in the three survey reports.

1.5.1 Qualitative Survey

The qualitative survey was carried out in a total of four microfinance and four non-microfinance villages in each of the 3 regions. In all, the survey was carried out in twenty-four villages: 12 microfinance villages and 12 non-microfinance villages. All villages are within the 22 townships in which the UNDP microfinance program (and other UNDP programs and activities) operate. These 24 villages are included in the cross-sectional sample. The equal number of villages having and not having MFP interventions provides the most efficient way to characterize the two groups.

The survey was done by supervisory staff of the survey company carrying out the two quantitative surveys. The survey team was trained in qualitative methods by an experienced national consultant. Qualitative data were collected in each village by focus groups of clients in microfinance villages and key informant interviews of village leaders and elders who were interviewed separately. In both cases, the same key points were covered in an open-ended format provided by the interview guide which was prepared prior to the start of the survey. A separate note taker took notes on what was said during the discussions and interviews and the company reviewed and provided those notes to me. Notes varied in quality and detail, with length varying from 6 to 19 pages for a single village.

I reviewed these notes and wrote the six sections of the Qualitative Report.¹ There are two sections (microfinance and non-microfinance) for each of the three regions (Delta, Dry Zone and Shan State). Each of the six sections summarizes the notes from each of the four villages per region (microfinance or non-microfinance). The sections cover each topic based on the synthesis of focus group discussions and key informant interviews both of which were conducted in every village and provide independent internal checks on the validity of information provided. It should be noted that this process was labor-intensive but highly productive in terms of understanding the situation in these types of villages.

This study also made it possible to identify the fact that a large number of developmental interventions were taking place in non-microfinance villages in the twenty-two townships. Some of these interventions duplicated in the form of grants items which in microfinance villages were provided on credit in the form of loans from the MFP. It also noted that there were Self-Reliance Groups operating village-banking, which is a different modality of microfinance, in villages listed as “non-microfinance.” Loan programs run by a local NGO were found in some non-microfinance villages in the Delta. While these programs are not as efficiently run as the MFP, they do provide the same services and therefore undercut the concept of a comparison group.

The qualitative survey served its purpose of providing a proxy for fieldwork which the researcher was unable to undertake because of LOE and travel restrictions (which have since been largely relaxed). It gave program clients and non-clients the chance to describe the situation in their village and provided much needed guidance for what to look for in the large volume of quantitative data available from the other two surveys. It also pointed out some need for a different approach to selecting treatment and comparison villages and respondents in future surveys.

1.5.2 Panel Survey 2007-2011

Panel studies follow the same respondents over time and are a powerful research tool because they eliminate the variation due to drawing a second sample: there is no variation because the same people are interviewed two (or more) times and changes in their responses are measured against data from their responses to the original survey.

Discussions preparatory to the consultancy made it clear that there was the expectation that some use would be made of the data from the 2007 impact survey. When I arrived in Myanmar in February 2011, I found that the cross-sectional sample selected excluded 2007 respondents entirely. I recommended to UNDP that a separate survey be carried out interviewing as many of the original respondents as could be found. In fact, despite Cyclone Nargis, the inroads of time and the movement of people to other places, a very satisfactory 85% (536/632) of the original respondents were found and reinterviewed to obtain comparable data for 2011 for comparison with data obtained in 2007. This permitted not only comparisons between the two groups of clients/non-clients at two points in time but also changes within the same group over time. It also provided an additional source of quantitative data from a separately drawn sample to allow cross-checking the results of the cross-sectional survey.

The sample was composed of microfinance and non-microfinance clients in the same villages. It was divided for some unknown reason into 75% clients and 25% non-clients, which makes comparisons computationally harder to make and more difficult to determine statistically significance of difference between the two groups. It also complicates reporting. Much of the financial data (spending, income, etc) was gathered as differences over a retrospective period going back two years; absolute values were not

¹ Jeff Dorsey, Qualitative Report: Impact Evaluation of the United Nations Development Program/Myanmar's Microfinance Program in the Delta, Dry Zone and Shan State, Yangon, Myanmar, November 21, 2011

collected, or at least were not coded and stored in the data set. Therefore, 2007 values for some variables were not available to provide a baseline for change.

1.5.3 Cross-Sectional Survey² (n = 3600)

The contract for the cross-sectional survey was signed in early 2010, and the sample was drawn in March of that same year, well before the process of hiring an international consultant knowledgeable in both survey techniques and microfinance was started. Lacking input from such a consultant, the sample was drawn using the estimated penetration rate for microfinance among eligible women in microfinance communities (41%) as the proportion of interest. A sample size of 1200 per region and 3600 in total for the three regions was determined. The sample was composed of nine microfinance villages in each zone and three non-microfinance villages in each township. All villages sampled were within 11 of the 22 townships where the MFP was operating but where numerous other UNDP interventions were being carried out at the same time. Thus, the comparison being made is not between microfinance and no interventions, but rather between microfinance villages where the program is operating and non-microfinance villages where other developmental activities are taking place. These activities include business support activities and in a few cases even Self-Reliance Groups (village banking) and in other villages other types of credit programs are being run with greater or lesser degrees of success by LINGOs. The approach taken is one of comparing two different treatments rather than a treatment and a pure comparison group. This approach probably leads to the underestimation of the impact of a microfinance intervention compared to no intervention at all.

This hypothesis can be tested in the near future since Government is proposing and donors are likely to support the expansion of the MFP into new townships, some of which border the existing 22 townships and where no or very few interventions have occurred to date. Presumably baseline surveys will be carried out in these townships prior to any interventions. If a similar questionnaire is used and questions are asked in similar ways, it will be possible to confirm by inspection of principal variables if this hypothesis is correct or not.

Fieldwork on the cross-sectional survey, the panel survey and the qualitative survey were all carried out at the same time between April and June 2011, all by the same firm. Thus, all data sets are from the same time period and the quantitative ones are both based on the same questionnaire administered by the same team. Selected members of the same team facilitated the focus group discussions and key informant interviews for the qualitative survey. Coding and data cleaning were carried out by the company in Yangon in July and August. Survey processing was carried out by the international consultant during the months of September and October and the three survey reports were prepared at that time. Due to previously scheduled work, the synthesis of the three survey reports which is presented here along with and conclusions and recommendations based on their findings was only carried out in December 2011.

2. Microfinance Program Impacts

The impacts are derived from the analysis of all three surveys. In each case the qualitative survey serves as the starting point. The numbers from the panel and cross-sectional surveys are then used to corroborate or contradict the information on the various topics of interest provided by focus groups and key informant interviews.

² Jeff Dorsey, Cross-Sectional Report based on 2011 Household Survey Data from a Sample of 3600 Households in Microfinance and Non-Microfinance Villages: Impact Evaluation of the United Nations Development Program/Myanmar's Microfinance Program in the Delta, Dry Zone and Shan State, Yangon, Myanmar, November 12, 2011

2.1 Microfinance Project Impacts on Households

2.1.1 Food Security

In all three zones, food security is better in microfinance than non-microfinance villages, according to the findings of the qualitative survey based on focus group discussions and key informant interviews. Most non-microfinance villages cannot be characterized as food secure, they eat preferred food such as rice fewer times per week, and eat less animal protein using foraged leaves as a partial protein replacement. In the Delta fishing with castnets in low-lying areas between fields contributes a source of protein during the rainy season. Casual laborers in particular live a hand-to-mouth existence and often have to borrow from their employers (with a negative impact on future earnings) and occasionally to take day-loans at 20% interest per day. Members of microfinance groups report greater food security, the ability to buy food in slightly larger quantities and store it for longer periods. They also have stores of gold and other assets which they can rely on to deal with emergencies and food shortage. In Shan State, where disposable income has risen, clients grow enough paddy for their own use and raise a variety of cash crops which come in at times when rice stores have been depleted. Those rearing pigs and poultry get some benefit from eggs and the slaughter of the few animals which are not sold.

Data for 2011 from the panel study show that microfinance clients were nearly 12 percentage points more likely to have had a source of protein in all three meals the previous day than non-clients. Based on the cross-sectional (CS) survey, clients responded to the question “Does your household have enough to eat” in the affirmative 3.5 percentage points more often than non-clients households (significance level 0.95). Overall, the difference in the duration of the food shortage is three weeks shorter for households experiencing such shortages for client than in non-client households (significance 0.999). Two percentage points more clients than non-clients are storing more food and four percentage points more clients are buying more than non-clients (sig. 0.999). Nearly half the respondents store no food at all; this fact needs to be taken into account by donors in planning income-based food security promotion strategies which are needed to replace “let’s grow our own food” approaches; a livelihood-based approach to food security aimed at increasing cash income is more likely to succeed in rural areas of Myanmar than one based on simply producing more food for on-farm consumption.

2.1.2 Education

According to information provided by the qualitative survey, most children in the regions covered by the MFP do not go to school even long enough to complete the highest grade in the primary school in their village due to family financial constraints. Parents often have to take older children out before finishing the number of years of education that the local school has to offer so that younger children can have the opportunity also to go to school for a few years. Older children then help their parents with farming or other business activities. Few children have traditionally been able to attend middle school in other villages or towns and fewer still, to go to cities to attend high school. Families often sell their food reserves or ration food so that more money can be put aside to allow their children to stay in school.

However, with the advent of the MFP and greater contact with educated outsiders, a new vision has arisen among villages of the importance of education. By raising incomes derived from activities supported by microfinance loans, clients are better able to send their children to school and to allow them to spend more time in school. Children of landowners are more likely to continue their education beyond primary school than are those of casual laborers. Client families with higher incomes derived from businesses supported by microfinance loans are better able to bear the costs of putting all their children in primary school and some even pay tutors for their children. They are also able to afford bicycles that allow children to continue beyond primary school and to attend middle school in nearby villages without having

to board. Many parents aspire to send their children on to high school and college to obtain graduate degrees despite the high cost of studying in cities. Education loans from MFP also were crucial in some cases in making it possible for some families to manage the high costs of higher education for their children. Some children are even able to finish college and to obtain university degrees.

More construction of school buildings are needed in microfinance villages due to the increased number of students. New middle schools have sprung up in more villages allowing children to attend without having to leave their home villages. Naturally, having a middle school in the same community reduces the cost of schooling. Residents are eager to contribute to the construction of more schools to the limit of their ability, but still need outside funding to build additional schools. Those families, who can afford to, send their children as boarding students in the city so that they can attend high school and higher education beyond high school. In villages where the MFP does not operate but UNDP's Self-Reliance Group (SRG) program does, grants and loans from the program have allowed more children to stay in school until reaching the final grade in their village school. The percentage of children whose families can afford to educate has risen as a result of the microfinance program corroborating statements to that effect in the qualitative survey.

According to 2011 panel study data, mean number of years of school attendance for those up to age 21 is 6.3 years for children of clients and 5.6 years for non-clients. On average, children of clients attend 0.7 years more school than non-clients (difference significant at the 0.90 significance level).

In the CS study, a substantially higher level of schooling is found among clients rather than non-clients. For all children, those of clients attend 0.436 years more on average than non-clients; excluding those children still in school and covering only those children who would have been school age during the time the MFP has been in existence, the average number of years in school is 5.01 years for children of clients and 4.53 children of non-clients; the difference in favor of client children is 0.48 years (nearly half a year) for children who are already out of school. This difference is statistically significant at or above the 0.999 significance level.

The two quantitative studies confirm the hypothesis based on the qualitative survey: the children of microfinance clients are able to attend school significantly longer on average than non-clients. Microfinance clients are better able than non-clients to meet the educational needs of their children based on higher earnings and access to education loans. The higher level of development of villages where microfinance operates may also allow these communities to contribute to building schools in the village which allows children to continue their education to a higher grade level without having to go outside the village.

2.1.2.1 School attendance

Families have to dedicate such a high portion of their income to feed their families that little is left for covering the costs of education, even for sending children to primary schools located in the same villages. Furthermore, the opportunity cost of children's labor is a more significant factor the lower the household income is; there is a significant financial incentive to take a child out of school if the alternative is to lose a cash or food crop on which family survival depends. By increasing income substantially, the MFP has allowed client families more leeway in their decisions concerning the education of their children. Fewer families face stark choices with regard to decisions on keeping a child in school, particularly an older child whose productivity in farm labor may be approaching that of an adult. The availability of MFP loans to cover times of peak labor demand increases the options of households for hiring more labor and allowing children to stay in school.

Observed increases (from the panel survey) in the transport assets of families (bicycles and motorcycles) due to higher incomes also improve the chances children have to attend middle schools in neighboring villages and for those fortunate enough to live in villages near town, perhaps even high school. Education loans also permit some students to pursue higher education where monthly costs of school and boarding can reach Kyats 60,000 per month.

Survey results indicate that on average children in microfinance client households attend school half a year or more on average longer than children from non-client households. Comparison with villages located nearby but not inside the 22 townships where the MFP and other UN sponsored programs are operating may show that in fact the difference is in fact greater than shown by these survey results.

2.1.3 Health

Fatalism dominated the thinking of rural people with respect to health in the past according to information provided by respondents to the qualitative survey. Particularly in the Delta, efforts of Government health staff together with outside assistance in health has had the effect of raising awareness of the importance of preventative care and of dealing with health issues as they arise. People deal with health care issues out of their own resources and by borrowing. Microfinance has improved access to health care in two ways: by raising income and allowing people to accumulate assets out of earnings and by making available health care loans and, if necessary, taking loans from non-microfinance sources knowing that they will have the resources to pay loans back. In the past and even now for people not linked with the MFP, options for health care are more limited because of lower incomes and the lack of access to loans at reasonable interest rates.

In some villages, respondents to the qualitative survey report a reduction in the death rate as a result of improvements in health and relate this reduction to the MFP.

The CS study shows that when acute illness strikes, 69% of clients but only 42% of non-clients deal with the challenge using their own resources, 7% of clients but only 5% of non-clients sell assets (also an appropriate strategy). Conversely, only 7% of clients versus 18% of non-clients borrow from a moneylender and only 7% of clients compared with 23% of non-clients go to friends and relatives for help. These differences are statistically significant (at the 0.95 level). Microfinance clients are better able to deal with their health care needs than non-clients. Thus, it seems to follow that microfinance leads to a general improvement in the general healthiness of the population.

2.1.4 Social Events

Based on results of the qualitative survey, in non-microfinance villages, social events are minimized; in lean years there are few such ceremonies. Marriages often consist of exchange of coconuts and bananas done in the presence of the elders (*ga-daw pwei*) rather than an elaborate wedding ceremony. Noviations are only performed every few years and only when a sponsor covers the cost. Funerals are also modest and their costs are largely covered by the community as a social welfare expense with youth groups collecting money and providing for a simple ceremony.

Spending on social events has generally increased in line with other categories of spending as a result of increased income derived from business expansion supported by microfinance lending. As a result ceremonies in communities where the MFP is operating are more frequent and more lavish. Microfinance clients find it easier to access high-interest, same-day loans (*khauk-pyan-kyay*) to finance weddings, funerals and other ceremonies; market-stall owners in town view them as good credit risks. Cash gifts at

ceremonies are usually sufficient to cover repayment; in some weddings, the family actually makes a profit on the ceremony.

Only 12% of households reported a recent wedding according to CS survey results. Of these 76% of clients and 68% of non-clients financed the weddings out of their own funds and 6% sold assets compared to 3% for non-clients, 13% of clients got help from their friends compared to 11% of non-clients. The big difference was between clients and non-clients in terms of their use of moneylenders to finance weddings: only 3% of clients compared with 13% of non-clients borrowed from moneylenders. Microfinance clients are better able to finance their own wedding expenses with their own resources, to sell assets or to obtain help from friends (who know this help will be returned when the time comes); they have much less need to recur to the services of moneylenders, even though they are better able to do so.

2.1.5 Ownership Assets

The qualitative survey confirmed that microfinance clients had universally improved their family welfare and quality of life. Easily measured and observable assets such as quality housing, access to electricity and acquisition of consumer durables all indicate substantial improvement in the standard of living of the microfinance clients.

2.1.5.1 Housing (roof, floor, walls, size, materials, etc)

Home improvement is one of the most visible changes attributable to microfinance interventions. These changes can be observed in the number of stories, type of material used for roofs, walls and floors. Some changes are so dramatic that entire villages are beautified. These changes come about in three main ways: 1) in years of good harvests of cash crops whose production and yields have expanded as a result of access to credit on reasonable terms or out of savings built up over several years, villagers invest in home improvements out of retained earnings, 2) to a lesser extent, using home construction loans from the MFP and 3) taking advantage of remittances from children and using skills acquired in previous years in construction work.

2.1.5.2 Roof

The panel study shows that the major change is toward improved roofing, with Corrugated Iron (C.I. or in a few cases corrugated asbestos) sheets and away from bamboo and palm or grass thatch. By 2007, 40% of clients and 38% of non-clients had roofs of corrugated sheets; by 2011 these figures had increased to 57% for clients and 55% for non-clients. There was a substantial drop in the use of the poorest material (grass thatch) which dropped in both categories from 26% to 11%. Both clients and non-clients have improved their roofing material with clients having a slight edge over non-clients in both years. Corrugated sheets, besides keeping the house drier, offer the advantage of durability (not having to change the roof annually as is the case with other materials). CI roofs also allow water collection in the rainy season to reduce the need to haul water; water collection is not possible with other types of roofing materials.

The cross-sectional study shows a much bigger differential in favor of microfinance clients over non-clients (52% compared to 40%) in roofing with CI and a lower percentage of clients than non-clients using grass thatch for roofing (7% versus 4%). These differences are significant at more than the 0.999 significance level.

2.1.5.3 Walls

Villagers have also been improving the walls of their houses changing from less preferred materials (bamboo, nipa/palm thatch, grass) to preferred materials (brick and wood). In panel study results for 2007, 26% of clients and 18% of non-clients in the panel study had walls of brick or wood; by 2010 the percentages had increased to 30% and 24% respectively. In the CS survey, the percentage of clients using preferred materials exceeded non-clients by 20% to 16%; the difference is significant at the 0.97 significance level.

2.1.5.4 Floor

Preferred floor materials are concrete and wood, with 57% of clients in the 2007 panel study having one of these two materials and only 45% of non-clients. By 2011 the percentages had risen to 59% and 47% respectively. In the CS study, 59% of clients and only 28% of non-clients had preferred floor materials; on the other hand, only 5% of clients and 8% of non-client had the least preferred material (earth). These differences are significant at the 0.999 significance level. Based on the CS study, clients have a much higher percentage of preferred materials for flooring than non-clients and almost twice the percentage of non-clients as clients had earthen floors, the least preferred material.

2.1.5.5 Number of Stories

Focus groups and key informants participating in the qualitative survey affirmed that microfinance beneficiaries were building two-story houses or adding rooms on the upper level of at least part of their houses. The quantitative surveys fail to corroborate this hypothesis that houses of clients have more stories than non-clients. In 2007 42% of clients and 45% of non-clients had house of more than one-story in 2007 and the percentage was 44% for both groups in 2011. The CS study gives 33% of both clients and non-client with houses of more than one story.

2.1.5.6 Electricity and other Forms of Lighting

Improving the source of lighting is a matter of major concern in the villages surveyed. The preferred type of lighting is in descending order of preference, public electricity, mini-hydropower, own generator, connection to private generator (all the above constitute preferred sources), battery-powered fluorescent lights, 12-volt battery lights, kerosene, or candles. The CS survey sample included a disproportionately large number of non-microfinance villages had access to micro-hydropower; donors carried out a large number of micro-hydropower projects in non-microfinance villages of Shan state. This impacts not only on the indicator of superior sources of lighting but also on the accumulation of household assets, since the purchase of consumer electronics is closely correlated with the availability of electricity. Barring interventions such as these, higher incomes obtained by microfinance clients make it more likely that they would be connected to electricity where it is available.

For the panel study, data were collected on lighting sources only for 2011. In this year 46% of clients and 43% of non-clients had preferred sources of lighting (electricity of some kind) while only 21% of clients and 25% of non-clients used least preferred sources (kerosene and candles, which provide poor lighting and constitute fire-hazards). Results from the CS survey are somewhat biased by the inclusion of a large number of micro-hydropower plants; however, overall 27% of clients and 21% of non-clients had lighting using preferred sources (electricity of some kind). If micro-hydropower plants are excluded, twice as many clients (27%) as non-clients (13%) have electricity from sources that are dependent in one way or another with income (even public electricity requires buying meters and making incentive payments to obtain a connection). Only 43% of clients compared with 54% of non-clients use least preferred sources of lighting. These differences are significant at the 0.999 significance level.

Higher incomes associated with microfinance make clients much more likely to have the money to connect to electricity where it is available. In some places, community funds have been set up to help the community connect to public electricity. A few solar-powered household systems also exist. A flexible rural electrification loan product could allow more clients to connect to electric systems and private generators.

2.1.6 Water and Sanitation

There are few differences between microfinance villages and non-microfinance in terms of water and sanitation. Such changes as there are largely donor-driven with one exception: people who can afford to are willing to pay to have tubewells dug for their drinking water needs. Microfinance borrowers are better able to incur the cost of tubewell construction because of their higher incomes.

MFP clients are also willing to pay watersellers for water in order to save the time and effort it takes to draw water and to haul it home. The proportion of clients in the panel study buying water has increased five times from 2007 to 2011 whereas that of non-clients has only doubled, indicating a greater willingness and ability of microfinance borrowers to pay for water in order to save time. This water is not necessarily safer (depending on where the waterseller gets it), but it is certainly more convenient.

2.1.7 Household Assets

There is a strong linkage between income derived from microfinance and the purchase of household assets. The first household assets purchased as a result of increased income derived from businesses supported by microfinance are very basic items such as blankets, mosquito nets, pot and pans, and plates. Access to electricity is a major determinant in whether or not consumer electronics (DVDs, TVs, etc) are purchased, since only small electronic items can be run off of 12-volt car batteries. Only one community, which had 24-hour-a-day public power, reported the purchase of refrigerators. Most households have purchased bicycles and these are being replaced by motorcycles; both help children reach schools outside their villages. Troller-Gs are also being purchased for trips to market. In the Delta boats are also purchased for transport as well as fishing.

Most assets were not coded in quantitative surveys, but the kind of stoves people used and the fuel they consumed were. In the CS survey, 2% of clients (and no non-clients at all) were using electric cookers or hotplates, 7% (compared with 6% of non-clients) were using A1 energy-efficient stove, and 2% of clients (and only 1% of non-clients) were using rice-husk stoves. Clients were using more energy efficient cooking equipment than non-clients (0.999 significance level).

In terms of fuel, 95% of clients and 98% of non-clients use firewood, and another 1% uses charcoal. However 4% of clients and only 1% of non-clients uses electricity as their principal energy source for cooking representing a considerable savings in the use of firewood (0.999 significance level).

2.1.7.1 Asset Value and its Evolution

One of the most revealing tables in the quantitative reports reveals changes in the level of various types of assets between clients and non-clients. Without going into a detailed analysis which is already done in the panel report, the table below shows that even in 2007, client assets exceeded those of non-clients in all categories except transport, and by 2011 clients had caught up with and overtaken non-clients even in that category. Clients' overall assets had risen between the two years by 65% more than non-clients had risen (Kyats 269,000 versus Kyats 163,000). Growth rate for client assets was 8.2% per year versus 5.8% per year for non-clients. These differences are highly favorable to clients over non-clients and respondents to the qualitative survey attribute these dramatic differences to the intervention of the microfinance program.

Differences of the means are highly significant for all categories (significance level 0.999) except productive assets (tools and the like).

Mean Value of Assets in 2007 and 2011 in Thousands of Kyat

Type of Assets	Means for 2007		Means for 2011		% Change 2011/2007		Signi-
		Non-		Non-		Non-	Ficance
	Client	Client	Client	Client	Client	Client	Level
Productive	250	226	289	246	15.5%	8.9%	0.892
Livestock	342	233	408	288	19.4%	23.8%	0.999
Household Durables	82	62	143	132	74.4%	112.9%	0.999
Transport (Moto, Bike)	49	127	153	149	212.2%	17.3%	0.999
Total Assets	725	652	994	815	37.2%	25.1%	0.999
Difference 2011 – 2007 Clients/Non-Clients%			269	163	+65.0% (=269/163)	Not applicable	
Growth rate of total assets					8.2%	5.8%	per annum

Approximately Kyats 800 = \$1 in October 2011

2.1.8 Business Development

2.1.8.1 Panel Study

In the panel study, the most important change observed in primary occupation between 2007 and 2011 is the increase in percentage of clients engaged in agriculture which rose from 52% to 58%, apparently in response to higher loan limits for agriculture than for other types of loans. This expansion occurred at the expense of trading which fell 3 percentage points from 31% to 28%. Casual labor fell from 8% to 7%. Other categories remain largely constant over the two study years.

Non-clients for the same years registered a drop in agriculture from 61% to 56%. Trading which had been 16% (about half the percentage for client) in 2007 rose substantially to 23%. Casual labor fell from 13% to 11%, higher than the percentage for clients in both years; for both years, percentages for non-clients are nearly twice those for clients for this less-than-preferred category of employment.

In terms of secondary occupations, what stands out for clients is that in 2011 agriculture fell to a third of what it was in 2007 (18% down to less than 7%). At the same time client proportions in trading doubled (from 22% in 2007 to 43% in 2011). Casual labor fell from 22% for clients in 2007 to 12% in 2011.

Non-clients in 2007 were nearly evenly divided between casual labor with 41% (twice the proportion of 22% for clients) and livestock rearing also with 41%. None of the non-clients was doing trading as a secondary business in 2007; by 2011 only 13% were involved in trading (whereas 42% of clients were involved). Non-clients percentages exceed those of clients in least preferred job categories and are well below those of clients in preferred categories.

These results show that clients are much more likely to engage in trading activities than non-clients and much less likely to engage in casual labor. These results corroborate findings of the qualitative survey which indicate that greater participation in trading activities by MFP clients is related to their access to

loans to engage in more lucrative businesses. Therefore, more clients are able to engage in businesses for their own account and fewer are forced to work as casual laborers for others.

2.1.8.2 Cross-sectional Study

According to the 2011 cross-sectional survey, clients and non-clients engage in agriculture as their primary business in almost the same proportion (58 % and 57% respectively). Nearly 17% of clients engage in trading compared to only 4% of non-clients. Almost 3% of clients are skilled laborers compared to 1% of non-clients. Almost 3% of clients and only a little more than 1% of non-clients engage in fishing.

Only 11% of clients are casual laborers compared to 18% of non-clients. Only 3% of clients compared to 7% of non-clients are unpaid family workers. Only a little over 2% of clients but 10% of non-clients classify their primary business as that of being a “dependent.” Clients less dependent on their husbands than non-clients and more likely to have their own business activities and therefore are less obliged to work for other people as casual laborers.

In terms of their secondary employment, again clients’ proportion of 37% as engaged in trading is nearly twice the 20% of non-clients. Only 18% of clients engage in casual labor compared to 31% of non-clients. Over 5% of clients engage in fishing compared to less than 3% of non-clients. All these results are significant at the 0.999 significance level. Clients are more likely to engage in higher value activities because of their access to credit through the MFP.

2.1.9 Agriculture as a Business

Equal proportions of CS survey respondents declare that they are engaged in agriculture as a business (66% and 65% for clients and non-clients respectively) with no significant difference in the proportion between the two categories.

2.1.9.1 Land Ownership, Land Purchase, Input Purchase

The CS survey shows that on average a slightly higher percentage of clients than non-clients (65% versus 63%) own land; however, this difference is not statistically significant. On the other hand, the amount of land that they own is on average 1.1 acres more than non-clients and this difference is significant at a very high level (0.999). Also highly significant (0.999) is the fact that 8% of client and only 3% of non-clients have bought land in the time since the MFP started in their area. The amount of land that clients bought is also 1.1 acres more than that which non-clients bought but this difference is not significant at the 0.90 significance level.

Clients are regularly leasing land but quantitative data were not collected on land-leasing due to the difficulty of collecting such data in a general survey such as this one. Leasing is the easiest and cheapest way to acquire use of land until such time as a farmer has the money to buy and conserves working capital for crop operations.

Ninety-five percent of clients used improved seeds and other inputs compared with only 83% for non-clients (difference significant at the 0.999 significance level).

Clients plant an average of 4.8 acres of land compared to 4.2 acres for non-clients. The average difference in acreage sown by clients versus non-clients is 0.6 acres. This difference is significant at the 0.95 significance level.

A disproportionately higher percentage of clients use improved inputs (77% compared to their sampling fraction of 75% clients) whereas the proportion of non-clients using such inputs is only 22% compared to their sampling fraction of 25%. Likewise, clients using such inputs buy 56% more in value terms (Kyats 270,000/165,000) than non-clients using these inputs; this difference is significant at the 0.999 significance level.

2.1.10 Loans for Various Types of Businesses

2.1.10.1 Panel Study

Whereas 85% of clients took agricultural loans in the 2010 survey, only 38% of non-clients accessed loans. For non-farm businesses, 65% of clients and only 39% of non-clients obtained loans for their non-farm businesses. The significance levels for these differences are 0.999.

Only a small number of respondents (45, or less than 9%) were engaged in fisheries. Of these, 59% of clients and only 27% of non-clients took out loans to finance their fisheries activities (significance level 0.90).

2.1.10.2 Cross-sectional Study

Over 87% of clients and only 29% of non-clients take out loans for **agriculture**. Over 80% of clients obtain their loans from the MFP, 10.0% from moneylenders, 3.3% from input providers and only 6.4% from friends or from advance sales to crop buyers. Non-clients do not have the option of borrowing from the MFP. Instead, 68% borrow from moneylenders, 23% borrow from input providers and 9% borrow from friends or take advances on sales of standing crops. All these sources (except friends and relatives) are high cost sources, cutting into the profitability of their farm operations. These differences are statistically significant at greater than the 0.999 significance level. Average, loan sizes of clients are lower than for non-clients (0.98 significance level) because of relatively low loan limits imposed by the MFP. Clients would like to see these limits raised.

The CS study found that for the entire sample 12% were engaged in **fisheries** with a little over 13% of clients and 7% of non-clients engaged in fisheries (significance level 0.999). Over 57% of clients but only 18% of non-clients took out fisheries loans (significance level 0.999), with all but 3% of client loans coming from the MFP and all non-client loans coming from moneylenders. The value of loans for fisheries is Kyats 65,000 larger for clients than for non-clients; this difference is significant at the 0.90 significance level.

The CS study confirmed that overall 40% of women engage in **non-farm businesses**. However, the proportion of clients having non-farm businesses is nearly twice that of non-clients (46% and 23% respectively, significance level 0.9999).

Microfinance households generally choose those types of businesses which are more profitable and which require more capital. Over 52% of clients have small retail shops while less than 32% of non-clients own such shops. In wholesale trading, clients outnumber non-clients by nearly three percentage points (16% versus 13%) and in vegetable-selling and street vending by nearly a percentage point (9 to 8%). This confirms results of the qualitative survey which note that many of the women who today own shops started out in selling on mats in a market or a little table by the roadside. These results confirm conclusions in the qualitative survey that the expansion of their businesses with the support of the MFP allowed clients to move from the market or the roadside into a shop of their own.

Clients exceed non-clients by more than a percentage point in the tailoring business (over 2% versus 1.0%), being better able to afford the investment in a sewing machine. Cottage industries require some capital; in these industries the proportion of clients to non-clients is almost five times as large (2.4% versus 0.5%). Nine times the proportion of women clients accessed loans to finance their non-farm businesses as non-clients (62% compared with a little less than 9%), and the average loan size is Kyats 16,000 higher for clients than for non-clients, although there is considerable variation in loan sizes for both categories. These differences are significant at the 0.999 significance level.

In summary, client women are in the position of being able to get into profitable activities and to operate them successfully with loan capital borrowed from the MFP. Non-clients have very limited access to credit and are limited in the businesses they can open and the scale that they can operate them on.

2.1.11 Livestock

According to the qualitative survey, the MFP has allowed clients to increase their purchases of animals. This diversification into livestock is largely the product of income that clients derive initially from their main business and later from second and third businesses. Some diversion of proceeds of loans taken for other purposes to partially fund livestock purchase is also likely. Most purchases concentrate on pigs which can reportedly be purchased for as little as Kyats 20,000 in some villages and finished for market within 7-12 months. Profitability is higher in villages near urban markets where a local butcher can slaughter pigs and their owners can sell the meat at retail rather than simply selling the pig. Sheep and goats are raised in some areas; ducks are a source of income in the Delta and chickens are raised everywhere. (UNDP and various NGOs have also encouraged animal raising in non-microfinance villages through the provision of loans to purchase draught animals and for raising pigs.)

In addition to their services for land preparation, animals are a store of wealth which is tapped in times of need or when profitable opportunities present themselves. The bulk of animals are sold for cash but a few animals are slaughtered for family use, and, together with animal products (milk, eggs) contribute in a small way directly to family nutrition by increasing consumption of protein. Except for one village located near a dairy, milk is generally not produced for market; for villages located near urban areas, milk production could be a profitable activity and one which could be financed by the MFP.

No loan product exists specifically for animal raising. Such a product would have to be tailored to the cash flow according to the type of animals being financed. Veterinary services to protect the investment would also be needed.

Lack of fodder is a limitation on raising animals. In some places the number of draught animals is declining as they are starting to be replaced by two-wheeled tractors for land preparation.

2.1.12 Mechanization

The pace of mechanization in rural areas of Myanmar served by the MFP is increasing. Members are able to acquire machinery of various kinds based on profits from their businesses. Mechanization of post-harvest activities is also starting. Small rice mills are being purchased, allowing rice to be milled locally; dehulling rice locally with these small rice mills saves on transport costs and more importantly makes subproducts available to feed animals. These mills and other small machines are often driven by the motors of two-wheeled tractors. Wherever a water source is available in close proximity to reasonably flat land, motorized pumps are being purchased to make it possible to irrigate land and to grow high-value vegetable crops during the dry season.

The main focus of mechanization is on land preparation. Although tractor plowing costs more than land preparation with draught animals, it is faster, assuring timely planting, results in a better seed bed and therefore minimizes the growth of weeds and leads to higher crop yields. The emerging trend toward substitution of two-wheel tractors for draught cattle is unstoppable. Given the shortage of fodder for draught animals, the lack of financing is the single element which is holding back this change-over to mechanized land preparation. Net employment impacts are ambiguous: mechanization of land preparation decreases the demand for labor in this part of the crop cycle, but it generally increases the possibility of double-cropping by speeding up land preparation which has a very positive impact on farm income and employment. It also frees up land used for pasture or fodder production for cropping.

No specific loan product exists to allow clients to purchase machinery at present. Such a product would have to be tailored to the cash flow of the equipment and would probably require a minimum loan term of 24 months.

2.1.13 Farm Labor

Casual laborers are less well-off than farmers who own land and than those who have other kinds of businesses. They rely on doing whatever work arises and are only paid when such work is available. When it is not, they are forced to take loans from their employers at 5% a month or to agree to accept lower wages in the future as jobs requiring their services arise. Sometimes they have to take day-loans at 15-20% per day in order to eat.

Nevertheless, the situation even of casual workers has improved since the intervention of the MFP. As noted, fewer clients report doing casual labor, channeling their energies instead into businesses of their own. The increased intensity of land use, which has been noted above, energizes the village economy, provides more employment to casual laborers and puts upward pressure on wages, all of which are helpful to casual laborers. Wages have generally risen to Kyats 1500-2500 per day (though wages as low as Kyats 600 per day were reported in one village, an improvement nonetheless on the Kyats 500 paid in the past).

2.1.14 Trees and Forest Cover

The MFP has a positive impact economic growth, affecting trees and forest cover in different ways. Demand for high-value tree crops has encouraged planting and care of commercially valuable trees (coconut, betel nut, plum, mango and lime trees and bananas). Fruit is in high demand in urban markets. In other areas where an agricultural frontier still exists, shifting cultivation has led to cutting of second-growth forest to allow for expansion of agricultural production.

Increased population has increased the demand for firewood, putting pressure on remaining trees. There is some increased planting of eucalyptus and native species for firewood, construction and on-farm needs. The qualitative survey notes that Forestry Department regulations prohibit cutting trees and its regulations and surveillance provides some protection for tree cover. However, this prohibition, while limiting the cutting of trees in general, does not encourage good forestry management practices which should allow farmers to cut trees that they've planted and when the trees are no longer providing the services for which they were planted. For example, the Department stops farmers from cutting toddy palms near urban areas even though they are no longer being tapped; fallen leaves are sold as roofing material, but the timber is not available to farmers for their own needs and for sale now that the trees are no longer serving their intended purpose. Forestry Department and NGO programs are encouraging some replanting of native species and fruit trees such as cherries. Some of the planting of mango trees and tea bushes has been based on MFP loans. Also, as noted earlier, increased incomes derived from MFP loans is allowing more client households to decrease their dependence on firewood as a source of fuel by shifting to electricity and to use less wood through the purchase of energy-efficient stoves.

2.1.15 Fisheries (and Aquaculture)

Fishing is an economically important activity in the Delta. Fish is the main source of protein in the diets of people in the areas served by the MFP. Some members engage in fishing and have used MFP loans and profits from other businesses to buy small fishing boats and nets according to qualitative survey data.

Handling and processing fish is also an important activity. Some members were engaged in making fish traps and transporting fish for fishmongers. The MFP has allowed them to get into more lucrative fish marketing instead of doing these low-wage jobs on the fringes of the industry.

Only one instance of aquaculture was reported. A French NGO (Gret) had recently established a fish pond in one village in the Delta shortly before the survey started; no results of this effort were available at the time. Fish do come into the farm fields during the rainy season and the local population uses cast nets to catch them in low spots between fields contributing to income from sales and improved food security from eating small fish. Where paddy is grown in other countries (especially China), joint production of fish and rice double the income generated from a single field as fish are harvested from small ponds inside field perimeters after the rice is harvested; there is a cost to building these ponds but profitability is high enough that if loans were provided for pond construction, they could be recovered in a single season.

The Delta fisheries are overfished and profits are generally low, but there are still some profits to be made. According to the panel study, among those who engaged in fisheries, clients are better able to finance the costs of fishing than non-clients due to the availability of MFP loans. Twice the proportion of clients (58.8%) involved in fisheries take out loans compared to non-clients (27.3%); results are significant at the 0.90 significance level. Interest rates are also lower for MFP borrowers than for those borrowing from other sources.

The CS survey also shows that twice the percentage of clients is engaged in fishing compared to that of non-clients (13.4% versus 6.8%); results are significant at the 0.999 significance level. Furthermore, clients have on average Kyats 65,000 more fish assets (boats, nets, etc) than non-clients (significance level 0.90).

2.1.16 Communications

Communications are improving but still remain a problem in most villages. However, no substantial differences were observed between microfinance and non-microfinance villages; about half have at least one telephone, about half have none. According to the qualitative survey, there appear to be more phones in total in microfinance villages than in non-microfinance villages, but responses are not completely clear on this point.

Some villages might benefit if financing could be found allowing private people to provide service to the community. Charges for using a telephone in villages range from Kyats 100-200, and exceptionally even Kyats 300, per minute. Such charges are high enough so that where few alternatives exist, they might justify the purchase and maintenance of a cellphone to provide communications services in a village.

2.1.17 Transportation

Bicycles are universal, being found in almost every household with a greater prevalence in client than non-client households; they serve multiple purposes, including transportation of people and products as

well as allowing children to attend schools outside the community. Motorcycles are being added in addition to bicycles in most communities. Two-wheeled vehicles are the major form of transport within the villages. According to the panel study, microfinance households lagged behind non-clients in the value of transportation assets (observed in the asset value table above) in 2007 but by 2011 had equaled or even slightly surpassed the value held by non-client households. Unfortunately, similar data on the value of transportation assets are not available from the CS study. In general, microfinance clients have an edge when it comes to the purchase of motorcycles and other transport compared to non-clients, due to their higher incomes and access to microfinance loans. In the Delta, some members are buying motorboats which are being bought specifically to provide transport services.

For transportation outside of the villages, troller-Gs and three-wheeled vehicles are becoming the major means of transport allowing villagers to transport themselves and their products to bigger markets in town where they get better prices for their products. Owners of troller-Gs and three-wheeled vehicles tend to be the more well-off members of the community, although some microfinance clients have bought them as well. Villages located in close proximity to highways have access to bus service, and a few villages even can access train service. However, for most villagers transport during the rainy season is still difficult and, thus, people's interest in improving road infrastructure to make better use of the available transport infrastructure is high, especially where production volume and income is rising as a result of the MFP.

Some villages are located on the outskirts of main towns and are in effect extensions of these towns, given the fact that people are able to quickly move themselves and products to town on the back of motorcycles, making themselves into urban commuters more than farmers. Because of good transport, farming activities have often declined in such villages as residents concentrated on more profitable urban activities (unless irrigation is available, in which case some residents still focus on the production of high-value vegetable production).

2.1.18 Gold and Other Forms of Saving

Villagers do not have the habit of going to the city to save their surplus income in a bank. They prefer to buy and hoard gold. However, the percentage of families in one village able to save in the form of gold is only about 10%. People do not save in banks which they regard as impractical; they do not understand the banking rules and regulations and are unwilling to waste time and energy to go to the city to deposit and withdraw money. Gold, on the other hand, is easily pawned and converted into cash when needed and pawnshop loans backed by gold attract a relative low interest rate of 4%-5% with village money lenders. People living near cities prefer to take their gold to urban pawnbrokers who charge lower interest rates than those in villages (as low as 3% per month in some cases according to the qualitative survey). Because of their higher incomes, microfinance clients are more likely than other villagers to be able to store wealth in the form of gold (based on the CS survey results), which is then available when it is needed to meet emergencies and other needs. For example according to the CS study, more clients than non-clients pawn or sell gold (12% versus 4%) to finance chronic illness.

2.1.19 Rights of Women

Respondents to the qualitative survey maintain that the opinions of women clients now are taken into account more than in the past at both household and village levels. Women clients of the microfinance program now run their own businesses and contribute to the family budget and are able to contribute to community projects or social events as well. Women have become more confident in themselves, show greater solidarity with each other and cooperate more among themselves, and have a greater vision of the world around them and a better understanding of how it operates. They are learning how to work together and to participate on an equal footing with their spouses in activities.

According to the CS study, over 80% women decide important matters jointly with their husbands. About 1% more clients report joint decisions than non-clients on matter such as marriage (82% clients, 81% non-clients) and sending children to schools (81% clients, 80% non-clients). On these same decision clients also have about a 1 percentage point difference over non-clients when they “consult over these subjects with their husband and gain their point” (i.e. prevailing in the discussion with their husbands concerning an issue) and about the same difference when they “initiate the discussion with their husband and win their point” (i.e., prevailing in the discussions where the point of view that they have proposed is accepted by their husband). Where the situation is clearest is in reference to asset purchase where client women consult with husbands and win or initiate the idea of asset purchase and win with differentials over non-client women by 5 and 3 percentage points respectively; since they are contributing money to the household budget, they have a greater say in how it is used. The same holds true for product marketing decisions with slightly lower differentials of 4 and 3 percentage points and 3 and 2 percentage point differentials on decisions on making a donation. On decisions involving daily household activities client women initiating ideas and prevailing in their point of view (15.4%) are almost double non-client women (8.2%). These differences are small but consistent from question to question and are all highly statistically significant (0.999 significance level or higher, in most cases).

Women’s roles in community decision-making have also become stronger with a large differential favoring women clients of the microfinance program. The percentage of clients who report being consulted on such decisions “sometimes” is 53% compared to 45% for non-clients and “often” 24% compared to 10% for non-clients (0.999 significance level).

In summary, the MFP has contributed to increasing the respect which women get within their households and within the larger community. While much remains to be done, the program has empowered women financially so that they are contributing not only to their household budgets but also to community activities and projects. It has also helped organize them in ways that have made it possible for greater cohesion to develop among women’s groups and thus to make it easier for them to band together to get things done and to have their voices heard.

2.1.20 Community Based Organizations (CBOs) other than the MFP Groups

In most microfinance villages, except for male and female youth groups, there are no civil society or community based organizations (CBOs) other than the microfinance groups themselves. Female and male youth organizations contribute to the welfare of the village and provide assistance for various ceremonial activities as they arise. In microfinance villages they have had an additional function: they have been able to convey the news regarding the benefits of microfinance to neighboring villages.

However, according to the qualitative survey, a women savings group was formed in one non-microfinance village. Mother and Child Care, Women's Affairs, Fitness group, and other organizations have also been formed in a small number of villages. In one village, men have formed a reserve fire brigades and in some others men organize to maintain village water supply. Good leadership responsible to the membership and a focus on the needs of the group is not always found.

In the Delta especially, numerous NGOs arrived with a variety of interventions, some of which may include setting up new CBOs. In a number of villages classified as “non-microfinance,” microfinance programs of some sort have been established along with groups which are involved in their management. Information is not available on program operations and results nor on the leadership the internal dynamics of groups associated with these programs. Repayment problems have already emerged in some case.

2.1.21 Need for Microfinance or for New Loan or Other Products

In general, agricultural loans are provided to all members of groups who are qualified by their experience and their activities for such loans. However, this is not always the case: according to the qualitative survey, in one village in the Delta only one member at a time out of the group composed of 5 members was allowed to receive agricultural loans, with others on hold until the first paid back. This could be a local procedural error or the fault of a local shortage of funds for providing large loans to all. Whatever the case, where MFP agricultural loans are not available, financial costs are higher and profits lower (as low as one third of what would be kept by a microfinance client) as members are forced to borrow from other, higher cost-sources (rice mills, moneylenders, etc). It is also worth noting that standard policy is for all qualified members to be eligible for agricultural loans but apparently the policy is not always respected.

The qualitative survey gave respondents the opportunity to propose changes to the MFP products and procedures. These suggestions include repayment periods and payment schedules, maximum loan sizes, the exclusion of members who stop attending meetings and rules relating to health loans and their treatment as refers to the maximum number of loans a client can have outstanding at any one time.

Fortnightly loan repayments also pose a problem for those engaged in agriculture. Some have proposed that payments be made monthly and that repayment be deferred until after crops are sold in the case of agricultural loans.

Opinion is strongly in favor of increasing maximum loan size. Where loans are inadequate to meeting the capital requirements of members' businesses, they are forced to either limit growth or to take loans from other, higher-cost sources, limiting their ability to generate a profit.

People who fail to attend meetings are at a higher risk of defaulting on their loans. Other members who have guaranteed their loans pay the penalty for such defaults. Survey respondents propose that people not attending meetings should be expelled.

Health loans are especially appreciated and their contribution to meeting health emergencies is noted. However, respondents report that it is difficult to get the health loan and that it requires the signature of someone from the hospital.

In the Delta, the rules governing the health loans are the following:

1. Maximum loan amount K 50,000 (some other types of loans such as agricultural and business loans are larger).
2. Repayment is biweekly in 12 installments at 2.5% per month interest payable over a year, with no grace period.
3. A health loan counts as a "loan."

A borrower can have a maximum of two loans outstanding at one time including the health loan. Since other loans have higher maximum loan limits, members refrain from taking health loans even when they need them in order to retain eligibility for large loans of other types.

2.2 Microfinance Impacts on the Community

2.2.1 General Welfare and Income Levels

The qualitative survey confirms a substantial improvement in the ability of people to engage in a variety of businesses, to set up additional businesses, and through the income derived from these businesses, to

improve the welfare of their families, to make much-needed repairs and improvements to housing and to acquire assets whose cost would have been prohibitive prior to the start of the program. At the time of the survey, Delta villages were affected by weather conditions which affected crop production and hence income. However, despite these transitory set-backs, pests or prices, villagers recognize that their overall returns from farming have increased as a result of better understanding of farming practices and the availability of resources to put them into practice. The intensity of land use has increased as fallow land is put back into production and, wherever possible, land is double-cropped: often paddy is grown first for on-farm consumption followed by a cash crop (whatever is best suited to soil type and quality and in high-demand in the market). Activities are performed in a more timely fashion, appropriate inputs are purchased, and yields have risen.

Non-farming businesses such as raising animals and poultry, trading, processing, services and transport also contribute to family income. Some engage in multiple businesses, pursuing sequentially or at the same time whatever business is most profitable. Non-farm trading businesses are developing and owner confidence is rising as people who sold farm produce as itinerant traders, have opened shops, and those who had shops are now able to trade in the cities and to sell their products at better prices. In areas like the Dry Zone, income from farming is just sufficient to meet people's basic food requirements; income necessary to meet other needs has to come from non-farm income. The combination of these diverse farm- and non-farm activities, carried out with an increase in resources, lower interest rates and the timely availability of funds combine to produce a larger and more stable income stream leading to the improvement in family welfare. In non-microfinance villages of the Dry Zone where farm size is limited in most cases to not more than one or two acres, remittances from emigrants are responsible for any increase observed in income.

Having two incomes (the wife's as well as the husband's) has been the key to increased family welfare in households of microfinance clients. Loans from the MFP have been critical to allowing women to run their own small businesses, earn income and contribute to the family budget. A second point of critical importance is the interest charged on loans: loans from the MFP are commonly at around 3% per month unlike the supplier credit used in the past which is at interest at rates varying from 8% to 10% per month and which squeezed all profitability out of small businesses. After several years of successful operations, many of these women are in a position to manage and make effective use of larger loans if they were available.

In Shan State the economic situation of villages of all types has improved in recent years as the result of expansion of tea and fruit and vegetable production and increased production of cash crops such as turmeric, potatoes and groundnuts. However, lack of access to finance on reasonable terms is an impediment to the region's development. In good years, where there are high yields and good prices, such as in 2010, turmeric is highly profitable and provides a good cash income and farmers invest in housing; in other years (such as 2011), price falls and farmers fall back into debt because of their inability to repay advances from brokers. Thus, some loans are repaid in turmeric at a price fixed at an unfavorable level.

Villages which are able to sell their crops directly in the market in town have higher income than those which are more geographically isolated. Incomes have increased in amounts varying from slight to substantial depending on the village. In microfinance villages, increases in income are derived largely from agriculture. They are based on the ability to buy fertilizer, to carry out crop operations in a timely manner, and to increase crop area and to intensify production by increasing the number of crops which can be grown each year. Income from farming is reinvested in products such as tea leaves and these products are held on-farm in the expectation of price increases and as a store of value easily converted into cash. Diversification into other types of enterprises (livestock breeding, trading and on-farm holding of crops, etc), improvements in educational attainment for children, better health care, greater food security, improved housing and greater ownership of assets are all observed.

Increased income is spent mainly on storing food, purchasing livestock and tea leaves for future sale at (presumably) higher prices, and on home renovation. Family assets, both productive and non-productive, are also rising. More money is available for education and health. Surplus funds are also available for donations.

2.2.2 Employment Opportunities

Increased economic activity in the villages has provided greater opportunity for employment reducing the number of people who are forced to migrate in search of work. The introduction of cash crops and the availability of MFP credit to finance their high production costs has increased the demand for labor. Mechanization is also increasing and though it reduces the need for labor for land preparation, this reduction is more than offset by increased labor demand for other operations (weeding, harvesting, post-harvest operations). The MFP is contributing to increased demand for labor by allowing farmers to put more land into production and to intensify production on land where this is feasible by expanding double-cropping and increased production of labor-intensive, high-value crops. Thus the impact of the MFP extends beyond direct clients of the program and provides income through employment to the poorest people in local economy. It provides opportunities for young people to earn a living in their villages as growth in agriculture and other businesses increases employment and family income.

Despite the positive impact of the MFP on employment, there are slack times in the agricultural calendar. At these times of year, no jobs and hardly any cash circulates in the village economy. Young people migrate either seasonally or permanently to take jobs in other areas or to the cities to work in construction, road-building or mining. Many work in or set up their own teashops. These migrants retain ties to their villages and their remittances contribute not only to sustaining their parents and younger siblings but to the development of the villages. Increased educational attainment also improves their ability to find employment outside their home villages; some young migrants work in order to further their education and some achieve higher degrees and professional employment.

Some of the 2011 results of the panel study differ in important ways from those found in the cross-sectional survey. Of relevance to employment are the figures on employment as casual labor which has been noted repeatedly in these reports is less profitable and lower-status than engaging in some kind of business. Data for 2011 from the panel study where both client and non-client respondents are drawn from the same community show only 7% of clients and 10% of non-clients engage in casual labor as their primary occupation and 12% for clients and 26% for non-clients as their secondary occupation. The figures for the cross-section study where clients are drawn exclusively from microfinance villages and non-clients from non-microfinance villages, corresponding figures for casual labor given as the primary occupation of clients are 11% and 18% for non-clients and for secondary occupation 18% and 31% respectively. What these figures appear to indicate is that in villages where the MFP is operating, the entire village benefits from the positive impact the program has on income and employment, not simply for the MFP clients. It is also likely that the benefits to employment derived from the microfinance program are still understated even in the CS study, since it compares microfinance villages with other villages in the same township receiving assistance from UNDP and from NGOs; thus the sample correctly represents the 22 townships where UNDP is operating but probably understates the benefit if the program were expanded to cover new townships where no significant externally funded development interventions are taking place.

2.2.3 Linkages with Supply Chains and External Economies

Production and incomes are increasing in the three regions where the project is operating; increases are believed to be greater in those villages served by the MFP. Microfinance clients have been acquiring land,

using their land more intensively, increasing their yields through the adoption of good agricultural practices and buying improved seed and other inputs with loans provided by the MFP. The qualitative survey makes clear a number of points concerning the relationship between clients and the large economies in which they operate. Both on the input purchase and the product marketing sides, microfinance clients are better linked to markets and are better able to make and implement decisions which maximize their income from farming. Some are also intervening in their village markets through the purchase of products at harvest for subsequent sale. Buyers seek out larger producers and farmers whose product volume is greater; such farmers have the ability to obtain better prices for their products. Because of access to credit, they can afford to transport their products to urban markets where prices are more attractive than in the 5-day markets in their villages or surrounding areas. Because transport is so critical for successful farm operations, people in microfinance villages are more willing to contribute to road maintenance. They are also more likely to take transport themselves rather than walking, which in itself encourages the increased frequency of transport service to their communities.

2.2.4 Growth of Primary Industries and Development of Large-Scale Businesses.

The impact of the program is positive and has multiplier effects which affect employment, income and general welfare within the villages. In some cases a very high percentage of the eligible women participate in the program. Nevertheless, loan size is relatively small, and despite recommendations to raise limits on some types of loans and to develop new loan products some of which might have higher loans limits, the growth of villages served by the microfinance program is unlikely to spur the development of large processing or other types of industries in the communities. It is also worth noting that new technologies which are appropriate to the scale of production within villages favor small-scale rather than large-scale operations. Except for a few countries such as Thailand, large rice mills are becoming white elephants in many countries. They cannot compete with small portable mills driven by two-wheeled tractors which can be set up at a farmer's house. Such mills initially had poor conversion rates and broke a high percentage of the rice; however, this is no longer the case and small mills are almost as efficient as large industrial scale mills and offer better service to small farmers (as well as leaving the sub-products on-site for animal feed). Other small machinery for processing is likely to make it more likely that small service operations develop within villages. Some of these businesses may grow but are unlikely to lead to large scale businesses developing within the villages. Depots for storage and aggregation of products and sales outlets for inputs could develop independently within villages but are likely to be linked with urban traders through some arrangement with people whom they trust within villages. Farmers' organizations can play a major role in the development of these kinds of activities. USAID in particular has long experience with agribusiness/ farmer organization support projects.

The qualitative survey confirms that villages are concentrating on developing linkages with the most profitable urban markets. It is in such markets that major businesses are going to locate because of their ability to serve many villages from a central point. Donors supporting the expansion of microfinance in Myanmar may want to look critically at also supporting small infrastructure projects such as roads, bridges, ferry-crossings, etc which improve transport links with major urban markets and which will facilitate development in villages served by the MFP.

2.2.5 Specialization or Diversification

Because of soil, water, weather and market conditions, at any given time of the year, most farmers in a given location will be growing the same set of crops. Based on long experience farmers will have determined the optimal crop mix for their areas, adapting it to changing conditions. Often they will grow similar areas of these crops based on the labor and other factors at their disposition. Likewise skill sets, input availability and markets may combine to encourage specialization in the particular type of product such as cheroots, brooms, toddy, yarn, weaving, etc. This specialization has advantages in that when 10

women are side-by-side producing and selling the same products, buyers know where to go to buy the specific product and that they will find a good selection of products to buy in terms of size or quality. Often, this specialization will be encouraged, as it was in one non-microfinance village selected in the qualitative survey sample and served by UNDP's SRG program (brooms and yarn). The availability of financing for these activities is probably a factor in allowing specialization to occur.

While specialization is a reasonable approach for a community, individual households need to diversify their income sources in terms of products, spatially, and over the year. Concentration in a single product is dangerous and farmers in the sample minimize risk as best they can. Their approach involves producing some of the food crops that they commonly eat, producing some cash crops (particularly crops whose harvest coincides with periods of scarcity of stored food), developing reserves of cash, gold, or stored crops and other assets to cover periods of low income, and having family members who work outside and send back remittances. Livestock form part of the strategy in that they can be sold at times when cash is most needed. The microfinance program encourages this kind of diversification in that the income from one business often provides the seed capital for setting up a second or third business and part of the proceeds loans for one business may in fact be channeled into supporting another entirely separate business. The fact that women have a separate income from their husband is also a risk-mitigation strategy in addition to contributing to increasing family income.

2.2.6 Mortality Rates

Mortality rates cannot be accurately computed from surveys of this type. However, out of the 24 villages covered in the qualitative survey, in two cases in microfinance villages and in one case in a non-microfinance village, participants affirmed that the death rate had declined. A clinic had recently been set up in the non-microfinance village and so treatment was available locally. In the microfinance villages people spoke of being able to consult medical staff because of 1) higher incomes from businesses supported by the MFP and 2) because of the existence of the health loan.

2.2.7 Made or Lobbied for Collective Investments

Microfinance villages are better able to face the cost of and to pay for community infrastructure such as schools, roads, clinics, monasteries. One village specifically mentioned that annual road repair is carried out since people are more willing to participate and better able to hire labor for maintenance. Because the poor state of roads limits people's ability to move around during the rainy season and for their children to travel to middle schools in other villages, there is considerable interest in seeing road infrastructure improve and a willingness on the part of communities to collaborate in the task. Villagers' organizational skills have also improved and can be harnessed to work with other organizations for community projects. Men's groups have been set up in many villages for maintenance of community water supplies. Having a middle school in the same community reduces the cost of schooling, residents are eager to contribute to the construction of more schools to the limit of their ability which is greater in the case of microfinance than non-microfinance villages. Repairs and improvements to monasteries were also reported frequently in microfinance villages; monasteries in turn provide considerable service to the communities.

Where outside assistance from donors and NGOs had arrived, the qualitative survey discussion and interview notes do not make it clear to what extent the communities have lobbied for this assistance. It appears that in most cases the outside organization has selected the community and only after selection are community projects identified jointly with the community and carried out.

2.2.8 Greater Propensity to have Other Projects or NGOs Present

People in microfinance villages are of two minds concerning the establishment of new organizations in their villages: some believe the arrival of new projects or outside organizations is favored by the existence of the microfinance groups; others, on the other hand, feel that the presence of the MFP may preclude or dissuade outside institutions from coming into the village and forming new organizations with the people. Those believing that the presence of microfinance encourages new organizations to come in make the case that the program has allowed them to better understand the basic concepts related to community development. They believe that this understanding will facilitate the arrival of other organizations and will facilitate their ability to work with new projects when they come. The contrary opinion is that if the MFP is already working in a community, other NGOs will choose to go elsewhere and to bring their assistance to communities not already receiving some outside support.

It is clear that their work with the program has improve women's ability to organize and get things done, but many outside institutions prefer to provide limited assistance funds in areas which are not being served by other development institutions in the belief that these areas are more needy. These organizations may put a higher priority in channeling resources to underserved areas than on obtaining the greatest efficiency in resource use. Donors could maximize the impact of their funding by putting their efforts into communities where the MFP has laid the groundwork, organized the women of the community and helped the community generate more local income, part of which can be put to use as counterpart funds to such projects.

3. Microfinance Impacts Related to Cyclone Nargis³

Cyclone Nargis formed in Bangladesh and India on April 29, 2008 and became a Category IV cyclone (winds 215 kilometers per hour) before it hit Myanmar on May 2. The MFP project manager is from Bangladesh and was in personal contact with people in Bangladesh; based on their advice, he warned MFP staff in the Delta that the cyclone was more serious than the authorities were predicting. This early warning undoubtedly saved the lives of many staff and certainly minimized losses of MFP property and assets. Others were less fortunate.

The death toll from the cyclone was at least 138,000 people. The worst-hit townships were Labutta with an estimated 80,000 dead and Bogale with 10,000 more deaths.⁴ Serious as the cyclone was, its impact even within the Delta varied tremendously from village to village; impact was minimal in some whereas virtually everyone who was not killed was completely devastated in other areas. This variation has implications for the impact on the program and for the program's response.

The storm surge reached 35 kms inland. The Delta is a low lying area populated by poor and vulnerable people who have migrated from the mainland, mostly the Dry Zone as the forest which had covered the Delta up to the 1980s was cut down. The islands on which they lived are almost at water- level, a scant 50 cms above the high tide mark; their homes were insubstantial, made of thatch and nipa. Even monasteries which in most of Myanmar are solid structures were new, built at ground level rather than on raised platforms, and constructed out of insubstantial materials due to their recent establishment and the poverty of the communities with which they were associated.

³ Much of the information in this section was provided by the MFP program manager Fahmid Bhuiya who directed Pact's response to Cyclone Nargis, interview notes for March 19, 2011.

⁴ http://en.wikipedia.org/wiki/Cyclone_Nargis

3.1 Nargis Impact on the Microfinance Program

MFP staff received early warning and instructions on emergency measures to take before the cyclone hit. MFP staff were called in from the field to their home bases; boats were pulled out of the water and lashed down high and dry, offices and equipment were protected as much as was possible. As a result of these precautions, only five staff in Labutta died and 22 were injured. The program lost 2 offices, a few computers and a little cash, in addition to water damage to premises. Sad as these losses are for staff and their families, the Program itself made it through the cyclone with relatively low number of staff casualties and its operational capacity largely intact. Pact's ability to function would be important in the days and months that followed both to emergency and to recovery efforts in the Delta. It was also critical in assuring the ability of the Program to resume operations more quickly than would otherwise have been the case.

The MFP was temporarily closed down in three Delta townships in the wake of Nargis, and all attention was turned to emergency response. The effectiveness of this national and international response is credited with having averted a second humanitarian disaster as those affected were expected to succumb to disease and starvation, neither of which happened. MFP staff with their management expertise, competence in accounting and attention to detail instilled by the MFP, were well-suited for emergency work. Some of them went to work on emergency projects of which Pact took on 14 in all. Most staff, however, found employment with other NGOs and international agencies which poured aid into the Delta. Their knowledge of the villages and the villagers was indispensable to the extraordinarily effective emergency response and recovery that saved so many lives. Since the microfinance program was to be closed for 8 months after the cyclone, these moves took the salary burden of paying 400 staff off of the MFP, and it also allowed the Program to hire new staff, which is usually a positive step for a development program. During the emergency period, the MFP kept a core group of only 60 staff doing damage assessment.

3.2 Collections Suspended, Savings Returned and Loans Written Off

The first acts of the MFP after the cyclone was to suspend loan repayments in the three townships most affected. This step kept clients from having to repay loans at a time when they were struggling to rebuild their homes and their lives. It allowed them to concentrate on starting their lives anew instead of paying off debt at a time when income was negligible. It eventually decided to write off all debts, a step which was done officially in January of 2009 but which was decided some time before.

The second step involved savings. Like many similar programs, borrowers are required to make some savings as a condition of getting loans. In the Delta these blocked savings amounted to an average of approximately Kyats 30,000-40,000; 46,000 clients were affected, all of whom wanted their savings back. The amount involved (\$1.25 million) was staggering for any institution to lose, on par with a bank run. Nevertheless, the MFP decided to return the savings of those affected as quickly as possible. By June 2009 the MFP had returned their savings to all but 300 clients who simply could not be found; 80 more clients showed up later to collect their savings.

The third step involved discussions with UNDP and with other NGOs and agencies working in the Delta. This issue revolved around how soon to restart the MFP. The predominant point of view in the development community was that microfinance cannot work for people whose homes and everything they own have been washed away. The opposing point of view is that the sooner microfinance starts providing the services which it provided before the cyclone, which people needed then and need even more afterwards, the faster they can get their family economies back in business and start rebuilding their homes and their lives. It took six months for donors to accept this point of view. In one of the qualitative

survey interviews in Bogale, villagers claimed that they were the ones who initiated the proposal that the microfinance program recommence its operations. If this is true, the question it raises is the following: could or should microfinance operations have restarted sooner?

3.3 Program Restarted Six Months after Cyclone

The MFP conducted a needs assessment before restarting the program and came up with 3 priorities:

1. Income-Generating Activities (IGAs), especially for paddy using agricultural loans and for fisheries using regular loans.
2. Housing, and
3. Education

One of the biggest impacts of Nargis was to disrupt the financial flows which make it possible for productive activities to occur. According to the qualitative survey, in one village where hundreds of acres of paddy are normally planted, only 30 acres was put in the ground after Nargis due to a shortage of funds. Casual workers who depend on work in the rice fields were particularly hard-hit. Eventually, work on reconstruction provided employment, but the communities affected have been much slower to get back to normal levels than those which weren't. In less affected communities, economic activity has expanded surpassing the situation prior to the cyclone. Mechanization is also occurring at a fast pace as two-wheeled tractors replace lost draught animals.

Of particular interest is the novel approach taken by the MFP with respect to housing recovery. In most disasters, the first response is to set up tent-cities with the familiar blue-plastic sheeting followed by cookie-cutter, matchbox houses designed by outsiders based on their idea of what people need within what donors can afford and built by contractors at prices on the order of \$2500-3000 per house. The MFP's approach was different: program management decided to buy Chinese-made roofing sheets which are available on the local market, provide these to those needing them, let them salvage palm tree and betel tree trunks for supporting pillars and make walls out of woven palm sheets or grass. The MFP put the priority where it belongs: the roof, and let borrowers take care of the rest building houses according to their own needs, customs and resources. The roofing sheets sufficient for making a new house could provide permanent shelter for \$250-300, skipping the intermediate step of Internally Displaced Persons (IDP) camps.

Schools in some villages which were destroyed by Nargis still have not been reconstructed. However, lending for education started quickly after the program restarted in November 2008. With businesses reopening, thanks to new loans from the MFP, people could again afford to send their children to school.

3.4 Analysis with respect to Nargis

The MFP responded appropriately in its response to Nargis by 1) suspending loan repayments and eventually writing off all debts in the affected townships, 2) by returning members savings, 3) by accurately assessing the situation with respect to housing and the need to provide roofing material above all else in the wake of a disaster in an area where temperatures are moderate to high, and 4) by restarting lending activities as quickly as it reasonably could. The transfer of experienced personnel who know the area to emergency response projects run by Pact and other donors also provided a contribution of inestimable value to emergency response projects and allowed them to quickly meet survivors' basic

needs in the wake of the disaster. Staff experience with microfinance was definitely useful in managing cash grants which some donors provided in the post-Nargis period.⁵

3.5 Special Conditions for Microfinance in the Aftermath of Cyclone Nargis

Loans for agriculture and fisheries allowed people to get back to their principal activities faster than would have been possible without them and on a larger scale. It generated employment for non-clients who had lost their jobs due to the disruption of the local economy. One of the complaints in the Delta among casual workers was that there was no work to be found in the immediate aftermath of the cyclone; a quick start of microfinance soon provided some employment as well as income and food to clients who took the loans. In the village referred to as having argued for the restart of the microfinance program, there were 8 microfinance groups in the community before Nargis; their number has risen to 21 since then. Thus, the restarting of the program encouraged other people in the community to join the groups and to take advantage of the credit available to MFP members.

Careful review of the eight interviews from the Delta reveals that initial planting after Nargis was limited by lack of funds to plant more land. Those most severely affected were casual workers who could not find work and hence had no money to feed their families. Business took about two years to get back to normal and demand for credit where it is available is brisk. (Local NGOs also opened up credit programs in some of the non-microfinance villages surveyed; such programs injected much-needed cash into the communities where they operated while encountering some repayment problems.) In microfinance villages the Microfinance Program has come back quickly and has grown fast.

A substantial number of villages were almost unaffected by the cyclone and as a consequence receive almost no external assistance. It is not clear from the qualitative survey notes if these villages microfinance continued to operate or if the program stopped until restarted throughout the Delta. Employment opportunities are greater in unaffected villages than in those affected by Nargis. Such villages need larger loans to take advantage of the opportunities available to them in filling the gap in supply created by the stoppage of production in affected communities and in supplying outsiders coming in to assist in the emergency. Since Nargis, there has been a substantial increase in the number of two-wheeled tractors despite the lack of financing for their purchase.

3.6 Analysis with respect to MF and Disasters More Generally

The Microfinance Program was restarted about eight months after the cyclone passed through the Delta after a specific request was made by the members in the Delta that it start again. The fact that members of the program who were making use of its services saw microfinance differently than did donors and NGOs in Yangon could indicate a need for the development community to rethink its understanding of what the role of microfinance should be in response to natural disasters in general. Full use has rarely been made of microfinance after natural disasters around the world. Microfinance has an important role to play in rebuilding people's homes (housing loans), in restarting their businesses where they have been destroyed, and in continuing business as usual in areas not directly affected by the disaster, which in many cases is localized in terms of its most severe impact. The MFP's approach to housing lending in particular should be a beacon for microfinance programs elsewhere and for donors who want to channel funds into communities where a disaster has destroyed a large percentage of the homes (buying roofing sheets locally, providing roofing material that answers disaster needs while being suitable for reuse in permanent structure when the emergency period is over).

⁵ Pact's Response to Cyclone Nargis: An Organizational Review, D. Bishop Consulting, pact, August 1, 2009.

Rural people were in the vanguard in asking for microfinance to restart. Their request indicates their appreciation of the importance that microfinance has in their lives and the imperative need of its continuing to provide this service come what may. In most disasters, there is considerable variation in the degree and ways in which people are affected by the calamity. In Aceh, for example, the tsunami cut a swath from the coast a kilometer or so inland in flat areas, a bit farther in some coastal valleys and a bit less where the slope of the land limited destruction to only a few hundred meters. People inland were unaffected except for the fact that there was then a displaced population whose needs had to be served by expanding businesses in these areas. In Sri Lanka, microfinance made a significant contribution to reconstruction by its rapid response to the tsunami; this response was aided by donors providing funds to expand lending in affected areas. Microfinance programs should only stop in areas that are directly affected and then should recommence as soon as the population served say they are needed. In unaffected areas, the programs should continue without interruption; certain kinds of businesses (trading, construction, some services) might in fact need exceptional increases in maximum loan amounts to provide service to people who may have been temporarily displaced into these areas by the disaster. Outside funds will be required to meet higher than normal loan demand from housing and rebuilding business inventories.

4. Conclusions⁶

The principal conclusion of the evaluation is that microfinance as provided by the MFP has highly positive impact on lives and welfare of clients in all three regions of Myanmar where the program is operating. This conclusion is derived from the three surveys which are unequivocal and mutual supportive of this overall conclusion.

Microfinance is instrumental in improving income, food security, education, housing and quality of life of women served by the program. The process whereby this improvement is achieved is the following. The MFP makes loans available to women on terms which are favorable and which allow them to establish and build up small businesses of their own. They then use the profits from these initial businesses to set up and operate additional businesses. These businesses as a whole provide a new income stream and one which is separate from their husband's. Having an additional stream of income, usually from multiple sources and largely separate from whatever income is provided by the husband, makes it much easier for the family to cover its expenses and reduces the risk of external shocks to the family budget by tapping additional income from multiple sources and obtained by two people independently.

Income from women's businesses contributes to the family's welfare in a number of ways. It increases women's ability to provide for their family's food security by increasing food stored and by providing income spread over the year, thus allowing them to buy food when it is needed. It improves access to education for their children in the community and gives families the means to acquire or to pay for transport to reach other villages, towns and cities where they can continue their education to higher levels than are available within the community in which they reside.

Higher income makes it possible for women to take better care of the health of family members when they are sick or are giving birth. It also allows client families to improve their houses which are by all measures better than they were in the past and by comparison with those of their peers who are not

⁶ The conclusions in this section are drawn from all three surveys and are based on points that have been cited in the respective sections of this synthesis report. In most cases these conclusions were brought up first by participants in focus groups and key informant interviews in the qualitative survey and then confirmed by the results of the two quantitative surveys. For the sake of clarity of presentation and brevity, specific citations will not be repeated here.

members of the MFP. Business income also makes it possible for client families to light their homes better than those of others and also makes a modest contribution to improving their access to more and better quality water for drinking, bathing and washing.

The MFP has made possible for clients' income to increase. This change has led to the dramatic differences in the accumulation of assets which are observed in the quantitative surveys to exist between clients and non-clients: these include an adequate stock of equipment for running their businesses, transport for themselves, their children and their products, consumer electronics, and livestock. This accumulation of assets provides for their personal and business needs; in addition, accumulated assets serve as store of wealth to meet unexpected expenditures or to take advantage of favorable opportunities when they arise, since most assets can be sold and turned into cash on short notice. Microfinance clients also have the ability to access a variety of loan products to finance their businesses, open new ones, to improve their homes, and to meet expenses associated with health care and education.

Qualitative differences between microfinance and non-microfinance clients and villages noted by informants are corroborated by the two quantitative surveys. Differences are of varying magnitude but most are statistically significant at very high levels (i.e., are not chance occurrences) and paint a picture of clients who are better off by all measures than non-clients and better off than they themselves were four years earlier. As noted in the employment opportunities section, microfinance program appears to have a positive impact on the entire village by increasing employment opportunities and the general level of economic activity in the villages where it operates; respondents to the qualitative survey maintained that this was the case. In the panel study clients/non-clients were from the same village whereas in the cross-sectional study where they were in separate villages; the percentages of women (both clients and non-clients) who classified themselves as engaging in low income and low status jobs such as casual labor or being dependents is much lower in microfinance villages than in villages from the cross-sectional study. This seems to indicate that increased activity because of the availability of microfinance loans to a significant fraction of the population raises the standard of living and the opportunities for the entire village, including for those who are not clients directly. Further research on this subject would be merited.

Women are empowered by the program and see their bargaining power and the respect and attention which they receive within the household rise significantly as a result of now having an income stream which contributes to family welfare. Women's ability to make their voices heard within the family is substantially improved by the MFP. The three surveys confirm that this change is the result of their participation in the program.

An expansion of the microfinance program both in the same regions where it is operating and its extension to new regions of the country would have a very positive impact on the lives of families who would be served. Because the program is in large measure self-financing (assuming continued high repayment rates and reasonable operating costs) after initial set up costs, its expansion would be an extremely efficient use of donor funds to have maximum impact on the population served. Its major beneficiaries would be women and their children whom the program targets almost exclusively.

Issues involving the way the sample for the cross-sectional survey was drawn (from townships having other developmental activities supported by UNDP and other donors and NGOs) imply that, if anything, actual differences in principal indicators attributable to microfinance are understated in this report. This hypothesis is susceptible to testing assuming, as appears probable, that some of the future expansion of the MFP will occur in areas bordering on 11 townships included in the CS survey sample, and that baseline surveys covering principal indicators also included in the 2011 surveys will be done. If indicators are consistently lower in these baseline studies than those found for "non-microfinance" villages in the

two quantitative surveys referred to, it will confirm the hypothesis that differences attributable to microfinance are even larger than those reported here.

Using different sampling fractions for clients and non-clients (75%-25%) complicates analysis and reporting. It is more efficient to use equal sampling fractions for both intervention and comparison groups in future impact evaluations.

The impact on villages served by the program is positive and goes beyond the clients directly served by the program. Women's ability to organize, to work together for their common good and for the good of the community has been much enhanced by the MFP. Women meet regularly and democratically elect their leaders and handle issues related to the correct operation of the microfinance program. Their status within the community is significantly greater than that of women in non-microfinance villages and they are consulted more frequently than their peers who do not participate in the MFP. These differences are confirmed in both the qualitative and the cross-sectional surveys.

The confidence instilled by participation in the women's groups organized in order to make the microfinance program work has inspired the population to believe that they will be equally successful in working effectively in other organizations. They are awaiting outside assistance to form these groups but are willing to participate actively and effectively if and when they are formed. Both male and female youth groups are already providing assistance in a number of social welfare tasks; in some areas, they are also transmitting accurate information on microfinance to neighboring villages; these groups could have a role in facilitating the expansion of the microfinance program to new villages near ones where the program is already working.

New organizations are normally formed in the community in response to outside intervention in the community. The confidence in their ability to work with new organizations should they be formed is tempered by the fear that donors will choose not to put additional resources into a community which is already benefiting from one program established with donor funding. In other words, if the Microfinance Program is working in a community, respondents to the qualitative survey fear that donors will automatically exclude the community from their consideration for new programs of another type. Donors may want to reflect on finding a balance between equitable distribution of resources among many worthy and underserved poor communities and the most efficient use of resources; new programs operating in the same communities where the MFP exists will find a multiplier effect because community resources available for counterpart contributions are greater and microfinance communities have the proven ability to manage resources put at their disposition more effectively.

4.1 New Loan Products

The main goal of this impact evaluation is to measure the contribution that the program makes to improving people's lives. Nevertheless, it is essential to pass on respondents' concerns about new and existing loan products and program operations expressed in the qualitative survey and which emerge from analysis of the quantitative data.

4.1.1 Higher Loan Limits

Respondents provided their concern with the loans which are inadequate in amount to take advantage of the opportunities available given the skills in managing larger loans of members who have been in the program for a number of years. Among the loans whose maximum limits are felt to be too low are agricultural loans and health loans.

4.1.2 Agricultural Loans

Clients are confident in their ability to make good use of larger agricultural loans. Some clients have been with the program for a decade and have the experience necessary to manage larger loans. It might be prudent to try such loans out first with a small number of the most experienced borrowers with the best track record and in the branches with the best management.

Loan terms should be tailored to individual crops or farm operations since term and payment structure may need to vary. This is another reason for piloting such loans in the branches with the best managers.

4.1.3 Marketing loans

Currently all agricultural loans from the MFP have to be paid at the same time shortly after harvest. Buyers know this deadline and have sufficient market power to hold down prices until the deadline has passed. Farmers would like market season loans to allow them to choose when they sell the product in order to achieve better prices. Microfinance institutions around the world have found ways to use harvested products to guarantee such loans.

4.1.4 Livestock Loans

Many clients are investing part of the proceeds of their businesses to buy animals, with the species purchased varying according to the region, with pigs being the most common, ducks in the Delta and sheep and goats occasionally. The term of loans required would depend on the species, with pigs estimated to take 7-12 months. Repayment schedules would also require some thought, since no revenue is generated until the time of sale; another risk factor is the death of animals purchased with such loans. Proponents have noted that veterinary service would also be necessary; good practice dictates that some institution other than the MFP would have to provide such services.

4.1.5 Health Loans

Respondents feel that the loan limit is too low given the cost of medical care. Furthermore, the health loan counts against the client's maximum of two loans outstanding at any given time. Because the loan has a low limit (compared to other loans such as agriculture which can be as high as Kyats 1 million), clients with a legitimate health problem in the household prefer to solve that problem without taking a health loan.

It may be worth considering 1) raising the limit for health loans and 2) considering such loans outside the framework of a borrower's maximum number of loans and maximum individual indebtedness might be a reasonable solution. Management, possibly with the assistance of external consultants, may want to reflect on these issues and others which may negatively influence borrowers' willingness to make use of health loans.

4.1.6 Mechanization Loans

The MFP should consider mechanization loans. The change-over from land preparation based on animal traction is happening and has been accelerated in the Delta by the death of large numbers of animals. The MFP could support this change by providing loans to qualified clients. Additional mechanical equipment which could be financed includes small, portable rice-mills, motorized irrigation pumps, compressors for tire repair, etc.

4.1.7 Electrification loans

Electric power is a key element in development and opens the way for many new types of business. Electricity also is essential in allowing people to live modern lives, with communications with the rest of the world (TV, videos and CDs, telephones and cellphones). Where electricity is available 24 hours a day, electric cookers and refrigerators become feasible, save fuel, and improve nutrition and reduce food losses. Communities and individual households are making efforts to obtain electricity by many different means, including diesel-powered and rice-husk generators and even solar power. Microfinance institutions in various countries have financed rural electrification, including the Rural Electric Associations which started in the United States during the Great Depression to lending by MFIs and banks for solar systems for rural villages in Sri Lanka. One or more loan products could be designed to allow clients to finance village systems and individual systems. Support of Government should be sought to reduce illicit charges for connections the public electrical grid.

4.2 Nargis Issues

MFP actions with respect to Nargis were both appropriate and innovative. Their high cost (returning \$1.25 million in savings, writing off a massive amount of loan debt) has been more than offset by the goodwill and recognition generated which has led to phenomenal growth in MFP membership reported at village level. The MFP approach to housing finance shows a perceptive understanding of how microfinance can make a permanent contribution to improved housing in a devastated area while other donors were still focusing on temporary solutions to emergency shelter. The quick restart to providing the financing needed in the post-Nargis period is a tribute to the program, its understanding of the need for rapidly restoring the availability of finance in post-disaster situations in order to get livelihood activities back in business and to provide for other borrowing needs of clients. Two issues which need further reflection are:

1. Could microfinance operations have been continued in unaffected or less affected areas of the Delta which then could have provided services and products to affected areas? and
2. Could the activity have been restarted more quickly in the areas affected by the cyclone?

Given the clairvoyance and prudence of program management in protecting nearly all program staff and most program assets from death and destruction, would it have been possible to continue some microfinance activities without interruption or at least to get them started sooner? The donor community still has not fully investigated the role that microfinance and well-run MFIs can have in post-disaster situation in helping their clients to rebuild and to take advantage of business opportunities that the disaster presents.

As of October 31, 2011 total savings of MFP members amounted to nearly kyats 7.5 million. However, compulsory savings accounted for 88% of the total whereas voluntary savings comprised only about 12%. Voluntary savings are highest in the Delta (15% of the total for the region) due to better income-generating opportunities and past experience with savings. (Members with compulsory savings are able to withdraw up to 75% of their savings if and when their business or family emergencies require their use.) In the past voluntary savings have not been promoted to the extent that compulsory savings have; members can withdraw 100% of voluntary savings at any time.

Voluntary savings:

1. Help borrowers to keep their surpluses in safe place,
2. Protect from unnecessary spending or not so important spending, and
3. Create additional financial resources that can make it possible for the MFP to increase its lending and to provide loans to additional borrowers.

Particular	Dry	Delta	Shan	Total Number/ Kyats 000	Total Number/ US Dollars
Active Clients (Number)	181,826	147,611	57,904	387,341	484,176
Compulsory	2,821,597	2,471,667	1,258,579	6,551,843	\$8,189,804
Voluntary	274,784	447,273	186,778	908,835	\$1,136,044
Total	3,096,381	2,918,940	1,445,358	7,460,679	\$9,325,849

Currently, clients for the most part save in-kind in gold, animals and other media of exchange. There is very little financial savings and no inclination whatsoever to save in banks. However, with proper encouragement, facilities and incentives more clients might be encouraged to save, and additional clients not interested so much in borrowing as in saving might be attracted to the microfinance groups. Holding part of family assets in the form of financial savings in the MFP might represent a reasonable alternative for many current and prospective clients.

5. Recommendations

This evaluation has confirmed the very substantial contribution the Microfinance Program has made to the lives of its clients and on those of their families. Given the current political opening and the fact that microfinance has been embraced by Government as an important tool in helping people out of poverty, a vastly expanded microfinance program is justified. First, program expansion should be promoted by deepening coverage of areas already served through inclusion of intervening villages where women express interest in the program. It should also be expanded locally on the fringes of current service areas. Second, program extension to new, non-contiguous areas should be supported; these new areas are the key to achieving nationwide coverage in a short period of time.

Program planning values for the average loan size and average duration of loans need to be revised. Loan limits should be raised prudently based on experience with trustworthy borrowers linked with branches with good management. Average loan terms may also have to rise: current terms are occasionally unrealistic and not tailored to investment cash flow; current terms encourage undesirable behavior on the part of brokers and crop buyers.

Donors need to incorporate these higher values and longer average loan terms in calculating loan capital needed in order to achieve targeted rates of program expansion.

Donors considering investing in development programs other than microfinance, may want to consider targeting microfinance communities. Significant efforts have gone into organizing the women in these communities, they have learned how to manage their own resources through years of successful small business management and they have learned how to collaborate to support community projects. They also are learning democratic management skills through the fact that new leaders are elected every year; as a result a large pool of women is available, all of whom have at least some experience in managing an organization.

Consideration might be given to relaxing rules on reelection (either immediately or in subsequent periods) of leaders. The annual change of leadership may be good for democracy but is not entirely efficient in terms of management of the microfinance groups.

When conducting surveys of this type, sampling should be deferred until the researcher who will be in charge of the study is available. If baseline data are available to allow before/after and treatment/comparison group analysis, they should be used and panel studies conducted. Equal sampling fractions of treatment and comparison groups should be used wherever possible.

The positive impact of microfinance on the lives and welfare of rural people is so clear that to deny people access to microfinance in the name of preserving a “pure” control group would be unethical, just as drug-trials are stopped when overwhelming evidence indicates that a treatment is having a strongly positive impact on controlling a disease or condition. However, in the case of the microfinance villages in the cross-sectional survey, relatively pure comparison groups exist in the form of villages outside but bordering on the 11 townships chosen for the study. If microfinance expands into these villages, presumably baseline surveys will have to be carried out. Villages meeting these criteria should be purposefully chosen, respondents asked similar questions in similar ways to those of the current study and comparisons made to test the hypothesis that impacts of microfinance are in fact higher than those estimated here because of the existence of other development activities sponsored by the same and other donors in the townships from which the sample was drawn.

Youth groups can be effectively used to spread the word about the advantages of joining the microfinance program. Respondents to the qualitative survey from non-microfinance villages had little direct knowledge about the microfinance village although they held a generally positive impression of the program. This impression could be reinforced if young people known to villagers can bring them more information on the program, its costs and requirements and its benefits.

5.1 New Products and Procedural Changes

Consideration should be given to raising maximum loan limits. These changes should not be mandated by donors but should be left to program management whose task it is both to expand the program while maintaining its hard-won reputation for seriousness and high rates of loan repayment. (Donors could assist management by providing funds for consultancies to address this and other issues.)

Conclusions identify a number of new loan products which would be in high demand if program management can devise good designs and a safe way of rolling them out as fast as their efficacy and loan recovery can be proven. As with procedural changes, final decisions should be left to management, but consultants can play a role in product design and propose ways for introducing them that do not put the MFP’s portfolio at risk in any significant way.

Voluntary savings should be emphasized. The MFP should investigate ways to incorporate voluntary savings as a more important element of its overall program to support the development of the businesses and welfare of its clients and their families. The MFP might consider engaging a consultant to help it analyze this aspect of financial services needed by its clients and to assist it in developing a plan of action to increase voluntary savings among its members.

5.2 Nargis Recommendations

In the wake of a localized disaster, triage needs to be carried out on the microfinance program: determine which areas were largely unaffected, can continue without interruption, which areas need to stop for an extended period and how long this period needs to be, and which areas can continue some part of their microfinance programs without interruption while others.

Steps taken by the MFP are a good model for the kinds of steps that need to be taken anywhere a similar disaster occurs: stopping collections, returning savings (blocked as well as voluntary), loan-write off, restart lending for IGAs as quickly as possible (taking into account the unforgiving nature of the agricultural calendar), start housing lending immediately as soon as land with permanent title and with some assessment of future disaster risks is identified for building, focus housing lending on keeping costs down, transferring maximum responsibility to the borrower for design and construction, and providing temporary solutions which can later become permanent (such as roofing sheets bought in the local market). Buy wood and other construction material in the local market as close to the disaster area as it can be found: importing wood as was done in Aceh is a mistake.

Conduct a special review of the Nargis response as part of an overall effort to incorporate microfinance into disaster planning donors will use in future yet-to-occur emergencies. Make sure these lessons are broadly transmitted to donors elsewhere: donors are all aware about Nargis, but they do not know the important role microfinance had in saving lives and helping people recover. This lesson should not be lost.

Annexes

I. List of People Contacted

People/Organizations

UNDP

Akbar Usmani	Senior Deputy Resident Representative
Shafique Rahman	Senior Policy Advisor
Salai Cung Lian. Thawng	Program Manager
Thein Myint	Microfinance Consultant
Nyan Lin	Senior Statistician Integrated Household Living Condition Assessment (IHLCA) Project
Anna Christina von Sponeck	External Resources and Partnerships Officer
DawThi Da Myint	Socio-economist, IHLCA, UNDP

UNOPS

Harald Kreuscher	Programme Officer Food Security & Livelihood
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Pact Inc. Headquarters

John Bernon	Program Officer
Hannah Poole	Program Officer
John Whalen	President, Pact Institute

Pact Regional Office for Asia

Kurt Macleod	Vice President/Regional Director, Asia Eurasia, Cambodia
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Pact Thailand Office

David J. Dobrowolski	Country Director Thailand / Mekong Region
Ana Coghlan	Senior M&E advisor, Asia Eurasia, Bangkok

Pact Myanmar

Tom Hensleigh	Country Director
Fahmid Bhuiya	Global Microfinance Advisor
	Agency Project Manager, Microfinance project
Ms. Erica Lynn Tubbs	Deputy Country Director,
U Maung Maung	General Manager, Microfinance Project, Myanmar
Kyaw Thu	Deputy General Manager (MIS/MER)

Pact Cambodia

Eric Bergthold	Country Director
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European Union

Silvia Facchinello	Attachée (Co-operation), Programme Officer for Myanmar
Veronique Lorenzo	Counselor, Head of Operations

Department for International Development (DFID)

Anthea Kerr	Livelihood Advisor
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Ausaid

Michael Hassett

Director, AusAid

L Sein Tun Associates

Lawson L Sein Tun

George Paw Tun

Research Director, Lawson and Associates

Senior Researcher, Lawson and Associates

Consultant

Khin Zar Naing

Thein Zaw

United Nation Fund for Population (UNFPA)

Consultant on Microfinance Working Group

Asia Green Development Bank

U Than Tin

Training Director, Asia Green Development Bank

II. Bibliography

ACTED, Microfinance Industry Report – Myanmar 2010, Paris, 2010?

Jeff Dorsey, Qualitative Report: Impact Evaluation of the United Nations Development Program/Myanmar's Microfinance Program in the Delta, Dry Zone and Shan State, Yangon, Myanmar, November 21, 2011

Jeff Dorsey, Panel Report based on 2007 – 2001 Household Survey Data: Impact Evaluation of the United Nations Development Program/Myanmar's Microfinance Program in the Delta, Dry Zone and Shan State, Yangon, Myanmar, November 23, 2011

Jeff Dorsey, Cross-Sectional Report based on 2011 Household Survey Data from a Sample of 3600 Households in Microfinance and Non-Microfinance Villages: Impact Evaluation of the United Nations Development Program/Myanmar's Microfinance Program in the Delta, Dry Zone and Shan State, Yangon, Myanmar, November 12, 2011

Pact's Response to Cyclone Nargis: An Organizational Review, DBishop Consulting, Pact, August 1, 2009.

Pact, Myanmar, Sustainable Microfinance to Improve the Livelihoods of the Poor, Quarterly Report for October - December 2010 (Dry Zone), Yangon, January 2011.

Pact, Myanmar, Sustainable Microfinance to Improve the Livelihoods of the Poor, Fourth Quarter Report for October - December 2010, Yangon, January 2011.

Pact, Myanmar, Sustainable Microfinance to Improve the Livelihoods of the Poor, Impact Study of Microfinance Project, August - September 2007

Pact, Myanmar, Sustainable Microfinance to Improve the Livelihoods of the Poor, Impact Study of Microfinance Project, Quarterly Report for July - September 2010 (Dry Zone), Yangon, October 2010

Pact, Myanmar, the Microfinance Project 2009-2010, Revised Proposal

UNDP, Sustainable Microfinance to Improve the Livelihoods of the Poor, Vulnerability Assessment of Microfinance Delta (July - August 2004)

UNDP-Myanmar, Formative Strategic Review of Microfinance Investments: Issues and Recommendations for the Future, Review Report by Feisal Hussain, Senior Regional Technical Advisor, Inclusive Finance United National Capital Development Fund (UNCDF), Bangkok, 20 April 2011

III. Terms of Reference:

IMPACT ASSESSMENT OF THE UNDP/PACT MYANMAR MICROFINANCE PROJECT

TERMS OF REFERENCE

International Consultant for Research Design and Report Writing

I. Introduction

A. Background to the Evaluation

The **Sustainable Microfinance to Improve the Livelihoods of the Poor Project**, or the Microfinance Project (MFP), implemented since January 2003 under the UNDP-funded Human Development Initiative (HDI) for Myanmar, is a successor to two earlier projects, namely, Sustainable Livelihoods through Microfinance to the Poor (1999-2002) and Sustainable Livelihoods through Microcredit to the Poorest (1997-1999). All these phases were executed by UNOPS and implemented by subcontracted Implementing Agencies. Between 1997 and 2005, four Implementing Agencies were engaged in three different areas: Pact (USA) in the Dry Zone from 1997 – 2005, GRET (France) in Shan State from 1997 – 2005, and Grameen Trust (Bangladesh) in the Delta Zone from 1997 – 2002 and continued by EDA (India) from 2003 – 2005. From 2006 to the present, Pact has been responsible for the implementation of the project in all three areas. In January 2009, Pact became the Executing Agency for the MFP under a direct agreement with UNDP.

Under Pact, the MFP has developed a strong Management Information and Accounting System that allows staff to measure critical microfinance and project outreach indicators, thereby enabling the assessment of the health of the project against international standards. However, this system does not measure the impact of the project on clients and their communities. In 2004 and 2007, the MFP conducted impact assessments that provided valuable information on the positive impact of the project including information on the economic opportunities and well-being of MFP clients versus non-MFP villagers. As planned in MFP's 2009-2010 project documents, the same impact assessment is to be repeated once every three years, to determine if the project is achieving its goal in increasing household incomes and assets. Within this round of the impact assessment, the results of the previous assessments are to serve as baselines for some indicators, in order to demonstrate change over time.

B. Brief Description of the Program

Under the current 2009-2010 phase, the overall goal of the Microfinance Project is that “poor and vulnerable households in Myanmar achieve improved socio-economic well-being through increased access to sustainable financial services and increases in household assets.”⁷ A major focus within this phase is sustainability and completing the consolidation of processes and procedures. Pact is reaching this goal by implementing the following four objectives:

1. To effectively manage the Microfinance Project in the current 22 townships, extend outreach to new townships and branches and restart microfinance activities in Cyclone Nargis-affected areas.
 2. To link with Self-Reliance Groups (SRGs) and provide wholesale lending to enhance MFP outreach.
 3. To improve the efficiency and services of the Microfinance Project through continued consolidation and harmonization of services, methodologies and organizational structures among the different program zones.
 4. To promote an enabling environment for microfinance long-term sustainability.
 5. By reviewing project documents and through an interactive exercise with different levels of MFP staff, the following were identified as the major outcomes expected to result from the project.
- Increase in property and household assets
 - Increase in the number and improvement of self-owned businesses
 - Increase in women's role in decision-making at the household, program and community levels
 - Increase in households spending on food security, health, education, and other social development factors

⁷Pact Institute (2009). *The Microfinance Project 2009-2010 Revised Project Document*, p. 4.

- Reduction in levels of dependency on external money lenders
- Increase in communication and cooperation within communities

For a greater explanation of MFP's program logic and its expected outcomes, see Annex 1, *MFP's Program Logic Model*.

C. Existing Project Performance and Outcome Data

In terms of project performance, the MFP has 371,356 active clients, of whom 336,683 are active borrowers. Of the active clients, more than 97.56% are women. As of May 2010, key portfolio data include:

No.	Name of Zone	No. Townships	No. Branches	No. Active Clients	No. Active Loans	No. Centers	kyat ('000) Savings	kyat ('000) Loans Outstanding
1	Dry	10	42	180,220	229,228	3,753	1,379,171	15,271,605
2	Delta	7	34	134,834	133,115	3,232	1,552,287	7,623,382
3	Shan	5	15	56,302	56,564	1,109	935,178	6,626,582
	Total	22	91	371,356	418,907	8,094	3,866,636	29,521,569

MFP offers different types of loans or products to clients, depending on which zone they are in. As of May 2010, the types and amounts of loans are:

SN	Type of Loans	No.	Unit	Cumulative to May, 2010			
				Dry	Delta	Shan	Total
1	Main Loans	No. of loans	No.	161,844	124,095	48,957	334,896
		Amount	K '000	7,943,725	7,111,515	5,442,220	20,497,460
2	Extra Loans (Special Loans)	No. of loans	No.	2,156	5,469	16	7,641
		Amount	K 1000	80,395	55,579	43	136,017
3	Micro enterprise Loans	No. of loans	No.	6,921	2,000	3,789	12,710
		Amount	K 1000	1,130,176	426,062	1,059,531	2,615,769
4	Health Care Loan	No. of loans	No.	905	721	331	1,957
		Amount	K 1000	31,017	15,113	13,170	59,300
5	Higher Education Loans	No. of loans	No.	7,332	179	403	7,914
		Amount	K 1000	234,075	3,287	9,735	247,097
6	Seasonal Loan (Star Borrower's Loan)	No. of loans	No.				
		Amount	K 1000				
7	Emergency Loan	No. of loans	No.				
		Amount	K 1000				
8	Small/Vulnerable Loan	No. of loans	No.	234	617	280	1,131
		Amount	K 1000	5,309	7,417	6,859	19,585
9	Property Loan	No. of loans	No.			2,786	2,786
		Amount	K 1000			92,324	92,324
10	Consumer Loans(Group Loans)	No. of loans	No.	696			696
		Amount	K 1000	37,504			37,504
11	Agriculture Loans	No. of loans	No.	49,140	34		49,174
		Amount	K 1000	5,809,404	4,409		5,813,813
12	SRG Whole sale Loan	No. of loans	No.			2	2
		Amount	K 1000			2,700	2,700
	Total Outstanding	Total no.of loans	No.	229,228	133,115	56,564	418,907
		Total amount	K 1000	15,271,605	7,623,382	6,626,582	29,521,569

Pact requires mandatory savings to a certain level and encourages additional voluntary savings, in order for clients to build their capital base for higher investments. Recent data show:

S N	Types of Savings	No. Number	Unit	Cumulative to May 2010			
				Dry	Delta	Shan	Total
1	Compulsory &		No.	180,220	134,834	56,302	371,356

	Voluntary	Amount	K 1000	1,379,171	1,552,287	935,178	3,866,636
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Key Findings from the 2007 Impact Study⁸

The impact study conducted in 2007 found that the project had positive impact on clients' households, communities, and on poverty alleviation in general in the areas of accumulated assets, business expansion, food security, improved housing, better healthcare and education, higher living standards and higher social status. Positive impact was also detected in the areas of women's empowerment, ability to cope with emergencies, and reduced dependency on money lenders. More specifically:

Increase in Asset Accumulation:

- Clients increased their assets by 22%, as compared to non-clients, over the previous two years.
- Clients also increased expenditures by 18%, as compared to non-clients, over the previous two years in such areas as health care, schooling and clothing, as well as social and religious obligations.

Increase in Food Storage:

- Clients storage of food increased, particularly in rural and remote areas. Stored food items included cereals, oilseed, and fodder for draft animals.

Change in Business Structure:

- The structure of businesses among clients shifted from primary agriculture to secondary businesses such as trading, small-scale manufacturing and services.

Better Coping Strategies against Unavoidable Risks:

- To cope with risks such as illnesses, childbirth, and deaths, only a few clients had to borrow money from informal sources or seek help from friends and relatives. Instead, the majority were able to use their own money without losing productive assets.

Reduced Borrowing from Informal Sources:

- When clients did have to borrow from informal sources, they borrowed only for three months or less, mostly for productive purposes, and under better terms since their credit rating had improved.

Increase in Women's Roles and Influence:

- As women gained more access to and control over finances through the project, they assumed larger roles and influenced more decisions within their households and villages. In addition, their status within communities and levels of self-confidence also measured increases.

For a more complete discussion of the measured outcomes of MFP, see U Thein Myint and U Kyaw Thu (2007), *Sustainable Microfinance to Improve the Livelihoods of the Poor, Impact Study of Microfinance Project*.

II. Purpose and Objectives of the Assessment

The overall purpose of this study is to assess the outcomes and impact of the Microfinance Project.

The audiences for this evaluation include:

1. UNDP, as the principal donor, and other donors that have contributed support through UNDP: It is critical to review the effectiveness of this kind of development support in Myanmar to ensure resources are being allocated effectively and efficiently.
2. Pact staff, including MFP management and Pact Myanmar staff, interested regional and DC-based staff, and Pact's executive management team: Project evaluations are critical inputs to continual project re-design, and information about project outcomes and impacts will feed into the business plan for the next phase of the MFP.

⁸ As summarized from U Thein Myint and U kyaw Thu (2007), *Sustainable Microfinance to Improve the Livelihoods of the Poor, Impact Study of Microfinance Project*, p. 8-10.

3. Clients: Transparency with MFP clients about the project's larger goals and to what extent they are being met is an important foundation for trust and continuous feedback.
4. Other NGOs: As the largest microfinance operation in Myanmar, the experience of this project can serve to improve the effectiveness of other microfinance projects.

The specific objectives of the assessment include:

1. Determine the extent to which the project's expected outcomes were achieved as a result of the project. Specific areas to be investigated include changes in :

- Property and household assets
- The number and types of improvements of self-owned businesses
- Women's roles in decision-making at the household, program and community levels
- Levels of households spending on food security, health, education, and other social development factors
- Levels of dependency on external money lenders

Although not explicitly stated as expected outcomes of the project, other areas investigated in the 2007 impact assessment and which should also be included in the 2010 assessment include changes in:

- Coping strategies against vulnerable issues
- Levels of land and crop production
- Sources of income by type of land
- Levels of loan and debt status
- Levels and type of communication and cooperation within communities⁹

For a list of the potential evaluation questions and indicators to be investigated under assessment objective 1, see Annex 2.

2. Determine the impact of Cyclone Nargis on the MFP in general and on MFP Nargis-affected clients in particular.

Possible evaluation questions under this objective might include:

- In what ways did the MFP respond to Cyclone Nargis, including the management of clients' savings?
 - How effective was project start-up after Cyclone Nargis?
 - How appropriate were/are MFP's post-Nargis loan products within the Nargis-affected areas?
 - What were the major effects of Cyclone Nargis on MFP clients within the Nargis-affected areas when compared to MFP clients in non-Nargis affected areas, including in the areas of borrowing and income generation activities?
3. Determine the extent of and ways in which MFP has affected communities at large and particular economic sectors, such as agriculture, fishing, and small-scale manufacturing

Potential evaluation questions under this objective might include:

- Has there been higher growth in the primary industries of borrowers in communities where the MFP is active compared to like communities where the MFP does not make loans?
- Has there been a transition towards larger scale businesses (from micro-enterprise to small and medium enterprise) in communities where the MFP is active?
- Are MFP clients establishing linkages between their businesses to create greater external economies of scale or stronger supply chains?

⁹ This expected outcome is not stated in program design documents but, instead, was identified by different levels of staff when developing MFP's program logic model. Staff explained that they believe this outcome is occurring in many MFP communities and that it would be important to determine the extent to which it is occurring in the impact assessment.

- Are there greater opportunities for wage labor in communities where the MFP is active? Are these communities attracting migrant laborers?
- Have MFP clients made any collective investments or lobbied for external investments in their communities (ie. in infrastructure, education, transport, health care, religious/cultural symbols)?
- Are communities where the MFP is active more likely to attract other external investment in production or market expansion by medium/large businesses?
- Have MFP communities become more specialized around certain industries? Have they become more diverse?
- Does the MFP presence in the community impact school drop-out rates and/or literacy rates?
- Does the MFP presence in the community impact mortality rates?
- Are communities where the MFP is lending more likely to have other community groups/projects or NGO presence that others in the same area?

III. Evaluation Methodology

A. Evaluation Design and Approach

In order to fulfill the above assessment of objectives and to measure particular changes over time, it is critical that this assessment adapt and broaden the evaluation design used in the 2007 impact assessment. Thus, it is essential that a similar mixed-method design with a comparison group, data collection methods and instruments, and sampling strategy be used in this assessment as was used in the 2007 assessment. However, based on lessons learned from the previous assessment, the evaluation design may be revised, as long as care is taken to ensure a measure of comparability to the baseline data. Also, in order to capture additional information about aspects of the project not included in the previous assessments, *a new qualitative component may be added to the assessment's overall design.*

B. Data Sources and Data Collection Methods

1. In order to collect comparable data with those collected in earlier rounds, the following data collections will be used:

- Face-to-face interviews with a random selection of clients and non-clients, using an updated version of the baseline questionnaire.

2. In addition to the methods used in the previous assessments, other qualitative data collection methods may be used, including:

- Focus group discussions and/or Most Significant Change interviews, in order to capture what community members view in their own words as the most important changes that have occurred in their lives and communities as a result of the program.
- Participatory rural appraisal methods, building on those that the Microfinance Project conducted when entering new communities. Depending on the final assessment objectives, questions and indicators, these methods may include participatory mapping, transects, Venn diagrams, trend and/or timelines, seasonal calendars, and various ranking techniques.

3. Data collection, entry, cleaning, tabulation and analysis will be performed per the consultant's instructions by a local firm contract by UNDP.

C. Sampling Strategy

1 To ensure that the data from the different rounds of the questionnaire are comparable to one another, it is critical that the same "multistage random sampling" strategy used in the 2007 impact study also be used in the 2010 assessment. This strategy included disaggregation by zones (3), and then selection of an equal number of townships and subsequently villages, in each zone. For example, 4 townships per zone and 12 villages per township, of which 9 are microfinance villages and 3 are

non-microfinance villages, would cover a total of 144 villages; at 20 households per village, the total sample would be 2,880 households. In the Delta, disaggregation of sampling by those most affected by cyclone Nargis will also be important, for example by selecting two townships from the Nargis-affected area and two from outside this area. However, the sampling design and approach will ultimately be dictated by the consultant's evaluation design. For a full description of the 2007 strategy, see U Thein Myint and U Kyaw Thu (2007), *Sustainable Microfinance to Improve the Livelihoods of the Poor, Impact Study of Microfinance Project*, p. 12-13.

2. Additionally, the sampling and selection of respondents for qualitative data collection methods will need to be identified by the assessment team. Determining if respondents or participants should be randomly or purposively selected will depend on the final evaluation questions and to what degree the findings need to be generalized to other program participants.

IV Activities and Outputs of the Consultancy

1. There will be two parts for the consultant of Design and Report writing; It will take 24 working days for Part A (design stage) and the later part will take 15 days for Part B (Report writing stage). In the mean time between these 2 parts, the consultant will not be in country. Detail schedules are mentioned in the following table

Task	Estimated LOE	Estimated Timeframe
Design evaluation plan, including refinement of evaluation objectives, sampling design, questions, and indicators; design of data collection methods and instruments (quantitative and qualitative); and devise sampling techniques.	5 working days	23.7.2010 to 30.7.2010
Develop quantitative data collection instruments and qualitative data collection guide (Including review of translation and draft data collection manual)	7 working days	2.8.2010 to 10.8.2010
Present complete evaluation plan to the UNDP/PACT assessment team (participate in a live meeting to present and discuss)	1 working day	11.8.2010
Prepare and conduct training, in collaboration with local firm contracted, for data collection, entry, and analysis, for data collection teams and data entry/analysis staff (Quantitative+Qualitative)	5 working days	12.8.2010 to 18.8.2010
Pilot test data collection and revise data collection instrument.(3 days for pilot test and 2 days for revisions of tools)	5 working days	19.8.2010 to 25.8.2010
Data Analysis Plan for data collection team	1 working day	26.8.2010
End of Part A	24 working days	23.7.2010 to 26.8.2010
Analyze all data and prepare draft report and PowerPoint presentation	10 working days	11.10.2010 to 22.10.2010
Present draft report to Pact/UNDP assessment team	1 working day	25.10.2010
Write final report and PowerPoint presentation	4 working days	26.10.2010 to 29.10.2010
Conduct debriefing for Pact and UNDP project management staff	1 working day	1.11.2010
End of Part B	16 working days	11.10.2010 to 1.11.2010

2. Within the first two weeks of the assignment, the consultant should present a complete evaluation plan including a matrix analysis of project impact points, indicator(s) for each impact points, methodology for measuring the indicators, sources of data (including types, sizes and geographical coverage of sample to be surveyed) and data collection instruments (questionnaires, focus group discussion guide, checklist and etc). The data collection, cleaning, entry, tabulation and initial analysis will be done by a local firm, so detailed instructions and training plan for this team should also be prepared.

3. The evaluation plan should also include detailed instructions, data collection instruments, and estimates of data translations requirements for any qualitative data collection. The consultant should prepare to teach qualitative methods to the qualitative moderators from the locally contracted data collection firm. In addition to that, coordination with the Integrated Household and Living Condition Assessment (IHLCA) Project, an HDI project¹⁰, are to be conducted by the consultant to make sure that questionnaire design, sampling design and data collection technique refined and designed by him for both qualitative and quantitative lies in the technical norms.

4. The consultant should be prepared to be in remote communication with the data collection firm during data collection, entry and analysis, but will not likely be in country during this time. The consultant will be given the full data set and any analysis requested in the data analysis plan for use in preparing the assessment report. The consultant will be given all qualitative data (translated as prescribed in the evaluation plan) for his/her own subsequent analysis, unless otherwise indicated in the evaluation plan.

5. At the end of the study period, the draft final report should be presented at the seminar organized by the consultant.

6. A final report should be a well documented comprehensive Project Impact Evaluation Study Report which addresses the objectives of impact evaluation expressed under section II.

7. Specific deliverables for the consultancy are:

- Full evaluation plan including:
 - Refined evaluation objectives, questions and indicators
 - Descriptions of the data collection methods
 - Detailed explanation of the sampling strategy and techniques
 - Training plan for data collection teams and data entry/analysis staff
 - Estimate of translation requirements
 - Data analysis plan
 - Schedule for the assessment
- Data collection instruments (draft and final)
- Draft final report
- Final report
- Presentation with PowerPoint file of about 15 slides

The exact schedule for submitting the deliverables is yet to be determined and will depend on the assessment team's start date and schedule for data collection and analysis

V Required Competencies and Qualifications

The incumbent should have extensive, demonstrable experience in field research design, complex sampling strategy, project evaluation, and participatory qualitative and quantitative methods. In addition, strong interpersonal skills across different groups and excellent analytical writing skills are necessary.

Qualifications must include:

- Advanced university degree in Development Studies, Statistics, Business/Public Administration, Economics, or other relevant field.
- At least ten years of relevant work experience with substantive experience and expertise in evaluation design. Knowledge of microfinance and livelihoods development interventions will be a plus.
- Excellent oral and written skills in English.

VI Logistics Arrangements

¹⁰ Integrated Household and Living Condition Assessment (IHLCA) Project is an HDI project which has pools of statistician and survey experts to calculate Poverty Headcount, Purchasing Power Parity (PPP), etc.

- Pact Myanmar will be responsible for identifying, managing and overseeing the consultant and for securing visas and permission to travel within Myanmar as necessary and possible. Pact Myanmar staff also will be responsible for organizing background materials, meetings, interviews, briefings, and travel arrangements, and completing an evaluation learning action plan.
- Pact Institute, through its regional and DC offices, will be responsible for supporting the selection process of the consultant, contracting the consultant, reviewing the draft evaluation plan, reviewing the draft report, organizing the global debriefing, assisting with the evaluation learning plan, processing payments and reimbursements, and other contract administration tasks.

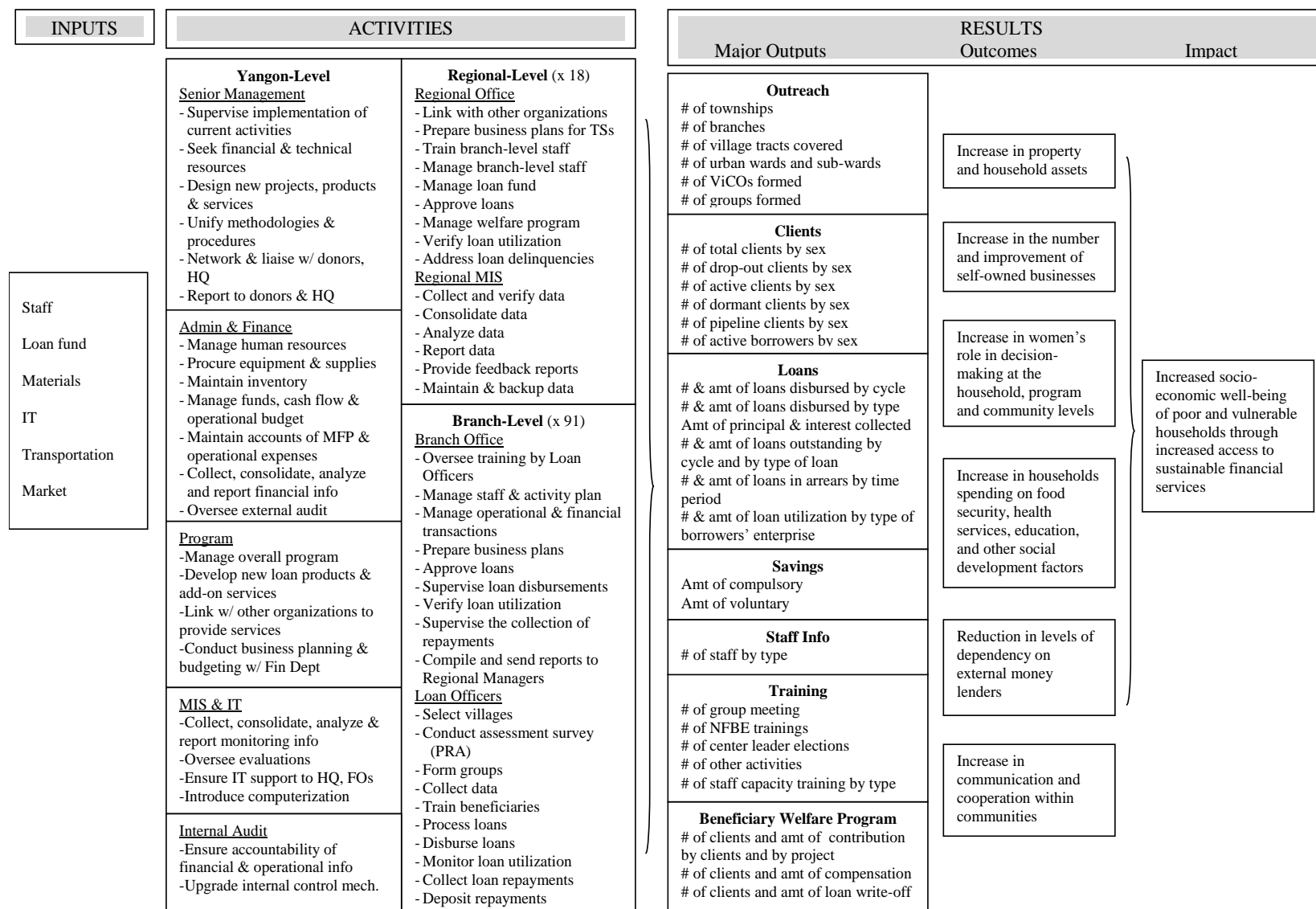
VII Application Instructions

Interested Candidates should submit the following by email to: **Kyaw Thu**, kyawthu2005@gmail.com, and **Kimberly McClain**, kmcclain@pactworld.org:

1. Updated CV
2. References that can attest to prior experience
3. Cover letter describing specific prior experience and expertise relevant to this consultancy, availability and daily rate
4. Signed biodata form

Applications should be submitted **by July 18, 2010**.

**PACT MYANMAR MICROFINANCE PROJECT (MFP)
PROGRAM LOGIC MODEL**



Annex 2

Illustrative Evaluation Questions and Possible Indicators for Assessment Objective 1

Note: the indicators listed below were used in the 2007 assessment.

1. To what extent have the following expected outcomes changed as a result of the project?

b. Increase in **property** and **household assets**

Existing indicators include:

- Change in the client and non-client's amount and value of land procured by type of land
- Change in client and non-client's house conditions including type of materials used for the roof, walls, flooring, and pillars, and the number of pillars and stories
- Change in client and non-client's sources of potable water drinking water
- Change in client and non-client's type of latrines
- Change in client and non-client's amount and types of productive assets such as bullock carts, pumps, boat, trees, sewing machines, generators, etc.
- Change in client and non-client's livestock assets
- Change in client and non-client's personal assets such as radios, televisions, bicycles, motor cycles, mosquito nets
- **Change in client and non-client's financial assets such as gold, cash, and savings FGD**

In addition to the indicators above, the evaluation design team will need to review and select appropriate indicators for food security, which are relevant both to UNDP's global indicators and to the MFP context.

c. Establishment and improvements of self-owned businesses

Existing indicators include: NOT AVAILABLE IN 2007 : ONLY MF CLIENT, ONLY TYPE OF BUSINESS AND HOW IT CHANGED OVER TIME. KT suggests we DROP THIS

- Change in number of clients [don't have non-clients] able to start a new business
- Change in number of clients and non-clients able to extend a business
- Change in number of clients and non-clients able to buy business premises
- Change in number of clients and non-clients able to increase business stock
- Change in number of clients and non-clients able to renovate or extend shop/office/etc.
- Change in number of clients and non-clients able to buy business equipment

d. Increase in women's role in decision-making at the household, project and community levels.

Existing indicators include:

- Change in number of women clients and non-clients reporting change in influence/involvement in household activities by amount of change
- Change in number of women clients and non-clients reporting change in village decisions by amount of change
- Change in number of women clients and non-clients reporting change in village activities by amount of change
- Change in number of women clients and non-clients reporting change in status in their communities by amount of change
- Change in number of women clients and non-clients reporting change in self confidence by amount of change

- Reasons for changes

e. Increase in spending on securing food, education for children, health services, and other social development aspects

Existing indicators include:

- Change in number of clients and non-clients increasing/decreasing spending on education by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on health by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on food (i.e., rice, meat, fish) by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on clothing by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on religious donations by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on social affairs by amount of spending
- Change in number of clients and non-clients increasing/decreasing spending on gifts by amount of spending

f. Reduction in the level of dependency on external money lenders

Existing indicators include:

- Change in number of clients and non-clients borrowing money from source other than MF Project by type of source and amount of loan

g. Increase in the amount of communication and cooperation Microfinance Project communities.

**Other Reports on the Same Subject
(and which form the basis upon which this synthesis report has been prepared)
are available separately from UNDP**

- I. Qualitative Survey Report (2011)**
- II. Panel Survey Report (2007-2011)**
- III. Cross-Sectional Survey Report (2011)**

PANEL REPORT
based on
2007 – 2001 HOUSEHOLD SURVEY DATA

IMPACT EVALUATION
of the
the UNITED NATIONS DEVELOPMENT PROGRAM/MYANMAR's
MICROFINANCE PROGRAM

in
the Delta, Dry Zone and Shan State

Prepared by
DR. JEFF DORSEY
International Consultant for Research Design and Report Writing

Yangon, Myanmar

December 26, 2011

Panel Study Rationale

Where baseline data exist on treatment and control groups for an intervention such as the Microfinance Program, a panel study which involves reinterviewing the original respondents is a powerful research tool to measure change over time within the two groups. In planning for the impact evaluation, PACT had expected to follow this approach at least in part. However, UNDP provided a separate sampling frame which only permitted cross-sectional analysis comparing microfinance and non-microfinance households in different villages at a single point in time. Used alone, this approach constitutes a much weaker methodology for evaluating interventions. Used together with the panel study presented in this section, however, the two sets of results can complement each other and corroborate evidence on the impact of the program on the lives of clients and its potential for reaching out and assisting unserved communities in the same townships and in other parts of Myanmar.

Pact concluded that the panel study in addition to the cross-sectional survey would provide much stronger evidence of program impact on the lives of clients and its potential impact on additional clients in the future. The local microfinance offices in the three regions were contacted and their managers confirmed that a high percentage of those households initially interviewed could still be located to respond to a follow-up survey; they estimated that even in the Delta affected as it was by Cyclone Nargis. Pact provided the additional resources necessary to commission the same research firm carrying out the cross-sectional survey to carry out the reinterview of such 2007 respondents as could be found and to cover the additional level of effort needed for the analysis of the 2007 and 2011 data in order to measure change over the intervening 4 years.

Sample Selection and Coverage of the 2007 Impact Survey

A 2006 audit of the Microfinance Project by KPMG concluded that the project was satisfactory based in its assessment but recommended that an impact evaluation be carried out. Its focus was to measure changes in the welfare of households based on retrospective collection of demographic and socioeconomic data based on a survey of client and non-client households. The survey was carried out by two UNOPS M&E experts with the assistance of an international consultant.

Households were selected by a multistage random sampling procedure. All 11 townships served by the Microfinance Program (MFP) were covered in the sample. Eighty villages where the microfinance program operated were selected. Their distribution was systematic to assure that both easily accessible and remote villages were covered proportionate to their numbers. Within selected villages 6 clients and 2 non-clients were selected. Microfinance groups were selected at random and within selected microfinance groups, 2 members (out of the five members in each group) were interviewed.

A well-being ranking was carried out for both clients and non-clients. Client selection had already excluded the most well-to-do households. Only clients with 3 years' experience with microfinance were included in the sample. A similar well-being analysis was conducted for non-client households and the most wealthy among them were excluded. Nevertheless it is believed that non-client households were slightly better off than client households on average when the program started; however, survey data for 2007 was not collected in terms of absolute values of assets prior to the intervention of microfinance but rather retrospectively and with respect to changes which had occurred over the previous two years. Because of the lack of absolute values from a baseline survey, this hypothesis can neither be confirmed nor rejected. The average duration of interviews was about 2 hours.

The 636 survey households were distributed proportionately to the population of the three zones: Dry Zone (36%), Shan State (31%) and Delta (33%). The overall sample was composed of 73% clients and 27% non-clients.

Resurvey for 2011

The cross-sectional study sample did not include any of the villages in the 2007 survey. After discussions with the international consultant and Pact's M&E department, Pact decided that it would be useful to do a panel study based on the data provided in 2007 by reinterviewing as many of the same respondents as could be found. Based on information from field offices, the presumption was that a high proportion of 2007 respondent households could be found. On this basis, Pact decided to go ahead with the restudy and UNDP concurred. In fact, out of the 636 households interviewed in 2007, the international consultant, Pact and UNDP were very pleased to find a very high percentage of the original respondents. A total of 536 households (85%) of the original households were identified and interviewed again. The sample for 2011 was composed of 402 clients (75.0%) and 134 (25.0%) non-clients. For purposes of comparison, only the 536 households for which data exist for both 2007 and 2011 are included in the analysis.

Early in the survey planning mission, the decision was made to follow the 2007 questionnaire as closely as possible consistent with the need to accommodate new issues which had emerged since that time and which were reflected in the Terms of Reference for the survey. The redesign the questionnaire for 2011 thus made it possible to 1) compare 2007 and 2011 responses based on this panel survey and 2) to use the same questionnaire for the large-sample (n = 3600) cross-sectional survey as well. In order to produce comparable data, to the greatest extent possible, questions were asked in the same way as in the 2007 survey. Comparable results were obtainable for the two study years and comparisons of the same clients with themselves were possible for principle variables including assets. To improve data quality, a decision was made to keep the interview duration down to an average of one hour (as opposed to the 2 hour average for 2007 interviews). There were also some doubts concerning the accuracy of 2007 retrospective measurement covering the prior two years. Therefore, the estimation of expenditures was not attempted; instead a greater concentration was put on household assets, which are easier to measure and closely correlate with income and expenditures over any extended period of time.

Based on the panel data it is possible to measure the changes in principal variables of interest over the two periods. The sub-sections that follow analyze the data available from the interviews of the 536 households which were interviewed in both 2007 and 2011.

Business Activities

The major goal of the microfinance program is to allow women to participate actively in business and to improve their standing within the family and the community as a result of their success at running businesses and the contribution of the income which these businesses generate, to the family budget and to the village economy. The section which follows documents how women's businesses have changed in the past 4 years. It shows how the microfinance has allowed women to expand existing businesses, to establish new businesses, and to diversify their sources of income.

Primary Businesses

Agriculture is the primary business for both clients and non-clients in 2007. However, 52.2% of clients engaged in agriculture in 2007 whereas nearly 10% more (61.2%) of non-clients reported agriculture as their primary activity. Microfinance provided women with other more profitable options and they took them. Nearly double the percentage of women in the sample in 2007 who were clients reported "trading"

as their primary activity (31.1%) compared to non-clients (16.4%). Furthermore, the percentage reporting low status and low paid casual labor as their primary occupation was only 8.0% for clients compared to 12.7% for non-clients.

In the other categories (livestock, fishing and services) , the major change observed between 2007 and 2011 is a substantial reduction in fishing which fell overall from 2.4% to 0.9% of responses between 2007 and 2011; by 2011 only 0.7% and 1.5% of clients and non-clients respectively gave fishing as their main occupation. The reduction is due mostly to the reduction in the Delta where the overall percentage of respondents giving “fishing” as their principal occupation fell from 7.9% overall to 3.3% between 2007 and 2011. The impact of Nargis by destroying boats and washing away nets may have been a factor in this reduction; equally important, perhaps, is overfishing and poor catches in all regions (except possibly for Shan State), which appears to be the main reason for reduced interest in fishing. Clients in particular, have been able to move out of a low-prestige, low-income activity such as fishing into other more profitable activities. (Only now is aquaculture is beginning to emerge as an alternative source of fish and income.)

In 2007 in the Delta only one third (33.0%) of clients reported agriculture as their primary activity while nearly half (47.0%) reported trading; the same percentages for non-clients are 43.2% and 32.4% respectively.

Primary Business Activity in 2007 – 2011

2007						
Primary Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %		in %		of Total
Agriculture	210	52.2%	82	61.2%	292	54.5%
Trading	125	31.1%	22	16.4%	147	27.4%
Casual Labor	32	8.0%	17	12.7%	49	9.1%
Skilled Labor	9	2.2%	6	4.5%	15	2.8%
Livestock	11	2.7%	3	2.2%	14	2.6%
Fishing	10	2.5%	3	2.2%	13	2.4%
Service	5	1.2%	1	0.7%	6	1.1%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

By 2011, the percentage of clients reporting agriculture as their primary business had increased by over 5 percentage points to 57.5% in response to modification of the agricultural loan product which provided 1) a much increased loan size for women engaging in farming enterprise and 2) a longer term for loan repayment. Women were quick to take advantage of this opportunity. The percentage of non-clients reporting agriculture as their primary occupation fell by 5 percentage point to 56.0%. The percentage of clients engaged in trading as their primary occupation fell slightly to 28.4% while that of non-clients rose to 23.1%; as will be seen below, this reduction does not indicate that they have abandoned trading but

rather that they have expanded agricultural operations to take advantage of favorable financing for such activities (while still preserving their trading businesses, as noted in the following subsection).

There was a slight reduction in the percentage of both clients and non-clients reporting casual labor as their primary occupation to 7.2% and 10.4% respectively. In both years, the percentage of clients reporting casual labor as their primary occupation is three to four percentage points lower than for non-clients; in other words, clients are able to find business and job opportunities other than casual labor.

2011						
Primary Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Agriculture	231	57.5%	75	56.0%	306	57.1%
Trading	114	28.4%	31	23.1%	145	27.1%
Casual Labor	29	7.2%	14	10.4%	43	8.0%
Skilled Labor	7	1.7%	6	4.5%	13	2.4%
Livestock	13	3.2%	2	1.5%	15	2.8%
Fishing	3	0.7%	2	1.5%	5	0.9%
Service	5	1.2%	4	3.0%	9	1.7%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a Percentage of Sample	75.0%		25.0%			

Second Businesses

Both households and individual members of households usually engage in multiple business activities in the course of the year as a way of producing a more or less constant income stream and of reducing risk. Survey data are available for up to the primary and secondary businesses of each of the women surveyed. In 2007, 45.1% of the households (242 respondents) reported having second businesses. Of those reporting second businesses, 81.8% were clients and 18.2% were non-clients; since the sampling fraction is 75% clients and 25% non-clients, a disproportionate percentage of clients report second business activities.

In the 2011 survey, 131 respondents reported having a second business; of these 82.4% were clients and 17.6% non-clients.

Agriculture as a percentage of secondary business fell to about one third for clients from 17.2% to 6.5% of clients with the percentage of non-clients rising slightly from 9.1% in 2007 to 13.1%. Fishing also fell by nearly half from 8.3% to 4.6% percent of all respondents. In 2007, seven clients (3.5%) were engaged in service employment, falling to 1 woman (0.9%) by 2011.

Casual labor also fell dramatically for both clients (from 22.2% to 12.0%) and non-clients (from 40.9% to 26.1%). This change implies that respondents are better able to find more profitable employment for their

time than simply taking casual jobs as they arise. For clients, this difference is probably attributable to the availability of financing from the MFP as noted in the following paragraph.

The most dramatic change observed in secondary employment is in trading activities which rose dramatically among clients from 22.2% in 2007 to 46.2% in 2010; this category includes a few home grocery shops in addition to itinerant trading and roadside or market sales. A high percentage of clients are establishing secondary businesses. Non-clients also increased their participation in trading as a secondary activity from 0.0% to 13.0% over the same period; their limited number seem to indicate that lack of finance constitutes an impediment to this kind of activity.

The big difference over time and between the two groups is clearly linked to the availability of finance for MFP clients as opposed to non-clients who have to depend on their own means or assistance from their families to set up and finance these kinds of businesses. In both 2007 and 2011, more than 80% of those reporting second businesses are clients; less than 20% of those reporting second businesses are non-clients.

		2007	Panel	Data		
Second Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %		in %		of Total
Agriculture	34	17.2%	4	9.1%	38	15.7%
Trading	26	13.1%	0	0.0%	26	10.7%
Casual Labor	44	22.2%	18	40.9%	62	25.6%
Skilled Labor	3	1.5%	1	2.3%	4	1.7%
Livestock	67	33.8%	18	40.9%	85	35.1%
Fishing	17	8.6%	3	6.8%	20	8.3%
Service	7	3.5%	0	0.0%	7	2.9%
Total	198	100.0%	44	100.0%	242	100.0%
Client/Non-Client as a						
Percentage of Sample	81.8 %		18.2%			

		2011	Panel	Data		
Second Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Agriculture	7	6.5%	3	13.0%	10	7.6%
Trading	46	42.6%	3	13.0%	49	37.4%
Casual Labor	13	12.0%	6	26.1%	19	14.5%
Skilled Labor	4	3.7%	1	4.3%	5	3.8%
Livestock	32	29.6%	9	39.1%	41	31.3%

Fishing	5	4.6%	1	4.3%	6	4.6%
Service	1	0.9%	0	0.0%	1	0.8%
Total	108	100.0%	23	100.0%	131	100.0%
Client/Non-Client as a Percentage of Sample	82.4%		17.6%			

Agricultural as Business

Data on agricultural businesses is available only for 2011.

Involvement in Agriculture as a Business

These data show that a significantly higher proportion of client compared to non-client households engage in agriculture as a business. The difference is fully ten percentage points and is significant at the 0.95 significance level. Access to credit might be related to the greater availability of credit from the MFP and the fact that the program makes available significantly larger loans for agriculture to qualified borrowers than for other types of activity.

		Respondent status		Total
		Client	Non client	
Does your household do agricultural business?	No	128	56	184
		31.8%	41.8%	34.3%
	Yes	274	78	352
		68.2%	58.2%	65.7%
Total		402	134	536
		100.0%	100.0%	100.0%

Chi-Square = 4.414 with 1 df; significant at > 0.95 significance level

Ownership of Agricultural Land

Being a client of the microfinance program is positively correlated to land ownership. The difference in the ownership of agricultural land is almost ten percentage points higher for clients than for non-clients. This difference is significant at the 0.90 significance level. Ownership of land is positively related to membership in the MFP.

Land Ownership		Respondent status		Total
		Client	Non client	
Does your household own agricultural land?	No	128	54	182
		31.8%	40.3%	34.0%
	Yes	274	80	354
		68.2%	59.7%	66.0%
Total		402	134	536
		100.0%	100.0%	100.0%

Chi-square 3.206 with 1 df; significant at > 0.90 significance level.

Amount of farm land owned

Clients on average own very slightly more farm land than do non-clients (0.04 acres). However, the difference is very small indeed and is not statistically significant. If there is any difference between the two groups, it is very small and the relationship between membership in the microfinance program and ownership of more land is weak if it exists at all.

	Respondent Status	N	Mean	Std. Deviation	Std. Error Mean
How much farm land in total does your household have?	Client	274	6.020	5.9904	.3619
	Non client	80	5.984	5.5896	.6249

Mean difference .0363; t-test = .048 with 352 df; not significant.

Land Purchase

However, there is a large difference between clients and non-clients with respect to the purchase of land since the MFP has started. Proportionately more clients than non-clients (more than five times the proportion of clients to non-clients) have bought land in the period since the microfinance program has started. This relationship is strong, significant at an extremely high level. It is most unlikely that these results would be observed if no relationship existed between membership and land purchase. Microfinance loans apparently make higher levels of income and the accumulation of assets possible; when the opportunity arises to buy additional land, microfinance clients take advantage of the opportunity to buy more land.

		Respondent Status		Total
		Client	Non client	
Have you bought any land since microfinance program started?	No	217	77	294
		79.2%	96.3%	83.1%
	Yes	57	3	60
		20.8%	3.8%	16.9%
Total		274	80	354
		100.0%	100.0%	100.0%

Chi-square = 12.792 with 1 df; significant at > 0.999

Amount of land purchased

There are very few non-clients in the sample who reported buying land (only 3) and considerable variation in the amount of land bought by those buying additional land. While the average amount of land purchased by clients is about 50% more than that purchased by non-clients, the difference is not statistically significant.

	Respondent Status	N	Mean	Std. Deviation	Std. Error Mean
How much value of land did you buy?	Client	57	3.649	3.0822	0.4082
	Non client	3	2.333	1.1547	0.6667

Mean difference 1.3158

t-test = 0.732 with 58 df; not significant.

Purchase of quality seeds and other inputs

Nearly four percentage points more clients than non-clients purchased quality seeds and other inputs than non-clients. This difference is substantial and statistically significant at the 0.90 significance level. Microfinance loans appear to be related to households' ability to purchase quality seed and other inputs.

		Respondent status		Total
		Client	Non client	
Did your household use quality seeds and other inputs?	No	9	6	15
		3.2%	7.1%	4.1%
	Yes	269	79	348
		96.8%	92.9%	95.9%
Total		278	85	363
		100.0%	100.0%	100.0%

Chi-square = 2.400 with 1 df; not significant at .90 significance level

Area sown

There is a difference of about half an acre in the average amount of land cropped by clients compared with non-clients. However, since no statistics are available, it is not possible to determine if this difference in favor of clients in terms of their area under crops is statistically significant.

	N			Mean		
	Client	Non client	Total	Client	Non client	Total
Acreage sown	269	79	348	5.487	4.965	5.368

No statistics are available

Average amount spent on inputs

The average amount spent on inputs is nearly double for microfinance clients compared to non-microfinance clients. This difference is significant at a very high level. It would appear that microfinance clients spend significantly more than non-clients on inputs. The availability of loans would appear to influence this behavior in a positive way.

	Respondent status	n	Mean	Std. Deviation	Std. Error Mean
Total amount spent on inputs (in Kyats 000s)	Client	402	208.365	361.269	18.019
	Non client	134	119.706	212.558	18.362

t-test = 2.689 with 534 df; significant at > 0.99 significance level.

Agricultural loans

More than twice the proportion of microfinance clients as of non-clients takes loans to finance agricultural production. This difference is large and significant at an extremely high level. Clients are much more likely than non-clients to take loans for agricultural operations and this relationship does not appear to be merely a chance correlation but would seem to indicate a strong link between membership or the lack thereof in the MFP and a household's willingness and ability to take out a loan to finance agricultural activities.

		Respondent Status		Total
		Client	Non client	
Has your household had any loan which is utilized in agriculture?	No	42	53	95
		15.1%	62.4%	26.2%
	Yes	236	32	268
		84.9%	37.6%	73.8%
Total		278	85	363
		100.0%	100.0%	100.0%

Chi-square = 75.201 with 1 df; significant at > 0.999 significance level

Non-Farm Business Loans in 2010

These data refer to 2010; corresponding data for 2007 are not available.

Well more than half the sample has had a loan for a non-farm business, but the proportion is significantly higher for microfinance client than non-microfinance households. This difference is significant at an extremely high significance level indicating that it is most unlikely that these results would have been observed in the sample if there was not some underlying relationship between client-non-client status and a household's having or not having a loan. Microfinance house households generally seem to have more loans than non-microfinance households.

		Respondent status		Total
		Client	Non client	
Has your household had any loan for any of its non-farm businesses?	No	72	32	104
		34.8%	71.1%	41.3%
	Yes	135	13	148
		65.2%	28.9%	58.7%
Total		207	45	252
		100.0%	100.0%	100.0%

Chi-Square 20.127 with 1 df; significant at > 0.999

Involvement in Fisheries

There is hardly any difference in the household's involvement in fisheries based on their status as a client or non-client, and any difference observed is not statistically significant. Only 8 percent of those surveyed report being involved in fisheries, although it may be that this proportion underestimates actual participation in fisheries to the extent that catching fish between the rice fields with cast nets during the rainy season or fishing only to supplement the family diet may not be captured in the survey data. Thus, the survey may underestimate the importance of fisheries' contribution to food security.

		Respondent Status		Total
		Client	Non client	
Is your household involved in any fisheries activities?	No	368	123	491
		91.5%	91.8%	91.6%
	Yes	34	11	45
		8.5%	8.2%	8.4%
Total		402	134	536
		100.0%	100.0%	100.0%

Chi-square 0.008, with 1 df. Not significant

Fisheries loans

Data are available only for 2010. Of the 45 respondents who report some involvement in fisheries, more than twice the proportion of clients (58.8%) has fisheries loans as non-clients (27.3%). This difference is significant at greater than the 0.90 significance level. It is quite likely that being a client is related to a greater chance that a fishing household would have taken a loan to finance this activity.

		Respondent Status		Total
		Client	Non client	
Has your household had any loan which is utilized in fisheries?	No	14	8	22
		41.2%	72.7%	48.9%
	Yes	20	3	23
		58.8%	27.3%	51.1%
Total		34	11	45
		100.0%	100.0%	100.0%

Chi-square 3.311 with 1 df; significant at > 0.90 significance level.

Changes in the Value of Assets between 2007 and 2011

The fact that no baseline for the situation of clients and non-clients was done at the time the program started means that it is not possible know for certain what the wealth status of clients and non-clients was before the program started and how well the sample selected in 2007 for clients and non-clients reflects a cross-section of the target population that the program was designed to serve at the time the program started.

Situation in 2007

What is clear is that by 2007 clients were accumulating assets rapidly and achieved levels which were substantially higher than those of non-clients for most categories. Where clients lagged behind non-clients was in the category “transport,” mainly bicycles and motorbikes; this difference probably indicates that clients were in fact at a lower level than non-clients in terms of their overall wealth at the time when the program started. In the 2007 survey, only clients with three years’ experience in the Microfinance Program were interviewed. Overall, by 2007 clients’ total assets exceeded those of non-clients by about 11% (Kyat 725,000 for clients compared to Kyats 652,000 for non-clients). In all other categories except for the category of “transport,” clients’ assets exceeded those of non-clients to some degree. In the ownership of livestock, clients’ exceeded non-clients’ holdings by 47%.

Situation in 2011

By 2011 clients’ holdings of assets exceeded that of non-clients by 22% % (Kyat 725,000 for clients compared to Kyats 652,000 for non-clients). Clients’ assets exceed those of non-clients in all categories. By 2011, clients have even succeeded in catching up with non-clients in the “transport” category where they had been very far behind 4 years earlier (clients Kyats 994,000 compared to non-clients Kyats 815,000). The category which increased least was “productive assets” (tools, non-mechanized farm equipment such as plows, etc.), rising by 15.5% for clients and 8.9% for non-clients. The difference between clients (and non-clients is not significant at commonly used levels of significance. In terms of productive assets, both clients and non-clients appeared to have attained the level of assets needed to operate their businesses in their accustomed fashion. Productive assets constitute about one third of total assets.

Changes over Time

The average value of “livestock” holdings increased by 19.4% for clients and 23.8% for non-clients; it should be noted that non-clients started from a much lower base (Kyats 233,000 compared to Kyats 342,000 for clients). Both clients and non-clients increased livestock holdings by about Kyats 65,000 over the 4 year period. Differences between the two study years are significant at the 0.999 significance level for this and all remaining categories of assets (excluding productive assets).

“Household durables” (TVs, VCDs, radios, generators, etc.) have increase by between Kyats 60,000 and Kyats 70,000 for clients and non-clients respectively, equivalent to 74.4% for clients and 112.9% for non-clients.

Clients were far behind non-clients in their ownership of means of transport (principally bicycles and motorcycles) in 2007. Starting from a low base, growth in this category has been phenomenal for clients, well over 200%; at the beginning of the period, the value of transport assets was about equal in value terms to each household owning one bicycle; by the end it was equivalent to ownership of one motorcycle for every other household. By 2011, clients and non-clients were about equal in terms of their holdings of transport equipment. Bicycles and motorcycles are used principally for business (commuting back-and-forth to farm fields, transport of products, the basis for itinerant trading businesses); they also have a role in the improvements in educational attainment (discussed later in this section) by providing a way to get children to schools beyond primary schools existing in home villages.

In absolute terms changes of clients surpass those for non-clients in all categories except “household durables.”

The total value of assets has risen by about Kyats 270,000 (US\$338) for clients and by about Kyats 160,000 (US\$ 200) for non-clients. This increase represents a change of 37.2% for clients between 2007 and 2011 and 25.1% for non-clients. The absolute value of household assets has reached Kyats 994,000 (US\$ 1,240) and Kyats 815,000 (\$1,020) respectively for clients and non-clients.

Assets are an easily measured proxy for both income and the expenditures. Assets are acquired out of current income (sometimes supplemented by loans, particularly for microfinance clients) and represent with a good degree of accuracy improvements in the well-being of respondent households. Higher average incomes over the intervening years between 2007 and 2011 on which this panel study is based have allowed households to accumulate more assets. Clients have taken advantage of their generally higher incomes as a result of loans obtained from the Microfinance Program at reasonable rates to expand their businesses (both farm and non-farm) and to establish and expand new businesses based on profits from the original businesses. Savings on financial costs of doing business based on lower interest rates contributed to greater profitability for client businesses. Non-clients have also increase their assets as a result of increased average income over time, but the lesser increases in assets indicate lower incomes on average. There is some degree of correlation between incomes of clients and non-clients as the operation of the Microfinance Program within a community is likely to raising living standards of the whole community through increased employment and greater circulation of cash with the village economy.

The total value of all assets has risen by Kyats 269,000 for clients and by Kyats 163,000 for non-clients, a difference of 65% more for clients than for non-clients.

Mean Value of Assets in 2007 and 2011 in Thousands of Kyat

	Means for 2007		Means for 2011		% Change 2011/2007		Significance Level
	Client	Non-Client	Client	Non-Client	Client	Non-Client	
Productive	250	226	289	246	15.5%	8.9%	0.892
Livestock	342	233	408	288	19.4%	23.8%	0.999
Household Durables	82	62	143	132	74.4%	112.9%	0.999
Transport (Moto, Bike)	49	127	153	149	212.2%	17.3%	0.999
Total Assets	725	652	994	815	37.2%	25.1%	0.999
Difference 2011 – 2007 Clients/Non-Clients%			269	163	+65.0% (=269/163)	Not applicable	

Approximately Kyats 800 = \$1 in October 2011

Ownership Assets

Housing

There have been some important changes in housing between 2007 and 2011. Both clients and non-clients have made improvements in the condition of their home, some of them substantial.

Roofing Material

The most striking change in housing is in the material used for the roof. Where they have been able to afford it, households surveyed in both 2007 and 2011 had put considerable effort into changing the material of their roofs. Where possible, they had made some change in the roof, replacing less satisfactory materials to those which are better at keeping the rain from leaking into the house. Galvanized Iron (GI) sheets (or tin roofs), are preferred. This change has been encouraged by substantial imports of these sheets from China at attractive prices. This confirms points in discussions with some respondents who maintain that GI sheets are cheaper in the long run for households which can afford the initial investment by avoiding the need for frequent (even annual) replacement of the roof. A very small number of houses have asbestos sheets rather than GI sheets; those that use asbestos have been included in the GI category since in terms of quality and durability the two materials are similar.

The least preferred materials are in order of preference: grass/thatch (least preferred), toddy/palm leaves and bamboo (more preferred). Grass and palm leaf thatch roofs have to be replaced almost every year and are subject to serious leaking if they are not.

In 2007, almost 26% of respondents had roofs made out of grass or thatch, with almost no difference between clients (25.9%) and non-clients (26.1%). By 2011, the percentages had declined dramatically to about 11%, again with little difference between clients (11.4%) and non-clients (11.2%).

In 2007, the use of toddy/palm leaves stood at about 29% (28.9% for clients and 29.1% for non-clients). By 2011, their use had fallen though only slightly to 26.1% for both clients and non-clients. It should be noted that toddy palm leaves are not free for collection by all, but are sold by the owners of the trees, generally for K 25 each.

The use of bamboo has increased very slightly between 2007 and 2011. In 2007 5.2% of clients and 6.7% of non-clients used bamboo for their roofs. By 2011, these figures had reached 5.7% and 8.2% respectively for clients and non-clients.

The most dramatic change came in the use of GI sheets. Asbestos sheets also used to a very limited extent (1 or two users among clients and non-clients) compared to GI sheets which have hundreds of users. In 2007, 40.0% of clients and 38.1% of non-clients had sheet roofing material, almost exclusively GI sheets. By 2011 the percentage had risen substantially to 56.7% of clients and 54.4% of non-clients. Construction loans from the MFP helped, although the maximum amount was only sufficient to provide sufficient sheets to cover half of the average size house.

Primary Roofing Material in 2007 - 2011

		2007	Panel	Data		
Type of Material	Households	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
G.I. Tin Roofing Sheets (& Asbestos)	161	40.0%	51	38.1%	212	39.6%
Bamboo	21	5.2%	9	6.7%	30	5.6%
Toddy/nipa palm leaves	116	28.9%	39	29.1%	155	28.9%
Grass/thatch	104	25.9%	35	26.1%	139	25.9%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

		2011	Panel	Data		
Primary Material	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
G.I. Tin Roofing Sheets (& Asbestos)	228	56.7%	73	54.5%	301	56.2%
Bamboo	23	5.7%	11	8.2%	34	6.3%
Toddy/nipa palm leaves	105	26.1%	35	26.1%	140	26.1%
Grass/thatch	46	11.4%	15	11.2%	61	11.4%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client						
Percentage of Sample	75.0%		25.0%			

Walls

Respondents also report some improvement in the walls of their houses. Brick and wood are preferred materials, followed by palm thatching, bamboo, and grass thatching (least preferred). The category “brick or wood” has risen by about 4%, with clients showing an increase from 25.6% to 29.6% between 2007 and 2011. The increase for non-clients for these two materials is from 23.9% to 27.9% over the same period. Palm thatch has increased from 13.8% to 16.8% for the entire sample between 2007 and 2011. For clients it has increased 13.7% to 16.4% for clients and from 14.2% to 17.9% for non-clients. Bamboo has fallen from 61.2% to 54.3% for the entire sample from 2007 to 2011 and from 59.0% to 53.7% for clients and from 67.9% to 56.0% for non-clients. For grass thatch (least preferred) overall, the percentage of houses using this material for their walls has decreased from 1.3% to 0.7% overall, while for clients it

has fallen from 1.7% to 0.2% but risen from 0.0% to 2.2% among non-clients. In summary, households are gradually improving the quality of their walls.

Primary Wall Material in 2007 - 2011

		2007	Panel	Data		
Material	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Brick	53	13.2%	7	5.2%	60	11.2%
Wood	50	12.4%	17	12.7%	67	12.5%
Brick or Wood	103	25.6%	24	17.9%	127	23.7%
Bamboo	237	59.0%	91	67.9%	328	61.2%
Toddy/nipa palm leaves	55	13.7%	19	14.2%	74	13.8%
Grass/thatch	7	1.7%	0	0.0%	7	1.3%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a Percentage of Sample	75.0 %		25.0%			

		2011	Panel	Data		
Primary Material	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Brick	61	15.2%	18	13.4%	79	14.7%
Wood	58	14.4%	14	10.4%	72	13.4%
Brick or Wood	119	29.6%	32	23.9%	151	28.2%
Bamboo	216	53.7%	75	56.0%	291	54.3%
Thatch/nipa palm leaves	66	16.4%	24	17.9%	90	16.8%
Other, what	1	0.2%	3	2.2%	4	0.7%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

Floor

Changes reported in the floor material are minor to date but indicate some switching to preferred over less preferred materials. “Most preferred” materials are concrete and wood. Overall 54.1% of those surveyed in 2007 were using one of these two materials (usually wood) while this percentage rose to 56.0% in 2011. Clients increased their percentage of concrete floors from 1.7% to 4.5% while non-clients increased

their usage from 2.2% to 3.7%. Wood flooring remained virtually unchanged at around 52% overall and changes within client/non-client categories being miniscule. Overall, the use of bamboo flooring dropped from 42.7% to 39.4% between 2007 and 2011; for clients the drop registered was from 39.3% to 36.8% and for non-clients from 53.0% to 47.0%. For 2011, a new category of “Other” (corresponding to split wood of the betel tree, inferior to wood, about equivalent in preference to bamboo) was introduced; for 2011 about 1% of all respondents with 1.0% for clients and 1.5% for non-clients.

Primary Floor Material in 2007 - 2011

		2007	Panel	Data		
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Concrete	7	1.7%	3	2.2%	10	1.9%
Wood	223	55.5%	57	42.5%	280	52.2%
Concrete or Wood	230	57.2%	60	44.8%	290	54.1%
Bamboo	158	39.3%	71	53.0%	229	42.7%
Earth	14	3.5%	3	2.2%	17	3.2%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a Percentage of Sample	75.0 %		25.0%			

		2011	Panel	Data		
Primary Material	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Concrete	18	4.5%	5	3.7%	23	4.3%
Wood	219	54.5%	58	43.3%	277	51.7%
Concrete or Wood	237	59.0%	63	47.0%	300	56.0%
Bamboo	148	36.8%	63	47.0%	211	39.4%
Earth	13	3.2%	6	4.5%	19	3.5%
Other, what	4	1.0%	2	1.5%	6	1.1%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a Percentage of Sample	75.0%		25.0%			

Number of Stories

However, there have been only slight changes in the average number of stories of houses. In 2007, 58.2% of clients and 55.2% of non-clients had houses with only one story; 41.8% of clients had houses where part of or the entire house was more than one story; for non-clients, the percentage was 44.8%. In 2011 56.5% of clients and 56.0% of non-clients reported having houses of only one story while 43.6% of clients and 44.0% of non-clients reported having more than 1 story (at least part of the house having two stories). Thus, panel data show very little change in the number of stories of houses from 2007 to 2011.

Number of Stories

Number of Stories

		2007	Panel	Data		
Number of Stories	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Two Stories	142	35.3%	49	36.6%	191	35.6%
One and a half	26	6.5%	11	8.2%	37	6.9%
More than one story	168	41.8%	60	44.8%	228	42.5%
One story	234	58.2%	74	55.2%	308	57.5%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

		2011	Panel	Data		
Number of Stories	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Two Stories	141	35.1%	45	33.6%	186	34.7%
One and a half	34	8.5%	14	10.4%	48	9.0%
More than one story	175	43.5%	59	44.0%	234	43.7%
One story	227	56.5%	75	56.0%	302	56.3%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

Electricity and Lighting Sources

The 2007 did not delve into the issue of power sources within the surveyed communities. However, in the 2001 restudy, respondents were asked about the source of lighting for their homes. Results for 2011 are presented in the table below.

Respondents clearly prefer electricity and go to great lengths to obtain access to electricity. Microfinance clients generally have higher incomes which they are able to obtain due to the profitability of their businesses and the availability of finance at reasonable interest rates. Thus, where electricity is available, villagers normally connect to the service if they can afford to pay the required charges which are comparable to the cost of lighting a home with kerosene lamps, according to the qualitative survey. Slightly more clients than non-clients report access to preferred sources of lighting (public electricity, privately generated electricity or generators). A higher percentage of clients than non-clients have 12 volt batteries to power lights and small consumer electronics (TVs and VCDs).

Candles and kerosene lamps are the least preferred sources of lighting. They give less light and constitute a fire-hazard particularly where most houses are made of combustible materials. A lower percentage of clients (20.9%) than non-clients (25.4%) use these sources of lighting.

Access to electricity is positively correlated with the purchase of consumer electronics. Permanent access to electricity (as through public electricity or some community hydropower systems which were not found in the panel study sample) is reported in the qualitative survey to reduce demand for firewood as heating water and meal preparation is at least partially done with electricity.

Primary Lighting Source

		2011	Panel	Data		
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Public Electricity	73	18.2%	23	17.2%	96	17.9%
Privately Generated Electricity	85	21.1%	28	20.9%	113	21.1%
Own Generator	25	6.2%	7	5.2%	32	6.0%
Preferred Sources	183	45.5%	58	43.3%	241	45.0%
Battery 12 volt	80	19.9%	22	16.4%	102	19.0%
Torch with Dry Cells	55	13.7%	20	14.9%	75	14.0%
Kerosene Lamp	46	11.4%	20	14.9%	66	12.3%
Candle	38	9.5%	14	10.4%	52	9.7%
Kerosene Lamp & Candle	84	20.9%	34	25.4%	118	22.0%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client						
Percentage of Sample	75.0%		25.0%			

Source of Fuel

The source of fuel is available for the 2011 resurvey but not for 2007. Differences between clients and non-clients are minimal. Firewood accounts for 86.6% of household fuel needs in 2011. Charcoal is used by 6.3% of households, electricity by 6.2%, gas/kerosene or diesel by 0.2% and rice husks by 0.7%. In all these categories (which are preferred) except the last, the percentage for client as opposed to non-client households is slightly higher.

Type of Stove

Data are available on the type of stove used only for 2011. The type of stove used by the household is ranked from more preferred to least preferred in terms of ease of use and fuel efficiency: electric cooker/hotplate, A1 improved stove, rice husk stove, charcoal stove and traditional stove. Except for electric stoves, clients' percentages exceed non-clients in all categories of preferred stoves. A substantially lower percentage of clients than non-clients use traditional wood stoves, which require more fuelwood per calorie of heat produced.

Type of Stove - 2011

		2011		Data		
Type of Stove	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %		in %		of Total
Electric Cooker or Hotplate	21	5.2%	8	6.0%	29	5.4%
A1 Improved Stove	67	16.7%	19	14.2%	86	16.0%
Rice Husk Stove	8	2.0%	1	0.7%	9	1.7%
Charcoal Stove	18	4.5%	1	0.7%	19	3.5%
Traditional Stove	288	71.6%	105	78.4%	393	73.3%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0 %		25.0%			

Household Assets

Water & Sanitation

Water

Little change is noted in access to water between 2007 and 2011.

The most noteworthy change is that many more clients and non-clients are buying water from watersellers which reflects increased income and more valuable uses for people's time than in hauling water. Whether or not such water is safer than water obtained from other sources, depends on where the waterseller obtains the water he sells, which it is not possible to determine from a general purpose survey of this type. The percentage of clients using watersellers as their primary source of water rose from 1.0% in 2007 to

5.5% in 2011; for non-clients, the percentages were 1.5% and 3.7% respectively. The primary motive for the change is convenience and lack of time to dedicate to low value uses of their time in fetching and hauling water.

Primary Source of Drinking Water in 2007 and 2011

		2007	Panel	Data		
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Safer Source of Water	97	24.1%	34	25.4%	131	24.4%
Fenced Pond	153	38.1%	4	3.0%	157	29.3%
Open Pond	50	12.4%	61	45.5%	111	20.7%
Rainwater	34	8.5%	11	8.2%	45	8.4%
Waterhole or Spring	25	6.2%	8	6.0%	33	6.2%
River or Stream	39	9.7%	14	10.4%	53	9.9%
Waterseller	4	1.0%	2	1.5%	6	1.1%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

		2011	Panel	Data		
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Safer Source of Water	107	26.6%	34	25.4%	141	26.3%
Fenced Pond	147	36.6%	47	35.1%	194	36.2%
Open Pond	15	3.7%	5	3.7%	20	3.7%
Rainwater	56	13.9%	17	12.7%	73	13.6%
Waterhole or Spring	34	8.5%	12	9.0%	46	8.6%
River or Stream	21	5.2%	14	10.4%	35	6.5%
Waterseller	22	5.5%	5	3.7%	27	5.0%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Note: Safer sources of water are wells or tubewells, whether hand- or motorized-pumps are used to lift the water. Respondents to the qualitative survey reported that 1) some villagers were paying the cost of and making their own tubewells and 2) that where water was available from tubewells and from other sources, water from tubewells was used for drinking and water of lesser quality was used for other purposes.

Sanitation

Sanitation is less dependent than other assets on the contribution of microfinance to increasing income and funds available for investing on assets to improve family welfare. There are two reasons for the weakness of the linkage: 1) lack of understanding of disease transmission through unsafe disposition of human wastes and 2) massive provision of materials for the construction of fly-proof latrines by donors. The qualitative survey made it clear that many respondents do not perceive any health problems being associated with taking care of their needs in the woods. The same survey noted the very substantial role of donors and NGOs in providing at least the design and materials for fly-proof latrines and encouraging their construction and use; where available, latrines in fact are used.

In 2007, 70.9% of clients and 73.1% of non-clients had access to fly-proof latrines. (For simplicity sake, flush ceramic bowls which perform the same function have been lumped together with fly-proof latrines, since they both provide protection against the transmission of disease and their numbers are so low, only 3 or 4 in both 2007 and 2011.) Systems which provide little protection against contamination from human wastes were still in substantial use in 2007. For clients, the percentages using these various systems are: open-pit latrines 14.4%, defecation on a riverbank or through outhouses over a river, canal or stream 5.7% and no toilet facilities at all (open defecation) 9.0%. For non-clients, the percentages using these various systems are: open-pit latrines 17.9% while 9.0% had no toilet facilities at all (open defecation); no non-client households reported river-bank outhouses.

Concerted efforts by donors along with labor and some materials provided by the community, led to dramatic improvements in the proportion of the population using fly-proof toilets by 2011. Among clients, the percentage of households having fly-proof latrines rose to 90.0% (a nearly 20%). For non-clients, the percentage rose substantially as well, to 88.1% (a 15 percentage point increase). For clients, the percentages using these various systems or having no toilet facilities at all fell substantially: open-pit latrines to 5.5%, defecation on a riverbank or through outhouses over a river to 1.5% and no toilet facilities at all (open defecation) 3.0%. For non-clients, improvements are also registered with the percentages using these various systems being the following: open-pit latrines 5.2%, river-bank outhouses 1.5% and those having no toilet facilities at all also 5.2%.

Primary Means of Sanitation in 2007 – 2011

		2007	Panel	Data		
Means of Sanitation	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Fly-Proof Latrine or Ceramic Bowl	285	70.9%	98	73.1%	383	71.5%
Open -Pit Latrine	58	14.4%	24	17.9%	82	15.3%
Riverbank or Riverbank Outhouse	23	5.7%	0	0.0%	23	4.3%
No toilet facilities at all (Open Defecation)	36	9.0%	12	9.0%	48	9.0%
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client Percentage of Sample	75.0%		25.0%			

		2011	Panel	Data		
Means of Sanitation	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Fly-Proof Latrine or Ceramic Bowl	362	90.0%	118	88.1%	480	89.6%
Open -Pit Latrine	22	5.5%	7	5.2%	29	5.4%
Riverbank or Riverbank Outhouse	6	1.5%	2	1.5%	8	1.5%
No toilet facilities at all	12	3.0%	7	5.2%	19	3.5%
(Open Defecation)						
Total	402	100.0%	134	100.0%	536	100.0%
Client/Non-Client as a Percentage of Sample	75.0%		25.0%			

Education

The 2007 survey used range data (5-9 years, 10-13, etc.) rather than age-specific data specified in years, which were used in the 2011 resurvey. Therefore, the data have had to be regrouped according to the groups found in 2007.

2007

Age Group	Studying			Numbers in Group		
	Client	Non-Client	Total	Client	Non-Client	Total
5 – 9	210	72	282	225	76	301
	93.3%	94.7%	93.7%	100.0%	100.0%	100.0%
10 – 13	191	42	233	222	48	270
	86.0%	87.5%	86.3%	100.0%	100.0%	100.0%
14-15	52	19	71	93	27	120
	55.9%	70.4%	59.2%	100.0%	100.0%	100.0%
16-19	79	19	98	206	39	245
	26.1%	34.5%	48.7%	100.0%	100.0%	100.0%
20-25	5	16	12	235	69	304
	7.2%	5.3%	5.1%	100.0%	100.0%	100.0%
25-30	0	0	0	145	52	197
	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%

In 2007 the big break in school attendance comes in after age 13 when children have to go outside the villages in the area to pursue high school education. In 2007 non-client children were more likely to go school in higher grades than those of microfinance clients. The number of years of school attendance is 5.6 years.

2011

Age Group	Studying			Not Studying		
	Client	Non-Client	Total	Client	Non-Client	Total
5 – 9	177	52	229	183	66	249
	96.8%	78.8%	92.0%	100.0%	100.0%	100.0%
10 – 13	158	58	216	187	67	254
	84.5%	87.5%	86.3%	100.0%	100.0%	100.0%
14-15	59	5	64	105	23	128
	55.9%	70.4%	59.2%	100.0%	100.0%	100.0%
16-19	73	19	92	211	49	260
	34.6%	38.8%	35.4%	100.0%	100.0%	100.0%
20-25	20	7	27	234	62	296
	8.5%	11.3%	9.1%	100.0%	100.0%	100.0%
25-30	0	1	1	136	52	188
	0.0%	1.9%	0.5%	100.0%	100.0%	100.0%

In 2011, mean number of years of school attendance for those up to age 21 is 6.3 years for children of clients and 5.6 years for non-clients. At the village level of attendance at school (the 5-9 year category), school attendance by client children has risen by 5% since 2007 and attendance is almost universal for all children in this age bracket. A substantially higher percentage of children in client than in non-client households in the 5-9 year age group reports attendance. Among children 14 years old or older, the percentage of children attending school is higher for non-clients than for clients.

Excluding those who are still studying, the average number of years of school attendance is 6.8 years for children of clients compared to 6.0 years for those of non-clients, nearly one additional year favoring client compared to non-client children.

Food Security and Nutrition

Meals Including Meat of Fish

Based on data only available for the survey conducted in 2011, client households were almost 12 percentage points more likely to have served protein sources in all three meals on the day previous to the survey than non-client households, and thus less likely to have included a protein source in only two meals (9 percentage points less than non-client households) and in only one meal (almost 3 percentage points less). This difference in favor of client households is significant at the 0.90 significance level, indicating that it is quite likely that this relationship is found among the population represented by the sample.

Number of Meals Including Meat of Fish

		Respondent status		Total
		Client	Non client	
How many meals did you serve yesterday that include meat or fish?	Three meals	222	58	280
		55.2%	43.3%	52.2%
	Two meals	143	60	203
		35.6%	44.8%	37.9%
	One meals	37	16	53
		9.2%	11.9%	9.9%
Total		402	134	536
		100.0%	100.0%	100.0%

Chi-square 5.752 with 2 df; significant at > 0.90 significance level

Difference in Number of Meals with Protein

There is a difference of 0.15 meals containing a protein source in favor of clients over non-clients. This difference is small but very positive for family nutrition. It is also significant at the 0.95 significance level.

Average Number of Meals Containing a Protein Source

		Mean	Std. Deviation	Std. Error Mean
Number of meals	Client	2.46	.658	.033
	Non client	2.31	.676	.058

t-test 2.219 (two-tailed with 534 df) for difference of the means assuming equal variances; significant at > 0.95 significance level

CROSS-SECTIONAL REPORT
based on
2011 HOUSEHOLD SURVEY DATA
from
a Sample of 3600 Households
in
Microfinance and Non-Microfinance Villages

IMPACT EVALUATION
of the
MICROFINANCE PROGRAM

Funded by
the UNITED NATIONS DEVELOPMENT PROGRAM/MYANMAR
in
the Delta, Dry Zone and Shan State

Prepared by
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Yangon, Myanmar

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Cross-Sectional Study Rationale

Selection and Coverage of the 2011 Sample

The cross-sectional study sample did not include any of the villages in the 2007 survey.

Early in the survey planning mission, the decision was made to follow the 2007 questionnaire as closely as possible consistent with the need to accommodate new issues which had emerged since that time and which were reflected in the Terms of Reference for the survey. The redesign the questionnaire for 2011 thus made it possible to 1) compare 2007 and 2011 responses based on this panel survey and 2) to use the same questionnaire for the large-sample (n = 3600) cross-sectional survey as well. In order to produce comparable data, to the greatest extent possible, questions were asked in the same way as in the 2007 survey. Comparable results were obtainable for the two study years and comparisons of the same clients with themselves were possible for principle variables including assets. To keep the interview duration down to an average duration of one hour (as opposed to the 2 hour average for 2007 interviews) and because of doubts concerning the accuracy of 2007 retrospective measurement covering the prior two years, estimation of expenditures was eliminated in favor of a greater concentration on assets, which are easier to measure and closely correlate with income and expenditures over any extended period of time.

Business Activities

Primary Businesses

The data from a cross-section composed of 75% microfinance beneficiaries living in microfinance communities and 25% of non-beneficiaries living in communities where the program does not operate showed some substantial differences between the two groups with respect to their primary businesses. In both cases, agriculture predominates as the primary business with just over a 1 percentage point difference in favor of microfinance respondents, perhaps influenced by upward modification in the size of agricultural loans. Nearly four times the proportion of microfinance respondents as compared with non-client respondents reported trading as their primary business; the availability of microfinance loans clearly facilitates MF clients to engage in trading businesses. MF clients are almost two and a half times as likely as non-clients to be skilled workers, which may be related to their ability to apply needed capital to skills that they already have or to acquire skills that make their access to small amounts of capital more productive. Conversely, clients are only half as likely as non-clients to engage in low prestige and low income work as casual laborers; clients have better options in many cases because of their access to microfinance loans. Microfinance clients are two to three times as likely as to non-clients to be engaged in livestock rearing, fishing or services, apparently related to their access to capital which they obtain from the MFP. Conversely, clients are less than half as likely as non-clients to be unpaid family workers and only a quarter as likely to classify themselves as a “dependents:” clearly microfinance loans open up greater opportunities for program clients.

2011 Cross-Section						
Primary Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Agriculture	1,573	58.3%	512	56.9%	2,085	58.0%
Trading	457	16.9%	39	4.3%	496	13.8%
Casual Labor	286	10.6%	163	18.1%	449	12.5%
Skilled Labor	77	2.9%	11	1.2%	88	2.4%
Livestock	58	2.1%	6	0.7%	64	1.8%
Fishing	78	2.9%	12	1.3%	90	2.5%
Service	19	0.7%	2	0.2%	21	0.6%

2011 Cross-Section						
Primary Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Unpaid Family Worker	88	3.3%	64	7.1%	152	4.2%
Dependent	64	2.4%	91	10.1%	155	4.3%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client as a Percentage of Sample	75.0%		25.0%			

Chi-square = 251.684 with 9 df; significant level > 0.999

A striking feature of the following table is the fact that, though they constitute only 75% of the sample, microfinance clients account for a disproportionate percentage (87.5%) of those reporting having a secondary business in addition to their primary business. Only a little more than half the proportion of clients as non-clients list themselves as engaging in casual labor even as a secondary activity; the same is true for the “unpaid family labor category.” Almost none of the clients lists being “dependent” as a secondary activity whereas 3.4% of non-clients describe their secondary activity as being dependent. The proportion of clients compared to non-clients in fishing is double, in trading is almost double, in livestock is almost 1.5 times and is over 1% in service for clients and 0% for non-clients. Clients engage in more secondary activities than non-clients, the activities they engage in are more remunerative on the whole, and they shy away from the least productive activities.

Second Businesses

		2011	Cross-	Section	Data	
Second Business	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Agriculture	72	8.9%	12	10.1%	84	9.1%
Trading	298	37.2%	24	20.3%	322	35.0%
Casual Labor	146	18.2%	36	30.5%	182	19.8%
Skilled Labor	37	4.6%	9	7.6%	46	5.0%
Livestock	145	18.1%	16	13.6%	161	17.5%
Fishing	42	5.2%	3	2.5%	45	4.9%
Service	9	1.1%	0	0.0%	9	1.0%
Unpaid Family Labor	26	3.2%	8	6.8%	34	3.7%
Other	25	3.1%	6	5.1%	31	3.4%
Dependent	2	0.2%	4	3.4%	6	0.7%
Total	802	100.0%	118	100.0%	920	100.0%
Client/Non-Client as a Percentage of Sample	87.2%		12.8%			

Chi-square = 43.496 with 10 df; significant level > 0.999

Value of Assets for 2011

Differences between clients and non-clients are highly significant in all categories, large overall and large in most individual categories. Total assets of clients are Kyats 1,023,000 (\$1,279 @ Kyat 800/dollar) and of non-clients Kyats 841,000 (\$1,051). On average clients have assets worth Kyats 182,000 (\$228, or 22%) more than non-clients. The largest difference is in the category of consumer durables (household durables like TVs, VCDs, etc and transport equipment such as bicycles and motorcycles) where clients have Kyats 86,000 (\$108). Productive assets of clients are Kyats 39,000 (\$49) higher. Livestock assets are higher by Kyat 56,000 (\$70). The accumulation of this great a difference in assets by clients compared to non-clients is an indication of the welfare impact of the program on people's lives, in that they are able to meet their basic needs at an improved level while retaining a surplus sufficient to build up assets substantially in excess of those accumulated by their peers who do not have access to the MFP. These assets not only permit them to carry out their businesses better, but also to improve the quality of the lives of their family such as by having bicycles and motorcycles available to transport product to markets where better prices are paid and to transport and thus allow children to continue on in middle schools in neighboring villages and in high schools in rural towns. Having motorcycles available for this purpose, lets children continue their education without incurring the cost of lodging and meals which would be prohibitive for many families.

Means for 2011 (Kyats 000s)				Difference between client & non-client means (Kyats 000s)	Signi- ficance levels
Categories of Assets	Client	Non- Client	Total		
Consumer Durables	385	299	363	86	0.999
Productive	309	270	299	39	0.999
Livestock	329	273	315	56	0.999
Total Assets	1,023	841	978	182	0.999

Differences due to rounding error

Approximately Kyats 800 = \$1 in October 2011

Ownership Assets

Housing

The principal element of importance to families is keeping their homes dry in the rainy season. While both clients and non-clients report improvements in the roofs of their homes, the percentage of clients exceeds that of non-clients by over twelve percent in terms of the preferred roofing material (corrugated iron sheets and to a minor extent asbestos sheets and wood shingles). The value of a CI roof based on the average size of houses and the cost of the sheets needed to cover it is Kyats 160,000.

Clients have the same percentage of palm leave roofing but substantially lower percentages of bamboo and grass thatch which are less preferred materials, leaking more and requiring frequent (often annual) replacement which is both time-consuming and costly.

Roofing Material

Primary Roofing Material in 2007 - 2011

		2011	Cross-	Section	Data	
Primary Material	Client Numbers	Client in %	Non-Client Numbers	Non-Client in %	Total Numbers	Percent of Total
C.I. Tin Roofing Sheets (& Asbestos & Wood Shingle)	1,274	52.3%	360	40.0%	1,624	45.3%
Bamboo	187	6.9%	98	10.9%	285	7.9%
Toddy/nipa palm leaves/Thet Kal	1,120	41.5%	377	41.9%	1,497	41.6%
Grass/thatch	119	4.4%	65	7.2%	184	5.1%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client						
Percentage of Sample	75.0%		25.0%			

Chi-square = 32.517 with 6 df: significance level > 0.999

Walls

A higher percentage of clients have better walls and a lower percentage of less preferred wall materials compared with non-clients. Brick and wood are preferred materials; bamboo, palm thatching, and grass thatching (least preferred). The category "brick or wood" is nearly 4% higher for clients than non-clients, with 19.9% of clients reporting either brick or wood and only 16.1% of non-clients. Nearly 4% fewer clients than non-clients have bamboo (63.3% compared to 67.1%). Both clients and non-clients have the same percentage of least-preferred materials (thatch, nipa palm, grass and thet kel). In summary, client households have a generally better quality of their walls compared with non-clients.

Primary Wall Material in 2011

		2011	Cross-	Section	Data	
Primary Material	Client Numbers	Client in %	Non-Client Numbers	Non-Client in %	Total Numbers	Percent of Total
Brick	362	13.4%	92	10.2%	454	12.6%
Wood	174	6.4%	53	5.9%	227	6.3%
Brick or Wood	536	19.9%	145	16.1%	681	18.9%

		2011	Cross-	Section	Data	
Primary Material	Client Numbers	Client in %	Non-Client Numbers	Non-Client in %	Total Numbers	Percent of Total
Bamboo	1,708	63.3%	604	67.1%	2,312	64.2%
Thatch/nipa palm leaves /Grass/Thet Kel	456	16.9%	151	16.8%	607	16.8%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

Chi-square = 11.446 with 4 df; significant level = 0.978

Primary Floor Material in 2011

The preferred materials for flooring are wood and concrete. In both categories clients are far better-off than non-clients. Concrete is the floor material in the homes of 3.8% of clients and in only 2.9% of non-clients. Nearly half of clients (45.1%) have wood floors compared to less than a quarter of non-clients (24.6%). Clients have made dramatic improvements in flooring in their homes and have more than double the improved materials found in houses belonging to non-clients; it is believe that these massive changes have been made possible by increased income derived from businesses financed by the MFP.

A lower proportion of clients than non-clients have non-preferred floor materials. Only 46.3% of the clients compared to 64.8% of non-clients have bamboo floors. The least preferred option (earth floors) accounts for less than 5% (4.8%) of clients compared to nearly 8% (7.8%) of non-clients.

These differences are statistically significant at greater than the 0.999 significance level.

In summary, substantially more clients than non-clients have better floor than is the case for non-clients.

		2011	Cross-	Section	Data	
Primary Material	Client Numbers	Client in %	Non-Client Numbers	Non-Client in %	Total Numbers	Percent of Total
Concrete	102	3.8%	26	2.9%	128	3.6%
Wood	1,219	45.1%	221	24.6%	1,440	40.0%
Concrete or Wood	237	59.0%	63	27.5%	300	43.6%
Bamboo	1,250	46.3%	583	64.8	1,833	50.9%
Earth	129	4.8%	70	7.8%	199	5.5%
Total	2,700	100%	900	100%	3,600	100%
Client/Non-Client as a						
Percentage of Sample	75.0%		25.0%			

Chi-Square = 129.330 with 3 df; significance level > 0.999

Number of Stories

Number of Stories

		2011	Cross-	Section	Data	
Number of Stories	Client Numbers	Client in %	Non-Client Numbers	Non-Client in %	Total Numbers	Percent of Total
Two Stories	639	23.7%	191	21.2%	830	23.1%
One and a half	258	9.6%	104	11.6%	362	10.1%
More than one story	897	33.2%	295	32.8%	1,192	33.1%
One story	1,803	66.8%	605	67.2%	2408	66.9%
Total						
Client/Non-Client as a	2,700	100.0%	900	100.0%	3,600	100.0%
Percentage of Sample	75.0%		25.0%			100.0%

Electricity and Lighting Sources

Clients are much more likely than non-clients to have access to electricity, particularly forms of electricity which require out-of-pocket costs. Micro-hydropower plants which are dependent on 1) a water source with a sufficient head (i.e., drop and quantity of water) and 2) the support of an external donor.

Electricity is a high priority for rural people, not only because of its convenience but because the quality of the light is better and the risk of fire is vastly reduced, a matter of considerable importance where houses are, for the most part made of flammable materials. Access to electricity at the time of day when families do most of their cooking is also reported to reduce the demand for fuel wood. Electricity is also needed to allow families access to consumer electronics (except for battery powered radios and a few black-and-white TVs and small sound systems).

Clients are five times as likely as non-clients (8.4% compared to 1.6%) to have access to public electricity which is (in theory) available 24 hours a day. They can afford the cost of connection, the meter and various incentive payments required to obtain a connection. Clients are slightly more likely than non-clients (9.6% compared to 8.3%) to purchase power provided for a few hours a day by privately owned, diesel-powered, generators; payments are usually monthly. The proportion of clients owning their own generator is more than twice (8.1% compared to 3.4%) that of non-clients. Overall, double the percentage of clients as non-clients have access to income-dependent sources of electricity (26.1% compared to 13.3%).

Mini-hydro plants supply electricity to more than six times greater proportion of non-clients compared with clients. This differential can only be explained by the inclusion in the sample a high percentage of villages, especially in Shan region where is mountainous and with an abundance of streams suitable for this purpose. Such installations depend on favorable location and support of external donors able to finance the initial investment. Unlike other means of generating power, mini-hydro plants are not dependent on income and are unrelated to the impact of the microfinance program. However, the availability of electricity on a full-time basis facilitates the establishment or the operation of many types of businesses and therefore the inclusion of a much higher proportion of non-microfinance villages

having electricity on a full-time bases may bias some of the results of the survey in terms of feasible business activities, income, and assets in favor of non-microfinance villages.

Batteries and torches with dry cells are the second best option for families which cannot achieve access to electricity from the mains or from generators. The percentage of clients with 12-volt (car/truck batteries which are taken for charging every few days) is about 50% higher than for non-clients (16.5% compared with 11.1%); the two groups are essentially equal for the category “torches with dry cells” (13.4% and 13/7% respectively).

Primary Lighting Source

		2011	Cross-	Section	Data	
Source	Client	Client	Non-	Non-	Total	Percent
	Numbers	in %	Client	Client	Numbers	of Total
			Numbers	in %		
Public Electricity	226	8.4%	14	1.6%	240	6.7%
Privately Generated Electricity	260	9.6%	75	8.3%	335	9.3%
Own Generator	219	8.1%	31	3.4%	250	6.9%
Income-Dependent Preferred Sources	705	26.1%	120	13.3%	825	22.9%
Micro-HydroPower	31	1.2%	66	7.3%	97	2.7%
All Preferred Sources	736	27.3%	186	20.7%	922	45.0%
Battery 12 volt	446	16.5%	100	11.1%	546	15.2%
Torch with Dry Cells	361	13.4%	132	14.7%	493	13.7%
Kerosene Lamp	719	26.6%	282	31.3%	1,001	27.8%
Candle	428	15.9%	200	22.2%	628	17.4%
Kerosene Lamp & Candle	1,147	42.5%	482	53.6%	1,629	22.0%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client						
Percentage of Sample	75.0%		25.0%			

Chi-Square = 203.496 with 8 df; significant at greater than 0.999
(although expected values of some cells are low)

Source of Fuel

Differences between clients and non-clients are not large except for the category of “Electricity” (in which we have included one respondent using kerosene). Clients are four times as likely as non-clients to use electricity (4.0% and 1.0% respectively). Most of this difference comes at the expense of firewood, with electricity substituting for firewood for cooking (94.7% and 97.7% respectively). Charcoal is used by 1.2% of client households and 1.4% of non-clients. The differences are significant at greater than the 0.999 significance level.

Type of Fuel – 2011

		2011		Data		
Type of Fuel	Client	Client	Non-	Non-	Total	Percent
	Numbers	in %	Client	Client		of Total
				in %		

Electricity (and 1 Kerosene)	108	4.0%	8	1.0%	116	3.2%
Charcoal	32	1.2%	13	1.4%	45	1.3%
Firewood	2,556	94.7%	879	97.7%	3,435	95.6%
Total	2,696	100.0%	900	100.0%	3,594	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0 %		25.0%			

Chi-square = 22.634 with 4 df; significance level > 0.999

Note: 4 missing cases

Type of Stove

The type of stove used by the household is ranked from more preferred to least preferred in terms of ease of use and fuel efficiency: electric cooker/hotplate, A1 improved stove, rice husk stove, charcoal stove and traditional stove.

The percentage of clients having electric cookers or hot plates is 1.7% whereas no non-clients at all have electric stoves or hotplates. A1 improved stoves are slightly more common in client than in non-client households. Rice husk stoves are two and a half times as prevalent in client than in non-client households. In all categories of improved cooking means, client percentages surpass those of non-clients, in some cases by a substantial margin.

Charcoal stoves are only half as common in client as non-client households. There is a three percentage point difference between clients and non-clients in their usage of traditional stoves (89.4% and 92.6% respectively). Clients use fewer traditional stoves and more improved stoves of various kinds.

Differences are significant at greater than the 0.999 significance level.

Type of Stove - 2011

		2011		Data		
Type of Stove	Client	Client	Non-Client	Non-Client	Total	Percent of Total
	Numbers	in %		in %		
Electric Cooker or Hotplate	47	1.7%	0	0.0%	47	1.3%
A1 Improved Stove	187	6.9%	57	6.3%	244	6.8%
Rice Husk Stove	42	1.6%	5	0.6%	47	1.3%
Charcoal Stove	9	0.3%	5	0.6%	15	0.4%
Traditional Stove	2,415	89.4%	833	92.6%	3,248	90.2%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client as a						
Percentage of Sample	75.0 %		25.0%			

Chi-Square = 22.768 with 4 df; significance > 0.999

Household Assets

Water & Sanitation

Water

The cross-sectional survey measured number of months in which respondents had access to different types of water sources. Unlike sanitation which is very much donor-driven, there is some connection between income and water sources, although donors still play a major role. Some of those who can afford to pay to have tubewells dug and then use water from these wells for drinking even if they continue using other less safe sources for washing and other uses.

Safer sources of water are wells or tubewells, whether hand- or motorized-pumps are used to lift the water. Future surveys focusing on water and health and their relationship to income derived from the availability of microrfinance should specifically focus on tubewells built at the expense of respondents or their communities. Respondents have access to these safer sources of water for just over 41% of the total number of months covered by the survey; there is a five percentage point difference in favor of clients (42.3%) with respect to non-clients (37.1%). Clients have slightly less access than non-clients to water from fenced ponds (12.6% and 14.7% respectively) or taps from fenced ponds (12.0 and 19.9% respectively). And the access of both groups to water from open ponds is about the same (11.4 and 11.5% respectively). Clients have better access than non-clients (4.0% and 1.9% respectively) to rainwater in part because more of them have CI roofs which shed clean water. Access for clients to a waterhole or spring is 6.6% and for non-clients (9.6%). Access through watersellers for clients is less than for non-clients (1.6% and 2.6% of the months respectively).; purchase of water represents increased convenience, important to busy people engaged in a variety of businesses, but not clearly related the quality or safety of water, which depends on where the waterseller obtains the water.

Clients appear to have a slight edge in terms of greater access to what are deemed safer sources of water, but the picture is far from clear and is only likely to be clarified by specialized studies which measure water quality, sources, transmission or piping and relationships to income, to the extent that these are important.

Primary Source of Drinking Water in 2011

		2011	Cross-	Section	Data	
Source	Client Total Months	Client in %	Non- Client Total Months	Non- Client in %	Total Total Months	Percent of Total
Safer Source of Water	11,748	42.3%	3,388	37.1%	15,136	41.0%
Fenced Pond	3,484	12.6%	1,340	14.7%	4,824	13.1%
Tap from Fenced Pond	3,341	12.0%	1,816	19.9%	5,157	14.0%
Open Pond	3,169	11.4%	1,052	11.5%	4,221	11.4%
Rainwater	1,099	4.0%	177	1.9%	1,276	3.5%
Waterhole or Spring	1,831	6.6%	876	9.6%	2,707	7.3%
River or Stream	2,620	9.4%	252	2.8%	2,872	7.8%
Waterseller	456	1.6%	240	2.6%	696	1.9%
Total months	27,748	100.0%	9,141	100.0%	36,889	100.0%

		2011	Cross-	Section	Data	
Source	Client Total Months	Client in %	Non- Client Total Months	Non- Client in %	Total Total Months	Percent of Total
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Note: Total months are obtained by multiplying the number of respondents in a given category by the average number of months for the response category; percentages are obtained by dividing through by total months.

No statistics are available.

Sanitation

Sanitation is largely donor driven, with donors providing materials at least, free of charge and encouraging villages to provide labor. There is not a clear understanding on the part of the community of the health benefits of fly-proof latrines and other means of safe disposition of human waste. Unlike water, where households in a financial position to do so often pay to have tube wells dug and installed, there are few if any privately financed efforts at sanitation.

The difference of one percent of clients over non-clients with respect to fly-proof systems is quite small, but more clients than non-clients also use open-pit latrines and there is a difference of nearly 3 percentage points favoring clients over non-clients in terms of not having any toilet facilities at all. Results are significant at the 0.90 significance level.

Primary Means of Sanitation in 2011

		2011	Cross-	Section	Data	
Means of Sanitation	Client	Client	Non- Client	Non- Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
Fly-Proof Latrine or Ceramic Bowl	2,165	80.2%	712	79.1%	2,877	79.9%
Open-Pit Latrine	181	6.7%	48	5.3%	229	6.4%
Riverbank or Riverbank Outhouse	42	1.6%	9	1.0%	51	1.4%
No toilet facilities at all (Open Defecation)	312	11.6%	131	14.6%	443	12.3%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client as a Percentage of Sample	75.0%		25.0%			

Chi-Square = 9.617 with 5 df; significance level 0.913

Education

Average Number of Years in School

There is a substantially higher level of schooling among clients rather than non-clients. This difference is significant at a very high level 0.999 or above for the entire sample and for each of the zones individually. This difference provides a strong case for microfinance in that clients of microfinance send their children to school for an increased number of years.

Average Number of Years in School

		Non-		Difference
Zone	Client	Client	Total	
Delta	4.83	4.52	4.76	0.305
Dry	5.63	4.94	5.46	0.683
Shan	4.63	4.31	4.55	0.311
Total	5.03	4.59	4.92	0.436

For the total sample, the t-test for the difference of 0.436 years is 7.624 and with 15,645 df; significance level > 0.999.

Significance levels for differences in each of the zones are also 0.999 or greater.

Delta: difference of 0.305 years, t-test 3.284 with 5052; significance level = 0.999

Dry Zone: difference of 0.683 years; t-test 6.490 with 5255; significance level > 0.999

Shan State: difference of 0.311 years; t-test 3.250 with 5334 df; significance level = 0.999

Average number of years of school for respondent family members no longer studying and less than 30 years of age

The sample of all members of client and non-client household was reworked to exclude all those who were studying and therefore who might skew results by the fact that their full educational attainment had probably not been reached. Also excluded were those who were over 30 years of age and who therefore would have gone to school before the advent of the microfinance program.

The result is a difference of 0.476 years between family members of client and non-client households who were not longer studying and who were of an age that they might have been affected by the MFP.

Thus, data bear out the hypothesis that there is a link between microfinance and educational attainment of children. There were qualitative reports confirming the positive impact of the education of children.

		Non-		Differ-
Zone	Client	Client	Total	ence
Total	5.01	4.53	4.92	0.48

For the total sample, the t-test for the mean difference of 0.476 years is 7.540 and with 12,180 df ; significant at greater than 0.999.

AGRICULTURE

Approximately two thirds of the respondents – both clients and non-clients – are engaged in agriculture, with virtually no difference between the two groups.

Engagement in Agricultural Business

		2011	Cross-	Section	Data	
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
No, not engaged in ag.	908	33.6%	312	34.7%	1,220	33.9%
Yes, engaged in ag. as biz	1,792	66.4%	588	65.3%	2,380	66.1%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Chi-Square = 0.34 with 1 df, significance level: not significant

Ownership of Agricultural Land

There is, however, a slight difference between clients and non-clients in term of their ownership of land. A little more than 2 percentage points more clients than non-clients own land; however this difference is not statistically significant for the sample as a whole.

		2011	Cross-	Section	Data	
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
No, does not own ag. land	934	34.6%	332	36.9%	1,266	35.2%
Yes, owns ag. Land	1,766	65.4%	568	63.1%	2,334	64.8%
Total	2,700	100.0%	900	100.0%	3,600	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Chi-Square = 1.56 with 1 df, significance level: not significant

Average Amount of Land Owner Expressed in Acres (Landowners Only)

The average amount of land owned (for land owners only, non-owners excluded) is 5.25 acres for clients compared to 4.15 acres for non-clients. The difference in favor of clients is 1.1 acres. This difference is significant at greater than the 0.999 significance level. There is a strong relations

	Microfinance Client	Non-Microfinance	All
Number of land owners	1,766	568	2,334
Avg. Amount of Land	5.25	4.15	4.99

t-test = 4.049 with 2,332 df ;

mean difference of 1.10 acres is significant at > the 0.999 significance level.

Purchase of Land since the Start of the Microfinance Program

The percentage of clients who have purchased land since the start of the microfinance program is two and a half times that of non-clients. While 8.4% of clients have purchased land among clients, only 3.3% of non-clients have purchased land. The relationship between program participation and land purchase is strong and significant at greater than the 0.999 significance level.

		2011	Cross-	Section	Data	
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
No, has not purchased Ag. land since MFP started	1,618	91.6%	583	96.7%	2,201	92.9%
Yes, has purchased Ag land since start of MFP	148	8.4%	20	3.3%	168	7.1%
Total	1,766	100.0%	603	100.0%	2,369	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Chi-Square = 17.49 with 1 df; significance level > 0.999

Amount of Land Purchased

While only a relatively small fraction (about 7%) of rural people represented by the sample have purchased land in recent years since the MFP has been in existence, on average microfinance clients purchase 1.13 acres more than do non-clients. However, there is a considerable variation in the data set: for clients the standard deviation is larger than the mean and for non-clients, almost as large. The t-test for the difference between the two means is not significant at the lowest of the most commonly used statistical significance level using a one-sided t-test. The hypothesis is not simply that the mean purchases of land by microfinance and non-microfinance clients are somehow different, but that clients on average buy more land when they do decide to buy.

Additional complications are added by the sampling fraction of 75% clients and 25%. The entire analysis would have been better served if the number of clients and non-clients were equal. This division was chosen for the quantitative survey where half the interviews and focus groups were conducted in microfinance and half in non-microfinance villages.

	Microfinance Client	Non-Microfinance	All
Number of purchasers	147	20	167
Avg. Amount of Land	3.79	2.66	3.66
Standard Deviation	4.03	1.90	-
Standard Error	0.33	0.43	-
Difference of means			1.1312
Significance level			Not significant

t = 1.234 with 165 df < p .10 (one-tailed test) = 1.282; not significant
(<http://www.statsoft.com/textbook/distribution-tables/#t>)

Data are not available on leased land. There are qualitative reports that a considerable amount of leasing of land is occurring by microfinance clients as they expand their farm operations before they are in a position to buy land or while waiting for land in their villages to become available. It would require and might be worth commissioning a specialized survey on the relationship between land leasing and microfinance if a loan product were planned to encourage clients to lease more land. (General purpose surveys have a difficult time in properly accounting for land leasing which requires specialized knowledge on the part of the survey team and enumerators.)

Improved Agricultural Seeds and Inputs

Farmers in Myanmar know the value of improved seeds and inputs in improving their yields and production, and most farmers use such seeds and inputs. However, as the table below demonstrates, microfinance clients acquire such seeds and inputs in a significantly higher proportion than non-clients. While 94.5% of clients use improved seeds and inputs, only 82.6% of non-clients use such seeds and inputs, a difference of 12 percentage points. This difference is significant at over the 0.999 significance level.

		2011	Cross-	Section	Data	
Source	Client	Client	Non-Client	Non-Client	Total	Percent
	Numbers	in %	Numbers	in %	Numbers	of Total
No, has not used improved seed	100	5.5%	105	17.4%	205	8.5%
Yes, has used improved seed	1,717	94.5%	500	82.6%	2,217	91.5%
Total	1,817	100.0%	605	100.0%	2,422	100.0%
Client/Non-Client Percentage of Sample	75.0 %		25.0%			

Chi-Square 82.287 with 1 df; significant at > than the 0.999 significance level.

Acreage sown

Microfinance clients plant an average of 4.77 acres of land compared to 4.21 acres for non-clients. Client average 0.56 acres more than non-clients with respect to the amount of land under crops. This difference is significant at the 0.967 significance level.

	Microfinance Client	Non-Microfinance	All
Number of farmers	1,717	500	2,217
Avg. Amount of Land	4.77	4.21	4.65
Standard Error	0.13	0.21	
Difference of means			0.5646
Significance level			0.967

t-test 2.128 with 2,215 df ; significant at 0.967

Value of Inputs

The average value of inputs used by clients is Kyats 265,000 compared to the Kyats 170,000 used by non-clients. This difference is significantly higher (56% higher) for clients than for non-clients. This difference is statistically significant at greater than the 0.999 significance level.

Clients are better able to invest in the modern inputs which increase productivity in agriculture and lead to higher expected incomes from agricultural production. Combining with slightly larger average farm sizes, this difference makes it possible for clients to increase their yields and production with respect to those of non-clients. Clients' value of seeds, fertilizer and compost are substantially higher than those of non-clients.

		2011	Cross-	Section	Data	
Inputs	Client	Client Value Kyats	Non-Client	Non-Client Value Kyats	Total	All producers
	Numbers	in 000s	Numbers	in 000s	Numbers	in 000s
Seeds	1,448	287	392	191	1,840	267
Fertilizer	237	148	88	95	325	133
Compost	20	137	11	102	31	124
Insecticide	10	50	2	55	12	51
Folia	1	60	0	60	1	60
Other	1	16	7	55	8	50
Total	1,717	265	500	170	2,217	243
Mean Difference						95
Client/Non-Client Percentage of Sample	77.4%		22.6%			

t-test 6.143 with 2,215 df ; significance level > 0.999.

Existence of Agricultural Loans

Only 12.8% of microfinance clients involved in agriculture carry out their operations without recourse to loans; for non-clients 70.7% of those engaged in agriculture fail to take out an agricultural loan. Conversely over 87% of clients and less than 30% of non-clients take out agricultural loans. Microfinance have better access to credit for agriculture and take advantage of this access. The difference is significant at greater than the 0.999 significance level.

	Microfinance Client Villages	Non-Microfinance Villages	Respondents from All Villages
No loan: Number	232	428	660
Percentage	12.8%	70.7%	27.3%
Loan taken	1,585	177	2,217
Percentage	87.2%	29.3%	72.7%
Total	1,817	605	2,422
Percentage of respondents	100.0%	100.0%	100.0%
Percentage clients/non-clients	75.0%	25.0%	

Chi-square 769.527 with 1 df, significance level > 0.999

Source of Agricultural Loans

Only 10.0% of microfinance clients reporting agricultural loans take such loans from moneylenders, 3.3% from input providers and only 6.4% from friends or from advance sales to crop buyers; over four fifths (80.4%) of client respondents obtain their loans from the Microfinance Program. Non-clients do not have the option of borrowing from the MFP. Instead, over two thirds of them (68.1%) borrow from moneylenders; a little less than a quarter (23.2%) borrow from input providers and 8.7% borrow from friends or take advances on sales of standing crops. These differences are statistically significant at greater than the 0.999 significance level.

	Microfinance Client Villages	Non-Microfinance Villages	Respondents from All Villages
Moneylender: No.	190	141	331
Percentage	10.0%	68.1%	15.7%
Input provider	62	48	110
Percentage	3.3%	23.2%	5.2%
MFI	1,533	0	1,533
Percentage of respondents	80.4%	0.0%	72.5%
Friends and Advance Sales	122	18	140
Percentage of respondents	6.4%	8.7%	6.6%
	1,907	207	2,114
Percentage clients/non-clients	90.2%	9.8%	

Chi-square = 713.84 with 3 df, significant at > 0.999

Loan size by Source of Loan Funds

In average, loan sizes of clients are lower than of non-clients; this result is related to relatively low loan limits imposed by the MFP which clients would like to see raised. These are statistically significant at greater than the 0.98 significance level.

Where no such constraint exists, microfinance clients when borrowing from non-microfinance sources obtain loans about twice the size or more compared to those of non-clients. The only category in which clients are lower than non-clients refers to the category of friends and advance sales when clients borrow about 50% less than non-clients. Clients have the option of accessing relatively large agricultural loans and are averse to the costs or other obligations borrowing from friends or relatives or engaging in advance sales of crops; non-clients have no such good option and therefore when in need of loans are forced to borrow from these sources.

t = -2.382 df 1,760, significance level = 0.983

	Number			Mean Amount of Loan(Kyat,000)		
	Client	Non Client	Total	Client	Non Client	Total
Money lender	149	122	271	390.738	246.189	325.664
Input provider	50	38	88	477.300	210.158	361.943
MFI	1,371		1,371	165.781		165.781
Friend/ Advance sales	15	17	32	86.000	138.824	114.063
Total	1,585	177	1,762	196.001	228.141	199.229

Fisheries

Microfinance clients have a higher than expected propensity to engage in fisheries activities than the overall

population, perhaps because they have the finance available for buying fishing gear and the fuel, bait and other supplies needed to go out fishing. The proportion of client respondents engaged in some kind of fisheries activity is nearly double that of non-clients (13.4% compared to 6.8%). This difference is statistically significant at greater than the 0.999 significance level.

Fisheries		TYPE OF VILLAGE		Total
		Microfinance village	Non-microfinance village	
Is your household involved in any fisheries activities?	No	2,338	837	3,175
		86.6%	93.2%	88.2%
	Yes	362	61	423
		13.4%	6.8%	11.8%
Total		2,700	898	3,598
		100.0%	100.0%	100.0%

Chi-square = 28.419 with 1 df, significance > 0.999

Value of Fishing Vessels and Gear

Not only do clients show a greater propensity to fish than non-clients, the value of their gear is higher in all categories of boats, nets, gear and equipment than for non-clients. Overall, their fishing assets exceed those of non-clients by Kyat 65,000. However, there is great variation in the data (standard deviations greater than the mean) for both clients and non-clients. Therefore, using a two-tailed test for differences between the two means and assuming the variances are equal, the results are not significant (significance level $0.870 < 0.90$, which is the lowest significance level normally used). However, it is more appropriate to use the one-tailed t-test since the hypothesis properly stated is that clients fishing assets are expected to be higher than those for non-clients; using the one-tailed test of the difference between the two means is significant at 0.90 significance level.

Type and value of boat and		Number			Mean		
		Microfinance village	Non-microfinance village	Total	Microfinance village	Non-microfinance village	Total
	Fishing boat	253	33	286	315.508	285.515	312.047
	Fishing net	81	14	95	165.531	102.214	156.200
	Fishing gear	9	2	11	91.467	255.000	121.200
	Engine boat	5	2	7	700.000	550.000	657.143
	Miscellaneous	10	5	15	43.450	20.600	35.833
	Total	358	56	414	273.713	224.393	267.042

Difference between two means = Kyats 65,438

t-test = 1.418 with 420 df > p.10 = 1.282, significance (1-tailed), significant at .90 significance level
(<http://www.statsoft.com/textbook/distribution-tables/#t>)

Fisheries Loan Taken

Over half the respondents engaged in fisheries confirmed having taken out a loan; however, their distribution is dramatically different between microfinance clients and non-clients whereas 57.3% of clients took loans only 18.0% of non-clients did the same. The observed values are very different from expected values (on the assumption that there really was no difference between the behavior of the two underlying populations); the chi-square test is significant at a significance level greater than 0.999.

		TYPE OF VILLAGE		Total
		Microfinance	Non-Microfinance	
Fisheries loan taken?	No	154	50	204
		42.7%	82.0%	48.3%
	Yes	207	11	218
		57.3%	18.0%	51.7%
Total		361	61	422
		100.0%	100.0%	100.0%

Chi-Square = 32.287 with 1 df; significance level > 0.999

Source of Fisheries Loan

All borrowing reported by non-microfinance clients was from moneylenders whereas on 2.9% of clients borrowed from moneylenders. Nearly the entirety of fisheries clients borrowed from the MFP. These differences are statistically significant at greater than 0.999.

Source of Fisheries Loan		TYPE OF VILLAGE		Total
		Microfinance village	Non-microfinance village	
Loan Provider	Money lender	6	11	17
		2.9%	100.0%	7.8%
	MFI	201	0	201
		97.1%	.0%	92.2%
Total		207	11	218
		100.0%	100.0%	100.0%

Chi-square 136.970 with 1 df; significance level > 0.999

Source and amount of fisheries loans

The amount of loans is about Kyat 33,000 higher for MFP loans to clients than moneylender loans to non-clients. The small fraction of clients who borrow from money lenders do so because of their ability to obtain higher value loans, a point which will recur in analysis of options available to microfinance clients in their non-institutional borrowing. The difference in mean borrowing favoring microfinance clients is not significant. The hypothesis is that microfinance borrowers would have access to larger loans than non-microfinance borrowers in view of their better credit worthiness.

Source & amount of loan	Number			Mean		
	Microfinance village	Non-microfinance village	Total	Microfinance village	Non-microfinance village	Total
Money lender	6	11	17	275.333	103.182	163.941
MFI	201	0	201	131.990		131.990
Total	207	11	218	136.145	103.182	134.482

t-test 1.117 with 216 df < 1.282 p = .10; not significant for 1-tailed test

FOOD SECURITY

Adequate food security

There is hardly any difference between client and non-client households in answering the question: “Has your household not had enough food to feed everyone in satisfactory manner?” There is a difference of just over 3 percentage points between the 24.4% of clients and the 28.9% of non-clients who provide affirmative answers to the question. Clients have somewhat better access to food and better food security than non-clients. The difference is statistically significant by at the 0.95 significance level.

Has your household not had enough food to feed everyone in satisfactory manner?	TYPE OF VILLAGE		Total
	Microfinance village	Non-microfinance village	
No	2,011	640	2,651
	74.5%	71.1%	73.6%
Yes	689	260	949
	25.5%	28.9%	26.4%
Total	2,700	900	3,600
	100.0%	100.0%	100.0%

Chi-square = 3.950 with 1 df, significance level 0.953, significant

Length of food shortage

In all zones except Shan State, the duration of food shortages during the lean months is shorter for microfinance than for non-microfinance clients. Overall, the difference in the duration of the food shortage is 0.709 months (three weeks) shorter in client than in non-client households. The difference is statistically significant at greater than 0.999.

No. of months HH was short of food? (last time)	Number			Mean		
	Microfinance village	Non-microfinance village	Total	Microfinance village	Non-microfinance village	Total
Delta	250	98	348	4.12	5.36	4.47
Dry	201	91	292	2.95	3.76	3.20
Shan	238	71	309	3.40	3.31	3.38
Total	689	260	949	3.53	4.24	3.72

t-test -3.450 with 947 df, significant at 0.999, mean difference is -0.709 months

Dealing with Food Insecurity

In order to deal with food insecurity, microfinance clients are responding in accordance with their higher incomes and diversified enterprise structure: they are storing more food where they can and they are also using the cash from their businesses to buy more food. Even non-clients are buying substantial amounts of food. These changes indicate that donors need to adopt a different approach to food security which takes food purchase into the equation together with self-production and of farm consumption. Clients are storing more food (difference of 2 percentage points) and storing more food AND buying more (difference of 4 percentage points) than in the past compared to non-clients. Clients and non-clients both report storing and buying the same as before in about the same proportion (34.7% and 34.2% respectively). Two percentage points fewer clients than non-clients report “storing less and buying less than before” (2.9% and 4.7% respectively). Five percentage points fewer clients than non-clients do not store at all and just buy all their food (46.5% and 51.4% respectively); the fact that nearly half the respondents don’t store at all needs to be taken into account by donors in planning income-based food security promotion strategies to replace “let’s grow our own food” approaches which are less and less relevant to reality as time goes by.

Differences between the two groups are statistically significant at the 0.999 level.

How do you deal with your food need at present?	TYPE OF VILLAGE		Total
	Microfinance village	Non-microfinance village	
Store more food than before	252	63	315
	9.3%	7.0%	8.8%
Store more food than before and buy	170	21	191
	6.3%	2.3%	5.3%
Store same amount as before & buy	937	308	1,245
	34.7%	34.2%	34.6%
Store less amount than before & buy	79	42	121
	2.9%	4.7%	3.4%
Do not store at all and just	1,256	463	1,719

How do you deal with your food need at present?	TYPE OF VILLAGE		Total
	Microfinance village	Non-microfinance village	
buy	46.5%	51.4%	47.8%
DK/NR	6	3	9
	.2%	.3%	.3%
Total	2,700	900	3,600
	100.0%	100.0%	100.0%

Chi-square = 34.075 with 5 df; significance level > 0.999

EMPLOYMENT

Hiring permanent workers

Only 4.6% of the households surveyed report hiring any permanent workers. Client hire a slightly There is no significant difference between clients (4.7%) and non-clients (4.0%).

Do you Hire any permanent workers?	TYPE OF VILLAGE		Total
	Microfinance village	Non-microfinance village	
No	2,572	864	3,436
	95.3%	96.0%	95.4%
Yes	128	36	164
	4.7%	4.0%	4.6%
Total	2,700	900	3,600
	100.0%	100.0%	100.0%

Chi-square 0.852 with 1 df; significance level 0.646, not significant

Mean Number of Employees

The average number of permanent workers hired in those households having them is 2.2. The average for microfinance households is higher for client than non-client households. The difference between the two groups is significant at the 0.90 significance level. Microfinance households are in a better financial position, have more land and other assets, and are better able to pay the cost and to have more need of permanent workers than non-client households.

Mean number of workers hired?	TYPE OF VILLAGE			Mean number of workers (and Standard Error)		
	Micro-finance village	Non-micro-finance village	Total	Micro-finance village	Non-micro-finance village	Total
(Only cases reporting hired workers)	128	36	164	2.35	1.69	2.20
	4.7%	4.0%	4.6%	2.477	1.390	n/a
Total	2,700	900	3,600			
	100.0%	100.0%	100.0%			

t-test 1.523 with 162 df, > 1.282 for p = .10 for a 1-tailed t-test, significant at .90 significance level

Hiring Temporary Workers

The demand for labor varies dramatically during the course of the agricultural year with peaks coinciding with land preparation, weeding and harvesting. Households meet these peaks where possible with unpaid family labor; however, many are forced to hire additional workers either from the same or from other villages to meet these peaks. Slightly more client than non-client households (39.6% compared to 37.1%) hire temporary workers, but the difference is not statistically significant. Since microfinance client households have more land and farm it more intensively, it is to be expected that such households hire more workers. Nearly 40% of enterprises hire such workers.

Hire temporary workers?	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
No	1,632	566	2,198
	60.4%	62.9%	61.1%
Yes	1,068	334	1,402
	39.6%	37.1%	38.9%
Total	2,700	900	3,600
	100.0%	100.0%	100.0%

Chi-square 1.696 with 1 df; significance level 0.807, not significant

Number of Temporary Workers Hired

Households which hire such workers, hire a large number of such workers during peaks for labor demand. They hire an average of a dozen temporary workers, with a difference of 2.03 workers per household. The one-tailed test for the difference of the means is significant at the 0.95 significance level. Microfinance client households hire more workers because they need them because of larger areas under cultivation, more intensive production technologies and higher yields; furthermore, with the availability of microfinance loans, they are better able to hire such workers when they need them.

	TYPE OF VILLAGE	N	Mean	Standard Deviation
How many temporary workers did you hire?	Microfinance households	1,068	13.06	17.23
	Non-microfinance households	334	11.03	15.93

t-test 1.908 with 1,400 df > 1.645, p = 0.05 (1-tailed test) significance level > .95
(<http://www.statsoft.com/textbook/distribution-tables/#t>)

Person-months of temporary labor hired

Temporary workers are hired to fill the gap between available unpaid family labor and peak period labor requirements. They are hired on an “as needed” basis. The table below provides insight into the number of months of such labor which is hired. There is considerable variation among households

(standard deviations greater than the mean) for both groups depending on family size and crop-mix grown. Nevertheless the mean difference of 4.83 months is significant at the 0.975 significance level. Client households have a very high probability of hiring more months of temporary labor than non-client households; this result is consistent with other findings on farm size and intensity of production.

Combining this result with that of the previous table on number of workers hired, each worker is hired for an average of 2.2 months and an average of a dozen workers are hired by households, with higher numbers associated with client status of households. Thus the MFP contributes substantially increasing employment opportunities in the rural areas where it operates. It helps young people to find productive and remunerative employment in their own villages, which most of them want.

	TYPE OF VILLAGE	N	Mean	Standard deviation
Total person months of temporary workers?	Microfinance households	1,068	29.14	36.25
	Non-microfinance households	334	24.32	26.569

t-test = 2.251 with 1,400 df, significance level (2-tailed, equality of variance assumed) 0.975, significant

Mean Difference = 4.83 months

Summary of Data on Employment

As a result of the microfinance program, family labor is fully employed during major periods of the year. Only a few households find it necessary to hire permanent workers, but nearly half the households hire temporary workers. Hiring is higher both in average number of workers and average number of months of hiring for clients as compared with non-clients. The MFP is contributing to generating greater employment opportunities in the areas in which it operates.

NON-FARM BUSINESS

A great deal of economic activity is going on in rural areas beyond simple engagement in agricultural production. As the rural economy grows, with the help of the MFP in those areas where it is active, there is an expansion of opportunities in the realm of non-farm businesses. Women in wealthy households take up such opportunities; the MFP has opened up these opportunities to those women in the community who are less well-off. The following tables address the ways in which households participate in non-farm enterprises of various kinds.

Ownership or Involvement in any Other Non-Farm Business

Non-farm businesses are carried out by a substantial proportion of women in rural areas (40.0%). For the purposes of this study, it is important to note that the proportion of microfinance clients engaging in non-farm business is significantly higher than that of non-microfinance women. In fact the proportion of clients engaging in non-farm business is nearly double that of non-client women (45.6% versus 23.2%). This difference is statistically significant at a significance level greater than 0.999. Participation in the MFP is strongly related to a woman's ability to carry out non-farm business.

Involved in or own any other non-farm business?	TYPE OF VILLAGE		Total
	Microfinance household	Non-microfinance household	
No	1,468	690	2,158
	54.4%	76.8%	60.0%
Yes	1,229	209	1,438
	45.6%	23.2%	40.0%
	2,697	899	3,596.00
	100.0%	100.0%	100.0%

Chi-square 139.985 with 1 df; significance level > 0.9999

Participation in principal types of Non-Farm Business

The table below classifies the principal types of businesses found the rural areas targeted by both the MFP and this survey and differentiates between client and non-client household participation in these types of businesses. Microfinance households tend to participate to a greater extent in those types of businesses requiring more capital. Their participation in such businesses is facilitated by the availability of finance.

Over half of the clients engaged in non-farm business (52.2%) have small retail shops while less than a third of non-clients (31.7%) own such shops. Of those engaging in wholesale trading, clients outnumber non-clients by nearly three percentage points (15.7% versus 12.5%) and in vegetable-selling and street vending by nearly a percentage point (9.1% to 8.2%); it is worth noting that many of the women who now own shops started out in selling by on mats or a little table in a market or by the road. The expansion of their businesses with the support of the MFP allowed them to move from the market or the roadside into a shop of their own.

Clients exceed non-clients by more than a percentage point in the tailoring business (2.4% versus 1.0%), being better able to afford the investment in a sewing machine. In cottage industries which require some capital for equipment or to maintain a stockpile of input materials, the proportion of clients exceeds non-clients by nearly two percentage points (2.4% versus 0.5%). Tubewell digging, rice hulling and money lending account for 0.3% of clients engaged in non-farm business and for not a single non-client. Clients make up 1.9% of other types of non-farm businesses for clients and only 1.0% for non-clients.

Non-clients predominate in the categories “boat and land transport,” “general work with occupational skill, “hewing and hauling of wood,” water supply services, and food stalls.

Differences between the observed and expected values are statistically significant at the highest levels, the significance level being greater than 0.999. Participation or non-participation in the MFP is related to a women’s greater or lesser ability to engage in profitable non-farm businesses.

Types of Non-Farm Businesses categorized by Client/Non-Client Status

Main non-farm business?	TYPE OF VILLAGE		Total
	Microfinance village	Non-microfinance village	
Small retail shop	642	66	699
	52.2%	31.7%	48.6%
Trading Wholesale General trading	193	26	219
	15.7%	12.5%	15.2%
Green grocer/ Street venders	112	17	129
	9.1%	8.2%	9.0%
Tailor/ Sewing	29	2	31
	2.4%	1.0%	2.2%
Cottage Industry (Welding,Cheroot-making,Mat-making)	29	1	30
	2.4%	0.5%	2.1%
Tubewell digging	1	0	1
	0.1%	0.0%	.1%
Rice Huller	1	0	1
	0.1%	0.0%	.1%
Money lender	1	0	1
	.1%	.0%	.1%
Other non-farm businesses	23	2	25
	1.9%	1.0%	1.7%
Boat/ Land transport (Motor Boat, Motor cycle, Troller-G)	13	7	20
	1.1%	3.4%	1.4%
General Work with Occupational skill	123	66	189
	10.0%	31.7%	13.2%
Cottage Industry (Wood-cutting/hauling)	32	13	45
	2.6%	6.3%	3.1%
Services (Water supply)	25	6	31
	2.0%	2.9%	2.2%
Food Stall/ Restaurant	5	2	7
	.4%	1.0%	.5%
Total	1,229	208	1,437
	100.0%	100.0%	100.0%

Chi-Square 102.457 with 14 df; significance level > 0.999

Loan for non-farm small business

Access to finance is crucial to the development and expansion of non-farm businesses. A large majority of women who are clients of the MFP (62.3%) take loans for their non-farm businesses. Less than ten percent of women who are not clients take such loans, being forced to rely largely on whatever resources they and their families can make available to them. Thus women who are not well-off are largely excluded by their poverty from accessing the capital needed to establish and operate non-farm businesses.

The differences observed between the two groups are statistically significant at greater than the 0.999 significance level.

Has your household had any loan for any of its non-farm businesses?	TYPE OF VILLAGE		
	Microfinance village	Non-microfinance village	
No	463	189	652
	37.7%	91.3%	45.5%
Yes	764	18	782
	62.3%	8.7%	54.5%
	1,227	207	1,434
	100.0%	100.0%	100.0%

Chi-Square = 205.000 with 1 df ; significance level > 0.999

Source of funds for non-farm businesses

The source and cost of funds is crucial to the success of any business. Given their participation in the MFP and its lower cost of funds, clients of the MFP borrow almost exclusively from the program; in all less than 3% of clients borrow from sources other than the MFP.

Non-clients cannot take advantage of funds from the MFP and therefore are forced to borrow from moneylenders (48.0%) and input suppliers (52.0%) and therefore have a cost-of-funds two to three times that paid by MFP clients.

The difference between the two groups is statistically significant at greater than the 0.999 significance level.

Fund source	TYPE OF VILLAGE		
	Microfinance village	Non-microfinance village	
Money lender	13	12	25
	1.7%	48.0%	3.2%
Input provider	8	13	21
	1.1%	52.0%	2.7%
MFI	736	0	736
	97.2%	.0%	94.1%
	757	25	782
	100.0%	100.0%	100.0%

Chi-Square = 420.340 with 2 df; significance level 0.999

Mean Size of Loans by Loan Provider and Type of Village

The average size of loans is slightly higher (about Kyats 16,500) for microfinance clients than non-clients; non-farm microfinance loans are limited by relatively low loan limits. Non-clients have no such limits but are constrained by the collateral they have available and by moneylender and input supplier perception of the risk of lending to non-clients. It is worth noting that when microfinance clients borrow from non-institutional sources of credit, they obtain loans whose size ranges from nearly twice to five times the amount obtained by non-clients; apparently they are perceived as better credit risks or have more and better collateral to guarantee these loans.

Average amount of loan	Number			Mean		
	Microfinance village	Non-microfinance village	Total	Microfinance village	Non-microfinance village	Total
Money lender	13	5	18	436.154	256.600	386.278
Input provider	8	13	21	481.250	98.077	244.048
MFI	735		735	150.219		150.219
Total	756	18	774	158.639	142.111	158.255

Overall difference between means Kyat 16,528 for average value of loan.

COPING STRATEGY

About a quarter of households (26.1%) have experienced some issue related to acute illness or accident. The difference between the proportions of client and non-client households experiencing such issues is small (3 percentage points); more client than non-client households report such issues. There may be a reporting bias in that clients have recourse to health loans from the MFP and a generally higher income and asset level than non-clients and therefore may recognize such problems more readily since they have a readily available means for dealing with them.

The Chi-Square test for the observed difference is statistically significant at greater than the 0.90 significance level.

Has your household experienced risks of Acute Illness or Accident?	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
No	1,976	686	2,662
	73.2%	76.2%	73.9%
Yes	724	214	938
	26.8%	23.8%	26.1%
Total	2,700	900	3,600
	100.0%	100.0%	100.0%

Chi-Square = 3.231 with df=1, Significant level > 0.90 (2.706)

(<http://www.statsoft.com/textbook/distribution-tables/#t>)

Coping with Acute Illness

Microfinance clients have available to them better ways of coping with emergencies triggered by acute illness or accident and are able to respond in ways that women not associated with the MFP do not have. As a result, clients are able to dedicate Kyats 176,000 dealing with acute illnesses and other medical emergencies. This amount is larger than non-clients are able to dedicate to similar problems Kyats 129,000, or Kyats 37,000 less than clients). (It is worth noting that under certain conditions; the MFP can also provide an emergency health loan of up to Kyat 50,000 to respond to such emergencies.)

The largest category is “use own money” which accounts for almost two thirds of responses overall. However, for microfinance clients the percentage is 69.2% whereas for non-clients it is only 42.3%; since no separate response category is included for “health loan from MFP,” such loans are probably included in this category. As a result of their higher incomes and greater control over assets, clients are less obliged than non-client to recur to less preferred means of coping with acute illness or accident. As a result of their better financial position and the support offered by the MFP, fewer clients than non-clients:

- Take advance from brokers
- Withdraw from savings
- Pawn or sell gold
- Borrow from friends or relatives
- Pawn their farms
- Sell Cattle

They have more assets than non-clients and they sell them, which is a sensible approach to resolving emergency health problems.

No statistics are available to test significance of differences between client and non-client households.

Has your household experienced Acute Illness or Accident?	Number			Mean in Kyat 000s			% Value of Loan/Category		
	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance village	Non-micro-finance village	Total
Take advance from brokers	7	3	10	490	42	356	2.7%	.5%	2.3%
Use own money	477	119	596	185	98	168	69.2%	42.3%	64.4%
Sell/pawn gold	45	9	54	138	201	148	4.9%	6.6%	5.2%
Withdrawal of savings	4	1	5	200	500	260	0.6%	1.8%	.8%
Borrow from money lender	65	29	94	144	175	154	7.3%	18.4%	9.3%
Helps from friends and relatives	70	37	107	123	171	140	6.8%	23.0%	9.6%
Pawn farm	4	1	5	188	500	250	0.6%	1.8%	.8%
Sell cattle	5	2	7	148	150	149	0.6%	1.1%	.7%
Sell assets	45	13	58	207	97	182	7.3%	4.6%	6.8%
Cannot cope	2		2	0		0	0.0%		.0%
Total	724	214	938	176	129	165	100.0%	100.0%	100.0%

Chi-square =16.982 with df = 9, significant level = 0.951

Strategies for Coping with Chronic Illness

Client and non-client strategies with respect to chronic illnesses are similar. However, some differences are observed and are worth noting. The main response to chronic illness is the same as for acute illness: those affected “use their own money”, with a much higher percentage of clients than non-clients able to take this approach. More clients pawn or sell gold to finance chronic illness, thus disinvesting to cope with this long-term problem. More clients borrow from moneylenders than is the case with acute illnesses. Otherwise, their approach to chronic illness is similar to that taken to respond to emergency health issues.

Strategies for chronic illness		Number			Mean in Kyat 000s			Sum in Strategies		
		Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total
Costs	Take advance from brokers		1	1	0	60	60		0.4%	.1%
	Use own money	208	63	271	100	119	104	63.7%	49.2%	59.1%
	Sell/pawn gold	16	5	21	234	130	209	11.5%	4.3%	9.2%
	Withdrawal of savings	2	1	3	175	30	127	1.1%	0.2%	.8%
	Borrow from money lender	22	14	36	138	188	157	9.3%	17.3%	11.8%

Strategies for chronic illness		Number			Mean in Kyat 000s			Sum in Strategies		
		Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total
	Helps from friends and relatives	20	9	29	79	298	147	4.9%	17.6%	8.9%
	Pawn farm	1		1	1000	0	1000	3.1%		2.1%
	Sell cattle		1	1	0	600	600		3.9%	1.3%
	Sell assets	14	5	19	136	210	156	5.8%	6.9%	6.2%
	Sell household utensil	1		1	200	0	200	.6%		.4%
	Cannot cope with	2	6	8	5	8	8	.0%	0.3%	.1%
	Total	286	105	391	114	145	122	100.0%	100.0%	100.0%

Chi-square =20.496 with 10 df; significance level = 0.975

Coping Strategy for Wedding Ceremonies

Only 12% of respondents had a recent wedding ceremony take place and therefore provided answers to this question. The major way of coping was to use own money; the percentage for clients giving this response was somewhat higher than for non-clients (75.6% compared to 68.0%). Nearly none of the clients and few of the non-clients took advances from brokers, and only a few clients (and many fewer non-clients) sold or pawned gold to finance the ceremony. Likewise, far fewer clients non-clients resorted to moneylenders (day-loans) to finance weddings: the difference between clients to non-clients with respect to these types of very expensive loans is 1:5, i.e. 2.5% and 13.3% respectively. About 12% of respondents obtained assistance from friends and relatives, with the percentage being slightly higher for clients than non-clients (13.0% and 10.5% respectively). About 5 percent of respondents sold assets, slightly more in the case of clients than non-clients (5.5% and 3.4% respectively). Few respondents in either category sold assets or cattle.

Coping Strategy for wedding ceremony	Number			Mean			Sum of Strategies		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Advance from brokers	1	1	2	100	700	400	0.1%	1.8%	0.5%
Use own money	168	68	236	493	384	462	75.6%	68.0%	73.6%
Sell/pawn gold	7	2	9	394	280	369	2.5%	1.5%	2.2%
Withdrawal of savings		1	1		300	300		0.8%	0.2%
Loan from moneylender	10	11	21	270	465	372	2.5%	13.3%	5.3%
Help: Friends and relatives	36	11	47	394	368	388	13.0%	10.5%	12.3%

Coping Strategy for wedding ceremony	Number			Mean			Sum of Strategies		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Pawn farm	1		1	400		400	0.4%		0.3%
Sell cattle	1	1	2	500	300	400	0.5%	0.8%	0.5%
Sell assets	12	4	16	502	325	458	5.5%	3.4%	4.9%
Total	236	99	335	464	388	442	100.0%	100.0%	100.0%

Chi-Square = 10.170 with 8 df, significance level = .753: not significant

Coping Strategies for Novitiation

To an even greater extent than is the case for illness and weddings, respondents finance novitiations using their own funds. The most important differences are between clients and non-clients: whereas 89.7% of clients finance novitiations with their own funds, the percentage for non-clients is only 72.4%. Non-clients are forced to resort to other strategies to a much greater extent than clients, taking more advances from brokers, pawning or selling gold, obtaining help from their relatives or friends (in some cases sponsors of the novitiation ceremony) and selling cattle. The major source of funds from clients is borrowing from moneylenders (only 1.0% for clients but 10.5% for non-clients); many of these are day-loans from market stall lenders which carry hefty fees as high as 20% out of the value of the loan (recovered by cash gifts from those attending the novitiation ceremony).

Coping Strategies for Novitiation	Number			Mean in Kyats 000s			% Value of Loans/Category		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Advance from brokers	2	3	5	1,015	667	806	1.4%	3.6%	2.0%
Use own money	313	84	397	421	474	432	89.7%	72.4%	85.0%
Sell/pawn gold	5	4	9	400	745	553	1.4%	5.4%	2.5%
Withdrawal of savings	7		7	186		186	0.9%		0.6%
Borrow from money lender	6	3	9	257	1933	816	1.0%	10.5%	3.6%
Helps from friends and relatives	22	13	35	299	278	292	4.5%	6.6%	5.1%
Sell cattle	2	1	3	210	600	340	0.3%	1.1%	.5%
Sell assets	4	2	6	329	85	248	0.9%	0.3%	0.7%
DK/NR	1		1	10		10	0.0%		0.0%
Total	362	110	472	406	500	428	100.0%	100.0%	100.0%

Chi-square =14.233 with 8 df, significant level = 0.90

Coping Strategies for Funeral Costs

Two thirds of the respondent finance funeral expenses using their own funds, clients to a lesser extent than non-clients. Clients benefit from a fund provided by the MFP which pays the family of the deceased Kyat 100,000 and cancels all loans that may be outstanding at the time of the borrower's death, so they are less dependent on own funds. Clients pawn or sell gold to a small extent (4.2%), take loans from moneylenders, and sell assets to a greater extent than non-microfinance households (7.9% for clients and 1.8% for non-clients). Both clients and non-clients receive considerable help from their friends during their bereavement (16.3% and 14.6% respectively).

Strategies for funeral cost	N			Mean in Kyats 000s			% of Sum in Strategies		
	Micro-finance House-holds	Non-MF House-holds	Total	Micro-finance House-holds	Non-MF House-holds	Total	Micro-finance House-holds	Non-MF House-holds	Total
Use own money	69	21	90	398	411	401	64.7%	79.5%	67.7%
Sell/pawn gold	3		3	590		590	4.2%		3.3%
Loan from money-lender	12	3	15	242	143	222	6.8%	4.0%	6.2%
Help from friends and relatives	23	8	31	301	199	275	16.3%	14.6%	16.0%
Helps from monk	1		1	20		20	0.0%		0.0%
Sell assets	5	1	6	674	200	595	7.9%	1.8%	6.7%
Total	113	33	146	376	329	365	100.0%	100.0%	100.0%

Chi-square =1.556 with 5 df; not significant

COMPETITIVENESS ANALYSIS

Friends and Relatives Providing Loans

Only ten percent of sample respondents borrowed from friends and relatives (363 out of 3600). Clients take fewer loans from friends and relatives than do non-clients: constituting 75.0% of the sample, clients take only 70.3% of the loans provided by this source. The loan amounts are almost the same for the two groups (Kyats 212,000 and 224,000 respectively). The proportion of the value of loans from friends and relatives for health is 48.5%, for agriculture 41.9% and for non-farm businesses, 8.3%. A higher percentage of non-clients borrow from friends and relatives 29.7% versus their 25% contribution to the sample. Their borrowing is primarily to deal with health problems (59.9%); they also borrow to a lesser extent for agriculture (28.3% and for non-farm businesses (11.1%). Minor amounts are borrowed by both clients and non-clients for livestock and for aquaculture. If additional lending or specialized loan products are contemplated for aquaculture, a specialized survey focusing specifically on aquaculture and rice-fish aquaculture should be undertaken.

Amount Purpose: Loans from Friends/Relatives	Number			Mean in Kyats 000s			% Value of Loan Purposes		
	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total
Agriculture	98	33	131	231	207	225	41.9%	28.3%	37.7%
Livestock	2	2	4	225	50	138	0.8%	0.4%	0.7%
Fisheries/ Aquaculture	6	1	7	39	65	43	0.4%	0.3%	0.4%
Non-farm business	31	17	48	145	158	150	8.3%	11.1%	9.2%
Health	118	55	173	222	263	235	48.5%	59.9%	52.0%
Total	255	108	363	212	224	215	100.0%	100.0%	100.0%

Utilization of Loans from Friends and Relatives

The declared purpose of a loan and its actual utilization sometimes differ with loans obtained for one purpose being used for another. The table below gives the actual utilization of funds reported by respondents for loans as being provided by friends and relatives. Medical care tops the list with 35.5% of loan proceeds for client households and 53.4% for non-client households. Emergency issues are resolved by loan proceeds from friends and relatives for 10.5% among clients but only for 2.2% among non-clients. Funerals account for 0.3% of the amount of such loans for clients and 5.8% of the amount for non-clients. Buying inputs or pigs accounts for 35.0% of the value of such loans for clients and 23.4% for non-clients. Trading accounts for 8.6% of the value of these types of loans for clients while it accounts for just half that percentage (4.3%) for non-clients. Both clients and non-clients use about 10% of the value of loans provided by friends and relatives for consumption purposes (10.1% and 10.8% respectively).

Utilization of Loans from Friends and Relatives	Number			Mean in Kyats 000s			% Value of Loan Use		
	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total
Medical care	97	47	144	197	274	223	35.5%	53.4%	41.0%
Emergency issues	5	4	9	1138	135	692	10.5%	2.2%	8.0%
Funeral	1	2	3	150	700	517	0.3%	5.8%	2.0%
Buying inputs	80	30	110	235	189	222	34.8%	23.4%	31.3%
Pig breeding	1		1	100		100	0.2%		0.1%
Trading	15	3	18	310	350	316	8.6%	4.3%	7.3%
Consumption	56	22	78	97	119	103	10.1%	10.8%	10.3%
Total	255	108	363	212	224	215	100.0%	100.0%	100.0%

INPUT PROVIDERS

About 5% of borrowers take loans from input providers. As is the case of loans from friends and relatives, the proportion of clients is only 4.6% of their total number, since most obtain agricultural inputs using loans from the MFP; 7.1% of non-clients, on the other hand take loans from input providers. Where they do take loans from input providers, clients on average take loan amounts that are higher by 27% than amounts taken by non-clients. This larger loan size is perhaps due to their greater access to land and more intensive production technologies which use more agricultural inputs; it may be they find agricultural loan limits for the MFP too low to allow them to take advantage of opportunities which they have in agriculture.

Loans from Input Providers	Number			Mean in Kyats 000s		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Delta	33	27	60	363	271	322
Dry	13	2	15	175	105	165
Shan	77	35	112	241	171	219
Total	123	64	187	267	211	248

Utilization of Loans from Input Providers

Even for loans from input suppliers who presumably provide inputs, some loans may actually be used for other purposes. As shown in the table below, the vast majority of loans are in fact used for buying inputs. Of the 123 client households who took loans from input provider, 86.5% of the loan proceeds were used for buying inputs; the 64 non-client households used only three quarters (74.9%) of their loan funds for the intended purpose of buying inputs. A small percentage of loan proceeds (4.3%) were diverted by borrowers to handle emergency issues which emerged; the proportion of funds used by non-clients (16.2%) to deal with emergencies is almost 4 times that of clients (4.3%). Only a tiny fraction of loan proceeds of client loans were used for consumption purposes (1.0%) whereas 7.3% of the value of loans to non-clients went to support consumption. Five times as large a fraction of client loans from this (8.2%) source were applied to trading activities as is the case for proceeds of non-client loans.

Input Provider & Loan Use	Number			Mean in Kyats 000s			% Value of Loan Use		
	Micro-finance households	Non-MF households	Total	Micro-finance households	Non-MF households	Total	Micro-finance households	Non-MF households	Total
Buying inputs	109	46	155	260	220	248	86.5%	74.9%	83.1%
Emergencies issues	10	9	19	142	244	190	4.3%	16.2%	7.8%
Consumption	2	7	9	160	141	146	1.0%	7.3%	2.8%
Trading	2	2	4	1,350	104	727	8.2%	1.5%	6.3%
Total	123	64	187	267	211	248	100.0%	100.0%	100.0%

Moneylender Loans by Region

The total number of loans from moneylenders is 750. Only 71.2% of borrowers from moneylenders are microfinance clients compared to their 75% representation in the sample; by contrast, non-clients account for 28.8%. The average size of loans for clients is slightly higher for clients than for non-

clients overall (Kyats 220,000 compared to 212, 000 for non-clients). For the Dry Zone and Shan State, clients have much larger loans from moneylenders than do non-clients; for the Delta, the opposite is true.

Loan amount from Money lender	Number			Mean Kyats 000s		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Delta	183	81	264	208	292	234
Dry	217	69	286	221	157	205
Shan	134	66	200	237	173	216
Total	534	216	750	220	212	218

Loan Purpose and Loan Amount by Money Lender

The largest number of loans for both clients and non-clients is for agriculture, followed by health and miscellaneous. Clients obtain larger average loan sizes for agriculture and smaller loans for all other activities. The fact that so many clients are taking out large loans from moneylenders for agriculture indicates excess demand for funds for farm operations which is not being fully met by the MFP.

Loan Purpose and Loan Amount by Money Lender	Number			Mean in Kyats 000s		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Agriculture	285	106	391	270	238	261
Livestock	11	2	13	81	125	88
Fisheries/Ag.	13		13	111		111
Non-Farm Business	72	41	113	186	215	196
Health	83	46	129	171	177	173
Miscellaneous	70	21	91	157	167	159
Total	534	216	750	220	212	218

Utilization of Loans from Moneylenders

For clients 223 (or 41.8%) actually use loans from moneylenders for agriculture or raising pigs, lower than the 296 (=285+11, or 75%) who borrow giving “agriculture” as the stated purpose for the loan. For non-clients, 68 (or 31.5%) use loans from moneylenders for agriculture or pig-raising (64% of the 108 who give agriculture or livestock as the purpose of the loan). A lesser percentage of loans for medical care (13.3%) than is the case for non-clients (19.4%), perhaps a reflection of greater financial resources to deal with medical problems and their ability to take out health loans from the MFP should they be needed. Results for loans used for emergency issues are similar with 6.6% of clients and 8.8% of non-clients using loans for such purposes. Only about 1% of loans from money lenders are used for funerals.

Only 13.3% of clients use moneylender loans for consumption whereas the same percentage for non-clients is 20.4%. Conversely, 6.2% of clients use loans from moneylenders for trading while only 3.7% of clients use loans for trading.

These differences are statistically significant at the 0.984 significance level, meaning that there is a high probability that client and non-client households behave differently with respect to the loans which they take from moneylenders.

Actual Loan Utilization from Moneylender	TYPE OF VILLAGE		Total
	Micro-finance households	Non-microfinance households	
Buying agricultural inputs & pigs	223	68	290
	41.8%	31.5%	38.7%
Medical care	71	42	113
	13.3%	19.4%	15.1%
Emergencies issues	35	19	54
	6.6%	8.8%	7.2%
Funeral	6	1	7
	1.1%	.5%	.9%
Consumption	71	44	115
	13.3%	20.4%	15.3%
Trading	33	8	41
	6.2%	3.7%	5.5%
Miscellaneous	95	34	129
	17.8%	15.7%	17.2%
Total	534	216	750
	100.0%	100.0%	100.0%

Chi-square = 17.227 with 7 df
Significant at the 0.984 level

Money Lenders Interest Rate

In the Delta interest rates charged to microfinance clients are substantially higher than those charged to non-microfinance households; the difference is almost 1.3 percentage points. In both the Dry Zone and Shan State, microfinance clients obtain rates which are lower by approximately 0.2 percentage points. The expectation is that interest rates should be lower for microfinance clients who present less risk to the lender than do non-clients. The reason why higher rates are charged to clients than to non-clients in the Delta is not immediately apparent.

Interest rate charged by Money lender	Number			Mean Interest Rate Percent		
	Micro-finance house-holds	Non-MF house-holds	Total	Micro-finance house-holds	Non-MF house-holds	Total
Delta	178	78	256	9.07	7.80	8.64
Dry	213	62	275	7.77	7.98	7.82
Shan	129	61	190	6.06	6.24	6.12
Total	520	201	721	7.61	7.30	7.52

Type of Collateral and its Impact on Interest Rates

Interest rates depend on the risk perceived by the lender of default. With more secure collateral, there is less risk. Gold is the best collateral and loans thus guaranteed command an interest rate of 4.6% on average. Where farmland guarantees loans, the interest rate averages 5.5%. Crop guarantees yield interest rates of 6.4%, whereas loans given with no guarantee whatsoever are provided at an average interest rate of 7.8%.

Microfinance clients pay, on average, 0.3 percentage points higher interest than non-clients. The reason for this difference is not clear.

Moneylender Interest rate by Type of Collateral	Number of loans			Mean in Percent/Month		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Gold	31	8	39	4.7	4.3	4.6
Farm Land	2	1	3	5.8	5.0	5.5
Crop	9	6	15	6.2	6.7	6.4
No collateral	478	186	664	8.0	7.5	7.8
Total	520	201	721	7.6	7.3	7.5

Pawnshop: Loan Terms

The average duration of loans from pawnshops is about 5 months. Clients in general take loans for a shorter period than non-clients, shorter by about 11 days on average. In the Delta the loan term is about 26 days shorter and Shan State 32 days shorter. In the Dry Zone, however, loan terms are almost 16 days longer on average, perhaps because the crops they cultivate take a longer time to produce.

Loan Terms in Pawnshop	Number			Mean in Months		
	Micro-finance village	Non-MF village	Total	Micro-finance village	Non-MF village	Total
Delta	129	35	164	4.33	5.20	4.51
Dry	172	38	210	6.02	5.50	5.92
Shan	87	10	97	3.46	4.50	3.57
Total	388	83	471	4.88	5.25	4.95

Purpose of Pawnshop Loans

The main purposes of pawnshop loans are: agriculture, livestock, fisheries and non-farm businesses. Health loans also feature, although they are relatively minor.

Purpose of Loans from Pawnshops	Number			Mean Loan Amount in Kyats 000s		
	Micro-finance household	Non-MF household	Total	Micro-finance household	Non-MF household	Total
Agriculture	263	53	316	204	202	204
Livestock	10	4	14	142	155	146
Fisheries/ Agriculture	7		7	161		161
Non-farm businesses	47	9	56	151	123	147
Health	61	17	78	121	108	118
Total	388	83	471	182	172	180

Pawnshop Loans: Actual Utilization

Pawnshops are an important source of credit for 14% of microfinance clients and for 9% of non-clients. Clients use ten percentage points more of the value of their loans for financing agriculture (and pig breeding to a minor extent) than do non-clients. Both types of respondents use about 10% of the value of pawnshop loans for medical care and clients use and additional 2.3% of loan value for emergencies and funerals compared to 5.4% for non-clients. Overall, about 11% of loan proceeds are used for trading activities, with the percentage of clients nearly double that of non-clients (12.3% and 6.4% respectively). Overall, respondents use nearly 13% of funds obtained from pawnshops on consumption; clients dedicate only 10.8% of loan proceeds whereas non-clients dedicate 22.3% to consumption. In summary, where households borrow from pawnshops, they dedicate most of the proceeds to financing productive enterprises (agriculture and to a lesser extent trading). However, clients dedicate a higher percentage of such loans to directly productive purposes than do non-clients; non-clients spend a larger portion of funds thus obtained to meeting consumption expenses.

Actual Loan Utilization	Number			Mean			% Value of Pawnshop Loans		
	Micro-finance households	Non-MF households	Total	Micro-finance households	Non-MF households	Total	Micro-finance households	Non-MF households	Total
Buying inputs	209	38	247	217	209	215	64.0%	55.6%	62.6%
Pig breeding	2		2	215		215	0.6%		0.5%
Medical care	55	15	70	129	98	122	10.0%	10.3%	10.0%
Emergencies issues	14	4	18	106	193	126	2.1%	5.4%	2.7%
Funeral	2		2	65		65	0.2%		0.2%
Trading	34	4	38	255	229	252	12.3%	6.4%	11.3%
Consumption	72	22	94	106	144	115	10.8%	22.3%	12.7%
Total	388	83	471	182	172	180	100.0%	100.0%	100.0%

Gold as Collateral and Interest Rate Charged

Gold is the best form of collateral for pawnshop loans. Where gold is provided as collateral, both clients and non-clients pay virtually the same interest rate (average 4.1%). It is interesting to note that where gold is not provided but perhaps some other asset is provided, the average interest rate is slightly higher (4.3%); however, there is a one percentage point difference favorable to clients over non-clients, perhaps reflecting the perception that loans to them entail less risk. It is also worth noting that nearly all microfinance clients (97%) who borrow from pawn shops are able to provide gold as collateral whereas only 84% of non-clients are able to do so; this appears to be another indication that microfinance clients are able to accumulate more assets than non-clients and that they keep at least part of their assets in the highly liquid form of gold.

Gold as Collateral	N			Mean Interest Rate Percentage		
	Micro-finance village	Non-MFvillage	Total	Micro-finance village	Non-MFvillage	Total
Gold	370	69	439	4.1	4.0	4.1
No gold collateral	11	13	24	3.8	4.8	4.3
Total	381	82	463	4.1	4.1	4.1

WOMEN'S EMPOWERMENT

Decision on Marriage of Children

One impact of the microfinance program in terms of its empowerment of women is observed in their greater involvement and increased influence on family decision-making. Clients are less likely by nearly a full percentage point (2.3% compared to 3.2%) to simply follow whatever decision the husband makes with respect to the marriage of one of their children. Clients who do discuss with their husbands are less likely to lose out in the discussions (1.6% versus 4.2%) than non-clients. Joint decisions are by far the most common solution in the areas served by the MFP; client households account for nearly one percentage point more in this category (81.6% compared to 80.7%) than non-clients. Clients who consult with the husband and have favorable outcomes exceed non-clients by almost a percentage point and a half (12.3% versus 10.7%). By the same token, clients exceed non-clients by one percentage point in terms of proposing a solution and having that proposal accepted. Clients are more likely than non-clients to have their voices heard and their opinions respected and taken into account on decisions concerning the marriage of a child. These differences are significant at greater than the 0.99 significance level.

Decision on Marriage of Children	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
Follow husband always	32	18	50
	2.3%	3.2%	2.5%
Consult with husband and lose	23	24	47
	1.6%	4.2%	2.4%
Decide both	1,153	461	1,614
	81.6%	80.7%	81.4%
Consult with husband and win	174	61	235
	12.3%	10.7%	11.8%
Initiate new idea, win her idea	31	7	38
	2.2%	1.2%	1.9%
Total	1,413	571	1,984
	100.0%	100.0%	100.0%

Chi-Square = 15.598 with 4 df; significant at the .996 level

Decision on sending children to school

Decisions concerning whether or not to send children to school have financial implications for the household budget. Clients are less likely by more than a full percentage point (1.8% compared to 3.1%) to simply follow whatever decision the husband makes with respect to sending their children. Clients who do discuss with their husbands are less likely to lose out in the discussions (1.3% versus 3.5%) than non-clients. Joint decisions are by far the most common solution, although client households account for more than one percentage point more in this category (81.2% compared to 80.0%) than non-clients. By the same token, clients exceed non-clients by one percentage point in terms of consulting with the husband and winning (12.8% versus 11.0%). Where clients initiate the new idea of sending a child to school or not, they are more likely than non-clients to have their proposal accepted, by half a percentage point (2.9% versus 2.4%). As in the case of marriage decisions, women do have more of a voice in decision-making concerning school attendance for their children when they are clients than when they are non-clients. These differences are significant at greater than the 0.999 significance level.

Decision on sending children to school	TYPE OF VILLAGE		Total
	MF Household	Non-MF Household	
Follow husband always	39	23	62
	1.8%	3.1%	2.1%
Consult with husband and lose	28	26	54
	1.3%	3.5%	1.9%
Decide both	1,742	595	2,337
	81.2%	80.0%	80.9%
Consult with husband and win	274	82	356
	12.8%	11.0%	12.3%
Initiate new idea, win her idea	62	18	80
	2.9%	2.4%	2.8%
Total	2,145	744	2889
	100.0%	100.0%	100.0%

Chi-Square 20.261 with 4 df; significant at the > 0.999 level

Decision on Asset Purchase

Women who participate in the microfinance program are contributing in a major way to overall family income. That being the case, they have greater rights when it comes to the family's decision on the purchase of major assets. Nevertheless 3.4% of clients follow their husband's wishes completely with respect to asset purchase; though still high, the figure is less than half that for non-clients (8.0%). When clients consult with their husband on this type of decisions, they lose in a much smaller proportion 1.5% to 4.0%. In three quarters of the cases, such decisions are made jointly with little difference between client and non-client households (78.4% and 76.1% respectively). Where women consult with their husbands and win, the percentage for clients is five percentage points higher than for non-clients (16.3% versus 11.0%). Where women themselves propose an asset purchase and succeed in winning their point, more than four times the proportion of clients (4.0%) as non-clients (0.9%) succeed in their proposals.

These differences are statistically significant at the 0.999 significance level.

Decision on Asset Purchase	TYPE OF VILLAGE		Total
	Microfinance household	Non-microfinance household	
Follow husband always	85	65	150
	3.4%	8.0%	4.5%
Consult with husband and lose	37	33	70
	1.5%	4.0%	2.1%
Decide both	1,856	620	2,476
	74.8%	76.1%	75.1%
Consult with husband and win	404	90	494
	16.3%	11.0%	15.0%
Initiate new idea, win her idea	100	7	107
	4.0%	.9%	3.2%
Total	2482	815	3297
	100.0%	100.0%	100.0%

Chi-Square = 77.197 with 4 df; significant at the > 0.999 level

Marketing Decision on Rural Produce and Others

Decisions on how and when to market farm products are generally made jointly (72.6% of the cases). However, less than half the women clients (3.7%) defer in all cases to the husband compared to 7.4% of non-clients. Fewer clients than non-clients consult their husbands and lose the decision (1.7% versus 4.1%), while 16.3% consult and win compared to 12.6% for non-clients. Of those initiating a new idea on marketing produce or other decisions, 5.7% win their point among clients compared to 3.2% among non-clients.

These results are consistent with those from previous questions and statistically significant at a very high significance level (> 0.999).

Marketing decision on rural produce and others	TYPE OF VILLAGE		
	Microfinance households	Non-microfinance households	
Follow husband always	91	58	149
	3.7%	7.4%	4.6%
Consult with husband and lose	42	32	74
	1.7%	4.1%	2.3%
Decide both	1,781	571	2,352
	72.6%	72.7%	72.6%
Consult with husband and win	400	99	499
	16.3%	12.6%	15.4%
Initiate new idea, win idea	139	25	164
	5.7%	3.2%	5.1%
Total	2,453	785	3,238
	100.0%	100.0%	100.0%

Chi-Square = 44.538 with 4 df; significance level > 0.999 =

Decision on donation

Joint decisions predominate on donations (80.7%). Around 2.2% of women always follow their husband's lead on the subject. Only a third of the proportion of clients who consult with their husbands lose out compared to non-clients who do the same (0.9% versus 2.8%). More clients consult with their husband and win (13.8%) than is the case with non-clients (2.7%). And almost five times the proportion of women who initiate ideas concerning donations win (3.4%) compared to non-clients (0.7%).

These differences are significant at a very high level of significance (> 0.999).

Decision donation on	TYPE OF VILLAGE		
	Microfinance households	Non-microfinance households	
Follow husband always	55	19	74
	2.2%	2.3%	2.2%
Consult with husband and lose	22	23	45
	0.9%	2.8%	1.4%

Decision on donation	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
Decide both	1,976	686	2,662
	79.7%	83.9%	80.7%
Consult with husband and win	343	84	427
	13.8%	10.3%	12.9%
Initiate new idea, win her idea	84	6	90
	3.4%	0.7%	2.7%
Total	2,480	818	3,298
	100.0%	100.0%	100.0%

Chi-Square = 39.963 with 4 df; significance level > 0.999 level

Decision on household activities

Decisions on household activities are made jointly in half the responding households, with this response being slightly lower in the case of client households (48.4%) compared to non-client households (55.7%). About 10% of the women defer always to their husbands concerning day-to-day activities. About half as many clients discuss with their husbands and lose (1.1% versus 2.3%). About a quarter of women consult with their husbands and win when deciding day-to-day activities. About double the proportion of women initiate new ideas on these subjects and win in the case of clients (15.4%) compared to non-clients (8.2%).

These results are statistically significant at the 0.999 significance level.

Decision on daily household activities	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
Follow always	239	70	309
	10.3%	9.4%	10.1%
Consult w/ husband and lose	26	17	43
	1.1%	2.3%	1.4%
Decide both	1,121	413	1,534
	48.4%	55.7%	50.1%
Consult with husband and win	576	181	757
	24.8%	24.4%	24.7%
Initiate new idea, win her idea	356	61	417
	15.4%	8.2%	13.6%
Total	2,318.00	742.00	3,060.00
	100.0%	100.0%	100.0%

Chi-Square = 32.929 with 4 df,
Significance level, significant at > 0.999

Village Level Decision-Making

Where clients have made great progress is in having their points-of-view heard in the decision-making process at village level. In the past women's voices were rarely heard when decisions affecting the entire village were made. Now only 14.2% of clients report that they "never" are consulted when such decisions come up compared to 38.0% of non-client women. Only seven percent of women claim that they are "rarely" consulted. The proportion of client women claim to have been consulted "sometimes" is 52.5% compared to 44.9% for non-client women. Almost a quarter of client women (24.1%) claim to have been consulted "often" when such decisions arise compared to less than ten percent (9.7%) of non-client women.

Women who participate in the microfinance program have a greater say than those who do not in village affairs.

The differences found here are significant at greater than the 0.999 significance level (despite minor problems with low expected values in two of the cells).

Village Level Decision-Making	TYPE OF VILLAGE		Total
	Microfinance households	Non-microfinance households	
Never	46	60	106
	14.2%	38.0%	22.0%
Rarely	23	12	35
	7.1%	7.6%	7.3%
Sometime	170	71	241
	52.5%	44.9%	50.0%
Often	78	15	93
	24.1%	9.5%	19.3%
DK / NR	7	0	7
	2.2%	.0%	1.5%
Total	324	158	482
	100.0%	100.0%	100.0%

Chi-Square = 43.660 with 4 df; significance level, significant at >0.999

Note: 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.29.

DRAFT QUALITATIVE REPORT

IMPACT EVALUATION

of

the UNITED NATIONS DEVELOPMENT PROGRAM/MYANMAR's

MICROFINANCE PROGRAM

in

the Delta, Dry Zone and Shan State

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QUALITATIVE REPORT

INTRODUCTION

The Terms of Reference for the study stressed the need to add a “new qualitative component to the assessment’s overall design.” In addressing any social research problem, a qualitative understanding of the issues to be covered needs to be attained before the quantification of the various elements believed related to them can be attempted with assurance of a successful outcome. In addition to the review of documents produced in the course of the intervention of the program, research would normally include extensive interviews by research staff engaged in the analysis with program beneficiaries and others who might potentially benefit from the program. Because of time constraints and the logistical difficulties an international consultant encountered in traveling to rural areas of Myanmar, fieldwork by the international consultant was limited to a two-day field visit to representative microfinance villages and program offices in the Dry Zone graciously organized by the Government of Myanmar (Ministry of Cooperatives, Pact and UNDP). Despite the consultant’s past experience in Myanmar many years earlier in the three zones in which the program intervenes, UNDP and Pact deemed that this limited exposure of the international consultant to the views, needs and aspirations of client and target populations was insufficient. Since the international consultant was not able to interact extensively with clients and leaders in microfinance villages and similar respondents in non-microfinance villages, an alternative which made possible the qualitative appreciation that extensive fieldwork in the study area normally provides to the analyst had to be devised. Although not originally contemplated, UNDP showed the flexibility needed to achieve success in applied research such as this evaluation and decided to add a qualitative component to the field work of the cross-sectional survey. It assigned the task to the task of collecting qualitative information needed for this aspect of the assessment to the research company carrying out the quantitative survey under a separate contract.

The six sections which follow are based on intensive work by the company’s selected field staff in twenty-four communities in zones covered by the Microfinance Program (MFP). The staff was specially trained in Key Informant Interview and Focus Group Discussion techniques prior to the survey. Interview and focus group discussion guides were prepared and used to conduct broad-ranging discussions with key informants (village leaders, elders, business owners) and focus groups composed of women who were clients of the Microfinance program (some of whom occupied current or past leadership positions, some of them who had not). Similar communities not served by microfinance were chosen in each of the 12 townships and similar informants and women who would have been eligible for membership in the MFP had it been operating were interviewed. Thus a total of 24 villages in all were covered: 4 microfinance and 4 non-microfinance villages in each of the three zones.

Interviews and discussions started with a general description of the village, its composition and major economic and social activities, and organizations active in the community and ways in which women participated in them. Areas covered by the discussions in both the key informant interviews and focus group discussions include the topics:

- Income and Spending
- Food Security
- Education
- Health
- Social Events (wedding ceremonies, novitiation and funerals and other social activities)
- Ownership Assets
- Housing (roof, floor, walls, size, materials, etc)
- Electricity and other forms of Lighting

- Household Assets
- Water & Sanitation
- Farm land and its management
- Livestock
- Mechanization
- Farm Labor
- Employment opportunities
- Trees and Forest Cover
- Fisheries (and Aquaculture)
- Communications
- Transportation
- Gold and Other Forms of Saving
- Rights of women
- Civil Societies (CBOs) other than the MFP groups and participation in them, and
- Need for Microfinance or for New Loan or Other Products

Without prompting, facilitators and note-takers were careful to record where participants in the interviews and discussions made linkages between these various topics and the ways the microfinance had impacted on the topic under discussion compared to the way things were in the past or the way they still were in other communities where the program was not active. The notes are a faithful echo of how people who had lived through the process of introduction and growth of microfinance had affected their lives. In other communities where the program had not intervened, the same topics were covered and responses and discussions were recorded; in many cases respondents noted differences between their results and coping strategies and those being achieved in nearby villages where the microfinance program was operating. Facilitators had the good sense to allow discussions to range as broadly or narrowly as participants wanted with broad bounds of the topic. Though not present at the discussions, the author was afforded the chance to share the perceptions, appreciations, goals, aspirations and limitations related to these topics as they affected the lives of those present at the focus groups and key informant interviews. These perceptions have guided the research in terms of prioritizing quantitative research and in being able to correctly group and rank data based on the appreciations shared by respondents and recorded in the interview notes.

This report represents the collation and compilation of the information that respondents provided. Information reported here came from the interview notes which are available for review. This qualitative report is the respondents' report with the consultant simply reporting as accurately and coherently as possible their statements, views and opinions. Outside information is largely excluded and where it is brought in, its source is noted. If no source is noted, then the information is derived from the notes on these interviews. Some deductions based on the information provided are made by the consultant and some suggestions provided on new products or possible changes in existing products which the MFP may choose to make and which donors may decide are worth supporting so that the benefits of the program reach a larger population than is currently being served and better serve that population's needs.

It should be stressed that interpretation of policies, rules and procedures of the microfinance program are those of the respondents themselves and may not reflect the policies, rules and procedures which are actually in place and put into practice. Where there are differences between respondents' interpretations and MFP regulations, these are noted.

It should be pointed out that the international consultant was not able to be present for any of these interviews or focus groups. Furthermore, it should also be pointed out that participants were not paid.

Quite the contrary, they normally provided hospitality to the interview team, lamenting in one non-microfinance village at the poor quality of the food that they were able to provide.

In their entirety, these sections bring out the major economic and social features of the lives of households in regions currently covered or which could be covered by the MFP should conditions permit its expansion. It conveys the programs accomplishments and highlights further needs and the populace's ideas on how the MFP could conceivably meet them.

The report covers the three zones: Delta, Dry Zone and Shan State. In each zone qualitative data on Non-Microfinance Villages is presented first and on Microfinance Villages second in each zone. There are a total of six sections following this introduction.

QUALITATIVE REPORT - DELTA (Non-Microfinance Villages)

Delta villages were affected to a greater or lesser degree by Cyclone Nargis and are still recovering with the help of Government, UN agencies, the international community and national and international NGOs. Some villages were severely affected while a few were affected only minimally or hardly at all. Virtually, all villages have received some sort of external assistance from Government, private donors and foreign international agencies and NGOs. With this outside help, farming and small-scale fisheries activities restarted rapidly after the cyclone.

NON-MICROFINANCE

General Economic Situation

Villages not covered by the microfinance program report some improvement over their situation prior to the cyclone but not much. Some villages report little improvement but nearly all have made some improvement. With outside support, agricultural production recovered quickly. Farmers who own land have fared better than casual laborers.

Income and Spending

Income in non-microfinance villages has increased only slightly in most, and hardly at all in some. Dependent as they are on farming and on the vagaries of weather, some report that poor crop yields, losses to pests, problems with marketing, and high financial costs have eroded their farm income to the point that it is actually lower than before; most, however, report a slight improvement in income. Most spending is for food for the family, followed by spending on education, health and social expenses. There is a dichotomy between land-owning families and those who depend on the sale of casual labor for their income. Peak periods of employment coincide with land preparation for the paddy crop and for its harvest; at other times of the year, few jobs and little income are available. Small businesses are largely absent in non-microfinance villages.

Food Security

In non-microfinance villages, food security has yet to be achieved. Although the Delta is favored by an abundance of fish and shrimp, most villagers subsist only on coarse rice and seasonal vegetables; meat is a luxury which few can afford. People live from day-to-day, buying food as they go along. Few are able to store rice to cover the four months of scarcity.

Casual laborers are the most affected. During slack times, they are forced to borrow from their employers against future wages to satisfy food needs. Such borrowing comes at a price, either as interest (5% per month) or by having to accept lower wages when they go back to work.

Education

Most children go to school long enough to complete the highest grade in the primary school in their village. After that they drop out to help their parents with farm work and to give the younger children in the family a chance to go to primary school as well. Less than half the children are able to go outside to other villages to attend middle school and fewer still, to cities to attend high school. Few graduates are found in non-microfinance villages. Children of farmers who have their own land are more likely to continue their education beyond primary school than are those of casual laborers. Sometimes villagers have to sell food reserves to meet urgent expenses to keep their children in school. Food is rationed within

the family to allow more funds to be put aside to meet school expenses. There is an increased awareness of the importance of education; this change is due in part to interaction with outsiders who brought assistance of various kinds and have also shared their views on the value of education.

Health

There is greater recognition of the importance of health due to the amount of outside intervention dedicated to health since Nargis. The Government health department has clinics in some villages and periodically visits others; health costs are higher when villagers have to go to town for treatment. More serious cases go to hospitals in the cities. People borrow to meet medical expenses but face high interest costs when they do. Medical expenses cut into income available for food and education, and health problems may lead to children being forced to drop out of school. Casual laborers also face environmental health risks from inhaling dust while threshing beans and paddy and working in inclement weather.

Social events

With some exceptions, social events have been limited in non-microfinance villages due to lack of disposable income.

Wedding ceremonies

Except for the rich, weddings tend to be modest affairs. While the number of marriages is actually rising in some villages, the ceremonies are tokens and traditional in most cases and more modest in the outlays needed to carry them out. In particular, people spend less on clothes than in the past. Nevertheless, because of cash gifts, the family sometimes obtains revenue exceeding what it has spent on the celebration.

Novitiation

The number of novitiation ceremonies seems to be lower in non-microfinance villages. In one village a collective novitiation was carried out in 2010 due to the shortage funds.

Funerals and other Social Activities

Funerals are regarded as a form of social assistance according to Myanmar tradition and culture. In non-microfinance villages, because of a shortage of funds, less tends to be spent on funerals than in the past.

There are few social activities other than weddings, novitiation and funerals, due to lack of income.

Ownership Assets

Housing

There has been little reconstruction of good housing in non-microfinance villages of the Delta. Very few people have the means to construct new houses; they do not exceed one third of the population). Only when houses are no longer providing protection from the elements do people invest what they can in their improvement, mostly attending to the roof and walls, built with straw and bamboo thatch. Rich families put in corrugated roofing sheets and wooden floors. Since economic recovery from Nargis remains limited, little house reconstruction has occurred until now.

Electricity

In most non-microfinance villages, there is still no electricity. Lighting is largely based on kerosene lamps and candles, which are dangerous in view of the combustible materials which the houses are made of; some families are able to buy battery-operated lights which are safer and provide better light. A few private generators exist. Donors have also provided some generators which are often not used, because people cannot come together to manage them and pool their funds to purchase needed fuel. The few TVs and VCDs there are run off of batteries.

Water & Sanitation

Water

Despite outside support, only a few villages have access to safe water sources. Most use open ponds, some of which have been fenced with the support of donors and NGOs. In a few cases tubewells are dug and used for drinking water, while surface water is used for other purposes. Where people can, rainwater is also collected and used during the rainy season.

Considerable efforts have been made by government and donor/NGO staff to sensitize the population concerning the beneficial effects of using water obtained from secure sources.

Sanitation

The use of fly-proof latrines is mandated by the Government. However, the proportion of the population having access to such latrines and pour-flush toilets is largely dependent on the outside support provided by donors, largely UN agencies

Farm Labor

There is considerable variation from one non-microfinance village to another in terms of the demand for farm labor. In some villages, only family labor is used for most of the year, while casual labor is hired only during the seasonal peaks in demand for labor (land preparation and harvesting). In some villages there is not even enough employment generated for family members who are forced to go out to other villages in seek of employment. However, in many villages, increased demand for labor is observed since wages have risen from between Ks. 1000-1500 to Ks. 2000-2500 per day (noting that work is only available during peak seasons of labor demand).

Farm land

There is little buying and selling of land, except to a small extent among villagers. There are few sales to outsiders from other regions. There is some leasing (*thee-zar kha*, leasing or perhaps share-cropping of land) for growing paddy where the person leasing the land has to provide the seed and carry out the crop activities. Leasing is by entrepreneurs rather than landless laborers.

Livestock breeding

A large number of animals were lost as a result of Nargis and others died of disease. In many cases these animals still have not been replaced. However, the number of animals varies from village-to-village. In most non-microfinance villages, livestock numbers are generally stagnant. In most villages plowing is still carried out almost exclusively with animal traction. However, in a few cases, their numbers may be

declining due to the replacement of animal traction by two-wheeled tractors for land-preparation and haulage. In a few cases people have had to sell animals when they encountered financial difficulties.

In one village, animal number have increased for pigs, chickens and ducks since a local NGO has provided cash grants for their purchase. Breeding of animals such as chickens, pigs, and cattle is still largely for consumption rather than for sale. Loans or other types of financial assistance would be needed if livestock numbers are to increase; such assistance is largely unavailable in non-microfinance villages.

Milk is not produced commercially.

Mechanization

In most villages, only buffaloes are used for plowing. However, with the substantial decrease in the number of buffaloes after 2008, there has been some substitution into two-wheeled tractors with one such tractor being reported in one village and additional tractors in another.

Trees

There has been some replanting and an increase in commercially valuable plantations: coconut, betel nut, mango and banana. Sale of fruit is generating some income.

However, in some villages because of increased population, there has been increased cutting of trees for firewood and a consequent reduction in trees over the past 4 years.

Fisheries

In the non-microfinance villages, there are few small family fishing businesses which provide food for the population and small amounts of income for the families engaged in them. However, there are no major fishing enterprises. During the rainy season, there is some fishing in-between the fields using cast nets (*kun*) contributing protein sources and income to increase food security.

There is no aquaculture to speak of in non-microfinance villages.

Communications

Many of the villages have recently obtained telephone service with two or three telephones available. However, a few non-microfinance villages still do not have access to telephones due to the failure of family businesses to generate enough of a surplus to allow villagers to buy phone.

Transportation

Some communities are surrounded by water meaning that motor boats and other vessels are the only form of transport available. In other villages on larger islands or the mainland, good roads have been built and motorcycles, troller-Gs and motorized vehicles (including buses) are favored; in some case, road transport is not possible during the rainy season and travel is restricted to motorboats.

Gold and Other Forms of Saving

In microfinance villages, it is only entrepreneurs who are able to accumulate assets (TVs, VCDs, motorcycles, etc.) and to save. Those who do save, do so in the form of the purchase of gold if they have surplus income. It is easier for them to pawn gold in exchange for cash when they are in need of cash.

In one village it was estimated that 10 out of 114 household (9%) had the ability to save.

Villagers do not have the habit of going to the city to save their surplus income in a bank. They prefer to buy and hoard gold as there is no one to save money in the banks as they do not understand the banking rules and regulations, and also, because they regard it as a waste of time and energy going to the city for depositing and withdrawing money.

Employment opportunities

There are now more employment opportunities in the most villages than in the immediate aftermath of Nargis. Consequently, fewer young people are forced to migrate to faraway places inside Myanmar or outside of the country to work. Those who do migrate normally send back remittances to their families. Where seasonal out-migration still exists, it consists of going to nearby villages for harvesting, with money brought back to contribute to the family economy. However, such opportunities exist only during harvesting. Some also join the crews of motorized fishing boats.

Large landowners whose labor requirements exceed available family labor hire workers for land preparation using animal traction and during the harvesting season. Demand for labor during these periods is such that wages have risen. Employment opportunities are greater in villages which were less affected by Nargis and where fewer businesses were destroyed. Village headmen concentrate their efforts on their own businesses rather than on promoting employment and development opportunities for their communities.

Rights of women

In non-microfinance villages, no changes in women's status were reported, although it was felt that women already have rights equal to those of men, despite the fact that no women have taken up leadership roles.

Civil Societies (CBOs) and participation

In most of the villages, there were no types of community organizations except for male and female youth groups which contribute to community social activities. However, people seem generally willing to participate in new organizations should they form. There is the expectation that such organizations will only be formed with outside support. There is also some confidence in the ability of the community to respond positively in case the need for new organizations emerges.

In some villages which are not members of the Microfinance Program managed by Pact, there are new microfinance programs set up by local NGOs. (This discovery points out the problem that villages classified as "non-microfinance" may in fact have access to some microfinance services.) Although not much information was available on these programs, some appear to have encountered repayment problems already.

QUALITATIVE REPORT - DELTA (Microfinance Villages)

MICROFINANCE

General Economic Situation

The general situation in microfinance villages is slightly better in villages of the Delta served by the Microfinance Program as a result of the availability of credit at moderate interest rates. Members have been able to gradually expand and diversify their businesses and to accumulate productive assets. At time of the survey, all farmers were being negatively impacted by transitory weather and crop conditions. However, microfinance villages tend to be more developed than those without access to microfinance as a result of the positive impact that microfinance has on businesses.

These businesses have a positive impact on employment. The global impact of the program, while positive, is not strong enough to encourage the development of larger businesses or the entry of new businesses from outside to set up operations in microfinance villages. The impact is significant in the lives of individual borrowers but not large enough to dramatically affect the local economy and to encourage formation of large-scale businesses as a result of increased economic activity. Collaboration with traders outside the villages is encouraged by increased production among businesses with access to finance from the microfinance program.

Income and Spending

The contribution of microfinance to income is positive but relatively small, given the size of loans and the needs of businesses for finance. Microfinance contributes to holding down financing costs because interest rates are low in comparison to those prevailing on loans from other sources and can make the difference between enterprise profitability and simply earning sufficient income to pay the interest on enterprise debt. The contribution of microfinance to member income is demonstrated by a 300% increase in membership in one village (from 25 to 105 members currently). In some villages, virtually the entire village has joined the program.

The principal enterprise is farming but even in the face of transitory set-backs brought on by weather, pests or prices, villagers recognize that their overall returns from farming have increased as a result of better understanding of farming practices and the availability of resources to put them into practice. In some places, fallow land has been put back into production, and with better inputs, yields are also increasing.

Members practice a variety of non-farming businesses involving raising animals and poultry, trading, processing, services and transport. Some engage in multiple businesses, pursuing sequentially or at the same time whatever business is most profitable. All these activities, carried out with an increase in resources, lower interest rates and the timely availability of funds also, contribute to increased income.

Most spending is on food, children's education, and donations and ceremonies.

Food Security

Members of microfinance groups report greater food security. They are able to buy food in slightly increased quantities and store it for longer periods. They are also in a better position to raise vegetables in their compounds to supplement purchased and stored food. Those engaged in raising poultry and pigs, also see direct contributions of animals and eggs to family food security.

Education

A tight link between higher incomes derived from activities supported by microfinance loans and the increased ability of members of microfinance groups to send their children to school or to keep them in school longer than they otherwise would have been able to, is very clear. A new vision concerning the importance of education now pervades the villages as a result of the influx of various outside agencies and the attitude of their staff; this influx came to the Delta in the wake of cyclone Nargis and reinforced a new perception of educational possibilities as a result of the arrival of microfinance.

Families with higher incomes derived from businesses supported by microfinance were better able to bear the costs of putting all their children in primary school. Some can afford tutors for their children as well as merely sending them to attend primary school classes. In some cases, they are also able to afford bicycles that allow children to continue beyond primary school and to attend middle school in nearby villages. Many parents aspire to sending their children on to high school and college to obtain graduate degrees despite the high cost of studying in cities. Some of their children are achieving these aspirations as a result of increased income attributable to businesses which depend on microfinance for their financial viability. Education loans from MFP also were crucial in some cases in making it possible for some families to manage the high costs of higher education for their children.

In some places UNICEF has also been providing school supplies to assist families with the cost of keeping their children in school. Adult literacy classes were also reported in one village.

Health

Before the advent of the microfinance program, when people got sick, they simply bought home remedies. Now they can afford treatment in clinics and to take transport in cases where the clinic is located outside of the village. In the past, people's options concerning health care were more limited because of lower incomes. Now, they are more or less resistant to selling animals, taking wage advances or borrowing from non-microfinance sources, in view of their better earning possibilities allowing them to replace assets or to repay loans.

The availability of health care loans from the MFP also contributes to improved health care when hospital care is called for. The fact that the loan is only granted with hospital approval is noted as an impediment to overall improvement in health care. In cases which are beyond the means of the family itself, the community itself provides collective assistance. Villagers report a reduction in the death rate as a result of improvements in health care related to the MFP.

The arrival of NGOs specialized in health issues in the Delta since Nargis has also contributed to a better understanding of the importance of addressing health issues in a timely fashion as well as in making health care more readily available.

Social events

Microfinance clients have a privileged status in that they can access same-day loans (*khauk-pyan-kyay*) with high interest to finance weddings, funerals and other ceremonies by market-stall owners in town who view them as good credit risks. As a result the number of ceremonies has increased in some microfinance villages. In some villages societies exist to support social events; women play an active role in cooking and providing other support for social events in microfinance villages. Social events are not regarded by the community as an investment, although where same-day loans are taken out, the family has the expectation of recovering the cost of the loan and interest from the guests' gifts.

Wedding ceremonies

Wedding ceremonies are largely financed by the participants. In some cases same-day loans are taken out and repaid from cash gifts given to the newlyweds.

Novitiation

Novitiation can either be carried out with an individual sponsor, supplement by individual donations, or collectively at the monastery for those who cannot afford a big celebration.

Funerals and other Social Activities

Funerals are collectively financed by the village by contributions of rice to the bereaved family at the rate of 1 pyi (approximately 2 kg) per family. If additional expenses are incurred, they are financed by a same-day loan.

The case is different for microfinance members: if a microfinance member dies, the members savings are returned to the family, the family is provided with a grant of Ks 100,000 for funeral expenses and, if there is an outstanding loan, it is cancelled and the debt written-off.

Village roads are repaired once a year with contributions in accord with each villager's ability to pay and the labor supplied to the repair work.

Ownership Assets

Housing

In areas where houses traditionally were made of bamboo, wooden houses going up in replacement. Where houses were normally made of wood, they are being replaced with houses built with bricks. For structural support, it can be found that wooden poles are being used instead of bamboo poles, and for roofing, corrugated sheets are used instead of bamboo thatches. Where roofing is still done with bamboo, the roof is changed annually. In the past, building and house repair was done at the last minute; now it is planned in advance and good quality materials are used. New houses are generally bigger than those they replace. All these improvements are made based on the surpluses generated in their businesses from microfinance loans.

Electricity

In most villages, electricity is not available and only kerosene and candles are normally used for lighting. Even where there are generators, some people cannot afford to use electricity in the village now preferring kerosene lamps at a costs per night of approximately K 200 for 10 ticals (1/6 of a liter for one-night supply) of kerosene; kerosene (and diesel) each cost K 4000 per gallon. More battery-powered lights, which provide better light and reduce the risk of fire, are used, and some families are able to buy generators. Microfinance is leading to some improvement in household lighting and can eventually be expected to help the majority of families to eventually obtain access to electricity.

Once families gain access to electricity, they normally buy consumer electronics to go with it: TVs, VCDs and the like. Video parlors have been set up and video and sound equipment is also rented out on ceremonial occasions. However, others report being unable to purchase consumer electronics since

earnings from businesses supported by MFP are insufficient to cover their cost. No purchase of refrigerators was yet reported.

Other Assets

Some of the first household assets purchased as a result of increased income derived from businesses supported by microfinance are blankets, mosquito nets, pot and pans, plates and the like.

Water & Sanitation

Water

In many villages drinking water is obtained from open ponds or lakes. In some places tubewells are being dug and are used as a source for water. During the rainy season, those who have corrugated roofs collect rainwater for drinking and other uses. Some people have manual and a few have motorized water pumps for pumping water from tube wells. They are able to dig tubewells and provide pumps with funds earned from microfinance-supported businesses.

Sanitation

The percentage of the population report fly-proof latrines varies from 25% to 100% of latrines. After cyclone Nargis, a number of donors (Red Cross and UNDP) and NGOs provided fly-proof latrines, whose existence has less to do with microfinance than with support provided by donors. By now, donors have provided fly-proof latrines in virtually all villages.

Farm land

When people leave the village, they sell to other villagers: outsiders are generally not coming in to purchase land in the Delta. A few microfinance members have been able to purchase land. However, in most cases, the loan amount is only sufficient to allow for leasing or share-cropping of land which is practiced in some villages and not in others. Farming is intensified as a result of access to microfinance loan which make it possible to most land into production, to carry out necessary operations in a timely manner, and to use appropriate inputs to restore soil fertility and to increase yields.

Livestock breeding

Draught animals lost to the cyclone, especially buffalo have been replaced. No milk cows are being acquired.

There is increased breeding of livestock and poultry, with nearly every household breeding pigs and ducks. Selling duck eggs has become a profitable business for some. Even small pigs which are reported to cost a minimum of K 20,000, had been beyond the means of most villagers prior to the advent of microfinance.

Mechanization

Substitution of two-wheeled tractors for land preparation (and for transportation) is beginning to occur. The increased productivity of tractors compared to buffalo is widely recognized by now.

Mechanization of post-harvest activities is also starting. Small rice mills are being purchased, allowing rice to be milled locally.

Members are able to acquire machinery of various kinds based on profits derived from their businesses financed by microfinance loans.

Farm Labor

There is increased demand for farm labor as a result of increased agricultural production. Needed labor is supplied mostly by family labor but some laborers are hired during peak periods. Leasing of land by large landowners in the form of share-cropping provides an opportunity for the landless to obtain access to land.

Employment opportunities

Opportunities for employment have increased in the villages where the MFP is operating. Fewer people are forced to leave the village to seek employment elsewhere. Those who do leave to take seasonal jobs elsewhere find work closer to home and are not required to spend long periods away from their villages, for which they profess considerable attachment. Few emigrate abroad. Those who leave for the most part send back remittances and retain their ties with the village and contribute to its development.

Activities increase enough in some cases that it is necessary to hire people from other villages to provide labor in businesses financed by the MFP.

Trees

Planting of trees to increase livelihoods has focused principally on fruit, coconut and betel-nut trees. There has also been some planting of trees as windbreaks. One species being planted (*Bhyu*) provides material for making plows and harrows after three years. Other species being planted as windbreaks include Eucalyptus, *La-mu*, *La-mei* and *Ka-na*.

Fisheries

Some members engage in making fish traps and carrying fish for others. Since joining the MFP, they have changed from simply carrying it to marketing the catch as well. Fish marketing is far more profitable than simply working as a porter.

Some members engage in fishing and have used loans and profits from other businesses to buy small fishing boats and nets.

Seasonal fishing is carried out with cast nets in low areas between the fields, contributing some income from sales and improving family food security by providing a cheap source of protein.

GRET sponsored the digging of a fish pond in one of the microfinance villages shortly before field work for the survey was carried out. It was not possible to evaluate the impact of this type of activity because it had only just started.

Communications

In some villages a few telephones are already available, but in most villages this is not the case. Villagers find that telephones are still too expensive for them to afford. Some villages are close enough to town that

people can easily travel to where telephones are available. In one case, a visiting trader allows villagers to use his phone at a cost of K 300 per minute.

Transportation

In most Delta villages, boats are used more than motorcycles or other land transport because of lower costs. Motorcycles are only used for urgent matters or for short trips. Troller-Gs are also being introduced in some places and replacing bicycles and carts for transport. Some villages are on islands which limit the usefulness of land-based transport. Bicycles are almost universal, found in almost every household in microfinance villages. However, they are fast being replaced by motorcycles which members are purchasing in increasing numbers. Some members also report purchasing motor boats.

Gold and Other Forms of Saving

Purchase of gold as a form of saving has increased as income from businesses supported by microfinance has increased. Savings in banks is still not considered to be practical and is not done.

Rights of women

Previously, family members did not pay much attention to the opinions and ideas of women who had no income of their own. After joining the MF project, women run their own businesses and contribute to family income resulting in there being more attention paid to the women. Women are also more confident in themselves, they have close to one another, their horizons are greater and they have become more broad-minded. They are learning how to work together and to participate on an equal footing with their spouses in activities.

However, these changes are not universal. Some villages report little change in attitudes toward women.

Civil Societies (CBOs) and participation

In most microfinance villages, except for male and female youth groups, there are no organizations other than the microfinance groups themselves.

People in microfinance villages are of two minds concerning the establishment of new organizations into the village: some believe their arrival is favored by the existence of the microfinance groups supported by Pact while others feel that the presence of Pact may dissuade other institutions from forming new organizations within the village.

Those who believe that the presence of microfinance encourages new organizations to form make the following case. They believe that the presence of Pact Myanmar in the village has allowed them to better understand basic concepts facilitating the arrival of other organizations and their ability to work with other projects when they do come. The contrary opinion is that if Pact is working in a community, other NGOs will choose to go elsewhere with their assistance.

Female and male youth organizations contribute to the welfare of the village and provide assistance for various ceremonial activities as they arise. In microfinance villages they have had an additional function: they have been able to convey the news regarding MF benefits to the neighboring villages. By providing accurate information on microfinance, these groups are facilitating the expansion of the program to new villages as funds and government become available to allow the expansion of the microfinance program.

Need for Microfinance or for New Loan or other Products

In general, agricultural loans are provided to all members of groups who are qualified by their experience and their activities for such loans. However, one village in the microfinance villages of the Delta responding to the qualitative survey reported that only one member at a time out of the group composed of 5 members was receiving agricultural loans. This procedure is questioned since when members cannot access agricultural loans, they are forced to borrow from other sources (rice mills, moneylenders, etc), and because of high financial costs, they are able to retain only about one third of the profit which would otherwise be derived from the activity. (It is also worth noting that standard policy is for all qualified members to be eligible for agricultural loans.)

Fortnightly loan repayments also pose a problem for those engaged in agriculture. Some have proposed that payments be made monthly and that repayment be deferred until after crops are sold in the case of agricultural loans.

Opinion is strongly in favor of increasing maximum loan size. Where loans are inadequate to meeting the capital requirements of members' businesses, they are forced to either limit growth or to take loans from other (much higher-cost) sources, limiting their ability to generate income.

People who fail to attend meetings are at a higher risk of defaulting on their loans, which imposes a penalty on other members of the groups who have guaranteed their loans. Some informants for the survey propose that people not attending meetings should be expelled so that other members do not suffer the consequences of their loan defaults which frequently occur among those not attending meetings.

Health loans are especially appreciated and their contribution to meeting health emergencies is noted. Respondents report that it is difficult to get the health loan and that it requires the signature of someone from the hospital.

In the Delta, the rules governing the health loans are the following:

1. Maximum loan amount K 50,000 (some other types of loans such as agricultural and business loans are larger).
2. Repayment is biweekly in 24 installments payable over a year, with no grace period.
3. A health loan counts as a "loan." A borrower can have a maximum of two loans outstanding at one time including the health loan.

Special Conditions for Microfinance in the Aftermath of Cyclone Nargis

Villagers reported that the MFP 1) immediately returned member savings and 2) provided them with K 30,000-40,000 to reestablish themselves. They recognized that these were significant contributions.

They also note that the microfinance program was recommenced only after their specific request that it start again. [The MFP was restarted about six months after the cyclone passed through the Delta.] Villagers further noted that the number of groups which had been 8 in number prior to Nargis quickly rose to 13 and now has risen to 21 groups, indicating a strong immediate and continuing demand for microfinance services. Lending started again allowing members to restart their livelihood activities and leading to improved food security; they feel that loan amounts were insufficient to provide adequate investment for their businesses to grow and would therefore like larger size loans.

QUALITATIVE REPORT - DRY ZONE (Non-Microfinance Villages)

NON-MICROFINANCE

General Economic Situation

There has been only minimal improvement in the economic situation of non-microfinance villages in recent years. The Dry Zone is very dependent on the vagaries of weather, with production and income rising and falling according to amount and timing of rainfall. Family income is heavily dependent on non-farm businesses and remittances.

Income and Spending

One village is located on a main road to Kyauk-padaung and is walking-distance (only about 15 minutes) from the rural town of Yenangyaung. Only four people work in agriculture full-time. The rest of the members of the 63 households work as casual laborers in a wide variety of activities, many of them located in town. Income for the village is dependent on wages earned in these occupation plus remittances sent back by the considerable portion of the population which migrates to Mandalay, Naypyitaw, Yangon and elsewhere to find employment. There is scarcity of jobs in the village. Most village men work as casual laborers on road-building or in construction as masons earning about K 2,000 per day; women in the same occupations earn about K 1,500. The demand for construction workers has led to an increase in income.

Women from at least 40 houses work in cheroot cigar-making and tobacco-related business. Except for short periods when there is a shortage of raw materials, they receive a regular income throughout the year and never have to worry about finding employment. They are engaged as employees of entrepreneurs from town. Some women work in town in a variety of other business enterprises owned by business people in Yenangyaung. Some women engage in growing farm products which they transform into popular Myanmar snacks (such as *mon-phet toke* and *mon-paung*) and which they sell in town.

Rainfed agriculture is risky, however; and some report losses as a result of bad weather, not even getting back the principal invested. As a result no significant change or improvement in farm income is reported in the non-microfinance villages surveyed since income is highly dependent on weather. Since there is no surplus income to be derived from farming, family income is highly dependent on earning from non-farm enterprises, off-farm employment and remittances. Farm size is generally small (only a one or two acres in most cases), and respondents report that “the income from farming is just enough for people to eat and drink;” any additional expenditures have to come from non-farm income. For some villages, income has risen but has done so in response to the work of those who have migrated: almost all youths in the families open tea shops in Yangon and elsewhere. In other villages no improvement at all is registered: there is a daily struggle for food which precludes attention to satisfying other pressing needs. Overall, however, income appears to have risen slightly.

Spending is limited by the low level of income. Food is the main expense. Out of daily earning of K 2,000 most is spent on purchasing rice while tamarind leaves are sometimes cooked as a soup, sometimes prepared as a salad. After feeding the family and attending to social matters (funerals, etc.), there is little surplus cash left over to attend to other needs such as education, health and clothing. Some men also spend an average of K 200 on liquor to drink; women generally rent VCDs to watch after work.

Food Security

In one case, the entire village reported improved nutrition and having an adequate food supply. Villagers are able to spend more on food and clothing than before.

While a few families in each village are well-off and have enough to eat, most non-microfinance villagers cannot be characterized as being food secure throughout the year. Many have an adequate food supply from the crops they grow and sufficient food for consumption; they also purchase more food than in the past. However, they are unable to store large amounts of food. For most of the year, villagers eat rice on a regular basis, but there are times when they are forced to ration and eat rice only two times in one week. Animal protein is even more limited: fish and meat are eaten only once a week. Seasonal vegetables and fruits such as tamarind leaves, sour mangoes, water cress and *chin-paung* help diversify the diet in dry zone villages. Villagers eat whatever is available and reduce spending and other expenses to the bare minimum in order to be able to afford sufficient food.

Many villagers live a hand-to-mouth existence, not being able to plan for their consumption needs from one day to the next. There about four months a year when families are food insecure, with the worst two months being July and August. When they have no food, they borrow, usually beans and repay in-kind and in the same amount when they are able to. They grow mainly *Pei-sin-ngone* and *Pei-nauk* beans. Casual laborers take advance wages from their employers. Urgent cases are met by small day-loans at interest rates as high as 15-20% for a single day.

Education

Some improvement is recorded in education in non-microfinance villages of the Dry Zone. This improvement is due to the opening of new schools and to slight improvement in income, part of which is used to further the education of children. Parents put considerable effort into seeing to it that children attend whatever primary school there is in the village up to the highest grade. In some cases, this is the fourth grade. Those who can, encourage their children to continue their education by attending middle school in another village or a nearby town; the cost of keeping a student in middle school are higher than for primary school which is located in the same village. Attendance at high school always requires travelling to the nearest city or major town; keeping a child in high school cost about K 60,000 per month, which is beyond the reach of most villagers. Respondents to the qualitative survey note that how far a child can go with his or her education is closely tied to the earnings their parents are able to achieve with their various businesses and jobs. Boys who drop out after the 8th grade end up working as masons or in tea shops, while girls work in the tobacco/cheroot-making industry, processed tea or bean frying businesses; some stay with their parents helping them with their businesses in order to increase family income. Parents who cannot afford school expenses are forced to take their children out of school so that they can contribute to family income and cover the cost of their own food which increases in cost as they grow up. Respondents make a direct link between the profitability of their parents' businesses and the ability to further their children's education for children. They blame high interest rates for reducing profitability and wish to gain access to microfinance loans to finance their businesses; this interest stems, at least in part, from the desire to keep their children in school for a longer period of time.

There are neither literacy courses nor other forms of adult education. Lack of education is one of the factors inhibiting older people from leaving village to find employment, as they are too frightened to confront the difficulties of the strange new world outside of their villages.

Health

Even in villages near town whose proximity facilitates access to medical treatment, villagers from non-microfinance villages are unable to give a very high priority to health since they have little money left over after feeding their families. When they are sick, villagers often self-medicate: some use indigenous medicines and home remedies, while others use Western medicines. When they are seriously ill, they borrow money to pay for the treatment. The community also provides some support to those having health problems and who are unable to afford treatment on their own. The health department provides some health programs, gives injections and provides emergency feeding in some villages, particularly those which are close to town.

In one village there is a social welfare organization (Shwe Nyar Myay) that provides assistance for health. The organization provides a nurse/midwife. She provides care to the community, charging those who can afford to pay and providing those who cannot with free treatment. Childbirth cases that cannot pay are treated in any case. There is also a youth group in the community provides some financial assistance in these cases.

There are more health problems during the rainy season. Children in particular suffer from dengue fever. Four children from one village died as their parents had no money and were therefore unable to send them to the Magway Children's hospital. A few adults have also lost their lives due to similar causes. The ability to respond to health emergencies and chronic problems is clearly related to income and to greater or lesser profitability as a result of higher or lower finance charges for business investment.

Social Events

Social events are dependent on the financial situation of villages and are rare or almost non-existent in years when incomes are reduced. Villagers have to contribute money for social events and funerals where the entire village is required to make some collective contribution. No particular organizations have been established for social events and funeral matters in the village. If there is an emergency, villagers as a matter of habit resolve the matter collectively. Almost the whole village makes donations for the construction of a school pond, pagoda, and *ta-zaung* (covered entrance way to pagoda).

Some people even go into debt as a result of donations for ceremonies, social events and funerals. However, social matters are becoming more limited by lack of money.

Wedding ceremonies

Wedding ceremonies are less frequent now than was the case in the past. In one village there had been no wedding ceremonies at all during the year of the survey. Furthermore, the ceremonies are not done on such a grand scale anymore; on average, less is spent on them.

Weddings are done within limits of what the parties can afford. Lavish weddings are only held when the two parties think it can be done profitably. There are cases where cash gifts surpass the cost of the wedding and the family can make a profit on the ceremony.

Wedding ceremonies are less frequent than before. Couples cannot do the ceremony as grandly as it would have been done in the past. In accordance with the tradition and custom, ceremonies are done only as a token despite the fact that more people are getting married. Some weddings are done entirely without ceremony, just offering of coconuts. It is becoming more frequent to just ask for the hand of the bride in marriage with an offering as *ka-taw pwei*.

Novitiation

Novitiation ceremonies have become increasingly rare in non-microfinance villages of the dry zone. For novitiation in a village which cannot afford such ceremonies, they simply buy monk robes and just hand these over to the revered monk. As well as the reduction in the number of ceremonies, so also the amount spent on them may also have fallen.

There are, of course, exceptions. One respondent reported paying K 1,100,000 of which he recovered two thirds. Those receiving in invitation cards, contribute money as donation (donation money for holy water pouring or *yay-zet-cha*). Total donations cover a major part of the cost of a novitiation.

Funerals

Funerals are not the grand affairs they were in the past. People have less money available to spend on them. The community has to assist most bereaved families as they cannot bear the cost alone. The villagers solve funeral matters collectively. For those who are very poor and have no support, 1 *pyi* of rice is contributed by each household. The funeral services can be performed with only with one monk present. If money needed for the funeral is not available, someone who has capital also lends money which has to be repaid afterwards. Cash gifts from mourners and relatives are usually sufficient to pay back the loan.

Ownership Assets

Housing

Wealthier households in non-microfinance villages have made some improvement in their houses but most residents do nothing to their houses until the point is reached when they are no longer serviceable at all and repairs can no longer be put off. At that point, they rebuild houses along the same lines as their old ones, same size and same materials of bamboo and thatch (*tha-man* grass and toddy palm leaves) and keeping construction costs to a minimum. Toddy palm leaves provide little protection from the rain, have to be bought for K 25 each by families who do not have their own toddy palm trees, and such roofs have to be changed every year to offer any at all protection from the rain. Young people stay with their parents and only build a separate house of their own when they marry. Bamboo and thatch houses provide little protection against the elements, do not facilitate the collection of rainwater, and have a high risk of fire. Furthermore, one bamboo plant costs K 100, making the use of bamboo less than cost effective where funds are available for more durable materials such as corrugated tin sheets which last for years instead of having to be replaced every year.

There have been changes in the walling and flooring of houses. Also, roofing is changed from using straw stalks (*yo-pyat*) to bamboo thatch, and from bamboo thatches to corrugated sheets. Few families are able to make these changes. For the majority, no improvement has so far been possible and they continue to use of straw stalks (*yo-pyat*) and bamboo thatches.

The few people who are able to improve their houses usually do so based on remittances sent by children working outside the villages in Yangon and elsewhere. Improvement costs are low because most men have outside experience in construction and can do the masonry work at least without hiring contractors. A small number of people in non-microfinance villages surveyed have been able to renovate their houses building them out of brick rather than less durable materials. Sand and gravel can be obtained from the rivers at certain times during the summer and the winter.

Electricity

Most villagers illuminate their houses using kerosene lamps or candles, or battery powered lights. In one village everyone uses battery-powered lights because of the risk of fire from kerosene lamps or candles. In some villages, the monastery has a generator and provides electricity to some residents. Even in one village which has had Government electricity for over 20 years, only a few households (7 out of 63) can connect because most cannot afford the cost of the electric meter and of the approval process for the installation. Alternatively, they run a wire to a neighbor who has a legal connection and pay a nominal monthly fee based on the number of lights they have (usually one or two fluorescent lights). In villages connected to the Government electrical grid, power is usually available 24 hours a day. Street lighting is often not available even in villages where household connections exist.

In villages where no connection to the grid is possible, some generators are installed with support from children or former villagers now living in town. In some cases, former village residents now living outside provide not only the funds for the generator but also subsidize the costs of running it, so that families can afford to use the electricity provided by the generator for a few hours a night. In one community, for example, households pay only K 1000 per month thanks to such subsidies.

Household Assets

Purchase of household electronics is tightly linked to the availability of electricity. In villages without electricity a few people have small TVs/VCDs operated off of batteries; in some villages there are none at all. Small radios running off of batteries are found in almost every household, even in villages with no electricity. Once electricity comes into a village, those able to afford and to obtain a connection start acquiring TVs and VCDs (cassette players are a thing of the past); TVs and VCDs are bought together with voltage regulators to minimize damage from power surges. No refrigerators or fans are yet purchased.

Water & Sanitation

Water

Some non-microfinance villages have only lakes, streams or other open sources of water. For the most part, open sources are not fenced but simply surrounded by berms to keep in the water.

Increasingly, however, tube wells are being dug, and either hand- or mechanized pumps are being installed. Tube wells are used as the main source of drinking water; water from other sources is used often for washing and other uses. Where both manual and mechanized pumps are available, water from manual tube wells is used for drinking and from mechanized ones for domestic uses. Where people have succeeded in changing the roofing material from thatch and bamboo to corrugate tin sheets, rain water is harvested for most household needs, obviating the need to fetch water and the cost and time entailed in doing it. The quantity of water available is generally sufficient.

Villages organize around provision of water. In one village, a “Repair and Maintenance of Village Lake for Drinking Water” group was formed by the men of the community.

Sanitation

The state of sanitation varies considerably from one microfinance village to the next. In some there are still no latrines at all and no outside organization have come to assist villagers with a proper design and

with the materials needed to build fly-proof latrines. Open defecation is still the norm in such villages. Since people's businesses are not doing particularly well in non-microfinance villages of the Dry Zone, villagers do not normally build latrines without outside support.

In one village 26 households (41%) have fly proof latrines while the rest go into the woods to excrete. Latrines are usually built first at the schools for the children and the teachers. In another village, almost every household in the village has a fly-proof latrine. A local NGO (Shwe Nyar Myay) provided assistance with their construction. Outside lectures on the benefits of fly-proof latrines are now paying off, as shown by the increase in the numbers of fly-proof latrines. Health *sayas* and *sayamas* repeatedly advised villagers to build these for health reasons. It should be noted that the use of fly-proof latrine is mandatory in the villages and there are periodic inspections by the health department.

Farm land

Only a few villages report the purchase of farm lands; purchases are almost entirely by other villagers. Outsiders are not allowed to buy land. For the most part land is simply handed down from one generation to the next generation. For the most part, villagers do not sell their land nor do they transfer ownership of toddy trees on the land. (There is some cutting of toddy leaves for use as roofing material for themselves and for sale to other villagers.) There is no fallow land or forest reserves which can be tapped; all available land is already under cultivation.

There is some leasing of land by people from the same village. Land leasing is a new phenomenon. Terms of the leases were not available. A great many people in one village (two thirds of the households) were leasing land within the village because they did not have enough land of their own for farming.

Livestock breeding

In microfinance villages of the Dry Zone, land is in short supply and cultivated intensively during the period when rainfall is sufficient for crops to grow. Consequently fodder for animals is very limited. There is no commercial livestock breeding. Most households do, however, raise chickens to a small extent only. Chickens are grown for family consumption as curry; some are sold to people who people interested in buying chickens but no one breeds chickens on a commercial basis nor sells eggs. Chickens are rarely kept until they reach 1 viss (1.6 kg), but rather are sold at lower weight whenever the family needs money. Disease problems also affect chicken production.

Pigs are also produced on a limited scale, one or two pigs per household. Others breed goats and lambs. However, it is seldom that villagers can raise animals beyond the subsistence level as they cannot afford to buy animal feed and there is little fodder except for stalks and other crop aftermath. Pasture is almost totally lacking. Breeding of goats and cows as a business has declined in importance due to low profitability.

One village was an exception to the generally limitations of animal breeding. The reason for the difference was the existence of a licensed butcher in the village. As a consequence, the meat of pigs, cows and goats can be transported and sold in Magway. One viss of pork is sold at K 5,000 and beef at K 4,400. Being able to sell meat instead of live animals and to sell in town rather than in the village makes the difference between profitable and unprofitable animal raising. Disease and lack of proper veterinary care caused some problems in 2010 due to pig flu which killed almost all pigs in the village.

Animal breeding can be quite profitable where families have sufficient feed available: A pig 45 days old can be bought for K 40,000 and sold after 8 months for around K 200,000. During the rainy season, the pig can be fed on rice bran, broken rice, fruits and grass as food. Female cows and goats are also

profitable. Pigs and other animals also constitute 'savings' for the household. While most households are knowledgeable on livestock issues, they lack the financial resources to get seriously involved in the business of livestock raising.

Cattle and buffalo are used for animal traction and not for milk production. Where animal traction is universal, draught cattle continue to predominate, since they are needed for land preparation and haulage. However, the number of cattle is stagnant. Draught animals are beginning to be replaced by tractors for land preparation and hauling.

Mechanization

In many villages, the trend is now emerging of substitution of two-wheel tractors for draught cows. Given the shortage of fodder for draught animals, the lack of financing is the single element which is holding back the change-over from draught animals into two-wheeled tractors. It should be noted that this change has an effect on employment: as machines replace draught cows in land preparation, fewer workers are employed. It is possible that this change will be offset by greater intensification of crop production which will increase the demand for labor in operations other than land preparation (weeding and harvesting principally).

Farm Labor

Employment opportunities in farming are scarce in non-microfinance villages of the Dry Zone. Therefore, both men and women seek off-farm employment where they can earn a daily or monthly wage. They normally send their income as remittances to their families. Farm employment opportunities are not such as to attract outsiders from other regions or other villages to come to work in these villages. To the greatest extent possible, families make do with family labor to carry out their farm work. Outside workers are only hired during those seasons when family labor is insufficient to meet peak demand.

When construction work is available, both men and women actively seek such employment. Male workers earn K 2,000 per day, while female workers get K 1,500. Women also work in plum-harvesting and in cutting firewood.

Despite weak demand for farm labor in most periods of the year, inflation has led to some increase in farm wages. Casual workers in agriculture used to get K 500 per day but now make K 600. In drought years when there is no farming, there is hardly any employment and income declines. Since the land available for cultivation is fixed and the population is growing, many are forced to undertake casual labor in farming in the village even though wages are unattractive. When the weather is not good, crops are lost resulting in losses to farmers and unemployment and special hardships for casual workers. Only about a third of the village households are doing well; the other two thirds (constituted by casual laborers) find little opportunity in the villages and are forced to emigrate in search of work.

Employment opportunities

Due to the lack of employment opportunities on the farm women seek work in Yenangyaung in various types of business. Men go to other regions to work in construction or as masons or in the tea shops in Yangon and elsewhere. Remittances contribute to the welfare of their families and keep the standard of living from falling too much. In-migration from other regions by people seeking work in the villages is not reported; casual laborers are hired only at peak periods of farm labor demand when family labor is inadequate to the task. Most workers from non-microfinance villages find only low-skilled work unrelated to their educational attainment or lack thereof. Those who have some education find little return on the time they have invested in staying in school and the money their families spent keeping them there. There

may be some impact from education as some jobs such as being a carpenter or plumber require a certain level of education and earn those who practice it at least K 3,000 per day. The higher level of education which they have attained does make young people more open to new opportunities and less afraid to venture away from their villages to seek opportunities in the outside world.

Even though education is not viewed as an investment, those who find employment outside generally (but not always) send back remittances which help their parents in their old-age. Their assistance goes beyond their own families and they provide assistance as necessary to the village for special village projects such as school renovation, electricity supply and the like.

Family labor is replacing hired labor. Furthermore, as mechanization replaces animal traction, the demand for labor in land preparation will also decline. Because of the lack of control over water, farmers find it hard to intensify production and create additional employment, which is often possible on irrigated land when land preparation activities are accelerated by mechanization.

Trees

Some people, mostly women, go to the forest to cut wood earning only K 1,500 per day, but they cannot do this activity on a regular basis. Collecting wood is prohibited by the Department of Forestry.

Trees are not planted as windbreaks or as community-owned forests. Since the Forestry Act prohibits the felling of trees to obtain firewood, villagers are forced either to purchase firewood or to burn stalks, crop aftermath and bushes, none of which are good replacements for real firewood. Even toddy trees which are no longer in production or are not being tapped because tapping has ceased to be profitable for a given village, cannot be cut down.

Tree cover is substantially unchanged. The only trees which grow in the dry zone are *ta-mar*, *hta-naung*, plum, mango and *koke-ko*. Other than these, ground cover is limited to bushes, grass and weeds. There are also toddy palm trees around the village. As a result of the Forest Department prohibition on cutting, some big trees planted long ago still remain.

Fisheries

No fisheries or aquaculture activities were reported in the qualitative survey.

Communications

Only two of the four non-microfinance villages reported having telephone service. Those which did not reported that people had to go to the city to make telephone calls. One village recently acquired a telephone but since it is close to a town, people still prefer going to town to call from there where calls are cheaper.

The other villages had two or three phones. People's names are called on a loud speaker if there's a call for them or a messenger is sent to track them down. Rates are normally between K 100 and K 200 per minute. But respondents said that charges were arbitrary, and sometimes exceeded these amounts.

Transportation

Villages which are located in close proximity to a town have clear advantages in terms of the opportunities available to residents both in terms of marketing their farm production, in off-farm employment and in small business activities. In any case transport has improved in most villages with an

increasing number of trolley-Gs and motorcycles becoming available in villages to take people and their produce to town much more quickly, easily and cheaply than in the past. Motorcycles also are used for petty trading of a variety of small products. Transport allows villagers to access the bigger markets in rural towns and cities and to obtain better prices for their products.

Even in poor villages where transport is still mostly by bicycles, nearly all households have a bicycle or motorcycle which makes for more efficient transport than in the past. These same means of transport are instrumental in allowing families to send their children to middle schools and high schools which are located in other villages or towns without incurring the costs of having to pay room and board for the children.

With the improvement in transport, people are more understanding about contributing to the maintenance of roads. Even if these are not done once a year, they are attended to periodically and kept in passable condition most of the time. Families contribute to road repair according to their means.

Those operating transport make a reasonable living providing transport services with trolley-Gs. People who own three-wheel motor cycles are able to make K 15,000 per day. Those operating transport services are often able to earn incomes that rank them among the wealthier members of the villages.

Gold and Other Forms of Saving

Villagers buy and save gold if they have money to spare. They do not save in the banks in town. It is easy either to pawn or to sell gold if there is a sudden need for cash. In non-microfinance villages in the Dry Zone almost no one hoards gold or jewelry because hardly any surplus is generated. What few funds they have are reinvested in farming or stored in the form of on-farm holding of agricultural crops whose price is expected to rise.

Moneylenders are usually not found in villages located close to town because if people wish to pawn gold and other jewelries, they find it easy to go to town. Pawning gold is done at an interest rate of 4%-5% with village money lenders. Without gold, the interest rate ranges from 10% to 20%.

Among friends and relatives, money lending is done without collateral based on mutual trust; the loan varies from case-to-case depending on the relationship between the two parties. In some cases no interest is charged; in others an interest rate of between 6-8% per month is charged.

The interest rate on "day-return loan with interest" is 15-20%. However, not much cash is borrowed; simply what is needed to meet daily consumption needs or celebrations.

Some farmers can manage land preparation and have the necessary seeds but are unable to cover the costs of weeding, plowing and harvesting. To finance their crop operations they either have to pawn their farm land and whatever gold they may have, or to take cash advances from the brokers (buyers) through crop payment system (forced sale of the crop at a fixed price after harvest with deduction of the loan and interest). If farm land or gold is provided as collateral, the interest rate is 5%. However the interest rate for pawning gold in Magway town is only 3%. Taking cash advances from brokers, on the other hand, entails paying interest of between 8%-10%. If farmers have an urgent need for a critical and time-sensitive operation such as weeding or harvesting, they have to pay an interest rate of 15% to 20% monthly.

Savings in the form of cash are unusual. However, in one village included in the qualitative survey there are two savings groups. In each group, there are 30 people who save K 200 per week with the objective of having money they could withdraw at times of difficulty to avoid having to borrow.

Rights of women

Women's rights did not appear to be particularly important in most non-microfinance villages. In most focus group discussion and interview notes, they are not mentioned. However, in one village, it was reported that women's views and ideas are taken into consideration in making decisions at the village level. However, the final decision still rests with the community leaders only.

Civil Societies (CBOs) and participation

Few community-based organizations existed in the villages in the past. But now organizations are beginning to form though these are not yet systematically organized. The women have recently formed "Women (like-minded) Savings" group. Men have formed a group for the maintenance of the village water supply. In other villages there are Mother & Child Care, Women's Affairs, Reserve Fire brigade, Fitness group, and other organizations. A main key to the success of these organizations is to select good leadership responsible to the membership and keeping their needs in mind.

Need for Microfinance or for New Loan or Other Products

Mismanagement of a past loan program

The misappropriation of funds provided by UNDP in 1998 to one village led to much ill-will focused on the chairman and the 25 people who defaulted on their loans; financial records were also made to disappear, allegedly in a fire. While they are interested in having access to microfinance, the village has been ashamed since that time to approach UNDP for more help. No other donor has set foot in the village since then either.

Impact of Interest Rates on Business Success

High interest rates are given as the main reason for the poor results of businesses in non-microfinance villages of the Dry Zone. To operate their businesses, people have to take loans at interest rates ranging from 8%-10% per month, rising in some cases to as high as 15%-20%. Residents of these villages are aware that in a neighboring village Pact's MFP provides loans at lower interest rates, resulting in their businesses doing well and their children receiving a good education. They concluded: "In our village also, if we can get Pact money, within 4-5 years, we can develop our village almost like that village."

Health Loan

In one village 4 children and some adults died in recent years because they didn't have the money for treatment. Respondents seek a project similar to UNDP's microfinance loan project that provides loans at lower rates in order to take care of the village's health.

Electricity Loans

Access to electricity is a key element for achieving development. A variety of situations are described in the qualitative survey interviews and discussions which could be resolved by electrification loans tailored to specific needs and advocacy to reduce unnecessary charges for connections. In some cases, villages have established funds for electrification which cover a down-payment on a connection to the government electrical grid and need a loan to cover the remainder. In other cases, residents cannot meet the cost of purchasing the electric meter and other costs required to connect to the distribution system in their village.

In other cases a micro-hydropower system or generator and an entire off-grid electric system would need to be built. Some families might qualify for solar energy loans for single or multiple houses.

Separate from these loans it is important to note that the low levels of business income in non-microfinance villages prevent many members from paying the minimal cost of connecting to generator-supplied electricity even where it is available. Some families are only able to obtain access as a result of remittances.

Livestock Loans

There would be a substantial demand for livestock loans if they were available. Loan terms would have to be tailored to the time it takes to the animal to reach market weight (for pigs, less than one year, sheep and goats only a few months). Lump sum payment of principal and interest at term would be needed. Collateral or insurance would be needed to minimize risks in case the animal dies. Loans for chickens are problematic due to disease problems and lack of feed.

Loans for cattle and buffaloes would be more problematic because of the need for longer terms.

Two-wheel tractor loan

Most land preparation is still done with animal traction in the dry zone and the process of mechanization is just starting. However, the process is unstoppable once it gets under way. Loans to purchase two-wheel tractors would accelerate this conversion. Attention would have to be paid to the possible negative impact of mechanization of land preparation on employment. Offsetting steps would have to be taken to increase the intensity of land use as crop production replaces pasture and to raise employment.

Non-farm business loans

Where villages are located in close proximity to main roads and to rural towns and cities, some villagers will be able to engage in a variety of trading, service and other activities whose profitability will depend on the availability of credit on favorable terms. Introduction of the MFP in such villages is likely to contribute rapidly to family income and to the general development of the villages and the welfare of their residents.

QUALITATIVE REPORT - DRY ZONE (Microfinance Villages)

MICROFINANCE

General Economic Situation

All microfinance villages surveyed report improvement as a result of their access to microfinance loans at reasonable interest rates. In some cases the improvements are reported as slight, in others as substantial. Changes start with improvement in the businesses women run, but spread to all aspects of the local society: economic, social, educational and health aspects. People who could not work due to the lack of capital are now able to do so with loans received from Pact. Due to the provision of agricultural loans, farming activities have increased as has income from farming. These benefits have reached almost the entire community with very few exceptions. The businesses of several members have become successful indeed. Access to land for farming has increased. Some improvement is also noted in housing, access to water and electricity, and command over household assets. People have also bought livestock and productive assets.

Income and Spending

The major business is farming and farmers are better off after the introduction of the MF project. Activities are performed in a more timely fashion, appropriate inputs can be purchased, and yields have increased; these changes lead to increased profitability. Main crops are groundnut, sesame, corn, *pei-di* bean and various other beans. Agricultural loans from Pact have permitted the expansion of agriculture and have made it possible for farmers to adopt appropriate technologies (improved seeds, fertilizer, and pesticides). World Vision provided one village with improved groundnut seed. By the same token costs have fallen as borrowing from Pact is on better terms than from other sources which charge high interest rates. As a result of these changes, profits have risen substantially.

The arrival of Pact has brought about significant change in some villages through improvements in non-farm trading businesses. People are able to sell their farm produce with confidence. Those who had to sell on the streets as street vendors have been able to open shops in their homes. People who had shops are now able to trade in cities. Business expansion brings higher family income. Before only the husband worked; now with the capital received from Pact, women are also able to run small businesses, earn income and contribute to the family budget. Interest charges are reasonable and do not squeeze all profitability out of businesses as the high interest rates (commonly 8%-10%) from other sources did. Many of these businesses would be in a position to manage and make effective use of more capital if larger loans were available from the microfinance project.

Income increase has been sufficient that families are now able to dedicate a larger part of their spending to education than to food consumption. There is also some additional spending on ceremonies.

Food Security

One respondent noted that food security was lacking in the past, remarking: "Before we worked standing and we ate standing as well" (that is, did not have enough food to make it worthwhile to sit down at table to eat). Compared to this state of affairs, people in microfinance villages of the Dry Zone are now able to eat adequately. They do not have a considerable surplus of food, but on the other hand there is no deficit either. People no longer need to spend their time worrying about meeting their food consumption requirements since they have been able to set up businesses of their own instead of depending on the vagaries of casual employment. Where previously they could afford to eat meat and fish only once a week, now they are able to eat animal protein three or four times a week. Those who could afford to buy

rice by the "pyi" (2 kg) are now able to eat in "bag" (50 kg). No significant improvement in the production of backyard gardens is reported; however, seasonal vegetables are produced in housing compounds. Production of other food crops such as groundnuts, sesame, various types of beans, tomatoes, egg plants, chilies, and *thit-sar* flowers, have increased.

After the introduction of the MF project, the number of people who experience a food shortage is minimal. However, casual workers who are poor and have nothing, are still forced to take wage advances from their employers to meet minimum consumption requirements.

Education

Education has improved substantially in microfinance villages. Virtually all children attend school. Whereas in the past they would have finished school after attending the 4th or 5th grades (the highest grades in local primary schools), now most children are able to continue their education into middle school. In the past parents played a balancing act: meeting expenses for food and shelter, finding money to send their children to school, and deciding how long they could attend and when they would have to drop out to help the family with its work. Financial constraints have been somewhat relaxed now with increased profits from businesses and help from microfinance program loans; families now are able to meet competing demand for scarce resources without sacrificing their children's education. In one village in the seven years since the arrival of the MFP, at least 30 people have obtained degrees, 25 of them M.Sc. and B.A degrees. One has become an army engineer and another, an army doctor. At least 20 have become teachers. Others are B.E graduates. Three quarters of the students graduated from the Government Technical Institute (GTI). Their educational attainment is the direct result of microfinance loans, including education loans from the MFP.

More construction of school buildings are needed in microfinance villages due to the increased number of students. New middle schools have sprung up in more villages allowing children to attend without having to leave their home villages. Naturally, having a middle school in the same community reduces the cost of schooling. Residents are eager to contribute to the construction of more schools to the limit of their ability, but still need outside funding to build additional schools. Those families, who can afford to, send their children as boarding students in the city so that they can attend high school and higher education beyond high school.

Monasteries also help with education. After attending the monastery school and after their senior year, children are sent to schools in Mandalay. When they finish, they come back and work as teachers at the monastery school.

In other villages, educational improvements are less dramatic but still substantial. One village in the qualitative survey reported that every single child of school age is in school and that they all continue up to the 7th grade. However, some cannot continue to high school and beyond due to financial difficulties. Those who excel in their classes up through high school are sent to Mandalay to pursue higher education. Not all applicants for educational loans from the MFP are accepted and some are forced to work in order to go to University.

There are no reports of adult education in the villages surveyed.

Health

Access to health care has improved thanks to the MFP. Many villages have a rural health center in the village and a mid-wife. Villagers can also go to better equipped health centers in larger villages and can be treated at government hospitals. Microfinance loans are available for members for hospitalization and

higher incomes make possible dedicating more money to health care expenses. The village gives assistance collectively to non-microfinance members who cannot afford treatment using their own resources. World Vision organizes public health lectures once a month. The nurses from the health department also visit the village on a monthly basis and give injections for protection against measles and polio.

One village reported that no one takes a loan for health because if it is needed when it is a matter of life and death, a member is not eligible if she has two other loans outstanding. Because clients want to be eligible for larger agricultural loans, they are unwilling to opt for smaller health loans even when they are needed. Taking a small health loan may make them ineligible for a much-needed agricultural loan. Criticisms were voiced in the qualitative survey concerning the amount of time it takes to obtain a health loan.

In the Dry Zone, the rules governing the health loans are the following:

1. Maximum loan amount is K 50,000 (some other types of loans such as agricultural and business loans are much larger).
2. Repayment is biweekly in 12 installments payable over a period of 6 months, with no grace period.
3. A health loan counts as a “loan.” A borrower can have a maximum of two loans outstanding at one time including the health loan.

Increased income also allows families to build up reserves (in gold or other stores of value) so that funds are available to deal with emergencies including health care and food shortages. As a result, people are less reticent about seeking treatment than before.

Social Events

Spending on social events has generally increased in line with other categories of spending as a result of increased income derived from business expansion supported by microfinance lending. In one village respondents reported that total expenses for social matters are approximately K 80,000 per year.

Wedding ceremonies

Families who can afford to pay for wedding ceremonies themselves. Where additional funds are needed, they are obtained by *khauk-pyan-kyay* (day-loans from market stall vendors). Each household contributes something to the collective cash gift from the community; those who are able to, give gifts ranging from K 2,000 to as much as K 30,000- K 50,000.

Families who cannot afford an expensive wedding, instead ask for the bride’s hand in marriage with *ga-daw pwei* (exchange of coconuts and bananas) done in the presence of the elders and without holding a wedding ceremony.

Novitiation

Novitiation ceremonies are generally paid for by the families of the novices-to-be. The amount dedicated to these ceremonies has risen from K 300,000 to between K 700,000 and K 3,000,000. Only if their own funds are not sufficient do families take out cash loans through *khauk-pyan-kyay* (day-loans) at high rates of interest and repay from proceeds of cash gifts after the ceremony finishes

Funerals and other Social Activities

There are families which can afford the expenses on their own and which do not accept outside the financial support. However, funeral expenses are generally covered collectively based on financial support from the village. When a person dies, the body is normally kept for 3 days. In the meanwhile, the male and female youth groups collect money for the funeral. Each household in the whole village contributes K 100 each in poorer villages; in richer villages where incomes have risen as a result of microfinance, household contributions which had been in the K 500 K 1,000 range now reach K 10,000 in some cases. The village fund is also used for paying funeral expenses. Families, who do not have many resources of their own, just accept the arrangements made by the village.

Day-loans are generally not taken out to pay for funeral expenses.

Ownership Assets

Housing

All microfinance villages responding to the qualitative survey unanimously report substantial improvements in housing and related them to the positive results of the microfinance program on business. Houses which had been small, one-story with toddy palm leaves for roofs and split-bamboo floors have been replaced with larger, more spacious dwellings, many of two-stories, with corrugated tin roofs and wooden floors. Structural support now is provided by hardwood (*ma-da-ma*) pillars and wooden beams rather than bamboo. Households which still have not upgraded their homes are saving a little at a time to make improvements along these lines described here. Some members of microfinance groups have been able to buy a housing compound and build themselves a house. Housing is not the first focus of microfinance but rather is financed from surpluses available after farming and other business costs have been met. Part of some microfinance loans is used to supplement family savings. A home improvement loan product also exists.

Electricity

There no electricity in only one of the four villages responding to the qualitative survey.

Other three villages have some access to electricity: two with generators and one connected to the Government grid with electricity 24 hours a day.

On one of the villages operating off of generators, electricity is available for 7 hours a day; in the other, only for 2 hours. While the owners of the generators are not microfinance members, the fact that microfinance members are able to afford and to make use of the electricity available is a direct result of their higher incomes derived from microfinance. The cost for a family having one fluorescent light is K 2,100 per month and for a family with one fluorescent light and a TV is K 6,000 per month. In another village, the cost lamp per month is K 1,000. Another village has electricity for 2 hours a day and pays K 2,500 per month to cover the cost of diesel. Any surplus over and above the costs of running such generators is put into the community fund which is available for emergencies and for a variety of other uses.

An additional 30 electric meters have been added to the 85 meters already installed within the village with access to Government electricity 24 hours a day. Those who cannot afford a meter of their own, connect to a house which has a metered connection and pay K 2000 per month for the electricity they use. One advantage of having electricity 24 hours a day is that families seldom use firewood, since most meals and

tea can be prepared using electric hotplates or coils. This difference represents a big savings for the family in terms of the time need to collect firewood or the cost of buying it.

Household Assets

In the village without electricity there are few consumer electronics listed as assets and the perception is that they should not be purchased because they hinder and even distract the family from work. Such attitudes change where electricity is available even a few hours a day; ten percent of the families in one such villages report purchases of TVs, VCDs and DVDs

Where electricity is available 24 hours a day, increased income has gone in part to buy electrical appliances. Whereas in the past there had been only one TV in the village, at present, nearly all houses have basic consumer electronics (TVs, VCDs and DVDs). In addition, about 10 households have purchased refrigerators which require a more dependable source of electricity than that offered by generators. Most villages report an interest in refrigerators but no purchases to date because of a limited and uncertain supply of electricity and the lack of sufficient income.

Water & Sanitation

There has been considerable progress as relates to water supply but also considerable variability among villages with respect to sanitation.

Water

In a few villages water problems persist. But in most villages by now, nearly all households have access to token wells or tube wells with hand- or motorized pumps. In most cases, safe water is available year-round.

Sanitation

However, sanitation is less clear-cut, with safe sanitation more dependent on the intervention of outside institutions than is the case with water where villagers usually take the initiative themselves to secure a secure and continuous supply of water. In some villages, the whole village or nearly the whole village uses fly-proof latrines. In one village UNDP supplied latrines for most but not all villagers. In one village, the reason people gave for not building latrines was that they “take up too much space” and “cost too much to build.”

Another, perhaps more important reason for their failure to build fly-proof latrines, is that people are not convinced that there is any health benefit to using fly-proof latrines instead of just going to the woods to take care of their needs. In one village despite repeated lectures from World Vision and frequent interaction with health professionals, there is still a lack of awareness of the risks of open defecation to community health; thus villagers do not fully understand the need for fly-proof latrines.

Farm land

Farming in Dry Zone microfinance villages is doing very well in general despite limitations on intensification of farm production due to small farm size and the general lack of irrigation. Success in farming is evidenced by increased access to land by those served by the microfinance program. Members are leasing land, buying land, recovering land that they had pawned in the past, leasing land in other villages and buying houses in town. They are in a strong position to make fullest possible use of their land

themselves; the favorable economic situation of members is reflected by the fact that no outsiders are buying or leasing land in the village referred to in the qualitative survey.

The area of labor-intensive crops such as *taing-htaung* tomatoes is expanding. In another village which only has 130 acres, 200 acres of onions and garlic are planted, indicating that most of the land is being double-cropped; a few people are reportedly buying land and others leasing land to do farming. People are also leasing land in other villages to grow beans, sesame, groundnuts, egg plants, chilies, and *thit-sar* flowers. With additional income, people are able to buy more food; by the same token, they also grow more food crops to provide for family food consumption needs. Yields have risen as farmers are able to buy improved quality seeds, to use fertilizer and pesticides and to carry out farm operations in a timely manner.

Livestock Breeding

In the microfinance villages of the Dry Zone, there has been a substantial increase in livestock since the MFP started. This increase has mainly taken the form of draught animals, pigs, goats and sheep, and chickens. There is one village located next to a processing factory where milk is produced commercially. This is the exception, however; if it is produced at all, milk is generally for family consumption but is not produced commercially in most villages.

The increase in the number of animals in comparison to the years before the microfinance project began work is attributable to loans from the program. Draught animals have increased substantially since they are needed for land preparation in an area where almost no one uses tractors. In one village surveyed one or two people hire tractors for land preparation, and they have to bring them in from another village because there are no tractors in the village surveyed.

Chickens have also increased in the number; in one village World Vision provided chickens and technical support. It also promoted the production of earth worms.

No one raises ducks.

Mechanization

While land preparation is still done almost exclusively with the help of draught animals, in some places this approach is changing. Mechanization is just starting. One village reports a gradual substitution into the use of two-wheel tractors instead of draught animals. In that village at least 10 such tractors are found.

Farm Labor

The increased intensity of land use involving complete use of all arable land and double-cropping on those fields where it is feasible has increased the demand for labor. During the period when crops can be grown, family labor faces virtually full employment on most farms. Where high-value, labor-intensive crops like tomatoes, garlic and onions are grown, casual labor from other villages is also finding employment in some microfinance villages. The period December and March is the main production seasons for onion & garlic season and a period of peak employment for casual workers, including some workers who come in from other villages.

Employment opportunities

Increased intensity of agriculture has led to some creation of employment in peak periods of demand for labor which coincide with land preparation and weeding. The main source of employment in the villages is agriculture; non-farm employment is found in a few villages but almost completely absent in many others villages. As a result, during July (*waso*), August (*wa-khaung*) and September (*taw-tha-lin*), almost no work related to agriculture is found and employment opportunities of other types are also almost totally absent. During this period with almost no cash circulating in the village, all kinds of business is virtually paralyzed, and there is no source of income for any purpose, including for paying loans.

Dependent as it is largely on agriculture, the demand for labor on farms in microfinance villages is not constant. When there is no work, young people are forced to go elsewhere to find work. Although parents do not regard the money spent on education as an investment, the remittances they send back do contribute to family welfare and to the overall development of the villages. Not all migrants send back remittances. Some migrate, do so to attend school and finance their education and their own expenses by working. By the time they pay school fees and their own expenses, there is little left out of their salaries. While they cannot send remittances back home, they normally do not need to ask for money from home.

Trees

Some microfinance villages which took part in the survey reported no increase in trees. However, most villages report some increase in trees. Mango and lime trees are grown inside the housing compounds. Toddy palm trees are grown in the farm land (upland) plantations. More trees are planted as the economy improves due to the microfinance loans; previously few people planted trees. In one village an additional factor is the support received jointly from World Vision and from the Forestry Department more generally. The reforestation program jointly implemented by the World Vision and Forestry department has led to increased planting of trees; varieties of choice are *tamar-pin*, *koke-ko*, eucalyptus, and *mei-za-li*.

Fisheries

None of the villages surveyed reported any fisheries or aquaculture activity.

Communications

In the past, communications were difficult for residents of microfinance villages in the Dry Zone. However, in recent years, that has changed. One village reported having 6 telephones in all, a big improvement over previous years, some of them fixed telephones and others CDMA hand phones available. Other villages reported one to three telephones. Consequently, communications is much improved in recent years.

Transportation

Transportation has improved considerably in villages in the Dry Zone since the MFP started. Even in the poorest villages, almost every household has a bicycle even if they have nothing else. The number of motorcycles has increased dramatically in villages which are doing better financially. Troller-G service is available in most villages to take people and their products to town. Besides saving people time over walking, this service facilitates the movement of principal products to major markets where prices tend to be better than in the village; in most cases such service operates at all hours from early morning to night. In a few cases microfinance members own the troller-Gs; more commonly, however, troller-Gs are owned by others but provide much-needed service to microfinance members as well as other villagers.

Many villages are also served by three-wheel motorcycles, and some are served by bus lines or are so located as to have access to train service.

Transport services have broken the isolation of the villages but have not led to the development of large-scale businesses in the villages themselves. They have, however, made it much easier for villagers to get their products to market and to buy supplies for themselves and for the small enterprises they operate in the villages.

Gold and Other Forms of Saving

Microfinance members are able to save more in the form of gold than they could in the past. Savings in the form of gold provide easy recourse to funds through pawning gold at favorable interest rates when the need arises. For loans of less than K 200,000 with gold as collateral, pawnbrokers usually charge 4% per month interest; for loans above K 200,000, the interest rate drops to 3% per month. Gold jewelry for personal adornment is also purchased and can also be pawned or sold easily should the need arise. People buy clothes as well as jewelry. In addition to gold, some people store agricultural commodities both as a store of wealth and in the expectation of price increases.

MFP members are required to participate in compulsory savings as part of the program. There are some reports of non-members starting savings in some villages outside of the microfinance program. Bank savings is extremely uncommon.

Most of the activities financed are agricultural. Farmers find it most advantageous to borrow from the MFP program because the interest rate charged is considerably lower than that which they would have to pay from other sources (commonly 8-10% per month from brokers).

The discipline, respect for obligations and due dates, and a generally more serious approach to business commitments instilled in members by the MFP makes them better overall credit risks. As a result, it is easier for the MF members to borrow than non-MF members; however, this lower risk is reflected in the decision to make a loan or not. Interest rates charged are, however, unaffected whether a borrower is a microfinance program member or not.

Rights of women

Since the Microfinance Program has been in place, women have come to have greater rights and more opportunities. They are now involved actively in social events and funeral matters. They actively participate in discussions concerning civic matters, and most village decisions are made in consultation with women. One woman even holds the village administrative position of a Ten-House community leader.

The greater respect accorded to women in this village is a result of their being involved in serious businesses bringing money into the family coffers as a result of the business they are able to do with microfinance loans. This experience and the responsibility entailed by their obligation to repay the loans leads them to work more effectively. Even women not known for their seriousness prior to joining the microfinance group change as a result of the program and begin working harder and take a more serious approach to their activities.

Civil Societies (CBOs) and participation

In most microfinance villages, the only organization is the one associated with the Microfinance Program. Respondents feel that because they have already learned a substantial amount about organization through

their participation in the Program, other organizations will find it easier to establish themselves in the community which already has a tradition of organization around microfinance. However, in some villages they see the MFP as fulfilling most of their needs and do not see any advantage to forming other organizations.

However, in one community World Vision is also working alongside the MFP. It has been providing support together with a private donor, individual members of the community and the community's women's organizations to build a community building. Respondents attributed the community's interest in donating collectively to its experience with the MFP. World Vision is also contributing school supplies and rice to all students in the village.

In one village, there are also other groups operating: a fitness group and the Pact Health group. For the health program, Pact established a reserve fund so that the people of the village who cannot afford medical treatment can be given grants.

Due to the presence of the MF project, there have been discussions about forming other groups in the village. However, these groups cannot be formed so far.

Need for Microfinance or for New Loan or Other Products

General Considerations

The loan received from the MF project is reasonable in terms of the interest charged and also well-suited for use in business in that it is received in a timely fashion and on the appointed date.

Losses were experienced in the production of sesame (a winter crop) due to flooding which destroyed the entire crop. Since all farmers who planted sesame lost their entire crop, they had severe difficulties repaying their loan. With considerable hardship, many farmers reported taking out a loans from informal credit sources at an interest rate of 20% to meet their obligations on the agreed upon repayment date.

It should be noted, however, that many loans were rescheduled so that farmers could repay later out of profits from subsequent crops. When rainfall or other agronomic conditions make repayment difficult, the MFP normally arranges to reschedule loans on mutually agreeable conditions.

Larger Limits for Housing Loans

The size of housing loans needs to be raised so that the amount provided is sufficient to allow the household to carry out the entire project to renovate or maintain the house to a complete and successful conclusion. Currently, the maximum loan size is limited to K 100,000 which is insufficient to cover the cost of major projects, such as changing a roof from thatch to corrugated tin sheets. This amount is sufficient for only about half the roofing sheets needed to cover a normal-sized house.

Some of those interviewed report the existence of purchases of a compounds and building a houses related to the MFP. Housing loans contribute toward these purchases and subsequent construction of a house though they are not sufficient alone to cover the full-cost, which may also depend on profits from businesses of microfinance members and other sources of revenue.

Loans for a Telephone

Some respondents expressed the need for installing a telephone in the village and finance need to make this possible.

Continuity of Leadership in Microfinance Organizations

Respondents note that membership and activities of the microfinance project is wide-spread. In some villages virtually all those who are eligible join microfinance groups. However, group leaders are changed and appointed once during the election, and once during the provision of loans. Reelection of former leaders is prohibited. As a result there is a certain lack of continuity in the leadership of microfinance groups. The chairman is changed once a year. Respondents also note the constant changes in staff responsible for the MFP in a given village. In general, it is mandatory to change leaders on an annual basis and to assure rotation by excluding them from reoccupying former leadership positions.

There are exceptions, however. In another microfinance village responding to the survey, there has been a considerable increase in the number of members. In this village, there has been no change in the Pact Chairman position who has occupied that position since the program was started seven years ago. The villagers are satisfied with the performance of the Chairman who carries out his work based on his principles and long-standing commitment. The feeling expressed in a number of the qualitative survey villages is that the constant change of leaders and staff is not conducive to good Microfinance Program operation.

Livestock Loans

It was noted earlier that the amount of livestock raising has increased since the start of the MFP. Those interviewed propose the creation of a loan product specifically for livestock raising. Many microfinance clients are already purchasing animals with existing loans but their terms and conditions are not well-suited to the cashflow of projects involving the raising of animals, particularly pigs, chickens and goats. Respondents are also cognizant of the need for veterinary services. If such loans were granted, there would be a need for an Animal Disease Prevention Program. They believe that Pact could arrange for such a program.

Health Loans

Health loans are now an impediment for members who have other pressing borrowing needs. Because the loans are relatively small compared to some other loans (such as agricultural or small enterprise loans), members prefer not to take them because they are not allowed to have more than two loans outstanding at any given time. Health loans are designed to meet emergency situations. If they were treated outside the normal framework so that they do not preclude other types of loans, members would be more inclined to take them when they are needed. Concerns are voiced about the fact that they can only be used in conjunction with hospitalization since the hospital has to sign for the loans.

Big Business and Linkages

Big businesses have not developed in any of the microfinance villages surveyed. However, villagers are establishing better connections with brokers and trades as a result of the larger volumes of products that they have available for sale. Because of the size of the villages and the relatively small volumes and the types of products that they are able to produce, despite the fairly substantial increases which they have achieved, the size of most villages makes the development of large-scale business enterprises within their borders highly unlikely. Strengthening linkages with outside buyers (brokers or large wholesalers) could be the focus of additional work by other agencies or organizations, such as World Vision or local NGOs.

QUALITATIVE REPORT - SHAN STATE (Non-Microfinance Villages)

NON-MICROFINANCE

The four villages surveyed qualitatively were not served by the Microfinance Program.

However, at least one village forms part of UNDP's Self-Reliance Group (SRG) program which has similar goals even though it operates under different modalities. In many respects this village resembles microfinance villages more than non-microfinance villages.

General Economic Situation

In general the economic situation of non-microfinance villages has improved over the past few years. Income has increased somewhat from tea production and the expansion of turmeric production. Isolation, bad roads and poor communication still inhibit the development of the region. Lack of access to finance on reasonable terms is also an impediment to the region's development.

Income and Spending

The main source of income is agriculture. The main cash crop now is turmeric; tea continues to be an important cash crop for many farmers. Groundnuts are also grown as a cash crop in some villages. Fruits and vegetables are also grown for market in some villages. Wheat and beans are also grown. Paddy is grown only to meet family food requirements.

In years of good yield and good price (such as 2010), turmeric is highly profitable and provides a good cash income; in other years (such as 2011), price falls and farmers are left in debt because of the need to take advances from brokers repaid in turmeric whose price is fixed at the time of borrowing at an unfavorable level.

Some non-microfinance villages are able to sell their crops directly in the market in town, increasing their income compared to those which are more geographically isolated. Income from farming is invested in other businesses. For example, some households buy tea leaves from others (in addition to those they produce themselves) and hold the leaves on-farm until prices rise.

Spending is mainly on buying food for storage, purchasing livestock and tea leaves for future sale at (presumably) higher prices, and renovating their houses. Family assets both productive and non-productive are also rising. More is also spent on education and health. Surplus money is also available in most villages for donations.

Food Security

Increase in disposable income has allowed families to store more food and eat better. In some villages, this improvement includes the addition of meat and fish in their diets, which are eaten 2-3 times a week in some villages (compared to once just a few years ago). In other villages meat and fish are still rare, and families depend on seasonal vegetables, beans and tofu as their main sources of protein. The practice of mixing rice with corn to reduce the cost of feeding the family has been abandoned in some places. While there is no food surplus, neither is a food shortage reported in any of the villages. One village has lagged behind others in terms of its food security and other aspects due largely to its isolation.

Education

Higher income has allowed most families to keep their children in school longer (4th to 6th grade), in most cases finishing the highest grade in the primary school located in their village. Continuing on to middle school requires going to another village and high school expenses are even greater. A few families send their children to social welfare schools (*para-hita*) in Yangon. Even the few families able to send their children to town daily on motorcycles suffer due to the poor state of the roads during the rainy season. Few are able to attend high school, and fewer still achieve university diplomas.

One village benefits from UNDP's Self-Reliance Group (SRG) program; as a result of grants from UNDP as well as loans from the SRG program, businesses have improved to the point that families are able to keep their children in school until at least the 7th grade in most cases. A number of children from this village have graduated and gone on to become teachers, mid-wives and government staff.

Health

Health centers are being established in some villages. In others there is only a mid-wife. Local healers are found in some villagers providing traditional remedies. Where medical treatment is not available in the village, people have to go to town incurring costs and in some cases falling into debt as a result of the high cost of treating illness; one respondent reported that treatment in the city was about the same as the cost of buying an elephant. Therefore, people often simply buy medicines off-the-shelf and self-medicate.

Although adults build up resistance due to repeated attacks during childhood, some who do not use mosquito nets still fall prey to malaria. Dengue fever is also reported. Cholera cases and hepatitis is also reported during the rainy season.

Outside organizations focusing on health issues have not intervened in the villages surveyed with health promotion campaigns.

Residents of the village receiving UNDP support through the SRG program are better able to access health care due to their higher income levels. UNDP has also provided some training courses dealing with health issues.

Social Events

Wedding ceremonies

A wedding ceremony costs between K 300,000 and K 1,000,000, with K 400-500,000 being most commonly spent for a wedding. Rice and curry is normally provided by the families of the couple. Villagers cooperate according to their means, at least K 500, with friends giving K 1000-2000 and relatives K 10,000. Relatives also provide gifts in-kind.

Those who cannot afford a lavish wedding, simply ask the elders for the woman's hand in marriage.

In general, people wear better clothing now, often purchased for weddings and novitiations. On average people purchase 3-4 pieces of clothing each year.

Novitiation

Novitiation is usually done with a group of ten people who act as sponsors, contributing on the order of K 150,000. Other estimates range as high as K 5,000,000 to 10,000,000. Others donate the monk's robes donating as much as they are able.

Funerals and other Social Activities

Funerals are handled as collective expenses of the village based on donations according to each family's status and relationship with the family of the deceased.

Ownership Assets

Housing

There is considerable variability in housing among non-microfinance villages. Informants report that in some villages most houses have changed from thatch roof houses to brick houses; in one village the percent change reported was 80%. Where people used to live in bamboo barracks, due to regular income received from tea and other crops, they now live in brick houses with corrugated tin sheets for their roof. This change is seen as a major change in family security and welfare.

However, in other villages little change has occurred. In some villages only 1 or 2 people have been able to change their houses from bamboo-thatch and mountain palm leaves to corrugated roofs. This change is related to the degree to which businesses have improved; where it has, people give repair and renovation of their houses a high-priority.

In villages where income has risen, houses are commonly of two floors, with the ground floor being designed for storing turmeric. Spacious houses are becoming more common. The majority of houses are built with 3 rooms and 16 pillars. Fewer people now live in small houses.

Electricity

More non-microfinance villages in Shan state are fortunate in having access to hydropower. Those that have access to hydropower have electricity all night (6PM to 6AM). In such villages 20% to 55% of the households are reportedly connected to the distribution system.

Others share the cost of running generators to supply their energy needs. However, the majority in such villages depend on candles and kerosene for their lighting needs.

One village where the SRG program is active has a bran-powered generator which produces electricity for 4 hours a night.

Some residents of a village with no access to electricity have installed solar systems.

Household Assets

The accumulation of consumer electronics (TVs, VCDs, etc.) is tied to the increased income and the availability of electricity which is becoming more readily available in recent years. In one village to where more than half of the households have access to electricity, about 30% of households are using TVs. In another village where electricity from hydropower is available, almost every household can

afford a TV and VCD. In this same villages, a few years back only one or two families had TVs and VCDs. In one village, 3 families have even installed satellite dish systems.

To date, in none of the villages surveyed had anyone bought a refrigerator.

Water & Sanitation

Water

In a number of villages UNDP has provided piped water from springs down to local villages; in some cases, pipes extend for more than a mile to convey spring water to the villages. In some cases distribution is from brick-lined ponds and piped directly to the houses. The quality of the water should generally be higher. Furthermore, these gravity systems avoid the high cost and wasted time and effort of hauling water from the mountains which was previously the only option.

One system was rendered in operable due to gold mining activities which polluted the source of the water.

Sanitation

UNDP has provided fly-proof latrines or safe flush-toilet in most villages. (It should be noted that while most villagers used pit latrines before UNDP's intervention, a few had constructed fly-proof latrines on their own.) Local administrations mandate the use of such systems and check to see that they are maintained.

UNDP has also provided some villages with improved stoves to reduce firewood consumption and mosquito nets as well.

Farm land

In some parts of Shan state, villagers still are able to acquire land simply through making the investment of clearing bush and taking possession of the land; average plot size is reported as 4 acres (1.6 hectares). In other places, there is no agricultural frontier left and villagers have only the land that has already been cleared, which is limited in its amount. In such cases, those who can afford to buy land in other villages. Main commercial crops are turmeric and fermented tea leaves, while paddy is grown mainly for on-farm consumption. Beans are grown as a second crop after paddy, making it possible to get two harvests out of the same land area in a single year.

It is reported that every household in the village own on average 4 acres of farmland. This ownership of farm land is not through buying, but the villagers clear the fallow lands themselves. Though life has become easier due to increased income, the villagers are still not in a position to buy houses and land in other places. There is also some leasing of land by those who do not have or do not have sufficient land of their own.

Because of the lack of credit in most non-microfinance villages and the high cost of taking advances from brokers, farmers use low quality turmeric seed which they get from other local farmers and do not apply chemical fertilizer; as a result, yields are less than what they should be.

Livestock breeding

With their increased income, farmers diversify into livestock, raising more chickens and pigs than in the past. Draught animals are a high priority with females being purchased and calves being raised; villagers also purchase carts to go with their draught animals. There are no milk cows.

Some problems are noted with various diseases affecting pigs and chickens. One village no longer practices livestock breeding including chickens and pigs, respecting a decree by the revered village monk (who is himself a vegetarian).

In one village, the increase in livestock numbers is attributed to UNDP's assistance and loans from the Self-Reliance Group (SRG) program.

Mechanization

Livestock raising concentrates on draught cows for farming. There is no one who uses tractors. In one SRG village, the increase in animals is due to the UNDP assistance and loans that have enabled households to purchase and breed animals. No one breeds chickens and ducks.

Farm Labor

Turmeric per season is an expensive crop to grow requiring good quality seed, chemical fertilizer (in most cases) and considerable amounts of labor. During the harvesting season, large numbers of workers are hired and paid K 2,000 with no differentiation between children and adult workers. Those who cannot pay wages in cash, settle the labor fees in a lump sum only when turmeric is sold.

Most villagers earn their livelihood through tea plantation and the cultivation of other crops including vegetables and fruits.

Employment opportunities

Most labor is family labor and few people are forced to migrate to other areas to find employment. One village reported that there was no hiring of workers from outside the village.

However, despite the more intensive agricultural production, 15% of the youth in one village have left to work in gold mining. They send back remittances which are spent mainly on food and house renovation. However, parents do not regard outmigration of youth as an investment for the family, although the remittances do provide additional income for the family.

One village reported other businesses including broom-making, cheroot making, and yarn making which provide considerable employment. These occupations are reported in the village where UNDP's SRG program provides capital for small enterprises.

Trees

Villagers are extending their crop area by clearing second-growth forest. This practice has reduced tree cover and had a negative impact on the environment.

There is an increase in the number of cherry trees due to plantation undertaken as part of the Forestry Department's plan.

In one village pine trees died as a result of disease resulting in reduction in tree cover. Land-clearing may also leave some land exposed to the elements and unfit for reforestation.

Fisheries

Neither fishing nor any aquaculture activity is reported in the villages.

Communications

Communication is a serious problem for villages where telephone service has yet to be established. Lack of communication is reported as inconveniencing people in such villages. However, communication is improving in non-microfinance villages and many villages already have one or more telephones in place. Messengers are sent and people are called to the phone, if anyone tries to reach them. Monasteries often have phones which they make available to village residents.

One informant put it this way: “If only we could have better communication, like having telephones, life conditions would improve much better.”

Transportation

Transportation and communication is improving in the area. However, because of the relative isolation of many villages, road access is possible only during the dry seasons (winter and summer). During that time, access by motorcycles and troller-gs is possible. However, during the rainy season, people from many villages have to walk long distances, take boats and take circuitous routes to get to town. More vehicles and better roads are reported as a priority in non-microfinance villages.

The major difficulty of the village is transportation. Infrastructure for road transport is highly desired by the villagers. Improved transport to town would lead to substantial improvement in the area of education, health and general economic well-being. In particular, there are villages where parent are impeded from sending their children to middle schools because of the state of the roads during rainy season or the need to cross swollen streams on rafts. The isolation of these villages also affects farmers’ ability to participate on even terms in marketing their crops.

Gold and Other Forms of Saving

Savings takes the form of purchases of tea leaves, paddy rice and gold. Tea leaves and paddy can be sold when there is a need for money; gold can be pawned at an interest rate of 4%. No one saves in banks.

Rights of women

In general, there has not been much in the way of empowerment for women and few organizations. Some slight improvement for women in participating in family’s activities and in decision making is reported. To the extent that, CBOs exist in the non-microfinance villages, women’s participation is rather low.

Civil Societies (CBOs) and participation

There are few community-based organizations in the non-microfinance villages. There is the hope that such organizations will be brought in, particularly since no such organizations are currently operating.

Need for Microfinance or for New Loan or Other Products

Those villagers who are able to save, hold their savings in the form of buying and on-farm holding of tea leaves, paddy and turmeric for sale when the price rises or when they are in need of funds. Some also save gold which can be easily pawned and converted into cash when needed. Microfinance loans would be preferable. In the villages where it is not currently operating, considerable interest is expressed in the establishment of the Microfinance Program.

The village main need is for agricultural crop loans. These are needed to purchase agricultural inputs and to improve agricultural operations and to carry them out in a timely fashion. However, villagers are only able to repay their loans only at harvest time. Monthly repayments would not be possible. Even petty trading businesses might find monthly repayment difficult in view of the isolation and limited availability of cash outside of harvest periods.

If the microfinance program were established in villages participating in the qualitative survey, villagers are convinced that they would not have to pawn gold and other assets nor go to the city to get loans at interest rates far in excess of those offered by the program.

QUALITATIVE REPORT - SHAN STATE (Microfinance Villages)

MICROFINANCE

General Economic Situation

The region depends on upland farming. Paddy is crop grown as a first crop to meet needs for rice for on-farm consumption followed by a high-value, labor-intensive cash crop (potatoes, turmeric, onions, groundnuts, etc.). Tea is also grown as a cash crop. Increases in income are derived largely from agriculture and are based on the ability to buy fertilizer and to carry out crop operations in a timely manner and to increase crop area and the number of crops which crops which can be grown each year (crop intensification). Incomes have increased in amounts varying from slight to substantial depending on the village. Increased income from farm businesses is reflected in diversification into other types of enterprises (livestock breeding, trading and on-farm holding of crops, etc), improvements in educational attainment for children, better health care, greater food security, and improved housing and greater ownership of assets. Increased economic activity in the villages has provided greater opportunity for employment reducing the number of people who are forced to migrate in search of work.

Income and Spending

Notable increases in income attributed to capital obtained through the microfinance program (MFP) are reported in microfinance villages in Shan State. The area is characterized by upland farming. Income is largely derived from high-value, labor-intensive cash crops such as turmeric, garlic, onions and potatoes. Paddy is grown as a food crop with various cash crops grown after the paddy crop is harvested. Income from masonry work and carpentry contributes to the income stream of some families. Trading activities have also grown in importance. One respondent reported that “who placed goods on their heads to sell around’ [itinerant traders] are now able to own shops.” Weavers are able to buy yarn when they need it based on loans from microfinance and profits derived from their business. Profits from all businesses have risen because interest charges on microfinance loans are substantially lower than on loans from other sources.

Farming practices have improved as farmers now have funds available from microfinance loans to purchase inputs such as improved seed, chemical fertilizer and pesticides and to meet urgent demands for labor at peak periods and to carry out crop operations in a timely way. As a result yields have improved. Where feasible, intensity of land use has increased and double-cropping is the norm (paddy followed by cash crops). Crop production is now of sufficient importance to attract outside buyers to come after harvest to buy upland crops such as tea leaves, maize and groundnuts. Most village economies are strong enough to support bringing products to the local market every five days on market-day. There is some bartering of main commodities but most sales are for cash. Young people who have migrated to find work in Yangon and Taunggyi send back remittances which also increase income in the villages.

First priorities for spending are shared by food consumption, investment (reinvestment in agriculture or other primary business, investment of profits in other businesses), education, health and social matters. People also dedicate some money to buying clothes. Increased income has permitted substantial increases in spending on education and health. Surplus money is saved.

Food Security

Food security has generally improved as increased income is spent primarily on food. More families are able to eat meat and vegetables than was the case in the past. Production of vegetables from garden plots has risen producing tomatoes, chilies, corn and ginger for family consumption. Paddy production has increased; most produced by villagers is milled to rice in nearby towns and is used exclusively for on-farm consumption (with a small amount of paddy being saved as seed for the following year). Cash from the sale of potatoes and other high-value crops comes in at the time of the year when paddy reserves normally finish. Some people produce *Mon-Yin* (mustard oil) for their own use but most families buy cooking oil. Pig raising has also increased contributing to improvement in the family's diet as additional income and directly with small amounts consumed by the family.

Chronic food shortages credit purchases of rice for most members are a thing of the past; those who still have to borrow face interest rates of up to 6% per month. People generally eat three meals a day; however, families find access to adequate food a bit difficult during the four months of the rainy season (*Ka-son*, *Na-yone*, *War-so* and *War-gaung*) and eat less regularly during those months. Casual workers sometimes are forced to take wage advances from their employers to purchase food in times when there is little employment.

Education

The percentage of children whose families can afford to educate has risen as a result of the microfinance program which has made it possible for families to send all their children to school instead of being forced to send some and not others because of insufficient resources to send them all. Communities often contribute collectively to meet the needs of poor students so that they can stay in school. As a result most children now normally finish the highest grade in the local primary school (often the 4th grade but in some cases as high as the 7th grade). In local parlance children who have finished the highest grade in the local school are said to have "completed school."

For most families, travel is difficult and costs prohibitive for sending children to middle schools in other villages and high schools in town. However, thanks to higher business income derived from microfinance loans and in a few cases the contribution of microfinance education loans, an increasing number of students continue their schooling beyond the last grade level of the local school. In one village 7 children had passed the 10th grade, 12 were attending the 10th grade and 6 had achieved university degrees. In one village located more favorably in relation to middle and high schools, it was estimated that half the students are able to obtain some education beyond primary school. Another village reported that two students had been sent to Yangon for middle school and high school. Educational expenses were estimated to be K 300,000 per student per year for students residing in town to pursue higher education.

Adult educational facilities were not reported in any of the villages forming part of the qualitative survey. Those who cannot read and write are ashamed at having to sign contracts with their fingerprints.

Health

Improvement in health in microfinance villages is also reported and related by those providing responses to the survey, to increased income derived from access to credit at reasonable interest rates. When emergencies arise (complicated birth, accidents, etc.), villagers do not hesitate to send the person involved to the township hospital for medical care. In the case of illnesses, self-medication (purchase of medicine based on the family's belief in what might work) is no longer generally practiced; instead, they send sick people to receive proper medical care. Not every village has a clinic staffed by health professionals, but those in need of treatment go to the nearest town to receive care; in most cases, medical care costs around

K 5,000. Fewer people go to local medicine men (*saya*). In some cases, isolation due to bad roads makes transporting patients difficult during bad weather. Mid-wives normally attend deliveries, charging between K 15,000 and 20,000 for their services; families who do not have the fund available at the time of birth are allowed to pay on credit over time. Microfinance members find charges for health care to be affordable thanks to their higher income. There is a greater awareness and less fatalism with regard to health now that people are in a position to afford proper medical treatment than was the case prior to the advent of the microfinance program. Nurses visit some communities to provide immunizations. A few people have been provided training in health by the Red Cross. One village reported that medical staff had given lectures on health issues. Patients with severe problems requiring hospitalization can access MFP health loans. Dengue remains a problem in some villages and adequate measures to deal with it have not been taken.

Social Events

Social events are reported to have increased somewhat in microfinance villages. After participating in the microfinance program for some time, villagers are in a better position to contribute to the cost of ceremonies and other social activities. For weddings, novitiations and religious festivals, new clothes are normally bought. The cost of these ceremonies is viewed by the community as social expenditures and not as investments.

Wedding ceremonies

Wedding ceremonies cost between K 300,000 and K 1,000,000 with most being contributed by the families of the couple getting married. Villagers provide cash gifts on the order of K 500 to K 1,000 (most commonly). Close friends and relatives give about k 10,000. As a result of these gifts, the families of the newlyweds recover perhaps half of the cost of the wedding. Other gifts (wrapped presents) are also commonly given.

Novitiation

Novitiation normally is sponsored by a group of ten sponsors who each give about K 300, 000 apiece. Tea is served to between 100-300-1,000 people and its total cost can run to K 600,000. Total cost of a novitiation ceremony runs between K 2,500,000 and K 3,000,000. The families who provide the novices-to-be give as much as they can. These ceremonies do not occur every year but are held only when a donor or set of donors emerges. Collective novitiations are held every 3-4 years. Celebrations surrounding a novitiation include song, dance and food and 5-7 days, or more. Novitiations occur more frequently since the microfinance program has been in place.

Families which cannot afford such costs provide the novices-to-be and buy robes and bowls which are offered to the revered monk.

Funerals and other Social Activities

Funerals cost K 500,000. For those who cannot afford such an expense, the village provides for the funeral collectively.

Ownership Assets

Household welfare has improved almost universally among microfinance households. As a result of expansion of existing businesses and establishment of new ones, microfinance clients are able to improve their quality of life.

Housing

Renovation of houses is one of the most visible results of the microfinance. Some improvement is noted in almost every microfinance family. Many houses are constructed out of solid materials: corrugated tin roofs, brick walls, wooden floors and two-stories. Where houses have two stories, the floor on the ground story is made of cement and the upper story of wood. Where these changes encompass most of the houses in the village, they result in the beautification of the entire village; those participating in the survey attribute these changes directly to the impact of the microfinance loans in generating increased income in members' business.

Villages which produce potatoes with the support of microfinance loans take advantage of years of good prices and good yields to renovate their houses. In one such village, one third of the houses are of brick with corrugated tin roofs. Most others have two floors and are built above ground on pilings (stilts). Such houses are quite spacious and offer their owners comfortable surroundings. The kitchen is built on the second floor in order to keep the living area warm during the winter months.

In two of the villages in the qualitative survey only a few families have been able to afford house renovations so far. Those who can, change bamboo thatched roofs for corrugated roofs as the first step in the home improvement process. (Corrugated roofs allow the household to store rainwater, something they cannot do when roofs are made of thatch.)

Electricity

In one village a member purchased a bran-powered generator and now is offering access to electricity to half the households in the village for 3 hours per day at a cost of K 3,500 per family.

One village has no electricity at all and another has three generators.

Another village has a bran-powered generator capable of providing sufficient current for two light bulbs per house, but those wanting to have TVs have to run them off of batteries or buy their own generator. Microfinance members for the most part (in some villages, all in others) connect to the electrical power where it is available since they can afford the monthly charge which ranges for K 2,500 to 4,000. (As a point of comparison, the cost of lighting a home using kerosene lamps is estimated to be K 4,200 per month, so electricity actually saves money besides reducing the risk of fire.)

The village which is most well-off of all the microfinance villages included in the qualitative survey still has no electricity. However, they have estimated the cost of electrification of the village (including street lights) at K 300,000 and have built up a fund for that purpose which has reached K 100,000. Due to the proximity of electrical distribution lines, the cost of complete electrification is relatively low.

Household Assets

Once they have access to electricity, members have an incentive to buy TVs and VCDs, and many of them buy as soon as they have access to electricity. By way of comparison, in the village where there is no electricity only 3 families have TVs and VCD sets which they power off of batteries (which have to be transported to other villages for recharging); in the other where there are 3 small generators, only the families with generators also have TVs and VCDs.

In one wealthy microfinance village where there still is no electricity, few people buy TVs and VCDs because of the inconvenience of having to run them off of batteries. However, one or two people have managed to install solar energy for their homes.

Despite the deficit of electricity, virtually all households have at least a portable radio run off of small batteries.

In one village, villagers used surplus funds to buy cabinets and Buddha statues. Most families had a statue of Buddha in their houses.

Water & Sanitation

Water

During the rainy season, rain water is used particularly by families who've changed their roofing to corrugated tin sheets and are able to collect the run-off from the roof.

A number of villages have springs as their water source; this involves toting water in some cases from considerable distance at a cost in terms of time dedicated to this activity. Other villages have ponds. One village has wells and storage tanks provided by UNHCR. In a few cases, with UNDP assistance villages have piped in water from springs located in the hills above the village.

Sanitation

Most villages now use fly-proof latrines exclusively built by the villagers with materials supplied by UNDP to specifications designed to minimize disease transmission.

Farm land

There is no purchase of lands by outsiders and few land sales within the microfinance villages. Since they are making more money now because of their livelihood activities which are generally quite productive, they are not forced into selling their land. By the same token, villagers rarely have sufficient funds to purchase additional land; however, sales to outsiders were not reported. In some villages there is no leasing of land but land used more intensively in any case because of the availability of microfinance loans allowing people to put more land into production and to use appropriate technologies to maximize income from the land they farm.

However, where good quality land is available, people lease land to gain access to land on which they can produce paddy to meet their family's consumption needs and potatoes as a commercial crop. In one village, fully one third of residents lease land for potato and paddy production paying between K 70,000 and 100,000 per acre per season (double-cropping being practiced). The amount paid depends on the quality of the soil.

People in this village buy land from other villagers in years when the potato price is good; two people reported acquiring land as a result of the large profits they made in growing potatoes (same happens in other countries). There are no land purchases by outsiders. Where good quality of land is available, double-cropping of paddy (for food security) and potatoes for income is the highest value crop combination. Farmers now understand the production technology after outsiders came earlier to another village and lost money growing potatoes because poor quality seeds led to low yields and no profits.

While land sales to people who are not from the village have not been reported, in one village outsiders are coming into the village and planting mango trees on village land. The modality of how these planting are arranged and of how production will be shared between the outsiders and village landowners is not made clear in the qualitative interview notes.

Livestock breeding

One village reports no increase in livestock due to a shortage of fodder to feed them.

However, in general in microfinance villages, livestock numbers have increased, with most of the increase concentrated in draught animals and pigs. Poultry are insignificant in microfinance villages of Shan State. The increase in animals is attributed by survey informants without exception to microfinance loans directly and to the use of profits from businesses financed by such loans. Land preparation is still almost entirely based on animal traction. Those who do not have their own draught animals are forced to hire or to prepare land manually using spades, which is very arduous indeed.

In a few villages, pigs are also raised.

Only one village reports having milk cows.

Mechanization

Only half the villages report any tractor at all in the village, and in those that do there are only one or two tractors. A few people hire tractor services where they exist, but very few choose this option because of the cost which exceeds the cost of land preparation using animal power. There is definitely some movement in the direction of mechanization because informants state that the reason for their failure to acquire power tillers is simply because their resources are not sufficient yet; as that changes, more tillers will be bought and the transition from animal to mechanical land preparation will accelerate.

Farm Labor

Labor demand is met mostly by family labor. As opportunities for employment in the village have risen, fewer people leave the village, preferring to work in the family business. However, at periods of peak labor demand (plowing, weeding and harvesting), casual labor is hired and comes mostly from other villages. The going wage rate for a casual laborer is K 3000 per day. The potato harvest, in particular, requires a lot of workers who are paid this wage for digging up the potatoes.

Employment opportunities

Microfinance loans have led to an increase in opportunities in the villages of the region. People generally prefer to remain in the villages to take advantage of these opportunities, and young people are increasingly able to find employment in agriculture as production intensifies and in other family businesses set up and strengthened with the assistance of loans from the MFP. As a result of the increase in employment opportunities resulting from the microfinance program, fewer people are forced to go outside of the village to find work. Two villages were situated close to a mine and to a cement factory respectively; their favorable location made it possible for young people to find employment doing daily labor as casual workers.

In spite of the opportunities in their home villages, some young people want to see the outside world and go to Taunggyi and Yangon to find work. Others find work in other places; one was reported to have found work in Singapore.

Education does not appear to have played a major role in helping young people find work outside their home villages. Families therefore do not regard education as an investment or an insurance policy for their old age, but simply want their children to have better opportunities than they had and to allow them to find employment in occupations that offer a better life than that found in the daily struggle on the farm.

Nevertheless, remittances are generally sent back to parents or families by migrants and these remittances increase income to the village.

Education not provided as an investment but rather to give the children an opportunity for more rewarding and less back-breaking employment so that they don't have to struggle as their parents have to make a living on the farm. They don't expect a return in the form of remittance sent back to help them in their old age (although this frequently is what the result is).

Many small tea plantations are operated as small businesses and find an outlet for their production in the markets which take place every 5 days, providing some employment on the plantations as well as in selling in these tea leaves markets.

Trees

In most villages, trees being replaced by cultivation. However, the planting of mango trees and tea bushes is attributable in part to MF loans. There is more economic awareness of the need for tree crops and for trees to provide energy.

In one village, there are no sales of forest products and production of wood. Villagers actually have to buy wood from other places. Timber in the form of small trees grows wild in some places but is also obtained from village-owned tree plantation. Certain trees (*thit-yar*, *thit-eh*, and *pin-zane*) are cut for firewood. Deforestation does not occur since many of these trees sprout new growth after cutting. There is no charcoal production.

Fisheries

Neither fishing nor any aquaculture activity is reported in the villages.

Communications

Of the four microfinance villages in the qualitative survey of Shan, only one village has access to telephones. In that village there are 2 phones but neither of them is owned by a microfinance client. Microfinance clients would like phones but cannot afford them yet. Whether or not a village gets a phone depends on telephone company priorities.

Transportation

Transportation has generally improved in microfinance villages of Shan State. One village surveyed is located right next to a major highway and has excellent transportation facilities by motor vehicles of all kinds, including trains, buses, pickup trucks, trucks, troller-Gs (10 of them) and motorcycles (almost one per household). Other villages less well located, depend on bicycles, motorcycles and troller-Gs for transport for themselves and their products. Troller-Gs are especially important for getting products to

towns and day-markets where they fetch higher prices than if sold in the villages. Some places can rely on transport only during the dry season and are unable to reach population centers by road during the rainy season.

Gold and Other Forms of Saving

In the microfinance villages of the region the only formal saving is done by microfinance group members with their group. When people have surplus cash, they buy gold and save in that form, pawning gold when they need quick access to cash. No one saves money in banks due to the high transaction costs of going to bring money for deposit and to withdraw it when needed.

In these villages, when people need a loan, they borrow gold from a friend or relative. When it is returned, they return it in-kind (of the same quality and weight as the gold originally taken on loan). This practice is not reported in other regions.

Rights of women

After the arrival of the MFP, the opinions and ideas of women are given much attention and their opinions are actually sought in the meetings at the community level. Women are the most involved in the trading of farm products. They also play a major role in family care, health and education. Men now give women more opportunities than before now that they constitute a major force in the local economy. In one village there are at least 130 members, who elect a chairwoman democratically every year. It is clear that women's standing has increased because of their command over significant income as a result of the microfinance program.

Civil Societies (CBOs) and participation

Since the start of the MFP, people are more open to forming new organizations in the villages based on the experience which they have acquired in working together in the microfinance groups. It is felt that other organizations will find it easier to come into the villages because of the presence of MFP

Need for Microfinance or for New Loan or Other Products

In Shan microfinance villages, most people do not borrow from other sources since loans from microfinance are seen to be adequate in most cases. Where informal lending is practiced, few changes have taken place and lending is carried out much as it was prior to the microfinance project. Borrowers pay an interest rate of 5% per month if gold is given as collateral; the interest rate on uncollateralized loans is between 8-10 % with no differentiation between microfinance and non-microfinance lenders. Informal loans are normally repaid after harvest.

Respondents concur on the need for more loans, larger loans and need new types of loans. Respondents also support some changes in the way that the microfinance program is run.

New Loan Products

New Agricultural Loan:

Currently people borrow fertilizer and pesticides from input suppliers who charge 2% per month after the first month on fertilizer (no charges on pesticides which have higher margins). MFP procedures require that borrowers repay monthly which given the lack of alternative income sources is difficult. Respondents

seek larger loans with loan terms in tune with the cashflow of the crops to be financed (up to six months). They require this financing principally for the purchase of fertilizer and pesticides.

Electrification Loans

Some communities would be able to finance the electrification of their communities with relatively small loans (K 200,000 was mentioned in one case, where total cost was K 300,000 and villagers had already put aside K 100,000). An electrification loan product catering to this need would be useful. Similar financing might be required in some communities to establish telephone service to improve communications.

Livestock Loans

While many microfinance clients finance pig production out of microfinance loans and through profits on other activities, there is a call for a specific loan product to finance pig production. Such a product would require a loan term of up to one year (since the time necessary for raising pigs varies between 7-12 months) with a lump sum payment covering principal and interest after the pigs are sold.

Program leadership

The general rule is that leaders should be changed annually with no possibility for past leaders either to stand for reelection or to be reelected even after a break. In general this precept which prevents leaders from becoming entrenched and hanging on to their positions forever and stifling the development of new leadership, is honored. There are, however, a few cases reported in the survey where there has been no turn-over of leadership since the MFP started.

The limitation of leaders to a one year term without the possibility of extension or reelection was raised as an issue in one microfinance village. They see this prohibition as having negative consequences for the group. In their view, after members choose an active, well-qualified and well-spoken leader for the group, they are obliged to elect someone else the following year. The continual turn-over in leadership is not in accordance with the wishes of members nor conducive to the development of microfinance in that village.

While recognizing the need to encourage democratic principals in microfinance groups, it might be useful to somewhat relax this rule (longer terms, reelection to positions after a break, etc.) particularly after microfinance has been operating successfully in a village for some time.

Linkages with Outside Businesses

All microfinance villages reported the occurrence of development to a lesser or greater extent. This development has not called forth outside private investment nor has it led to the formation of linkages other than those which already existed between villagers and input suppliers and traders. No big businesses have sought to set up operations in microfinance villages nor have villagers themselves banded together to set up service organizations in support of their activities. Such a development would probably require an outside catalyst in the form of an NGO or commercial organization willing to put in a long-term effort to develop farmer-operated associations or cooperative marketing organizations. As currently operating, the microfinance program makes a substantial contribution to improving income in microfinance villages but is insufficient in size and amount to have dramatic multiplier effects on the economies of the villages in which it operates. In any case, major input supply and marketing operations will probably continue to be located in larger towns which act as transport hubs.