

Implementing cash for work programmes in post-tsunami Aceh: experiences and lessons learned

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Cash for work (CFW) programmes are utilised in various disaster and emergency contexts and were a prominent component of the tsunami response in Aceh province, Indonesia. This paper describes Mercy Corps' CFW programme, discusses CFW implementation experiences and provides key recommendations for similar programmes in future emergencies. For the majority of CFW participants and their households, CFW was the only source of household income and 93 per cent of household incomes were attributable to it. The CFW programme empowered displaced populations to return to their communities; 91 per cent of participants indicated that CFW facilitated their return. Other reported psychosocial benefits included providing productive activities and giving communities an opportunity to work together. Mercy Corps' experience in Aceh demonstrates that cash disbursements can be safely delivered in a widespread manner in emergencies, and that when implemented on a short-term basis, can have positive impacts at the individual and community level.

Keywords: cash for work, cash interventions, disaster recovery, Indonesia, tsunami

Introduction

Job creation programmes, such as the Civilian Conservation Corps in the United States, have been used to provide aid to less well-off citizens, and can be considered as antecedents to cash for work (CFW) programmes, which are an increasingly common element of humanitarian assistance in food-insecure settings, disaster-affected areas and post-conflict environments. CFW was originally developed in famine and food-insecure regions and was employed as an alternative to food for work (FFW) programmes; CFW was later expanded to post-disaster and conflict environments. CFW programmes have been implemented after floods in Bangladesh, in conflict-affected regions like Afghanistan and the Democratic Republic of the Congo, and, most recently, in the tsunami-affected parts of Indonesia and Sri Lanka.

CFW programmes are considered easier to administer than FFW programmes and can be less disruptive to local markets; they infuse cash into economies depleted of monetary resources, and in some cases can stimulate local economies (Cuny and Hill, 1999). The benefits of harnessing idle labour in the immediate post-disaster period are of critical importance. The tsunami of 26 December 2004 caused massive devastation and hundreds of thousands of people were no longer able to participate in their routine employment activities. CFW was a logical response that provided a structured

mechanism to engage people in low-skilled constructive activities while injecting cash into the economy and promoting decision-making at the community and individual level.

CFW programmes have been implemented on a small scale and there is a need for additional research to examine their effectiveness, particularly as the size of cash interventions increases (Overseas Development Institute, 2005). Many organisations launched cash interventions after the Asian tsunami and large-scale CFW programmes were widespread in Aceh, Indonesia, and Sri Lanka, with tens of thousands of beneficiaries participating in CFW programmes operated by multiple international non-governmental organisations (INGOs) and the United Nations Development Programme (UNDP), sometimes in partnership with local non-governmental organisations (NGOs). In the post-tsunami context, where livelihoods were destroyed and assets lost, CFW programmes provided income, contributed to community rehabilitation, helped to meet financial needs and had positive social effects in tsunami-affected communities. While CFW programmes have been utilised in a variety of contexts, they have never been implemented before on the scale observed following the Asian tsunami.

Previous studies have shown that communities tend to prefer cash to food relief, making CFW an attractive option for relief providers and target beneficiaries alike (Lothike, 2005; Galuma, 2004; Overseas Development Institute, 2005; Harvey, 2005). The success of a CFW programme largely depends on the objectives and management capability of programme administrators as well as on the implementation environment. When implemented incorrectly, CFW programmes can disrupt local economies, artificially inflate wages and generate unsustainable shifts in the labour force (Cuny and Hill, 2005). The cost of implementing CFW is lower than that of FFW programmes because the transaction costs associated with food delivery are avoided; in addition, cash provides versatility and empowers people to make choices and act on their own decisions.

Many relief agencies are gaining experience in implementing CFW programmes, but there is a need for both additional research and the sharing of experiences if these initiatives are to evolve in ways that maximise benefits for participants and local economies. Complicating the challenge of implementing CFW programmes as a component of disaster response is the management capability needed to ensure effective oversight. In Aceh, post-tsunami CFW programmes were conducted in a context of severe infrastructural devastation and resource loss. Furthermore, most NGOs had no prior experience of working in the region because of ongoing conflict and related restrictions on the presence of foreign organisations.

The large-scale implementation of CFW programmes following the tsunami provided a unique opportunity to assess their impact on beneficiaries and their communities. This study aims to document Mercy Corps' experience of implementing CFW in Aceh province, post-tsunami, evaluate the outcomes of its CFW programme at the individual and household level, appraise the role of CFW income within the household economy² and highlight lessons learned that can serve as guidelines for the implementation of CFW in future disasters.

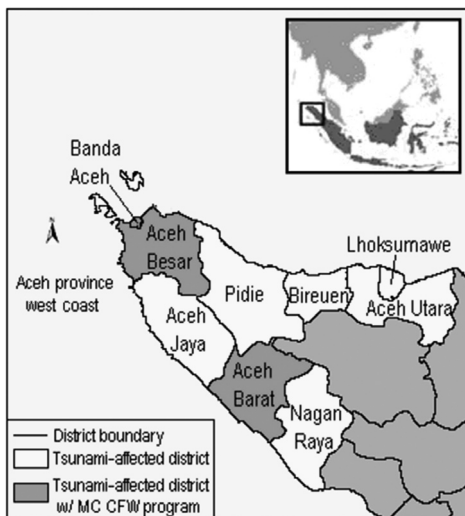
Methods

Mercy Corps' cash for work programme in Aceh

Among the largest CFW programmes in Aceh immediately following the tsunami was that of Mercy Corps, which operated in the districts of Aceh Barat, Aceh Besar, Banda Aceh and Nagan Raya (see Figure 1). Mercy Corps was the first organisation to initiate CFW in Aceh—less than two weeks after the tsunami struck. The aims of the programme were to mobilise idle labour, infuse cash into the local economy, empower individuals and households to act on their own decisions by supplying them with cash to meet their needs, and provide people with productive and compensated work opportunities, thus facilitating the return to normalcy.

CFW was selected over FFW for several reasons:

- extensive time is often required to procure and transport food distributed under FFW programmes; since in the post-tsunami context rapid implementation and scale up of the programme were necessary, cash was logistically the simpler intervention option;
- Mercy Corps had not worked in Aceh prior to the tsunami and lacked the organisational infrastructure required to transport and store food immediately afterwards;
- other agencies were engaged in food distributions;
- CFW is commonly implemented when food availability is not compromised, whereas FFW is ideal in areas with low food availability; following the tsunami, food availability was relatively stable and commodities were moving to coastal regions, however, damaged transportation infrastructure was a limiting factor; and
- Mercy Corps' programme goals included empowering individuals to meet their needs and facilitating the return to normalcy; payment in cash was viewed as preferable to food because it was seen as a better mechanism for aiding Mercy Corps' objectives.



The CFW programme was implemented in 60 villages and at its peak, had nearly 18,000 participants and was disbursing over USD 1 million per month. The CFW programme employed men and women, primarily for physical pursuits; no provisions were made for elderly or the disabled because their needs were addressed through other humanitarian response mechanisms and CFW was intended to

Figure 1

Map of Mercy Corps' CFW programme areas

Source: Humanitarian Information Center Indonesia

generate employment and facilitate clean-up and reconstruction. Over USD 4.5 million was disbursed in direct payments to CFW workers during the seven months of the programme. Mercy Corps' CFW programme began on 7 January 2005, and was gradually phased out, ending on 31 July 2005, in favour of output-based labour payments (OBLPs) and other initiatives that aimed to rebuild livelihoods and generate more sustainable sources of income.

Study design and data collection

Mercy Corps' CFW programme was assessed using routinely collected, output-level monitoring data augmented with information gained in exit interviews of CFW participants and discussions with CFW project staff. A monthly monitoring system was developed for the CFW programme that collected basic quantitative and qualitative information in two project regions: Banda Aceh and Meulaboh. Quantitative information procured included the number, type and sex of participants, number of days worked, and payments disbursed. Qualitative information gathered included the nature of obstacles and problems encountered in programme implementation. Monitoring data was collected and reported by area supervisors (national staff directly responsible for oversight of CFW projects) who were assisted by participants acting as supervisors of smaller groups of their peers. The CFW coordinator and programme manager then compiled data on a monthly basis in branch offices in Banda Aceh and Meulaboh.

The exit survey had a stratified design in order to compare CFW programmes operating out of the two branch offices. A sample was randomly drawn from CFW participant lists, which were constructed daily and varied based on which individuals came to work. Biweekly pay sheets from each CFW project were used to develop participant lists; these included all individuals ever paid for serving as workers in CFW projects, regardless of the duration of their involvement. Survey respondents were randomly selected (that is, every n^{th} individual) for participation and then located in project areas. If the identified participant was not located on the second visit to the community, the name immediately below on the list was selected and that individual was substituted as a survey participant. A total of 1,460 interviews were completed and 1,428 were used in the final analysis (Meulaboh was over-sampled and 32 interviews were randomly dropped to equalise sample sizes ($n=714$) from each site). The survey instrument was developed in English and later translated into Bahasa Indonesia. The questionnaire focused on participation in the CFW programme, household income and household expenditures.

The study methodology was primarily developed by Johns Hopkins University and implemented by Mercy Corps, although both were involved in aspects of design, data collection, analysis and the writing up of findings. The survey was carried out in June and July 2005 by national staff in the Mercy Corps monitoring and evaluation unit. Interviewers had previous survey experience and received additional training before the start of data collection. Interviewers with no previous contact with CFW participants were selected to minimise biased responses. Data analysis was performed using STATA Version 8 and SPSS Version 12.0. All monetary data were collected in

Indonesia Rupiah, and converted to US dollars at a rate of Rp. 9,800 per dollar. This study was certified as exempt from human subjects review by the Committee on Human Research at Johns Hopkins Bloomberg School of Public Health because it was an evaluation of a service programme.

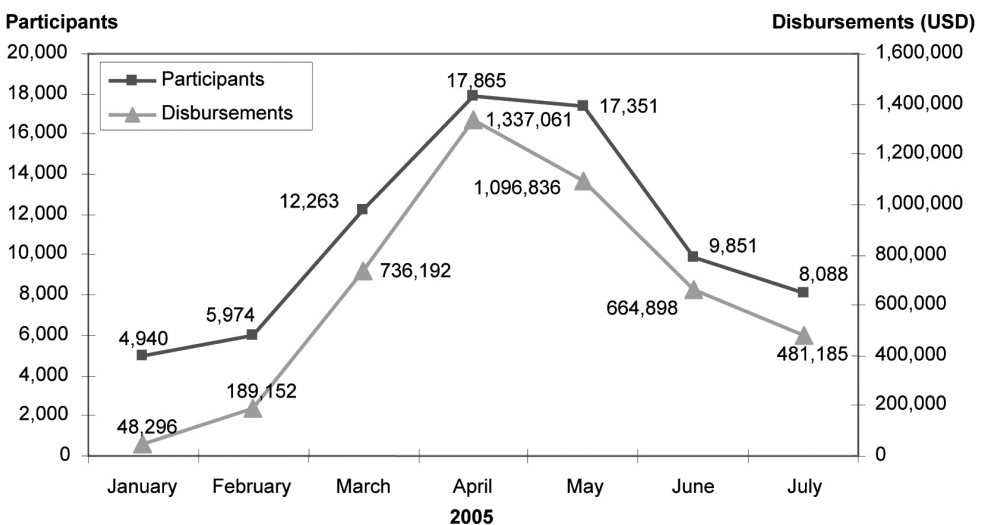
Results

Mercy Corps' CFW programme was implemented in 60 tsunami-affected communities and had an average of 10,905 participants a month and a mean monthly disbursement of USD 650,517. The programme was relatively small at its inception, although it grew rapidly, expanding to include 17,865 beneficiaries in April 2005 (see Figure 2). Mercy Corps' criteria for selecting CFW projects included:

- villages in which a sizeable portion of the population planned to return;
- villages consisting of a substantial and willing population able to work on community-identified civic works projects;
- a distance from Mercy Corps' two areas of operation (Banda Aceh and Meulaboh) that allowed for adequate supervision and delivery of materials; and
- coordination with other agencies implementing CFW projects.

Once identified, the length of a project was influenced by need, tasks identified by the village, and how the village adapted to the programme. Villages were responsible for clean-up and reconstruction projects and in some cases, the presence or absence of skilled labour was a key determinant in deciding which initiatives to implement. The CFW programme expanded at a greater than anticipated rate because of high demand for paid labour opportunities.

Figure 2 Evolution of Mercy Corps' Aceh CFW programme



Of the CFW participants, 29 per cent reported residing in camps for the displaced, 13 per cent were staying with host families and 58 per cent were returnees (at the time of the exit survey). Nearly all respondents (94 per cent) participated in CFW programmes implemented in their pre-tsunami community of residence. Respondent status within the household was as follows: household heads (40 per cent); spouses (22 per cent); children (32 per cent); and other (two per cent).³ Thirty-five per cent of respondents were female and the average age was 34 years.

Programme structure

Mercy Corps' CFW programme in the field was overseen by area supervisors (Mercy Corps employees) who were responsible for CFW projects in several communities. Within the communities, projects were organised into work groups headed by group leaders; group leaders were responsible to project/site supervisors, and ultimately, project/site supervisors reported to Mercy Corps area supervisors. Overall, there were an average of 157 participant labourers per project each month and an average of 23 participant labourers in each work group. Supervisors were responsible for an average of six groups (the total participant to supervisor ratio was 127:1). A male-to-female labourer ratio of 2.5:1 was determined from programme monitoring data and 28.9 per cent of participants were female (when data was reported on a monthly basis). Of the randomly selected exit survey respondents, 35 per cent were female. The average length of participation was 35 days (standard deviation (SD)=17) and was similar for males and females ($p=.995$).

Payment

Mercy Corps' CFW payments ranged from USD 1.02 (Rp. 10,000) to USD 7.65 (Rp. 75,000) per day, depending on the type and skill level of work, the length of the workday and the time period of the project. In general, the daily rate for unskilled labour was set at USD 3.06 (Rp. 30,000) with an additional allowance of USD 0.51 (Rp. 5,000) for lunch; any wages higher than that were for special skills or added responsibility and were paid on an occasional basis. The average daily rate calculated using programme monitoring data⁴ was USD 2.99 (Rp. 29,300). The average daily rate as reported by exit survey respondents was USD 3.64 (SD=0.51; Rp. 35,700), which is similar to that from monitoring data when the lunch allowance is included. Mercy Corps' reported CFW daily rate of USD 3.50 compares to a pre-tsunami daily labour rate of USD 2.55–3.06 (Rp. 25,000–30,000).⁵ NGOs and UNDP made efforts to fix wages so that payment rates were similar among the different organisations implementing CFW.

Cash for work programme outputs

Mercy Corps' CFW programme had a major impact on community recovery, largely due to the size of the endeavour. Among other outputs, the CFW programme was responsible for the clearing of 136 square kilometres of land, 262 kilometres of roads

Table 1 Cash for work programme outputs

	Meulaboh	Banda Aceh	Total
Corpses removed	157	2,659	2,816
Boats moved to shoreline	126	1	127
Agricultural land cleaned (Ha)	818	722	1,540
Other land area cleaned (Ha)	10,534	1,417	11,951
Drainage ditches cleaned (m)	146,719	91,971	238,690
Drainage ditches rehabilitated (m)	109,153	6,201	115,354
Road cleaned (m)	105,750	156,736	262,486
Road rehabilitated/constructed (m)	–	351	351
Drinking water systems cleaned	222	261	483
Latrines cleaned/rehabilitated/built	44	115	159
Other public facilities* cleaned	79	53	132
Other public facilities rehabilitated	20	14	34
Houses cleaned	966	908	1,874
Houses rehabilitated/constructed	239	43	282
Temporary shelters constructed	502	75	577
Bridges constructed	21	3	24

* Includes health facilities, mosques, schools and other public amenities.

and 2,006 buildings; in addition, 306 permanent and 577 temporary structures, including mosques, schools and temporary homes, were constructed. In the initial phase, CFW activities involved, for example, clearing debris and clean-up; emphasis was placed on cleaning schools and other important public facilities in order to restore access to basic services to help communities re-establish a sense of normalcy as soon as possible. Starting in February and playing an increasing role over time, rehabilitation of public facilities and construction projects were initiated. Furthermore, there were various other location-specific initiatives, including demolition of buildings, construction of fishponds, rice planting, boat repair and restoration, and development of recreational areas. Key outputs of the CFW programme are summarised in Table 1. Community leaders and others reported that CFW was a good means of absorbing idle work capacity.

Household income and expenditures

Average reported monthly household income was USD 297, of which 93 per cent was attributed to CFW (see Table 2). Mean monthly CFW income was USD 276 and an average income of USD 21 was attributed to other income sources. Reported household incomes (total, CFW and non-CFW) were significantly greater in Meulaboh

Table 2 Selected household economy indicators (USD)

	Overall	Meulaboh	Banda Aceh	p-value for site comparison
Household income				
CFW income (SD)	276 (202)	294 (202)	258 (200)	.001
Non-CFW income (SD)	21 (60)	27 (66)	15 (42)	<.001
Total income (SD)	297 (207)	322 (209)	272 (201)	<.001
Savings*				
Pre-tsunami savings (SD)	385 (922)	354 (886)	402 (940)	.415
Post-tsunami savings (SD)	76 (183)	111 (202)	66 (176)	.001
Decrease in savings (SD)	307 (855)	189 (393)	336 (934)	.040
Percentage change in savings	80	54	84	–

* Excludes gold. Reporting on pre- and post-tsunami savings in Meulaboh was very low (pre=370 and post=215); change in savings was only calculated for 179 households in Meulaboh. Pre- and post-tsunami savings information for Meulaboh (and overall) should be interpreted with caution, as it does not represent the majority of participants.

than in Banda Aceh (see Table 2). As described below, surveyed households in Meulaboh were more likely to have other forms of employment, coupled with their CFW earnings, as compared to households in Banda Aceh. Monthly expenditures were similar between the two sites and averaged USD 191.

In 68 per cent of households, multiple family members took part in CFW; on average, 2.3 household members participated in the programme and households averaged a total of 79 working days. Overall, 24 per cent of households reported having sources of income apart from CFW; non-CFW income was reported by significantly more households in Meulaboh (28 per cent) than in Banda Aceh (19 per cent). In addition, Meulaboh respondents were significantly more likely to receive income from a permanent employment source.

Monthly household expenditures were similar between the two sites and averaged USD 191. Expenditure rates by participant sex were similar for medicine and education; male CFW participants reported significantly higher relative expenditures on snacks/cigarettes for their households than female participants. Total reported monthly household expenditures were on average USD 5.3 (95% confidence interval (CI): 2.0–8.6) greater among female participants than males. Food was the primary household expense (average monthly expenditure of USD 62), accounting for 42 per cent of reported expenditures. In the analysis of the results of this study, it is notable that food security did not appear to be a major concern of most households: 91 per cent of households reported receiving rations and 94 per cent reported purchasing additional food to supplement rations. Households consumed an average of three meals per day with only 1.8 per cent (95% CI: 1.1–2.6) of households reporting consuming fewer than three meals per day. Average monthly food expenditures were similar between male and female participants, and no significant differences in food security measures were observed by participant sex or by household ration receipt.

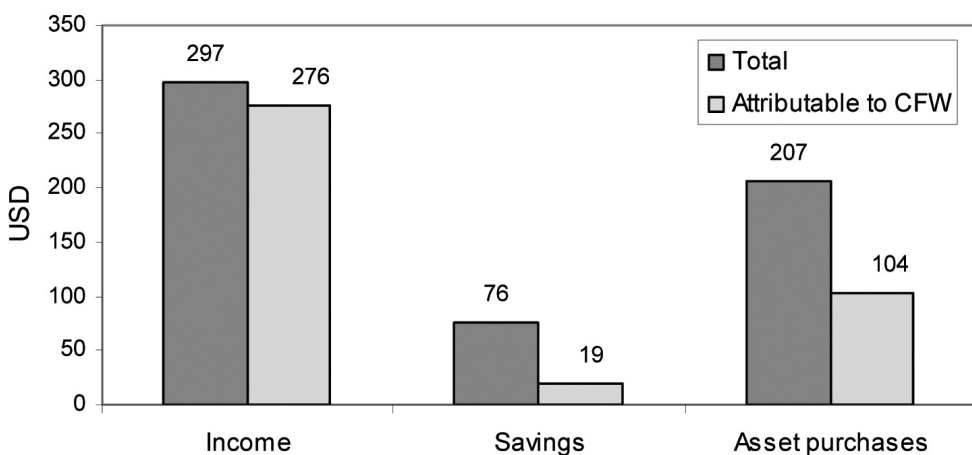
Household savings and assets

Savings rates declined significantly because of the tsunami: 81 per cent of households reported having savings pre-tsunami as compared to 43 per cent post-tsunami. Average savings (total household savings in cash or bank accounts) was USD 385 pre-tsunami in contrast to a post-tsunami average of USD 76. Households reported an average savings decrease of USD 306 or 79 per cent due to the tsunami. Pre-tsunami savings were similar in Banda Aceh and Meulaboh, but post-tsunami savings in Banda Aceh were significantly less than in Meulaboh (see Table 3). Gold was originally identified and analysed as an asset, yet during data analysis and report writing it became apparent that it is a common form of savings in Aceh because it can be easily liquidated and sold locally. When post-tsunami savings were expanded to include gold, 60 per cent (95% CI: 58–63) of CFW participants reported some type of savings. Frequency and the amount of savings, including gold, was significantly higher in Meulaboh than in Banda Aceh. Average savings in gold was USD 105, which was greater than savings in cash and bank accounts. Post-tsunami savings in cash was reported in 29 per cent of households; 26 per cent of households had purchased gold; and three per cent of households had bank accounts. At the time of the survey, 31 per cent of households reported spending post-tsunami savings; a significantly greater proportion of households in Meulaboh (37 per cent) reported spending savings than in Banda Aceh (27 per cent).

Overall, 34 per cent of CFW participants reported saving earnings from CFW (see Figure 3). Among saving households, average CFW savings was USD 58; among all households (savers and non-savers), average savings was USD 19. The frequency and quantity of savings from CFW earnings was statistically similar between Banda Aceh and Meulaboh, and there was no significant difference in frequency of saving CFW income by participant sex.

Of households surveyed, 35 per cent reported purchasing assets since the tsunami; asset purchasing was significantly more frequent in Meulaboh (54 per cent) than in Banda Aceh (15 per cent). Average expenditure on assets was USD 207 (SD=30) and

Figure 3 Post-tsunami household economic measures among CFW participants



CFW income expenditure on assets was similar among households purchasing assets in Banda Aceh and Meulaboh. CFW income accounted for an average of 50 per cent of funds (USD 104) that went towards the purchase of assets. The most frequently purchased asset was gold (84 per cent of households); other assets included electronics, appliances, and household items (12 per cent) and motorcycles (11 per cent).

Ninety-one per cent of participants indicated that CFW helped facilitate their return to their original communities of residence, and response frequencies were similar in Banda Aceh and Meulaboh.

Discussion

There was strong demand for CFW among local communities eager to begin clean-up after the tsunami, and among individuals in need of income, since the majority of productive assets and livelihoods were lost. Hence, Mercy Corps' CFW programme was scaled up rapidly and grew to an exceptional size. In the initial stages of the CFW programme, the primary intention was to mobilise idle labour in the midst of an overwhelming need for simple labour activities, such as clearing debris. Many communities already had taken the initiative and began clean-up; introducing CFW enabled these activities to expand to scale. By mobilising labour via CFW, decision-making power remained with individuals, and households were empowered to make their own choices and spend money accordingly. A secondary intention of the programme was to disburse cash. By February, it became apparent that an evolution towards using CFW to facilitate reconstruction was required as the situation transitioned from an emergency response to recovery, resulting in increased emphasis on physical outputs and deliverables. The CFW programme was gradually scaled back from May, even though demand for the programme remained strong and beneficiaries expressed dissatisfaction with its curtailment. In addition, government pressure to continue CFW activities at the regular pace made it difficult to scale back activities any faster. The programme was phased out for the following reasons:

- it was initially conceptualised as a short-term intervention that would provide temporary employment before other livelihoods and long-term employment opportunities were available;
- other organisations planned to continue CFW programmes after Mercy Corps scaled back CFW, thus temporary employment through CFW remained possible for many participants; and
- there was concern about the negative impact on local economies because of a fear of wage inflation, as well as the potential for dependency on CFW as an income source.

Equipment and labour

Logistical and procurement challenges are key issues that can limit the expansion of CFW and FFW programmes, particularly in a post-disaster context (as compared to development settings) where such initiatives are implemented with little advanced

planning and are quickly scaled up. Lack of technical expertise and equipment and untimely delivery of materials and tools were limiting factors in Mercy Corps' CFW programme in Aceh. In some CFW sites, projects could not proceed because the delivery of fundamental tools, such as chainsaws, or building materials was delayed and, in the early phases of CFW especially, participants did not have boots and other appropriate clothing. While tools and heavy equipment were in place, the number of labourers in the programme increased at a greater rate than tools could be obtained, which hampered progress at some sites and was a major complaint of area supervisors. Procurement, in the start-up phases of CFW, was based on anticipated programme expansion and spending rates for programme tools, equipment and materials. However, procurement, warehousing and the delivery of supplies and equipment remained a challenge. Similar issues have been reported in CFW and FFW programmes in other settings. The lack of sufficient or suitable tools and building materials suggests that 'non-wage' costs and logistical issues are important considerations in the planning of future CFW projects (IFRC, 2003).

The availability of engineers and other skilled labour was also a limiting factor in some project sites. There was some overlap between CFW and reconstruction projects, such as house and bridge building, and drainage schemes, where engineering blueprints and skilled labour were required. In future CFW programmes, it may be ideal to limit the need for technical expertise in the initial phases by focusing labour on projects that require minimal technical oversight. In Mercy Corps' CFW project, contracts with skilled workers helped to ensure adequate technical support, and a Mercy Corps engineering team was eventually developed as a consequence. In some areas, supervisors reported difficulties in getting labourers to follow designs, which led to shortages of building materials; the training of workers and improved oversight by skilled foremen could potentially address these issues in future CFW projects.

Payment

Oversight of the CFW programme was a challenge. Timely delivery of wages was particularly difficult, especially in the first months of the programme when support mechanisms were still being put in place and CFW was rapidly expanding. Initially, payment was on a daily basis, as required by the labourers, because there was limited access to cash. As the programme expanded, the logistics of daily payment became too complicated, resulting in a shift to weekly payments. Group leaders were paid directly and then were responsible for disbursement among members of their work group. In comparing the two project areas, supervisor to participant ratios were significantly higher in Meulaboh than in Banda Aceh, and this generated some problems in Meulaboh. In particular, the reporting of 'ghost workers', or individuals that were registered as present on time sheets but were not actually working, was a problem that developed in March and continued through to the end of the programme. Assistant area supervisors and coordinators, who were from outside villages, and were not as sympathetic to labourer demands, were hired to improve oversight with respect to the reporting of ghost workers by group leaders. A system of compliance monitoring

was developed in May under which regular unannounced checks of work groups were conducted; if a discrepancy was found between the names reported on the time sheets and workers at the site it was documented in an incident report and addressed by programme managers.

Another issue relating to programme management was the basis of payment. At first, CFW workers were paid for a fixed amount of labourer time, usually eight hours a day, and there was no flexibility in the compensation system, mostly due to lack of adequate personnel and difficulties anticipated in managing workdays of varying length. On unannounced visits to work sites, it was often observed that workers were starting late and departing early and hence not putting in a full eight-hour day. In some CFW sites, progress was slower than expected, which called into question the hours being worked and productivity levels; in many cases, this was because villagers feared that once clean-up was completed NGO support would end. Two solutions were implemented:

- payment for partial days, with participants receiving a rate for four hours of work each day; and
- output-based labour payments instead of hourly wages as a means of increasing accountability—for example, participants were paid for 18–25 workdays per house constructed regardless of the number of days it took to build the house.

The shift in programme focus from the distribution of cash in the initial phase of the emergency to facilitation of reconstruction was important as a longer-term strategy. The new system that based payment on the accomplishment of specific tasks improved relations between supervisors and workers and made programme supervision easier.

Use and expenditure of cash for work income

Lack of control over how money is spent is a common concern of CFW programmes, even though available evidence from monitoring reports and evaluations of cash programmes has consistently indicated that people do not use the money to purchase non-essential goods, and that it is spent on basic items that are needed to survive and protect livelihoods (Harvey, 2005). Findings from Aceh are aligned with previous experiences: household expenditures were largely attributable to meeting basic needs, and 57 per cent (95% CI: 55–60) of participating households chose to save CFW earnings and/or use them to purchase assets. This indicates that CFW earnings were not only instrumental in satisfying daily needs, but were also invested in the long-term well-being of households. While an inability to control the use of CFW funds is a concern, the potential benefits of empowering beneficiaries in decision-making outweighed the risks of misappropriation of funds in the Mercy Corps programme in Aceh.

Other frequent assertions relating to cash programmes are that women may be disadvantaged because of a lack of ability to control cash (as compared to food) within the household (Harvey, 2005), and that men may be less likely to spend income on meeting household needs than women (Blumberg, 1995). In Mercy Corps' CFW programme, reported expenditure patterns in terms of percentages were similar

among males and females, and female respondents reported significantly higher monthly household expenditures than males. These findings suggest that men and women spent relatively equally on family sustenance and that women had adequate control over cash. However, it is likely that gender issues in CFW will vary greatly by culture and project setting.

In 68 per cent of households, multiple members participated in CFW, which contributed to the relatively high household incomes reported. Where CFW funds are limited and implementing organisations experience difficulties in satisfying demand for CFW, targeting (focusing on groups of individuals that meet more rigorous criteria) may be an ideal strategy to improve equity. Limiting participation to one household member per family would be an ideal strategy to ensure equity in receipt of CFW funds. In practice, though, this would be exceptionally hard to implement and most likely would lead to fraud or the need for a significantly more complicated monitoring system.

Distribution of cash improved the ability of households to cope with the tsunami because they could decide how to spend and invest their money. In the immediate context, the flexibility accorded by cash allowed households to replace lost items and meet varied needs that are difficult to address through mass distribution of food or non-food items. Communities have consistently reported preferring cash to food assistance in other environments and this was true of Mercy Corps CFW participants in Aceh as well (Lothike, 2005; Galuma, 2004). In post-tsunami Aceh, while CFW participants used cash to meet immediate basic needs, significant savings rates indicated that CFW played an important role in the revitalisation of household economies and longer-term economic recovery.

Cash for work and food security

Food security did not appear to be a major problem among CFW participants or in post-tsunami Aceh. The vast majority of households reported receiving food aid, and 98 per cent of households participating in Mercy Corps' CFW programme reported consuming three meals per day. Malnutrition is a problem in post-tsunami Aceh, however, pre-tsunami malnutrition rates are not available and post-tsunami surveys suggest that malnutrition is unlikely to be tsunami-related. Prevalence rates of global acute malnutrition and severe acute malnutrition among children in displaced camps were 12.7 per cent and 1.5 per cent, respectively; prevalence of wasting was similar in tsunami-displaced populations as compared to those unaffected by the tsunami (WHO Health Information Unit, 2005).

More than 90 per cent of households in the CFW programme were receiving food aid, yet food was the most significant household expense. Expenditures on food to supplement rations accounted for an average of 42 per cent of total monthly expenditures. Food items purchased by respondents most frequently included fruits, vegetables and protein sources, such as fish, indicating that CFW facilitates dietary diversity and food security. Mercy Corps' CFW experience in Aceh suggests that cash and food relief may be complementary, and aligned with the broader statement of Harvey (2005, p. 4) describing the role of CFW in the emergency context:

A strong body of evidence is beginning to emerge to the effect that providing people with cash or vouchers in a wide range of emergency situations works. It is possible to target and distribute cash safely, people overwhelmingly spend money on basic essentials, and cash provides a stimulus to local economies and is often more cost-effective than commodity based alternatives. The evidence also suggests that, in some situations, cash may complement commodities. Cash should not necessarily therefore be seen as a replacement for other forms of aid, but as an additional instrument.

In Kenya, in 2003, CFW was implemented in conjunction with food distribution, and 81 per cent of cash distributed was reinvested in livelihood recovery and 68 per cent of funds spent on household purchases went towards food security. Other benefits reported were skills transfer, community empowerment and community preference for CFW over food relief (Lothike, 2005). Additional reported advantages of cash projects include household asset creation, increased purchasing power and the ability to repay debt and meet essential needs, such as food, health and water (Overseas Development Institute, 2005).

Cash for work exit strategies

Mercy Corps' exit strategy involved, among other things, decreasing the number of work-days in a week from five to four (beginning in June) and restructuring labour payments based on contracts (OBLPs) where payments were based on deliverables. Because of the realisation that demand for casual labour would exist beyond the 'artificial' CFW end date of 31 July and the understanding that many people would become unemployed, a methodological change—from CFW to OBLPs—was required to tackle these issues. The main distinction between CFW and OBLPs is that the latter are paid as progress is achieved or work finished and there is an agreed fixed budget for completion of the project, which restricts the number of workers employed. In CFW, all individuals wanting to work can be engaged in a project and payments are based on the number of hours worked. The extensive rehabilitation and reconstruction work post-tsunami has resulted in increased demand for casual labour as compared to before the tsunami. Performance-based OBLPs accommodate demand-driven casual labour requirements, whereas CFW that pays a wage is a supply-driven approach, which has a greater risk of influencing day labour rates if implemented in the long term.

In addition to phase-out strategies within the CFW programme, Mercy Corps' livelihoods and cash grant programmes were expanding in communities where CFW had been implemented and were seen as a means of facilitating sustainable economic recovery and thus promoting a return to pre-tsunami livelihoods. Some CFW participants transitioned into the livelihoods programme, which was more stringent about how people became engaged in cash-paying activities. A major difficulty in phasing out CFW was that some participants said they would have no form of employment after the programme ended; this created some tensions within communities as programmes were scaled back and workers were forced to leave the programme. In future CFW programmes, having participants work fewer hours per week during the final

weeks of a project may help to ease this transition. Another issue reported was that because of widespread CFW initiatives, communities were less willing to contribute to rebuilding without compensation in later reconstruction phases.

Geographic differences in recovery

CFW was a logical response in post-tsunami Aceh because of the extreme devastation and economic impact in coastal areas of the province where many productive assets and employment opportunities were lost. CFW was an ideal means of infusing cash into thousands of households and promoting the re-establishment of local markets by providing participants with cash that could be used to meet their needs and demands. CFW participants in Meulaboh had multiple economic advantages compared to those in Banda Aceh. Households in Banda Aceh reported a post-tsunami decrease in savings that was USD 45.5 greater than in Meulaboh, suggesting that the tsunami may have had a greater effect on Banda Aceh households; mortality findings also indicate that the ramifications of the tsunami in Banda Aceh were more significant than in Meulaboh (Rofi, Doocy and Robinson, 2006; Doocy et al., forthcoming).

Households in Meulaboh reported earning more and spending less than those in Banda Aceh, indicating that families in Meulaboh may have more disposable income and a greater ability to invest in rebuilding than those in Banda Aceh. On average, monthly household income in Meulaboh was USD 50 greater than in Banda Aceh and mean monthly expenditures were USD 7 less in Meulaboh as compared to Banda Aceh. Significantly more households in Meulaboh had non-CFW income sources, and of households with non-CFW income, average non-CFW income was USD 13 greater in Meulaboh than in Banda Aceh. That a considerably greater proportion of households in Meulaboh reported non-CFW income sources and that more of those income sources were permanent suggests that households in Banda Aceh may have been more dependent on CFW than those in Meulaboh, and that economic recovery and livelihoods opportunities may be evolving at a faster rate in Meulaboh. It is unclear whether these findings hold true for the Banda Aceh and Meulaboh areas as a whole or if other criteria, such as selection factors or geographic location of CFW project sites, may have influenced these conclusions.

Cash for work and the local economy

The impact of CFW projects on the local economy is a concern and to date there has been no thorough analysis of the combined impact of CFW programmes on the local economy in post-tsunami Aceh. There were anecdotal reports that the widespread implementation of CFW increased day labour rates in some areas. United Nations (UN) agencies and NGOs implementing CFW made efforts to standardise CFW payment rates and to set them at the pre-tsunami casual labour rate, but there were indications that CFW rates were slightly greater than pre-tsunami rates. In August, UNDP recommended that day labour rates be reduced to pre-tsunami levels in order to establish a more sustainable day labour rate and to encourage households to return to long-term livelihoods options rather than to continue in CFW programmes (UNDP, 2005).

However, due to uncertainty as to what the pre-tsunami daily labour rates were, the strategy implemented was to standardise daily labour rates paid by organisations implementing CFW by type and level of services being provided.

Mercy Corps' CFW programme was a short-term intervention; the majority of participants were displaced by the tsunami and unable to engage in their regular livelihoods activities. Participation in the CFW programme was not seen as disruptive to livelihoods activities or other priorities because of self-targeting (only those who needed the income would participate in CFW) and because of the programme structure: frequency of participation was flexible and CFW participants could decide how many days per week they wanted to engage in the programme.

Inflation of food prices because of large cash infusions into the economy was not reported, although no formal monitoring of food prices was undertaken. Oxfam monitored market prices in Aceh province and found that CFW did not impact on market prices in Meulaboh; CFW programmes in other settings have also reported that distributing cash did not lead to higher food prices (Adams, Meehan and Satriana, 2005; IFRC, 2003). CFW appeared to have a positive impact on the local economy by providing much needed employment, which in turn gave people the resources to act on their demands for goods and services, stimulating the re-establishment of markets and contributing to the start of economic recovery. Dependency on CFW remains a concern because it is intended to be a short-term intervention, which must transition to more sustainable interventions and livelihoods recovery programmes.

Security

Central concerns in adopting cash-based humanitarian responses to disasters are security and the fear of diversion. Security risks include dangers associated with transportation and the distribution of cash for aid agency staff and beneficiaries who could be targeted after receiving their pay. Apprehensions related to diversion are based on the fact that cash is more vulnerable than commodities to misuse because of its portability and the ease with which it can be hidden, however, food for work and food distribution programmes also face considerable challenges in preventing diversion and abuse. Because cash is less visible, it could be safer in some situations than large-scale commodity distributions (Harvey, 2005). While no security incidents were reported during the Mercy Corps programme in Aceh, corruption was an issue: 'ghost workers' were reported, as noted above, and in one instance, suspected militants insisted that they be placed on project payrolls and threatened to halt the initiative if the request was not granted. Mercy Corps conducted regular compliance monitoring to check the systems in place in order to minimise ghost workers. When problems were identified, communities were given warnings and notified that Mercy Corps would take corrective action if the issue remained unresolved. In one case, Mercy Corps stopped working with a community when it pinpointed ghost workers on more than a single occasion.

Innovative ways to minimise the risks of insecurity and corruption have been tried⁶ and evaluations of some CFW programmes report little evidence of insecurity or corruption relating to cash-based approaches (Harvey, 2005). Mercy Corps discovered

that the key means of combating these constraints is transparency—allowing the free flow of information empowers people to monitor how fairly they are being treated. Mercy Corps promoted transparency by making sure that all labourers knew the amount they were supposed to be paid and the total funds provided to the site supervisor, and that timesheets for all labourers were available and visible on site. Mercy Corps' experience in post-tsunami Aceh supports evidence from previous projects indicating that cash can be delivered and distributed safely in the emergency context, and even in conflict environments.

Cash for work in the post-disaster context

In the post-disaster context, CFW programmes are implemented by organisations that often have little previous experience of working in the disaster-affected area. This presents significant challenges with regard to the creation of organisational offices and procedures, familiarisation with the local context and needs, and the identification and hiring of personnel. In addition, the rapid scale up of post-disaster CFW programmes presents challenges in terms of the development of criteria for identifying communities and programme participants, establishing adequate supervision, monitoring and payment systems, and ensuring that adequate tools, materials and skilled labour are consistently available so that work programmes may proceed. In comparison, public works programmes in development settings may be easier to manage because there is more time for planning and scale up, and they occur in environments with well-established systems.

Reduction of displacement was an important reported outcome of the programme. Ninety-one per cent of respondents indicated that the CFW programme helped them to return to their village by providing a source of income while improving the village, either via clean-up or reconstruction. Outputs of the CFW programme in terms of cleaning and reconstruction contributed to the recovery process. Psychosocial benefits were also an important product of the CFW programme: many respondents reported that CFW helped them to remain active while reducing feelings of trauma and stress, and CFW increased the amount of time spent with community members, which created a sense of unity that helped to facilitate rebuilding.

Recommendations and conclusions

Mercy Corps' experience in implementing a large-scale CFW programme in post-tsunami Aceh has led to the following set of recommendations for CFW programmes in the post-disaster context:

- A lack of technical expertise, equipment and untimely delivery of building materials and tools were limiting factors in Mercy Corps' CFW programme in Aceh. **Adequate attention should be paid *early on* to procurement, warehousing and the delivery of supplies and equipment in order to expedite CFW activities.**

- A dearth of engineering and other skilled labour slowed progress at times in Mercy Corps' CFW programme. In future CFW programmes, it is recommended that **CFW implementers either limit the need for technical expertise by providing simple project design or ensure the availability of skilled labour needed to complete CFW activities.**
- Making CFW payments can be a time-consuming activity. Frequent payments (that is, daily payments) can be too complicated and time-consuming during the onset of an emergency. **Weekly or less regular payments may be more workable from a management perspective once the immediate crisis is over and there is no longer a daily need for cash.**
- Mercy Corps identified a higher degree of work outputs or deliverables in areas in which there was a lower supervisor to participant ratio. **Consider work groups with no more than 25 workers and a ratio of no more than four work groups to one supervisor (overall maximum ratio of 100 workers:4 group leaders:1 area supervisor)** to ensure quality and efficient work.
- **Monitoring through unannounced visits to work groups is an effective way of guaranteeing compliance and pinpointing problems.** If a discrepancy was found, an incident report was filed and the issue was taken up with the programme managers. **In cases of repeat problems, the only solution may be to stop CFW activities so as to maintain a strong reputation across the implementation area.**
- To be flexible and ensure that participants are being compensated for actual work completed, which helps increase programme efficiency, future programmes should consider **implementing a payment for partial days scheme, in which participants receive a rate for four hours of work each day.** Another option is to **institute OBLPs instead of hourly wages as a means of increasing accountability.** OBLPs define specific project deliverables that have to be achieved for workers to receive payment and are ideal in the recovery phase once the primary objectives of CFW have shifted from cash disbursement to facilitation of reconstruction.
- **Slowing CFW activities as the programme nears completion** rather than abruptly curtailing them is an option to consider as CFW programmes transition to more development-oriented activities.

Mercy Corps' CFW programme in Aceh was a complementary intervention to provide food relief and allowed participants to supplement rations while facilitating savings and asset purchase, and increased purchasing power which enabled households to meet basic needs. CFW contributed significantly to household economic recovery and was a factor in aiding the return of displaced population members to their original communities of residence. Expenditure patterns were similar among males and females, suggesting that men and women spent relatively equally on family sustenance, a common concern of CFW. The CFW monitoring system employed was useful in tracking programme evolution, planning for scaling up and down, and reducing corruption, especially the reporting of ghost workers. In future CFW programmes, attention to the targeting of beneficiaries and equity concerns as well as graduated

exit strategies that ease the transition away from CFW will be important considerations. Mercy Corps' programme in Aceh demonstrates that CFW clearly has a positive impact on household economies and post-disaster economic recovery. The infusion of cash via CFW programmes has important social benefits, including the facilitation of return to disaster-affected communities, positive psychosocial impacts and empowerment via capital and the decision-making associated with the use of CFW earnings.

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Endnotes

- ¹ Shannon Doocy and Courtland Robinson represent the Johns Hopkins Bloomberg School of Public Health, US; Michael Gabriel, Sean Collins and Peter Stevenson represent Mercy Corps, US.
- ² 'Household economy' describes the collective economic activities of households, and includes the production of commodities (such as goods or labour); these are used to satisfy needs and wants (consumption of goods and services).
- ³ The 'other' category refers to either an extended family member or an individual who is not biologically related but who is living in the household.
- ⁴ Calculated by dividing reported disbursements by person days worked
- ⁵ There are differences in reported pre-tsunami day labour rates for Aceh province. Some believe it was Rp. 25,000, while others believe it was Rp. 30,000 plus Rp. 5,000 for lunch. The daily labour rate paid by Mercy Corps reflects the upper end of pre-tsunami labour rates: Rp. 30,000 plus Rp. 5,000 for lunch.
- ⁶ See Khogali and Takhar (2001) for a discussion and list of measures to reduce security risks associated with CFW programmes in Uganda.

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