Case study

Supporting community recovery and risk reduction in Yogyakarta

International Federation

An open and transparent communication strategy ensured all stakeholders had access to relevant and accurate information on a regular basis.

Summary

It is generally agreed that a disaster can be transformed into an opportunity. Rarely, however, is full advantage taken of the chance to do so that presents itself after a disaster strikes. During the early stages of an emergency response, decisions can be made and programmes designed to strengthen a community's capacity to cope with the impact of disasters and to reduce their vulnerability to future hazards and shocks.

Awareness of the importance of earthquake-resistant construction, for example, is at its highest immediately after an earthquake. Following the May 2006 earthquake in Yogyakarta and Central Java in Indonesia, the International Federation of Red Cross and Red Crescent Societies (International Federation) and its local partner, the Indonesian Red Cross (Palang Merah Indonesia or PMI), devised an early recovery programme that capitalized on this heightened awareness and was designed to draw on and strengthen the affected communities' own disaster resilience and capacities for recovery.

The programme included a number of innovative features:

- making the priority identified by the affected communities – shelter provision – the entry point for the programme;
- placing the community at the centre of the recovery process, with PMI playing only a facilitator role;
- creating the conditions for communities to build their own transitional (temporary) shelters, rather than providing ready-made solutions;
- training volunteers and sending them to live in and work with the affected communities;

- adopting a cash-based rather than a commodity-based approach to assistance.

The result of this process was a well-designed, durable, seismically safe, Sphere-compliant[1] and inexpensive transitional shelter that community members could easily build themselves. Not only did the communities benefit from a decent and dignified shelter with a longer lifespan than a tent or tarpaulin, they also learned how to build safe structures and were able to resume their livelihoods much faster.

This case study provides an overview of the early recovery programme in Yogyakarta and Central Java, with a special focus on shelter. It presents the merits of the approach and techniques, as well as the challenges encountered, and identifies lessons and principles that can help in its replication and contribute to good practice in the future.

Background

Indonesia is the world's largest archipelago, comprising around 17,508 islands. Forming part of the "Pacific Ring of Fire", it is prone to earthquakes and volcanic eruptions, as well as tsunamis, floods and severe droughts. Since 2006, the Indonesian government has placed 10 of the country's 129 active volcanoes on "alert" status. The country has also experienced political, economic, sectarian and social upheavals in recent years. To coordinate the response to natural disasters, the government has established a national disaster agency, called *Bakornas* at the central level and *Satkorlak* at the provincial level.

Earthquakes are one of nature's most brutal and unforgiving forces. Unlike volcanic eruptions or adverse weather conditions, they strike without warning and can cause utter devastation in a matter of seconds. The earthquake that shook Yogyakarta and Central Java in the early morning of 27 May 2006 caused widespread destruction and considerable loss of life and injury. The overall affected area covered 500 sq km, with a population of approximately 5 million.

The official death toll was 5,749, with more than 38,000 injured. The provincial government's housing impact assessment calculated that 303,330 houses were destroyed or severely damaged and 269,195 houses were slightly damaged. Given the high population density of the impact zone, nearly 1.2 million people were left homeless. Villages in remote areas south of Yogyakarta, in and around the district of Bantul, were the worst hit, and bodies continued to be recovered from the rubble more than a week later.

The programme

Emergency response

On the day of the earthquake, the International Federation launched a preliminary emergency appeal for 12.8 million Swiss francs and provided both initial and ongoing relief support during the weeks and months following the disaster. The PMI, with the support of the International Federation and partner National Societies, provided more than 119,000 families in the worst-affected districts of Yogyakarta and Central Java with essential relief items, including food parcels, family kits, hygiene parcels, baby kits, sleeping mats, tents and tarpaulins.

Situation analysis

The PMI, International Federation and partner National Societies also undertook a rapid assessment of early recovery needs in the affected area from 3 to 15 June. The aim of the rapid assessment was to:

- confirm and prioritize areas selected for inclusion in the early recovery programme and identify gaps in planned interventions;
- carry out detailed targeting of vulnerable groups and communities and develop different models of cooperation and support for early recovery interventions;
- map ongoing or planned support from partner National Societies for early recovery activities;
- draw up a manageable, cost-effective and realistic plan of action for early recovery activities in the earthquake-affected areas and for capacity-building support to the PMI.

The communities to be directly surveyed during the assessment were selected by correlating high pre-earthquake poverty levels with heavy losses and damage reported through the Indonesian government agencies. Communities were not surveyed where it was known that other humanitarian organizations were already conducting such assessments. Graduate student researchers – both male and female – from the University of Gadjah Mada (UGM) were recruited to carry out the assessment, as all of the PMI's volunteers were already heavily involved in the relief effort.

The students were trained in rapid assessment and data processing techniques and supported in carrying out in-depth interviews in the sub-districts of Gantiwarno in Klaten (190 households) and Dlingo in Bantul (120 households). At the same time, local markets were visited to assess the impact of the earthquake on the prices and availability of goods and services for people living in the affected area.

1 Sphere refers to a set of quality standards for humanitarian response developed during the late 1990s.

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A situation analysis allowed for timely action in response to evolving needs. Instead of planned distributions of tools, cash was provided for communities to choose tools best suited to their purpose.

Information from many different sources was constantly collected, updated and reviewed by the PMI/International Federation team members over the two-week period of the assessment. This allowed for a more dynamic understanding of the situation faced by affected people, as the disaster's impact on their lives became clearer over time.

Approach, design and implementation

Early recovery programmes tend to fall into some traps. They frequently set their sights on bringing the affected population back to "normality", without taking into account that the population's "normal" living conditions often include the risks and vulnerabilities that allowed a hazard to become a disaster in the first place. For instance, if construction standards were poor, simply rebuilding houses the same way may make them vulnerable to collapse again in the future. Or the programmes focus on delivering a "product" (e.g. providing a certain number of houses) rather than on setting up "processes" (e.g. enabling people to understand and reduce risk by rebuilding their own houses to better standards).

The PMI/International Federation early recovery programme in Yogyakarta and Central Java was conceived to avoid these pitfalls. The need expressed overwhelmingly by the affected communities during the assessment was for decent, durable shelter. The rainy season was imminent. Also, many male family members who were day labourers on agri-business farms were reluctant to return to work until their families were living in less exposed conditions. The communities felt that they needed something to tide them over the substantial time lapse between the emergency tent and tarpaulin distribution and the reconstruction of permanent housing. The overarching goal of the programme was, therefore, to empower community members to rebuild their lives starting with the construction of a transitional shelter.

People whose houses were still standing after the earthquake were provided with the means to buy tools to repair and modify their homes to make them safer. Families living in tents and under tarpaulins were provided with the material and technical resources to build themselves a simple, safe and locally appropriate transitional shelter from which to resume economic activity. In both cases, the PMI was the implementing agency. The International Federation played a facilitator role, assisting the National Society in developing the capacities of its branches in Yogyakarta and Central Java through the training of volunteers in the design and implementation of community-based early recovery activities.

Following training, the volunteers were deployed to live in selected villages. Their mission was to facilitate early recovery activities by building on the Javanese tradition of *gotong royong* or mutual support (see box). Instead of singling out individuals or even households for assistance, volunteers helped the community organize itself into neighbourhood-based groups which would receive and use the assistance collectively. The groups were mobilized during the early stages of the community self-assessment and familiarized with the programme management aspects as well as with the shelter prototype.

Gotong royong

Gotong royong has been a part of Javanese culture for generations. It is a form of community solidarity involving working together for a common purpose. It is usually applied to tasks that are of benefit to the community as a whole, such as the preparation of rice fields for planting, the maintenance of drainage channels, or village cleaning.

In Indonesia, each village (desa) of up to 2,500 people has a nominal head or kepala desa, elected by popular vote. Villages are divided into sub-villages of 100–300 families headed by a kepala dusun. These are further sub-divided into neighbourhoods of 40–80 families overseen by a kepala rumah tangga. Since the earthquake, it is at the neighbourhood level that the community has rallied together in the spirit of gotong royong.

The facilitation approach adopted for the programme involved:

- helping communities to undertake a self-assessment of shelter needs;
- training volunteers and community members in financial management and the establishment of a transparent, open financial reporting mechanism;
- procuring appropriate tools and materials for households to build a "minimum safe shelter" based on a common design and in line with Sphere recommendations.

As the programme focused on building community capacity rather than on providing direct aid to individuals, each neighbourhood community group was asked to select a "finance team" consisting of a team leader, a secretary and a treasurer to manage the funds

for the group and to liaise with the PMI volunteers assigned to their village. Banks and other financial institutions were approached and consulted on the role they could play in ensuring accountability and security of funds. Once agreement had been reached with a community group on its participation in the programme and a finance team had been established, cash was paid into a collective account in the name of the community in three phases:

Phase 1: To buy tools and other materials to build the first 10 transitional shelters made of traditional bamboo in each neighbourhood for families whose houses had been severely damaged or destroyed. Priority was given to the most vulnerable – the elderly, the sick, the disabled, mothers expecting babies within two to three months, and single-headed households.

Phase 2: Cash for materials to build half of the remaining required transitional shelters in each neighbourhood.

Phase 3: Cash for materials to build the rest of the required transitional shelters.

Close relationships were forged between the communities and volunteers during programme implementation. There were daily field support visits made by International Federation staff and weekly reflection meetings held with the volunteers in the sub-districts. Problems which sometimes arose, such as when materials or cash were taken back from families or community neighbourhood groups that decided not to construct the shelters, were resolved using the Indonesian system of *musyawarah*. This involved holding discussions with the concerned party until an agreement was reached.

Gender considerations

The importance of ensuring that the early recovery programme reached men and women equally was recognized during the planning stage. Gender concerns featured prominently in the initial situation analysis and needs assessment processes. These largely focused on the access of women, especially female-headed households, to the resources provided through the early recovery programme and on ensuring women's direct participation in needs identification and decision-making on programme priorities.

Gender equity strategies were integrated programme implementation by recruiting female volunteers, requiring that the finance team for each neighbourhood group have at least one female finance officer, and involving women in the temporary shelter construction process.

Programme outcomes

The programme was completed in April 2007. Through it, around 17,000 families were provided with tools, funds and/or transitional shelters. A total of 12,250 shelters that had been financed were completed, covering 938 neighbourhood groups in 55 villages in Yogyakarta and Central Java. An estimated 60,000 people were involved in building the shelters. The large number of transitional shelters, built in only nine months, was a major achievement.

> *"My husband has passed away and my children are grown and married, raising their own families, and so I live alone. After the earthquake, my house was destroyed and I had to live in a tent. Though it was a place to lay my head, the tent was oppressive in the heat. I had been injured in the earthquake when the brick walls of my house fell onto my leg. I was alone and I had to move the wall off my leg in order to move to the street and call for help. Living there, after the earthquake, I was so uncomfortable.*
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> *PMI came into our district and built me a house, a better house. Everyone thinks that it is perfect for me. Because of the crossed poles and the pyramid shaped roof, it will be strong enough to withstand another earthquake. It is wide and there is so much room for my grandchildren to come and play and for my neighbours to stop by and visit. Best of all, because it is made with bamboo, it is shaded and cool. I feel comfortable here, in this house."*
>
> Granny Poncoiguno, Mlese village, Gantiwarno, Klaten

Lessons learned

For the International Federation, the early recovery programme in Yogyakarta and Central Java represents a new approach to programming following a major disaster. Overall, it has proved successful in addressing the needs of the most vulnerable within the disaster-affected communities, strengthening the wider community's long-term resilience and ensuring the sustainability of recovery efforts and accountability to donors. In these respects, the disaster was turned into an opportunity. At the same time, with such a new approach, there were inevitably some aspects of the programme that did not work out as well as expected. Both the strengths and the challenges of the programme offer valuable lessons for future recovery operations.

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Training and mentoring PMI volunteers at the village and district levels and placing them within the communities led to a high degree of trust. It was also an effective way of accurately identifying beneficiaries.

Conduct ongoing assessment and analysis and revise program design

By carrying out a situation analysis which progressively built up a picture of the situation, as opposed to a "one-off" needs assessment, the International Federation was able to design a recovery programme that took account of the changing situation rather than relying on a static snapshot of a given moment. The situation analysis was followed by more in-depth consultations with recipient communities of the programme. Taking this dynamic view allowed for timely action in response to communities' evolving needs in the early stages of recovery. For example, a planned distribution of certain tools was stopped when it became clear that different types of tools were needed and cash was provided instead, so that communities could choose which tools best suited their purposes.

During the situation analysis, extensive consultation took place with PMI on the programme design and the National Society's capacity to implement it and the recommended activities were approved by the Central Board of PMI. This helped to create a sense of ownership by the National Society of the situation analysis and its results.

Experience has shown that targeting individuals or selected households for assistance and bypassing channels that promote collective action can engender jealousy, conflict and division within communities. Capitalizing on traditional practices such as *gotong royong* contributed to fostering a community spirit, whereby community members rallied together to assist the most vulnerable individuals and families in their midst.

Start with clear objectives and seek a holistic approach

Disaster risk reduction was incorporated into the recovery situation analysis and plan of action at an early stage. Although the reduction of risk and vulnerability was not a stated objective of the programme, it became one of its greatest strengths. All aspects of the shelter programme contributed to risk reduction. The way communities were approached and organized to work collectively with the support of the PMI/International

International Federation

Shelters were built to meet Sphere standards with regard to safety, size, durability, hygiene and most importantly, the dignity and privacy of the occupants.

Federation, the seismically safe transitional shelter prototype not requiring prior knowledge of building techniques, the step-by-step building manual, the mobile construction clinics, and the range of awareness material made available all ensured an easy transfer of the required skills and knowledge to communities in a relatively short space of time. Together, they have gone a long way towards ensuring that the next time a hazard strikes, it is less likely to turn into a disaster.

The strength of the programme is reflected most in the design of the transitional shelter. The bamboo shelter is durable, resistant to the elements and to seismic activity, and will provide safe shelter until such time as the government's permanent housing programme gets under way. It also meets the Sphere standards with regard to safety, size, durability, hygiene and, most importantly, the dignity and privacy of the occupants.

More time spent clarifying the objectives with different stakeholders would have cemented the overall goals of the programme, as well as aided in determining realistic target numbers, timelines and the development of monitoring and evaluation plans. The generosity of the donors and the low cost of the transitional shelters prompted a desire to increase the number of shelters to be built over a short time period, but this would have pushed volunteer and staff capacity beyond its limits.

There is no doubt that making the most pressing priority – shelter – the entry point for the recovery programme was a successful strategy. However, once the programme reached the point where it had fulfilled communities' temporary shelter needs, one of its biggest challenges was to find ways to incorporate other community needs into the design of the ongoing recovery programme. The overall PMI/International Federation recovery programme was divided by sector (e.g. separate health, water and sanitation projects) and targeted different geographical areas. Months spent implementing activities independently of each other created dynamics within the programme that later made it more difficult to work in an integrated way in responding to diverse community recovery needs and priorities. In future, it is recommended that recovery programmes begin with a strong focus on a community's leading priority such as shelter, but still include and integrate other sectors such as health and water and sanitation from the outset.

Cash based assistance need be no more risky or complicated than commodity based assistance

The nature of the earthquake damage, the communities' priorities and the conditions of local markets all pointed to the appropriateness of using a cash-based model. Providing finished contractor-built shelter or providing tools and building materials without technical assistance (commodity-based approach) would have been less effective in this particular case. The community-led construction process empowered communities to take control of their own recovery and raised awareness of risk and safe building techniques within the recipient communities. Feedback from the neighbourhood groups indicated that the programme had helped them to feel they could return to work and restored a sense of "normality" in the community. Moreover, without the collective organization of construction (through *gotong royong*), the most vulnerable may not have received help with the construction of their shelters nor have been able to afford to pay someone to build them.

The International Federation's experience has also demonstrated that, done on a manageable scale and properly designed, cash-based models are no more risky or complicated than commodity-based assistance. The finance system, in terms of transfer of cash to a community account, phasing of payments, and procurement and purchase of tools and materials, was well designed and implemented. It was also flexible enough to adjust to changing circumstances. For instance, the number of planned payments to neighbourhood groups was reduced from four to three when it became apparent that the four-phase system was placing unnecessarily high administrative burdens on both the beneficiaries and the programme administrators. Where less than ten shelters were required in a particular neighbourhood, funding disbursements were reduced to one instalment. Transparency of decision-making and especially of financial management ensured community participation, trust and accountability to both beneficiaries and donors.

A mid-term review of the early recovery programme noted that bottlenecks in the financial reporting had had an adverse effect on the pace of construction and overall progress. There were delays in reporting on funds received, and some reports were rejected because they didn't meet the strict guidelines laid down to ensure accountability. Both the PMI volunteers and the neighbourhood groups found it difficult to produce this kind of precise financial reporting. However, with time and support, their reporting became more accurate, and the rejection rate was gradually reduced to almost zero.

The risk of misuse of funds perceived by some led to more stringent controls over distribution procedures than was really required. That said, it was also a new and experimental approach, with initially a strong element of risk. This suggests that financial controls and procedures could be simplified to make them more manageable for communities to fulfil. Properly prepared and supported, communities will report accurately and honestly.

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The procedures for using cash as an aid delivery mechanism were new to the PMI/International Federation team. The International Federation's humanitarian aid delivery systems were not designed to switch easily between commodity- and cash-based approaches. This meant that the earthquake response operation had to go through a steep learning curve. Implementing a recovery programme based on a complex cash-based model and a community-built shelter prototype also placed great demands on the PMI volunteers. These volunteers rose to the challenge, with only 1 out of 350 leaving the programme because of difficulties coping with the high accountability requirements. The PMI also gained considerably in capacity through having to deal with these challenges and through the "learning by doing" coaching and mentoring approach taken by the programme managers.

Plan early for handover and incorporate in capacity building approaches

The focus on facilitation of recovery and on building resilience, rather than on the provision of relief items, placed a fair amount of responsibility on PMI's shoulders. This was a challenge for the National Society but one that ultimately proved positive. Jakarta-based PMI staff and the International Federation's early recovery team trained volunteers in facilitation, community-based mapping, financial management and safe house construction. A handover approach was used, whereby the trainees who succeeded best in the field assisted in the training of successive volunteers. If they proved adept at it, they were then encouraged to lead training sessions. Eventually, the training was fully facilitated by PMI volunteers.

> *"After the earthquake of May 2006, I underwent early recovery training and was assigned to PMI's Shelter Division. I went to Dlingo as a member of the initial team to assess the community's needs. There, I began as a coordinator for the village and was eventually promoted to coordinator at sub-district level. Now, as the programme has expanded to include Pandak, I am working as the district coordinator.*
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> *The place that a volunteer learns the most is in the field. There is no substitute for hands-on experience, and there is no mistaking the leadership skills you acquire when making the difficult decisions involved in helping a community solve its problems."*
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> Jirokhim Soleh, PMI Bantul Branch,
> Shelter Programme Coordinator

Whilst assessment of PMI's existing capacity was carried out at the time of the situation analysis, the programme still ended up somewhat too ambitious. It aimed to assist PMI in developing various recovery-related skills during implementation, but many PMI and International Federation personnel felt that their ability to implement such a new and innovative approach had been overstretched. Some gaps in the skills needed to support capacity building were only filled once the programme was under way.

This should not be seen as an argument against innovation. Rather, the lesson learned is that it is important to be realistic as to how much innovation an operation can take at any given time. Changes should be introduced progressively and at a pace that is sensitive to the abilities of the individuals involved. For PMI, the learning curve was initially too steep, because the information being received was complicated and changed so often that it was sometimes confusing.

Give priority to communications and demonstrate accountability to beneficiaries

The investment in communication largely paid off, in terms of giving clear messages and managing expectations. The early recovery programme placed a great deal of importance on the flow of information *from* PMI and the International Federation to the community. The range of methods used (direct communication, mobile clinics, notice boards) and the printed material used (step-by-step construction guide on temporary shelter, awareness posters, calendars, etc.) were highly effective in transferring information to communities and left no room for assumptions.

The Yogyakarta earthquake early recovery programme differed from many other International Federation recovery programmes in its approach to relating to and working with communities. Instead of the usual "visiting" professionals or volunteers, trained volunteers went to live among the community.

Undertaking a detailed community assessment during the early stages of the disaster response would have been time-consuming and possibly counter-productive. There were multiple factors pressing for a quick response – the acute and immediate survival needs of the population, the increasing activity of a nearby volcano and the imminence of the rainy season.

The severe states of shock and trauma that are often found in the early days following a major disaster can also make participation in such a process difficult for the survivors. By placing volunteers within the community, it was possible to go beyond the early situation analysis and make some assessments of the disaster's impacts on peoples' vulnerability and means of coping, with minimum disruption to the community.

Training and mentoring PMI volunteers at the village and district levels and placing them within the community led to a high degree of trust between communities and the programme implementers. It was also an effective means of accurately identifying beneficiaries. Vulnerability is an ambiguous concept for communities and can lead to conflict as to who is termed vulnerable; everyone affected by a disaster feels in some way vulnerable.

However, the clear and simple criteria for determining vulnerability in the context of the programme (elderly,

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PMI volunteers were trained to build model shelters in each village to demonstrate the process and to provide the community with a standard shelter for replication. Volunteers were able to provide first hand technical assistance with the "learning by doing" approach that was used by program managers.

sick, disabled, mothers expecting babies within two to three months and single male- or female-headed households) meant that there was little discord over who qualified for assistance.

It is important to establish formal mechanisms for neighbourhood groups to communicate information about changes in their priorities or preferences to the early recovery programme. While qualitative information, such as feedback from communities and staff visits, was gathered and discussed at the weekly early recovery team meetings, the follow-up action was often not well recorded or tracked. There is a risk of putting too much emphasis on producing spreadsheets showing construction progress rates, rather than valuing and capturing qualitative feedback and adapting the programme to best meet changing community needs.

Following the mid-term review of the programme, action was taken to increase and improve formal communication and qualitative reporting systems, as this was seen by PMI and the International Federation to be a key element in achieving successful outcomes for community recovery programmes.

Identify locally acceptable ways to increase women's participation

Women in the beneficiary communities do not usually participate in formal local decision-making bodies. The volunteer placements within communities, combined with the use of local notice boards, helped women to get more direct access to information and share their views on the programme.

At the same time, the majority of PMI volunteers are men, and the early recovery programme experienced some challenges in attracting and retaining female volunteers. The programme recruited a local gender specialist to help to identify constraints to increasing women's participation. One of the difficulties encountered in recruiting women, according to several volunteers, was that construction was not deemed to be a suitable role for women in Indonesian society. Some female volunteers were dissatisfied with the field opportunities available to them, for example, being asked to cook meals rather than facilitate women's participation in community decision-making processes.

PMI and the International Federation have gained considerable insight into the complexities involved and

the skills required in incorporating a gender-sensitive approach into early recovery programmes. The gender specialist continued to work with the programme and the broader operation to identify locally acceptable ways to increase women's participation in decision-making and activities. At a gender review workshop in January 2007, PMI and the International Federation also agreed to embed gender equity objectives fully into the design of the next stages of the recovery programme.

The way forward

The PMI/International Federation Yogyakarta earthquake response and recovery operation achieved its objectives and targets for assistance by the end of April 2007.

The next challenge was to better integrate the different relief and recovery sectoral programmes – health, shelter, water and sanitation, and disaster management capacity-building – into one cohesive programme that responds to the identified needs and priorities of beneficiary communities, as well as the strategic objectives of the PMI for the longer term.

The good relations and strong bond of trust that the PMI has built with the participating communities through the earthquake early recovery programme offer a solid foundation for future disaster preparedness and risk reduction activities. Community-based disaster risk reduction activities were subsequently expanded into several of the villages that participated in the early recovery programme.

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