

Post-Nargis Social Impacts

Monitoring: April 2010



A report prepared by the Tripartite Core Group comprised of representatives of the Government of the Union of Myanmar, the Association of Southeast Asian Nations and the United Nations with the support of the humanitarian and development community.



July 2010

FOREWORD

On 2 May 2008, Cyclone Nargis struck the coast of Myanmar. Over two days, it moved across the Ayeyarwady Delta and southern Yangon Division. Those who survived lost their family members, homes and, in many cases, almost all of their belongings. In its aftermath, scores of domestic and international actors, including private citizens, religious groups, local and international aid organisations, ASEAN and its member countries, the government, United Nations agencies, several bilateral donors and others contributed their time, money and organisational skills to assist the people of the Delta.

The success of any post-disaster aid effort depends on how programs respond to and reflect the changing needs and dynamics of affected communities. In order to understand these changing dynamics, the Tripartite Core Group (TCG), composed of the Government of the Union of Myanmar, ASEAN and the United Nations, approved on 9 September 2008 a comprehensive results framework and monitoring system. The framework includes results monitoring, aid tracking and community monitoring. The community monitoring component comprises the Post Nargis Periodic Review, which is designed to report regularly on progress in meeting household and community-level needs in affected areas, and a complementary qualitative monitoring of the social and socioeconomic impacts of the cyclone and aid effort, the Post-Nargis Social Impacts Monitoring.

This report outlines the results from the third phase of the social impacts monitoring (SIM 3), conducted in March-April 2010, almost two years after the cyclone. It builds on research conducted during the first and second phase of the social impacts monitoring (SIM 1 and SIM 2), undertaken six and twelve months after the cyclone in November 2008 and June 2009, respectively, and on the Post-Nargis Joint Assessment (PONJA), which took place in the immediate aftermath of the cyclone.

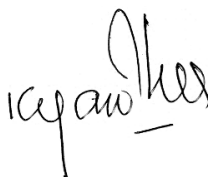
The report aims to understand how Cyclone Nargis and the subsequent aid effort have affected key aspects of social and socioeconomic life in Delta villages two years after the cyclone. It focuses on three areas: aid effectiveness, the socioeconomic impacts of the disaster, and the impact on social relations within and between affected communities.

Many Nargis-affected communities have begun to recover, and the aid effort has made important contributions to the recovery of Delta villages. However, needs remain immense. Lessons from other disasters show that if governments and humanitarian partners fail to sustain assistance before communities have adequately recovered, the successes of any recovery phase may be short-lived. We thus encourage all that have been involved to date – domestic and international actors – to continue to support the vital humanitarian and recovery efforts for cyclone-affected communities in the Ayeyarwady Delta.

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EXECUTIVE SUMMARY

Natural disasters can have profound impacts on the social and economic fabric of affected communities. These evolve over time, responding to the strength of community coping mechanisms, the effectiveness of the aid effort and changes in the wider social and economic environment. As time goes on, the needs and priorities of affected communities change accordingly. Understanding these evolving impacts and needs is vital for effectively delivering post-disaster assistance. To this end, the third phase of Post-Nargis Social Impacts Monitoring (SIM 3) assesses three areas:

1. *Aid effectiveness*: this analyses the recovery effort at the village level as experienced by affected villagers. It examines how much and what types of aid people are getting, needs and shortfalls, how assistance is being targeted and delivered, how decisions are made, and how complaints are resolved.
2. *Socioeconomic impacts*: this analyses the ongoing impacts of Nargis on key occupational groups such as farmers, fishermen and casual labourers. It examines livelihoods, debt and credit and coping mechanisms.
3. *Social relations and institutions*: this explores how Nargis and the subsequent aid effort have affected social capital, the capacity in villages for collective action, group relations within villages (among gender, age, religious and ethnic groups), inter-village relations and relations among villagers and their leaders. It also reviews how local level institutions have changed in the past two years, and their role in shaping recovery.

SIM 3 builds on and uses the same methodology as the previous two rounds of social impacts monitoring, undertaken in November 2008 and June 2009, respectively. It is based on in-depth qualitative interviews, focus groups discussions and key informant interviews involving over 960 villagers in 40 villages in the eight townships across the Delta that were most affected by the cyclone.

Aid Effectiveness

Aid continues to decline, and priorities are shifting

Aid delivery has continued to decline in the Delta. Overall, the sample villages received roughly the same level of aid in the last year that they had received during the preceding six months. The steady decline in aid provision since the cyclone has been accompanied by a significant change in the priorities of aid providers. Assistance in the form of food, shelter and household goods has fallen sharply since the initial relief phase. Over the last year, the decline in credit provision and fishing inputs has been particularly noteworthy. Moreover, researchers found that the number of disaster risk reduction activities has decreased, though there is some evidence that the value of these projects might have increased, due to the initiation of cyclone shelter construction.

Clear priorities have emerged for aid provision

Aid has become more focused on key sectors, with a major emphasis on water and sanitation. Twenty-nine of the forty villages studied received water and sanitation projects over the last year, mostly household drinking water storage

units and latrines. While this has contributed to improved access to drinking water in sixteen villages, seventeen villages continue to face problems.

The other key priorities for aid have been agricultural inputs and community infrastructure. Support for small and medium farmers has been widespread, but there are concerns that the level of aid has been insufficient to make a real impact on livelihood restoration. In the case of infrastructure, many villages now have better buildings than ever, including quality schools, jetties, and cyclone shelters, but overall these public works are not considered to have significantly impacted on improving the daily lives of villagers.

There is a significant disjuncture between aid provision and the needs of certain groups in the community

Overall, villagers expressed a clear preference for three types of assistance: working capital/credit, agricultural inputs and village infrastructure. All groups, apart from the leaders, felt that credit was amongst the two most important priorities, along with livelihood related inputs. The pre-eminence of the need for credit is particularly significant in light of the low and declining priority given by aid providers. Food remains a key priority for labourers whilst fishermen are in need fishing inputs and alternative employment opportunities. These findings highlight the degree to which needs vary within the village, and the challenges this raises in identifying appropriate areas of assistance. Indeed, the correlation between aid provision and needs was far higher for the leaders and farmers than it was for other groups in the community.

Villagers are not being involved sufficiently in aid provision

A large number of providers are involved in aid related activities in the Delta, yet local coordination remains minimal. Aid providers continue to be the main decision makers when it comes to determining both the type of project and the process of implementation. That said, local committees are involved to some degree in delivery, and communities are being encouraged to contribute to aid activities in the form of cash or labour. However, the nature of aid provision shows little sign of change since the previous rounds of the SIM. Relations of accountability between aid providers and the villagers are limited, and there is little evidence of transparency measures working effectively at the community level. As a result, the capacity of formal and informal village leaders to liaise with providers and settle conflicts over aid provision is emerging as an important determinant of aid effectiveness.

Socioeconomic Impacts

There are signs of a recovery in the farming sector ...

Recovery in the farming sector has started. Farmers in almost half the villages have grown both monsoon and summer paddy during the second year after Nargis, compared to only one-fifth during the first year. Furthermore, yields have rebounded on average by over 15 percent across the 40 villages, and villages with increasing yields outnumber those with decreasing yields by over two to one.

This achievement is a qualified success, however. During the 2009 cropping seasons, farmers in two-thirds of the villages studied had to cope with crop diseases, rodent and crab infestations, the depletion of mangrove trees, and soil deterioration due to salt water intrusion. As a result, monsoon yields have reached pre-Nargis levels in only eight villages and in only three cases surpassed them. Villagers in the remaining 26 villages for which comparative data are

available have estimated that output is still over 30 percent below pre-Nargis levels.

... whilst the fishing sector has not fully recovered ...

In a sharp turn over the past year, fishing in the 21 villages with a significant fishing population has experienced a drastic reduction in fish stock, output and employment. Furthermore, most fishermen in the fishing villages studied still have not been able to replace the boats, nets and other gear that had been lost or destroyed during Nargis, mainly as a result of lack of credit. As a result, it is estimated that most of the fishermen have lost their traditional livelihood in these villages over the past year, forcing many of them to become casual labourers.

... and many labourers are facing hardship

The number of labourers seeking employment has increased markedly. At the same time, their employment prospects have continued to worsen due to their dependence on farming; in 24 out of 40 villages farmers reduced their demand for labour especially for maintaining land. Labourers have to rely on doing low-paying "odd jobs" that are insufficient to cover basic household expenses. In fact, in almost half of the villages labourers have become significantly worse off than other villagers during the past year.

Debt continues to undermine the prospects for recovery

The debt dynamics are complex. Two years after Nargis, the average debt by borrower was 5.4 lakh¹ based on a sample of over 600 borrowers in the sample villages. Interest rates have largely remained stable. Although reliable income and expenditure data are not available it can be surmised that, given their uncertain employment situation and earning potential, the debt burden of small fishermen and labourers is the highest in relation to disposable income. Across all occupational groups the average maximum debt across villages two years after Nargis is higher than before the cyclone, with the average maximum debt of labourers and fishermen having more than doubled over the past two years, and that of small farmers being almost twice as high. The poor, thus, carry the greatest debt burden.

Fish collectors, rice millers and big farmers, important sources of credit for small fishermen and farmers, respectively, are struggling financially themselves since Nargis. In all villages, therefore, credit has become noticeably scarcer for smaller borrowers. Consequently, they had to diversify their sources of credit because of limited loan amounts from any one source. In some villages, debt payments are an increasing burden on household finances. However, farmers in particular have gone to great lengths to remain current on at least their interest payments and have been selling their assets in order to do so. In this way they can get additional loans, albeit in smaller amounts. The story of debt in the Delta two years after Nargis is, thus, one of continued asset depletion but not yet of widespread default.

Living with financial duress

For many families in the villages studied, household income from traditional sources is no longer sufficient to cover expenses for consumption, investments, and debt payments. Consequently, nearly all families in the affected villages have employed a variety of coping mechanisms to adjust to the depressed economic

¹ One lakh equals 100,000 kyat.

environment. The most prominent strategy to increase incomes across those villages that have not yet recovered is to do odd jobs, followed by increased seasonal migration (especially in the farming sector), occupational changes (most noticeably for a great many fishermen who became labourers), and, lastly, selling assets (although the loss of land has so far been rather limited). At the same time, in all villages studied, just about every family is using at least three mechanisms to limit household expenditure: reducing food expenses, giving children less pocket money, and reducing health care expenses.

Social Relations and Institutions

Owing to a strong social fabric Delta communities have stayed resilient despite the continued challenges they face. In most aspects of village life, there has been little change over the past year and social relations are good. People in all villages continue to work together in a wide range of development and social activities, and previous tensions regarding aid have largely dissipated.

Gender relations are good and women are becoming more empowered but, economic stress is increasing

There has been a noticeable increase in marriages over the past year. The majority of widows and widowers have remarried, thereby reducing the double burden of carrying their own and their deceased spouse's responsibilities. Aid and the social dynamics after Nargis have led to a gradual shift in women's role in village affairs. A noticeable trend during the past year has been women's increased involvement in village affairs, especially as a result of the requirement of many aid providers to include women in aid-related committees. Two years after Nargis, people are experiencing more stress because of their struggle for livelihoods and survival rather than from directly coping with Nargis.

Inter-generational relations have remained steady but the role of the youth in the aid effort has decreased

The young and old carry out joint social and economic activities and engage in community organisations in almost all villages. The more successful organisations have been initiated and are led by the villagers (rather than aid providers), give equal space to all generations, and reflect the ideas of both the old and the young. Youth continue to play a role in social, development and aid related village affairs. However, compared to the immediate post-Nargis period, their role is less pronounced today and decision-making remains mostly with the older generation.

There have been no further cases of aid targeting only one identity group, and identity-based relations have improved

The research team found no further evidence of identity-based aid targeting since SIM 2. Villages continue to receive aid from religious groups, but other faiths also benefit from it. As a result, previous tensions related to the provision of aid in three mixed villages have dissipated, and intra-village relations across identity groups have improved. Religious leaders have largely withdrawn from the aid effort and other secular affairs and have taken their traditional place in village life focusing on spiritual matters.

Inter-village relations are also good

Two years after Nargis, inter-village relations are good and in a number of cases interaction has intensified further. The most frequent interaction, which occurs in all villages, is for business purposes. Religious interaction has increased during

the second year after Nargis, and villages cooperate in a range of development, livelihoods and social activities. In only three cases did perceived inequality regarding aid affect relations.

There are very few cases of conflict and crime within communities

The number of conflicts within the villages studied is very low, which is another reflection of the high degree of social cohesion in the Ayeyarwady Delta. Community conflicts are usually resolved by the head of the Village Peace and Development Council (VPDC), generally in consultation with informal leaders (village elders and other respected persons). Local leaders are able to resolve most conflicts to the villagers' satisfaction. Petty crime occurs, but its occurrence is neither significant within or across villages nor much increased since Nargis or over the past year. The most common cases reported include the theft of some livestock and some fishing equipment.

Institutions, leaders and villagers

Village leaders play a vital role in everyday life in the Delta. The formal leaders (VPDC members) carry out a number of important functions beyond administration and liaising with aid providers, including mediating social disputes. In most villages informal leaders support them in these tasks, and act as a check on their authority. Some signs of tensions between villagers and their leaders were reported, most of which related to aid provision. However, in only six villages were relations considered 'poor'. Overall, there is little indication that the influx of aid has resulted in a significant expansion in local leadership. In all sample villages the established formal and informal leaders remain the most important decision makers. As a result, the capacity of individual leaders, and the strength of the relations between them, plays a central role in determining aid effectiveness.

SECTION 1: INTRODUCTION

Natural disasters have profound immediate impacts. Lives are lost; shelters are destroyed; assets are damaged or destroyed. Those who survive may face acute health or sanitation problems and food or water shortages. When Cyclone Nargis hit the Ayeyarwady Delta and southern Yangon Division in Myanmar on 2 May 2008, it brought devastation in its wake. An estimated 140,000 people died, and damages and losses were estimated at around US\$ 4 billion.² In its aftermath, scores of domestic and international actors launched a wide-ranging humanitarian aid effort to address immediate emergency needs. The Government of the Union of Myanmar, ASEAN and the United Nations (UN) formed a Tripartite Core Group (TCG) to coordinate this aid effort.

After disasters, the needs of affected communities evolve. As immediate survival priorities recede, disaster survivors start focusing on how to rebuild their lives and communities. Communities develop coping mechanisms to help them deal with the disaster and aid effort, which can have wide-ranging impacts on local socioeconomic structures and social relations. At the same time, new obstacles to recovery can emerge as different individuals and institutions adjust their behaviour in the post-disaster environment. Resource scarcity can increase competition or promote cooperation.

The success of any post-disaster aid effort depends on how programs respond to and reflect such changing needs and dynamics. Since Cyclone Nargis, the TCG has thus developed a comprehensive monitoring system that aims to inform aid responses. One component of this is the Post-Nargis Social Impacts Monitoring (SIM). The SIM aims to understand the changing needs and priorities of villagers, how social relations and socioeconomic life are evolving, and the impact of the aid effort. It focuses on 40 villages spread across the Delta. By focusing on a limited set of villages, it provides in-depth information on how village life is changing post-Nargis and how aid responses can best help Delta communities. It complements the ongoing quantitative Periodic Review assessment work, which measures progress against recovery indicators in a wider set of affected villages.

The first SIM (SIM 1) was conducted in November 2008 and assessed how the disaster had affected Delta communities in the first six months after Nargis. The second SIM (SIM 2) was undertaken from May to June 2009, i.e., one year after Nargis. This report outlines the results of the third social impacts monitoring (SIM 3), conducted from March to April 2010. It revisits the same 40 villages to assess changes during the second year after Nargis. Field observations in a small number of these villages in June 2010 round out the picture.

1. Focus Areas

As with the previous rounds of SIM, SIM 3 focuses on three areas identified through the initial social impacts assessment conducted as part of the Post Nargis Joint Assessment (PONJA), released in July 2008. SIM 3 tracks changes in these areas since SIM 2:

Aid effectiveness: This analyses the recovery effort at the village level as experienced by affected villagers. It looks at how much and what types of aid people are getting, needs and shortfalls, how assistance is being targeted and delivered, how aid decisions are made and how complaints are resolved.

² Tripartite Core Group (2008a). Post-Nargis Joint Assessment. Yangon: TCG.

Socioeconomic impacts in the Delta: This examines the ongoing impacts of Nargis on key occupational groups such as farmers, fishermen and casual labourers. It looks at issues such as livelihoods, debt and credit and coping mechanisms.

Social relations and institutions: This explores how Nargis and the subsequent aid effort have affected social capital, the capacity for collective action, group relations within villages, inter-village relations, relations among villagers and their leaders. It also reviews how local level institutions have changed in the past two years, and their role in shaping recovery.

For SIM 3, the research team also set out to answer whether the aid effort had resulted in any significant changes in the structure of local institutions, whether this has had a positive impact over the last year, and what the implications may be for the future.

2. Method

SIM 3 relies primarily on in-depth qualitative fieldwork conducted between March and April 2010 in 40 villages spread across eight affected Delta townships (see Map A1).³ In all, the research teams interviewed over 960 villagers. There were three rounds of village-level fieldwork: a pre-test in two villages, where the field guide was further refined, followed by two phases of research.

The villages studied in SIM 3 are the same as in SIM 1 and SIM 2 to allow changing conditions to be tracked over time. Villages were originally selected to cover the eight most severely affected townships to ensure that different predominant village livelihoods were included in the sample (in rough proportion to the importance of those livelihoods in the Delta economy), and to maximize variation in the impacts of Nargis and in the level of remoteness, both of which were hypothesized to affect recovery. Four less affected control villages were also included in the sample.⁴

Researchers spent approximately three days in each village. Overall, the teams conducted 149 focus group discussions and 195 key informant interviews. The researchers selected respondents to include a wide cross-section of villagers, including: the village head and other official village leaders; village elders and religious leaders; others who were involved in aid decisions; farmers, fishermen, labourers and those in other occupations; (potentially) vulnerable groups, including female-headed households, disabled or injured people and the elderly; and young men and women. To the extent possible, the researchers tried to get perspectives on the same topics from each group in order to triangulate the information received.

The researchers also collected case studies to provide in-depth explorations of the issues emerging. Throughout the report, these are used to illustrate the experience of villagers in the Delta since Nargis. In each village, the researchers also collected standardized data to allow for comparative village analysis.

³ A more comprehensive discussion of the methodology employed is given in Annex A.

⁴ All four of these villages turned out to have been affected by Nargis, although to a lesser extent than most other villages. One of the farming villages (not a control village) turned out not to have been directly affected by the cyclone.

3. Report Structure

The report continues as follows:

- Section Two: Aid Delivery and Effectiveness
- Section Three: Socioeconomic Impacts
- Section Four: Social Relations and Institutions
- Section Five: Conclusions

In each area, the focus is primarily on changes since SIM 2 was conducted in June 2009. In many instances, it also compares them to the situation just before Nargis.

SECTION 2: AID DELIVERY AND EFFECTIVENESS

This section examines changes in aid provision in the second year after the cyclone. As with previous rounds of SIM, the research is based on data collected from villagers and triangulated from a number of sources. This methodology is designed to prioritize villagers' perceptions of aid as a means to understand the changes in the overall patterns of aid delivery in the Delta.

Aid received by villages has fallen significantly, and support is focused on village infrastructure, water and sanitation, and agriculture whereas villagers require primarily working capital; whatever cash-based assistance has been given or employment-generation activities developed falls far short of the requirement of livelihood restoration. There are important differences between the expressed needs of social and occupational groups. Some of the poorer groups still require food aid, and fishermen require nets and boats; yet both of these types of aid have been reduced sharply in the last year.

The way in which aid is being delivered has not changed significantly from the first year after Nargis. Aid providers continued to play a major role in decision-making and there is little evidence of local coordination between providers at the village level. Despite increased exposure to external providers, key aspects of village leadership have changed little. The village leaders have tended to respond well to the increased pressures they face. At the same time, there are indications that the capacity of village level institutions can have a major impact on aid and aid effectiveness.

1. Aid Received

The level of aid has fallen to roughly half that of the previous year

Aid delivery⁵ has continued to decline. Overall, the sample villages received roughly the same level of aid in the last year as they had done in the preceding six months.⁶ Two villages did not receive any assistance, and a further ten received three or fewer types of aid in the last year.

Box 1: Counting aid in SIM

How are aid levels assessed in SIM? In the first two rounds of SIM it was found that it was hard to quantify precisely the monetary value of aid received at the village level, since villages did not tend to keep detailed records of the value of aid received. However, they did have records of the types of aid received from each organisation, and the levels of aid received within each type varied little across villages of similar size. SIM, thus, used the number of types of aid as a proxy for aid levels, and categorized villages into those receiving 'high' levels of aid (eight or nine types), 'moderate' (six or seven types), or 'low' (less than six types).

In the last year, it was found that villagers were able to provide more details of aid projects, including their source and value, which is likely to be the result of increased awareness and familiarity with aid. This allows for a more detailed analysis of aid provision for SIM 3. In this section, data on the actual number of projects are analyzed, in addition to an assessment of the types of project used previously.

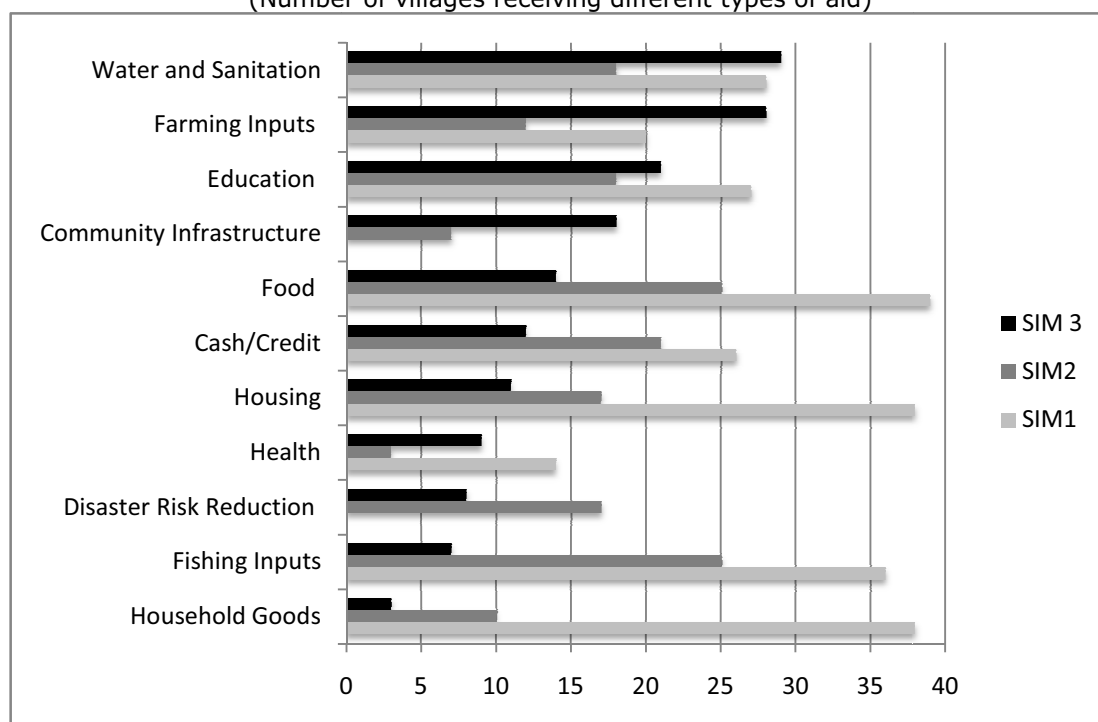
⁵ 'Aid' refers to all types of assistance received in villages, both cash and in-kind and across multiple sectors. In each village, researchers obtained disaggregated data on aid received, broken down by sector and aid provider.

⁶ By way of comparison, total humanitarian assistance to Ayeyarwady Division was US\$596 million (2008), US\$77 million (2009), and US\$25 million (2010); source: OCHA (as of 23 June 2010).

Types of aid

The decline in the overall level of aid has been accompanied by a significant change in the priorities of aid providers. Comparing the first and second year following the cyclone (Figure 1) shows that assistance in the form of food, shelter and household goods has continued to decline steadily. The sizable decrease in support for fishermen and in assistance in the form of cash and credit is significant, for reasons that are discussed below (also see Section 3). After the initiation of disaster reduction activities six months after the cyclone, support has decreased over the last year. Assistance for health has increased, but remains a relatively low priority, and support for education has remained relatively stable.

Figure 1: Changing levels of aid provision
(Number of villages receiving different types of aid)



Note: Cyclone shelters have been included under community infrastructure, as in many cases these are multi-purpose structures.

Aid has become more focused on key sectors, with a major emphasis on water and sanitation

The main priorities for aid providers over the last year have been water and sanitation and farming inputs. Twenty-nine villages received water and sanitation projects in the last year, which included latrines and drinking water storage, most of which are targeted at individual households. Ten villages have received large-scale water storage tanks, which were linked to schools or cyclone shelters, and one village received a water purification plant.

Many of the villages studied have always faced problems accessing safe drinking water, particularly during the dry season, and these problems were exacerbated by the cyclone. Access to safe drinking water was found to be a major concern in the Delta over the last year, especially during the dry season. Increased salination of the water supply was another key concern. Of the 26 villages that received drinking water aid over the last year, ten continue to face problems. Among the villages that did not receive aid, researchers found that half (7) continued to face problems accessing safe drinking water.

Agricultural support is widespread, but the level falls short of need

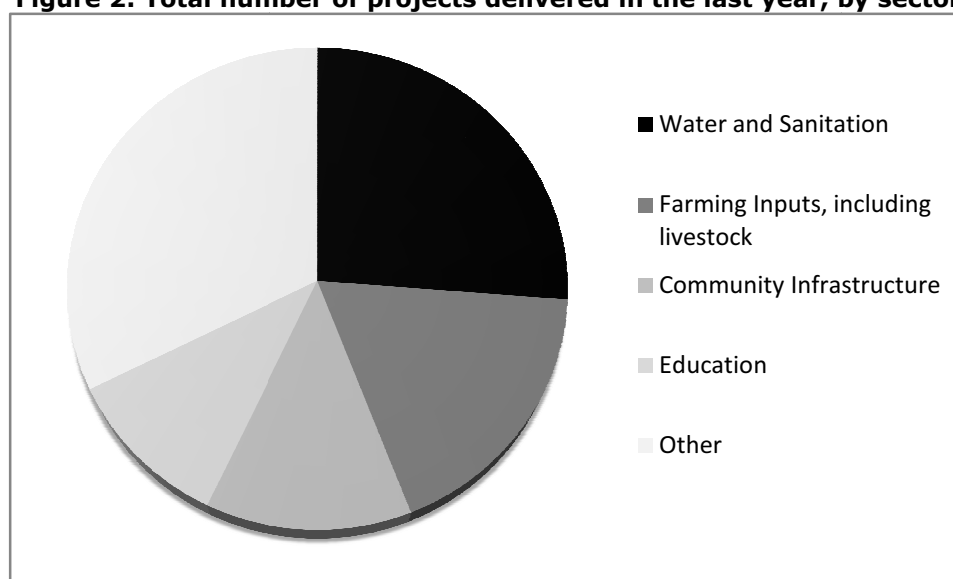
The majority of villages (28) also received farming inputs over the last year in the form of seeds and fertilizer, tillers and other tools, and draught buffalos. Most of this assistance was provided to individuals, mostly small and medium famers. In all villages, the level of support for farmers was found to be limited. For example, where assistance was given in the form of seeds and fertilizer this tended to be sufficient only for two acres, and farmers needed to supplement this with purchases from the market.

The few instances where livelihoods inputs were provided to groups, it was found that disagreements often arose. In cases where farmers were sharing a tiller, there were arguments over transportation and maintenance. In the case of fishermen, low levels of aid meant that nets and boats were shared, as was the catch. While it was necessary to work as a group this did not result in livelihood restoration for the individual members (see Section 3).

Aid provision is focused on a few key sectors

Analysis of the total number of projects delivered in the sample villages highlights the extent to which aid provision is focused on key sectors (Figure 2). Four areas of support comprised two-thirds of actual aid deliveries⁷, and over one-quarter of projects (27 percent) were for water and sanitation.

Figure 2: Total number of projects delivered in the last year, by sector



Community infrastructure accounts for the largest share of aid value

The last year has also seen an increased focus on community infrastructure, which has more than doubled since SIM 2. The focus on rebuilding and developing community infrastructure is more apparent when considering that 19 of the 28 education projects were for building schools, classrooms, fencing or footpaths. Researchers found that 26 projects delivered in the last year were valued at more than 10 million kyat each. Of these, all but three were for infrastructure. Of the 23 villages that received community infrastructure it was found that in five of these people felt their village now had better infrastructure than they had before

⁷ From here onwards, level of aid is calculated according to the actual number of projects, rather than the type of project as used in previous rounds of SIM.

the cyclone. In some cases, new bridges meant the children were able to access the school easily for the first time. Several villages now have large cyclone shelters, though concerns over disaster preparedness remain (Box 2). Many of the SIM villages have experienced 'building back better' in the wake of the cyclone.

Box 2: Disaster risk reduction measures

Disaster risk reduction (DRR) activities have continued in the last year, albeit at a lower level than in SIM 2. In addition to cyclone shelter, the main DRR activities were: trainings, and the provision of equipment for individuals and villages. Common types of equipment include loud speakers and flags to give signal of a cyclone's intensity, watertight floating bags in which villagers could keep their important documents and identification, and radios. In all, six of the forty villages have cyclone shelter, all of which have been built in the last two years. Of these four are multi-purpose shelters, used also as schools or clinics. Only one village has more than one shelter.

Despite the provision of cyclone shelters, DRR aid is not considered effective because anti-cyclone measures such as shelters and re-enforcing embankments are still not enough to protect many who live in the Delta. Even in the villages that received shelters, it was generally felt that buildings are not always big enough for all villagers to take refuge in. Concerns were also expressed regarding the planning of cyclone preparedness measures. One village received three cyclone shelters in the last year, large enough for the village population. However, the lack of a bridge (which had been demolished in order to transport the construction materials to the sites, but has not been rebuilt since) means that villagers living on the other side of the stream cannot easily access these shelters.

Furthermore, collective community initiatives on disaster risk reduction are also considered to be insufficient. Collective community DRR preparedness includes the few elevated main roads observed during SIM 2. DRR committees are found to be active in only one village, and two more were now considered inactive. These committees had been established to take responsibility for communicating and confirming a cyclone alert, disseminating the information in the village, signalling the intensity of the cyclone, and undertaking rescue activities in the village. In terms of individual cyclone awareness, only in highly impacted villages are villagers still highly aware, while the experience of Nargis is increasingly faded for the people in low impacted villages. People in highly impacted villages take several individual preparedness measures: they now listen to the radio regularly; they pack their important belongings and keep them at the safe place; and some tied their homes to strong trees.

Levels of aid vary between villages, but overall it is fairly well distributed

One of the concerns in the earlier rounds of SIM was whether aid was reaching the most affected areas, or whether it was clustered in the more accessible localities. Both were found to be true to some extent, though the spread of aid improved after SIM 1. This trend has continued in the last year, as there is little discernable bias of aid provision based on key village characteristics. Aid is well distributed regardless of whether a village is ethnically mixed or far from a township centre (Table 1). Another possible concern was whether main tract villages receive more aid than others. The data indicate that the opposite is true. Furthermore, highly affected villages continue to receive more aid than less affected villages, but less so than in the first year after the cyclone. As would be expected, larger villages tend to receive a higher level of support. There does, however, remain a wide diversity in terms of the level of aid received by village; which ranges from none at all, to twenty projects over the last year. Some of the reasons for this are explored in more detail below.

Table 1: Distribution of level of aid according to village characteristics

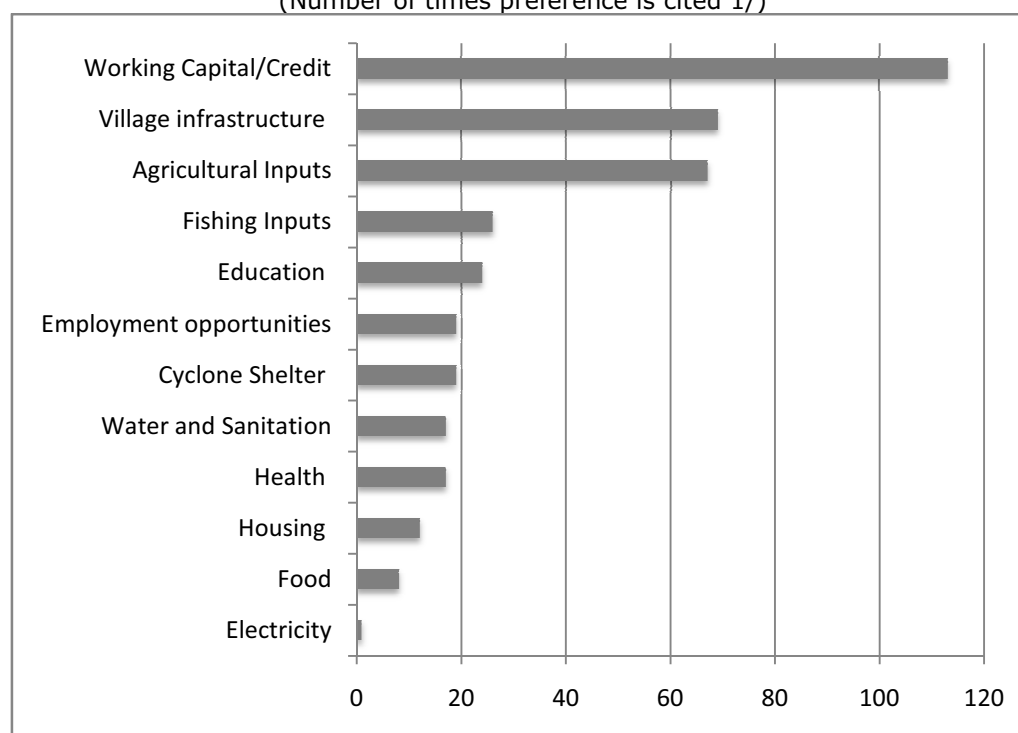
Types of aid received	<i>n</i>	Ethnically mixed	Very remote	Non-tract villages	Highly affected	Largest villages
0-3	13	3	5	7	3	2
4-8	14	2	3	8	5	5
9+	13	4	5	10	8	7
Total	40	9	13	25	16	14

Note: Level of aid is calculated according to the number of types of aid. Large villages have a population of over 1,050. The level of affectedness used data from SIM 1 and includes villages highly and moderately affected by the cyclone.

2. Needs and Shortfalls

Aid priorities change in the second year following a natural disaster, and the extent to which these changes are aligned with the expectations or needs of the villages is critical to aid effectiveness. Assessing need is challenging, especially in areas where villagers are not accustomed to planning their own development. In the previous rounds of the SIM emphasis was given to assessing expressed priorities at the village level, and exploring the extent to which these vary according to levels of affectedness. In this round the researchers collected detailed information on needs from key social and occupation groups, reflecting the fact that levels of recovery vary among different groups within the village, as do development priorities. Analysis has been carried out on the basis of the total number of priorities mentioned, rather than as a ranked list (Figure 3).

Figure 3: Expressed needs of villagers
(Number of times preference is cited 1/)



1/ Needs were assessed through focus groups, where participants were asked to list up to five priorities. This chart represents the total number of citations of a particular 'need', and represents the views of over 740 participants of 144 focus groups (mixed or non-occupation groups are not included).

There is a critical disjuncture between needs and aid provision ...

Analysis of the aggregate needs reveals a clear preference for three types of assistance: working capital/credit, agricultural inputs and village infrastructure. The pre-eminence of the demand for credit is particularly important in light of the low and declining priority given by aid providers. While there has been some provision of working capital, this has been both limited and sporadic. Longer-term credit schemes do exist in the Delta, but are too limited to be effective on the needed scale.

Villagers need credit, to support livelihood recovery and for everyday expenses

During SIM 2 it was found that villagers preferred cash to in-kind assistance as it enabled them to prioritize their varied needs. Over the last year it has become increasingly clear that villagers need working capital both to support livelihood recovery and for everyday expenses. Evidence suggests that aid providers have not yet been able to make a significant impact in terms of reducing the need for cash and credit. The few cases where credit groups have been established since the cyclone underline the fact that in order to be successful, credit based assistance requires long-term engagement and capacity building (see also Section 3).

Demand for water and sanitation is limited, despite the fact many villages still face water shortages

Water and sanitation was not mentioned among the key needs of villagers, and there are a number of reasons for this. As noted above, despite significant investments since the cyclone, access to drinking water remains a problem in many villages, though there is evidence of a significant improvement in some villages over the last year. However, the research team found that villagers felt that livelihood support and credit were far more pressing concerns. One reason for this is that SIM 3 fieldwork was carried out at the end of the dry season, when villagers were expecting the rains. Another is that villagers were able to employ various coping mechanisms to overcome the lack of drinking water, primarily by accessing water from neighbouring villages. The same option does not exist for credit and income. Indeed, the short-term need for income was evident in the number of instances where labourers had sold the water storage containers provided to them to others within the village.

Housing is often inadequate but is not an immediate priority for villagers

In all the villages studied, many people have improved their homes over the past two years, for the most part using their own means, but to a limited extent also thanks to housing aid. The quality of housing today is better than immediately after Nargis when villagers erected simple structures with whatever materials they could find. However, on the whole, today's quality remains below that prior to Nargis and most houses would not be able to withstand a similar cyclone.

Overall, it is estimated that around 150,000 families are still in need of adequate shelter in the cyclone-affected areas of the Delta.⁸ Across the sample villages, about 60 percent of families continue to live in poor housing conditions. At the same time, housing assistance in the villages studied has dropped sharply since the period immediately following Nargis. Nevertheless, during SIM 3, villagers did not include housing among their expressed priority needs. These findings suggest two things: first, that villagers do not have sufficient means—on their own or

⁸ UN-Habitat, Shelter Recovery Two Years after Cyclone Nargis, June 2010.

from aid providers—to improve the quality of their homes; and second, that adequate housing is of lesser importance compared to earning one's living.

There is concern over both the amount and quality of agricultural inputs

Farming inputs remains a key priority, not only for farmers but also for women and labourers. Agricultural inputs have been provided in most villages but at a relatively low level. Seeds and fertilizer have tended to be given in small amounts to all small and medium farmers in a village. Regarding livestock, aid providers targeted a smaller number of beneficiaries, though some effort has been made to ensure that benefits would eventually reach a wider group by requiring recipients to provide a buffalo to another farmer after one year. While the quality of seeds and fertilizer was generally considered to be good, a number of concerns were raised regarding buffalos, many of which were brought from a different agro-climatic zone, or simply were in ill health from the time of delivery. These were not new concerns, but in SIM 3 it was apparent that the poor quality of draught cattle was seen by villages as the fault of the middlemen who were contracted by agencies to deliver them, rather than the aid providers themselves. Concerns of the type of fishing nets that are delivered to fishermen persist, although less often during SIM 3 due to the overall decline in aid for fishing inputs.

Needs vary considerably within the village

A very different picture emerges when disaggregating the needs expressed by key social and occupation groups (Table 2). The leaders rank community infrastructure, as most highly, yet this was not true for any other group. Equally important, the leaders did not mention working capital and agricultural inputs as key priorities, and gave more emphasis to water and sanitation, health and education. All other groups expressed the need for credit/cash among the top two priorities.

Table 2: Expressed priorities for social and occupational groups
(Ranked according to the total number of times cited)

Rank <i>n</i>	Leaders 66	Farmers 269	Labourers 207	Fishermen 134	Women 65
1	Infrastruc- ture	Agricultural inputs	Cash/credit	Fishing Inputs	Cash/credit
2	Health	Cash/credit	Agricultural inputs	Cash/credit	Agricultural inputs
3	Water and sanitation	Infrastructure	Food	Employment opportunities	Infrastruc- ture
4	Education	Cyclone shelter	Infrastructure	Infrastructure	Education
5	Agricultural inputs	Water and sanitation	Cyclone shelter	Cyclone shelter	Cyclone shelter

Note: Information on preference was recorded in focus group discussions with homogenous groups. Preferences of big, medium and small farmers have been combined, as have been those of medium and small fishermen. Respondents were asked to list all priorities, and ranking was carried out on the basis of the frequencies of responses for each group as a whole.

Overall, the gap between needs and the provision of aid is smaller for leaders and farmers than it is for labourers and fishermen. Food remains an important priority for labourers. Fishermen expressed a need for alternative employment opportunities, but require inputs for livelihoods, nets and boats, above anything else. Health and sanitation are not considered as high priorities for villagers, whilst women expressed the need for assistance for education provision as well as for access to credit.

There are two important implications of these findings. The first is that, two years after the cyclone there has been some considerable success in terms of rebuilding infrastructure and even enhancing village facilities; yet rebuilding livelihoods remains a significant challenge. The clear overriding need is for cash and credit to rebuild traditional livelihoods, as well as a need for new employment opportunities among some groups. Secondly, the needs of different occupational and social groups vary considerably. This research shows that assessing needs requires intensive consultation with different groups within a village, as the views of an influential minority may be misaligned with the preference of other groups in the village.

3. Aid Decision-Making, Delivery and Targeting

Given the significant disjuncture between aid provision and articulated needs of some groups within the communities studied it is important to better understand the ways in which aid is delivered, from both the perspective of the structure of the aid sector in the Delta and the relationship between providers and the community. Two years after the cyclone, villagers have become more familiar with the presence of aid providers and there is a general increase in awareness of the sources of aid and the way in which it is managed. This enabled researchers to collect more detailed information on the aid providers than was previously possible, as in all but a handful of cases villagers were able to give specific details of the agencies responsible for projects in the village. While this could suggest that aid providers have become more effective in sharing information on projects, the analysis below suggests otherwise.

A diversity of aid providers are operating in the sample villages ...

Sixty-one different aid providers were involved in delivering aid in the 40 sample villages during the last year. Of these by far the largest group was international non-governmental organisations who were responsible for 56 percent of the total number of aid deliveries in the villages studied. The next largest groups of aid providers were local non-governmental organisations (19 percent), followed by multilateral international organisations (16 percent). Religious organisations⁹ and private donors played a relatively small role in aid provision. Villagers tended not to include government-financed activities when discussing aid, possibly because the main thrust of government support has been at the township or area (rather than the village) level where it financed larger infrastructure works, such as roads and bridges connecting villages to township centres that could be used as cyclone evacuation routes.

Table 3: Number of aid deliveries in the last year

Type of non-government aid provider 1/	Number
International non-governmental organisations	151
Local non-governmental organisations	51
Multilateral agencies	45
Private donors	6
Religious organisations	4
Total	269

1/ Multilateral agencies consist mainly of United Nations agencies. Bilateral support tends to be implemented in partnership with international and local non-governmental agencies.

⁹ These figures underplay the importance of Christian organisations as aid providers in the Delta, as many have registered, and are identified, as non-governmental organisation. This is not the case for Buddhist and other religious groups.

... yet continuity and coordination are limited

The number of aid providers operating in each village varied significantly across the sample villages. Two villages had no aid provider in the last year, the highest was nine, and the average was three (Table 4). Despite the fact that many of these aid providers have been operating in the Delta for two years, research found that aid providers had developed a long-term village level engagement strategy in only four villages. A further ten villages have been supported by the same aid providers on a relatively continuous basis since the cyclone. In the remaining 26 villages aid providers have 'come and gone', delivering projects on a sporadic basis, with no defined engagement with the community.

Table 4: Number of aid providers per village

Number	Frequency	Percent
0 to 1	11	27
2 to 3	17	43
4 or more	12	30
Total	40	100

When agencies come to a village to carry out an assessment, it is not always clear what they are planning to provide. More importantly, villagers have no idea what aid is likely to be delivered in the coming months.¹⁰ The research team found no evidence of coordination between aid providers who had delivered aid in the same village during the last year.

Aid providers continue to play the major role in decision-making ...

There is little evidence of a significant change in the relationship between aid providers and villagers since the earlier rounds of SIM. As before, aid providers play a major role in implementing projects, at the village level, and in 177 of cases (66 percent) aid providers were reported to be the primary decision makers, determining both design and allocation of aid. Of the remaining projects, only in 18 (7 percent) was decision-making primarily vested with village representatives, and in the remainder of cases aid providers made decisions along with village leaders or local committees. One reasons for this could be that aid providers are tied to delivering specific projects. There are however some good examples of where improved project outcomes were the result of local flexibility in project management (Box 3).

Box 3: Making the most of aid projects

An NGO provided a jetty to one village. The cost of the project was calculated as 13.2 million kyat. After the jetty was built, there were some extra cement, gravel and sand left. The leader of the Village Peace and Development Council (VPDC) asked the NGO staff to allow them to use the remaining materials to renovate a village path. The NGO staff agreed, and the VPDC leader decided to carry out work on a main village path that provided access to the school, VPDC office and hospital. However, the materials were not sufficient to complete the entire path, so it was decided that the households living nearest the path should contribute labour and materials for 10 feet of path per household. In this way, the village got a new jetty and a new main path as part of the project.

¹⁰ This research was carried out in the weeks before planting for the monsoon season. Many farmers were expecting seeds to be delivered, but were not sure when or how much.

... yet communities are involved in delivery

Despite the perceived dominance of aid providers, there continues to be an effort to develop community capacity to participate in project design and management. Four out of five projects (81 percent) were delivered, at least partially, in conjunction with a village level organisation. In half of these cases the aid provider operated in conjunction with a *multi-purpose* village level committee, normally the aid or village development committee (Table 5). The remainder of projects was delivered in conjunction with *single-purpose committees*, either formed by the provider or by the villagers with a specific role overseeing aspects of development, like education or village infrastructure.

Table 5: Common modes of delivery by aid providers

Delivery mode by non-government provider	Village level committee	Village sub-committee	NGO committee
International non-gov. organisations	59	33	22
Local non-governmental organisations	21	4	14
Multilateral agencies	20	10	6
Private donors	3	0	0
Religious organisations	3	0	0
Total	110	48	43

Note: Seventeen cases were delivered in conjunction with other types of local committees, including religious groups and private organisations.

Local leaders are key drivers of development in the village

The research team found that NGO committees that had been established more than one year ago remained active in nineteen villages, and ten of these included representatives from the Village Peace and Development Council (VDPC).¹¹ In all villages the VPDC was found to play the main role` in liaising with aid providers, though in a number of cases other members of the local leadership, including religious and other respected persons, supported the formal leadership (see Section 4).

As a result, the role of village leaders has increased considerably since the cyclone, as has the pressure exerted on them by both external aid providers and the villagers. On the whole, leaders were responding to these challenges well. Yet despite the importance of village leaders in accessing and managing aid, there has been little support offered by aid providers to develop the capacities of local leadership. Instead, there has been a tendency to threaten to withdraw aid from the village unless local leaders can solve their problems themselves.

Researchers found one example where the threat to withdraw aid resulted in leaders acting effectively to resolve issues of beneficiary selection (see Box 4). In two other villages, aid projects were actual withdrawn. In one case, the aid provider brought material to the village to build a bridge, but as it was peak agricultural season there was no labour available to contribute to the project and the aid provider took the material away. In another, a disagreement between village leaders and the head mistress over the location of a proposed pond led the aid provider to take the project elsewhere. While the actual instances of aid withdrawal are rare, villagers in seven other villages mentioned that they were concerned that aid projects could be withdrawn if the community did not engage effectively.

¹¹ Overall, about 90 percent of the committees in the villages were aid to be active, though most do not have any finances or authority.

Box 4: How village leaders solved an aid complaint

In the early months of 2009, an aid provider planned to provide 22 houses in a certain village. The aid provider determined the criteria for the beneficiary selection. The aid committee, led by the VPDC leader, decided on the beneficiary selection. However, most of the villagers were discontent with the aid committee's decision thinking that there are people deserving the aid rather than the beneficiaries selected by the committee. Regardless of the villagers' disagreement, the committee submitted their selected beneficiary list to the township level office of an aid provider and that office endorsed it. According to the procedure of the aid provider the preliminary list was put on a notice board for seven days so that any villager could lodge a complaint. Then, one person complained to the aid provider's head office in Yangon. As a result, the township office pressured the aid committee leader (VPDC leader) to solve the problem, and warned that failure to do so would result in all aid being stopped. At this point, the members of the village tract committee requested the village elders to review the beneficiary selection. The elders took off some beneficiaries who were related to some VPDC members and included other more deserving beneficiaries. The villagers accepted the list selected by the elders and the aid was delivered in November 2009. Since then the VPDC members who were formerly actively involved in aid affairs have withdrawn gradually.

4. Community Participation in Aid Delivery

Mobilizing communities to contribute towards the cost of local development activities is widely understood to be an important means to enhance community ownership over local development projects, and thereby further sustainability. Managing community contributions to externally funded project successfully does, however, demand significant investment in terms of community mobilization that is challenging in a post-disaster context.

In SIM 2 it was found that contributions to local development had increased since the previous round of monitoring. In SIM 3 the team found that the use of contributions continued, and that roughly one-quarter of the projects were implemented through community contributions (22 percent). The most common form of contribution was in labour (12 percent of projects) and less in cash (8 percent).

In SIM 2, the research team found that most villagers reported that the burden of contributing to projects was low or modest; the same was true in SIM 3. Villagers found it relatively easy to mobilize contributions and generally felt that this was a reasonable expectation. Consequently, the overall rather limited community contributions are a reflection on the limited requirements of aid providers rather than on the capacity or willingness of villagers to share project costs. There are, however, a number of facets to this issue that the research team encountered.

Mandatory contributions to projects can exclude the poorest groups and villages

In a number of cases villagers were willing to mobilize labour for community infrastructure projects, but the timing was not planned in consultation with beneficiaries. In one extreme case, villagers had agreed to contribute labour for the construction of a village road, but the plan devised by the local NGO coincided with the peak demand for agricultural labour. As such, the villagers were finding it difficult to meet the delivery milestone that had been set. While this was an isolated example, it serves to highlight the need to design community engagement in consultation with villagers, and the need for flexibility on the part of providers.

Where contributions in the form of cash were required, villagers faced significant problems in mobilizing contributions in time, and in six cases village leaders and other well-off persons came forward to pay the contribution on behalf of the

'community'. In most cases, leaders were aware that mobilizing contributions would take time and could create tensions in the village. There are two important implications of this. The first is that allocation of contribution-linked projects might be biased towards those villages where the leaders are in a position to pay on behalf of others, and that this is especially the case where the aid project does not allocate sufficient time for community mobilization (see below). Secondly, in the process of seeking to bring aid to the village, the leaders might be shouldering a burden, or be placed under pressure that could undermine community capacity (Box 5).

Box 5: Bearing the burden of contributing to a project

A pre-school was built financed by an aid provider with the contributions of villagers. The aid provider provided 63 lakh (1/) and the village had to contribute 35 lakh. The aid committee collected 10,000 Kyat from the small and medium farmers and 12,000 kyat from the big farmers and other well-off people in the village, including the villager formal and informal leaders. The committee led by the village formal leaders did not collect money from the poor. However, the total contributions did not reach the target. So, the chairman of the aid committee assumed some of the remaining cost. Still, the committee could not pay the carpenters and suppliers of construction materials. The chairman called a meeting on this matter but the other aid committee members did not come to the meeting knowing that they would have to share the burden of the debt. The carpenters and suppliers still have not been paid in full.

1/ One lakh equals 100,000 kyat.

Mobilizing contributions for individual aid was generally found to be easier than for public goods, as the individual stood to gain directly. The requirement of an individual contribution also makes the task of beneficiary selection and targeting more effective, and only those people who are genuinely interested will come forward to request assistance. However, in certain cases it was reported that the requirements for a contribution excluded the poorest groups in the village, who were unable to mobilize cash in time. While it was not possible to collect detailed information of beneficiaries, discussions with the poorest groups in the village in a number of villages indicate that they felt they were not able to access assistance due to their inability to contribute.

Villagers continue to undertake community initiatives

Villagers continue to undertake self-initiated development activities, but there are little signs of any significant increase (see also Section 4). Researchers found that 34 villages had undertaken some form of community initiative in the last year. Most of these activities were limited to road renovation, pond cleaning and repairs of religious buildings. These kinds of activities were commonly undertaken in the Delta, even before the cyclone, and there is no indication of any changes in the prevalence of such activities in the past year. In the six cases where 'normal' community activities were not being carried out, this was due to a lack of interest on behalf of both the leaders and villagers in collective activities. In two cases, the leaders had tried to mobilize a community initiative, but people were not forthcoming.

Large-scale community initiated activities had been implemented in eight villages in the last year. The most significant activity was the construction of a new bridge costing 450,000 kyat, which was paid by a group of local leaders and businessmen. In another case, the leaders from two villages joined together to build a bridge connecting villages. Such cases are important in that villagers can play a vital role in addressing gaps in aid provision. Six out of these eight villages

had not undertaken similar activities before, which indicates an increase in 'large scale' community initiated activities since SIM 2.

5. Transparency, Aid Equity and Complaints

In a context where exposure to aid has increased, but the level of support is decreasing, one would expect that villagers, especially their leaders, would become more assertive in terms of requesting assistance from aid providers based on their own priorities. It could also be suggested that the demand for transparency in and awareness of aid provision would have increased among villagers.

Cases of villagers demanding aid are rare

Researchers found little evidence of increased demand from villagers. Only in six villages had leaders approached aid providers to request specific types of assistance in the last year. The general tendency is to wait for the arrival of aid providers, and to accept any assistance that is being offered, as was the case in the last rounds of monitoring. One possible explanation for this is that aid providers do not encourage or respond to requests from villagers, as on the whole their engagement is sporadic and project based. As mentioned above, village leaders are also aware that providers are likely to withdraw aid if they do not conform to the demands that are placed on them, for instance in terms of beneficiary selection. Given the overall decline in the level of aid, this could act as a disincentive to pro-actively engaging with providers. Another explanation is that Delta villagers do not have enough experience working with aid providers so as to know how to request aid.

Transparency measures are found to have limited effect

During the previous round of SIM it was recorded that there was some increase in the provision of information to promote transparency, mostly in the form of public meetings. Researchers found little further improvement in terms of the promotion of transparency, and the effectiveness of the measures that had been put in place. As in SIM 2, the research encountered examples of 'good initiatives', like the placement of complaints boxes or notice boards in the village by providers, but little evidence that these provisions were being used effectively by the villagers.

While there were some allegations of misuse of funds by village leaders, most of which related to beneficiary selection, formal complaints were rarely lodged. Indeed, in the small number of cases where issues were raised publically, these tended to result in grievances being lodged outside the village, either to the head office of the aid provider or the township level authorities, rather than being resolved through village level processes. Where these 'extraordinary' demands for transparency were used, the accused leaders tended to withdraw from active involvement in aid management rather than leading to improved aid delivery.

Providers have tended to limit the degree of local discretion

The threat of social conflict and the potential withdrawal of support by aid providers were found to be a major disincentive for demanding transparency. Another is the practice of aid providers, which is little changed since the early stages of the relief effort. Rather than encouraging greater discretion among communities, aid providers have tended to continue to use strict allocation criteria and project based assessments to select beneficiaries that aim to limit the potential for disputes. While this approach could potentially result in greater

transparency, the research team was told that the final selection normally took place outside the village based on the information provided by the leaders. Indeed, in many cases, leaders are not aware of what, or how much, aid would be provided following an assessment.

Two other common practices by aid providers were found to limit the need for transparency. The first is the tendency to target occupation and social groups and deliver equal benefits to all eligible members. An important example of this was found in the case of drinking water storage pots, where two pots were provided to all eligible households. Another was the provision of working capital for small and medium farmers, at a low level to a large number of beneficiaries. The second delivery strategy that restricts the scope for accountability is the use of contractors to deliver larger public goods, especially for the construction of cyclone shelters and jetties. In such cases, villagers had little or no knowledge of the specific details of the project, and therefore were unable to play a role in monitoring implementation.

Conflicts tend to be limited to individual goods, which are valued more highly than public goods

The demand for transparency is determined by the degree of value attached to aid. Researchers found that villagers tended to attach far more value to individual benefits than public goods, like community infrastructure. When asked what aid they had received in the last year, it was common that villagers (especially non-leaders) would not mention public goods until prompted. It is, therefore, unsurprising that the demand for transparency for larger scale projects tends to be limited, and that disagreement tended to be around private benefits.

Of the total of seven formal complaints about aid delivery that the research team heard of during this SIM round, only one related to the implementation of public works. Two complaints related directly to the allocation of individual benefits, and three were complaints against the contractors or aid provider. In one case, the villagers lodged a complaint regarding their villager leader, who is alleged to have collected money from 30 fishermen on the promise that he would organize loans for them, which he then failed to do.

SECTION 3: SOCIOECONOMIC IMPACTS

Overall, the SIM 2 research found that while villages had often been able to re-build basic infrastructure and re-start some livelihoods activities, the socioeconomic conditions of the Delta were still challenging. Three main themes could be observed. First, there had been little progress overall with livelihoods recovery. Farmers, fisherman, casual labourers and small business were still struggling to recover. Second, household indebtedness continued to rise. Many households who faced the risk of a debt trap in SIM 1 were now in a debt trap. Credit remained scarce, which made it difficult for households to recapitalize. Third, the inability of households to repay debt and the lack of progress with livelihoods had begun to affect land ownership and use. Many large-scale farmers had become small-scale farmers; and many small-scale farmers had become casual labourers.

Two years after Nargis, the economic situation in the Ayeyarwady Delta remains grave, with different socioeconomic group experiencing different and changing predicaments. There are signs of a recovery in the farming sector with both yields and farm gate prices rising. However, yields in almost three-quarters of the villages studied still remain below pre-Nargis levels, and without further assistance, the recovery may be short-lived. Fishing in the 21 villages with a significant fishing population has experienced a drastic reduction in fish stock, output and employment over the past year. It is estimated that 90 or more percent of fishermen lost their traditional livelihood in these villages. The number of labourers seeking employment has increased markedly; they have to rely on doing low-paying "odd jobs" that are barely enough to cover basic household expenses.

The level of debt has continued to rise especially for small farmers, labourers and fishermen. At the same time, the overall availability of credit has further declined, forcing many villagers to borrow from multiple sources. Repayment problems exist in those three quarters of villages that have not recovered to pre-Nargis levels. However, farmers in particular have gone to great lengths to remain current on at least their interest payments and have been selling their assets to do so. As a result, only four villages were found to be in severe debt distress. Villagers throughout the villages studied have had to adopt a multitude of coping mechanisms to increase their incomes and/or reduce their expenditures. On the whole, economic recovery in the area affected by Nargis hinges on the revival of agriculture which at this moment is an uncertain prospect.

1. Livelihoods Recovery: Uneven Progress

Farming

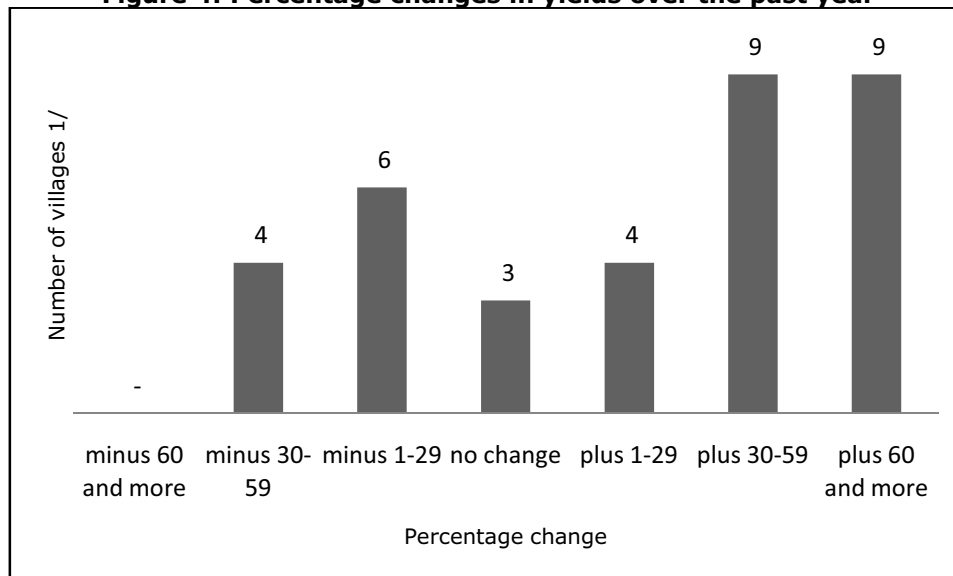
Recovery has started ...

Recovery in the farming sector has started. Farmers¹² in almost half the villages have grown both monsoon and summer paddy during the second year after Nargis, compared to only one-fifth during the first year. Furthermore, yields have rebounded on average by over 15 percent across the 40 villages, and villages with increasing yields outnumber those with decreasing yields by over two to one

¹² There are almost 2,600 farmers in the 40 villages studied: over one-half are small farmers (below 10 acres of land), over one-quarter are considered medium (10-20 acres), and slightly less than one-fifth are big farmers (over 20 acres). The number of farmers has increased over the past year by as much as 20 percent since families have split land user rights in order to access credit from formal sources (see below).

(Figure 4).¹³ Input prices have remained steady¹⁴ whilst farm gate prices for the two rice types grown in the Delta have risen by 10 percent (for *Bay Gyar*) and 40 percent (for *Achon*, the more popular variety). The ensuing rise in incomes of many farmers is a welcome departure from the downward trend observed one year after Nargis, giving testimony to the resilience of Delta farmers who have achieved this turnaround with important yet insufficient assistance.

Figure 4: Percentage changes in yields over the past year



1/ Data are unavailable for five villages.

... but agricultural production is still far below pre-Nargis levels

This achievement is a qualified success, however. The majority of small farmers are still faced with a lack of affordable credit while suffering a heavy, and increasing, debt burden (see below). Short of working capital, and without the means to recapitalize the assets they had lost during Nargis, many farmers have had to reduce the scope of their activities compared to the pre-Nargis period through a combination of measures, including:

- Not using all of their farm land for production,¹⁵ thereby also requiring less labour.¹⁶ Farmers in villages only growing monsoon paddy used all their land. Farmers in those that also grow summer paddy did not use all their land since summer paddy requires more fertilizer and water, which they could not afford;
- Reducing the amount of fertilizer significantly. Normally farmers would use two bags of fertilizer per acre, now they can afford only one bag or half of one bag. Some farmers have used fertilizer only on part of their land with low fertility;

¹³ The significant drop in yields in a few villages is attributed to: the fact that fertilizer aid had been provided for the 2008 monsoon season but not the 2009 season; crab infestation and crop disease; bad weather; and poor infrastructure leading to flooding.

¹⁴ The price for seeds has decreased compared to one year after Nargis, the fertilizer price and wages have remained steady, and the price for diesel has increased.

¹⁵ However, during the second year after Nargis the land under cultivation decreased by more than 10 percent compared to one year after Nargis in only one heavily affected village.

¹⁶ Immediately after Nargis there was a concern that farmers would lose their user rights to land if they did not cultivate it. Two years on, this concern has not been borne out. Villagers did not report any such case of land loss (see below).

- Broadcasting rather than transplanting seeds on most land. Broadcasting is less labour intensive but yields about 10 baskets per acre less;
- Not investing in land preparation and maintenance (for instance, by not maintaining embankments around and inside paddy fields); and
- Foregoing the use of hand tractors, which they would need in order to make up for the loss of draught cattle during Nargis. But, many farmers cannot afford to hire the driver and buy diesel.

Farmers have also suffered from a host of environmental problems ...

During the 2009 cropping seasons, the above problems have been exacerbated in two-thirds of the villages by crop diseases, rodent and crab infestations, the depletion of mangrove forests, and soil deterioration due to salt water intrusion. Pests have been common in the Delta prior to Nargis but infestations and crop diseases have been significantly worse during the past season; in five villages, the crop diseases were a new phenomenon altogether. Farmers in some one-fifth of the villages studied lost most of their crop because of rats.¹⁷ Moreover, in about one-fifth of the villages the lack of proper maintenance of ditches, dykes and embankments has resulted in the intrusion of brackish water.

... and as a result, many are struggling to break even

As a result of this multitude of factors conspiring against the full recovery of farming in the Delta, monsoon yields have reached pre-Nargis levels in only eight villages and in only three cases surpassed them (by one-third on average); these were among the least affected by the cyclone (and farmers there have no difficulty repaying debts and saving paddy for family consumption; see below). Villagers in the remaining 26 villages have estimated that output is still over 30 percent below pre-Nargis levels, in six villages it is only about one-half.¹⁸

Higher rice prices are a mixed blessing ...

As noted above, farm gate prices have increased by 10-40 percent compared to a year earlier, and higher farm gate prices translate into higher market prices. Traders who stock the rice for 1-2 months can fetch around 4.5 and 6.5 lakh¹⁹ on the market for monsoon *Achon* and *Bay Gyar*, respectively, generating a margin of 1.0 to 2.0 lakh per 100 baskets (Table 6).²⁰

Table 6: Farm gate and market prices for rice

	<i>Achon</i> 1/	<i>Bay Gyar</i>
Monsoon 2009 farm gate price	3.5L	4.5L
Monsoon 2009 market price	4.5L	6.5L
Margin	1.0L	2.0L
<i>Pre-Nargis farm gate price</i>	3.5L	6.0L

1/ Per 100 baskets.

This margin may be explained in good part by the fact that farmers in about 40 percent of the villages had to sell all their paddy as soon as it was harvested to

¹⁷ In order to fight the plague, villagers were ordered to catch rats and deliver 25-30 tails to the VPDC leader every month who in turn had to deliver them at the township centre. In some villages, a market for rat tails developed (at 50-80 kyat per tail), which provided additional incomes for labourers. In rare cases, villagers were fined 1,000 kyat for not fulfilling their quota. This operation has not resolved the problem but villagers did not object to it; rats have been part of villagers' diet for a long time.

¹⁸ Data from SIM 2 were unavailable for three villages.

¹⁹ One lakh (L) equals 100,000 kyat.

²⁰ This margin has remained largely unchanged over the past year.

meet their debt and wage obligations; many other farmers can keep only little for own consumption. Once their now meagre stock is depleted, they need to buy rice on the market²¹. The overall impact of the price rise on farmers' incomes is, thus, negative.²²

... and the outlook may be bleaker

Circumstantial evidence from four villages after the SIM 3 fieldwork took place suggests that the recovery may not last. The increase in yields during the 2009 monsoon season is attributed to, in part, the supply of free fertilizer by aid providers. So far, only one of the villages received fertilizer again, and only two received seeds. Aggravating matters, the rains started up to six weeks late this year and as a result, farmers in these villages are not able to grow the higher yielding and better quality ("big") *Bay Gyar* rice, which requires more time to grow. Furthermore, villagers who rely on the tide to flood their fields (which occurs in two villages) reported that the tides are not coming up as high as they used to, providing less water to the paddy fields. As a result of these factors, farmers are worried that upcoming yields may decrease over the 2009 harvest, which would likely put many of them at livelihood risk. This scenario may play out in other villages as well.

Fishing

The fishing sector has deteriorated sharply

In a sharp turn over the past year, fishing in the 21 villages with a significant fishing population has experienced a drastic reduction in fish stock, output and employment. While the causes of this decline were not known to the fishermen, it can be surmised that the following factors conspired to achieving this result, which was not nearly as evident one year after Nargis: (1) the damage Nargis inflicted on the Delta's ecology; (2) over-fishing and the use of wrong equipment; and (3) the loss of knowledge.

Nargis damaged the Delta's marine flora and fauna, at the wrong time

The enormous water movement caused by Nargis wrought havoc to aquatic life, killing fish in multitudes both near shore and in inland water bodies. Nargis also destroyed mangrove forests²³ which shelter and nourish many fish species, especially during breeding. Equally disconcerting was the timing of the cyclone: it hit the Delta at the beginning of the spawning season. Many freshwater species migrate down the Ayeyarwady to the Delta and many saltwater species migrate up to the Delta, to breed in its brackish waters. The cyclone not only killed many of these migratory fish but also their brood, inevitably leading to a decline in the stock of fish over the medium-term.

Man-made factors also play an important role

The depletion of the fish stock in the Delta had started already before Nargis, due to unregulated fishing. Using nets that were too small, fishermen caught many

²¹ Most of the farmers are also not able to keep seeds and have to buy them for the next planting season, increasing household expenditures further.

²² Farmers living near fresh water used to grow betel trees to sell the leaves, an activity about four times as profitable per acre as rice farming. These trees are very vulnerable to wind and weather and many were destroyed by Nargis. Since investment costs in betel tree farms are significant, only in a few cases have farmers been able to restart this activity.

²³ In four of the villages studied Nargis destroyed the mangrove forest.

young fish, thus putting pressure on the natural stock. In the post-Nargis period this problem has been compounded by fishermen having to use the often inadequate gear they received as livelihoods assistance. Limited as such assistance was²⁴, it did not take into account the complexity of Delta fishing and ensuing needs for equipment. Fishermen in some villages have reported that the donated nets were too tight for the type of fish villagers catch and therefore kill all small fish in their path.

Nargis also severely affected the knowledge transfer about Delta fishing

Fishing in the Delta is a complex undertaking, requiring a range of techniques and equipment to catch different types of fish (and prawn). This knowledge is commonly passed on from father to son. Fishermen perished during Nargis in their thousands, interrupting this transfer of knowledge and affecting the capacity of the remaining fishing population to adjust to the changed ecological context.

Fishermen have had to reduce the scope of their activities considerably ...

About four-fifths of fishermen in the fishing villages studied have not been able to replace the boats, nets and other gear that had been lost or destroyed during Nargis, mostly as a result of lack of credit.²⁵ Investment and working capital for small and medium fishermen in all the 21 fishing villages has dried up since the fish collectors, who used to provide credit to fishermen, have less liquidity themselves to lend and know that they face even higher risks when they do (Box 6). The ensuing lack of investment reduced the amount of fish that could be caught. Fishermen have had to make do with simple repairs to boats and nets which they could afford, which still left their equipment in poor condition.

Box 6: A village's declining fishing industry

Fishermen in a village have been faced with serious livelihood difficulties because of a significant decline in fish (*hilsa*) and lobster (*gyawt*) catches since the middle of 2009. Prior to Nargis, they caught substantial amounts of *hilsa* on 13 days per tide. (There are 15 days in each tide). Now they catch fish on only two to three days per tide, and much less even on days of a good tide. So, many fishermen in the village no longer fish regularly and most of them are working as labourers instead. Some fishermen who own engine boats became boatmen and hire out their boats.

The livelihood experience of fish collectors mirrors that of the fishermen. Before Nargis, one of the fish collectors in the village collected five *kits* (barrels) of *gyawt* per tide in the season (June). But in June 2009 he did not collect a *kit* even in a good tide. Similarly, while prior to Nargis he would get two full kits of *hilsa* per tide now he gets no more than five good *hilsa* even in a good tide. The fish collector believes that this does not happen only to his village because he saw very few *hilsa kits* on the line ship. With his business in a poor state, he now relies on the grocery stores and rice trading business of his son in another township and does not know whether or not he will continue his fish collecting business.

In the villages with a large fishing population, fishermen have fished jointly by pooling resources and equipment, acquiring this way a whole set of equipment. Hiring better equipment was beyond the reach of most. The cost of fishing licenses, which small fishermen have to pay to tender owners, has remained more or less steady over the past year. In all villages some tender owners did not allow small fishermen to fish in their area, forcing them to fish stealthily despite the risk of having their boats and fishing gear impounded if caught. In six

²⁴ The livelihoods assistance provided to fishermen was more limited than for farmers or labourers; see above.

²⁵ The cost of the equipment (boats, nets) has remained stable over the past year.

villages, fishermen have refused to pay license fees and fish stealthily, stopping only when township officials or the police visit the village.

In one village a labourer used electric shocks, though illegal, to kill fish, which is condoned by the other villagers since he is facing severe livelihoods difficulties. In another village, a big fisherman employs both electric shock (using a 12 volt battery) and poison to kill fish of all kinds and sizes, rapidly depleting the local fish stock and creating tensions with other fishermen. However, since he is very wealthy, villagers dare not complain about his acts.

... and are much farther away from recovering their livelihoods than farmers

As a result of this multitude of factors catches have continued to decline in all 21 fishing villages. Fishermen explained that now they fish *Hilsa* (the most common fish in the Delta) on only four days every month (during a 15 day cycle), compared to at least ten days prior to Nargis because of a decrease in catch. The price for *Hilsa* has increased by around one-third in several locations over the past year (though is still below pre-Nargis levels), which was insufficient to make up for the loss of output.²⁶

The price of fish fishermen receive is closer to the market price than the farm gate price for rice is. However, fish collectors commonly use heavier weights when buying fish in many villages, thus cheating on the fishermen. Fishermen, even those who are VPDC leaders, accept this as normal "business practice" which, voiceless, they do not contest; they have to repay the advances received from the same fish collectors, and will require other advances in the future.²⁷

Prior to Nargis, small fishermen could earn up to 100,000 kyat in one tide, big fishermen anywhere from 4 million to 15 million kyat. Even during the main fishing season following Nargis (July to September 2008), villagers considered the catch good. These days, small fishermen sometimes come up completely empty. Combined, lower yields, despite increasing prices, have led to a noticeable decline in disposable incomes of fishermen in all 21 fishing villages, forcing many fishermen to become casual labourers (Box 7) (see below).

Box 7: A fisherman's hardship because of a scarcity of fish

A fisherman had six sets of *Kyar* fishing nets and a boat to fish at sea which he did not lose during Nargis. In 2009, he and his family stayed the entire fishing season (four months) at sea but he did not catch much fish or prawn. What he earned was not enough to pay for his living expenses while at sea, for which he had borrowed from a fish collector. In order to settle his debt he had to relinquish his boat and four sets of fishing nets.

Small enterprises

The Delta economy is dominated by farming and, to a lesser extent today, fishing. By contrast, there are very few small businesses in the 40 villages studied. The research team recorded the following examples of small businesses and their situation (Table 7).

²⁶ There is anecdotal evidence from at least one township that fishermen catch more of the smaller *Nga Pone Nar*. However, the price for this fish species has declined.

²⁷ This practice is much less pronounced in farming. Farmers usually sell to traders whom they know. Unknown traders may offer them a higher price but farmers suspect their weights may be heavier.

Table 7: Small businesses – prevalence and status

Type of business	Location	Situation
Shopkeepers	Several in all villages	Mixed business; some are expanding, others are struggling
Video shop owners	1-2 each in most villages	A few had to close because of lack of demand, others are showing movies only few days a week ²⁸
Rice millers	1 each in 6 villages	Business is good for 3 and bad for the other 3
Fish paste makers	1 each in 3 villages	One is in good standing, 2 are struggling
Charcoal makers	Several each in 2 villages	Struggling in both villages
Thatch makers	Several each in 2 villages	In acceptable standing
Thatch builders	Several each in 3 villages	In good standing
Transporters (motorcycles and toke toke)	Several in 3 villages	Business is generally good but profit margins are low because of competition
Gravel producers	Several in 1 village	Business is good
Fish vendor	One in 1 village	Not in good standing as people cannot afford to buy fish

The economic situation of these businesses is location dependent, with the same type of business experiencing different trajectories since Nargis. By way of example:

- The charcoal makers in the two villages are struggling, in one case because of forest depletion, decreasing revenues and increasing debt, and in the other case because of a decline in prices and high informal transaction costs.
- The business of three of the six rice millers is good whilst the other three have faced a decline in demand. Farmers used to have their rice for own consumption milled but now farmers had to sell all their rice. As a result, the mills that used to run for 24 hours during harvest season have been in operation for only 10 hours per day during the last season, and after the season they sometimes shut down completely.
- The gravel producers benefit from the nearby township development project; they include farmers who had used their compensation to invest in this business.
- A good quality jetty in one village has recently become part of a new transport route. Within a matter of weeks there were about 100 motorcycle transporters doing business. Their margins are low because there are too many of them.
- In one village, the five new grocery shops are in good business because there are many migrant workers on the township development project. In about 10 other villages, an aid provider started a micro-credit project. Many beneficiaries invested their funds in grocery shops. As a result, competition is high and profit margins are low.

Shopkeepers are an important source of credit for labourers (see below). There are labourers in all villages who do not have the cash to buy goods and thus receive them on credit from the shopkeepers. In four of the villages studied shopkeepers have had to reduce the amount of credit they give because of their own financial difficulty; they used to restock their wares every two weeks from wholesalers in the township centres, now they take longer to generate enough revenue to repay their debt to the traders. Such difficulty is cyclical, with business better during the harvesting season. Business is also better now because labourers need to buy food since food aid ceased about a year ago.

²⁸ Entry usually costs 100 kyat per person.

The businesses vary widely in capital intensity and revenue. Some are established enterprises (such as the rice millers and fish paste makers) whilst others opened over the past year using savings, loans or micro-credit; these include gravel producers, transporters and grocery shops as well as some video shops and the fish vendor. A few businesses have closed since SIM 2, including some grocery and video shops. On the whole, the small business sector in the 40 villages studied lacks the capital, as well as the demand, to expand.

Casual labour

Less agricultural production means fewer jobs ...

Agriculture is the main employer of labour. The employment situation for labourers has continued to worsen due to their dependence on farmers (especially big farmers). In 24 out of 40 villages farmers reduced their demand for labour especially for maintaining land; for harvesting, labour demand has declined somewhat less, being replaced by family labour and/or because farmers no longer cultivate all their land (see above). There is a marked difference to a year ago, however. At that time, labourers were still receiving food aid, which led to an unanticipated labour shortage. Two years after Nargis, with food aid stopped, labourers are confronting a job shortage.

In almost two-thirds of the villages, farmers have been using machines especially for threshing since before Nargis. The need to replace draught cattle lost during Nargis, farming aid and the labour shortage in the first year after Nargis led to an increase in the use of machinery, which reduced the demand for labour also in the longer-term.

... whilst other employment opportunities are also dwindling

Other employment opportunities have also been lost. For instance, in some of the villages, gardens and fruit trees were destroyed and related jobs for labourers lost as a result of Nargis. In two villages, where farming is more vulnerable to flooding, the landless have been earning their living off the forest, where farmers own bamboo farms. However, decades of logging have depleted the forest. Furthermore, Nargis felled many trees which have been used as firewood ever since. In fact, stocks of firewood are still high, and the price labourers can fetch is low.

Only in three of the villages studied did larger-scale construction work take place and create new albeit temporary jobs: two aid projects for shelter and housing construction²⁹ and one government project for township development. The latter project has created many jobs for people from other townships as well. A salt farm can be found in one village and employs many labourers. However, working conditions are harsh and levels of indebtedness of these workers high (Box 8).

Box 8: Indebted for life?

Workers on a salt farm earn 1,200 kyat per day. They regularly receive an advance of 20,000 kyat from the owner of the salt farm, which they repay every month in labour. One worker, who has been working on the salt farm for over six years, says he has slim hopes of ever leaving it because of his increasing debt. He and his wife are both working on the farm. They live with their two children in a miserable hut by the salt farm. Outside of the salt farm season, which lasts from October to May, they earn a living by fishing and tending cattle.

²⁹ Company staff of one of the shelter projects did not pay the wages in full and were later dismissed. The workers eventually received their full wages.

Daily wages have stabilised ...

Over the past year wages³⁰ stabilized at an average of 2,100 kyat per day (Table 8). The maximum wage remained steady as well, at 3,000 kyat a day, while the minimum wage decreased by 17 percent to the pre-Nargis level of 1,000 kyat. This lowest wage is also paid for household chores like fetching water and firewood (see below), though it can even be lower.³¹

Table 8: Daily wage rates for farm labour (kyat)

	Before Nargis	One year after Nargis	Two years after Nargis
Minimum	1,000	1,200	1,000
Maximum	2,500 2/	3,000 3/	3,000
Average 1/	1,600	2,100	2,100

1/ Average across the 40 villages studied.

2/ Excluding one village with a maximum wage of 4,000 kyat.

3/ Excluding one village with a township development project with a maximum wage of 5,000 kyat.

Compared to before Nargis, the average daily wage has remained about one-quarter higher despite apparent downward pressures since SIM 2: the end of food aid meant that more labourers had to find work to buy food; the massive occupational shift out of fishing and into farm labour increased labour supply; and many aid-financed community infrastructure projects (jetty, shelter, school, etc.), which paid higher wages, came to an end.

There are various reasons put forward to explain this downward rigidity. During the first year after Nargis, the labour shortage pushed wages up at a time when aid-financed cash-for-work projects also offered higher wages (from 2,000 per day upwards to 3,000 kyat). Even though labour supply overall increased during the second year of Nargis, labour demand peaks at harvesting time, which has helped keep wages at the level of the previous season. There is also an assumed downward inflexibility in that wages do not decrease from previously achieved levels.

... while seasonal wages have been catching up ...

Seasonal wages evolved differently. The minimum across villages increased by 20 percent within the first year after Nargis³² and remained steady thereafter. By contrast, the maximum remained constant during the first year after Nargis and increased by 20 percent thereafter. At 1.7 lakh, the average seasonal wage is 17 percent higher two years after Nargis than before. The seasonal wage, thus, increased by one-third less than the daily wage, which may be an indication that labourers accept a somewhat lower wage in exchange for greater job security.

... but labourers too are far from recovering their livelihoods

Steady and higher daily wages at harvest time compared to before Nargis do not, however, translate into higher incomes for labourers for the year. Labourers have less farm work overall and have to do more odd jobs, which are paid at lower rates, to make ends meet. At the same time, the cost of living has increased. In fact, in almost half of the villages labourers have become significantly worse off

³⁰ The wages mentioned here are those reported by farmers for the 2009 monsoon season for male farm labourers.

³¹ In two of the villages, the research team observed a daily wage of 500 kyat for these activities in very rare instances.

³² Excluding one village before and one year after Nargis where labourers received a significantly lower rate.

than other villagers during the past year. These labourers say that they are experiencing “a second Nargis” (Box 9).

Box 9: A labourer’s tale

“In earlier times, we had ample jobs to do in the hot season. We could reap paddy during harvesting time. We could also get work from the fishermen. So, we had nothing to worry about food! In those days, our couple’s income was over 50,000 kyat per month. Now, the only job we can find is thatching. It barely earns us 20,000 kyat. And we do worry about food. In the past, we had fine meals with curry, now we are having only rice without curry, and eat boil vegetables as the main dish. This evening, I asked for 1,000 kyat from the villager for whom we thatch. She can deduct this from my wage tomorrow. If we could borrow 1,000 kyat, we would have dinner for us four family members. If not, we would not have dinner tonight. Sometimes, we cannot afford to eat rice daily. It seems that Nargis had finished a long time ago. Still, it did not stop, and it left these consequences behind.”

Informal labour referral helps labourers find jobs

In six villages there exist informal labour referral services, which are much appreciated by the beneficiaries. These services are organized by labourers themselves (three cases), a small farmer (one, Box 10), a respected villager (one), and someone from the township centre (one). Four of these services were established before Nargis. The organizers find jobs for labourers in the same and in other villages, in farming (four cases), construction (one) and on the village jetty (one). The number of workers referred per service ranges from twelve to sixty. Labourers pay for the referral service in only two cases; in each case 10 percent of the wages earned. The service is provided for free in the other four cases. Five of the services are offered in villages close to township centres, where it is easier to find jobs and where villagers are considered more “business minded”.

Box 10: A well functioning labour referral service

Thirty years ago, a small farmer organized a group of labourers to find them farming jobs. These labourers were not only from his village but also from nearby villages. At first he organized labourers for his own farm because it was difficult to find labourers during harvesting. Later on, he also found them jobs on the farms of his relatives, and eventually in many nearby villages through his extensive network. Fifteen years ago he started to charge the labourers a fee of 10 percent of the wage for finding jobs for them. His group of labourers was disbanded right after Nargis. However, he was able to reorganize the group in 2009 and is now operating much as before Nargis; only the fee is slightly lower.

Box 11: Who are the poorest in the Delta?

Villagers identify the poorest on the basis of their ability to sustain themselves at a subsistence level without outside help; for example, if they cannot afford three meals a day. As such, the poorest survive on multiple coping mechanisms (see below).

Across the villages studied villagers consider the following categories to be the poorest: widows and female headed households, the chronically sick and disabled, those elderly who have no family support, and families with many (four and more) children and/or other non-working dependents. In addition, many (though by no means all) casual labourers are among the poorest. In total, about 10 percent of village households are considered as the poorest. In one village, those displaced from other villages by Nargis who live in said village are also included in this group.

In all villages studied, villagers look after the elderly and chronically ill and those who have no family to help them. They often provide food to those who have little to eat. In a few villages, the VPDC leader has exempted these groups from paying village taxes. In others, they are exempt from contributing labour to community infrastructure projects. By

contrast, families with many dependents are not normally assisted.

The poorest are classified as the neediest for purposes of aid distribution. (They attend meeting and participate in the discussions of village committees, especially in small villages, but they are not involved in decision making.) However, during the second year after Nargis, aid (especially food aid) was no longer provided to the neediest; in only two villages did some of the children of very poor households receive one-off assistance. The aid that is targeted to labourers is no longer specifically targeted to the poorest.

In comparing villages, the poorest in those villages that are difficult to access and/or have been severely affected by Nargis are considered poorer than the poorest living in more accessible and less affected ones. Furthermore, given the predominance of agriculture in the Delta economy, the poorest people in villages with a small farming sector are seen as poorer than the poorest who live in villages with a large farming population.

2. Credit and Debt: Undermining the Prospects for Recovery

Debt dynamics at play

Two years after Nargis, the average debt by borrower was 5.4 lakh based on a sample of over 600 borrowers (Table 9).³³ This average conceals a wide range: from 16.6 lakh for big farmers to 1.8 lakh for labourers. The average debt for borrowing medium and small farmers stood at 8.8 and 6.0 lakh, respectively, that of medium and small fishermen at 6.3 and 3.1 lakh, respectively. Although reliable income and expenditure data are not available it can be surmised that, given their uncertain employment situation and earning potential, the debt burden of small fishermen and labourers is the highest in relation to disposable income. Overall, farmer borrowers accounted for close to two-thirds of debt in the villages studied (with the share of big farmers being almost one-quarter).

Table 9: Average debt amount by borrower

Borrower	in lakh
Big farmers	16.6
Medium farmers	8.8
Small farmers	6.0
Medium fishermen	6.3
Small fishermen	3.1
Labourers	1.8

1/ Based on a sample of 608 borrowers who participated in focus group discussions across the 40 villages.

The debt dynamics are complex ...

SIM data do not allow for a direct comparison of debt levels over time.³⁴ However, they allow for a comparison of the average smallest and largest debt amounts across occupational groups in the villages studied (Table 10). For farmers as a whole, the average maximum debt two years after Nargis was around 30 percent lower than one year after Nargis. This masks wide variations within this occupational group, however: whilst the average maximum debt of big farmers declined by about half over the past year, that of small farmers and

³³ Drawn from focus group discussions across the villages studied. Over 80 percent of participants in focus group discussions had debts, with the group of small fishermen having the largest share of borrowers, at 93 percent.

³⁴ In focus group discussions during SIM 2, researchers recorded the smallest and largest debt in each village for each occupational group. These data were then aggregated over all villages. For SIM 3, researchers also noted the amount of debt for each of the participants of focus group discussions.

labourers increased by about 50 percent. The average maximum debt of fishermen rose only slightly (16 percent). Across all occupational groups the average maximum debt across villages two years after Nargis is higher than before the cyclone, with the total maximum debt of labourers and fishermen having more than doubled over the past two years, and that of small farmers being almost twice as high.³⁵

Table 10: Average smallest and largest total debt

Borrower	Two years after Nargis		One year after Nargis		Before Nargis	
	Min.	Max.	Min.	Max.	Min.	Max.
<i>Big farmers</i>	5.9	27.3	9.2	57.4	5.8	22.5
<i>Med. farmers</i>	3.6	14.1	3.5	15.6	4.8	10.5
<i>Small farmers</i>	2.3	9.8	1.6	6.4	2.2	5.2
All farmers	3.9	17.1	4.4	23.9	3.7	10.0
All fishermen	1.9	7.5	3.1	6.5	1.0	3.2
Labourers	0.6	2.9	1.2	2.0	0.3	1.4

... but it is clear that the poor carry the greatest debt burden

The SIM 3 research does not allow for a detailed assessment of the reasons for these debt dynamics. However, it could be surmised that big farmers borrowed heavily immediately after Nargis to recapitalize, a pressing need which had subsided two years on. Conversely, increasingly limited access to credit may have prevented a further rise in the total debt. What is clear, though, is that the poorer segments of Delta society face the gravest debt situation, a trend which has continued since SIM 2. They are clearly in need of further credit for both investment and consumption but have a more restricted ability to service their debts, leading to further de-capitalization.

Poorer villagers have to borrow for consumption

Big and medium farmers have borrowed loans to meet their cultivation cost. In contrast, while most small farmers and fishermen across villages also borrow for buying equipment and working capital, they borrow for food, too. Labourers borrow mostly for food. Generally, poorer villagers also borrow for other household expenses, such as for medical treatment, education and transport for their school children.

Interest rates have remained largely stable

Interest rates have largely remained stable. For informal sources they range from 5 to 20 percent per month for most borrower groups, and 30 percent for women (Table 11). In rare cases, villagers recorded monthly interest rates as high as 50 to 60 percent. The interest rate on formal credit is lower (c. 1.5 percent per

³⁵ Using the same method as under SIM 2, SIM 3 data show the imputed average between smallest and highest average debt level to be very close to the actual average for all occupational groups. Thus comparing the mean of the smallest and largest average debt, yields the following. Over the past year, the average debt of small farmers rose by around 50 percent, the average for big farmers dropped by half, and that of the remainder remained largely stable. (Interestingly, the average debt of small farmers barely increased during the first year of Nargis.) Compared to before Nargis, the average debt of borrowers in all occupation groups rose. Fishermen and labourers suffered from the steepest increase to more than double their pre-Nargis debt; the average debt of small farmers rose by two-thirds.

month), but its share in the overall debt stock is low, at an estimated 20 percent.³⁶

Table 11: Monthly interest rates from informal sources

Type of borrower	Most common range in percent
Big farmers	5-10
Medium farmers	5-10
Small farmers	5-10
Medium fishermen	5-20
Small fishermen	6-10
Labourers	5-20

Quite regularly, informal lenders (shopkeepers, farmers, traders and fish collectors) did not charge any interest formally. However, they did so informally, by imputing a sometimes significant interest rate in the advance given to fishermen and labourers. Informal credit, thus, involves a complex web of transactions to meet the needs of borrowers (Box 12).

Box 12: Informal credit practices

There are various practices for small informal credit in the Delta:

1. Wage advance: Farmers in all villages grant labourers advances for 1-3 months worth of work at the going wage rate, but at a discount. Prior to Nargis, labourers would not receive less than 10,000 kyat as an advance for work on one acre of land, against an agreed rate of 15,000. By taking wages in advance, labourers were being charged around 30 percent in interest for a 3 month loan period. Today, they may receive as little as 7-8,000 kyat, implying an interest rate of 50 percent for 3 months. Villagers note that this situation has worsened during the second year after Nargis.
2. Paddy advance: If a farmer borrows 100 baskets of paddy (or the equivalent in cash) at the start of the monsoon season, he must pay back 200 baskets of paddy after harvesting. Generally, the time gap between disbursement and repayment is six months, making this an effective interest rate of approximately 15 percent per month.
3. Daily payment #1: In many markets, lenders will provide loans to vendors which are collected at the end of the day. If the agreement is made for 1,000 kyat, borrowers receive only 800 kyat. In the evening the borrower must repay the full 1,000 kyat, making this an effective interest of 20 percent per day.
4. Daily payments #2: If one borrows 1,000 kyat, s/he must repay a daily fee of 10 kyat every day until the principle is paid back in full. The effective interest rate depends on the period until full repayment.

Sources of credit

Informal lenders dominate the credit market ...

The credit market in the Delta is largely informal, with borrowers receiving loans mostly from within the village: from big farmers, moneylenders, and relatives and friends (Table 12). The organized sector (NGOs, banks, rice millers) has limited scope while the economic sector has appeared only over the last year.³⁷ Micro-credit lending for groups has yielded positive results, but not entirely so (Box 13).

³⁶ Farmers in only nine villages had received significant loan amounts from formal sources.

³⁷ The Tun Foundation Bank and Myanmar Economic Holding Limited (MEHL) started lending in 2009. The Tun Foundation Bank is active in only one of the villages studied. It lends higher amounts per acre (20,000 kyat) at 3 percent interest per month, has flexible repayment arrangements, and returns one third of the interest payments made to the

Table 12: Sources of credit

Debt held by 1/	Frequency
Private moneylenders	75
Relatives/friends	42
Farmers, salt farmers	39
Shopkeepers and similar	21
Traders	19
Fish collectors and similar	18
Government banks	11
Rice millers/associations	11
NGOs and similar	10
Gold shop and pawn shops	8
Economic sector	5
Other sources	3

1/ Sample based on focus group discussions.

Box 13: When micro-credit works, and when it doesn't

In one village, a micro-credit project established a self reliance group after a careful assessment, which included the ability of members to make regular savings and keep records. The project then provided the group 10 lakh which it lends to its members (from a minimum of 0.7 lakh to a maximum of 1 lakh) for starting a business or investing in an existing one. The credit terms are set by the group. Borrowers have to pay a 5 percent interest rate per month and make payments every two weeks. In addition to credit activities, members also save 200 kyat at weekly meetings. According to the members, their businesses have improved due to the micro-credit project. Furthermore, they now have more group activities as they frequently volunteer as a group, for example in road renovation or for religious ceremonies. The group plans to initiate a large scale road renovation activity in the near future.

Through a micro-credit project women in another village were able to access low-interest funds with the aim of restarting their livelihoods. According to the terms of the project, the women formed a credit committee which is responsible for ensuring that its members make small payments every week. Tensions erupted when various members were no longer able to make their regular payments since the other members now had to shoulder their obligations as well. Those who had trouble repaying had used the funds to buy food instead of investing in an economic activity (as they were required to do) or bought pigs but had no extra money to feed them. Three members of the credit committee went into hiding because they could not face the others anymore. The other members contacted their village leader who felt unable to resolve the problem since the project had been set up without his involvement. So the micro-credit project not only did not achieve its objective, it has also created social tensions in the village.

As in the past, formal lenders (such as the Myanmar Agricultural Development Bank and MEHL) offer loans at lower interest rates and longer maturities, which villagers prefer. However, their payment terms are stricter, and access depends on the support of the village tract leader. As a result, borrowers often end up with informal lenders, who grant them more repayment flexibility.

Savings and loan groups have been operating in only three of the 40 villages studied. Two of these are women's groups that had been established prior to Nargis, and all occurred in Kayin villages that were little affected by the cyclone (Box 14). Loans are small and for set purposes: 30,000 kyat for health expenses, accessible to needy villagers at-large, and not more than 1-1.5 lakh primarily for

village. So far, villagers have contributed to the renovation of a Buddha statue with this money. MEHL is active in six villages and lends at 2 percent per month up to 50,000 kyat per acre. It changed its repayment policy, now expecting farmers to repay only in bags of *Achon* rice; farmers who did not grow *Achon* rice, thus, had to buy paddy to repay the loan. Myanmar Livestock and Fisheries Development Bank provided loans in one of the sample villages in the last year.

business for members only. Interest rates range from 3-5 percent per month; in one case, the interest payments received by the group were given to teachers as salary supplements. Despite Nargis, none of the groups, which are managed by their members, has experienced repayment problems.

Box 14: How a women's group established a savings and credit fund

In one village, the women's group of the Church established a savings and credit fund three years ago. The group is led by a committee comprising a chairperson, a treasurer, an accountant, an advisor and three other members. The total membership of the group is 159. The members save a minimum of 1,000 kyat every month. The group lends to members who want to do business at an interest rate of 5 percent per month against an agreed repayment period. It does not lend for other purposes such as health and education. The group reserves 2 percent out of the interest as a fund for religious and social needs, such as for religious ceremonies and medical and funeral expenses of the poor, and the remaining 3 percent is added to the main fund. Over the three-year period the group accumulated over 160 lakh in savings. It recently divided the entire amount amongst the members because they did not have the capacity to store large amounts of money in the village, and they had no experience of using a bank account. The group started a new savings fund in early 2010.

... but borrowers have to increasingly diversify their credit sources ...

In all villages, big farmers had relatively easier access to loans than other borrowers, relying mainly on private moneylenders. For smaller borrowers (farmers, fishermen and labourers), credit has become noticeably scarcer. Consequently, they had to diversify their sources of credit because of limited loan amounts from any one source, with many borrowing from three lenders, and sometimes up to five. Quite often, villagers said that they have had to find credit with tricks, for example, by telling a prospective creditor that he was the only source of credit available. In such cases, if a lender is the only source of credit, villagers say he has more incentives to lend since he thinks the borrower can repay more easily.

Small and medium farmers rely mostly on private moneylenders and big farmers, fishermen on actors in the value chain (fish collectors), and labourers on farmers, moneylenders and shopkeepers. All smaller borrowers rely on relatives and friends (Table 13).

Table 13: Borrowers diversifying their sources of credit

Primary creditors 1/	Big farmers	Small/med. farmers	Fishermen	Labourers
Private moneylenders	5	9	6	8
Rice millers	1	3	2	-
Farmers, salt farmers	1	10	1	10
Traders and gold shops	2	5	2	1
Fish collectors and similar	-	-	8	2
Shopkeepers and similar	-	3	1	7
Relatives/friends	-	7	6	4
Banks and economic sector	-	6	-	-
Other	-	-	-	5

1/ Primary credit providers as mentioned in focus group discussions.

Another, common way to access (affordable) credit is for households to split the land user right among family members. This happens mostly for MADB loans but to some extent also for aid-financed micro-credit projects. MADB provides loans of up to 10,000 kyat per acre (up from 5,000 kyat before Nargis) for up to 10 acres of land per household, charging an affordable interest rate of 17 percent

per year. By splitting user rights family members can collectively access more credit. This practice predates Nargis but is more frequent now.

... while informal lenders are facing financial difficulties, too

Advance payments from informal lenders for goods and services have been a practice in the Delta for a long time. However, these too now face increasing financial difficulties. Labourers still often receive an advance payment from farmers for future services (see above). By contrast, fish collectors and rice millers, important sources of credit for small fishermen and farmers, respectively, are struggling financially themselves since Nargis. Similarly, in all villages, big farmers still do not have sufficient liquidity to provide loans to smaller farmers, a situation largely unchanged since SIM 2.³⁸ The financial woes of common credit sources, thus, reduce the amount of advance financing available.³⁹ In fact, by the time SIM 3 fieldwork was carried out, advances to fishermen had dried up in many villages.

Ability to repay

Debt payments are an increasing burden on household finances

Farmers can settle their obligations after the harvest in cash or kind whilst fishermen usually pay in kind (their catch). The ability to service outstanding debt and repay loan principal depends largely on their economic situation. In the about one-quarter of villages (11) that have recovered better and where livelihoods have improved, borrowers do not face any difficulty repaying their debts. The socioeconomic situation in the other villages (which includes all fishing villages), however, has not sufficiently improved to ease the borrowers' debt burden. On the contrary, in addition to paying interest on old debt, borrowers have had to incur new loans, and debt levels have increased accordingly (see above).

If borrowers cannot repay the principal but keep paying interest, a frequent occurrence in the villages studied, they can take out new loans. However, they then have to pay interest on the total outstanding principal, which increases interest payments. In a few cases involving farmers, moneylenders, who were mostly from outside the village, have added outstanding interest to the principal, thereby exacerbating the burden on these borrowers.

A borrower who defaults loses her assets and her prospects for recovery

When borrowers cannot settle the debt when due and cannot make interest payments, they generally lose their collateral: farmers lose land user rights (see below), fishermen lose fishing boats, nets and other gear, and small businesses lose their inventory (Box 15). Labourers who have no collateral generally repay with additional labour services.⁴⁰ Defaulting borrowers, from big farmers to labourers, lose their ability to take out another loan⁴¹, which further stunts both

³⁸ Villagers recorded only one case where a big farmer has started to lend to smaller farmers again.

³⁹ For instance, before Nargis, a rice miller in a village provided at least seven farmers with an advance equivalent to 200 baskets of paddy which they would repay in kind once harvested. Now, the rice miller is not able to provide farmers any advance.

⁴⁰ In one village, labourers had to sign a letter committing to settle their debts to grocers after these had complained to the VPDC leaders about the failure of the labourers to repay their debts.

⁴¹ Labourers generally cannot repay their debts. However, most of them can still get advances from farmers and shopkeepers by selling their labour.

investment (and with it the possibility to generate future income) and consumption.

Box 15: Losing assets to pay debt

A 40-year old woman with her eight family members cultivated 12 acres of land before the cyclone. She also used to do some fishing with a prawn net (*hmyin*), as secondary livelihood. After Nargis, she took out loans to lease additional land, and cultivated a total of 22 acres. But the yield was significantly reduced due to soil deterioration, rat infestation and crop disease. She could not pay back the money she had borrowed. (In this village, borrowers have to pay the fixed interest rate of 60 percent per season; if a debtor borrows 100,000 kyat then s/he must pay 160,000 kyat back in one season. If the debtor cannot pay the loan this season, the outstanding amount will be added to the original loan and the interest will be higher next season accordingly.) Therefore, she was forced to give up her land user rights to 10 acres temporarily, and still her total outstanding debt remains at 44 lakh, and she will not be able to reclaim her land until she can settle this debt.

Against the grave consequences of default, farmers in particular go to great lengths to remain current on at least their interest payments and have been selling their assets to do so, such as gold and jewellery, draught cattle and even motorcycles (see below). In this way they can get additional loans, albeit in smaller amounts. The story of debt in the Delta two years after Nargis is, thus, one of continued asset depletion but not yet of widespread default.

Fishermen are particularly hard hit by the debt crisis

Small and medium fishermen have lost access to credit on a significant scale; in seven out of 21 fishing villages advances from fish collectors, which kept the fishing economy going for decades, have largely ceased. In dire cases, fish collectors may lend a few thousand kyat to fishermen to buy food but amounts are far insufficient to re-invest in the business. Many fishermen had to pawn their boats and equipment after Nargis to restart fishing. Unable to repay their debt due to a decrease in the number of fish caught, they lost their assets and would now have to rent boats and fishing gear to remain in business, which many cannot afford. A large number of fishermen were, therefore, forced to change occupation (see below).

When farmers default

The borrow-harvest-repay cycle is still functioning ...

The large-scale loss of land user rights would have a devastating impact on livelihoods in the Delta. So far, aided by increasing yields, the majority of farmers have kept paying interest and many have been able to start repaying some of their debt. This enabled them to take out new loans, keeping the borrow-harvest-repay cycle going, which is critical for the Delta economy.

... and there are only few cases of debt distress so far

Farmers defaulting on (pre- or post-Nargis) loans can happen, and has happened, in any village. However, in more than half of the villages, these cases were rare. More frequent cases were encountered in about one-third of villages. However, in only four villages did the research team find severe debt payment distress and high default rates, ranging from 12 to 35 percent of farmers. All of these villages have been highly affected by Nargis, and three of them are difficult to access.

Even when farmers default, they do not automatically lose their user rights ...

When farmers default they would generally forfeit their collateral, i.e., their user rights to part or all of the land they are farming, depending on the amount of their debt and the price of land.⁴² In this way, several creditors have become big farmers themselves. However, creditors are often related by kinship or friendship to the borrowers and do not want to bring about their default. They are also aware of the difficult economic situation of farmers and thus oftentimes do not want to manage or cultivate land thus acquired.

There are two main patterns for what happens to the land user rights of defaulting farmers since before Nargis. The first involves farmers maintaining their user rights to land with them continuing to pay interest on the outstanding principal. This has occurred in an estimated 5 percent of cases across the villages studied.

... but when they do, there are different ways of land loss

The second pattern involves the creditor assuming the land user rights and managing the land in one of four ways: (1) the debtor farmer continues to farm the land and, if s/he repays the loan, obtains the land user right once again (20 percent of cases) (Box 16); (2) the creditor manages the land himself and hires labourers, including farmers-turned-labourers, to work it (5 percent); (3) the lender rents the land out to one or more small farmers or even labourers (65 percent); and (4) the lender sells the land user rights to a third party, including his own creditors (5 percent). All sub-/types can happen in any one village.

Box 16: A "money return-land return" deal gone wrong

Before Nargis, a farmer lived comfortably with his wife and two daughters on 10 acres of land. The quality of the soil was good, and he could grow monsoon and summer paddy. During Nargis, the farmer lost his house, cattle, barn, equipment and stored paddy, so he borrowed 15 lakh from his brother-in-law without interest in order to rebuild his house and barn and buy tools and equipments. For the 2008 monsoon season he received seeds and fertilizer from NGOs. He cultivated paddy twice a year and was able to repay 8 lakh. For the 2009 monsoon season, the farmer borrowed another 7 lakh from his brother-in-law without interest to prepare the land for both monsoon and summer paddy. Unfortunately, the yield per acre was low because of pests, and he could not service his debt. So he had to transfer the user rights to 5 acres of land to his brother-in-law, which would be returned to him when he paid back his loans. The next summer crop was not enough to make a debt payment, and he lost the user rights to 5 acres of his land. For the upcoming monsoon season he would need to invest in the remaining 5 acres to produce a better yield but he does not dare borrow again for fear of losing the land.

Most transactions of land user rights remain informal

The majority of cases that involve the seizure of land user rights by creditors are carried out informally. A formal transfer would have to be approved by the VPDC leader and require a transaction fee set by him. This fee can range from 20-30,000 kyat per transaction to 7-10,000 kyat per acre transferred. Any return or onward transfer of the user rights would necessitate further approval and the payment of additional fees, which is why creditors are not willing to pursue them.

⁴² The price for land user rights varies by village; in the villages studied it has ranged from 1.3 to 5 lakh per acre.

Despite the obvious financial difficulties the majority of farmers finds themselves in, the formal loss of land user rights is, therefore, still limited.⁴³

3. Rising Expenditures

Delta villagers spend more on food ...

Food aid effectively ended one year after Nargis, requiring even the poorest villagers to buy food. At the same time, in contrast to the situation before Nargis, most small and medium farmers in all but the least affected villages can no longer store paddy for annual family consumption; they have become food deficient themselves (see above), increasing rice demand further. By the time SIM 3 research took place, rice consumers had to pay c. 10 percent more than a year earlier. For the villages studied, therefore, the expenses on rice have increased over the past year.

... and also more on non-food items

SIM 3 research did not aim to collect detailed information on the general price level. However, data from the 40 villages suggest that the cost of living has increased somewhat, especially for food items beyond rice. Cooking oil, sugar, fish sauce and eggs saw price increases of 30-50 percent since one year after Nargis. The price for pork and chilli remained steady while that for onions and salt decreased by 30-60 percent. The price for household non-food items remained largely steady, although it increased by 20 and 40 percent for thatch and bamboo, respectively, reflecting higher demand to build houses. On the whole, therefore, many villagers have confronted not only dwindling incomes but also increasing costs of living.

4. Coping Strategies: Living with Financial Duress

For many families in the villages studied, household income from traditional sources is no longer sufficient to cover expenses for consumption, investments, and debt payments. Families, therefore, have come to rely on a range of coping activities to make ends meet; these either increase incomes from new sources or reduce expenditures. In fact, nearly all families in the affected villages have employed a variety of coping mechanisms to adjust to the depressed economic environment.

Strategies to increase incomes

The most prominent strategy to increase incomes across those villages that have not yet recovered is to do odd jobs, followed by increased seasonal migration, occupational changes, and, lastly, selling assets.

DOING ODD JOBS

Labourers in the Delta have always been doing "odd jobs" in the agricultural off-season to supplement their incomes. Since Nargis, these odd jobs have become even more important for sustaining a household. Many small farmers and fishermen in all the villages studied have started to do odd jobs to make ends meet.

⁴³ Not all farmers are forthcoming about their debt or land situation. It is, therefore, not possible to ascertain the actual number of land loss cases.

Odd jobs are a collection of activities, including such diverse tasks as cutting grass, digging and cleaning the community drinking water pond, trapping crabs and eels⁴⁴, making boxes to catch eels, working as carpenters, catching mice and rats for sale, doing household chores (like fetching water and firewood), repairing fishing nets, selling fruits and snacks, and thatching. Many of these jobs used to be considered unappealing and left to the most destitute. Since Nargis many have no choice but to do them, too.

In today's Delta village economy, supply of labour for these tasks outstrips demand in many instances, putting downward pressure on daily wages especially in the agricultural off-season. As noted above, the average farm wage is c. 2,100 kyat per day⁴⁵ compared to no more than 1,000 kyat for odd jobs.

SEASONAL MIGRATION

Delta villagers prefer to stay on their native soil

Traditionally, seasonal migration has been an important part of the Delta economy. If anything, it has become more important since Nargis, and occurs in all villages studied. However, despite the tremendous shock to the economy, the overall pattern of migration has not changed much. The obvious hardship of post-Nargis life in the Delta notwithstanding, villagers show a revealed preference for staying on their native soil, which is perhaps a reflection also of the fact that in their view, the economic situation overall is still acceptable compared to the difficulty of establishing new livelihoods elsewhere.

Most seasonal migration is for farming, and is increasing

Migration takes place primarily in the agricultural sector, accounting for around 70 percent of seasonal migration in the villages studied (Table 14). Between 7 and 31 percent of the village population migrates seasonally, with an average of c. 15 percent. In about one-quarter of the villages, on average half of all households have at least one migrant; these villages have a small farming sector, with labourers greatly outnumbering farmers.

Table 14: Migration patterns

Sector	Percentage
Farming	70
Fishing	20
Other	10
Total	100

Peak labour demand occurs at harvest time and lasts for about six weeks for each crop cycle: roughly October to mid-November for monsoon paddy and March to mid-April for summer paddy. During these periods, villages that usually have a surplus supply of labour need to import labour. To a lesser extent, labour demand surpasses supply also during planting season (July and December for monsoon and summer paddy, respectively).

An estimated 70 percent of seasonal agricultural migrants are women. A major change since Nargis is that an increasing number of small farmers in most

⁴⁴ Farmers have also started to trap eels and crabs on their fields, leaving less to landless labourers.

⁴⁵ Farmers used to serve lunches to labourers who worked for them the entire season while working in the fields but, fewer can afford to do so today.

villages now also migrate as labourers once they have harvested their own crop, to supplement their incomes.

Migration is commonly to nearby areas

Many villages experience in and out migration, most of it from and to neighbouring villages. Only four villages recorded in-migration from other townships. In fact, an estimated 90 percent of Delta villagers who migrate seasonally in the agriculture sector stay in the region; only around 10 percent migrate outside the Delta.

Migration for fishing is decreasing

Migration also occurs in the fishing industry (about 20 percent of seasonal migration with an overall decreasing trend since one year after Nargis), in two ways. First, fishermen in six out of the 21 fishing villages get hired on big boats to fish at sea for generally 3-4 months a year; they earn around 30-60,000 kyat per month, depending on their skills. Second, in a few fishing villages, big fishermen who own the licenses organize small fishermen in groups to fish in the coastal areas during the fishing season. This long-standing practice is also less common after Nargis, however, since the catch has declined significantly and fishermen lack boats and gear.

Migration to further afield remains limited and of short duration

About one-tenth of seasonal migration in the villages studied is for other employment⁴⁶, with women and men migrating in about equal numbers, including to other townships/divisions. For the most part, women are hired as maids or work in factories and shops while men work in construction (roads, housing, etc.). Again, these migrants mostly stay within the Delta; only perhaps 1-5 percent of villagers across the villages studied have migrated—temporarily or for several years—to Yangon or neighbouring countries (mostly when they had contacts there already).

Remittances do not constitute an important source of income across the villages studied. Any remittances long-term migrants are able to send to their families in the Delta are small, even for those migrants in Yangon and outside the country.⁴⁷

Villagers did not report any restrictions on travel within the Delta or to other parts of the country. No travel authorization is required for travel within Ayeyarwady Division, within which the vast majority of migration takes place. For travel to Yangon and other Divisions/States villagers require an authorization from the VPDC leader, which villagers say is easy to get.

CHANGING OCCUPATION AND LIVELIHOODS

Occupational change is multi-directional

Changes in occupation are new to the Delta; prior to Nargis, people generally did not change livelihoods. Since Nargis, villagers had to take on new activities in order to increase their income. Overall, occupational change in the Delta has been

⁴⁶ In one village, nearly half of its labour force migrated to work on a nearby highway construction and in logging bamboo for a paper factory.

⁴⁷ In one exceptional case, which happened after SIM 2, a villager was able to build a house worth 7 million kyat with the money he had received from his two sons, who are working in Malaysia.

multi-directional but only fishermen have had to change livelihoods entirely. Other changes that have happened are new occupations that villagers carry out in addition to their traditional livelihoods. Such occupational shifts include the following: farmers intensifying the collection of crabs; farmers migrating as labourers after harvesting their fields; farmers and fishermen raising animals; labourers starting small businesses or raising animals; and small business owners becoming labourers to settle their debts. Increased animal raising is closely related to the provision of livestock aid.

Oftentimes, villagers pursue multiple jobs to earn a living (Box 17), but, doing mostly odd jobs, have found reliable income streams in very few cases only.⁴⁸

Box 17: Multi-tasking

In one village an old lady took an advance of around 30,000 kyat from a farmer with the promise of repaying in labour at harvest time. She opened a small grocery shop with this money. When the time came to repay the debt with her labour she hired someone to work for her instead. However, she was not getting income from her shop, as the labourers who took goods from her were unable to settle their accounts until they themselves were paid. She therefore was forced to earn a living as a crab collector, while she tried to run her shop. Then she was struck by an illness and could not operate either business for one month. So, she was forced to give up the shop. As she is old, she cannot work in the fields, and is now trying to restart her shop.

Furthermore, a change of occupation may require basic knowledge if the job is new, which villagers do not always possess (Box 18).

Box 18: Labourers make poor choices

In one village, two casual labourers agreed to build houses for a construction company as part of a post-Nargis housing construction project. They would receive 45,000 kyat for each house frame completed. They hired another five carpenters for the first house. After completing the house the labourers discovered that they had spent 7,500 kyat more than they earned. They then decided to only hire two carpenters to build another seven house frames. They were not always paid on time and sometimes had to wait for the construction materials to arrive, which increased the number of working days beyond what they had estimated. So it turned out that their expenses on these houses were 37,500 kyat higher than their earnings. After losing their own houses and assets during Nargis, to settle their obligations, one labourer now also lost the family's grocery store and the other the family's rice stock.

The majority of fishermen have lost their livelihood

Of by far greatest importance has been the change from being a fisherman who lost his boat and gear to being a labourer or a boatman. In the 21 fishing villages studied 90 or more percent of fishermen thus became labourers. The vast majority of cases happened during the second year after Nargis; SIM 2 recorded far fewer such cases. Even so, fishermen want to maintain their traditional livelihoods and try to continue subsistence fishing.

Overall, villagers consider fishermen-turned-labourers to be the worst off in terms of occupational shift. They may not be worse off than labourers in absolute terms. However, their relative position has shifted significantly, and their familiarity with

⁴⁸ In one of the villages studied, occupational shifts have been the result of a government township development project. Farmers received compensation for the land lost, and displaced fishermen and labourers received compensation in the form of ten roofing sheets each. Many of these displaced have yet to fully establish their new livelihoods. In two other villages, a government pipeline construction project led to the temporary loss of land use.

the new occupation(s) is more limited. They are thus seen as having fewer choices with regard to the jobs they need to do to make a meagre living.

SELLING ASSETS

As noted above, the sale of land user rights to settle debt obligations has so far happened infrequently. In addition, in about a third of the villages, farmers who own user rights to land that is vulnerable to tides and weather face difficulties finding potential buyers, who are not willing to make the additional investments that would be required. By contrast, in all villages an average of 15 percent of small and medium farmers rent commonly 2-3 acres to labourers because they lack sufficient working capital, to be repaid after harvest at 10-15 baskets of paddy per acre. This way, farmers maintain greater longer-term household security.

Conversely, very frequent has been the sale (or forfeiting) of fishing boats and gear, which undermines the prospects for livelihood recovery. People in all villages also sold other household assets (see above) in order to settle debts and/or pay for health treatments and education.

Strategies to reduce expenditures

Households in the villages studied employ a range of approaches to reduce daily expenses: they eat less and spend less on medicines and other household items, they use more family labour, and they take children out of school—or send them to monasteries, whichever option saves them more money. In fact, just about every household in the villages studied uses at least three mechanisms: reducing food expenditures, giving children less pocket money, and reducing health care expenses.

REDUCING FOOD AND OTHER CONSUMPTION

Most villagers have enough to eat ...

By the time the fieldwork for SIM 3 was carried out there were no signs of starvation in any of the villages studied, and most people in 36 of 40 villages were eating three meals a day. In general, farmers have the least difficulty though even they have to eat broken rice in almost a quarter of the villages, and in one-tenth of villages people can only afford lower grade rice. Conversely, there are labourers and fishermen-turned-labourers in all villages studied who experienced some reductions in food consumption: they skip lunch and eat two meals a day instead of three, reduce the amount of rice they eat with each meal (commonly four cups⁴⁹ per meal instead of six previously for a family of five), eat broken rice, eat porridge (boiled rice with water), and have meals only with fish sauce and paste (instead of fish).

Given the necessity of spending on food almost every Delta household, with the exception of big farmers, has reduced expenditures on other items, especially since food aid ended one year after Nargis, though to varying degrees. Households reduced expenditures on entertainment (watching videos, see above), children's pocket money, health care and education, clothes, donations, and travel to visit relatives in other villages. It was reported that expenses for smoking, alcohol and betel leaves have not been reduced much (see below).

⁴⁹ Eight cups of rice make up a *pyi*, and a *pyi* of rice weighs two kilograms.

... though the poor face greater difficulty ...

People across the villages reported that food deficit households quite often eat their evening meals late since food aid ceased, after 8 o'clock instead of the normal 6 o'clock supper. These families have to work longer hours and are able to buy or borrow rice only upon their return from work; they no longer have rice stored at home or easy cash to buy it.

... and poor parents can no longer afford their children's education

In all villages, some parents have taken their children out of school since Nargis because they cannot afford to keep them there. This has happened especially in those six out of 40 villages that have no primary school, where parents have to send children to schools in neighbouring villages. At the same time, in one-fifth of villages, some poor parents (on average an estimated 15 per village) have sent one or two of their boys (but not girls) to a monastery where they receive education. Some of these boys have entered into monkhood since.

USING FAMILY LABOUR

Both small and medium farmers in almost every village can no longer afford to hire as many labourers as before; they have reduced their labour demand by an estimated one-third. As a result, other family members have to work in the fields instead. In a few instances across villages, but with increasing frequency since Nargis, parents have taken children out of school so that they migrate with them seasonally in search of jobs.

SECTION 4: SOCIAL RELATIONS AND INSTITUTIONS

SIM 2 research found social capital to be strong overall. Gender relations had been good, and women had more awareness of aid affairs than before. However, widows and widowers continued to face a double burden, and orphans had been taken out of school and had to work because their relatives could not afford their school fees. Young people continued to play an active role in the aid effort, and relations among young people and the elderly continued to be strong. The role of religious leaders in the aid effort had shifted somewhat, some focusing on their traditional role as providers of education. Aid had played a role in whether villagers' relations with their leaders changed. Relations were mostly good, though some cases of perceived aid mishandling had caused relations to worsen. There had also been some changes in inter-village interaction. Business and administrative interactions had decreased somewhat, but social and religious interaction and participation in inter-village infrastructure projects had gone up.

This latest round of SIM finds that Delta communities have stayed resilient despite the continued challenges they face. In most aspects of village life, there has been little change over the past year and social relations are good. A noticeable change has been the remarriage of a majority of widows and widowers during the second year after Nargis, which reduced their double burden. Furthermore, women are becoming more empowered, in good part as a result of the aid effort. At the same time, villagers' stress has increased because of the dire economic predicament. The role of religious leaders and the youth in the aid effort has decreased but relations between the young and the old, between villagers and religious leaders, and between villages are generally good. There have been no further cases of identity based aid in the villages studied since SIM 2, and inter-ethnic and inter-religious relations are stronger. The tensions that still exist in a minority of villages between villagers and their leaders are mostly related to the provision of aid. On the whole, however, many leaders are responding well to the pressures that aid has brought with it, and relations between villagers and their leaders are generally good.

1. Social Cohesion and Collective Action

In all villages many families are related to each other. Furthermore, in contrast to life in urban areas, villagers have daily contact with each other. This creates a strong social fabric, which has helped Delta society weather Nargis' shock to the social system remarkably well. Two years after Nargis relations between social groups in the Delta are strong.⁵⁰

Earlier tensions have largely dissipated ...

A year after Nargis tensions existed in several villages because of issues related to aid. In particular, villagers had sometimes been unhappy with the selection of beneficiaries. For the provision of individual aid (such as household goods, food aid and shelter), labourers had been commonly identified as the beneficiaries on the basis of the criteria determined by the aid providers. Villagers who felt equally needy but excluded from such aid complained about the village leaders who had identified the beneficiaries. This resulted in a certain degree of distrust between villagers and their leaders and a lack of cooperativeness. During the second year after Nargis this type of aid decreased, and with it the potential to cause tensions among villagers.

⁵⁰ The ratings for social relations are a combination of villagers' views and the research team's assessment across the villages studied.

... and social relations today are good across the villages studied

Two years on, relations between women and men are considered good in all villages (Table 15). In three-quarters of the villages studied, relations between the young and the old are good, and fair in the remainder. In only four villages are there noticeably poor relations between religious leaders and villagers (see below); in two of these, the situation deteriorated since SIM 2.

Table 15: Overview of social relations

Relations	Good	Fair	Poor	Better	Same 1/	Worse
Gender	40	-	-	-	40	-
Age	30	10	-	-	40	-
Religious lead.	30	6	4	-	38	2
Identity 2/	9	-	-	3	6	-
Village leaders	19	15	6	2	35	3

1/ Compared to SIM 2, i.e., one year after Nargis.

2/ Between religious and ethnic groups.

There is little change to collective action to before Nargis (see also Section 2). People in all villages continue to work together in a wide range of development activities, such as the renovation or building of community infrastructure (village roads, school buildings, drinking water ponds, etc.). They also cooperate in social activities, including rice donation ceremonies for monasteries (which are organized by village leaders at the beginning of each year), the organisation of a music band (also to entertain neighbouring villages), and the mobilization of money to increase teacher salaries through lucky draw lotteries. These activities, which villagers commonly perform voluntarily, are mostly led by VPDC leaders in cooperation with village elders and respected persons.

The research team found that where relations between villagers and their formal and informal leaders were particularly strong, which was the case in about half of the villages studied, collective action and general trust were also strong. In only six villages was social cohesion considered weak as a result of distrust, related mainly to the perceived unequal distribution of aid.

Gender relations

Relations between women and men are considered normal, i.e., largely the same as before Nargis, in all villages. Family arguments and quarrelling between husbands and wives are a common occurrence. However, villagers deem these occurrences neither more frequent nor more intense.

Men and women are putting their lives together again ...

There has been a noticeable increase in marriages since SIM 2 especially in the highly affected villages. The majority of widows and widowers have remarried during the second year after Nargis, very frequently marrying someone who also lost a spouse to the cyclone. By contrast, the research team encountered no genuine divorce case after SIM 2 (with only one reported during the first year after Nargis).⁵¹

⁵¹ Prior to Nargis there had been many instances of a husband and wife quarrelling and approaching the VPDC leader to seek a divorce. Invariably, the VPDC leader would tell the couple to return in a week or two to carry out the divorce. By that time, the feud had usually subsided and the couple would not report to the VPDC leader. After Nargis, VPDC leaders in five villages, irritated by this burden on village social and administrative life at a time when their work responsibilities had increased noticeably, introduced a fee for anyone

... and overall, the double burden has eased

In previous rounds of SIM it was noted that widows and widowers carried a double burden, having had to take on their spouse's responsibilities in addition to their own. This double burden eased for all those who remarried. It does, however, remain especially for the remaining widows who are often amongst the poorest in the village (see above) and have to rely on help from relatives and religious groups.

Women are becoming more empowered ...

In the past, women's primary sphere of influence was the household while public matters were the prerogative of men. Aid and the social dynamics after Nargis have led to a gradual shift in women's role in village affairs. A noticeable trend during the past year has been women's increased involvement in village affairs. This is especially but not exclusively so for aid-related committees: in almost half (19) of the villages, aid providers require women's participation.⁵² In five of these villages women also take part in decision-making related to aid. Men appear to accept, and be satisfied with, women's membership in local committees. Women are also satisfied with their evolving roles. Moreover, due to aid projects women have become more independent economically in several villages, which increased their self-confidence (Box 20). On occasion, they have even become their household's primary breadwinner.

Box 19: Saving for empowerment

Since before Nargis, a young woman farmed 10 acres of land for her mother-in-law, and followed whatever her husband told her as is the common practice in the village. In 2009, she became the leader of a 5-member savings group and received a loan of 70,000 kyat. With this money she invested in a small grocery shop. In 2010, she received another loan of 100,000 kyat from the aid provider that had set up the group, and a further 150,000 kyat from a farmer. She used this money to breed 50 ducks. She is able to manage these businesses without the influence of her husband or mother-in-law. Moreover, she often attends the meetings of the savings group. As a result, she is now more confident and does not request permission from her husband to attend meetings in the village.

... but traditional gender discrimination remains

Women continue to suffer from long-standing discrimination. There is a clear tendency for parents to favour the education of boys over that of girls. Furthermore, in the villages studied the average wage for women (1,600 kyat per day) was almost one quarter lower than that for men (2,100 kyat); in some cases, it was only half.

The incidence of gender-based violence remains difficult to ascertain

As in previous rounds of SIM, the research team heard few cases of gender-based violence. However, since such violence usually happens in the home and is under-reported, its full extent cannot be determined.

who wanted to divorce (and in some cases, also to remarry). (In one such case, the fee for a divorce was set at 50,000 kyat while that for remarriage at 1 lakh.) As a result, couples in these villages no longer approach village leaders for a divorce when they quarrel.

⁵² In almost one-quarter of the village studied (9) young women are also involved in the village committee, especially the aid committee.

Family arguments are common in all villages and on the whole are not deemed different from prior to Nargis.⁵³ Often, these are related to drinking and gambling. Village leaders in four villages complained about husbands drinking and beating their wives more over the past year than previously; they attribute such behaviour to increased economic difficulty and stress. In the other villages no higher alcohol consumption was observed.

In the most severe case since SIM 2, a man (from a neighbouring village) was sentenced to life in prison by the township court for having raped a 12-year old girl. In other reported cases: a village leader has been beating his wife frequently, even in public; a wife filed for divorce after having been beaten severely by her husband (though the couple united again later); and a wife stabbed her drunk husband because he had strangled her.

Psychosocial wellbeing

Villagers did not report any widespread cases of psychosocial suffering. However, particularly in the highly affected villages, people still talk about Nargis often and are afraid of monsoon rains and storms. They worry when they hear a cyclone alert on the radio especially when they do not have a cyclone shelter in the village; some say that they would all be killed if another cyclone came. Examples of psychosocial stress include: children in one village who play outside coming back home as soon as rain starts, some going straight to the cyclone shelter; a widow ageing rapidly because of post-Nargis depression who is now being looked after by her teenage son; and a villager, erstwhile a big farmer who lost his family during Nargis, selling off most of his land and being content with earning less money. By contrast, in less affected villages, villagers hardly talk about Nargis anymore.

Today, stress more often originates from a dire economic predicament

Two years after Nargis, people are experiencing more stress because of their struggle for livelihoods and survival rather than from coping with Nargis *per se*. For instance, such stress also manifests itself in farmers in several of the villages being gravely concerned about their next crop due to rains arriving late—even though the end of the planting season was still almost two months off at the time of the visit.

Orphans

The situation of orphans in the villages studied has changed little. Buddhist orphans are mostly looked after by their relatives: primarily grandparents, aunts and uncles, and elder siblings. In a few villages monks are looking after several orphans who do not have any relatives, or if these cannot support them. Churches and mosques take care of children of their faith, often in Yangon, where they also provide them with education. Many foster families do not have the means to pay the orphans' school fees and receive related assistance only on occasion. Consequently, many orphans have dropped out of school. In other cases, orphans have to help supplement the family's meagre income.

⁵³ In two villages, VPDC leaders have levied a fine of 5,000 kyat on any couple that fights, which reportedly has reduced the number of family quarrels. The leaders use these fines for community development and administrative expenses.

Inter-generational relations

Relations between the youth and the older generation have remained steady and are mostly good in the 40 villages studied. The young and old cooperate in all but one village; in 12 villages activities were organized by youth themselves or in cooperation with elders, in the remainder of villages they were initiated by the older generation. Such joint activities include school concerts, music classes, handicraft courses, building shelter, and renovating the village bridge. Young and old cooperate also in many community organisations that cover an array of activities ranging from religious ceremonies to fire fighting. The more successful organisations among these have been initiated and are led by the villagers (rather than aid providers), give equal space to all generations, and reflect the ideas of both the old and the young.

Young people continue to play a role in social, development and aid related village affairs. However, compared to the immediate post-Nargis period, their role is less pronounced today and decision-making remains mostly with the older generation. In a quarter of villages, the elderly complain that the youth are lazy and that they have to ask them to help, for instance, to unload aid construction materials, renovate the village road, or prepare land for a school building. The elders feel that the youth should offer their help out of their own volition.

Identity-based relations

There have been no further cases of aid targeting exclusively one identity group

Post-Nargis, aid targeted to members of one faith or ethnicity led to some intra-village tensions. The research team found no further evidence of such cases since SIM 2. Villages continue to receive aid from religious groups, but other faiths also benefit from it. As a result, previous tensions related to the provision of aid in three mixed villages have dissipated, and intra-village relations across identity groups have improved.

Social relations between religious groups are considered healthy

People in the mixed villages consider relations between religious and ethnic groups to be good. For example, in several of the religiously heterogeneous villages people from both faiths participate in religious ceremonies of the other community, like Buddhists attending the Christmas and New Year celebrations of Christians. In other instances, Christians and Muslims contribute financially and in labour to Buddhist ceremonies and the cleaning of monasteries. Furthermore, inter-religious (and inter-ethnic marriages), which have taken place since long before Nargis, continue in all the mixed villages.

Relations with religious leaders

The role of religious leaders in the aid effort has decreased

With the emergency after Nargis over, religious leaders have largely withdrawn from the aid effort and other secular affairs and have taken their traditional place in village life focusing on spiritual matters. Only leaders of Christian communities continue their habitually active role in organizing and supporting their congregations. In one exceptional case, a village monk, concerned about his villagers' wellbeing, had formed a village development organisation right after Nargis which is still operational today. Through this committee the villagers received a generator, a clinic, shelter, a jetty and credit from aid providers. Relations between the villagers and the village monk in this case are

exceptionally good, but they are strong in most of the other villages, too; in fact, villagers expect monks to lead spiritual lives.⁵⁴

Relations with newly settled people

Village populations have largely settled two years after Nargis. Five of the studied villages are still host to people from other areas because their villages had been destroyed by the cyclone. Their numbers vary from a few (3-8 people) in two villages to c. 100-115 in two other villages (representing c. 10 percent of the population of the host communities), to about 250 people in one village. In the latter village, which had been receiving more aid, people from different villages settled in the hope of also receiving assistance; the new settlers represent almost one-fifth of the village population. There are tensions in the village between the established and the new settlers for lack of clarity on who would receive housing assistance, and when.

In one of the medium range villages the new settlers have received aid from several providers. They changed their livelihoods from fishermen to labourers but have yet to establish themselves fully. Consequently, they return to their home areas for about two weeks every month to do odd jobs there. Relations with the host village are considered to be very good. In the other of these villages, people from different areas have settled as a group; many of these too had been fishermen who turned labourers while aiming to maintain subsistence fishing. Social relations with the host population are not bad. However, the established villagers are said to not show much concern for the livelihoods of the new settlers.

2. Inter-village Relations

Inter-village relations are good ...

Villages in the Delta regularly interact with each other for a variety of activities. Nargis affected these relations in the short-term; it brought villages closer together when they helped each other after the disaster, and on occasion pulled them somewhat apart because some villages felt excluded from the aid that others were receiving. Two years after Nargis, inter-village relations are good and in a number of cases interaction has intensified further (Table 16). The most frequent interaction, which occurs in all villages, is for business purposes, especially for harvesting and trading (rice, fish, and other goods).

Table 16 : Frequency of inter-village interactions during the past year

Frequency of interactions in ...	# Villages in which increased	# Villages in which stayed the same	# Villages in which decreased
Business	4	33	3
Administrative affairs	11	26	3
Social affairs	4	36	-
Religious Affairs	14	25	1
Resource sharing 1/	6	4	-
Inter-village projects	6	4	-

1/ Including non-formal education (NFE) schools.

⁵⁴ Relations between villagers and monks were bad in four villages, including two where relations have worsened since SIM 2. In these cases, villagers have noted the secular behaviour of monks, which they consider inappropriate.

... and have intensified especially for religious affairs

Cooperation on religious matters is to some extent cyclical. The SIM 3 research took place at the time of various religious festivals, which usually brings communities together.⁵⁵ And yet, religious interaction has increased during the second year after Nargis; the ability of villages to do so within the first year after the cyclone had been more limited given the immediate focus of villagers on re-establishing their lives and livelihoods. In almost all villages, cooperation took place for religious affairs. In six villages, such cooperation involved 3-4 neighbouring villages. Activities included rebuilding and maintaining the village pagoda, jointly celebrating religious festivities and organizing fun fairs to raise money for the village church.

In a variety of cases there was strong cooperation across villages also in other matters, including for development (which was very strong in seven villages), livelihoods and social affairs. Such cooperation may be initiated by the villages concerned or an aid provider. Villagers made financial and labour contributions to, among others, the renovation of bridges and roads, and the construction of community buildings (such as classrooms) (Box 21). They shared food and water ponds (and in one case purified water after an aid provider had donated a purifier to one village), participated in a credit and savings group (which lends to poor people to cover health expenses), organized school concerts and shared music bands, and shared funeral facilities. In four villages there are groups that organize labourers, including from nearby villages, and help them find jobs (see above).

Box 20: Working together to come closer together

The village elders and respected persons and pagoda trustees from two villages cooperated in building a bridge across the stream that separates them, as they have never had one. The informal leaders from both villages asked for donations with an illustrated picture of the bridge-to-be-built. They received 15 lakh which was sufficient to build the base of the bridge. A private donor is donating another 150 lakh to complete it. The bridge also serves three nearby villages. Although these other villages could be reached by boat, every person has to pay a fee of 50 kyat for using the jetty. The bridge now allows villagers easy travel in their environs.

Only three villages experienced fewer business and administrative interactions. At the same time, in only three cases did perceived inequality regarding aid affect relations.⁵⁶ Such envy did not create tensions *per se*. However, it limited the extent of cooperation between villages except for necessary business relations and relations between extended family members.

3. Local Conflict and Crime

There are very few cases of conflict within communities ...

The number of conflicts within the villages studied is very low, which is another reflection of the high degree of social cohesion in the Ayeyarwady Delta. Disputes as they arise include the trespassing of animals, fighting among drunkards, work accidents, and aggressive arguments related to debt. There are rare instances of conflict between and within socioeconomic groups since Nargis; in one reported case, small fishermen were upset by the actions of a big fisherman who killed fish

⁵⁵ By contrast, SIM 2 research took place during the planting season when there are fewer religious activities.

⁵⁶ This aid included community infrastructure (a cyclone shelter, good quality houses and a jetty) and livelihoods assistance (fertilizer).

by electric shock and poison (see above). But few serious incidents of conflict have arisen in the research villages.

... and local leaders resolve most conflicts to the villagers' satisfaction

Community conflicts are usually resolved by the VPDC leader, generally in consultation with elderly and respected persons.⁵⁷ In about one-third of villages, troublemakers have been ordered to do community work, such as renovating a foot path, digging or cleaning a water pond, or providing materials for community infrastructure rehabilitation. In two villages, village leaders have levied a fine of 5,000 kyat on each quarrelling party; these fines are deposited in a village fund for use in community development activities. In case of (draught) animals trespassing (which was reported in eight villages), the owner has to compensate the farmer at a rate of 500-1,000 kyat per cattle trespassing regardless of the damage.

Despite the economic hardship there is little theft

Petty crime occurs, but its occurrence is neither significant within or across villages nor much increased since Nargis or over the past year. The most common cases reported include the theft of some livestock (draught cattle, piglets, ducks; individual cases in three villages) and some fishing equipment (boats and nets; individual cases in six villages). The draught cattle are usually recovered⁵⁸, the boats and nets are not⁵⁹. In the two instances where the case was resolved, the thieves were from another village and transferred to the authority of their respective VPDC leader. In one other reported case a labourer stole paddy during transportation and was required to repay the amount stolen.

4. Institutions, Leaders and Villagers

In the immediate aftermath of the cyclone, challenges of recovery brought people together around a common purpose. Formal, informal and religious leaders played an important role. As the aid effort increased, village leaders were heavily involved in the aid effort, participating in aid committees, helping distribute and manage aid, and liaising with project committees. Increased responsibility brought with it the potential to both strengthen and weaken community relations. In SIM 2, it was found that religious leaders (especially monks) had become less active in village affairs, and that aid related issues were emerging as one of the main sources of conflict in the villages. Overall, however, relations between villagers and their leaders were found to remain constant, and in some cases were improving.

It would also be expected that the flow of aid introduces some important changes in the way in which villages are organized. Providers have sought to involve villagers in the aid effort, both through direct engagement with existing village development committees, as well as the creation of new ones. Moreover, the SIM 3 research shows that the flow (and reduction) of aid puts pressure on leaders and the dynamics of potential conflict have become clearer. When complaints or perceived inequities about aid arose, relations among villages and their leaders grew worse and relations between leaders often were placed under strain as well.

⁵⁷ In settling local disputes, especially uncommon cases, village leaders often depend on their resourcefulness.

⁵⁸ Farmers recognize their cattle even without marks. Cattle supplied by aid providers have branded numbers.

⁵⁹ In two of the cases involving theft of boats and nets, the fishermen did not report the theft to the authorities since they would have to pay a formal fee for the investigation.

Formal and informal leaders shape village life

Village leaders play a critical role in everyday life in the Delta. There are two kinds: formal leaders, who are authorized by the state, and the informal leaders who are widely recognised in the village. The main formal leaders (*ya ya ka*⁶⁰) are the VPDC president, the "100 household" leaders (*yar ain hmuu*), and to a lesser extent the "10 household" leaders (*sae ain hmuu*)⁶¹. The informal leaders are recognized according to village custom (*yat mi yat pha*⁶²) and in most villages, are found to play an important role not only in religious and social affairs, but also in aid activities.

The lines between formal and informal leaders are often blurred

The relationship between the formal and informal leaders can have a major impact on the village. Villager elders and religious leaders often have the power to challenge the formal leaders, and therefore provide an important check on their authority. In nine villages, the research team found that one or more village elders⁶³ were considered to be the main decision makers in the village. In all other villages the VPDC leader was the main authority in the village. It is also important to note that, in most villages, the VPDC leader was widely accepted by the vast majority of villagers.

The VPDC leaders are relied on to perform a wide range of functions in addition to performing administrative activities for the township and liaising with aid providers (Box 22). This included resolving social disputes, assisting villagers in accessing legal and economic assistance, and even organizing community activities. While the extent to which formal leaders perform these broader social functions varied, in most cases it was clear that the lines between formal and informal leadership are blurred, and in all but six villages, this broader 'core group' of village leaders (including formal, informal and religious leaders) was reported to be working together effectively.

Box 21: Examples of wider roles of village formal leaders

In addition to acting as the link between the villagers, the township and aid providers, the formal leaders take on a wide range of additional responsibilities to support the village. When asked, village leaders cited the following as some of the examples of activities and achievements over the year:

- Resolving disputes: settling domestic and inter-household disputes, as well as negotiating between occupational groups (farmers and fishermen);
- Supporting livelihoods: supporting farmers to access loans from the Myanmar Agricultural Development Bank;
- Reducing conflict between ethnic groups in the village, bringing leaders from various groups into the decision making process;
- Contributing to village development activities by mobilizing contributions from other leaders and, in one case, contributing own land for housing sites;
- Attending trainings given by NGOs, chairing various sub-committees, and

⁶⁰ *Ya ya ka* is often used to mean the village administration, and all formal members of the VPDC can be given this title.

⁶¹ The president of the village tract is officially appointed by the township authorities, and then selects the 100 household and 10 household leaders, who are not official members of the Village Peace and Development Council.

⁶² *Yat mi yat pha* refers to people who are relatively aged, respected and admired by villagers because of their knowledge, spirit or past role in village affairs, or elderly wealthy people who are reputed to be fair in their business dealings. This exclusively male group tends to comprise large farmers and members of the better-off households in the village.

⁶³ In one case, the village monk is the main decision maker.

- supporting other groups (youth, religious, women) in social and development activities;
- Mediating in local justice: intervening to stop the arrest of, or release, farmers who have not paid their paddy quota, and helping township authorities in criminal cases; and
 - Organising community fund raising events, such as setting up a music band to raise funds for community activities.

Some tensions remain between villagers and their leaders

Some signs of tensions between villagers and their leaders were reported in half the villages (21) over the last year. In most of these villages (15) the tensions were moderate, and were limited to a sense of distrust of leaders among certain groups of people in the village, or a sense that the leaders are not sufficiently active in village development. In six cases, relations were reported to be 'poor', with a clear division between leaders or groups in the village, though formal complaints against the leaders are rare. Only in one case have the social relations deteriorated significantly in the last year. In this case, two aid related disputes have divided the village in two.

New space for participation has not altered village leadership

Since the cyclone, a number of new committees have been created to oversee the aid effort, the most common of which is often referred to as the aid committee or village development committee. In most cases, these committees include members of the formal and informal leadership, but also include other active villagers. Two years after the cyclone, these committees were found to still exist in twelve of the sample villages. In cases where the aid committee did not exist, it was common that the committee of elders was playing a similar role in supporting the VPDC in managing aid provision in the village.

The research team also found that a range of single purpose committees existed in the sample villages. Two main types were found.⁶⁴ The first was established to oversee specific aspects of village development, the most common of which oversee school management or welfare and hygiene. Many of these committees were established by non-governmental organisations (17 committees). The second type of single-purpose committee was concerned with socioeconomic activities, mostly among youth (16 groups) and women (11 groups). Notably, livelihoods based groups were less common (7 groups). A relatively large number of faith based, and other social organisations were found (32).

The average village has five development related committees. The minimum number of committees was three and the maximum was eleven. Only one quarter of these were formed since the cyclone. However, the research team found that some kind of new committee had been established in the last year in 13 villages. This suggests that the effect of aid on expanding social capital has been limited. More importantly, as indicated above, it was very rare to find that individuals who are outside the 'core' cluster of leaders had any significant influence in the village. This cluster of leaders is predominantly male, and tends to be dominated by older and better-off persons in the village.

⁶⁴ Ninety percent of the committees discussed in this section were found to be active at the time of the SIM 3 research.

Table 17: Development and aid related committees

Type of Committee 1/	Frequency 2/
<i>Committees/groups overseeing general village development</i>	
VPDC	40
Village elders	33
Aid committee	12
<i>Committees/groups overseeing aspects of village development</i>	
Parent teacher association	24
Other NGO committees	17
Welfare/hygiene	7
Red Cross	5
Library	2
Disaster risk reduction	2
<i>Socioeconomic groups</i>	
Youth	16
Women groups (informal)	11
Self-reliance groups, micro-credit (NGO)	8
Livelihoods	7
Religious and other social	32

1/ Other committees were found in all village, but these were not recognised as being directly involved in aid and development related activities.

2/ Number of committees across sample villages at the time of SIM 3 research.

This suggests that there has been little expansion in terms of the number of effective leaders at the village level, as leaders from single purpose committees tend to have little influence over major decisions in the village. There have, however, been some changes within the leadership, especially in the VPDC. In all villages the established formal and informal leaders remain the most important decision makers. As a result, the capacity of individual leaders, and the strength of the relations between them, plays a central role in determining aid effectiveness, both now and in the future.

SECTION 5: CONCLUSIONS

A great many changes have taken place in the Ayeyarwady Delta during the two years following Cyclone Nargis. The raw devastation that the cyclone left in its wake has been moderated to some degree due to a combination of external aid and internal resilience. Yet the challenges of rebuilding livelihoods remain immense, and are increasingly complex. The long-term effects of the cyclone are evident, and it is clear that the development trajectory in the Delta has been fundamentally altered. Villagers have adapted to a lower equilibrium than they had had before, and harnessing their economic and social potential will require a longer-term strategy, which is yet to emerge. This chapter explores some of the critical challenges for development in the Delta, and suggests some priorities on which future assistance could be focused.

The social impacts monitoring study has provided a unique opportunity to understand the changing nature of the challenge of post-disaster recovery. Indeed, there are few other examples where the impacts of a natural disaster have been studied as they have been in Myanmar. Revisiting the panel of 40 villages at three strategically chosen points in time has revealed a detail picture of the transition from relief to recovery, and of aid effectiveness. The qualitative research approach used has enabled the research team to capture the multiple dimensions of impacts on social and economic life, and the diversity of experience between different social groups and localities. In the process, the research team has developed strong relationships with the people living in the villages they studied, which has enabled them to track issues and life stories over the two-year period.

Key Challenges

In the immediate wake of the cyclone, villagers had to cope with immense loss of life, personal property and a broad sense of insecurity and uncertainty. In the months that followed, they faced new challenges of having to rebuild their livelihoods and communities as best they could. Many still struggle with regaining the essentials of their lives, but as they have been doing so new challenges have emerged. Two years after the disaster, the extent of these new challenges is starting to become clear, and so too are the implications for long-term recovery.

Different socioeconomic groups have taken different trajectories, and face different challenges. This is an important change from the first year after the cyclone, when the level of damage in each village largely determined the rate of its recovery. Now, we find that recovery rates vary more significantly between main occupations/sources of livelihood within the villages: while farming has started to recover somewhat, fishing is declining after tentative signs of a recovery a year before. Farming is the mainstay of the Delta economy and on its sustainable recovery rests the generation of sufficient employment for labourers, and those who have become labourers as a result of necessary occupational shifts—but recovery is everything but certain.

The Delta economy has also been exposed to further environmental shocks since Nargis, especially the pest infestations and crop diseases during the 2009 season. These hazards are not new, but a severely weakened economy is facing much greater difficulty responding to them. The initial depletion of assets that resulted from Nargis has been further intensified largely due to the lack of sufficient aid and lack of affordable credit that farmers and fishermen need in order to be able to recapitalize. The ensuing lack of investment undermines the prospects of economic recovery, and continues to add to the debt burden. And so, asset

depletion continues since borrowers do their utmost to avoid defaulting on their debts.

It appears as if the shock of Nargis has moved the Delta economy to a new equilibrium that is lower in welfare terms. Without significant external assistance and a favourable environment the Delta economy will likely not reach its pre-Nargis level in a long time to come. As a result, households are employing a multitude of coping mechanisms to increase income and reduce expenditure. The greater hardship for many families and grave concerns over future crop failures compound the psychological stress that the experiences of Nargis left in the mind of the people of the Delta.

And yet, despite the enormous challenges, the Delta village has proven to be remarkably resilient. Relations between social groups and between villages intensified immediately after the cyclone in many areas and weakened in some others. But, two years after the disaster, village social life seems to have swung back to its pre-Nargis equilibrium. The level of crime and intra- and inter-community conflict, including between ethnic and religious groups, is not noticeably different from before the cyclone. In the rare cases where there are tensions, these are often linked to the post-Nargis aid effort.

In the initial period after the disaster, there have been some changes in roles between social groups. Youth and religious leaders became more involved in community affairs than before. Two years on, their role is diminishing. At the same time, women appear to become more prominent in some ways on account of their involvement in the aid effort though it remains to be seen whether their empowerment lasts. One of the most important determinants of a community's recovery, however, has been their leaders, both the formally recognised village heads as well as the informal group of elders and other respected persons, who have played a major role in organising communities and liaising with external aid providers.

Ways Forward

Given the immensity of the challenges that face the Delta, identifying key elements of a development strategy will be critical to ensuring the effectiveness of aid and the sustainability of its impact. Drawing on the findings of the SIM, four core areas of support are suggested as being of particular importance.

1. Cash and credit for productive investment

The demand for cash/credit-based assistance arose soon after the cyclone, as beneficiaries felt that aid would be more effective if they had greater discretion over how it was used. This demand has persisted, and it is increasingly clear that affordable credit is needed in sufficient quantity so that it can make a real impact on livelihood restoration. That said, experience has shown the effective provision of credit is difficult in the absence of capacity building and a favourable environment. The challenge is not simply one of generating sufficient volume, but also ensuring that it is used effectively. The design of credit provision needs to be done in a way that does not result in an increase of the debt burden and does not intensify the tensions between economic groups. This will require a long-term approach, to develop the capacity of borrowers and credit institutions to ensure that credit flows are sustainable and are linked to productive investments.

2. Sectoral approaches to livelihoods

Approaching economic recovery from the 'systems' or sector level will be critical to overcoming the limitations of short-term livelihood support. In the case of agriculture, there is a danger that a decline in investments will contribute to a downward spiral of productivity. This will not only affect farmers, but also the poorest groups in the village that earn a living as labourers. In the case of fisheries, there is evidence that fishermen are facing serious challenges which are the result of larger issues, such as declining fish stocks. Confronting this requires an integrated approach in support of the Delta's ecosystem, as well as an analysis of the value chain. These issues need to be better understood, and research needs to be used to inform more effective livelihood support both at the sector and local level.

3. Supporting the poorest and vulnerable groups

Investing in rehabilitating agriculture would have a major impact in the Delta, as many of the poorest groups depend on farming for both work and broader social support. However, to quote a local saying, 'Only when the hand is full of water, does water seep through the fingers.' Many of the poorest groups in the village can neither wait for nor depend on this trickle-down effect. There remains a need to provide direct support to help the poorest and most vulnerable groups get out of poverty, by creating jobs through livelihood support and cash/credit and providing targeted safety nets. There are a number of good practices to draw on that offer effective ways to identify those individuals and households who require specific support, using participatory identification processes. Identification methodologies and support strategies need to be developed in ways that suit the context of the Delta.

4. Enabling communities to drive development

In order to provide sustainable and effective support for the communities, aid providers need to involve villagers more intensively in planning and implementing projects, and build a longer-term vision of local development than has been the case hitherto. Despite some important attempts to do so, there remains significant scope to develop the capacities of community organisations as active partners in aid provision. Developing the capacity of the existing leaders, as well as other potentially active members of the community, is likely to be another important factor in enabling communities to respond to the pressures and opportunities that are placed upon and before them. Participatory planning and local level coordination of aid provision, both of which enhance transparency and accountability at the village level, are two important—and feasible—ways to achieve this.

ANNEX 1: SOCIAL IMPACTS MONITORING METHODOLOGY

The Post-Nargis Social Impacts Monitoring is a central part of the Tripartite Core Group's framework for monitoring the ongoing impacts of Cyclone Nargis and recovery progress. SIM provides assessments of how 40 villages affected by the cyclone are recovering, how the aid effort is playing out at the local level, and of changes in the social and socioeconomic structures of villages. SIM is the first time that the social impacts of a natural disaster have been assessed periodically as a core part of a post-disaster needs assessment and formal monitoring system.

The first and second rounds of monitoring (SIM 1 and SIM 2) tracked impacts during the first six months and the first year after the cyclone, respectively. The third phase of social impacts monitoring (SIM 3) was implemented two years after Nargis, a 12-month period following the 2009 water festival.⁶⁵ The study was conducted in the same 40 villages spread across the Delta where the previous rounds of social impacts monitoring were conducted. Fieldwork took place in March and April 2010.

The methodology used is an adapted version of that employed for SIM 2, which was conducted between May and June 2009. SIM 3 also focused in greater depth on issues identified in SIM 1 and SIM 2. One important aspect of this was a focus on local institutions: how these have changed in the last two years, and their role in shaping recovery. Another was the continued tracking of core development concerns: namely debt and access to credit and differential rates of recovery between different livelihood and occupational groups.

As with SIM 1 and 2, Myanmar Egress conducted the fieldwork and analysis for SIM 3 with technical support from the World Bank. The researchers are all from Myanmar civil society with extensive experience of working in remote villages and conducting social assessment work. The social impacts monitoring team represents a mix of Myanmar's ethnic and religious groups. Women form over half the team. Research was conducted in local languages. An advisory group, consisting of Tripartite Core Group members and civil society, provided peer review.

While findings from SIM are representative only of the villages where fieldwork was conducted, triangulation with other data sources suggests that many apply more broadly across Nargis-affected areas.

1. Fieldwork for SIM 3

A pre-test was conducted in two villages in February 2010 after three days of intensive training. This initial fieldwork allowed the instruments and approach to be tested. The entire field team of 16 researchers were involved in the pre-test, which was followed by a three day de-brief, where approaches to data analysis were developed, and the research instruments were refined.

Two rounds of fieldwork were then conducted for the full social impacts monitoring, in March and April 2010, ending before the water festival. Four teams of three researchers and one team leader covered 38 villages in two phases. The one-week period during the fieldwork was used for the team to regroup and complete documentation before embarking on the second phase. Each research

⁶⁵ Recall is a critical issue in studies that aim to cover specific time periods. The water festival is something that all villagers are aware of and, therefore, acted as an important reference point when carrying out discussions in the villages.

team spent approximately three days in each village, with additional time allocated for travel.

Research methodologies were similar to those used in the SIM 1 and 2: they relied on in-depth interviews, focus group discussions and key informant interviews.

2. Sampling of Villages

The 40 villages visited in SIM 3 are the same as those where SIM 1 and 2 were conducted. Full sampling procedures are outlined in the SIM 1 report. Villages were selected to ensure: (a) wide geographic coverage; (b) coverage of the eight townships most affected by Nargis; (c) variation in predominant village livelihood types; and (d) variation in the degree of initial affectedness by Nargis. Four control villages were added to allow for comparisons to be made between areas that were affected and those less so, although three of the four 'controls' had also been impacted by Nargis. Map 1 show the locations of the social impact monitoring villages.

3. Overview of Research Topics and Questions

SIM 3 focused on the same topic areas as SIM 1⁶⁶ and SIM 2. Collecting data on the same issues allowed for an assessment of the evolution of conditions and villagers' and aid deliverers' responses over time. The focus in SIM 3 was on changes over the second year after the cyclone, and aimed to take a more forward looking approach to identify challenges and opportunities for the coming years.

Key question areas for the three topics examined are given below.

Aid and delivery

- What development assistance has reached the village since the last water festival, and how?
- What are the key needs in the village?
- Who are the poorest groups, and are they receiving aid?
- Is information about aid and benefits shared, are decisions made openly?
- Who in the village plays a major role in decision making and delivering development assistance?

Socioeconomic impacts

- Have there been any changes in livelihoods in the village?
- Have the different livelihoods in the village been restored?
- How does debt affect people's livelihoods?
- What are people's livelihood coping strategies?
- What are the key institutions that support different economic groups?

⁶⁶ The SIM 1 focus areas and questions were based on issues identified through the initial social impacts assessment conducted as part of the PONJA; see Tripartite Core Group (2008a, pp. 27-28 and Annex 15). That report identified a number of hypotheses on forms of social impact that might play out in the post-Nargis period. SIM aims to track these issues over time. In addition, an extra emphasis is placed in SIM on issues of aid effectiveness. The PONJA report identified four guiding principles for aid delivery: effectiveness, transparency and accountability; independence, self-sufficiency and capacity building; focus on the most vulnerable groups; and strengthening communities. These provide the basis for the questions on aid.

Social impacts and institutions

- Is the village unified in all aspects of development and social life?
- Have there been any conflicts in the village since the last water festival, and how have these been resolved?
- Which are the important village level development institutions, and how is their role changing?
- What are the key social challenges facing the village?

4. Informants

Within villages sampling protocols were the same as for SIM 1 and SIM 2. The research team sought to interview a wide cross-section of the community. This included: the village head and other official village leaders; village elders and religious leaders; others who were/are involved in aid decisions in the village; farmers, fishermen, labourers and those in other occupations; (potentially) vulnerable groups, including female-headed households, the handicapped or injured, and the elderly; and young men and women. Many informants from previous rounds of SIM were re-interviewed, allowing a more accurate assessment of changes over time.

To the extent possible, the researchers tried to get the perspectives on the same topics from each group in order to triangulate information received. Where differences existed in the answers, this could also be important for assessing social impacts and local dynamics.

5. Research Instruments

Three research instruments were used.

First, in-depth interviews were conducted with a wide range of elite and non-elite villagers (see above). Interviews were semi- or unstructured, meaning that the researchers had the flexibility to focus on particular issues that the informant had information on and follow up interesting lines of inquiry. Guiding questions were provided to the researchers to help focus interviews, but the researchers were free to amend and adapt these as necessary, in particular to make sure that they fitted with the local context.

Second, focus group discussions (FGDs) were held with different groups within the villages studied. In each, around four to eight informants were interviewed together. Groups were constructed so that people with similar characteristics (for example, village leaders, young women, etc.) gathered together. This helped ensure the “openness” of the discussions. Overall, 149 FGDs were conducted, involving a total of 773 participants.

Third, the researchers also conducted informal interviews and participant observation. This included many late-night discussions with those with whom they stayed and discussions with individuals and groups over meals. Directly observing dynamics and impacts also provided much information on the way villages were functioning, the effects of Nargis and how aid was operating. A total of 195 key informants interviews were conducted in SIM 3.

6. Use of Data

Three types of data are utilized in the SIM 3 report.

First, the research team collected standardized data on various dimensions of village life and on the aid effort for each village. These data were used to generate tables that allow for a mapping of broad patterns and consideration of sources of variation. Many of the indicators collected were based on those used in SIM 2.

Some new approaches to data collection and analysis were used in SIM 3, to reflect the changing context two years after the cyclone. The main changes include:

- Analysis of needs paid more attention to the variation between different social and occupational groups.
- More detailed information on aid provision was collected and analyzed, including the total number of projects and the sources of aid. This was possible due to the higher level of awareness among respondents.
- Data on debt was collected by members of all focus groups, hence analysis is based on actual debt levels of over 600 focus group participants who had outstanding debts, rather than indicative maximum and minimum levels as was done during SIM 2.

Second, qualitative village summary sheets were written for each village, and qualitative data were entered into spreadsheets to enable rapid analysis of trends.

Finally, case studies on the experiences of particular families and groups in Nargis affected villages were created. These allow for in-depth investigations of *how* Nargis and the aid effort have affected the lives of different people. Case studies focused first on people and families whose experience is representative of (large sub-sections of) the general population. This allowed for an extrapolation from the experience of particular individuals or households.

Case studies also outlined the experience of 'exceptional' cases, those who have had particularly positive or negative experiences. In these, researchers made efforts to determine *why* the individual or household had done worse or better than others. Again, this helped determine sources of variation in outcomes and experiences, between and within villages. A selection of the case studies is presented throughout the report.

Map A1: Location of villages studied in the social impacts monitoring



