The Role of the Military in International Disaster Relief Activities

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Introduction

Although not recognised fully in military doctrine or strategic concepts, since 1997 more military assets have been deployed around the world for the purposes of disaster relief than at any other time in the international community's history. This trend looks set to continue as a result of four factors:

1. The strategic context, particularly the fact that civil contingencies are likely to increase in both scale and frequency.
2. The increasingly harsh nature of disasters, which will make environments more difficult and hazardous to operate in. The military are better suited to operating in a timely way in adverse circumstances compared to most other organisations.
3. Growing expectations on the part of the public for improved responses, including the reassurance that can be provided by a military presence. Fears that military involvement can unsettle populations have proved unfounded.[2]
4. The unique skills and capabilities which armed forces in many countries have developed for recent and ongoing operations in Afghanistan and other theatres which have applicability in civil contexts.

However, a number of challenges to the effective deployment of the armed forces remain and will need to be addressed, including: the longstanding tension between using the military as a last resort and the need for timeliness of response; delays to damage assessments and, related to this, delays in offering or requesting assistance; the need to improve deployment and operational times, including the need to manage the competing demands placed on ever smaller armed forces as

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[2] Though the use of international military forces in certain countries may increase radicalisation amongst the local population.

defence budgets shrink; interoperability challenges between different military forces in an area as well as interoperability challenges between the military and civilian organisations (whether government or non-government); the need to develop skills and capabilities for operating in increasingly unique and difficult environments (such as urban areas, contaminated areas where people cannot be deployed, or countries with different cultures) within the armed forces; and problems with sustaining the disaster relief effort once a military contribution comes to an end.

This paper looks briefly at the context in which the military have been and will be deployed, but focuses primarily on how to overcome the various challenges to using the military instrument and identifies future capability requirements and approaches which will improve effectiveness.

The strategic context and place of the military

While much attention has focussed, quite understandably, on the international terrorist threat over the past decade, terrorist attacks are contingent events that may or may not occur and which authorities arguably have a greater likelihood of preventing, detecting and disrupting, particularly given advances in intercept and surveillance technologies and methods. In contrast, it is a certainty that natural disasters and other civil crises will occur. Yet resilience and civil contingencies are not usually regarded as "sexy" topics and do no attract attention or investment until something goes wrong, when we tend to learn the same lessons over and over again. The relative priority afforded to these crises by government might therefore be usefully reassessed, not least given two trends.

First, that natural hazards will increase in scale and frequency. These will not just be "flash" events such as earthquakes, hurricanes and tsunamis, but "slow burn" events such as heat waves and snow falls which disrupt supplies and can result in very large numbers of fatalities. For both types of event, improved prevention and preparation may help to limit disruptive effects, but pressure from population growth is likely to hinder these efforts. For example, increasing urbanisation, particularly in cities near coastal areas, will mean that more people are vulnerable to disasters. The trend of urbanisation is difficult to manage and reverse.

Secondly, in the future, emergencies will result not only from terrorism and natural trends, but from intrinsic pressures and the complexity of systems themselves. A good example is provided by the United Kingdom's national electricity grid.

By 2015 the national grid will struggle to meet demand. This is a combination of both the ageing infrastructure and increasing socio-demographic demand. It should also be noted that as systems become more complex, the risk of internal errors and system failure which have disruptive effects also increases. This is characteristic of complexity.

It is also worth postulating the concept of "hybrid" disasters. There has been much talk of 'hybrid conflicts,' which are characterised by a blurring of capabilities or convergence between state and non-state actors and the simultaneous use of conventional and non-conventional methods in the same area of operation. This concept is equally applicable for disaster situations: multiple natural disasters can occur in one country or region at the same time; a natural disaster can have important second or third order effects (for example an earthquake can trigger a tsunami and disrupt nuclear sites, as Japan has experienced); or non-state actors such as terrorists, extremists and organised criminals using the space and chaos provided by a natural disaster to embed themselves in an area.

Within this context of larger, simultaneous and more complex events, it is increasingly likely that the command and control frameworks of civilian responders, and the ability of civilian organisations to operate effectively across a wide area, will be overwhelmed. As an example, one need only look at the limited bandwidth of the communications networks available to emergency responders in many countries: this limited capacity will be exacerbated by large scale crises.

At the same time, defence capabilities are constantly evolving. The rapid development of technology in militaries over the last five or more years to meet the demands of operations makes the armed forces the owners of leading edge capabilities over and above that found in other government departments, agencies, non-governmental organisations or elsewhere. These include extensive strategic and tactical airlift capabilities, surveillance and reconnaissance assets, information acquisition, integration and exploitation, command, control and communications, detection and clearing capabilities, and medical support. Taken together with the continuing austere financial climate, which will result in other organisations drawing back on funding and potentially looking to Defence to take up on the provision of certain capabilities particularly as operations in Afghanistan and other areas drawdown, this is likely to create an environment in which the use of the military to respond to disasters may well become expected.

What makes a military response to disasters effective?

The military will always be well-suited to maintaining high-end capabilities that will not be used on a daily basis, and which it would be unrealistically expensive for civil organisations to develop, maintain and dedicate significant training time to. But what makes the deployment of these capabilities effective in response to a disaster?

From an analysis of numerous disasters including the floods and cyclones in Mozambique in 2000, the floods and tropical storm Jeanne in Haiti in 2004, the Indian Ocean tsunami in 2004 and the Pakistan earthquake in 2005, previous research has identified six factors which influence the effectiveness of military response: [3]

- Timeliness: in particular, if the military is slow to arrive and start operating this can actually impede response by preventing or delaying the deployment of civilian alternatives.
- The appropriateness of the assets deployed, both in terms of how well these assets meet the needs of a specific situation and how suitable they are for local cultural and political contexts.
- Efficiency, namely how easily military assets can be used on the ground and also how well military assets are co-ordinated with the wider international relief effort.
- The 'absorptive capacity' of the host country — in other words, how easily the country can accommodate a large influx of assets and people, and the ability of the country's own disaster management institutions to co-ordinate and effectively use external assistance.
- Co-ordination between the different organisations (military, civilian government, international organisations and non-government) involved in the relief effort, including through information sharing and achieving "harmony" between different organisational cultures.
- Developing effective funding mechanisms for using military assets, which are usually more expensive than civilian assets, so that their use is not constrained and does not place a burden on the contributing or victim countries. This could become a greater challenge given the economic crisis affecting many countries at the moment.

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[3] Sharon Wiharta, Hassan Ahmad, Jean-Yves Haine, Josefina Lofgren and Tim Randall, *The Effectiveness of Foreign Military Assets in Natural Disaster Response*, Stockholm International Peace Research Institute, 2008.

Furthermore, analysis of disasters, including the Great East Japan Earthquake of 2011, has found that for military contributions to be successful in providing disaster relief they need to be: [4]

- Self-contained, utilising teams from across the military which are combined on an ad hoc basis and have a high level of inter-operability, based on combined forces operations, with little need for further augmentation which would delay response. This includes making greater use of reservists; reserve personnel tend to have unique specialist skills from civilian careers which are of great value in responding to crises. Defence ministries need a better understanding of these civilian skills and how to harness them, including through more flexible terms and conditions of service.
- Fast-moving: able to be deployed in a matter of hours, and as such able to carry with them all of the equipment that would allow them to establish a forward command position that would then act as the central command position for subsequent operations and activities.
- Multi-skilled. Units should be able to adapt and respond to whatever is required of them, rather than be confined to a limited number of highly-defined pre-set tasks that are likely to have only limited relevance to the situation they will encounter on the ground (particularly as the situation could change rapidly).
- Self directing. It is in the nature of disaster response that units are likely to be distanced from their command chain and headquarters. Therefore, they will need to make fast decisions based on their own assessment of the environment they are in. If deployed units are constantly required to pass information up the chain of command and wait for decisions to be made and relayed back to them from commanders and HQ formations who are not actually in the crisis zone itself, they are likely to suffer from the "three basic rules of Distance Management," namely, the further away the decision makers are from the actual site:
  i. The less likely senior commanders/HQ formations are to understand the actual requirements on the ground;
  ii. The more likely any decision that is made is going to be ineffective or inapplicable; and

[4] David Rubens, *Great Eastern Japan Earthquake, March 11th 2011: A Preliminary Report on the Japanese Government's Disaster Response Management*, May 2011.

iii. By the time the decision is made, the situation will have changed and orders will therefore be irrelevant.

An implication of this is that personnel need to be allowed to take greater risks, not just on exercises, but during operations.

Overcoming challenges to the military response: the implications for future capability requirements

Meeting these criteria for the effective use of the military in disaster response has been a challenge.

At a political and strategic level, there has always been an inherent tension between the principle of last resort set out in the 1994 Oslo Guidelines and the need for timeliness: can we really wait until all possible civilian options are explored before asking for military support? Unsurprisingly, governments have tended to interpret this principle in different ways: many have preferred to focus on the unique nature of military capabilities, in effect making them an instrument of first call.

However, requests to offer or use military assets are still dependent on a number of factors, including the scale of the disaster, media coverage and pressure, the availability of those assets, and diplomatic and historical relations. Some countries choose to wait for specific requests for military assistance before responding, while others are happy to respond to generic requests. Only the US has an explicit policy of making its forces available for international disaster and humanitarian work.

The pre-authorised deployment and movement of assets is a step that has been experimented with (particularly where forces have a regional presence through basing arrangements or other operations) and can help negate the effect of a delayed assessment. Improved forecasting and prediction of disasters will aid forward and pre- deployment. However, it probably does not go far enough, as the actual use of these assets still requires political authorisation from the contributing country. In fast-moving situations where a comprehensive picture of what is happening is unlikely to be available to senior decision makers for some time, this could delay the response: any requests or offers are dependent on assessments of the situation on the ground, but experiences even in developed countries such as the US (during Hurricane Katrina) show that disasters can damage indigenous capabilities for undertaking damage assessments or, at the very least, communicating those

assessments. It cannot be assumed that the affected country will be able to make assessments and requests on its own in quick time. It is therefore worth exploring whether local and regional commanders should have greater discretion to deploy; the US has adopted this approach, and it is an example of best practice. There will also be a growing role for external military contributions to help develop detailed damage and needs assessments, and standing authorisation might need to be put in place to allow this task to be undertaken immediately.

The US has recognised the importance of forward and quick deployment in areas where it has no regional or other presence, noting that military assets and other responders need to deploy within 72 hours to make an impact. It has started to develop multi-skilled 'Contingency Command Posts' (CCPs) for this purpose. CCPs are small, rapidly deployable cells of 96 people that bring together command, control and liaison capabilities. They have two deployable assessment teams, of 9 and 14 people respectively, that deploy within 24 and 48 hours, and are augmented by the deployment of the remaining personnel within 72 hours. The cells are designed to operate 24/7 without further augmentation for 30 days.[5] They are a model of best practice internationally.

However, the forward (and faster) deployment of military forces — even for damage assessment purposes — is still dependent on a number of variables. For example,

- Over flight and basing rights might have to be negotiated with neighbouring countries;
- There needs to be clarity about the status of deployed forces;
- The right assets need to be put on standby or re-tasked quickly for deployment following initial assessments;
- The military needs to be able to work effectively alongside, and in co-ordination with, the indigenous government and other actors;
- The military needs to be able to operate in the particular circumstances of the country in question.

It follows that the effective deployment of military assets will be dependent on good bilateral diplomatic relations and alliance arrangements or partnerships.

[5] Though CCPs do not have organic force protection assets, which might be needed in some environments.

Diplomatic relations should be used to agree generic status of forces agreements to facilitate timely deployments in response to disasters. Coalitions are useful for developing interoperability between military forces, and the training and exercising undertaken through these arrangements can and should include non-governmental organisations to a much greater extent than they have to date. Some have argued that coalitions can actually act as the framework for an entire disaster relief operation, the experience of NATO during the Pakistan earthquake of 2005 suggests that this delays the deployment of assets as countries still seek national clearance even when a unified command exists on the ground (the problem of "multi-bilateralism"). For this reason countries prefer, and will continue to prefer, providing military assets for disaster relief on a bilateral basis, but this does not void the important role of alliances and regional organisations in fostering cultures of co-operation, interoperability and commonality of command and control before an event through joint training and the development of joint standards. Alliances and regional organisations should act as "interoperability hubs."

Coalitions and regional organisations also have an important role in facilitating the deployment of military assets through information sharing. One of the main challenges to effective response is identifying the appropriate capabilities to deploy, based on an adequate assessment of damage and need. To improve response times, it is important that countries each develop national-level risk assessments which identify threats and hazards, prioritise them according to likelihood and impact, and determine and assess civil response capabilities and gaps. These risk assessments could be shared bilaterally or multi-nationally, including through existing coalitions such as NATO (and NATO's partnership activities) and through regional organisations such as ASEAN, so that countries have a picture of what gaps exist in emergency response capabilities in different countries. These risk assessments should be complemented by information sharing or a database of military capabilities that other countries think can be used in disaster response efforts to fill those gaps, including the status of these assets (deployed or not, undergoing maintenance, out of service, etc.) to facilitate faster re-tasking where necessary.[6] The experience in Haiti is driving some local progress in this area; others should undertake similar efforts. There are some potential parallels with the asset tracking systems for operations in Afghanistan:

[6] The previous OCHA MCDA Register was considered inadequate and not widely used or updated by countries, possibly because it was too expansive and bureaucratic. Smaller databases at the regional level might be more successful.

logistics and asset management systems can be used for other purposes as forces are drawn down from ongoing operations.

In relation to the requirement for the military to be able to operate in the particular circumstances unique to each country affected by a disaster, many armed forces can similarly draw on the extensive experience and skills they have gained from recent counter insurgency operations. Examples include the need to understand different cultures and operate in close proximity to the public; be able to identify the needs of different communities; and the utility of forensic skills to help post-mortem analysis and investigations. These skill sets should be maintained and extended. In general terms, it could be argued that personnel should be educated not only in the history and politics of states, but in disciplines such as anthropology, so that they know how societies function and can adapt this knowledge quickly to suit different countries.

Apart from cultural challenges, the environments in which the armed forces are likely to deploy will also pose particular challenges. Although the military has more experience and capability than most organisations to operate in harsh and extreme circumstances, the future does hold some particular challenges for which better preparation is required. For example,

- Urbanisation is a trend that increases the likelihood of disasters; it also means that forces are more likely to deploy and operate in urban areas in the future. However, based on the experience of the British Army, this is a significant gap in training at present. Challenges include gaining understanding and situational awareness in cities; the endurance of forces in urban environments; the need to decentralise command and control; the need to navigate in domestic settings; the mobility of soldiers in urban areas; the possible need to master the subterranean environment; and urban search and rescue.
- The second order health effects of natural disasters include pandemics and disease and CBRN. Forces will need to operate in this context with appropriate detection, protection and vaccination capabilities (possibly for unknown illnesses). This might include the need to utilise unmanned assets, for example UAVs, in contaminated areas to a much greater extent.

Specific capability areas

Based on this analysis, the military should become both more responsive and able to operate in more complex and hazardous areas, and earmark or develop capabilities/skills which the civil authorities struggle to maintain or keep on such a scale that they tend to be overwhelmed. The following generic capability areas should be prioritised:

- Providing situational awareness for complex, large scale or multi-site crises through use of ISR assets, including unmanned platforms. A further challenge is actually processing and exploiting the information gained through ISR in real-time: more attention needs to be given to the requirements for supporting analytical personnel.
- Providing communications and C2 capabilities as redundancy and to increase civil capacity (possibly through air-to-ground assets).
- Extending the provision of logistical co-ordination and expertise.
- Providing engineering support to help reconstitute disrupted CNI.
- Strategic and tactical airlift.
- Assist in dealing with mass fatalities and casualties, including through establishing primary health infrastructure through field clinics, medical evacuation and so on.

However, as a note of caution, countries which have been the victim of natural disasters often come to rely on these capabilities. This dependency means that, once the military assets are withdrawn, it can be difficult to sustain the emergency response over the medium and long-term. For this reason it is important that significant effort is put into producing joint transition and termination plans. It is also worth putting further investment in what the UK calls 'Training and Logistic Support to the Civil Power,' to build up capacity of civil organisations before disaster strikes, including through regional and coalition organisations like NATO.

Conclusion

The military makes a unique and valuable contribution to disaster response operations, but a number of challenges reduce its potential effectiveness. As countries

and civil responders are likely to rely on the military more as disasters increase in scale, frequency and severity in the future, it will be necessary to facilitate the more timely deployment of Defence assets. A number of steps can be taken to achieve this, including developing joint risk assessments prior to disasters, producing damage assessments in quicker time, improving information sharing, developing better mechanisms for re-tasking forces, developing rapidly deployable C2 units, overcoming interoperability challenges through coalition training and exercising, and providing the armed forces with the skills to operate in urban areas, contaminated areas and in countries with different cultures.