**38th WEDC International Conference, Loughborough University, UK, 2015**

WATER, SANITATION AND HYGIENE SERVICES BEYOND 2015:
IMPROVING ACCESS AND SUSTAINABILITY

# RedR: effective support in response to changing humanitarian needs

*R. L. P. Hodgson, I. Smout & M. A. M. Nor, (UK)*

**BRIEFING PAPER 2307**

*Case studies from 20 years of RedR's humanitarian experience are presented to demonstrate recent evolutions in technologies and management systems appropriate for the effective relief of suffering during and after major disasters. Trends identified include increasing urbanisation of humanitarian response, greater demand for professionalisation and for professional infrastructure services and roles for support organisations such as RedR in developing and promoting effective relief through resource development and learning support at all levels. RedR's 2,500 peer-reviewed members worldwide form a significant professional humanitarian expertise network that can assist in coordination of humanitarian response. Field training courses provide neutral venues for frank exchange of experiences, which must be regularly captured in publications such as Engineering in Emergencies.*

## RedR: skills and learning support for effective relief

RedR was established in 1980 to relieve suffering after disasters by selecting, training and providing skilled personnel to humanitarian agencies. It is now a network of 5 national organisations that collectively works throughout the humanitarian sector with 2,500 members and/or support teams providing professional services in every major international disaster.

This paper examines case studies drawn from humanitarian responses over the past two decades to identify trends in humanitarian response and demonstrate the added value that second tier responders such as RedR can bring in increasing the effectiveness of international relief operations.

### Case study 1: Water system reconstruction in Mostar, 1994

Mostar in central Bosnia was a particular focus for conflict during the Balkans wars of the 1990s. For much of 1993 the confrontation line approximately followed the river that divided two communities and all infrastructure across the river was destroyed. In March 1994 the International Committee of the Red Cross promoted reconnecting the water supply network as a practical step in restoring normal relations in Mostar. The lead author undertook assessments and oversaw the start of an 18-month WASH programme.

Some learning points:

- Broken pipes resulted in no water to the east of the river and no pressure to the west – it was in the interests of both communities to fix the connections;
- Effective reconstruction required network analysis professional specialisms that were then in their infancy and access to 'corporate memory' of the pre-war water authority that no longer existed;
- It was possible to introduce modern materials and methods to replace 120 year old pipes, and
- Political challenges remained and took precedence over engineering practicalities, preventing rapid progress of the programme in the city areas.

## Working with existing infrastructure

Until the Balkan wars many international relief operations had followed a well-tried format of establishing new camps in sometimes remote areas where new temporary infrastructure must be imported. The 1990s saw a gradual shift towards working with urban authorities to rebuild existing services.

Lack of investment in much of eastern Europe during the Cold War meant that many systems, like that in Mostar, were vulnerable due to the presence of old materials and lack of maintenance (Hodgson, 2004). Mostar's water mains were of lead-jointed cast iron construction, a methodology long superseded in the rest of Europe. Introduction of modern materials including ductile iron and welded polyethylene (then unknown in the Balkans) required careful planning and training for local staff.

Prioritising the reconstruction work involved sophisticated leak detection and analysis skills that were not present in the area and could not be mobilised from elsewhere due to the uncertainties of the continuing war in neighbouring districts. Moving and emplacing large iron pipes and valves can be done only with heavy lifting equipment and excavators that had to be sourced elsewhere and imported. Water company management had been largely disrupted and was by then under the control of individuals chosen for leadership rather than technical skills. In these circumstances the aid worker must tread a fine line between prescription and facilitation.

### Case Study 2: Learning support in Haiti, 2010

A Magnitude 7.0 earthquake struck at shallow depth beneath Port au Prince, Haiti, on 12 January 2010 destroying much of the city and killing an estimated 220,000 inhabitants. Within a month about 1000 international organisations had set up response teams in Haiti to support 1.5m displaced people in tented camps around the city. RedR UK in partnership with Bioforce established a learning support team in Port au Prince that trained over 1000 people in 6 months, 91% of them Haitian.

Some learning points:

- Haitian relief workers mostly had no humanitarian experience and needed basic logistics and security skills quickly;
- Surviving Haitian professionals needed orientation to humanitarian imperatives;
- RedR courses provided a neutral ground on which current issues could be discussed freely, and
- Latest information could be disseminated within RedR/Bioforce courses.

## Learning support as a networking tool

Although the OCHA (UN Office for the Coordination of Humanitarian Affairs) cluster system was implemented early in the response phase of the Haiti response, there were significant challenges faced in coordinating the response. This was due in part to the huge number of agencies to be coordinated (Bhattacharjee & Lossio, 2011) but another factor not always recognised is that, because all major agencies are competing for funding from the OCHA 'pot', they do not always feel free to raise negative issues in multi-agency coordination meetings and therefore serious challenges may take some time to surface.

The RedR/Bioforce support team noted that course participants are much more willing to share experiences in the less formal setting that the training sessions offered. Through its participation with the appropriate clusters, the Support team was able to incorporate the outputs of current studies and evaluations immediately into its training sessions, ensuring rapid dissemination of the latest experiences directly into field teams.

This support function played an important role is raising the game of the response from the very early stages and it was unfortunate that OCHA Central Emergency Fund and the specific Flash Appeal for this emergency did not include any funds for training support during the response phase. RedR/Bioforce worked mostly using private donations and had to shut down when those were finished. It is vital that international funding mechanisms include support for initiatives like this at early stages of the humanitarian response.

### Case Study 3: Ebola treatment in Sierra Leone, 2014

An ebola epidemic in 2014 killed an estimated 11,000 people in West Africa, spreading from remote inland areas to capital cities such as Monrovia and Freetown. As part of a major international response the UK Department for International Development funded four 100-bed treatment centres and a number of community centres in Sierra Leone. Save the Children operated the first of the Treatment Centres at Kerrytown.

As part of the wider UK response, RedR UK provided pre-departure training to 292 medical staff from UK and 4 other countries in a series of 5-day training courses to prepare them for deployment to West Africa over a 6 month period.

Some learning points:

- The 2014 epidemic was much larger in geographic reach and impact on communities than any previous occurrence of this rare disease;
- The epidemic spread quickly once the disease reached densely-packed cities;
- Huge demands were generated for training of both international and national aid workers to cope with a disease about which little was previously known; and
- A significant part of the response was raising awareness of the characteristics of the disease and spreading messages about safe practices.

## Rapid upskilling in emergencies

The 2014 ebola epidemic presented the world with a set of new challenges. In terms of people killed it was more than an order of magnitude larger than any of the 2 dozen or so previous outbreaks, affecting six west African countries and resulting in cases in four 'donor' countries. Accepted practice prior to 2014 was to set up a 10-bed isolation centre. Thus a large number of responders needed to be trained quickly in a field where little was previously known. Médecins sans Frontières (MSF) has a long track record of dealing with ebola outbreaks and shared its experience with other agencies in training centres in Brussels and Madrid. MSF also provided mentoring for both national and international staff at its centres in West Africa. This valuable resource was nowhere near sufficient to meet needs that were unfolding in late 2014.

The biggest need was for training of national support staff. Due to the constraints of working in full protective clothing, Kerrytown Ebola Treatment Centre required around 110 clinical staff for full operation and at least double that number of hygienists, body management teams, water supply technicians and so on. The clinical staff needed training in practical aspects of safe working in the centre, which was done in part by RedR UK for international staff travelling from the UK. RedR's long involvement in learning support to humanitarian agencies helped them to develop relevant new materials quickly and to upgrade the courses as experience with the epidemic developed.

However, the majority of national support staff had to be trained in both safe working and in their professional functions because none had previously worked in a medical setting. The time required to train this large staff to work safely was a significant constraint on the upscaling of the Kerrytown and other major treatment centres.

## Civilian crisis management

Emergencies can arise in any part of the world and success in responding to the needs will depend on good preparation of crisis management plans. Planning of this type is often not prioritised, resulting in ad hoc responses such as that reported in Case Study 4.

RedR Malaysia professionals who responded to this crisis identified a need to include experienced engineers within crisis management teams. They will be applying RedR's worldwide experience of crisis response and management in helping to develop more effective management of civilian disasters in Malaysia. RedR India has similar experiences of assisting local government responding to crises in India as well as sending experts abroad and there seems to be a growing role for the national organisations working within their own borders (Sen, 2015).

### Case study 4: Flooding in Malaysia, 2014

The December 2014 Floods in Peninsular Malaysia were the biggest in Malaysia's recorded history, affecting 200,000 people. The State of Kelantan was particularly affected with water levels rising up to 10 metres. Many structures, on-line data collection and transmission systems were destroyed or damaged by fast flowing waters. RedR Malaysia provided technical support to Government Departments and NGOs for flood flow analysis and flood level projections, on-site assessment and review of planned emergency escape routes, on-site data and information collection and installation of a local relief potable water supply system.

Some learning points:

- In an unprecedented event, authorities faced the problem of inadequate numbers of experienced and qualified personnel to provide continuous “backroom” technical support services for on-time information for rescue and relief works.
- Design and installation expertise for localised relief potable water systems were inadequate.
- Communications breakdowns and equipment failures prevented timely transmission of data for the real-time monitoring systems, leading to uncertainty in response. Manual data collection had to be established to enable planning of humanitarian actions.
- Some emergency response plans and escape route plans were found to be ineffective.
- There is a need for stand-by teams of qualified personnel to undertake on-site data collection both for immediate use as well as for future improvements.

Restoring infrastructure requires significant time and availability of specific materials. It is important to keep the affected populations informed of the progress of works to prevent disaffection. The UK Environment Agency experimented with using social media for this purpose after flooding in early 2014.

## Urbanisation of disasters and emergencies

Since 2010 the majority of the world's population has been urban-dwelling. The number of people living in cities is expected to rise steadily to around 6bn by 2050. Therefore there will be increasing needs for trained professionals with specific, sometimes hi-tech, skills in assessing and restoring the infrastructure on which these urban populations will come to depend.

Traditionally, professionals have been assigned within emergency relief operations as individuals. The limitations of this approach have been evident since the time of the Mostar programme in that no individual can have the full range of skills needed to restore a complex municipal water or other infrastructure system, even an old one.

Recognising this, RedR is exploring ways in which specialist teams of analysts or advisors can be assigned in the field or can provide 'back office' support remotely to the technicians on the ground. Many of RedR's Patrons and supporters employ such teams as part of their daily business and, with the help of a grant from Lloyd's of London, RedR UK is negotiating how and when such support might be available.

## Professionalisation and humanitarian action

Every major disaster results in a collective public desire to help those affected by it. Local people are commonly the first to respond, as described in Case Study 4. Inexperienced responders, however well-intentioned, add to the complexities of managing the situation, a factor also recognised in Haiti in OCHA's own evaluation of the coordination challenges there (Bhattarcharjee & Lossio, 2011). The well-intentioned may also mask groups of less well-intentioned persons that may use the resulting chaos for their own ends.

RedR UK's experience in Haiti showed that establishing a humanitarian training base close to the centre of a relief operation provides opportunities for local responders to raise their skill levels and to apply their new skills immediately for the benefit of those suffering around them. RedR hesitated in setting up the training base, fearing that they might take resources needed by first responders. However, they concluded later that training needs to be available as soon as the first response is completed; therefore establishment of learning support facilities needs to be planned from the outset. This lesson was developed in the Philippines and is again being put into practice at the time of writing in Nepal, where three RedRs from India, Australia and UK are jointly providing in-field support to teams working in response to a major earthquake.

Professionalisation is needed at all levels in humanitarian response. A number of useful tools and metrics have been developed such as the Sphere Standards (The Sphere Project, 2011). However, raising awareness of these and applying them rigorously in a sector where actors change regularly is a major endeavour. RedR has been at the forefront of professionalising humanitarian response since 1980 building on the skills and experiences of its active members. This has involved rigorous processes for the selection and deployment of members, disseminating best practice e.g. through the RedR manual 'Engineering in Emergencies' (Davis & Lambert, 2001) and delivering professional training programmes world-wide based on this experience.

### Case Study 5 – Typhoon in the Philippines, 2013/14

In November 2013, Typhoon Haiyan swept through the central islands of the Philippines killing over 6,300 people and displacing about 6 million people. RedR UK, RedR India and RedR Australia collaborated in a response that led to 27 training courses being delivered between February and April 2014, with 577 participants and more than 1200 training days. The RedR team established an effective relationship with Save the Children International to provide learning support for all their national staff.

Some learning points:

- Three RedRs working together provided a good platform for harmonising their learning support objectives worldwide.
- Developing effective partnership on the ground required considerable planning to ensure that administrative systems were synchronised, and
- Collaboration between teams from different cultural backgrounds shows the strength of the worldwide RedR movement in being able to provide support appropriate to a range of contexts.

## Networking and coordination

RedR's 2,500 members across the world are all peer-reviewed to ensure that they have appropriate skills and professional humanitarian motivation. They include many senior managers with international agencies as well as experienced consultants and specialists. Whereas once membership was an entry for western responders to fieldwork, now, thanks to better organisation of human resource management in the agencies, RedR membership is increasingly being viewed by humanitarians across the world as a route to recognition within this traditionally fragmented field.

RedR supports the cluster coordination system and using the existing network provided by its membership could help to bring clusters together quickly. At any time in 2010 there were an estimated 70 or so RedR members in Haiti. Using a training base as a support for those members in the field is yet to be explored in terms of facilitating the work of cluster coordinators. RedR's membership across many key agencies appears to be an under-utilised resource in the battle to restore lives and livelihoods after disasters.

## Global support to global responses

All the case studies illustrate how major disasters increasingly bring responders from across the world to work in places that sometimes have had little previous exposure to the media attention and logistics demands. The responders may also be working in unfamiliar contexts (Case 3) or without experience of the remote areas of operation.

Given this trend, RedR's work illustrates the ability to develop tailor-made support drawing on resources from different cultural backgrounds to create courses for both international and local responders, wherever possible in their own language. International teams need rapid orientation to the local scenario and, for newcomers, an introduction to the international humanitarian systems.

Workers in the field will need help with the basics of logistics, security, WASH management, coordination and so on. They commonly have a great need but little time for personal development. Therefore, RedR's field teams are developing 'training podules', short support interventions with one or two immediate learning points tailored to the needs of today for the participant/ trainee. These were trialled in Haiti and are being developed in Nepal. There is often a great need for awareness raising within local teams as a measure for mitigating the disaster, as noted in Case 3.

## Preparation for response

Case Study 4 illustrates how many disaster-affected countries could increase their resilience through disaster planning. It is crucial to build the capacity of governments and NGOs who will be in the front line of the response and Disaster Risk Reduction is an increasing part of the work of RedR and other humanitarian agencies. This has required a broadening of focus from the technical aspects of disaster response, e.g. including humanitarian coordination, personal security, logistics and supply management.

## Summary and conclusions

Five Case Studies are presented drawn from RedR's experiences of supporting disaster relief organisations to minimise suffering over the past 20 years. These illustrate the following trends and support needs:

- Urbanisation: Relief operations have moved steadily from creating camps in rural settings to restoring services and settlements in urban contexts. At the same time the world's population has become increasingly urbanised with the global proportion of urban dwellers exceeding 50% since 2010.
- Professionalisation: Humanitarian work has become a career choice for many. This creates a demand for training of international staff in humanitarian response, SPHERE standards and so on.
- Technical professionals: At the same time, the needs of restoring urban infrastructure increasingly requires, as seen in Case Study 1, professional engineers, planners and other technologists experienced in disaster response. The range of skills needed is expanding and teams of appropriate professionals will be required to cover all aspects of a major urban response. In some contexts (e.g. Case 1), diplomacy will be needed to achieve desired outcomes.
- Appropriate training: local responders need orientation to the immediate needs of effective response to upskill them quickly for the needs of logistics support and so on. Doing this requires a multi-cultural learning support team able to adapt quickly to local needs. Funding mechanisms must allow for the learning support needs that will arise early in a disaster response.
- Networking in disasters: RedR's 2,500 individual members worldwide are active in every disaster, providing a ready-made networking tool to support the cluster coordination system. RedR support teams, where present, have a role in encouraging discussion and collaboration across agencies.
- Preparation and planning will be key to mitigating future disasters in many places and this requires building the capacity of national and local organisations in both technical and non-technical skills.
- Resources: Every disaster brings new challenges to overcome and it is important that training incorporates local recommended responses as these become available, as well as best international practice. New approaches need to be captured through updates of resources such as Engineering in Emergencies.

### References

Bhattacharjee, A. and Lossio, R. (2011) "*Evaluation of OCHA response to Haiti earthquake*", report to UNOCHA.

Davis, J., and Lambert, R., (2002) *'Engineering in Emergencies, a Practical Guide for Relief Workers'*, 2nd Edn, ITDG Publishing, 718pp

Hodgson, R. L. P. (2004) "Rebuilding communities: the role of volunteers after disasters", *Proceedings of ICE, Civil Engineering* 167, Nov 2004, pp16-26

Sen, T (2015), on experiences of Redr India supporting Government of India, *personal comm.*.

The Sphere Project (2011). "*Humanitarian Charter and Minimum Standards in Humanitarian Response*". The Sphere Handbook, 3rd edition. Available from: http://www.spherehandbook.org/ [viewed 5 June 2015]

### Contact details

Robert Hodgson
RedR International
Hon. University Fellow, University of Exeter, UK
Email: R.L.P.Hodgson@exeter.ac.uk
http://www.redr.org/international.html

Ian Smout
WEDC, Loughborough University, UK
Email: i.k.smout@Lboro.ac.uk
http://wedc.lboro.ac.uk/