

Emergency urban sanitation—challenges and solutions

Bob Reed of the School of Civil & Building Engineering, Loughborough University, United Kingdom

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Introduction by Roel Blesgraaf, Climate and Energy Division, Ministry of Foreign Affairs (DME)

During the past year, DGIS was approached by Gert de Bruijne of WASTE—an organisation advocating for increased knowledge in the emergency urban sanitation sector. DGIS agreed to support WASTE with seed money for the development of products for emergency situations.

IRC International Water and Sanitation Centre and DGIS/ DME (with support from NWP) invited Bob Reed to give a presentation at the Ministry of Foreign Affairs (DGIS). Reed shared insights on the topic of emergency urban sanitation—shining light on the challenges and solutions.

Bob Reed has been involved globally in emergency water supply and sanitation for over 30 years. His recent work has been in Haiti after the disaster.

He currently leads Water, Engineering and Development Centre (WEDC)'s learning and teaching programmes and specialises in public health engineering with a particular interest in humanitarian situations, emergency preparedness and emergency response, and water supply and sanitation for low-income communities.

Presentation by Bob Reed

Bob Reed visited his first refugee camp in 1975. Since then, he has been involved in various situations in emergency relief.

“During Bob Reed’s presentation he highlighted that ‘between January to September 2010, 236, 000 persons were killed by natural disasters—flooding being the leading cause’. The estimated cost is a financial loss of 81 billion (currency). Most of the losses – human and financial are urban, that is why it is important we look at urban areas...”

WEDC is a knowledge institute and offers undergraduate courses. Students are highly interested in development issues. The undergraduate courses are the most popular modules in the school. WEDC is also conducting research and carrying out consultancies. WEDC is self- financed.

Presenting the situation

Emergency response has a history of focusing exclusively on rural communities. Carrying out emergency urban sanitation work poses difficult challenges as urban regions are often spread out. For instance, conducting emergency urban sanitation in Port-au-Prince after the earthquake was a difficult task to undertake for emergency relief organisations.

As emergency urban sanitation workers, we have many technologies to choose from. However, there is not one-size-fits-all solution. We always have to tailor the response to the problem. (Ref. pic: Trench latrine. You can build a trench latrine in a couple of hours and it can last for a week. However, you need to think of something else to replace this technology). A (Ref. picture of a plastic tank. You can build a toilet on top. When the tank is full, a tanker should come to empty it and dispose of it. Unfortunately, you cannot use the trench latrine in this (ref picture in Sri Lanka) situation.

Bob Reed said that ‘we don’t do a very good job as a sector; and we can do a lot better!’ He asked: ‘what can we do to perform better?’. He also directly asked the Ministry audience: ‘what can you do as a Ministry and group of thinkers at this level to support the sector to do a better job?’

The problems with emergency urban sanitation

During Bob Reed’s presentation, he also identified several problems with conducting emergency urban sanitation work. They include:

Physical constraints

High densities: In urban areas there are many people living in a very small land spaces. If there is not enough land, where are you supposed to build a toilet, and where can you dispose of the waste? Scattered need: People cover every inch of urban areas—some people live in formal structures while many others live in tents in the middle of the street. The mix of residency issues causes huge logistical problems as finding people in need of emergency urban sanitation relief are often hidden in the urban chaos of people.

After the tsunami in Sri Lanka, people who survived the disaster left their wrecked homes and moved in with their relatives. Emergency urban sanitation workers were faced with the challenge of finding these displaced people. An equally overwhelming situation was after the earthquake in Port-au-Prince, where the scale of damages covered an area six times the size of Birmingham. How are we, emergency urban sanitation workers, actually supposed to respond to that sort of situation?

Logistical problems

The earthquake destroyed the harbour of Port-au-Prince creating a gigantic logistical problem for emergency work. With no physical infrastructure in place to receive stock, how can emergency workers deliver stock? Fortunately, the airport remained intact. However, the huge demand for using the airport to bring emergency stock in Haiti created logistical and management issues. For example, a local agency trying to bring in takers for emptying latrines was delayed for eight months at the border.

Bob Reed explained that governments can play a role in these situations, since they have a broader skill set and wider network (than NGOs) to handle logistical and management issues.

Poor service levels

Prior to the earthquake, Haiti was already experiencing poor service levels. People did not have access to toilets let alone a sewage system. A situation like this, poses problems for emergency urban sanitation work. With relief work, the aim is to return things to how they were before a disaster. How are we supposed to put something back that was not there before—in this case, toilets and sewers? And, how do we promote the use, inspection, and maintenance of a service that people never had? As a relief worker, we also cannot deprive a person of a service, such as a latrine, just because a person never had one.

Problems with toilet technologies

Thousands of mobile toilets were brought into Haiti after the disaster. Each mobile toilet costs approximately \$USD 25 per day. Mobile toilets do play an important role in providing a service. However, are mobile toilets an appropriate choice in emergency situations? What are we supposed to do with all the waste? How do we transport it?

Expensive costs

In general, building sanitation facilities in emergency situations is cheap. However, maintaining them is very expensive. The Department for International Development [DFID] spends approximately £GBP 500 per week on emptying toilets alone.

Limited capacity

There are many organisations working on water, but only a small amount on sanitation in emergency relief. For example, in Haiti, we called meetings with water and sanitation agencies every week. The number of people who attended could not fit in the room. However, we also noticed that only a few people worked in the sanitation sector.

Bob Reed explained that there are a limited number of agencies interested in sanitation. In Haiti, many people were interested in working in the water sector, even though water was not an issue for the country. Not many people were interested in dealing with sanitation. Reed explained why: “Shit is not sexy. It does not get you out of bed to go to work, so people do not get excited about it”.

Organisations that are actually interested in sanitation are poorly resourced and staffed. This relates strongly to the issue faced by relief agencies—agencies are generally populated by young and inexperienced workers. The retention rate of staff in relief agencies is also low as career options within agencies are limited.

Bob Reed explained that during his recent visit to Haiti, he was asked by several relief workers if they were doing the right thing. As a relief worker, it is difficult to assess your own work as there is often no mentoring programme at field level within relief agencies.

Poor management

Bob Reed explained that emergency relief organisations/workers do not manage situations. The WASH cluster system is organised and coordinated by UNICEF. However, UNICEF cannot select which organisations should go where. There is no management body in place. There is no clear arrangement on who is in charge in emergency relief situations. Reed highlighted that clear direction is a huge gap that needs to be filled. Therefore, how can we as an international society help post-governments manage emergency relief situations and move away from coordination roles.

The eight steps to Nirvana: Bob Reed’s recommendations for improving emergency urban sanitation work

1. **Raise interest.** We need more people interested in shit. We need more people actively involved in handling sanitation problems. We need more organisations involved--with more organisations comes more people.
2. **Professionalise agencies.** We need to professionalise relief agencies. Sanitation is not taught at school. Most degree courses do not talk about sanitation. There is no course in sanitation at the undergraduate level. Agencies have to train and retain their staff. However, NGOs are weak with capacity development of their own staff.
3. **Improve sector management.** We need to deal with the management incapacity in the sector. The UN coordinates agencies but they do not manage them. Government agencies are often present in emergency relief areas, but they do not have the skill to manage relief agencies. We should support government bodies in being able to take control and manage.
4. **Support preparedness and Disaster Risk Reduction (DRR).** We have to support preparedness, sanitation preparedness so that local organisations manage. There are only four organisations (Oxfam, MSF, UNICEF and Red Cross) in the world that have the required stock-piling in place to react quickly to emergency relief situations.. Countries with frequent disasters are often better prepared to deal with emergency situations because the proper mechanisms such as medical and other emergency facilities are in place.
5. **Increased research and development for sanitation technologies.** We need to improve sanitation technology. The Netherlands provides the highest funding in Europe for research and development.
6. **Engage with local stakeholders.** We have to find ways to encourage collaboration from an early point on. International agencies go with a set method and a set of procedures on how to work in emergency situations. International agencies, however, forget that local agencies with experience in handling emergency situations are also present in these areas. External organisations tend to only involve local NGOs by the time they leave the country and have to get rid of their stock supplies. Some relief agencies do have links with local partners, but local partners are hardly involved in the planning and management side. We can help by putting in place ground rules and criteria on how people should work. Getting local partners involved and building their local capacities will lead to sustainability and decrease dependence on international involvement.
7. **Accept that urban sanitation is expensive.** We have to budget for urban sanitation services and accept that the costs are high. Removing waste from urban areas is very expensive. More data is needed to plan for realistic costs of emergency urban sanitation services. We need to address the issue of not having clear costs information.
8. Practice **critical evaluation.** We need to encourage relief agencies to be more professional. We need to be critical on how we are spending money for emergency relief work.

We can all play a big role in thinking strategically about how to carry out these eight recommendations.

Questions & answers

There is a big gap between the knowledge in the sector, institutions, and government vs. the knowledge needed in emergency situations. How can knowledge be better linked to and used by the people who need it most?

Education has a big role to play. The Loughborough University runs a master's programme that costs £GBP 14, 000. We try to look at education from the point of view of the person who is learning. We do not say "if you do a master's with us, you will get a job at CARE, and after six months you will be completely burned out". We face the challenge of producing long-term professionalism. We notice that students do not participate in the full programme. People pick and choose what they think is interesting for them at the present moment. We need big-picture and long-term thinking.

You never referred to water and sanitation. I haven't seen a connection with water.

Water and sanitation are completely different subjects. Water supply is primarily a technical issue. The best people who work on sanitation are not engineers. Sanitation is about management and people skills. We need different skills sets.

Most problems come down to the financing structure, which in turn causes scattered organisations. As long as we privatise aid, it will be very difficult to solve issues.

It is a socio-political issue, where nobody wants to be a parent and say: "my daughter deals with shit". Sanitation is not politically high level. There is a social stigma about working with waste. This reflects on political values. It is very difficult to get governments to commit to sanitation. It is not high on the political agenda. It is not so much about the money, it also about the fragmentation of the sector and the continuity of funding streams. There are very few organisations with the capacity to give first hand aid in sanitation.

See Bob Reed's presentation - <http://www.ircwash.org/resources/emergency-urban-sanitation-challenges-and-solutions>

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