An Incident Control Centre in action: Response to the Rena oil spill in New Zealand

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Abstract

Following the Rena grounding and oil spill in the Bay of Plenty, New Zealand, an Incident Control Centre was established which, among other tasks, coordinated a volunteer clean-up effort. We interviewed volunteers and organisers to gain insight into the efficacy of the volunteer coordination effort. Volunteers praised the system of communication and the involvement of indigenous groups. They expressed a desire for better training, more flexibility and community autonomy, a quicker uptake of volunteer support, and the use of social media. Locating the Incident Control Centre in a single site aided interaction between experts, and the sharing of resources. Overall, the volunteer coordination was considered a success.

Acknowledgements

Our research was made possible through grants from the University of Waikato and Bay of Plenty Polytechnic. We would like to thank the Bay of Plenty Regional Council for their support, and the participants of this study for their time.

On 5 October, 2011, the MV Rena grounded 12 km off the coast of the Bay of Plenty, New Zealand, resulting in a spill of approximately 350 tonnes of oil and marine diesel. An Incident Control Centre (ICC), the location of which changed several times, was established in a disused supermarket in Tauranga to coordinate responses to the grounding, including coordination of a volunteer programme. Staff seconded from government organisations managed the thousands of volunteers.

An Incident Command System (ICS) is a temporary organisation tasked with coordinating a crisis response involving multiple organisations (Moynihan, 2009). For the coordination of volunteers following the Rena grounding, organisers used a Coordinated Incident Management System (CIMS), New Zealand's adaptation of California's ICS developed in the 1970s. The Ministry of Civil Defence and Emergency Management (2006) provides a guide to volunteer management in civil defence emergencies and the *New Zealand Marine Oil Spill Response Strategy* (Maritime New Zealand, 2006) outlines the New Zealand response to domestic oil spills through "partnerships between Maritime New Zealand, regional councils and unitary authorities, industry, domestic and overseas agencies" (p. 3). Moynihan (2009) noted that although an ICS is designed as a hierarchy, it may operate in a networked fashion, with members interacting directly and sharing authority.

Effective communication between everyone involved, and a coordinated approach to information dissemination to the general public, is important for the success of emergency responses (Boin & 't Hart, 2010; Crichton, Lauche, & Flin, 2005; Leadbeater, 2010). Poor communication is often a source of stress (Crichton, Lauche, & Flin, 2005). Using mobile phones and social networking to report news carries the risk of disseminating misinformation; on the other hand, good communication flows allay people's fears and aid recovery (Leadbeater, 2010).

Adequate training of personnel is also important (Boin & 't Hart, 2010; Crichton, Lauche & Flin, 2005), particularly as personnel are not necessarily trained in emergency response. Hur (2012) recommended a collaborative approach with clear responsibilities for those involved. Key skills include situation awareness, decision-making, communication, leadership and teamwork, problem-solving, a working knowledge of emergency response procedures, and a range of management styles (Crichton, Lauche & Flin, 2005; Sommer & Njå, 2012). However, in crisis situations, emergent and transitory groups can quickly develop ways of coordinating knowledge (Majchrzak, Jarvenpaa, & Hollingshead, 2007).

Ordinary citizens can play an important role in crisis response, as they are often close to the action and, contrary to popular myths, usually act quickly and calmly (Helsloot & Ruitenberg, 2004). In traditional, hierarchical, models of volunteer management, volunteers are viewed as resources to be managed. In an "active citizenship" approach, members of a community are considered experts on their issues, needs, and goals (Kenny, McNevin, & Hogan, 2008) and support is provided for community initiatives. The use of volunteers is not always straightforward, however. Following an oil spill on the coast of Korea in 2007, authorities and infrastructure were overwhelmed by thousands of volunteers (Hur, 2012), and their ineffective coordination resulted in unclear responsibilities, poor organisation of resources, and harm to volunteers. Nonetheless, in this, and many other emergency responses, volunteers have made enormous contributions to response and recovery (Hur, 2012; Villemure et al., 2012; Webber & Jones, 2011).

In New Zealand, indigenous and community groups have responded effectively to natural disasters (Busby, 2010; Villemure et al., 2012; Ward, Becker & Johnston, 2008). Māori, the indigenous people of Aotearoa New Zealand, are significant stakeholders, due to their ancestral knowledge of tribal lands, and possess communication and social networks that could aid in disaster recovery (Busby, 2010; Proctor, 2010). Thus, ordinary citizens and

indigenous groups are a useful volunteer workforce for a range of emergencies. We focus on the efficacy of the ICC Volunteer Coordination Team.

Method

We interviewed 48 people who had either volunteered to clean up the oil spill (*Volunteers*), or were involved in organising the volunteer effort (*Key informants*), including project managers, site supervisors, health and safety coordinators, and indigenous leaders. A stratified-random sampling method ensured selection of equal numbers of Māori and non-Māori volunteers from a pool of questionnaire respondents (Sargisson, Hunt, Hanlen, Smith, & Hamerton, 2012).

Participants were interviewed individually or in focus groups. Key informants were asked about their role over time, strengths of the coordination effort, and potential improvements. They were asked about their experience of working with volunteers, stressors in their role, and the support they received. Volunteers were asked about their volunteer experience, including the usefulness of their contribution, the need for support, and suggestions for improvement.

Results and Discussion

As our purpose was to explore the usefulness of the ICC as a centralised system for organising volunteer operations, we present only a subset of the findings here; key informant and volunteer reports of strengths and areas for improvement, stressors in management roles, support provided and needed, and implications for the planning for future events.

Strengths

Due to enormous public pressure, a realistic plan for utilising volunteers in the clean-up was made and implemented as quickly as possible. One organiser, who lobbied Maritime New Zealand to include volunteers in the clean-up, noted it was important to listen to the community.

Establishing good communication networks is vital (Boin & 't Hart, 2010; Crichton, Lauche & Flin, 2005; Leadbeater, 2010). Organisers set up an online registration system and used an email alert system "READYNET" to dispatch daily email and mobile text messages to volunteers. The regional council and Maritime New Zealand also posted up-to-date information on websites. The volunteers praised the email and text messages which provided progress updates, location and timing of upcoming events, and information on the state of beaches in the various sites.

Providing training for those who manage volunteers is also important (Boin & 't Hart, 2010; Crichton, Lauche & Flin, 2005), as is having access to a range of experts. The inclusion of volunteer coordinators in the ICC facilitated networking with such experts. The ICC appeared to operate in a networked fashion, with members interacting directly (Moynihan, 2009). Having groups located in one place facilitated this networking.

It was important for volunteer organisers to work closely with indigenous leaders to ensure access to resources and to avoid duplication. An Iwi[1] Liaison Team quickly established itself within the ICC to ensure participation by indigenous groups in decision-making. Working relationships were established, despite many organisers' inexperience in working with indigenous groups. One indigenous-led clean-up programme, located some distance away from the ICC, operated independently, with local organisers establishing their own communication, training, and decontamination protocols. However, the ICC provided them with training and equipment in the same way as for other clean-up sites. The successful responses of indigenous groups mirrored other indigenous responses to emergencies (Busby, 2010; Proctor, 2010; Ward, Becker & Johnston, 2008).

Suggested Improvements

[1] Iwi is a Māori word meaning "tribe". Māori are the indigenous people of Aotearoa New Zealand.

Our participants advocated the inclusion of volunteers in the Maritime New Zealand's Oil Spill Strategy, which does not currently allow for volunteers, and for the volunteer programme to have been established at the inception of the ICC, allowing for a quicker response. Villemure et al. (2012) stated that provision for volunteers should be present in pre-disaster plans to facilitate their rapid and efficient use. This suggestion is consistent with Helsloot and Ruitenberg's (2004) conclusion that ordinary citizens can provide effective responses to emergencies.

Participants advised that training for people taking on coordination roles be available sooner, noting that the organisation of clean-up sites improved over time as managers became more experienced. Participants also proposed a flexible approach to leadership that makes better use of local knowledge and community demands for information and input into decision-making. In particular, liaison with indigenous groups should occur immediately.

Initially, specifications around who could volunteer, and the length and nature of each volunteer session were quite rigid. All participants wanted a more flexible approach that enables people to contribute their expertise in a range of ways and allows communities to undertake their own initiatives. These suggestions echo the "active citizenship" approach advocated by Kenny et al. (2008). As the volunteer programme wound down, community groups took over clean-up in their local areas, similar to the emergent groups described by Majchrzak et al. (2007).

Many participants were critical of the use, and too frequent rotation, of outside experts, reporting that outsiders were rotated into ICC roles without being properly briefed, and in some cases disregarding local knowledge.

Volunteers suggested improvements to practical aspects of the programme, including better training, more suitable equipment, earlier organisation, and provision of, or reimbursement for, transport to and from clean-up sites. They wanted on-going information

about how the volunteer work was contributing to the clean-up, and for their own feedback to be sought. Volunteers also called for greater clarity about volunteer roles and clearer demarcation of the beach.

Participants suggested that while the READYNET alerts had worked well, social media could also have been used. Some, particularly young, volunteers used social media informally, similarly to the student volunteers following the Christchurch earthquakes (Villemure et al., 2012). Young people did not appear to participate in organised volunteer events as much as older people following the Rena oil spill (Sargisson et al., 2012), whereas the volunteer hours contributed by students following the Christchurch earthquake was immense (Villemure et al., 2012). Therefore, using Facebook to spread information about volunteer events may have yielded higher participation by young people. A few volunteers, conversely, recommended more traditional forms of communication, such as community noticeboards and newspapers.

Stressors and support for managers

Key informants identified many stressors related to their roles. Many worked extremely long hours; for some resulting in loss of regular paid work and financial loss. Coordinators often dealt with angry people and made decisions in the face of uncertainty. Supportive colleagues, expert advice, good communication, resources, and equipment helped reduce stress. Administrative support was provided by a wide range of organisations, and local businesses and voluntary agencies donated equipment and food. For indigenous leaders, cultural support and advice from elders helped.

Volunteering: Impact and support

Volunteers viewed their experience positively and were satisfied with their contributions. They were impressed with the number of volunteers and the support provided by businesses and the general public. Most volunteers thought their work had been personally

useful in building communities, obtaining information, and as a way to educate and politicise themselves and the community. Some were less certain about the usefulness of their work and wished they could have done more.

Volunteers appreciated the support and feedback they received from site supervisors and leaders and the refreshments provided at the end of shifts and follow-up events. They spoke of feeling part of the community and country.

Being kept informed via text and email motivated the volunteers and being interviewed about their experience was considered supportive. Other writers have noted that lack of support can lead to stress and burnout (Hur, 2012; Webber & Jones, 2011).

Conclusion

The volunteer clean-up programme following the Rena oil spill was considered a success by both volunteers and organisers. Volunteers worked effectively alongside contractors and New Zealand Defence Force workers. Management of the volunteer programme was effective, even though the organisers were not experts in oil spill response or use of volunteers. The location of the organisers within the ICC ensured ready access to expertise, training, and resources. Provision of training for both organisers and volunteers was pivotal to the programme's success, as was good communication. Organisation and communication improved over time.

The success of the volunteer clean-up programme was likely due in part to its inclusion within the ICC structure. Independently operating groups still depended on the ICC for training, expertise, and resources. Volunteer organisers reported they were able to network effectively and lobby authorities on behalf of communities.

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