

THE EFFECTIVENESS OF FOREIGN MILITARY ASSETS IN NATURAL DISASTER RESPONSE

A report by the Stockholm International Peace Research Institute



THE EFFECTIVENESS OF FOREIGN MILITARY ASSETS IN NATURAL DISASTER RESPONSE

This study examines the advantages, limitations and implications of involving foreign military assets—personnel, equipment and expertise—in the relief operations that follow major natural disasters. It presents the findings of a research project carried out by the Stockholm International Peace Research Institute (SIPRI) with the support of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). Foreign military assets have made large contributions to several recent natural disaster relief operations, yet their use in such operations remains controversial. The questions asked range from matters of principle—is it appropriate for foreign forces to take part in humanitarian work?—to more practical considerations such as cost, how effectively foreign military assets can participate in civilian-led humanitarian operations and how the presence of foreign military assets affects the ability of civilian humanitarian organizations to act independently and safely. This study provides an overview of the current use of foreign military assets in natural disaster response, including how and why they are deployed. It also analyses the role played by foreign military assets in several major disaster relief operations: in Mozambique following the floods in 2000, in Haiti following floods and tropical storm Jeanne in 2004, in Aceh province, Indonesia, following the Indian Ocean tsunami of 2004, and in Pakistan-administered Kashmir following the South Asia earthquake of 2005.

ISBN 978-91-85114-57-3



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The Effectiveness of Foreign Military Assets in Natural Disaster Response

Stockholm International Peace Research Institute

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and Tim Randall**



**Supported by the United Nations Office for the Coordination of
Humanitarian Affairs**

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**STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE
2008**

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Design and layout: FSPNetwork Co., Ltd, Thailand

Cover image: Bauer/USN/IP

Printed in Sweden by Elanders

ISBN 978-91-85114-57-3

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Acknowledgements

This study would not have been possible without the support of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), in particular the Policy and Development Studies Branch. Funding for this study was provided by the Governments of Australia, Denmark, the Netherlands and Norway.

The study has benefited greatly from the invaluable comments and advice provided by the Advisory Group. Special thanks are due to Christina Bennett, Hansjoerg Strohmeyer, Kai Koddenbroch and Marcus Elten at OCHA, who provided critical feedback throughout the study, and to the SIPRI editorial team, in particular Caspar Trimmer and Jetta Gilligan Borg. The authors would also like to thank all those who made themselves available for interviews for this study.

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Executive summary

This study examines the advantages, limitations and implications of using foreign military assets as part of the international response after major natural disasters. Humanitarian principle dictates that all available resources—including military assets—should be used to minimize the human cost of a natural disaster. In recognition of the fact that humanitarian relief is and should remain a predominantly civilian function, international norms have been established that place conditions and limitations on the use of foreign military assets in disaster relief operations: these assets should be used only if they meet a genuine humanitarian need, operate in accordance with humanitarian principles and complement and coordinate with the other components of the relief effort. Foreign military assets are and will remain a common feature of major international disaster relief assistance. However, significant questions have been raised regarding their deployment, use and withdrawal. The outstanding problems and uncertainties need to be urgently addressed.

This study provides an overview of recent developments in the use of foreign military assets in response to major natural disasters, based on primary and secondary data. Four case studies of recent disaster relief operations that have involved major deployments of foreign military assets have been used to contextualize the general observations and give examples of good and bad practice. These case studies examine the responses to: floods and cyclones in Mozambique in 2000; the 2004 floods and tropical windstorms in Haiti; the 2004 Indian Ocean tsunami (focusing on Aceh province, Indonesia); and the 2005 South Asian earthquake (focusing on Pakistan-administered Kashmir).

A changing landscape for emergency assistance

The recorded incidence of natural disasters and, more critically, large-scale disasters (10 000–99 999 people killed or affected) around the world has risen in the past 20 years. Most of this rise has been due to the increasing frequency of hydrometeorological hazards such as floods and windstorms. Predictions of increased climate variability alongside factors such as rapid urbanization, environmental degradation and weak governance suggest that these hazards are likely to happen more often and to have even more destructive effects on populations. In recent years many more actors—particularly non-governmental organizations but also foreign militaries—have started participating in international disaster

relief. The total aid provided for emergency assistance has increased, but the funding that is available for assistance to individual relief efforts may have decreased given the rise in the number of disasters occurring. Competition over resources is intensifying debate about cost-effectiveness in disaster relief.

Overview of the use of foreign military assets: 1997–2006

In the period 1997–2006 the military assets that were most commonly contributed to international disaster relief operations by the responding countries were: (a) air transport, including aeroplanes used for the transport of relief items and personnel; (b) medical assistance (field hospitals and personnel); and (c) expert personnel (in civil–military coordination and liaison, needs assessment and logistics).

Of the countries that provided data for this study, the USA deployed its military assets most frequently and in the greatest volume—15 times between 2003 and 2006 for disaster relief. Besides having unmatched financial and military resources and a network of overseas military bases, the USA has an explicit policy of making its forces available for international humanitarian work. European countries have deployed military assets for natural disaster responses in Africa, Central America, the Middle East and, more recently, Asia, but rarely in Europe. The Netherlands, for example, reported 18 deployments between 1997 and 2006, including in Suriname and Pakistan. Outside Europe, Australia, Canada, India, Japan and South Africa respond more readily to natural disasters in neighbouring countries than to those outside their region, unless they already have military assets in the affected region. Some countries have policies limiting the use of their military assets in international disaster response.

The decision to request and deploy foreign military assets

When a natural disaster strikes abroad, a combination of factors will influence a government's decisions regarding what, if any, military assistance to offer: (a) the scale of the disaster and the humanitarian needs it creates; (b) the country's policies regarding the deployment of its military assets for international disaster relief; (c) whether the affected country has requested foreign military assistance; (d) the availability of military assets that are not engaged in higher priority tasks, and how quickly and easily those assets can reach the disaster site; (e) national interests; (f) diplomatic and historical relations with the affected country; and (g) media coverage of the disaster and the public

pressure it generates. Political and diplomatic considerations have in the past led to military assets being offered—and deployed—that do not match the humanitarian needs of the affected populations and have in some cases even reduced the efficiency of the overall response.

Factors that may influence an affected country's decision to request, or accept offers of, international assistance after a natural disaster include: the scale of the disaster and the humanitarian needs it creates; the level of preparedness for such a disaster at the national and sub-national levels; and how urgently particular capabilities are needed. For most governments, the primary concern is the welfare of the people affected by a disaster. Once it has been established that international assistance is needed, whether that assistance is provided by soldiers or civilians is of secondary importance and will not be allowed to delay its arrival. (This may not be the case in countries that are experiencing conflict or political instability.) A few disaster-prone countries, including China, India and North Korea, have policies against the deployment of foreign forces on their territories.

Countries affected by natural disasters usually turn first to their neighbours for assistance because of the proximity of their assets and of their probable good understanding of the political, social and geographic characteristics of the affected country. Most deployments of foreign military assets in disaster relief come through direct, bilateral negotiations between governments, or even between national militaries, based on established relationships, and rarely through the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). This is especially true in the first days of a disaster relief operation. Regional multilateral frameworks and other methods of coordinating the deployment and use of military assets in international disaster relief assistance have recently been explored.

The Guidelines on the Use of Military and Civil Defence Assets in Disaster Relief (Oslo Guidelines) were created in 1994 to provide an international normative and practical framework for the use of military and civil defence assets in natural disaster response. Application of the guidelines at the national level has been uneven. Most notably, the paragraph calling for foreign military assets to be used only as a 'last resort' has been interpreted and applied very differently by different actors. Integral to the concept of 'last resort' is whether the military asset can offer unique capabilities and availability. There are some areas where militaries unquestionably possess unique capabilities, primarily in transport, logistics and the ability to deploy rapidly. However, there is considerable disagreement among governments and humanitarian actors about how much weight to give these 'unique' characteristics when balancing them against issues such as cost burdens, the risk of militarizing the relief effort and how the presence of foreign troops affects civilian humanitarian actors' safety and freedom to operate.

The effectiveness of using foreign military assets

Six interconnected aspects of effectiveness in the use of foreign military assets were identified for this study: timeliness, appropriateness, efficiency, absorptive capacity, coordination and costs. These are used to examine recent experience in the use of foreign military assets in natural disaster relief and could be a starting point for developing tools for decision making regarding the deployment and withdrawal of foreign military assets.

Timeliness seems to be the main factor affecting the effectiveness of foreign military assets in a natural disaster response, especially in the first days and weeks of the operation. In particular, military aircraft can transport large quantities of relief supplies and other assets and military helicopters can support search-and-rescue operations. However, when promised military assets are slow to arrive and to start operating it may actually impede the response by preventing the deployment of civilian alternatives. The timely arrival of foreign military assets can be affected by their location at the time of the disaster, and bureaucratic delays relating to, for example, status-of-forces agreements.

The *appropriateness* of a military asset is determined by how well its capabilities meet the needs of the response and how suitable it is for the local cultural and political context in which it is operating. The study highlights the importance of needs assessments. Regular comprehensive, multi-stakeholder needs assessments, linked to a coordination framework, can help to ensure that the appropriate assets—military and civilian—are provided when they are needed and to facilitate the withdrawal of assets that are no longer required or appropriate.

The *efficiency* of a foreign military asset in a natural disaster response depends not only on the efficiency with which it carries out its assigned tasks but also on how well its capabilities are used within the larger operation. The former aspect is to a large extent affected by the techniques used; the latter is related to coordination of the relief operation and to how far foreign military contingents submit to coordination by other, often civilian, actors. Some countries that contribute military assets often insist on force-protection measures, which both reduce the efficiency of the operation and may intimidate or be resented by local populations.

The effectiveness of foreign military assets in disaster relief is also affected by *absorptive capacity* in the affected country—the ability of disaster management institutions to coordinate and effectively use the assets during the relief operation. While individual military assets tend to be relatively self-sufficient and thus to place a small burden on absorptive capacity, the arrival of large numbers of foreign military assets from different countries and with overlapping capabilities can cause serious problems.

Coordination between civilian humanitarian actors and military assets has been one of the greatest challenges created by the increasing deployment of foreign military assets. The differences in cultures, priorities and operating modes between military personnel and civilian actors have an impact not least on information sharing between the civilian and military spheres. Information management is crucial to the success or failure of any relief operations. This role is best and most suitably carried out by the United Nations, led by OCHA.

The *costs* of deploying military assets are generally higher than for civilian assets. This has caused concerns that foreign military assets are placing a disproportionate burden on humanitarian funds. However, the matter seems to be more complicated. Several countries have introduced measures whereby their defence ministry covers some or all of the costs of deploying military assets for overseas disaster relief, reducing their impact on humanitarian aid budgets. The implications of this for humanitarian funds at the international level are hard to gauge in the absence of greater transparency in reporting.

Recommendations

The report makes recommendations for potential contributors of military assets, countries that are prone to natural disasters, the UN, including OCHA and UN operational humanitarian agencies and other humanitarian organizations. The key recommendations are as follows.

- The decision to deploy military assets as part of international disaster relief assistance should be based primarily on the humanitarian needs and interests of the relief effort and the affected country and communities. In particular, the burden of coordination and the real and opportunity costs of accommodating and operating the asset for the affected government must be taken into account.
- Steps should be taken to improve the capacity of military commanders and forces in potential contributing countries to take part in natural disaster relief alongside humanitarian actors. This could be done through, for example, military training and ensuring that military doctrines, standard operating procedures and field manuals adequately reference humanitarian principles and elements of the Oslo Guidelines. In addition, humanitarian actors should be involved in the design of military training on humanitarian assistance and disaster response.
- National disaster management plans in countries prone to natural disasters should include provisions on how to assess the need for foreign military assets, how to request them, how to manage offers of military assets from foreign countries and how to manage the assets when they arrive.

- Generic status-of-forces agreements should be prepared to facilitate the timely deployment of foreign military assets in disaster relief.
- The UN should strengthen humanitarian coordinators' and resident coordinators' knowledge of disaster relief. They must be better able to advise the governments of countries prone to natural disasters on issues such as determining the need for specific military assets and transmitting requests for such assets to key actors in the region or, if necessary, to the wider international community.
- Regional capacities to respond to disasters should be developed and relevant institutional relationships strengthened, particularly between existing regional organizations and the UN regional offices. This would improve the effectiveness of foreign military assets in disaster relief, not least coordination with other actors.
- OCHA should expand the skills and expertise of UN Disaster Assessment and Coordination (UNDAC) teams to include more civil–military liaison, logistics and information experts. They can be deployed with other key partners for the initial disaster impact appreciation. The UN should also take steps, including developing a funding base, to expand the roster of potential UNDAC team members so that countries in disaster-prone regions are better represented.
- Military actors should be included in needs assessment activities. Military assets can play an enabling role, including providing assets to facilitate the assessment missions. Involving military representatives in these activities can also help civil–military coordination, identifying the most useful role that military assets can play and facilitating requests for military assets that will best complement civilian capabilities.
- Needs assessments should be continually updated and refined. This can help to adjust the tasks of military and civilian actors and, importantly, to identify the earliest opportunities for military assets to be withdrawn and their responsibilities given to foreign or domestic civilian alternatives.
- The humanitarian community should develop indicators or benchmarks for each functional sector of an international disaster relief operation to guide decision making regarding when military assets can be withdrawn and responsibilities handed over to civilian actors. OCHA and the designated heads of the new UN cluster system should take the lead in this process.
- OCHA should review its current practices in the channelling and coordination of foreign military assets in natural disaster relief. While

it often plays a crucial role in the coordination of relief efforts, it is rarely the preferred channel for foreign military assets. In particular, OCHA's Register of Military and Civil Defence Assets has not been effectively used in the past decade. The role of the register should be analysed and reassessed.

- OCHA should maintain and improve its programme to disseminate and raise awareness of the Oslo Guidelines.
- Lessons learned and best practices workshops on the use of foreign military assets should become a regular feature of international disaster relief operations. These should be conducted under the aegis of the UN. The evaluation exercises of the International Search and Rescue Advisory Group would serve as a useful model.
- Governments and regional multilateral organizations should be encouraged to declassify and share any documentation from their own evaluations and assessments of contribution of military assets for international disaster relief.
- OCHA should create, maintain and promote transparent and accessible knowledge- and information-sharing systems on international disaster relief, including the use of foreign military assets. These systems should include a standing central electronic and physical document archive.

Abbreviations

ADF	Australian Defence Force
ARF	ASEAN Regional Forum
ASDF	Air Self-Defence Force (Japan)
ASEAN	Association of Southeast Asian Nations
Bakornas	National Coordinating Body for Disaster Management (Badan Koordinasi Nasional Penanggulangan Bencana dan Penanganan Pengungsi; Indonesia)
CARICOM	Caribbean Community
CCGC	Coordinating Council for Disaster Management (Conselho Coordenador de Gestão de Calamidades; Mozambique)
CDERA	Caribbean Disaster Emergency Response Agency
CENOE	National Emergency Operations Centre (Centro Nacional Operativo de Emergência; Mozambique)
CHAP	Common humanitarian action plan
CIMIC	Civil–military coordination
CMCS	OCHA Civil–Military Coordination Section
CMOC	Civil and military operations centre
CSG-I	US Combined Support Group–Indonesia
CTGC	Disaster Management Technical Council (Conselho Técnico de Gestão de Calamidades; Mozambique)
CVM	Mozambique Red Cross (Cruz Vermelha de Moçambique)
DAC	OECD Disaster Assistance Committee
DfID	Department for International Development (UK)
DPCCN	Department for the Prevention and Combat of Natural Disasters (Departamento de Prevenção e Combate às Calamidades Naturais; Mozambique)
EADRCC	NATO Euro-Atlantic Disaster Response Coordination Centre
ECHO	European Commission Directorate-General for Humanitarian Aid
EM-DAT	OFDA/CRED International Disaster Database
ERC	Emergency Relief Cell (Pakistan)
EU	European Union
FRC	Federal Relief Commission (Pakistan)
GAM	Free Aceh Movement (Gerakan Aceh Merdeka)
GSDf	Ground Self-Defence Force (Japan)
HAST	Humanitarian assistance survey team
ICRC	International Committee of the Red Cross
IDRA	International disaster relief assistance
IFPPD	Indonesian Forum of Parliamentarians on Population and Development
IFRC	International Federation of Red Cross and Red Crescent Societies

INGC	National Disaster Management Institute (Instituto Nacional de Gestao de Calamidades; Mozambique)
IOM	International Organization for Migration
JICA	Japan International Cooperation Agency
JLOC	Joint Logistics Operation Centre (UN)
LOC	Line of Control
LST	Tank landing ship
MASH	Mobile army surgical hospital (US)
MCDA	Military and civil defence assets
MDM	Médecins du Monde
MIF-H	Multinational Interim Force–Haiti
MINUSTAH	UN Stabilization Mission in Haiti
MOU	Memorandum of understanding
MSDF	Maritime Self-Defence Force (Japan)
MSF	Mèdecins Sans Frontières
NAC	NATO North Atlantic Council
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organization
OAS	Organization of American States
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
OFDA	Office of US Foreign Disaster Assistance
OSOCC	On-site Operations Coordination Centre
PAHO	Pan American Health Organization
SAAF	South African Air Force
SAF	Singapore Armed Forces
SAHIMS	Southern African Human-Development Information Management Network for Coordinated Humanitarian and Development Action
SANDF	South African National Defence Force
Satkorlak	Provincial disaster management office (Satuan Koordinasi Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi; Indonesia)
SOG	Strategic Oversight Group (Pakistan)
SOP	Standard operating procedure
TNI	Armed Forces of Indonesia (Tentara Nasional Indonesia)
UNDAC	United Nations Disaster Assessment and Coordination
UNDP	United Nations Development Programme
UNHAS	UN Humanitarian Air Service
UNHCR	UN High Commissioner for Refugees
UNICEF	United Nations Children’s Fund
UNMOGIP	UN Military Observer Group in India and Pakistan
USAID	US Agency for International Development
USPACOM	US Pacific Command
USSOUTHCOM	US Southern Command
WFP	World Food Programme

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Background

The study

The international responses to the impacts of the 2004 Indian Ocean tsunami in Aceh province, Indonesia, and to the 2005 South Asian earthquake in Pakistan-administered Kashmir included the greatest level of engagement by foreign military assets in the provision of humanitarian assistance to date. Some have even suggested that these were paradigm-setting events. In their wake, increasing attention has been paid to the role of military assets—personnel, equipment and expertise—in international disaster relief assistance, which is traditionally the domain of civilian humanitarian agencies. Among the main questions being asked are how foreign military assets fit into the larger humanitarian response to natural disasters, and what roles they can—or should—play in international disaster relief assistance.

This report aims to contribute to understanding of the advantages, limitations and implications of current practice in deploying foreign military assets as part of international disaster relief assistance following natural disasters. It does this primarily by bringing together insights from four case studies of international natural disaster responses with foreign military involvement from the last 10 years; a literature review; and a survey involving a range of governments, non-government and inter-governmental humanitarian actors, and militaries with experience of disaster relief assistance. The report is not an attempt to challenge the primacy of civil agencies in humanitarian activities; rather, it seeks to examine if and how military assets can complement their efforts.

The research carried out in preparing this report was carried out with the support of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) by a team of researchers from the Stockholm International Peace Research Institute (SIPRI), between May and October 2007.

The study benefited from the creation of an international Advisory Group composed of individuals with long-standing practical experience in IDRA.¹ Members of the Advisory Group supplemented the data gathered by the research team.

Concepts and definitions

Many of the key terms and concepts in this study draw on established definitions used by the UN and other humanitarian organizations and in international policy documents, such as the Guidelines on the Use of Military and Civil Defence Assets in Disaster Relief (Oslo Guidelines).

¹ The members of the Advisory Group were nominated by the governments of the following countries: Australia, Denmark, India, Japan, Mozambique, Norway, Pakistan, the United Kingdom and the United States. In addition, one representative of the Caribbean Community (CARICOM) and one representative of OCHA were included in the Advisory Group.

Only *rapid-onset natural disasters* are addressed by this study. The UN International Strategy for Disaster Reduction (ISDR) defines *hazard* as ‘a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation’. Natural hazards are divided into three categories: hydrometeorological, geological and biological. The ISDR defines *disaster* as ‘a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resource’. *Natural disasters* are disasters that follow natural hazards. Other types of disaster are man-made and complex. Disasters can be classified according to the speed of their onset (rapid or slow). *Rapid-onset disasters* occur suddenly. There may be little or no warning of the hazard that causes them. Flash floods, windstorms, earthquakes, tsunamis, landslides, avalanches, volcanic eruptions and meteor strikes are examples of rapid-onset natural disasters.

International disaster relief assistance (IDRA) comprises material, personnel and services provided by the international community to an affected state at its request, to meet the needs of the people affected by a disaster. The primary purposes of IDRA are to save lives and alleviate suffering.

Foreign military assets are personnel, equipment and services of a military nature provided by governments with the consent of the affected state for IDRA.

This study distinguishes between the types of assistance provided by foreign military assets based on the degree of their contact with the affected population: direct, indirect or infrastructure support. *Direct assistance* is the face-to-face distribution of relief items and services. *Indirect assistance* is at least one step removed from the people affected by the disaster and involves activities such as transporting relief items or personnel. *Infrastructure support* is the provision of general services—such as road repair, airspace management and power generation—that facilitate relief but are not necessarily visible to or solely for the benefit of the affected population.

Scope and limitations of the study

This study examines the use of foreign military assets in rapid-onset natural disasters. In particular, it looks at the use of military assets in the following sectors: emergency shelter, food, water and sanitation, health, logistics and telecommunications. Although the Oslo Guidelines treat military and civil defence assets together, this study does not consider civil defence assets.

Disaster relief operations commonly have several identifiable phases, which may have variable lengths and may overlap. The focus in this study is on the phases from pre-deployment preparations, immediate disaster relief (including the ‘surge’ phase in the days and weeks after the disaster strikes) to the transition from relief to rehabilitation and development—the point after which, ideally, the use of foreign military assets diminishes and then ceases.

The study takes an inductive approach using a qualitative analysis of four case studies, supplemented by data from a literature review. The case studies are of the international

responses that followed the 2000 floods and cyclones in Mozambique; the 2004 floods and tropical windstorms in Haiti; the 2004 Indian Ocean tsunami (focusing on Aceh province, Indonesia); and the 2005 South Asian earthquake in Pakistan-administered Kashmir.

The case studies were selected by OCHA to cover disasters of different types, frequencies and scales; to provide geographical balance and scope; to reflect the different operating environments (including political and security constraints) in which the responses took place; and to illustrate different methods—multilateral and bilateral—of channelling the military assets and different types of response—global or regional.

The study attempts to identify some of the major trends and developments in the use of foreign military assets in IDRA during the past decade, and examines the decision-making processes of both the providers of military assets and the disaster-affected countries that have requested, or accepted offers of, the assets. The study also discusses the effectiveness of foreign military assets in IDRA, based on the experiences of the past 10 years, particularly in the case studies. It focuses on both objectives and outcomes.

The comprehensiveness of the study is constrained by its time frame and by the limited availability of open-source, unclassified data. Data on the type of assets contributed, the timing of the deployment, and the cost and financing of the military assets deployed for disaster relief can only be obtained from national governments or appropriate multilateral organizations (e.g. the United Nations). However, there is little institutional memory, at either the multilateral or national levels, about such deployments and records are incomplete. Locating personnel with access to the necessary information was one of the biggest obstacles encountered in this study. Data on costs and the financing of deploying military assets should be viewed as approximate, owing to the differences in national reporting mechanisms. A preponderance of survey data from countries that have contributed military assets to IDRA may bias the findings, but significant efforts were made to speak to all stakeholders.

Data collection

The study combines desk and field-based research. A review of the relevant literature was conducted on key themes such as the changing role of the military, humanitarian principles and guidelines, measuring the impact of the military's efforts, cost-effectiveness and efficiency. Among the sources analysed were independent reports from humanitarian organizations, situation and after-action reports from the UN and other actors involved in responses to the case study disasters, national doctrines and policies, official statistics, and documents from the European Union (EU), the North Atlantic Treaty Organization (NATO) and the UN.

Data from the EM-DAT international disaster database were used to create a data set of 28 rapid-onset natural disasters that occurred between 1997 and 2006 with at least 500 fatalities and 75 000 people affected.² These parameters were chosen because they

² EM-DAT, the Emergency Disasters Data Base, is a joint initiative of the Centre for Research on the Epidemiology of Disasters at the Université Catholique de Louvain, Brussels, Belgium, and the Office of US Foreign Disaster Assistance. It can be accessed at <<http://www.em-dat.net/>>.

represent a level of humanitarian need that might necessitate the deployment of significant foreign military assets.³ This data set served as the basis for gathering survey data from stakeholders regarding the deployment of foreign military assets in IDRA.

The main source of information for the overview of the use of foreign military assets was the contributing countries themselves. A questionnaire was distributed to the governments of the following 25 countries:⁴ Australia, Austria, Brazil, Belgium, Canada, Denmark, Finland, France, Germany, India, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the UK and the USA.⁵ Where the country was not represented in the Advisory Group, the first point of contact was generally the foreign ministry, who then advised on which agencies could provide the information. Not all countries responded.⁶ This questionnaire was also sent to three regional organizations: the EU (the European Commission Environment Directorate-General and the Military Staff of the European Union), NATO (the Euro-Atlantic Disaster Response Coordination Centre) and the Caribbean Community (the Caribbean Disaster Emergency Response Agency, CDERA).

Section I of the questionnaire posed general questions regarding the policy and procedures for deploying military assets as part of the international response to rapid-onset natural disasters. Nineteen countries and the three regional organizations responded to section I in written form or through interviews.

Section II of the questionnaire posed specific questions regarding the number of deployments and the type of military assets that were contributed in response to rapid-onset natural disasters between 1997 and 2006. Four countries—Canada, Japan, the Netherlands and the UK—provided this information for the whole period under review. A further 10 countries—Australia, Belgium, France, Germany, India, Ireland, Norway, Singapore, South Africa and the USA—provided partial information, covering a shorter period or not all natural disasters.

In addition to the printed questionnaire, numerous telephone and personal interviews were conducted with representatives of national governments and regional organizations; UN personnel from OCHA, the UN Children's Fund (UNICEF), the Office of the UN High Commissioner for Refugees (UNHCR) and the World Food Programme (WFP); selected non-governmental humanitarian organizations; and commercial actors engaged in providing logistical services for IDRA.⁷

A similar process was used in data gathering for the case. A second questionnaire was sent to the countries and organizations that reported contributing military assets to the case study disasters in their responses to the first questionnaire. The second questionnaire asked for information about the military assets each contributed to each of the case study disasters. A different questionnaire was sent to the governments of the affected countries

³ A list of the 28 disasters is included in annex F. A number of disasters were excluded from the final list as they occurred in either China or India, which have stated policies of not accepting foreign military assets.

⁴ All questionnaires used in the study are reproduced in annex F.

⁵ The list of countries invited to participate in the study is not exhaustive; Israel, South Korea and others have in the past been significant contributors of IDRA.

⁶ Six countries did not respond to the questionnaire: Austria, Brazil, Italy, Portugal, Russia and Turkey.

⁷ The full list of survey respondents is given in annex E.

in the case studies or to a member of the Advisory Group representing that country. However, the main source of information for the case studies was a series of semi-structured field interviews conducted, in person or by telephone, between June and September 2007 by the authors of the case studies and SIPRI researchers. Between one and two weeks was allocated for field-based interviews related to each case study. Representatives from the affected governments, military and civilian representatives from some of the key contributors of foreign military assets, UN field personnel from relevant agencies, members of international and local non-governmental organizations (NGOs), and local media were interviewed. Further suitable candidates for interview were identified in the course of the interviews. When possible, non-structured interviews were also held with a small sample of the affected population.

The report

This report focuses on the period 1997–2006 and provides a brief historical overview of how foreign military assets were deployed in rapid-onset natural disasters that affected a large proportion of the population of the areas where they occurred. Chapter 2 presents some background information on the incidence of natural disasters and the international responses to them. Chapter 3 offers an overview of the main contributors of foreign military assets, the types of assets most often deployed and where they have been deployed. Chapter 4 examines the factors that influence contributing and affected countries' decisions regarding the deployment of foreign military assets, including the countries' current policies and institutional arrangements. It also introduces some of the regional initiatives that are under way. Chapter 5 discusses how foreign military assets have been used in IDRA and how effective and desirable their participation has been. Chapter 6 identifies the most significant findings of the study and offers recommendations to the actors involved in disaster response—governments, militaries, OCHA and other UN agencies, international aid NGOs, and others—for addressing issues surrounding the deployment of foreign military assets in disaster relief operations.

The four case studies of natural disaster responses that involved foreign military assets are annexed to the main report. These cases illustrate why, when and how foreign military assets have been used in disaster relief efforts. Each case study presents information about the international response, including the foreign military assets deployed, the timing of the deployments and how the deployments took place, along with observations from people involved in the response about how effectively the foreign military assets were used.

2

A changing landscape for disaster relief assistance

This chapter examines some aspects of the background against which IDRA currently takes place. The incidence of natural disasters has increased markedly over the past 20 years. More funds are being made available internationally for humanitarian aid and for disaster relief. Nevertheless, a proliferation of humanitarian actors and the increasing number of disasters mean that there is considerable competition for resources—as well as for visibility. The deployment of foreign military actors as part of IDRA is also apparently becoming more frequent for a number of reasons. This is not always welcomed by civilian humanitarian actors. The chapter concludes with an introduction to the Oslo Guidelines.

The incidence of natural disasters

EM-DAT has recorded a rise in the number of natural disasters since 1987. In 1988, the year that EM-DAT was created, around 240 natural disasters were reported—the record at that time. Since 2000 the annual number has fluctuated between around 380 to around 520 natural disasters.⁸ The number of large-scale disasters (10 000–99 999 people killed or affected) reported has also increased in the past two decades. The large increase is partly explained by better reporting by governments, humanitarian agencies and the media.

Floods, windstorms and earthquakes are the most common types of rapid-onset natural hazards.⁹ Between 2000 and 2006 their occurrence was significantly greater than for the period 1987–98.¹⁰ Most of the increase in the number of disasters has been accounted for by hydrometeorological hazards, principally floods and windstorms. The most common type of natural hazard in recent years has been floods. Floods typically affect large numbers of people but cause a relatively low number of deaths compared, for example, to earthquakes. Floods can require extended responses if renewed rains occur, meaning that humanitarian actors are required to maintain their field presence for longer and possibly respond to several ‘disasters within a disaster’.

Geological hazards, such as earthquakes, volcanic eruptions and tsunamis, show a high degree of variability and are not themselves influenced by climate. Nevertheless, the

⁸ This figure also includes slow-onset hydrometeorological disasters. Hoyois, P. et al., ‘Annual disaster statistical review: numbers and trends 2006’, Catholic University of Louvain, School of Public Health, Centre for Research on the Epidemiology of Disasters (CRED), May 2007.

⁹ Droughts, which are classed as slow-onset disasters, are the third most frequently occurring natural disaster.

¹⁰ Data for 1999 were excluded to correct data bias. The period 1998–2000 reflects an escalation in the number of disasters reported, with 1999 showing the most dramatic inflection. Hoyois et al. (note 8).

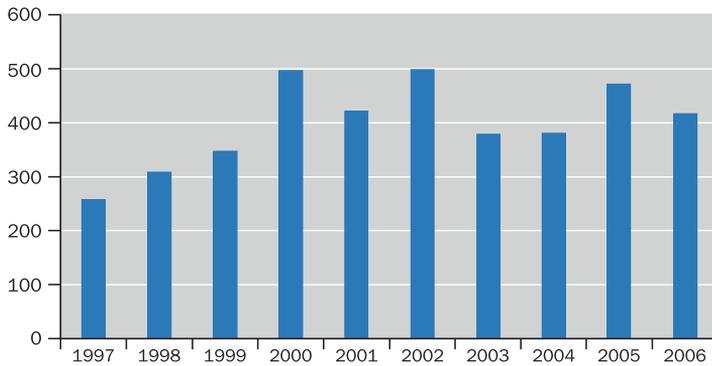


Figure 1. Number of rapid-onset natural disasters, 1997–2006

Source: Université Catholique de Louvain, Centre for Research on the Epidemiology of Disasters (CRED) and Office of US Foreign Disaster Assistance (OFDA), EM-DAT international disaster database.

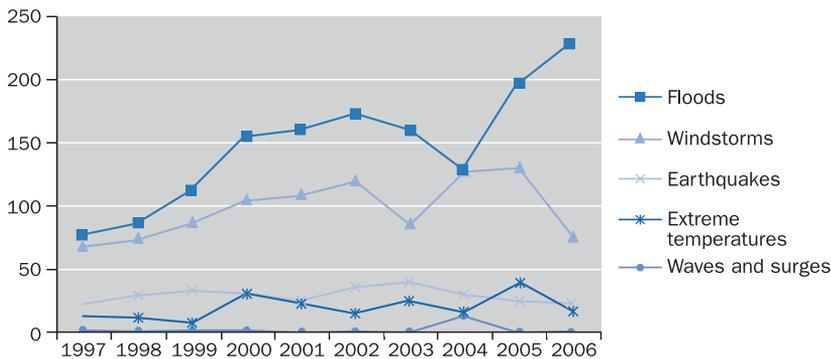


Figure 2. The changing incidence of different types of rapid-onset natural disaster, 1997–2006

Source: Université Catholique de Louvain, Centre for Research on the Epidemiology of Disasters (CRED) and Office of US Foreign Disaster Assistance (OFDA), EM-DAT international disaster database.

number of geological hazards that caused disasters clearly increased in the period 1987–2006.¹¹ The average number of occurrences in the period 2000–2006 was nearly 1.5 times greater than during 1987–98.

The UN Under-Secretary-General for Humanitarian Affairs, John Holmes, recently characterized the high incidence of hydrometeorological disasters in 2007 as a ‘mega disaster’ linked to climate change.¹² Based on the trends presented by EM-DAT and according to the data provided by the Intergovernmental Panel on Climate Change, the incidence and intensity of climate-related hazards will probably remain at the current level or increase in the future. The incidence of geological hazards is harder to predict. However, factors such as rapid urbanization, environmental degradation and weak governance are likely to make such hazards have an even greater human cost.

¹¹ Data for 1999 were excluded to correct data bias. See note 10.

¹² Borger, J., ‘Climate change disaster is upon us, warns UN’, *The Guardian*, 5 Oct. 2007.

Table 1. Overseas development assistance disbursements and emergency assistance from all donors, 2000–2005

Figures are in US\$ million at constant (2005) prices

	2000	2001	2002	2003	2004	2005
Overseas development assistance	56 431.69	56 905.80	65 392.25	74 695.71	81 543.80	107 121.64
Emergency assistance	4 450.58	4 205.27	4 768.28	7 340.85	9 471.79	10 111.28

Source: Organisation for Economic Co-operation and Development (OECD), Creditor Reporting System online: DAC 2a ODA disbursements to developing countries, <<http://www.oecd.org/dac/stats/idsonline>>.

Funding

Funding for emergency assistance has increased since 2000. Overall, overseas development assistance net disbursements from all donors to developing countries increased by nearly 150 per cent between 2000 and 2004. In the same period, emergency aid more than doubled (see table 1). While the absolute amount of aid has increased, arguably the funding that is available for assistance to individual relief efforts may have decreased given the current rise in the number of disasters occurring. This has led to a renewed debate about how best to use the limited funds that exist.

Because deploying military assets is generally more expensive than deploying equivalent civil assets, it is often assumed that using foreign military assets consumes a disproportionate share of the funds available. However, the situation is certainly more complex. A discussion of the true burden of foreign military assets on the humanitarian aid budget is presented in chapter 5.

Foreign military assets and ‘humanitarian space’

More actors are engaged in providing humanitarian assistance today than in the 1990s, and there has been a particularly significant increase in the number of NGOs that have joined the established humanitarian agencies.¹³ Thus, even without the involvement of foreign military assets, there is greater competition among humanitarian actors. This has had the positive effect of focusing attention on quality control and on the need for coordination in order to avoid duplication of effort and to improve the targeting of aid to the people affected by disasters.¹⁴

¹³ During the Indian Ocean tsunami and Pakistan responses, hundreds of NGOs registered with the UN.

¹⁴ Paul, J. A., ‘NGOs and global policy-making’, Global Policy Forum website, June 2000, <<http://www.globalpolicy.org/ngos/analysis/anal00.htm>>.

At the same time, there is a trend for armed forces around the world to go beyond traditional war-fighting and take on humanitarian and development-related tasks. Some of the factors behind this are post-cold war realignment, the professionalization of armed forces (the phasing out of conscription and a greater investment in individual soldiers' training and salary) and a search for new roles as 'forces for good' or 'humanitarian warriors'.¹⁵ It also reflects moves towards more comprehensive approaches to security.

One of the key variables that influence contributing countries' policies on sending military assets for IDRA is their national strategic culture, which relates to the perceived and actual role of the military in the society and the world. Beliefs about the proper role of the armed forces greatly influence the missions that they are asked to perform. In some countries, it is considered normal for the army to play a central part in response to natural or man-made disasters—the British Army was actively involved in responding to the UK's bovine spongiform encephalopathy (BSE) epidemic in the early 1990s. In others, disaster relief is considered an inappropriate role for armed forces.

The seemingly increasing involvement of the military in IDRA is viewed by many in the humanitarian community as potentially jeopardizing 'humanitarian space'—freedom and access for humanitarian organizations to assess and meet humanitarian needs according to the key humanitarian principles of humanity, neutrality and impartiality. Humanitarian space relies on the consent and cooperation of the national government—or of whoever has de facto control of the affected region. The importance, and difficulty, of maintaining humanitarian space is, thus, particularly acute in countries that are experiencing conflict or political instability.

Civil humanitarian actors are often concerned about being too closely associated with a military force, even in peacetime.¹⁶ However, there is a growing acceptance in the humanitarian community that military assets can play an appropriate role in supporting natural disaster responses.

Several of the contributing countries responding to the questionnaires stated that the perceived increase in the use of military assets in natural disasters, along with a policy trend towards such use, is attributable to a general increase in the number of large-scale natural disasters requiring an international response. Hence, discussions on the use of foreign military assets have intensified since 2004 and this has given rise to a more careful consideration of key issues such as:

- interaction between civilian and military actors in disaster settings;
- how to maintain humanitarian space based on neutrality, impartiality and humanity; and
- the conditions under which military assets should be deployed and when they are inappropriate.

¹⁵ Wheeler, V. and Harmer, A., 'Resetting the rules of engagement: trends and issues in military–humanitarian relations', Humanitarian Policy Group Briefing Paper no. 21, Mar. 2006.

¹⁶ Schoff, J., 'In times of crisis: global and local civil/military disaster relief coordination in the United States and Japan', Institute for Foreign Policy Analysis, Interim report, Apr. 2007.

¹⁷ Kartoach, A., 'Assessing the possible contribution of the military and the challenges faced in their deployment', Remarks at Wilton Park conference, Steyning, West Sussex, Jan. 2007.

To some extent, the tension between civilian and military actors is viewed as a largely European construction. It has been pointed out that, in most of Africa, Asia and Latin America and in the United States, the military is the primary domestic instrument of disaster response that is available to the government.¹⁷

The Oslo Guidelines

The Oslo Guidelines were formulated in 1994. They were intended to address the need for principles and standards and to provide improved coordination in the use of military and civil defence assets in response to natural, technological and environmental emergencies in peacetime.¹⁸ The Oslo Guidelines stipulate that all humanitarian assistance must be provided in accordance with the core principles of humanity, neutrality and impartiality (paragraph 20) and with full respect for the sovereignty of states (paragraph 21). The humanitarian imperative is widely recognized by all humanitarian actors as the basic principle and condition for the delivery of humanitarian assistance. Ensuring that assistance is based on actual needs and delivered by actors that have no political interest or stake in the situation on the ground not only helps to ensure access to people in need of assistance, but also contributes to the safety and long-term perception of humanitarian workers as neutral agents in the field.¹⁹

The Oslo Guidelines are designed to be applied to operations that take place in peacetime. However, many of the major natural disasters that provoked an international humanitarian response in recent years occurred in areas with pre-existing conflicts, such as Aceh province in Indonesia, Haiti, Kashmir and Sri Lanka. This study raised some questions about how relevant the guidelines are when a natural disaster takes place in the context of a complex emergency situation.²⁰

The Oslo Guidelines were updated in 2006 after a consultation process led by Norway, Sweden, Switzerland and the UN.²¹ The revision was influenced in part by the 2003 Guidelines on the Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies (MCDA Guidelines). The unprecedented deployment of military assets in response to natural disasters in 2004–2005 made it apparent that new impetus was needed to create awareness of the guidelines, particularly among countries that contribute military and civil defence assets.

Key provisions of the Oslo Guidelines are outlined in box 1.

¹⁸ Argentina, Austria, Belgium, Germany, Indonesia, Italy, Japan, Kenya, the Netherlands, Norway, Russia, Switzerland, the UK and the USA were among 45†states and 25‡organizations that participated in the conference.

¹⁹ See e.g. UNICEF, ‘UNICEF’s humanitarian principles’, July 2003; and Plattner, D., ‘ICRC neutrality and neutrality in humanitarian assistance’, *International Review of the Red Cross*, no. 311 (April 1996).

²⁰ A complex emergency is ‘a humanitarian crisis in a country, region or society where there is total or considerable breakdown of authority resulting from internal or external conflict and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing United Nations country program’.

²¹ Another 22 countries participated in the consultation process and endorsed the revised Oslo Guidelines.

Box 1. Key principles of the Oslo Guidelines

5. Last resort: foreign military and civil defence assets should be requested only where there is no comparable civilian alternative and only the use of military or civil defence assets can meet a critical humanitarian need. The military or civil defence asset must therefore be unique in capability and availability.²²

24. Military and civil defence assets should be seen as a tool complementing existing relief mechanisms in order to provide specific support to specific requirements, in response to the acknowledged 'humanitarian gap' between the disaster needs that the

25. MCDA can be mobilized and deployed bilaterally or under regional or alliance agreements as 'other deployed forces' or as part of a United Nations operation as 'UN MCDA'. All disaster relief . . . should be provided at the request or with the consent of the Affected State and, in principle, on the basis of an appeal for international assistance.

26. All relief actions remain the overall responsibility of the Affected State and are complemented by foreign MCDA operating bilaterally or within an international relief effort.

27. Foreign MCDA assistance should be provided at no cost to the Affected State, unless otherwise agreed between concerned States or regulated by international agreements.

28. An Assisting State deciding to employ its MCDA should bear in mind the cost/benefit ratio of such operations as compared to other alternatives, if available. In principle, the costs involved in using MCDA on disaster relief missions abroad should be covered by funds other than those available for international development activities.

34. . . . as a general principle, UN humanitarian agencies must avoid becoming dependent on military resources and Member States are encouraged to invest in increased civilian capacity instead of the ad hoc use of military forces to support humanitarian actors.

Source: Oslo Guidelines, Nov. 2006 update.

²² For the most recent revision of the text on 'last resort', which was made in Nov. 2007, see chapter 6.

3

Overview of the use of foreign military assets: 1997–2006

Different actors become involved in different disaster responses. The role they play usually depends on a combination of factors: the nature of the disaster; the country's general policy on the use of military assets, the location of the disaster site, and national interests and diplomatic and historical relations with the affected country. This chapter presents an overview of who contributed foreign military assets, the types of assets most commonly deployed, and what sorts of disasters attracted IDRA that included military assets during the 10-year period 1997–2006.

Contributing countries

North America

Of the countries that contributed data for this study,²³ the United States is the most proactive in making its military assets available for disaster response. This can be partly explained by the financial and military resources at its disposal and by the fact that the USA maintains a number of military bases worldwide, enabling it to reach the affected countries very quickly. The USA also has a stated policy of maintaining an active international role for its military. The USA reported that it deployed military assets 15 times in response to overseas natural disasters between 2003 and 2006. Most of these deployments were in the Caribbean and Central America.

Canada mainly contributed airlift capacity to Canadian aid agencies operating in the Caribbean. Canada's location and its financial resources enable it to be a strong regional player, particularly during the Atlantic hurricane season.

Central and South America and the Caribbean

Most of the countries that sent IDRA in response to three disasters that occurred in this region between 1997 and 2006—the 1998 hurricane Mitch in the Caribbean, the 1999 severe flooding in Venezuela and the 2004 tropical windstorms in Haiti—came from the Americas. In the case of the response in Venezuela in 1999—which killed 30 000 people and affected almost half a million—nearly all the governments contributing personnel and equipment were in the Americas. A large proportion of the response came from within the region, primarily Argentina, Chile, Mexico, Peru and Uruguay.²⁴

²³ See chapter 1 for the full list of countries participating in the study.

²⁴ Inter-American Defence Board, 'Natural disaster in Venezuela update 12 Jan 2000', ReliefWeb, <<http://www.reliefweb.int/rw/rwb.nsf/db900sid/OCHA-64C67Y?OpenDocument&rc=2&emid=FL-1999-0547-VEN>>.

Europe

European countries tend to deploy military assets as part of IDRA—if they do so at all—only to countries outside Europe. The Netherlands appears to be the most frequent contributor of military assets for IDRA following natural disasters, reporting 18 deployments since 1997 to countries as distant as Suriname and Pakistan.²⁵ At the other end of the spectrum are Finland and Norway, which have strong policies limiting the use of their military assets. Finland does not contribute military assets to disaster responses. Norway, a key driving force behind the Oslo Guidelines, maintains what it calls a ‘principled and pragmatic’ approach: it retains the option of deploying military assets if there is no other way to meet a crucial humanitarian need. This policy reflects a strict interpretation of the ‘last resort’ principle in the Oslo Guidelines. Finland and Norway instead contribute civilian resources—civil protection assets and UN Disaster Assessment and Coordination (UNDAC) personnel—or make cash contributions to humanitarian agencies.

A few other countries in Europe provide military assets quite regularly when a major humanitarian disaster strikes, although they also claim to follow the Oslo Guidelines. The UK, while being a relatively powerful military actor in Europe, has made only seven deployments of military assets overseas for natural disaster response in the past 10 years. British policy is reflected in a recently drafted memorandum of understanding (MOU) between its Ministry of Defence and its Department for International Development, which stipulates that military assets can only be deployed in response to a natural disaster at DfID’s request.

France is one of several EU countries that strongly advocate the use of civil protection mechanisms rather than military assets in disaster response. Nonetheless, France has deployed military assets in response to major natural disasters, including the 2003 earthquake in Bam, Iran; the 2004 Indian Ocean tsunami; and the 2005 earthquake in Pakistan. Belgium and Germany also reported sending military assets in response to only a few, large-scale natural disasters.

Asia–Pacific

Several Asia–Pacific countries reported that they deploy military assets primarily to natural disasters that take place in their region, and only rarely to disasters outside it. This is mainly true in the Asian region. India, which generally deploys its military assets to disaster responses in South and East Asia, is rising in importance as a regional player. The military has long played a key role in domestic disaster response, but India has also significantly increased its assistance to neighbouring countries in recent years. The three branches of India’s armed forces have been brought together under a unified coordination structure, the Integrated Defence Staff. The Indian Government has noted an increased demand for its assistance from neighbouring countries affected by disasters and has responded by boosting the country’s preparedness and capacity to act quickly.

²⁵ The apparently high number of deployments by the Netherlands, relative to other European countries, may be partly explained by the fact that the Netherlands was able to provide data on all of its deployments of military assets to natural disasters, whereas several other countries provided data on major disasters only.

Japan, in addition to being a strong advocate of the Oslo Guidelines, is also an increasingly active contributor of military assets internationally. This outward reorientation of Japan's defence forces followed the 1992 amendment of the Law concerning Dispatch of Japan Disaster Relief Teams, which allowed for the deployment of Japan's Self-Defense Force abroad 'when it [is] considered particularly necessary'. Japan sent military assets in response to the devastation wrought by hurricane Mitch in Central America in 1998 and to Turkey following the severe consequences of the August 1999 earthquake. However, all of Japan's subsequent contributions have taken place in South and East Asia, suggesting that it, like India, is focusing on a regional role.

Singapore is also another increasingly active contributor of military assets and played a crucial role in the 2004 tsunami response in Indonesia. Since 2003 Singapore's support has strongly emphasized the contribution of personnel (expertise and manpower) in addition to physical assets, primarily in the areas of medical care and logistics.

Australia is perhaps the most proactive contributor of military assets in the Asia-Pacific region. It is a frequent contributor of military assets in response to disasters that strike the Pacific (Melanesia) region, even if the scale of the disaster is relatively small. However, Australia has been known to contribute to disasters that occurred further afield when the disaster has been large enough to cause massive humanitarian need. An example of such a deployment was the 2003 Bam earthquake.

Africa

South Africa has in recent years deployed its military assets to disaster responses in Africa, particularly in its immediate neighbourhood. It is a frequent contributor of military assets for natural disaster responses in Botswana, Lesotho, Mozambique and Namibia. Although the South African National Defence Force 'does not structure, train or budget for disaster management', it has adapted some of its procurement practices to include equipment that is more appropriate for use in disaster response. There is also an inter-department initiative to establish a standard operating procedure (SOP) for the use of military assets in IDRA.

Frequency of deployment

Four countries—Canada, Japan, the Netherlands and the UK—submitted full information on their deployments of military assets to rapid-onset natural disasters since 1997. The number of disasters to which each country responded with military assets per year is shown in figure 3.

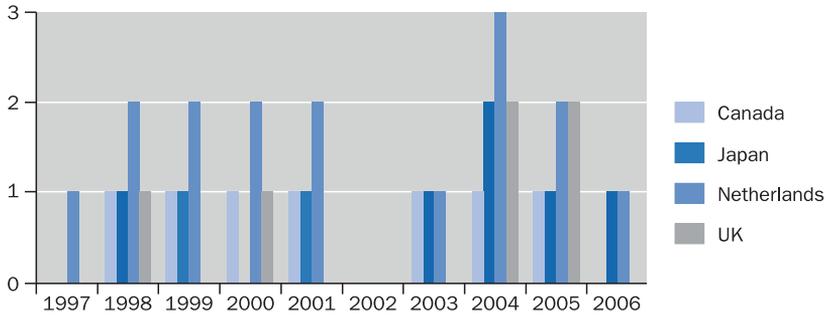


Figure 3. Annual number of deployments reported by Canada, Japan, the Netherlands and the UK, 1997–2006

Assets provided

Countries were asked to provide data about the types of military assets they contribute to disasters based on the modules used in the Register of Military, Civil Defence and Civil Protection Assets (MCDA Register) maintained by OCHA.²⁶ Those areas were communications, engineering, medical support, power supply and distribution, search and rescue, transport, logistics and coordination, (air; transport, logistics and coordination) road and rail; transport, logistics and coordination—sea and inland water; and water and sanitation.

The category of asset that contributing countries reported most frequently deploying, and in the greatest volume, was air transport. The second and third most frequently deployed categories of assets were medical support and expert personnel. These categories are discussed below.

Air transport, logistics and coordination

By far the most common type of military asset provided was aircraft, particularly cargo aeroplanes for airlift operations. This was particularly evident in the four case studies. Every respondent country reported providing military airlift capacity. The predominance of aircraft in the military assets provided is understandable; in most cases, getting personnel and humanitarian relief supplies to a disaster site requires air transport, particularly during the initial (‘surge’) phase of the response, when the need is most urgent and in places where access to the affected area is limited.

Moving relief goods and personnel between countries or within a country—but not directly to the affected population—is the least politically sensitive and controversial use of foreign military assets, including aircraft. Such indirect assistance is always at least one step away from the affected population, and it is thus less likely to blur the line

²⁶ The MCDA Register, part of OCHA’s Central Register, can be accessed at <<http://www.ocha.unog.ch/cr/>>.

between the military and the civilian spheres or to confuse the roles played by civilian aid workers and the military. The use of military aircraft to transport goods and personnel to or around the affected area, or to carry out different types of mission—such as search and rescue, needs assessment, mapping and evacuation—is usually more politically sensitive (chapter 5 includes a discussion of the ‘appropriateness’ of deploying foreign military assets in different contexts).

Medical support

Many countries reported that they frequently send military medical support assets to disaster relief operations. This assistance may take the form of medical supplies or of field hospitals, mobile clinics or hospital ships staffed by military doctors, nurses and other medical professionals. Canada, Germany, India, Japan, the Netherlands, Singapore, the UK and the USA all contributed medical assistance in the aftermath of the Indian Ocean tsunami. The number of countries that provided medical support during the tsunami response was quite high compared to other disasters. However, many countries also contributed military field hospitals and mobile clinics in response to hurricane Mitch in 1998 and the earthquakes in Iran and Algeria in 2003.

The provision of medical military assets is more controversial than air transport because it entails a high degree of interaction between affected populations and foreign military personnel. Also, deploying military field hospitals is considerably more expensive than deploying civilian field hospitals, as was recognized by several contributing countries. Even so, several countries continue to dispatch military field hospitals, mobile clinics and hospital ships to disaster sites. Some of the reasons for this were identified by contributing countries and members of the NGO community as:

- an overwhelming humanitarian need that cannot be met by local health infrastructure or by the humanitarian agencies responding to the disaster (access, security etc);
- assets already deployed in the country or region;
- the political attraction (visibility, media exposure) of having one’s armed forces saving lives in a foreign disaster situation.

Expert personnel

Other important military assets that are contributed to natural disaster response are human resources, particularly personnel skilled in needs assessment, civil–military liaison and various coordination functions.

Countries that are considering the deployment of various types of military assets to large-scale natural disasters often first dispatch a disaster assessment team of staff from their military, national aid agency and other relevant government actors, such as civil defence and health authorities. Belgium, Germany, India, Japan, the UK and the USA all stated that they conduct their own needs assessments, while Canada and Ireland responded that they only did so after the tsunami and the earthquake in Pakistan.

Because humanitarian and military actors operate in the same disaster settings, national aid agencies, the UN and other humanitarian organizations need personnel with knowledge of both military and civilian structures and operational procedures. Countries

frequently provide military personnel on a temporary basis to UN bodies such as UNDAC teams during disaster responses. For example, the logistics department of the WFP often hires individuals with a military background because they possess strong logistics and transport coordination capacity and have a good understanding of military culture.

Expert personnel who carry out needs assessments, logistics management or civil–military liaison tasks are generally more likely to come into contact with affected populations than are air transport personnel, although not as directly as medical staff. The potential for controversy caused by the use of military experts in a field situation obviously depends on the task they are given. Needs assessments, logistics coordination and civil–military liaison tasks carried out under the auspices of or in cooperation with the UN would probably be consistent with humanitarian norms.

Which disasters

Scale, nature and location

The responses to the questionnaires illustrated that the international community is willing to respond to large-scale, rapid-onset natural disasters that cause massive humanitarian need. The immediate transmission of media images and news coverage of the disaster site both inform governments and the humanitarian community of the situation and help to ensure that a response is mounted. However, geographic proximity is often an important determinant of which countries provide military assets in response to a disaster. Canada, Japan, India, South Africa and the USA reported frequently coming to the assistance of their neighbours. It is interesting to note that some countries that do not generally dispatch military assets when disaster strikes in remote locations are willing to do so when it happens close to them.

The 2004 Indian Ocean tsunami was one of the most devastating natural disasters of the past decade and had by far the largest impact geographically. All the countries that responded to the survey during this study contributed IDRA, including military assets, to disaster relief efforts in various locations affected by the tsunami. Other large-scale disasters that attracted military assets from a large number of foreign countries during 1997–2006 included: hurricane Mitch (in Honduras), in 1998; floods in Venezuela in 1999; the 1999 earthquake in Algeria; the Bam earthquake in Iran in 2003; and the Indonesian earthquake of 2006.

In 1998 military assets were extensively deployed in Central America as part of the response to hurricane Mitch. The worst affected areas were in Honduras, where 14 600 people died and more than two million people were affected. The international response included 30 countries, of which 12 contributed military assets.²⁷ The response to hurricane Mitch is widely seen among contributing countries as one of the first major international military involvements in a humanitarian response. The main military assets contributed were air transport and several hundred personnel.

²⁷ These were Argentina, Belgium, Canada, France, Japan, Mexico, the Netherlands, Spain, Uruguay, the UK and the USA. The figures are based on reports to OCHA. OCHA, 'Central America—hurricane/tropical storm Mitch OCHA contributions report', 7 Dec. 1998 <<http://www.reliefweb.int/rw/rwb.nsf/db900sid/ACOS-64CEWA>>.

18 The Effectiveness of Foreign Military Assets in Natural Disaster Response

During the response to the earthquake in Bam, Iran, in 2003, which affected 267 628 people and killing over a quarter of the city's population of roughly 80 000; approximately 60 countries took part in the international response, twice as many as had done so after hurricane Mitch. However, only 13 countries reported providing military assets.²⁸ The main military assets contributed were air assets for transport, search and rescue assets, and field hospitals.

²⁸ These were Australia, Austria, Belgium, Canada, France, Greece, India, Japan, Jordan, the Netherlands, Spain and the USA.

4

The decision to use military assets

This chapter presents an overview of the policies, institutional arrangements and practices of governments that provide military assets for international response to rapid-onset natural disasters. It illustrates how the Oslo Guidelines are reflected in the criteria for offering or requesting military assets, based on data provided during this survey. It also outlines the factors that influence affected countries' decisions to request, or accept offers of, foreign military assets. The final section describes how governments channel the assets they contribute.

Contributing countries

Political considerations

The decision to provide military assets to a disaster relief operation in another country is inevitably political, since it deals with essential attributes of state power. Political considerations may be domestic—for example, pressure from public opinion to respond to human suffering or the need to help citizens of the contributing country who are caught up in the disaster—or they may be international, linked to the contributing country's desired profile on the world stage. Countries that contribute military (and other) assets often do so because they have a particular stake—historical, political or strategic—in the affected country or territory. Reciprocity can also be a factor.

Given that humanitarian assistance is supposed to be provided on the basis of humanitarian need in an impartial and neutral manner, politically motivated deployments of foreign military assets present a challenge. Contributing countries should not allow political considerations to unduly influence decisions on whether to provide military assets to the detriment of the relief operation. Political motivations can lead to assets being offered—and dispatched—that do not correspond to the needs of the response. This can put an avoidable burden on coordination in the affected country. When hurricane Katrina struck the USA in 2005, many countries offered to send military assets as an act of friendship or solidarity, although the USA had not requested that form of assistance. Some countries had their offers rejected.

Governments are the only actors that can contribute military assets and so only they can address the problems, but this should ideally be in dialogue with other (non-governmental) humanitarian actors. One way to focus on the needs assessment process, ensuring that contributing countries have access to coordinated, timely and updated needs assessments to inform their decision making. However, it is worth asking how far political considerations influence decision making about other forms of humanitarian assistance, and thus whether military assets should be singled out.

In the course of this study, contributing countries tended not to mention political motivations. Some of the factors that they cited as influencing their decisions are discussed below.

Criteria for offering military assets

Governments interpret the Oslo Guidelines, particularly the ‘last resort’ principle, differently. They also apply the Oslo Guidelines in different ways and to different degrees during their decision making regarding the deployment of military assets in response to natural disasters. For example, Canada and the UK have created their own national guidelines based on the Oslo Guidelines. Germany has no SOP or interdepartmental agreements applicable to the deployment of military assets in IDRA; and instead decisions are made on an ad hoc basis using the Oslo Guidelines.²⁹

In contrast, Belgium, the Netherlands and the USA responded that their decision making is not directly influenced by the Oslo Guidelines, unless the request for assets comes from OCHA. These countries claimed to base their decisions on factors such as the ability to save lives, the feasibility of responding to specific requests and the availability of the requested assets and on decisions by governmental departments regarding deployment.

Below are some examples of contributing countries’ statements regarding factors that influence their decision making.

Canada. ‘The [Canadian] Guidelines stress that the Canadian Forces do not normally engage in humanitarian aid activities, although they can become involved in facilitating or providing such aid in an emergency context where no other actor can meet the needs identified.’³⁰

Belgium. ‘Civilian and military assets need to complement each other when a natural disaster strikes. The main principle is acting on time, in the right place and with assets uniquely suited to solve the task at hand.’³¹

France. ‘Military means are used according to the principle of last resort; that is, when there is an observed or foreseeable need, taking into account the nature or scale of the disaster and the equivalent civil resources and in accordance with the relevant recognized international guidelines.’³²

UK. ‘Last resort does not necessarily mean last. We can and will use military assets first, if it is considered the best way to save lives [and/or] alleviate suffering.’³³

Integral to the concept of ‘last resort’ contained in the Oslo Guidelines is whether the military asset under consideration offers a unique capability that will add value to the relief operation. Both governments and humanitarian actors acknowledge that there are some areas where the military tends to possess unique capabilities, primarily in transport

²⁹ ‘Decisions are based on a case-by-case evaluation, and military assets are only deployed according to the provisions of the Oslo Guidelines.’ German Federal Foreign Office, questionnaire response.

³⁰ Canadian Department for Foreign Affairs and International Trade, questionnaire response.

³¹ Danish Ministry of Foreign Affairs, questionnaire response.

³² French Ministry of Foreign Affairs, questionnaire response.

³³ UK Advisory Group representative’s remarks.

and logistics. In such areas, the last resort criterion is therefore more easily fulfilled. Canada and Singapore stressed the military's niche capabilities in transport and medical care. Australia added the relative self-sufficiency of military assets as a reason for contributing military assets.

The ADF [Australian Defence Force] capacity for quick reaction, the special skills and training of its personnel and its capacity to be self supporting in a disaster environment, mean that there may be considerable reliance on the ADF during an Australian Government response to an overseas relief operation.³⁴

Another key consideration is timeliness. Several countries, including the USA, stated that this is a higher priority than applying the last resort principle in situations of urgent need, and as a result give the military the power to act independently.

For the U.S. military to become involved in a humanitarian assistance operation, a special set of conditions apply. When lives are in immediate danger and the combatant command is in a position to render timely life-saving assistance, a military commander has the authority to act independently to render immediate aid within the first 72 hours.³⁵

Availability

In all countries, the primary tasks of the military are to protect the country's territorial integrity, defend the country from external threats and safeguard vital national interests as directed by the government. Only military assets that are not needed to fulfil these tasks are considered available for deployment as part of IDRA. Even assets already engaged in disaster relief could be withdrawn should they be needed to protect their country or its interests.

Singapore's SOP for the deployment of foreign military assets reflects the way in which availability is factored into decision making.

The SOP for decision making regarding military assets involved a staff check with the three Services for availability of the requested assets, when it can be released, location to be collected from, and so forth. Once these inputs from the Services are available, a Singapore Armed Forces position is staffed to the Central Defence Force for approval. Thereafter, it is staffed to Policy Office for approval at the policy/national level as appropriate. The SOP has been in existence for some time now and is periodically revised to incorporate the latest refinements from lessons learnt.³⁶

Request from the affected country

Contributing countries take different policy positions regarding the importance of having an official request for assistance from the affected country. These different positions can be roughly summarized as follows.

- Offers of military assets can be made when countries are struck by natural disasters, regardless of whether there has been a request by the affected country or the UN.

³⁴ Emergency Management Australia (EMA) and Australian Agency for International Development (AusAID), Australian Government Overseas Disaster Assistance Plan, Feb. 2002.

³⁵ USAID, Questionnaire response.

³⁶ Government of Singapore, Questionnaire response.

- Offers of military assets can only be made following a general request for international assistance made by the affected country or through the UN.
- Offers of military assets can only be made in response to specific requests for military assets made by the affected country or through the UN.

The first policy position is that of Germany and the USA. According to an official US briefing:

One of our requirements is that the impacted governments must accept the offer of assistance by the US Government. [However] the trigger which opens the door to US humanitarian assistance is an official declaration of a disaster by the US Ambassador or someone with chief-of-mission authority within that impacted country.³⁷

Most of the countries that responded to the questionnaire—Belgium, Canada, Denmark, France, India, Ireland, Japan, the Netherlands and Spain—stated that they generally await a request before considering the contribution of military assets. However, some hold the view that it is appropriate to deploy military assets in response to a general request, while others do not. According to DfID, ‘a request for international assistance is rarely broken down into categories, either of need or preferred responder, in the first instance.’³⁸

Some countries stated that they sometimes approach other countries informally to offer military assets as part of their response to the disaster. This may be an indication that the requests transmitted via OCHA are not specific enough and leave it to the contributing countries to determine what assets are appropriate. It could also be a sign that countries requesting assistance do not know how to formally identify what military assets they need or how to request them internationally. The latter would fit with the general acknowledgement by both contributing and affected countries that there is a lack of awareness or implementation of the mechanisms of the Oslo Guidelines in the field, which is where needs are assessed and requests for assistance originate.

Institutional arrangements

Division of responsibilities

The government entities most commonly involved in dealing with disaster response in contributing countries are the foreign ministry, the defence ministry, the international development agency and the civil protection authorities. Other ministries and bodies, such as the health ministry, the interior ministry and the cabinet office, may also be involved in some instances. The relevant entities often form a special joint task force or interdepartmental liaison group following a disaster in order to assess the situation, identify responsibilities and formulate a response. Figure 4 is a graphic summary of Australia’s AusAssist plan, a good example of national arrangements for overseas emergency assistance.

³⁷ On-the-record briefing by Ky Luu, Director, Office of Foreign Disaster Assistance, USAID and Michele Bond, Deputy Assistant Secretary of State for Overseas Citizen Services on US assistance to earthquake and hurricane victims in the Western Hemisphere region, Washington, DC, 21 Aug. 2007, <<http://www.reliefweb.int/rw/rwb.nsf/db900sid/SJHG-76B445>>.

³⁸ DfID, Questionnaire response.

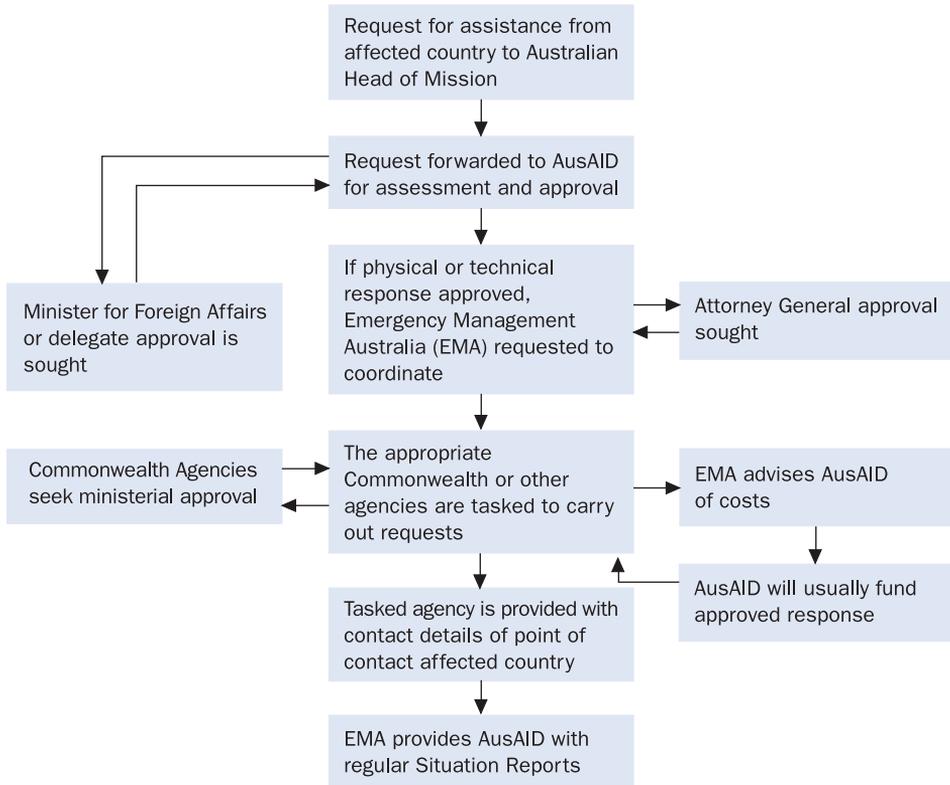


Figure 4. Australia's AusAssist plan

Source: Emergency Management Australia (EMA) and Australian Agency for International Development (AusAID), *Australian Government Overseas Disaster Assistance Plan*, Feb. 2002.

Laws, guidelines and MOUs

In some countries, specific laws, guidelines and MOUs have been agreed between the major stakeholders that deal with emergency assistance and military assets. These documents generally build on the provisions of the Oslo Guidelines and adapt them to the national level. Canada has developed guidelines that draw heavily on the Oslo Guidelines; Japan and Sweden have laws governing the procedures and rules for the use of military assets in IDRA; and the Netherlands, Spain, Switzerland and the UK have MOUs detailing such procedures. Efforts are underway in South Africa to institute a formalized procedure for the deployment of military assets. Most of these national laws, guidelines and MOUs have been drawn up only in recent years.

In the British case, the MOU is the result of lessons learned from previous deployments and the need to clarify issues regarding financing and relevant authority. The fact that these policy documents have been adopted relatively recently supports the opinion of many contributing countries that the debate regarding humanitarian deployment and use of military assets has increased and that routines and procedures are being established to 'govern' it.

Even when these documents clearly reflect the Oslo Guidelines, it should not be assumed that awareness of the guidelines, or of the provisions contained in them, has filtered down from the policy level to the relevant government departments and that the guidelines are now reflected in the entire organizational strategy—structure, doctrine and training.

Cost-sharing mechanisms

To address the issue of the costs of deploying military assets, several countries have now introduced measures to reduce the burden on the humanitarian budget. In some cases, military assets are now deployed at no cost to the humanitarian budget. For example, Australia's Department of Defence bears the total cost of deploying and operating the asset if the sum is relatively small (less than AU\$10 million). In the USA, the Department of Defense bears the whole cost of all deployments of military assets.

Many other countries have established cost-sharing mechanisms. For example, in Belgium, Japan, the Netherlands, Sweden, Switzerland and the UK the defence ministries are partly reimbursed from the humanitarian aid budget for certain expenses. In Belgium, the Ministry of Defence covers the cost of deploying military personnel, and the Federal Public Service for Foreign Affairs, Foreign Trade and Development Cooperation pays all other costs. In Japan, the Netherlands, Sweden, Switzerland and the UK the standard operating costs of the military asset are covered by the defence ministry, while the marginal costs incurred as a result of participating in the relief operation, such as for fuel, are reimbursed from the humanitarian aid budget. It is also important to note that for costs to be reimbursed the request for military assets must have been authorized by the department responsible for humanitarian aid. This proviso goes some way towards ensuring that these departments are consulted before military assets are offered.

Most countries also state that funding arrangements for a disaster response are to a very large degree dependent on the scale of the disaster. In Australia, Canada and the USA extra-budgetary funds can be authorized by the legislative body when severe disasters occur. For example, the Canadian Department of National Defence requested additional funds from the 'governmental crisis pool' budget for its deployments to Sri Lanka during the 2004 Indian Ocean tsunami and the 2005 South Asian earthquake.

Affected countries

When a natural disaster occurs in a country, it is the responsibility of the government to mount a response and protect the lives and security of its population (Oslo Guidelines, paragraph 51). Even when international assistance is provided, the affected country has overall responsibility for the relief operation (paragraph 26) and for the security of foreign military assets taking part in it (paragraph 29).

Whether a government requests international assistance following a natural disaster depends on a number of factors, including:

- its general policy on deployment of foreign military assets on its territory for disaster relief;

- the scale of the disaster and the humanitarian needs it creates;
- the level of disaster preparedness at the local and national levels; and
- the urgency of the need for particular assets and capabilities.

Some countries, among them China and North Korea, do not as a rule accept foreign military actors as part of IDRA on their territories, regardless of the extent of the devastation. India has a similar policy, although the Indian Armed Forces play a central role in domestic disaster relief.

Many countries that have had to request foreign military assets during natural disaster response have taken steps to introduce standard procedures for making such requests in future. Mozambique, however, has not done so. Instead personal, political ties between heads of government of Mozambique and South Africa are still used.

Due to the enormity of the Indian Ocean tsunami disaster and the minimal level of preparedness for that type of disaster at the local and national levels, the Indonesian Government did not establish any criteria for the selection of foreign assets. Instead it chose to open the gates to assistance as widely as possible. However the government did impose a 90-day limit on the use of foreign military assets. Following the South Asia earthquake, the urgency with which assets could be deployed to Pakistan was the paramount factor in the government's decision to accept the deployment of foreign military assets.

Preparedness measures, including contingency planning, generally reduce the human cost of disasters. This was clearly evident during the 2007 floods and cyclones in Mozambique. The enhanced institutional capacity of the National Disaster Management Institute (Instituto Nacional de Gestao de Calamidades, INGC) and its implementation of risk awareness measures and effective contingency planning helped to ensure that the impact of the floods was significantly less devastating than in 2000. It also reduced the need to request foreign military assets.

Lessons learned from previous disasters and through processes related to the UN International Strategy for Disaster Reduction (ISDR) have inspired several new initiatives of this type, particularly in South Asia. A number of South Asian countries have recently established national disaster-management structures, and these have already proved their value, for example during the 2005 earthquake in Pakistan. However, even when preparedness strategies and mechanisms are in place, there may still be a need for international assistance.

For most governments, the primary concern is the lives and welfare of the people affected by a disaster. Once it has been established that international assistance is needed, whether relief items are brought into the country by civil or military means is generally not an issue of contention insofar as the relevant arrangements (status of forces agreements and so on) can be made. Political questions regarding the use of foreign military assets are usually asked only when the assets are to be used in or close to the affected area.

Channelling of military assets

OCHA and the MCDA Register

In theory, when a natural disaster occurs, an UNDAC team should promptly be deployed at the request of the affected government to the site of the disaster and should carry out an initial needs assessment in cooperation with the government of the country and the Humanitarian Coordinator or Resident Coordinator. If it is deemed necessary and appropriate—in accordance with the Oslo Guidelines—targeted requests for military assets should then be transmitted to countries that have the required assets available. However, the findings of this study clearly indicate that countries, UN agencies and other organizations involved in relief efforts have more often chosen alternative means to channel military assets.

The MCDA Register maintained by OCHA in Geneva is central to this official procedure. The register was conceived as a database of disaster relief assets (expertise, personnel, supplies, equipment and services) that are available from UN member states, intergovernmental organizations and NGOs. Once the UNDAC needs assessment has been carried out, the MCDA Register should be used to identify which countries can offer the required assets. The MCDA Register’s usefulness depends on the contributing countries supplying accurate information about the assets that they can offer, and regularly updating the information. However, the register is now several years out of date, mainly because the contributing countries do not supply the information requested by OCHA.

The main reason why the contributing countries do not update the MCDA Register seems to be that they do not believe it can be a useful tool. Several countries stated in responses to this study that the availability of assets changes day by day, so the register can never be a reliable guide. Humanitarian relief is never the primary mission of a military asset; thus, it is not possible for countries to earmark specific military assets for international disaster response.

Because the MCDA Register is not up to date, when needs for military assets are identified the government of the affected country and OCHA must use other means to find out what is available and from whom. It is clear that key individuals in government departments and international agencies have at least partial knowledge of which countries and organizations have what military assets. For this reason, personal relationships and diplomatic ties play a large part in the process of requesting and providing military assets internationally. This personal knowledge is likely to remain an important resource in making and channelling requests for military assets for IDRA, even if a better-functioning alternative to the MCDA Register is created.

Channelling through UN agencies

The WFP is the lead agency for logistics in the UN humanitarian system. It hosts the UN Humanitarian Air Service (UNHAS), which is mandated to supply all UN agencies with air transport by chartering aircraft from companies and flight brokers on a list of approximately 60 approved companies. UNICEF frequently uses UNHAS to move relief items and personnel, but the UNHCR often charters its own flights.

The WFP and the UNHCR have devised their own alternatives to the MCDA Register, but rather than maintaining a database of assets, they have created registers of ‘service packages’ in consultation with governments. A service package is a set of assets that can be put together and provided by a government at short notice. For example, the UNHCR has agreements with France, Norway, Russia, Sweden and the UK to provide airlift, trucking, staff, stockpiles and telecommunications services.³⁹ One advantage of this approach is that if governments choose to include military assets as part of their service package, these assets would already be integrated with the other services. For example, Switzerland provided helicopters to the UNHCR during the Indian Ocean tsunami response. However, direct channelling to UN agencies happens far less often than bilateral contribution to affected countries.

Bilateral channelling

The data gathered for this study indicate that the countries that provide military assets do so overwhelmingly on a bilateral basis. With the exception of the Swiss deployment of its air assets to UNHCR, all the foreign military assets deployed in response to the Indian Ocean tsunami were channelled bilaterally. All the countries that took part in this study had provided assets bilaterally at least once. Belgium, France, India, Japan, Singapore and the UK did not report having made any contributions through the UN or its agencies. Ireland, the Netherlands and the USA stated that, in addition to bilateral contributions, they had also provided assets through the UN and its agencies. Canada reported making contributions both bilaterally and as ‘part of the international response’ to the disaster or ‘in full cooperation with the UN’.⁴⁰ Some countries also stated that one of the main reasons for dispatching military assets in a formalized government-to-government response is because governments will almost always have a greater military capacity than civilian capacity at its disposal. Table 2 shows the preponderance of bilateral channelling of foreign military assets reported during the response to the 2003 earthquake in Bam, Iran.

The contributing countries expressed a desire for the UN (led by OCHA) to take the lead in gathering and distributing key information and in identifying needs in the immediate aftermath of a disaster. They also called on OCHA to transmit and ‘translate’ information between the humanitarian and military actors participating in the relief effort. If OCHA could be the first and most efficient provider of such information, it could formulate specific requests for military assets in cooperation with the affected government and other humanitarian agencies at the earliest stages of the response.

Such an approach may also help to avoid unnecessary or unsuitable deployments of foreign military assets. As mentioned above, the contributing countries hold different views on whether to offer military assets if they have not been requested specifically. When such offers are made, it can be diplomatically difficult for an affected country to turn them down.

³⁹ UN High Commissioner for Refugees (UNHCR), Stocktaking of UNHCR’s emergency standby agreements, Geneva, 20 July 2007.

⁴⁰ Canadian Department for Foreign Affairs and International Trade, questionnaire response.

Table 2. Reported bilateral and multilateral contributions of foreign military assets during the international disaster response to the 2003 earthquake in Bam, Iran

Contributing country	Military assets provided	Channel
Belgium	Air transport (B-FAST)	Bilateral
Canada	Air transport	Multilateral
India	Air transport; medical assistance; water purification	Bilateral
Japan	Air transport	Bilateral
Netherlands	Air transport; search and rescue	Bilateral Multilateral
South Africa	Air transport	Bilateral
USA	Air transport	Bilateral

B-FAST = Belgian First Aid and Support Team

The governments of countries that have been affected by natural disasters sometimes make specific requests for military assets—often bilaterally and sometimes through OCHA. Not least because there is often a lack of awareness of the Oslo Guidelines in the affected countries, they often make requests for military assets without considering the stipulations of the guidelines. Instead, countries may issue ad hoc requests:

As no specific provisions existed concerning the modalities with which international assistance should be requested and received, the Government issued ad hoc administrative instructions in the midst of a major response operation. It was recognized, however, that such ad hoc measures . . . were particularly effective.⁴¹

Although all of the contributing countries recognize that OCHA is the mandated organization within the UN for coordination of humanitarian responses, there is an overall impression that OCHA does not currently have the resources, manpower and field presence to play its mandated role. Instead of waiting for requests through OCHA, both the affected countries and the contributors choose alternative—bilateral—channels for disaster relief assets, including military assets. A major reason for this, they state, is that it is quicker and more efficient and ensures that the military assets can be deployed in a timely manner once the decision to request or dispatch them has been made.

The affected countries' governments rely on existing good relations with potential contributing countries and bilateral pre-disaster discussions and arrangements, or use a combination of requests and accepting offers from contributing countries. This happened in Jamaica during the hurricane season in 2007, when some international assistance was provided under a prior bilateral agreement with the USA and an offer of military assets from Venezuela was also accepted.⁴²

⁴¹ OCHA, Post-Tsunami lessons learned and best practices workshop, Jakarta, Indonesia, 16–17 May 2005.

⁴² Government of Jamaica, Questionnaire response.

Other multilateral channels: the European Union and NATO

In the response to the earthquake in Pakistan in 2005 NATO assumed a new role as a multilateral coordinator of military assets on the ground. It worked closely with the Pakistani Government to coordinate air and other military assets in the country. As the Pakistan case study shows, NATO was commended by some countries for its efficiency and delivery of services, while other countries, even NATO members, were critical of its efforts.

The question of whether the involvement of NATO as an organization—as opposed to that of individual NATO member countries—added value was raised by some countries. Although the NATO assets were ostensibly under a unified command in the field, some still had to have all tasks cleared by their national commands. This created coordination problems and delays. Although such ‘multi-bilateralism’ is a common feature of NATO operations for peacekeeping purposes, DfID observed that some of the benefits of using foreign military assets—rapid deployment, flexibility, strong organization and leadership—were lost when assets were channelled through NATO.⁴³

The EU also has guidelines and processes for requesting and coordinating the use of the military assets of its member states in IDRA, although these have not yet been put to the test. In 2006 the European Council ‘noted’ two framework documents with regard to EU military support to EU disaster response: the General Framework for the Use of Member States Military or Military Chartered Transportation Assets and ESDP Coordination Tools in Support of EU Disaster Response, and Military Support to EU Disaster Relief: Identification and Coordination of Available Assets and Capabilities. However, none of the countries that responded to this study stated that they had contributed military assets through the EU. Liaison officers from the EU Military Staff were, however, positioned with OCHA during the Indian Ocean tsunami response in 2004 to help coordinate the military assets of the EU member states.

Regional–bilateral channelling

As observed above, most countries deploy foreign military assets more readily within their own region. Also, multilateral channels are not the only ways in which countries deploy their military assets. It follows that efforts to operationalize the Oslo Guidelines vis-à-vis the coordinated channelling of foreign military assets could be made at the regional level. Some relevant regional initiatives are described below.

Asia–Pacific

In July 2005 the Association of Southeast Asian Nations (ASEAN) signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). AADMER called for the establishment of an ASEAN Standby Arrangements for Disaster Relief and Emergency Response and the preparation of an SOP to guide the actions of member states and the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster

⁴³ DfID, ‘Evaluation report: use of UK military assets in support of Pakistan earthquake response—special reference to 59 Indep Cdo Sqn re NATO land component’, 20 Feb.2006, provided to the authors in the course of the study.

Management (AHA Centre) in implementing (a) the regional standby arrangements for disaster relief and emergency response; (b) the utilization of military and civilian personnel, transportation and communication equipment, facilities, goods and services, and the facilitation of their trans-boundary movement; and (c) the coordination of joint disaster relief and emergency response operations.

In 2006 the ASEAN Regional Forum (ARF) ministers agreed to a statement committing the ARF to consider the development of general guidelines on disaster management and emergency response for the use of both civilian and military personnel within the ARF participating countries and to ‘ensure consistency with existing international normative framework and ASEAN mechanisms on disaster management and emergency response, civil–military cooperation and other international capabilities’.⁴⁴ The ARF is also to ‘work towards the development of ARF regional standby arrangements for immediate humanitarian assistance including the development of Standard Operating Procedures . . .’ in close cooperation with OCHA. The SOP development process is designed to allow ARF participants to share their best practices and successful experiences in the mobilization, utilization and management of disaster relief resources. Its ultimate goal is to develop the framework, modality, and principles of ARF disaster relief cooperation.

Apart from regional multilateral frameworks, countries in the region have increasingly looked to other methods of developing coordinated deployment and use of military assets in IDRA. China, Japan and South Korea have recently discussed a trilateral partnership on the use of military assets for disaster response. A more developed agreement has been reached between Japan and the USA.⁴⁵

FRANZ is an agreement between the governments of France, Australia and New Zealand to exchange information to ensure the best use of their assets and other resources for relief operations after cyclones and other natural disasters in the Pacific region. It was originally signed in December 1992 and has had only minor change until recently. In 2007 the member states decided to review the agreement with a view to strengthening the coordination mechanisms.

Central America and the Caribbean

The Caribbean Disaster Emergency Response Agency was established by CARICOM member states in 1991. On receipt of the request for assistance, CDERA is responsible for soliciting and coordinating assistance from governments, organizations and individuals, both within and outside the region, who can provide the specific resources or expertise most urgently needed.

⁴⁴ ASEAN Regional Forum, Statement on disaster management and emergency response, Kuala Lumpur, 28 July 2006.

⁴⁵ Schoff, J., ‘In times of crisis: global and local civil–military disaster relief coordination in the United States and Japan’, Institute for Foreign Policy Analysis, Interim report, Apr. 2007

5

The effectiveness of using foreign military assets in natural disaster response

This chapter examines six interconnected aspects of effectiveness in relation to the experiences documented in this study. These are the timeliness with which assets are deployed and become operational; the appropriateness of the assets to the tasks at hand, as well as how appropriate it is to deploy foreign military assets, rather than domestic or civilian assets, in a specific context and for a specific task; the efficiency with which the assets operate and are used within the relief effort; absorptive capacity in the affected country, meaning the capacity to accommodate and effectively use foreign military (and other) disaster relief assets; the coordination of the relief effort, including coordination between civilian and military assets; and the various costs of deploying foreign military assets. Practices in the conduct of needs assessments are discussed. The chapter ends with a look at how the effectiveness of using foreign military assets can be measured.

Military assets have been an integral part of the international community's humanitarian responses to many major, rapid-onset natural disasters, and they are likely to remain so for the foreseeable future. Military assets' unique capabilities and ability to deploy quickly have contributed to saving lives in the cases studied. However, many questions remain about how and when military assets can or should be used as part of IDRA. This chapter seeks to provide at least partial answers to these questions, based on the information gathered during this research. To do so, it examines the research findings in the light of six areas that influence the effectiveness and desirability of deploying military assets in response to a natural disaster. It also identifies lessons learned and some good practices from the case studies.

The six aspects of effectiveness used in this analysis have been chosen in accordance with principles articulated in the Oslo Guidelines and the OECD Development Assistance Committee (DAC) evaluation requirements as well as actual experiences from the field. These factors—timeliness, appropriateness and competence, efficiency, absorptive capacity, coordination and costs—may be used as a starting point for developing tools for use in both decisions to deploy and ultimately withdraw foreign military assets, although that falls outside the scope of this study. It is important to bear in mind that all of these aspects interconnect and overlap. None of them should be considered in isolation.

Timeliness

When a disaster strikes, certain assets are needed urgently in the surge phase of the relief operation; if they do not arrive and become operational within a matter of hours or, at most, days, the opportunity to use them effectively is missed. Other assets may not be as critically needed or are required at a different stage of the operation. In such cases, timeliness depends on whether they become operational at the time that they are needed. For many, timeliness is perhaps the overriding reason for deploying military assets. According to a report for the OECD DAC, ‘When large numbers of lives are immediately at risk, issues of experience, cost-effectiveness, and longer-term impact have to take secondary importance.’⁴⁶ This section examines the timeliness of the deployment of military assets and the factors that assist and hinder timely deployment. It also looks at the relationship between timeliness and the Oslo Guidelines principle of ‘last resort’.

Timeliness and effectiveness

Dispatch

Rapid-onset natural disasters often occur with little or no notice and call for an immediate response in order to prevent further damage or loss of life. This is particularly true in the case of earthquakes: search-and-rescue assets are most needed in the first 48–72 hours, when there is the best chance of saving the lives of people trapped in the rubble. It is generally recognized that one of the biggest comparative advantages of military assets in disaster response is that they are typically on permanent standby, available in large numbers, ready to deploy at a moment’s notice, and thus able to reach the scene of a disaster quickly. In terms of the Oslo Guidelines, military assets often have a ‘unique availability’ during the surge phase of a disaster response.

The location of the contributing countries’ military assets at the time of a disaster substantially affects timely deployment. In all the cases reviewed, neighbouring countries and regional actors were generally the first to be approached for assistance and also the first to deploy military assets. During the Indian Ocean tsunami response, the Singaporean Government was able to deploy critical air assets—a C-130 Hercules cargo aircraft with supplies and Chinook and Super Puma helicopters—to Aceh within the first two to three days after the tidal waves struck. These helped the Indonesian Government to deliver the first wave of relief supplies and gave access to the affected areas, which were otherwise virtually inaccessible. Similarly, the presence of the United Nations Stabilization Mission in Haiti (MINUSTAH) in Haiti at the time of tropical storm Jeanne meant that international forces were able to respond within hours.

The effectiveness of foreign military assets in the surge phase of a disaster response is to a great extent determined by the speed of their deployment relative to civilian assets with the same capabilities. In the case of most military assets, late arrival and being slow to become operational will greatly reduce their effectiveness in disaster relief. This should be taken into account by countries considering deploying military assets as part of IDRA.

⁴⁶ OECD DAC, *Civilian and Military Means of Providing and Supporting Humanitarian Assistance during Conflict: Comparative Advantages and Costs*, Conflict, Peace and Development Cooperation Report no. 1 (OECD: Paris, 1998).

The field hospital contributed by the Mexican Government to Aceh in 2004 arrived six weeks after the tsunami, at a time when civilian and other military medical care facilities were already in place. Thus, the military field hospital did not meet the criteria of either unique availability or capability, making it an ineffective and inappropriate use of military assets, according to the Oslo Guidelines. Deployment of military assets that will take some time to reach a disaster relief operation should only be considered if they can still add a unique value to the operation and not be based solely on political considerations or expediency.

One reason why military assets may not be able to deploy in a timely manner is that they are already committed elsewhere. Rerouting takes time and increases the likelihood that they will not arrive before similar civilian capabilities could be established. Rerouting may still be valuable in the case of military assets that offer a ‘unique capability’ which is useful beyond the first few days of the relief effort, such as tank landing ships (amphibious landing craft that can provide sea access to the affected area, carrying significant quantities of vehicles and other cargo and landing troops directly onto unimproved shore) and heavy-lift helicopters such as the Mi-26.

The timeliness of the deployment of military assets may also be affected by external factors, such as the initial needs assessment. In the case of the Indian Ocean tsunami, the scale and severity of the disaster were immediately clear and prompted rapid response from the international community with all of its available resources. In contrast, a lack of reliable information about the scale and severity of the 2005 earthquake in Pakistan meant that even seasoned humanitarian organizations, among them UNICEF, Oxfam and Médecins Sans Frontières (MSF), initially underestimated the response required, and military (and other) assets were not deployed as quickly as they might have been.

Bureaucratic processes can also delay the deployment of military assets, especially when the political will is lacking. Where there are no established procedures and channels between the military and civilian disaster response agencies in a contributing country, separate negotiations on the use of the assets may have to take place during the planning of each individual disaster response. Where such procedures and channels exist, an ad hoc negotiation process may still be necessary to determine who is to bear the costs. This may occur if, for example, the reasons for using military assets are not in accordance with the Oslo Guidelines or those envisaged by existing interdepartmental agreements—perhaps because they are political rather than purely humanitarian. However, if the political will to deploy the military assets is strong, such considerations will probably not be allowed to delay it.

UN humanitarian agencies and, increasingly, large, well-established organizations such as the International Federation of Red Cross and Red Crescent Societies (IFRC), MSF, and Oxfam have standing agreements with civilian transport and logistic companies, enabling them to respond quickly to a disaster.

Becoming operational

For the deployment of military assets to be timely, they must not only arrive promptly but also become operational quickly and smoothly. In the cases of Mozambique and Pakistan, poor information sharing, backlogs in the issuing of visas, lack of clarity over landing rights, customs procedures and so forth caused minor delays in certain foreign military

assets becoming operational. The ideal scenario would be a minimal delay between the signing of any status of force agreement, dispatch and operation. This requires good communication and coordination between the contributing and affected countries regarding estimated dates of arrival, official procedures, number of personnel and type of equipment being sent, and so forth. Additionally, early agreement between the contributing country and the agency coordinating the relief effort can ensure that military assets are sent directly to the area where they are needed and no time is lost once the assets are in place in discussing the scope of the tasks they will perform.

Delays in military assets becoming operational can also be caused by force protection measures. In Haiti, the Gonaïves base camp of the Argentinean battalion of MINUSTAH was badly affected by the tropical storm. A contingent of Brazilian troops was redeployed to Gonaïves to help the Argentineans rebuild their camp. Looking after the security of troops and equipment is one of the first duties of a military commander, so it is inevitable that this will be a priority, especially if a disaster takes place in the context of a complex emergency. However, several of the contributing countries participating in the response to the 2005 earthquake in Pakistan were critical of the Spanish engineering contingent, which took around two weeks to prepare its own base before actively joining the relief effort, even though the Pakistani Government had guaranteed security for the operation.

Timeliness and ‘last resort’

There is an inherent tension between the principle of last resort and the imperative to provide assistance in a timely manner, particularly in the first stages of the relief. Ensuring that ‘all possible civilian options’ have been exhausted and that the military assets offer ‘unique capability and availability’, as the Oslo Guidelines stipulate, inevitably takes time and thus potentially delays deployment at a critical time. From the humanitarian perspective, deploying the necessary capabilities as promptly as possible must be the highest priority, and the countries participating in this study indicated that timeliness was, in most cases, their main reason for deploying military assets. In the case of time-critical deployments, the last resort principle is perhaps more practically useful as a reminder to governments that military assets should not be the first resort, especially given the political dimensions of deploying such assets and the concerns of the humanitarian community.

While there are strong arguments that the principle of last resort may justifiably be suspended when rapid deployment is needed during the surge phase, the same cannot be said if the asset is to be deployed in the relief phase or, especially, during the rehabilitation phase. Unless new urgent needs arise, the last resort principle should be applied more strictly later on in the relief effort. Presumably, by this stage there will have been more time to investigate and mobilize available civilian alternatives.

Appropriateness

Two aspects of appropriateness are examined in this section. The first is the question of whether the military assets provided are appropriate for a particular task. In some cases—whether due to poor needs assessments or to deployments being influenced by factors

other than genuine need—clearly inappropriate military assets have been deployed to relief operations. These assets are at best of limited use and at worst a burden, wasting precious time and resources. The second question is under what circumstances it is appropriate to use military assets per se in humanitarian relief operations. This section also looks at the relationship between appropriateness and the Oslo Guidelines principle of last resort.

Appropriateness for the task

According to the Oslo Guidelines and many countries' stated policies, military assets should only be deployed as part of IDRA if they offer a 'unique capability' that no available civilian asset can provide. There are certainly some military assets that offer capabilities that are virtually impossible to match from civilian sources. For example, heavy-lift helicopters, which are almost exclusively possessed by national militaries, have proved extremely useful in search-and-rescue operations in flooding emergencies. Military aerial reconnaissance assets can provide a unique and much needed contribution to relief operations, particularly if the affected country does not have the means to map affected areas. They should only be deployed with the explicit consent or request of the affected country. The US military's OC-130 Keen Sage aircraft proved useful in mapping the worst-hit towns and villages of the 2000 floods in Mozambique, thus allowing the INGC to prioritize distribution of aid effectively. However, as private corporations such as Google continue to develop their real-time satellite maps, aerial reconnaissance may no longer be a capacity unique to the military.

In the past, practices such as countries soliciting requests for military assets from affected countries or providing military assets according to what is available rather than what has been requested have resulted in inappropriate military assets being deployed. For example, during the relief operation following the earthquake in Lebanon in 2006, the UK deployed Bailey bridges—a type of portable prefabricated bridge that is relatively easy and quick to assemble—as part of its wider response at the request of the British and Lebanese prime ministers. The offer was based on what had been contributed to Pakistan in 2005, not on a needs assessment in Lebanon. During the response to the Indian Ocean tsunami in Aceh, it was thought that the provision of a Singaporean military mobile air traffic control tower would be useful given the decimated airport infrastructure in Banda Aceh. However, the tower was initially sent without personnel. It remained out of action until Singaporean Air Force officers were sent over and provided two weeks of training to Indonesian personnel.

A comprehensive, unified needs assessment and coordination framework could potentially help to ensure that the appropriate military assets are provided and prevent the deployment of those that are unnecessary or for which a civilian alternative is available. In the case of Australia's helicopter deployment for the tsunami response, UH-1H Iroquois (Huey) helicopters were chosen instead of S-70A-9 Black Hawks because the former required less time to prepare for dispatch to the affected area, were quicker to prepare for flight once they were in the field and required smaller logistical support. More importantly, the Huey's rotors produce less downwash (downward air turbulence), which was important when approaching affected people in flooded areas.⁴⁷

⁴⁷ Hobson, S. et al., 'Welcome relief?', *Jane's Defence Weekly*, vol. 42, no. 20 (18 May 2005), p. 23.

The experiences reported in this study highlight the fact that needs assessment should be an ongoing process. Information about the extent of the damage and the resulting humanitarian needs is likely to be scant when the first needs assessment is carried out but build up over time. The list of necessary resources can be refined over time and also contribute to exit strategies for any military assets contributed, as the need they are addressing reduces or civilian alternatives become available. Continuous needs assessment in Meulaboh, Aceh, helped to ensure that French and Singaporean military assets provided the most appropriate and effective help. France and Singapore had initially planned to set up field hospitals. However, after further needs assessment, the local disaster management agency and the Meulaboh General Hospital realized that there was a greater need for mobile clinics and direct assistance at the hospital. It was jointly decided that France would run the mobile clinics, treating minor injuries and referring the more serious cases to its offshore floating hospital, while Singapore's Medical Corps would directly support the local health structures.

Appropriateness for the context

The humanitarian community is generally critical of the growing encroachment of military actors into humanitarian operations. Some in the humanitarian community argue that just because the military has the capacity to perform a task, it may not necessarily be the most appropriate entity to do so, since most militaries do not train their personnel in the principles and practices of humanitarian affairs. Some international NGOs, for example MSF, have called for a stricter application of the 'last resort' principle. At a minimum, they want the involvement of foreign military assets to be limited to providing indirect assistance and infrastructure support. The Oslo Guidelines only recommend that military and civil defence assets should focus on such missions but allow for direct assistance on a case-by-case basis (paragraph 38).

The evidence from this study shows that most of the assistance provided by foreign military assets is indirect—mainly logistical support to enable humanitarian personnel to gain access and ensure that relief items reach the affected populations.

Medical support is the next most common task performed by foreign military assets. This certainly brings military personnel into direct contact with affected populations and is a function distinctly within the sphere of the civilian humanitarian community. Thus, it is highly controversial. Humanitarian agencies have also raised the argument that military medical facilities are less suitable for treating the different groups of victims and injuries caused by a natural disaster because their structures are designed for battle-related injuries. Whether this makes medical support by foreign military assets inherently inappropriate is an open question. In the case studies, where foreign military assets provided medical support, the interaction was relatively limited because the military was engaged for a relatively short period of time. Furthermore, in at least one case, the beneficiaries made no distinction between foreign military or civilian assets.

During the response to the 2004 Indian Ocean tsunami and the 2005 South Asian earthquake, some countries contributed engineering assets that were responsible for providing water and sanitation. In both cases the results were mixed. This is because militaries have different standards—they are generally expected to provide high-quality

water to small populations rather than adequate water to large populations, as is needed in a natural disaster response. Moreover, certain civilian actors, notably Oxfam and MSF, have developed water and sanitation technologies and capabilities with the needs of large displaced populations in mind.⁴⁸

Length of deployment is an important determinant of the appropriateness of using foreign military assets. Civilian humanitarian actors have a distinct advantage in linking relief and rehabilitation activities. This advantage stems from the ability of civilian actors to draw on and develop local resources and to assess and monitor the impact of short-term emergency assistance on longer-term development goals. While there is no standard definition of the surge, relief and rehabilitation phases, in part because it is highly contextual, it is generally understood that the military can most effectively contribute during these phases of a disaster. Foreign military assets should be withdrawn when the civilian sector has built up its capacity.

Some of the frequently repeated objections to the use of foreign military assets may be unfair or exaggerated. For example, there is a perception that the military has a strong desire to become involved in longer-term development work. However, the various armed forces interviewed in the course of this study articulated a preference for withdrawing as soon as their mandated tasks have been completed and when their presence no longer adds value. Also, from the findings of this study the argument that foreign military personnel are insensitive to the ethos of humanitarian aid and thus do not fit into humanitarian relief operations is countered by the fact that civilian humanitarian actors frequently resist coordination, whereas military actors make more effort to fit into the coordinating structures. Both military and international humanitarian actors have to make some adjustments to attune themselves to the local culture and context. Further, while the presence of foreign militaries—even with the consent of the national government—may be viewed with suspicion in countries where the military is a strong political actor, it may be welcomed by the affected population. There is concern that military involvement will have unintended consequences, including on the sustainability of some relief efforts. For instance, temporary shelters built by the military may be of a higher standard than the affected population are used to, and there would therefore be reluctance to move out of them. However, this problem is not limited to the military. The solution is continuous consultation with the affected government.

One genuinely problematic question is whether and how foreign military assets should be deployed for disaster relief when the affected country is experiencing a complex emergency situation. As the Haiti case demonstrates, in such circumstances security concerns mean that commanders will be reluctant to deploy unless their personnel can be armed, which they should not be ‘in principle’, according to the Oslo Guidelines (paragraph 29). However, the 2003 Guidelines on the Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies (MCDA Guidelines), rather than the Oslo Guidelines, apply in such cases. Clearly, the participation of militaries that are parties to a conflict that also involves the affected country should not be involved in humanitarian assistance because they cannot be considered neutral.

⁴⁸ OECD DAC (note 46).

Efficiency

Efficiency in the context of this study refers both to whether military assets operate efficiently as such and whether they are optimally utilized within the larger relief effort. External factors can have an important impact not just on efficiency of operation but also on whether efficient operation actually contributes to the effectiveness of the relief operation. In particular, efficient utilization of an asset is clearly linked to coordination and planning.

The overall efficiency of foreign military assets is to a large extent affected by the techniques they use. For example, the use of external (underslung) payloads can increase the quantity of relief supplies that a helicopter transports on each flight. Also, setting up intermediary distribution or operational bases to reduce bottlenecks at the main operational centre (often the capital or the largest city close to the affected area) proved useful, as illustrated in the case studies. These and many other technical lessons, which can contribute to greater efficiency in future operations, have been learned from recent disaster responses but have not been adequately disseminated.

Countries that contribute foreign military assets should be prepared to have their assets directed to where they are most needed and to carry out the most urgent tasks for which they are suited. During the 2000 floods in Mozambique a visiting high-level German delegation expressed dissatisfaction that German air assets had been diverted from Maputo, where the relief operation was focused, to Beira. It was not until the UN Joint Logistics Centre explained to the delegation that the reason for the redeployment was because their aircraft had long-range capability and would be more efficiently used in Beira that they acquiesced. After the 2005 earthquake in Pakistan the Spanish military contingent, consisting of some 1500 soldiers, was tasked to dig field latrines. Even though the task fell within its competency and normal range of work, the contingent refused the task.

Military assets may not always be able to contribute to the efficiency of the response for reasons beyond their control. In Pakistan, the Canadian engineering contingent was tasked specifically to provide potable water. This task was carried out quickly and professionally, but the water did not reach the affected population because the mandate did not include distributing the water, and no one else had been given that task. Thus, although the military asset operated efficiently in relation to its assigned task, it was inefficiently utilized in relation to the larger aim of getting potable water to the affected communities.

Previous evaluation exercises on the efficiency of foreign military assets have relied on basic statistical measurements such as number of flying hours or amount of food and other relief items delivered. Because it does not look at the larger aims and context, this method does not provide a good measure of efficiency. A high number of flying hours may in fact point to inefficiency in the technique used to deliver items to those in need.

One of the arguments for the use of military assets is that they bring with them a high degree of self-sufficiency and do not strain local resources. Further, they can operate under extreme conditions for protracted and intense periods, including day and night operations. Because militaries are designed to be fail-safe, support personnel are often deployed to perform regular maintenance checks on sensitive equipment such as airlift assets. The humanitarian community may deem this ‘support package’ to be excessive and a factor contributing to the higher cost of military deployments compared to civilian assets. However, maintenance crew and other support personnel increase the value added by military assets. For example, one of the main reasons cited for the South African military’s effective performance during the 2000 floods and cyclones in Mozambique was the ability of its helicopter squadron to sustain a virtually round-the-clock air operation for nearly three months. The intensity of the air operation (the high number of flying hours) exposed the aircraft to considerably more wear and tear than usual, necessitating maintenance and safety checks. Any aircraft that was not serviceable was sent back to South Africa and a replacement aircraft arrived within hours. Similarly, crews were rotated frequently to avoid exhaustion.

Countries that contribute military assets often insist on force protection measures being taken. For example, during the Pakistan earthquake response, some countries did not allow their helicopters to fly solo sorties. These practices have come under criticism from actors in relief operations—including civilian humanitarian organizations, the affected country and militaries that do not apply such measures—because they often reduce the efficiency of the military assets.

Absorptive capacity

Absorptive capacity is the capacity of the affected country to effectively utilize and coordinate foreign military assets during a disaster relief operation. This may take the form of existing or ad hoc disaster management structures into which foreign military assets can fit. Strong governments are generally in a better position to take responsibility for relief efforts than weaker ones. Functioning state structures facilitate the coordination of international assistance and the assessment of needs.

From the evidence of the case studies, the presence of domestic capacity for disaster management was proportional to the effectiveness of the use of foreign military assets in disaster relief operations.⁴⁹ In all four cases, there was no centralized, functioning disaster management authority. If institutions did exist, they existed on paper only. The lack of internal coordination mechanisms in the affected countries meant that international actors (military and civilian) did not have a structure or system to ‘plug into’. In Indonesia and Pakistan, the national armed forces were primarily responsible for coordinating the

⁴⁹ Haiti was an exceptional case. Because domestic institutions were virtually non-existent, the international forces in effect provided the domestic capacity.

operations of the foreign military presence. In Haiti and Mozambique in 2000, where there was a leadership vacuum, the coordination of foreign military assets became the responsibility of the internationals themselves. The UN peacekeeping force, MINUSTAH, and the US military served as lead entities in Haiti, while South Africa served as the lead country for air operations in Mozambique.

In addition, the decision to request and accept the use of foreign military assets was at times not adequately communicated down the chain of command of the government so that, while there may have been good high-level political coordination between governments, practical coordination between international and domestic actors at the headquarter or field levels was somewhat lacking.

All the countries reviewed for this study have subsequently overhauled their domestic management practices. The increased capacity of Bakornas, the Indonesian national disaster management agency, during the Yogyakarta earthquake in 2006 and of the INGC in Mozambique during the floods in Sofala province in 2007 were particularly noticeable. The improved disaster management processes were also attributed to improved disaster risk reduction measures, a higher level of disaster preparedness, enhanced contingency planning and better early warning systems in the two countries. Local communities along the flood-prone Zambezi River were told where and when they would be evacuated; and certain essential relief items were pre-positioned in nearby warehouses. Although the floods had the potential to reach the same level of destruction as those in 2000 and 2001, the number of people affected or killed was significantly lower. The need to call for foreign military assets was consequently markedly reduced: only South Africa was present with airlift assets, which were placed under the civilian control of the WFP, the UN's lead agency for the logistics cluster.

Affected countries often find themselves in too weak a position to decline assistance. Based on its experience of dealing with a large number of foreign military assets, some of which were not critically needed, during the tsunami, Bakornas took a firm position and clearly articulated which foreign military assets were needed for the Yogyakarta earthquake. It was thus in a better position to coordinate their use. While there may be a continued lack of certain technical expertise or equipment, it can be said that in both cases a well-structured system is in place for international actors to fit into.

Coordination

Coordination is critical to the success or failure of a disaster relief operation. The degree of coordination between different actors affects not only the efficient running of the operation but also the operation's overall effectiveness. However, coordination in the field is less than straightforward owing to the multiplicity of actors with differing mandates that may be participating in the operation.

In all four case studies it is evident that coordination was weakest in the first few days after the disasters, particularly because local communication structures were themselves affected and there was thus a shortage of accurate information available. At the same time, the case studies illustrate that actors participating in the relief effort quickly adapted to the situation and worked around the deficiencies.

Civil–military coordination

The need for civil–military coordination arises because the humanitarian and military sectors have different cultures and priorities and operate under different standard operating procedures, codes of conduct or rules of engagement. There have been persistent problems in civil–military coordination in humanitarian assistance. The case studies highlight the fact that one of the biggest factors behind the difficulty was the large number of civilian and military actors on the ground, each with different rules and procedures for interacting with the UN and with the affected country. In all of the case studies, the average number of international NGOs present during the surge and relief phases was in the range of 200 to 300, while the number of foreign military contingents was in the range of 13 to 26. This was certainly a new experience for the local authorities in Mozambique, while in Pakistan, ‘Coordinating with the foreign military contingents was relatively smooth because the Pakistan military has a long history of participating in UN peacekeeping operations, and is used to working with different national militaries’.⁵⁰ However, with the increase in the number of large-scale disasters, of the actors involved in responding to them and, apparently, of the use of foreign military assets in disaster relief, there is an urgent need to address the outstanding issues.

An initial step to improve civil–military coordination during disaster relief operations would be to have civilian and military actors carry out joint needs assessments. Accurate and comprehensive needs assessments can be vital tools in planning and putting together an effective disaster response.⁵¹ There have been efforts in recent years to coordinate needs assessments, or at least improve information sharing, between different UN agencies and other humanitarian organizations. In the past, they have tended to conduct their own needs assessments in relation to their own programmes, making it difficult to gain a coherent picture of the disaster situation and to avoid gaps and overlap in the response. However, so far there has been little attempt to involve military actors in collaborative needs assessments. Besides benefiting from military reconnaissance capabilities, joint needs assessment teams would include civilian actors with experience in assessing the scale of the disaster, the size of the affected population and the corresponding needs, while the military representatives could identify the type and number of military assets that could help to meet the needs if civilian assets could not do so.⁵² The potential benefits of joint civilian and military assessments were explicitly recognized in the mission report of the UNDAC team for the Indian Ocean tsunami.

Civil–military coordination in the field is affected by the amount of timely and accurate information shared between all actors. Although mechanisms like the UN cluster system (where the division of labour is grouped by functional areas) and processes such as elaborate coordination meetings were instituted in all of the case studies, the success

⁵⁰ Head of the Flood Damage Rehabilitation Committee, Pakistan, Interview with the authors.

⁵¹ See Darcy, J. and Hofman, C., *According to Need? Needs Assessment and Decision-Making in the Humanitarian Sector*, Humanitarian Policy Group Report no. 15, Sep. 2003.

⁵² The INGC dispatched a joint civil–military needs assessment team (with the cooperation of UN agencies) during the 2007 floods in Mozambique. If the affected country does not have the capacity to conduct its own needs assessment, this role could be performed by the UN.

of coordination was mixed. Civil–military coordination seems to be generally good in one functional area: logistics, the transport of relief personnel and items to the affected population. The tried-and-tested formula of having twice-daily tasking meetings, to account for what had been transported that day and what needed to be done the following day, worked well in all of the case studies. The humanitarian agencies articulated what needed to be done and where, and the military actors decided among themselves how to carry out the job. In other functional areas, such as water and sanitation and shelter, the foreign militaries were given a specific area of responsibility.

Based on field interviews with those involved in the disaster responses examined in the case studies, information management seems to be best and most appropriately carried out by OCHA. The interviewees reported that the ability to synthesize the plethora of incoming information and redistribute it to all the actors on the ground was helpful in the daily operations. This was particularly true when the information headquarters included individuals who understood the terminology and practices of both military and civilian humanitarian communities.

The relationship of the foreign military to the domestic military can at times enhance the relief operation but at others can hinder it. For instance, in Aceh the Indonesian military was able to address security concerns by making the Singaporean Armed Forces the primary foreign military contingent present in Meulaboh, the stronghold of the GAM insurgency. In contrast, when foreign military assets are tasked to perform certain functions by the domestic military, this choice may not be acceptable to or suitable for the affected population.

Discussions with the affected governments in the case studies revealed that it was at times easier to coordinate with foreign militaries than with international NGOs. One reason for this is that there are generally few foreign military contingents compared to international NGOs, and they bring relatively small numbers of assets. The affected governments also stated that the hierarchical military structures guaranteed that an instruction to the commander would filter down to all personnel in the contingent and would be followed.

Supplementing local coordination capacity

Contributing countries tend to channel military assets bilaterally. The case studies indicate that constant, uncoordinated arrivals of foreign military contingents can put a heavy burden on the affected countries' absorptive capacity during the first few days of a disaster response. Clearly, a coordinated initial request for military assets would be preferable, but as the findings of this study make clear, that is rarely made and may not even be feasible in some situations. The problem might be alleviated if there were a central body able to assist the affected country to coordinate the arrival of international assistance, both military and civilian, particularly while the affected country mobilizes its emergency response mechanisms. This role could potentially be filled by OCHA, through its civil–military coordination (CMCoord) officers or UNDAC teams, and the responsibility could gradually be transferred to domestic agencies when it becomes possible. Many contributing countries indicated that they would like to see OCHA act as an information hub in the immediate aftermath of a disaster, 'translating' and channelling information

between humanitarian and military actors. They also stated that they would appreciate it if OCHA could assume the responsibility for requesting military assets—in close consultation with the affected government and in cooperation with other UN agencies—in the earliest phases of the response. For this to work, contributors would need to make some compromises themselves, particularly regarding their current practice of carrying out independent needs assessments and making independent requests for, or offers of, military assets. If OCHA can improve its information role and develop a viable alternative to the MCDA Register, the contributing countries could introduce into their national policies an obligation to deploy military assets for IDRA only in response to specific requests. However, this will place a heavy burden of responsibility on OCHA to carry out this function well and to ensure that it has a well-resourced field presence and the necessary staff to formulate needs and transmit requests in a timely manner: any inefficiency on the part of OCHA that delays the deployment of vitally needed assets would inevitably impact on the affected population.

Costs

Costs are a subject of frequent and heated debate in the context of the use of military assets in natural disaster relief operations. Deploying a military asset is, generally speaking, more expensive than deploying a civilian asset that offers an equivalent capability. The Oslo Guidelines state clearly that foreign military assets should be made available at no cost to the affected country, unless there has been prior agreement (paragraph 27), and this principle seems to have been applied in practice. However, the question remains of who in the contributing country should bear the additional cost of deploying military assets. Many object, on both practical and ethical grounds, to the idea of military expenses being funded from humanitarian aid budgets. This section examines the different approaches that countries have taken to budgeting for the deployment of military assets as part of IDRA. It also questions how the hidden and intangible costs associated with the use of military assets should be accounted for.

The relative cost of different means of providing and supporting disaster relief assistance is a difficult but important issue. Although the global humanitarian aid budget has been expanding since 2000, it remains a finite resource, and there are growing demands on it. Also, there are indications of ‘donor fatigue’; for example, of about \$338 million requested for 13 OCHA flash appeals in 2007, only \$114 million had been contributed or pledged by October of that year.⁵³ It is necessary to consider the relationship between the costs and performance of military assets, as the inefficient use of funds in one operation may reduce the availability of funds for others or even for other parts of the same operation where needs are equally critical.

It is generally accepted that, on a task-by-task basis, military assets are more costly than their civilian counterparts. This is largely because reliability, security and robustness are generally higher priorities in the procurement and operation of military assets than cost. However, because military assets are usually kept in a state of readiness for quick deployment, defence ministries already cover their procurement and basic running costs, whether the assets are being used or not. Thus, the idea that deploying military assets is

⁵³ Borger, J., ‘Climate change disaster is upon us, warns UN’, *The Guardian*, 5 Oct. 2007.

Box 2. The allocation of costs in Japan and the UK for deploying military assets to the 2004 Indian Ocean tsunami response

For Japan, the costs of deploying military assets totalled \$12.15 million. Of this, the Ministry of Defence bore 80 per cent (about \$9.87 million) while the Japan International Cooperation Agency (JICA) funded the remaining 20 per cent.

The British Government spent \$7.42 million deploying military assets, of which nearly 70 per cent (\$5.18 million) was borne by the Ministry of Defence and the remaining 30 per cent by the Department for International Development.

Source: Response to questionnaires.

Box 3. Introduction of a cost-sharing mechanism in the UK

The response to the 2004 Indian Ocean tsunami was a watershed for the UK in terms of how it budgets for deployment of military assets in disaster relief. During the relief operation following floods and cyclones in Mozambique in 2000, the UK made substantial contributions of military assets. There had been minimal discussion of who would pay for the deployments, and the Ministry of Defence subsequently requested reimbursement from DfID for the bulk of the costs incurred (\$14.37 million).

To avoid a similar situation, before deploying military assets to tsunami relief operations, DfID and the Ministry of Defence drew up an MOU setting out cost-sharing arrangements. DfID paid only 30 per cent of the \$7.42 million total cost of deploying military assets for tsunami relief. In the relief operation in Pakistan following the 2005 earthquake, DfID covered 49 per cent of the \$6.7 million total military deployment costs. In both cases, the Ministry of Defence covered the remainder.

Source: Response to questionnaires and authors' interview with DfID representatives.

much more expensive than deploying civilian assets should be regarded with caution; the additional cost to the contributing country of deploying military assets for humanitarian relief operations may even be competitive with the cost of procuring and deploying equivalent civilian assets.

Prior to this study, there has been little understanding of how the deployment of military assets has been financed in contributing countries. Chapter 4 outlines the three basic types of cost allocation system that countries could use: (a) costs are fully absorbed by the defence ministry, (b) costs are shared between the humanitarian aid budget and the defence budget, and (c) costs are fully borne by the humanitarian aid budget. Clearly, these mechanisms have different implications for the global humanitarian aid budget. Where the full costs of deploying military assets are absorbed by the defence ministry, as

in the USA, they become a highly cost-effective option. Where countries share the costs between the defence and humanitarian budgets, cost is still less of an issue, especially if the assets offer unique capability or availability. Boxes 2 and 3 show how cost sharing has impacted on the cost to national humanitarian aid budgets of deploying military assets. An important consideration is that the costs are accounted for only after the completion of the deployment. Arguably, countries that implement the first two cost-allocation systems can afford to deploy military assets and perhaps spend even more of their humanitarian aid budget on programmatic activities than they could if they deployed civilian assets instead. In fact, no country reported that the entire cost of deploying military assets was now funded from its humanitarian aid budget.

Another important point is that deploying civilian assets generally requires a new, ad hoc budgetary requisition to pay for them up front, which could take time and delay deployment. Deploying military assets simply requires an agreement to transfer funds between departments, which can be done at a later date.

Viewed this way, cost considerations could actually make deploying military assets a more, not less, attractive option for contributing countries. The tendency might then be to see military assets as a first—rather than last—resort. Whether this will happen remains to be seen, as cost-sharing mechanisms are relatively new initiatives in all of the countries that have them.

At times, it can also be more cost-effective for UN civilian agencies to use military assets. For example, the Super Puma helicopters offered by the Swiss Government to the UNHCR for airlift during the Indian Ocean tsunami response came at no financial cost. There was thus a strong incentive for the UNHCR to use an effectively free military asset rather than chartering commercial aircraft.

Despite the apparent tendency for countries to limit the burden of deploying military assets in disaster relief on their national humanitarian budgets, it is far from certain that this is having the same effect on the resources available for humanitarian aid internationally. It is possible that some countries include part or all of the costs of deploying military assets—even that portion paid from national military budgets—in their accounts of total humanitarian and aid expenditure, thus helping them to meet OECD obligations. If this is the case, the deployment of military assets must still reduce the funds available for traditional humanitarian and development work regardless of the cost-sharing systems in place; ‘free’ military assets might not be quite as cost free to NGOs and UN agencies as they appear. Greater clarity and transparency in the reporting of humanitarian aid, and whether it includes the deployment of military assets, will help to identify—and, it is to be hoped, prevent—such practices. At the same time, greater transparency about how much defence ministries spend on disaster response in proportion to total defence expenditure would shed light on the true costs of deploying military assets.

Another issue relating to the costs of deploying foreign military assets in disaster relief is the existence of hidden costs associated with their use (or non-use). For example, maintaining and repairing runways and other airport facilities damaged by a heavy flow of relief flights can be expensive. Such costs usually fall on the affected country, whose financial resources are already stretched.

Political and diplomatic considerations are also often part of the calculus of relief operations. The media coverage that often follows major disasters can lead to huge public pressure on the governments of other countries, especially those nearby or with a historical association with the affected country, to contribute to the relief effort. An offer of military (or civilian) assets may also be diplomatically expedient because of current foreign policy aims. To avoid the intangible costs of inaction, countries may be inclined to shoulder the more tangible costs of offering military assets. When diplomatic and political, rather than purely humanitarian, considerations take precedence, it may lead to countries offering inappropriate or unnecessary military assets. The affected country must then weigh the potential diplomatic and political costs of refusing the offer—or the possibility that the contributing country will be less generous next time—against the hidden costs of having to absorb these assets within the relief operation.

Measuring effectiveness

As mentioned above, the six ‘aspects of effectiveness’ examined in this chapter are interlinked. They are, in effect, different angles from which to view the same phenomenon, and each one draws attention to different aspects and considerations.

In decisions about whether and which military assets to deploy, and in any attempt to evaluate the effectiveness of deployments that have already taken place, it is essential to take such a multifaceted approach. No single criterion will give a true picture of the effectiveness of using a military asset; different factors will influence each other in different ways in any given situation. For example, the efficiency with which a military asset performs a particular task has previously been used as an index of that asset’s effectiveness, but such an index is meaningless unless one also evaluates how the task, and the asset, fit into the larger relief effort; how they coordinate with other tasks and actors; whether that military asset was the most appropriate for the task; whether the asset arrived and started working when it was needed; and so on. Thus, these six ‘aspects of effectiveness’ could be used as a basis to develop decision-making or evaluation tools for the effective deployment of foreign military assets in natural disaster relief.

In designing such tools it is also important to take into account how the phase of the response affects the importance of the various factors. For example, in the first few days of the response it is probably appropriate to prioritize speed of deployment. A useful approach would be to consider several interlinked factors at a time. For example, when considering whether to deploy military assets, contributing countries should take into account both the timeliness and appropriateness aspects of that particular asset. Ultimately, however, a system for measuring effectiveness depends on clearly identifying the overarching objectives from the outset.

The four case studies illustrate the fact that the exit strategies of the contributing countries are often arbitrarily based on timelines imposed by the affected countries. This study contends that needs assessments are important not just at the start of the operation but also for determining how and when foreign military assets are withdrawn. Exit strategies should be determined according to how much value the foreign military asset is currently adding to the relief effort—that is, how easily and successfully it could be

replaced by civilian or domestic assets. Because a multitude of actors—civilian and military—are likely to be involved in the disaster response, it is important that the assessment and planning for handover are shared at the strategic level in order that they can be seen in their wider context. Exit strategies should be decided in close consultation with the affected government and relevant international humanitarian actors and should be based on available evidence. In this regard, measurements of efficiency, appropriateness and absorptive capacity would be useful. Clearly, a continual evaluation of these priorities and trade-offs is necessary over the course of the disaster response.

With respect to the issue of costs (including opportunity costs), one approach put forward by analysts is cost-effectiveness analysis, which identifies a fixed target level of benefits and then seeks the cheapest way of achieving it. Cost-effectiveness analysis can reveal inefficient imbalances in resource distribution.⁵⁴ However, it is important to bear in mind that any cost-effectiveness analysis of the use of military assets in a disaster relief operation will produce information that is highly specific to the context and thus can only be generalized with caution. The question of the cost of foreign military assets is not and should not be a factor in the decisions of contributing countries, especially when lives are at stake. It is, however, pertinent when discussing the relationship between cost-effectiveness and the ethical considerations enshrined in the Oslo Guidelines: to what extent is it justifiable to compromise these principles for a more cost-effective alternative?

⁵⁴ Cost-effectiveness analysis should not be confused with cost-benefit analysis, in which the valuation of benefits is calculated in monetary terms. Hallam, A., *Cost-effectiveness Analysis: A Useful Tool for the Assessment and Evaluation of Relief Operations*, ODI Network paper no. 15, Apr. 1996.

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Findings and recommendations

The findings of this study indicate that, while humanitarian relief is and should remain a predominantly civilian function, foreign military assets can play a valuable role in natural disaster relief. Significant problems and questions remain regarding their deployment, but foreign military assets are almost certain to remain a common feature of major international disaster relief operations. Such operations, given predictions about the possible impacts of climate change, may be needed even more frequently in the future. The last chapter of this report examines some of the key issues identified in this study and recommends action to be taken by potential contributors of military assets, countries that are prone to natural disasters, the United Nations, including OCHA and UN operational humanitarian agencies and other humanitarian organizations.

The effectiveness of using military assets

In general terms, the study found that—at least in the cases studied—the use of foreign military assets in life-saving and life-supporting operations in the wake of natural disasters was effective. They were also deployed, by and large, in accordance with some of the key elements of the Oslo Guidelines: they were deployed only at the request of the affected country or with the affected country’s consent (although in Haiti there was no effective government to make a request or give consent); they were integrated with and supported the existing disaster-relief responses; and they were provided at no direct financial cost to the affected country. Whether the military assets were more or less effective than equivalent civilian assets would have been—if such equivalent assets had been available—is far harder to establish.

However, the discussion should not be about the use of foreign military assets per se. When responding to major natural disasters, humanitarian principle dictates that all available resources must be used to minimize the human cost. Foreign military assets can complement civilian humanitarian assets in valuable and even critical ways during the surge phase of a relief operation. In none of the four case studies did government of the affected country state a preference for civilian over military assets.

Certain types of military asset were better used than others. For example, no air assets were idle for any length of time in any of the cases studied. Air assets were in fact critical to the overall success of the operations. Airlift is also the one functional area where there has been considerable civil—military coordination, and this has meant that it has been relatively smoothly run—the case studies of Mozambique and the tsunami response in Aceh clearly illustrate this. Also, airlift is one of the less controversial functions carried out by foreign military assets, because it falls within the category of indirect assistance. In the words of one international NGO representative based in Mozambique, ‘I don’t see

the problem with using military planes to transport items from point A to B, especially if point B is not the distribution point'. Some other military assets, such as field hospitals, were less well used for a number of reasons: there was an oversupply of the asset or it was not appropriate because the type of medical assistance it offered was not the most needed and could have been provided by local or international civilian organizations.

The role of the UN humanitarian coordination system

It is clear from the study that the contributing countries prefer to channel military assets to the affected country bilaterally or, to a lesser extent, through standby agreements with some of the UN agencies rather than through OCHA's MCDA Register. While the bilateral channels and standby arrangements are expedient for a number of reasons, they are not ideal for the purposes of mounting an effective response. Bilateral channelling assumes that the affected country's governmental structures are functioning effectively and have the capacity to make sound decisions regarding the deployment of foreign military assets. In fact, as this study has shown, bilateral channelling can lead to gaps and overlaps in tasks and capabilities, to a lack of coordination and even to overloading of the affected country's absorptive capacity.

The fact that contributing countries bypass the current OCHA system and some UN agencies have even established their own alternatives to the MCDA Register are indications that OCHA needs to review its operations and consider how it can better fulfil its coordination mandate. In particular, this research has highlighted some of the inherent weaknesses in the MCDA Register that are perceived by contributing countries.

Norms and principles

Several countries have sought to 'internalize' the Oslo Guidelines, using them as the basis for clarifying and improving their own internal mechanisms for deploying military assets as part of IDRA. This suggests that the guidelines, and the international norms they enshrine, are seen as useful and largely valid. Nevertheless, awareness of the guidelines and understanding about the conditions under which they apply are evidently still far short of what they should be. This suggests that OCHA should strive to maintain the momentum that was built by the revision of the Oslo Guidelines at the end of 2006. In addition, while the Oslo Guidelines seem to be well known to policymakers, they are relatively unfamiliar to military commanders and others taking part in disaster relief operations.

There are also signs that some of the norms and concepts in the Oslo Guidelines need further consideration or clarification. Some of the Oslo Guidelines principles are applied more rigorously than others. One in particular, 'last resort', has been interpreted and applied differently by governments and international humanitarian organizations. Countries stated candidly that they offer or accept military assets because of the speed with which they can be deployed and do not concern themselves with establishing that military assets offer both a unique availability and a unique capability. They argue that time is critical, particularly in the surge phase of a disaster response, and that an exhaustive survey of the different options would take too long and possibly cost lives.

As this study has tried to show, neither timeliness nor any other criterion should be taken in isolation as the basis for deploying foreign military assets. There are many other practical, political and ethical considerations that need to be balanced. However, the tangible added value that military assets have offered in certain circumstances suggests that the ‘last resort’ principle needs revisiting. An attempt was made to clarify the phrase at the extraordinary session of the Consultative Group on the Use of Military and Civil Defence Assets, which was held in Geneva in November 2007. However, the new text does not clarify an important issue in interpretations of the principle: whether the emphasis should be on the assets’ unique availability (i.e. the ability to deploy before an equivalent civilian asset) or on unique capability.⁵⁵ Unless the concept itself, the usage and the onus of application are clarified, the ‘last resort’ principle is likely to remain ambiguous, contentious and—often—quietly ignored.

Recommendations

Decision making on the deployment of foreign military assets

- The decision to deploy military assets as part of international disaster relief assistance should be based primarily on humanitarian needs and interests of the relief effort and the affected country and communities. In particular, the burden of coordination and the real and opportunity costs of accommodating and operating the asset for the affected government must be taken into account.

Capabilities

- Steps should be taken to improve the capacity of military commanders and forces in potential contributing countries to take part in natural disaster relief alongside humanitarian actors, for example through military training and ensuring that military doctrines, standard operating procedures and field manuals adequately reference humanitarian principles and elements of the Oslo Guidelines. In addition, humanitarian actors should be involved in the design of military training on humanitarian assistance and disaster response.

⁵⁵ The revised text on ‘last resort’ is as follows.

Military and civil defence assets should be seen as a tool complementing existing relief mechanisms in order to provide specific support to specific requirements, in response to the acknowledged ‘humanitarian gap’ between the disaster needs that the relief community is being asked to satisfy and the resources available to meet them. Therefore, foreign military and civil defence assets should be requested only where there is no comparable civilian alternative and only the use of military or civil defence assets can meet a critical humanitarian need. The military or civil defence asset must therefore be unique in capability and availability. However, foreign civil protection assets, when civilian in nature and respecting humanitarian principles, can provide an important direct and indirect contribution to humanitarian actions based on humanitarian needs assessments and their possible advantages in terms of speed, specialisation, efficiency and effectiveness, especially in the early phase of relief response. The use of civil protection assets should be needs driven, complementary to and coherent with humanitarian aid operations, respecting the overall coordinating role of the UN.

Absorptive capacity

- National disaster management plans in countries prone to natural disasters should include provisions for how to assess the need for foreign military assets, how to request them, how to manage offers of military assets from foreign countries, and how to manage the assets when they arrive.
- Generic status-of-forces agreements should be prepared to facilitate the timely deployment of foreign military assets in disaster relief.
- The UN should strengthen humanitarian coordinators' and resident coordinators' knowledge of disaster relief so that they are better able to advise the governments of countries prone to natural disasters on issues such as determining the need for specific military assets and transmitting requests for such assets to key actors in the region or, if necessary, to the wider international community.

Regional framework

- Developing regional capacities to respond to disasters and strengthening relevant institutional relationships, particularly between existing regional organizations and the UN regional offices, would improve the effectiveness of foreign military assets in disaster relief, not least coordination with other actors.

Needs assessment

- OCHA should expand the skills and expertise of UNDAC teams to include more civil–military liaison, logistics and information experts. They can be deployed with other key partners for the initial disaster impact appreciation. Currently, most of the people on the roster of potential UNDAC members are based in Europe and other regions that rarely experience major natural disasters. In order to facilitate the quick deployment of UNDAC teams to disaster sites and to improve their local knowledge, the UN should take steps, including developing a funding base, to expand the roster so that countries in disaster-prone regions are better represented.
- Military actors should be included in needs assessment activities. Military assets can play an enabling role, including providing assets to facilitate the assessment missions. Involving military representatives in the process can also help civil–military coordination, identifying the most useful role that military assets can play and facilitating targeted requests for military assets that will best complement civilian capabilities.
- Needs assessments should be continually updated and refined, based on new information. This can help to adjust the tasks of military and civilian actors and, importantly, to identify the earliest opportunities for military assets to be withdrawn and their responsibilities given to foreign or domestic civilian alternatives.
- The humanitarian community should develop indicators or benchmarks for each functional sector of an international disaster relief operation to guide decision making regarding when military assets can be withdrawn and responsibilities handed over to civilian actors. OCHA and the designated heads of the new UN cluster system should take the lead in this process.

Channelling

- OCHA should review its current practices in the channelling and coordination of foreign military assets in natural disaster relief. While it plays an often crucial role in coordination of relief efforts, it is rarely the preferred channel for requesting and deploying military assets. In particular, OCHA's Register of Military and Civil Defence Assets has not been effectively used in the last decade. The role of the register should be analysed and reassessed.

Information management

- OCHA should review the various humanitarian information management tools available (eg: Virtual OSOCC, HIC SAHIMS) and raise awareness and understanding about when and how each system is intended to be used. Alternatively, an integrated system that is user friendly should be considered so that actors in the field will more readily use them during a disaster response.

Building the knowledge base

- OCHA should improve and expand its programme to disseminate and raise awareness of the Oslo Guidelines.
- Lessons learned and best practices workshops on the use of foreign military assets should become a regular feature of international disaster relief operations. These should be conducted under the aegis of the UN. The evaluation exercises of the International Search and Rescue Advisory Group could serve as a useful model.
- Governments and regional multilateral organizations should be encouraged to declassify and share any documentation from their own evaluations and assessments of their contribution of military assets for international disaster relief.
- Greater clarity and transparency in the reporting of humanitarian aid (including to what extent it includes the deployment of military assets) and on defence ministry spending on disaster response in proportion to total defence expenditure would shed light on the true costs of deploying military assets and the burden it places on humanitarian funds.
- OCHA should create, maintain and promote transparent and accessible knowledge- and information-sharing systems on international disaster relief, including the use of foreign military assets. These systems should include a standing central electronic and physical document archive.
- This study was the first of its kind but was constrained by the limitations of the data available and that provided. To obtain a fuller picture of how military assets are used in IDRA and of where the potential pitfalls or benefits may exist, OCHA may wish to consider a real-time-evaluation study.
- A comparable study on the advantages and limitations of civilian assets would contribute to an enhanced understanding of how to increase the overall efficacy of IDRA.

Annexes



Annex A

Case study: Floods and cyclones in Mozambique, 2000

In January and February 2000 prolonged heavy rains and the cyclones Connie and Eline caused catastrophic flooding in Mozambique's Gaza, Inhambane, Manica, Maputo and Sofala provinces. An estimated 2 million people were affected, 544 000 were displaced and 699 were killed. The World Bank estimated the economic damage caused by the floods and cyclones to be approximately 20 per cent of the country's gross national product.¹ Mozambique's recently created disaster management structure was quickly overwhelmed by the scale of the humanitarian crisis. A major international assistance effort included foreign military assets from 11 countries. These countries eventually allowed their assets to be under United Nations coordination to an unprecedented degree. It was the first time that the concept of a Joint Logistics Operation Centre to manage and coordinate air assets was applied in a natural disaster response. Another similar bout of flooding in the country in 2007 provides a useful comparison of the responses and some indication of how, and how far, the lessons of 2000 have been applied.

Background

The disaster

Mozambique experiences an annual rainy season from October to March. The amount of rain that fell in the 1999–2000 rainy season was the largest in over half a century, and the subsequent flooding in 2000 reached record-breaking levels. The Limpopo river experienced its worst flooding since at least 1848, and the floods along the Incomáti river were the worst in a century or more. This record rainfall and flooding were the result of a very unusual weather pattern. Windstorms moved unusually slowly, dropping large amounts of rain and moved inland instead of up the coast. The disaster that affected Mozambique was thus a culmination of a series of events. In December 1999 the heavy rains in southern Mozambique were almost triple the average level for Maputo and 25 per cent above that which is normal for Xai Xai city in Gaza province. In January intense rain occurred throughout southern Africa, affecting northern South Africa, eastern Botswana, south-east Zimbabwe and Swaziland. This caused the first wave of flooding, as the Limpopo, Incomáti and Umbeluzi rivers rose between 17 and 23 January.

¹ Cosgrave, J. et al., 'Inter-agency real-time evaluation of the response to the February 2007 floods and cyclone in Mozambique', Draft final version, UN Inter-Agency Standing Committee, May 2007.

The regional heavy rains continued in the first week of February, becoming even heavier when cyclone Connie struck central and southern Mozambique on 4–7 February. The movement of the cyclone southwards towards South Africa caused the Incomáti to rise upstream. Approximately 100 000 people in Mozambique were displaced and 200 000 were affected by the resulting second wave of flooding. On 22 February cyclone Eline hit central Mozambique and caused heavy rainfall in Gaza province. As the ground in the region was already saturated, it was not able to absorb the additional water, which quickly ran off into the river systems. Cyclone Eline caused an unexpected additional flood crest on the Limpopo, which is 60 kilometres wide at its widest point, and inundated areas that were normally viewed as safe high ground. The rainfall from cyclone Connie at the headwaters of the Limpopo reached Mozambique about the same time as cyclone Eline struck the country. The combined crest hit Chókwè city in Gaza province on 27 February and Xai Xai on 1 March and caused a third wave of flooding, in which water levels reached more than 3 metres above that of the previous record flood of 1977. The floodwaters covered 30 000 square km and caused the Incomáti and Limpopo rivers to merge for the first time in history. A third cyclone, Glória—downgraded to a tropical storm by the time it reached Mozambique—brought even more rain to central Mozambique on 5–8 March. Countries upstream opening their dams adding significantly to the volume of water flowing into Mozambique.

The floods severely damaged the main road and railway connections between the affected cities, making some of the cities, including like Chókwè and Xai Xai, virtually inaccessible. The floods affected 12 per cent of the population of Mozambique—approximately 2 million people in five provinces, of whom half a million were displaced and placed in over 100 temporary shelters.²

Mozambique in 2000

Mozambique was ranked number 169 out of 174 on the UN's 1999 Human Development Index and in 2000 was still recovering from a protracted civil conflict that had ended eight years earlier. The government, re-elected in 1999, focused its efforts and resources on rebuilding state structures and on economic growth. Even though Mozambique already frequently suffered drought, floods and cyclones, disaster management was not a high priority on the national agenda at the time. UN agencies in Mozambique had also slowly begun to switch from primarily humanitarian relief activities to longer-term development activities since the peace agreement. The UN had downsized and then dismantled the emergency information and management system it had set up through the offices of the former UN Special Coordinator of Emergency Relief Operations. UN operational agencies had also reduced their field presence in Mozambique. Those involved in the 2000 relief operation said that this partly explained a lack of preparedness for the disaster.

² United Nations, Assistance to Mozambique following the devastating floods: Report of the Secretary-General, UN document A/55/123-E/2000/89, 11 July 2000, para. 4.

Existing domestic disaster management structures

At the time of the floods, Mozambique's new disaster management structure had been in place for only a few months. In July 1999, the National Institute for Disaster Management (Instituto Nacional de Gestão de Calamidades, INGC) was established under the Ministry for Foreign Affairs and Cooperation, with offices at the provincial level. It replaced the Department for the Prevention and Combat of Natural Disasters (Departamento de Prevenção e Combate às Calamidades Naturais, DPCCN). Two other entities were created at the same time: the Coordinating Council for Disaster Management (Conselho Coordenador de Gestão de Calamidades, CCGC) at the political level and the Disaster Management Technical Council (CTGC) at the operational level. The CCGC, chaired by the prime minister and including 10 other ministers, was responsible for managing policy decisions relating to disaster management. The CTGC was created to support the INGC. Its members represented 10 ministries and the UN's World Food Programme. Its role was to coordinate sectoral and ministry early-warning systems for disasters. The intention was for it to meet every three months.

One of the INGC's first tasks was to draw up contingency plans for the 1999–2000 rainy season. The plan outlined three possible scenarios, the most extreme of which included cyclones and heavy rain. The plan estimated that 93 000 people in Gaza province could be affected, of whom 23 000 would require assistance. It proposed modest resources to address flooding: 20 boats and 240 lifejackets for search-and-rescue operations, and basic relief items (food supplies, tents and blankets) for those affected by the disaster. The plan was supposed to be based on provincial plans and the relief efforts for the February 1999 flood in Inhambane province. In practice, CTGC and INGC representatives did not work with the provincial authorities. Thus, the true conditions in each province were not accurately reflected in the plan, nor were available resources matched to what would be needed for an appropriate response.

In addition to creating a contingency plan, the INGC held two national workshops and several training and simulation exercises in the autumn of 1999 with the support of the WFP and the UN Development Programme. The aim of the exercises was to strengthen the technical capacities of the fire brigade, the police, the Mozambique Red Cross (Cruz Vermelha de Moçambique, CVM), Boy Scouts and several religious civil society organizations, as well as to promote coordination during actual disaster relief operations.

The response

The scale of the 2000 flooding emergency quickly overwhelmed the INGC's capacity and the Government of Mozambique requested international assistance. A massive international response was thus launched, involving over 2500 foreign civilian and military personnel from 100 NGOs and 11 national militaries. It is important to note that the domestic and international responses came in waves, with the largest influx of international (military and civilian) assistance arriving in early March, following the arrival of cyclone Eline. The response to the first wave of flooding, from late January on, was predominantly domestic, although some countries in the region provided assistance.

The first stage of the relief effort was jointly coordinated by the INGC and the WFP, with the CVM, Médecins Sans Frontières and other NGOs making important contributions. The search-and-rescue operations were conducted primarily by helicopters of the South African Air Force (SAAF), the Malawi Army Air Wing and the Mozambican Air Force and Navy.

Overall coordination

The exceptionally heavy rains in Maputo on 6 February triggered the initial large-scale governmental response. Foreign Minister Leonardo Simao called the first CCGC meetings to coordinate the government's response to the unfolding crisis. On 8 February OCHA offered the Mozambican Government the support of a UN Disaster Assessment and Coordination team, which the government accepted on 10 February. Several donors, including the US Agency for International Development (USAID), also initiated their own needs assessments to identify appropriate measures to assist the Mozambican Government.

Overall coordination of the relief operation was provided by the INGC with support from UNDAC teams. This took the form of daily briefings where all stakeholders reported on their activities. Many of the actors involved in the relief operation felt that the establishment of the On-Site Operations Coordination Centre (OSOCC) and, more critically, the fact that the centre was located in the INGC building enforced the notion that the UN played only a supporting role. However, there were other coordination meetings that took place concurrently which led to observations that no clear or cohesive picture was available about what was going on.

The first full UNDAC team arrived between 12 and 13 February. However there was some confusion as to the team's role. The government and the UN Resident Coordinator's Office assumed that OCHA had deployed the team to strengthen the INGC's capacity to deal with the floods associated with cyclone Connie. However, the team's brief from OCHA was primarily to further refine the government's initial 10 February appeal and to prepare a UN inter-agency appeal for funds, which was launched on 23 February. On 16 February, with the support of the UNDAC team, the INGC set up the OSOCC.³ The role of the OSOCC was to gather and disseminate information on the following functional sectors, which were under the responsibility of the relevant Mozambican line ministries, collaborating with international partners (listed in brackets): food (WFP), health (World Health Organization, WHO), transport, customs and communications (DfID), shelter and camp accommodation (IFRC), water and sanitation (UNICEF), and information (UN Development Programme, UNDP). The UN's ability to support the INGC in coordinating the disaster relief operation was hampered by the absence of a common humanitarian action plan (CHAP).

In addition, the premature departure of the UNDAC team contributed to a vacuum in the coordination structures during the relief operations. Despite the warnings of the impending arrival of cyclone Eline, the UNDAC team left Mozambique two days before the full impact of the cyclone hit Chókwè. In addition to their absence, several of the field

³ OCHA, 'Mozambique—floods: OCHA Situation report no. 7', 16 Feb. 2000.

UN leadership were also out of the country during that crucial weekend. In an unfortunate coincidence, the Mozambican foreign minister (who was overseeing the government's response) fell ill that weekend. These combined absences left a gap in the decision-making structures.

The decision to request and send foreign military assets

In mid-January the South African High Commission in Mozambique alerted the Mozambican Government to the possibility of serious flooding. The high commissioner also suggested that if Mozambique required helicopter support assistance from the South African National Defence Force (SANDF)—with which Mozambique had previously cooperated—a request should be made through South Africa's department of foreign affairs. In the interim, the high commissioner alerted the South African departments of Foreign Affairs and Defence to the fact that a request for foreign military assets could be forthcoming. Accordingly, a budget of 4.2 million rand was earmarked to finance the anticipated airlift and airborne search-and-rescue operations. On 8 February the Government of Mozambique made a formal request for assistance to the Government of South Africa. The next day, the SANDF sent in a needs assessment team to meet with the INGC and relevant ministerial officials and to assess the type of support needed. Within two days, on 11 February, South Africa deployed a fleet of six helicopters and four fixed-wing aircraft to Maputo.

South Africa was the only country from which Mozambique specifically requested military assets. Most of the military assets provided by the other 10 countries were sent to address humanitarian needs identified by Mozambique or the countries' own assessment teams. However, several of those interviewed for this study observed that the provisions of foreign humanitarian assistance, including military assets, was very much supply driven and there were evidently other motivations behind some governments' offers. For instance, the Spanish deployment of three helicopters was thought to be motivated, at least in part, by the good training opportunity it presented to familiarize the pilots with newly procured aircraft in a safe environment.⁴ Other governments were responding to domestic constituencies' desire to 'do something' at least as much as any humanitarian need. The INGC was not prepared for the onslaught of international assistance. According to one interviewee, various foreign military and international NGOs gave the INGC virtually no indication of what assistance they would provide or when it might arrive. This contributed considerably to the poor coordination on the ground.

The media seem to have played a crucial role in influencing countries' decisions to contribute military assets. Observers noted that, prior to the multiple emergencies in Mozambique in 2000, very few disasters had received media coverage comparable to that given the second phase of flooding of the Limpopo valley, which was associated with the full impact of cyclone Connie. International television crews, already present to cover the earlier flooding, transmitted dramatic pictures of people clinging to trees and rooftops and being winched to safety by helicopter crews. According to a British official who was involved in the disaster response, following the media coverage governments wished to offer help as a 'goodwill gesture'.

⁴ Former JLOC officer involved in the 2000 disaster response, interview.

Political considerations also came into play for some of the contributing countries. According to a member of the US humanitarian assistance survey team (HAST):

A humanitarian joint task force like this is political. . . . The US is trying to build relations with South Africa, and Defense Secretary [William] Cohen was in South Africa [at the time of the floods], and Cohen offered help [to South Africa, which was also experiencing floods]. But South Africa said it would be better to go to Mozambique. And we [the HAST] arrived there on 18 February.

It is worth noting that while the decision to send the HAST was arguably political, the US deployment of military assets was, in fact, in response to real assessed needs. The HAST's initial assessment was that US military assets would add little value to the existing efforts. The team was preparing to depart on 24 February but stayed in the country, at the urging of the US ambassador in Maputo, in order to determine the full impact of cyclone Eline. It was only after the team issued a new assessment, identifying a need for US military air assets, that the USA sent helicopters and C-130 Hercules aircraft.

Foreign military assets in the response

Because the main roads were made inaccessible, a large portion of the disaster relief assistance during the floods was conducted by air. Thus, the most common type of foreign military assets deployed in 2000 were fixed-wing aircraft and helicopters for transporting relief personnel to the affected areas and relief goods to the affected population and for conducting search-and-rescue operations. At the height of the operation, 56 foreign aircraft and over 1000 foreign military personnel were deployed. Table A.1 gives a list of foreign military assets participating in the response. The rest of this section examines the role played by foreign military assets in the response.

Timeliness

South Africa's military assets—mainly fixed-wing aircraft and helicopters—were the first to arrive in Mozambique, in early February, followed shortly afterwards by French and Malawian air assets. The majority of other foreign military assets arrived only in early March, after the third wave of flooding in Chókwè. Thus, only the South African and Malawian helicopters were available in time to participate in search-and-rescue operations, the South Africans in and around Chókwè and the Malawians in Beira, Sofala province. However, it is not clear that the lack of availability of other foreign military helicopters at this crucial time was a problem. The South African helicopters were able to rescue a total of 14 391 people. A British official interviewed observed that 'leaving it in the hands of one nation [South Africa] was probably ideal as the presence of other helicopters would have crowded the air space and posed some danger. Additionally, the South Africans were most familiar with the terrain.' The remaining air assets that arrived in the first week of March were deployed in time to take part in the lengthy relief phase.

By early March, the airport in Maputo was managing four times the normal number of landings and take-offs and nearly 10 times the normal volume of cargo. A bottleneck quickly developed due to delays in handling administrative issues such as landing fees of the foreign military air assets and customs declarations for relief items meant that several foreign military assets were not able to start operations in a timely manner.

Efficiency

Several measures instituted by foreign military assets were particularly helpful in ensuring the efficient use of (domestic and foreign) air assets. The creation of an emergency airstrip near Palmeira, situated midway between Maputo and Xai Xai, was particularly helpful as it reduced the number of flying hours and distances. More importantly, it helped to relieve congestion at Maputo airport. The establishment of the forward airbase at Manica allowed an efficient way to provide relief to Chókwè: items were delivered by road to Manica and then flown to the Chókwè region.

Potential humanitarian need also influenced the use of military assets already deployed to Mozambique. When the warnings for cyclone Eline were given, the South African Air Force cut back its flying hours late in that week to save hours and fuel for the rescues it expected to make the following week.

A number of military logistical techniques also increased efficiency. These included the use of oil bladders, which hold large quantities of fuel, together with the Canadian Buffalo aircraft, which had refuelling capability, meaning that aircraft did not need to carry spare fuel in oil drums and thus leaving more room for relief items to be transported to the affected population.

One critical factor that threatened to affect not only the efficiency but also the effectiveness of the disaster relief operation was the unavailability of fuel for the South African air assets. South Africa had indicated that it had only limited amounts of funds available to sustain the air support operation and that the cost of fuel needed to be borne by the international community. There were several occasions when the South African fleet was on the verge of withdrawing. This was ultimately resolved by offers from several donor countries to cover the cost of fuel for the South African helicopters.

With approximately 700 personnel and a fleet of 10 aircraft, the USA had the largest military presence during the disaster relief operation. However, whether the military assets operated efficiently and whether they were optimally utilized within the larger relief effort was called into question by a number of observers. For instance, the US Air Force decided against parking its aircraft at the military base at Maputo airport and instead chose to remain based in Hoedspruit, South Africa, for the entire duration of the relief operation as part of their force protection measures.⁵ This reduced the number of sorties and the coverage of the US helicopters because they had longer distances to travel. It was also reported that the load capacity of the US helicopters was significantly reduced because they were heavily armoured.

Similarly, the Spanish helicopter deployment was not able to operate at maximum efficiency because the pilots were still getting used to their aircraft.

Civil–military coordination

This flood had the largest number of military aircraft ever used in a coordinated way in a natural disaster.⁶

⁵ Mozambican Armed Forces official, interview.

⁶ Elmquist, M., 'Remarks', in F. Christie and J. Hanlon, *Mozambique and the Great Flood of 2000* (Indiana University Press: Bloomington, Ind., 2001).

Owing to the multiplicity of actors on the ground, the level of civil-military coordination was mixed. The greatest convergence of foreign military and civilian actors, as well as goods in Maputo, occurred during the first week of March. A number of interviewees pointed out that the Mozambican Government had no previous experience working with such a high number of international actors (be they military or humanitarian) and was not accustomed to the many and different operating procedures and reporting guidelines. Given that there was no effective domestic overall framework for coordination, other actors stepped in to fill the gap. The friction between the INGC and the Mozambican Armed Forces was seen by some as a contributing factor on the domestic front to the lack of overall stewardship of the relief operation. However, all those interviewed for this study responded that, despite the initial delays or problems, civil–military coordination during the relief effort functioned relatively smoothly.

The coordination unit of the Mozambican Armed Forces, the most logical domestic agency to take responsibility for coordination foreign military assets, was largely sidelined, in part because it lacked manpower; the unit had only three staff to coordinate effectively the many military assets coming from different countries. The members of this unit thought that the foreign contingents were reluctant to have their air assets coordinated by the Mozambican Armed Forces because the Mozambican Air Force itself contributed no air assets for the relief operation.⁷ Thus, leadership and coordination of the air operation out of Maputo was assumed by the SAAF, which had assisted the Mozambican Government in previous floods in 1996, 1997 and 1999 and thus knew the terrain well. More importantly, the SAAF task force commander had good relations with key Mozambican Government officials. Thus, daily meetings to coordinate the movement of air assets were chaired by the SAAF and coordinated with the domestic civilian air authority as regards air traffic control. As other contributing countries arrived with their military assets, they were integrated into the South African-led command-and-control structure. The other countries' militaries readily accepted South African leadership, perhaps because it is a regional actor with a well-respected military.

On 5 March, after the third flood, the Cell for Logistics Co-ordination was converted into a fully fledged Joint Logistics Operation Centre (JLOC) to manage and coordinate air assets, with the South African Air Force task commander in charge. This was the first time that the JLOC concept had been applied in a natural disaster response. Its use was the result of lessons learned from earlier complex emergency operations that involved the use of military assets. Interestingly, the UN's authority to plan and decide on priorities was initially questioned by some of the military units, in particular those of Germany and the USA, which did not readily accept the humanitarian coordination role of the UN. This problem was eventually overcome and, for the first time ever, foreign military assets were placed under civilian coordination in a natural disaster relief operation. The willingness to try new coordination set-ups was perhaps a result of earlier experience. As an OCHA official observed, 'In Hurricane Mitch there had been more military aircraft [than in Mozambique in 2000], but . . . each country went in and did its own operation. This proved to be inefficient, and many countries agreed to be more coordinated in future.'⁸

⁷ Mozambican Armed Forces official, interview.

⁸ Elmquist (note 6).

However, a separate civil and military operations centre (CMOC) for British and US military assets was set up in the INGC building. British individuals interviewed for the study contend that setting up the CMOC was necessary because it was up to each country to ‘handle and control [its own] air assets’, particularly if the country contributed a significant number of aircraft, while the role of the JLOC was to coordinate only. Other countries contributing military assets thought that these structures duplicated the work of the JLOC.

Another example of civil–military coordination that worked well occurred in water-based operations. Although air assets were vital to the disaster response, boats were also extensively used to rescue people in the Save Valley. They were perhaps more appropriate for transporting relief supplies to isolated groups and for simply ferrying people across breaks in or washed-out sections of roads caused by the continuing floods. The Netherlands dispatched 50 rubber dinghies manned by 10 military instructor-operators. A UK-based civilian organization, the Royal National Lifeboat Institute, sent a fleet of boats and a team of personnel. Both these civilian and military deployments worked alongside the Mozambican Navy. In the lessons learned session, it was suggested that, in future disaster relief operations, other common assets—such as boats, tents and warehousing—might be placed under the JLOC’s mandate in order to coordinate their deployment and use.⁹

Coordination in Beira, the other main area of operation, and in other provinces was not as good as that in Maputo. This was due to the fact that the INGC presence outside Maputo was weak. For example, in Beira the INGC asked the WFP to take on the overall coordination role, and the INGC was only occasionally represented at coordination meetings.¹⁰ However, logistic and air asset coordination reportedly functioned relatively well because the JLOC model employed in Maputo was also adopted in Beira to serve the Buzi and Save areas.

Key findings from the 2000 flood response

An evaluation workshop was held in June 2000 to review the 2000 flood response in Mozambique and identify issues that required further discussion, clarification and policy guidance. Its findings were as follows.

- The national capacity for disaster management needed strengthening. Division of roles and responsibilities between the different departments and ministries needed to be clarified.
- Disaster preparedness, contingency plans (including preposition of assets) and risk mitigation efforts needed to be developed.
- The Mozambican armed forces have an important role to play in national disaster management.

⁹ UN System in Mozambique, ‘Final report: review of the lessons learned in the response to the flood emergency in Mozambique’, 9 Sep. 2000.

¹⁰ UN System in Mozambique (note 9).

- It is important to first exhaust all domestic (civilian and military) resources before requesting foreign military assets.
- Overall coordination of the disaster relief assistance was considered a success, in particular, the unprecedented manner in which foreign militaries allowed themselves to be coordinated by the UN.

Lessons learned: the floods and cyclone in 2007

In February 2007 Mozambique was again afflicted by serious floods caused by heavy rains, quickly followed by the arrival of a cyclone, Favio, and exacerbated by the discharge of the Cahora Bassa dam in Tete province. The Zambezi river basin—the fourth largest in Africa—flooded and some 285 000 people in Inhambane, Manica, Sofala, Tete and Zambézia provinces were affected and 114 000 displaced. The economic damage was assessed at \$71 million. Although the impact of the February 2007 events was smaller than that in 2000, the INGC reported that the disaster in 2007 had the potential to have impacts on the same scale as those in 2001, which killed 81 and displaced over 155 000 people.¹¹

Several important lessons were drawn from the 2000 and 2001 experiences that affected how the INGC operated and managed the 2007 disaster. The use of foreign military assets was not considered a sensitive issue for the INGC, several domestic humanitarian organizations and even some of the UN operational agencies—it was felt that a pragmatic view should be adopted.

Strengthened domestic disaster management structures

Since 2000, policies, legislation and structured operating procedures regarding disaster risk reduction and disaster management have been put in place or are underway. In 2006 a new head was appointed to lead the INGC, and the coordination role of the agency was emphasized over its former operational role. During emergencies the INGC has a direct reporting line to the prime minister. The INGC built a number of regional centres for managing emergency operations. The operational response to emergencies is managed by the National Emergency Operations Centre (Centro Nacional Operativo de Emergência, CENOE). This is a component of the INGC. CENOE has several centres around the country that serve as the operations rooms for emergency response. The centre for the central region is in Caia. Another is located in Vilanculos for the south, and a third is planned for Angoche in the north. In an emergency, personnel drawn from the national level of the INGC and from the governments of the affected provinces staff the CENOE. One critical component of CENOE is that the UN operational agencies and other key humanitarian organizations are represented. Thus, in the event of an emergency, working relationships would have been regularized.

In addition, recognizing the important role that the Mozambican military can play, a military liaison officer is now permanently seconded to CENOE to ensure smoother inter-agency and civil—military cooperation. There is wide recognition that the domestic

¹¹ Cosgrave et al. (note 1).

military will continue to play a similar, and perhaps greater, role in future disaster relief operations. There is, thus, a strong imperative to involve the domestic military as early as possible and to sustain long-term relations between the INGC and the army. Joint training of individuals from the Ministry of Interior, the military, the INGC and the CVM has been organized to strengthen civil–military cooperation. The curricula include general training in first aid and information gathering as well as specialized training for the different natural disasters that occur in Mozambique—floods and cyclones, droughts, earthquakes and forest fires.

Using and coordinating foreign military assets

In 2007 the need to rely on foreign assistance, in particular foreign military assets, was greatly reduced due to the enhanced institutional capacity of the INGC in terms of disaster preparedness and effective contingency plans at the national, provincial and district levels. Much of the response was managed by the INGC, with limited airlift assistance from the South African Air Force. The SANDF contributed two fixed-wing aircraft and one helicopter to transport relief items to the affected areas. An innovative approach was adopted with regard to the command and control of the South African aircraft deployed. A retired general from the South African Air Force was seconded to the INGC and the WFP, which was the lead agency for logistics, to control and coordinate all air operations during the emergency. This prevented civil–military coordination problems during the 2007 emergency. In the words of a WFP official:

It was much cheaper for the UN to use the South African military air assets because it bore no cost to us, with the exception of fuel which was built into the CERF [United Nations Central Emergency Response Fund] application. Most importantly it was an approach that worked well and WFP would not hesitate to use the same approach again in Mozambique.¹²

Nevertheless, Mozambique still does not have a standard or formalized procedure for requesting foreign military assets. Instead personal and political ties between the heads of government of Mozambique and South Africa have been the driving force behind the deployment of military assets.

¹² WFP official, Maputo, interview.

Table A.1. Foreign military assets contributed to the disaster relief operations in Mozambique, 2000

This list of assets should not be taken as definitive.

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling date	Arrival date	Departure date	Location
South Africa	Fixed-wing aircraft	C-212 Aviocar	3	20	Air	Bilateral	11/02/00	02/05/00	Maputo
	Fixed-wing aircraft	Cessna Caravan	1		Air	Bilateral	11/02/00	02/05/00	Maputo
	Fixed-wing aircraft	Cessna Skywagon	1		Air	Bilateral	11/02/00	02/05/00	Maputo
	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	11/02/00	02/05/00	Maputo
	Helicopter	Oryx and BK 117	5	42	Search and rescue	Bilateral	11/02/00	02/05/00	Maputo
	Ground operation personnel			57	Support personnel	Bilateral	11/02/00	02/05/00	Maputo
France	Fixed-wing aircraft	C-160 Transall	2		Air	Bilateral	19/02/00	26/02/00	..
Malawi	Helicopter	SA-330 Puma	2		Search and rescue	Bilateral	22/02/00	05/04/00	Beira
	Helicopter	AS-350 Fenec	1		Search and rescue	Bilateral	22/02/00	05/04/00	Beira
France	Helicopter	SA-330 Puma	2		Air	Bilateral	02/03/00	12/03/00	Maputo
	Helicopter	SA-341 Gazelle	2		Air	Bilateral	02/03/00	12/03/00	Maputo
	Helicopter	A3	2		Air	Bilateral	02/03/00	12/03/00	Maputo
	Personnel			750		Bilateral			Maputo
UK	Helicopter	SA-330 Puma	4		Air	Bilateral	06/03/00	20/03/00	Maputo
	Helicopter	SH-3 Sea King	4		Air	Bilateral	06/03/00	20/03/00	Beira
Germany	Fixed-wing aircraft	C-160 Transall	2		Air	Bilateral	07/03/00	29/03/00	Beira
	Helicopter	Bo-105	4		Air	Bilateral	07/03/00	29/03/00	Beira
	Helicopter	SA-330 Puma	3		Air	Bilateral	07/03/00	29/03/00	Beira
	Helicopter	UH-1 Huey	4		Air	Bilateral	07/03/00	29/03/00	Beira
USA	Fixed-wing aircraft	C-130 Hercules	3		Air	Bilateral	09/03/00	27/03/00	Hoedspruit, South Africa
	Helicopter	HH-53	3		Air	Bilateral	09/03/00	27/03/00	Hoedspruit, South Africa
	Helicopter	HH-60 Pave Hawk	4		Air	Bilateral	09/03/00	27/03/00	Beira

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Spain	Helicopter	SA-330 Puma	2		Air	Bilateral	12/03/00	02/04/00	..
	Helicopter	AS-532 Cougar	1		Air	Bilateral	12/03/00	02/04/00	..
Portugal	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	20/03/00	03/04/00	..
Netherlands	Boats	Zodiac	50		Search and rescue	Bilateral	..	..	..

Source: List of main foreign military assets obtained from Governo De Moçambique, Balanco Final: Apelo de Emergência Face às Cheias, Outubro de 2000; documents obtained from the OCHA Financial Tracking System; F. Christie and J. Hanlon, *Mozambique and the Great Flood of 2000* (Indiana University Press: Bloomington, Ind., 2001); and data from contributing countries.



Annex B

Case study: Floods and tropical storm Jeanne, Haiti, 2004

The responses to two natural disasters that occurred in Haiti in 2004 were in some ways unique among the cases presented here. Extremely weak domestic infrastructure and institutions, poor governance and a violent political crisis that broke out in February 2004 left the country with virtually non-existent civilian disaster relief capabilities. Thus, foreign troops deployed under United Nations mandate to restore security and stability and to facilitate the provision of humanitarian relief, among other tasks, became the main actors for disaster relief. At the same time, the relief operation became intertwined with the larger question of domestic insecurity. The natural disasters caused by flooding in May 2004 and tropical storm Jeanne in September–October 2004 differed in their nature but together marked a turning point in disaster relief management in Haiti.

Background

Weak domestic infrastructure and institutions

Haiti is one of the world's poorest countries. Endemic violence and failed governance have led to a continuous decline in development and investment and to a high dependency on foreign aid and security. These weaknesses have had a long-term negative effect on several critical areas such as food security, water and sanitation, and health and nutrition. Deficiencies in these areas are not conducive to a normal and efficient national response to severe humanitarian needs. Non-governmental organizations and other civilian humanitarian actors also have serious difficulties operating normally in an environment of such widespread insecurity. Haiti's weaknesses reinforced its vulnerability to natural disasters. In 2004 the military had to provide escorts, transport and logistics as well as deploy troops. Some capabilities—ranging from helicopters to night vision goggles—are indispensable for an effective response, as the local and international NGOs and other civilian humanitarian agencies were well aware. Since 2004, the United Nations Stabilization Mission in Haiti (MINUSTAH) has taken measures to better meet such needs.

The Haitian infrastructure remains extremely weak, especially at the local level, and it is unable to respond adequately to damaging hurricanes. Without an army and a significant police force, Haiti has to rely on foreign troops to respond to emergencies. Its civilian infrastructure is also too weak to cope with disasters. The lack of transport is particularly significant. Currently, assessment teams must rely on foreign helicopters to transport them to affected areas, and even the president and the interior minister are dependent on foreign logistics.

The National Committee for Risks and Disasters Management (Comité National de Gestion des Risques et des Désastres), directed by the Ministry of Interior, is responsible for dealing with natural disasters. Each community is supposed to designate a local committee; and this is also the case for each of the 10 departments into which Haiti is divided. During a crisis, the president may choose to coordinate relief efforts himself. The Centre for Emergency Operations (Centre d'Operations d'Urgence) coordinates its activities with those of the local authorities, usually relying on the Red Cross network. However, it does not have sufficient capabilities in terms of logistics, communications and knowledge. During the flooding in May 2004 it was not activated because of the suddenness of the event and the volatile political situation at the time. The centre was activated for tropical storm Jeanne, but its effectiveness was limited. The true command authority lies elsewhere: at the United States Embassy, at US Southern Command (USSOUTHCOM) or with MINUSTAH, institutions that have the capacity to effectively respond to disasters.

Vulnerability to natural disasters

Haiti is particularly vulnerable to natural hazards because of its location on the trajectory of hurricanes and tropical storms. It is also in one of the areas of the world with the most seismic activity. Poverty, overpopulation, unplanned urbanization and the weaknesses of government institutions greatly increase the chance that such events will result in disasters. Environmental destruction, specifically deforestation, is the most significant problem. Haiti now has only around 1 per cent forest cover, which makes it particularly vulnerable to rainfall and high winds. The impacts of deforestation are made even more catastrophic by the fact that 63 per cent of Haiti's territory is on a slope greater than 20 per cent.¹³ According to a UNDP report, Haiti suffered an average of 0.81 flooding disasters every year between 1980 and 2000.¹⁴

Floods and mudslides are particularly lethal in Haiti. In urban centres, unplanned construction is spreading in unsafe areas. Entire neighbourhoods are being built on unsafe hillsides, posing a danger to the inhabitants and to those living below such structures. In these precarious conditions, even normal rains are a serious hazard. Endemic violence has also contributed to the displacement of people to remote and hazardous areas. Unless environmental destruction and other basic problems are addressed, natural disasters will continue to affect Haiti frequently. As an official of a leading local NGO stated: 'without a policy of urban planning, land management and safety regulations, Haiti is doomed to suffer again from natural disaster'.

The disasters in 2004 caused the death of more than 5000 people in Haiti, a figure that is disproportionate to the severity of the events that caused them. Although it did not reach

¹³ See Diamond, J., *Collapse: How Societies Choose to Fail or Succeed* (Viking Press: New York, N.Y., 2005); Preeg, E. H., *The Haitian Dilemma: A Case Study in Demographics, Development, and US Foreign Policy* (Center for Strategic and International Studies: Washington, DC, 1996), p. 35; UN Inter-Agency Secretariat of the International Strategy for Disaster Reduction (ISDR), 'Haiti: poverty generates disasters', Press release UN/ISDR 2004/09, 24 Sep. 2004.

¹⁴ United Nations Development Programme, Bureau for Crisis Prevention and Recovery, *Reducing Disaster Risk: A Challenge for Development* (UNDP: New York, N.Y., 2004).

hurricane strength, tropical storm Jeanne was particularly lethal, resulting in the deaths of 3000 people. Only 11 deaths were reported in the neighbouring Dominican Republic, even though the force of the rains there was even greater.¹⁵

Reliance on international assistance

Haiti relies on foreign aid and assistance to meet its basic needs—a situation not unlike that during disaster relief. The USA is one of the most important contributors, through USAID and USSOUTHCOM. These two institutions are essential for disaster management; the relationship between the US Embassy in Haiti and USSOUTHCOM is particularly close. US dominance in the Caribbean extends to a wide range of issues, several of them critical to Haiti.¹⁶

At the April 2001 Summit of the Americas, US President George W. Bush presented the Third Border Initiative, which aims to increase cooperation in HIV/AIDS prevention and in mitigating the negative effects of globalization for developing countries. The initiative also aims to enhance capabilities to respond to natural disasters. After the 11 September 2001 terrorist attacks on the USA, trafficking, border control and terrorism became the highest priorities for the USA. This shift in focus strengthened the role that USSOUTHCOM plays in Haitian affairs and has also affected the way that the USA perceives its humanitarian efforts in general. As an official from the Office of US Foreign Disaster Assistance (USAID/OFDA) noted: ‘assistance has become a means to an end, less an end in itself’.

Other international contributors are also crucial to Haiti’s existence. The European Community Humanitarian Aid department (ECHO) has allocated more than €11 million in humanitarian aid to Haiti since 2002.¹⁷ Among UN agencies, the UNDP and the WFP are essential components of the international humanitarian effort. Several international NGOs are also active in the country, in particular Oxfam Quebec, CARE, Catholic Relief Services (CRS) and the International Committee of the Red Cross. The International Federation of Red Cross and Red Crescent Societies in 2000 established the Pan American Disaster Response Unit (PADRU) to respond more effectively to natural disasters in the Caribbean and Latin America. PADRU’s role is twofold: when a disaster occurs, it coordinates and facilitates the international response of the Red Cross in the Caribbean and Latin America; and when it is not responding to disasters, it contributes to strengthening the local and regional disaster response capacity of its national societies.

Haiti’s dependence is also accentuated by its relative isolation in the region. Its membership in the Caribbean Community was suspended after President Jean-Bertrand

¹⁵ UN Inter-Agency Secretariat of the ISDR (note 13).

¹⁶ Between 1995 and 2003, USAID provided a total of \$850 million in direct bilateral assistance to Haiti for programmes in several areas, including health; democracy and governance; education; and economic growth. This assistance was channelled through NGOs, most notably CARE (which was very active in Gonaïves after tropical storm Jeanne) and the Pan American Health Organization (PAHO). USAID provided food and food-related assistance to 650 000 Haitians annually. USAID, ‘Food, water and medical assistance to Haiti’, Press release, 23 Feb. 2004.

¹⁷ Of the €1.8 million earmarked by the European Commission for Haiti in Mar. 2004, €200,000 were dedicated to the funding of an OCHA office in Port-au-Prince. European Commission, ‘ECHO’s response to the crisis’, <http://ec.europa.eu/echo/field/haiti/echo_en.htm>.

Aristide's departure from power in February 2004. Although Haiti was formally reinstated as a member in July 2006, its relations with CARICOM are minimal. Haiti is also not part of CARICOM's Caribbean Disaster Emergency Response Agency, which further reinforces the dominance of the UN and US forces in responding to disasters there.

Political instability

Haiti has suffered from dictatorship and political instability for decades and has a long history of violence. President Aristide's second term of office, which followed controversial elections held in 2000, saw a marked increase in human rights violations and extrajudicial killings that fed a vicious cycle of vengeance, violence and unrest. Haiti suffered political deadlock, with opposition groups refusing to negotiate as long as Aristide remained in power. The Organization of American States (OAS) and CARICOM made several fruitless attempts to bring the opposition and the government to the negotiating table. International aid was also suspended.

In early 2004 this dangerous situation became even more unstable. On 5 February armed rebels seized control of Gonaïves, Haiti's third largest city, and then took Cap-Haïtien, the second largest city. Subsequently, they expanded their control throughout most of the northern region. Widespread violence erupted in other areas, including Port-au-Prince. On 18 February 2004, US Ambassador James Foley issued a disaster declaration and the transport and distribution of emergency relief supplies began.¹⁸ In a standard initial response, the USA provided \$50 000 through USAID/Haiti for the transport and distribution of these supplies.¹⁹ USAID, the ICRC, the UN and the NGOs assessed the humanitarian situation. Widespread violence and looting; the collapse of Haiti's infrastructure, including its hospitals; the quadrupling of the price of fuel; and the lack of electricity led them to decide that the use of military troops was necessary in order to deliver assistance. USAID's short-term response amounted to more than \$2 million. The ICRC appealed to donors for 4.6 million Swiss francs to cover relief operations in the months to come.²⁰ UN Secretary-General Kofi Annan appointed John Reginald Dumas of Trinidad and Tobago as his special adviser on Haiti on 26 February, and the UN established an Inter-Agency Humanitarian Mission to assess the situation. A task force made up of representatives from the UN agencies involved—the WFP, the World Health Organization, the Pan American Health Organization (PAHO), the UN Children's Fund, the Office for the Coordination of Humanitarian Affairs, the UN Food and Agriculture Organization (FAO), the Joint UN Programme on HIV/AIDS (UNAIDS), the UN

¹⁸ This assistance included medical, surgical and hygiene kits. Additional assistance was provided for emergency medical and immunization activities, emergency cash grants to local institutions caring for vulnerable populations, emergency relief kits, cash-for-work initiatives, electricity generation and emergency air transport. USAID Bureau for Democracy, Conflict, and Humanitarian Assistance and USAID/OFDA, 'Haiti—complex emergency', Fact sheet no. 1, 23 Feb. 2004.

¹⁹ USAID/OFDA used Air Serv International, a non-profit humanitarian aviation organization, for relief operations and personnel transport. Due to the precarious security situation and the temporary closure of many areas, Air Serv International provided only 3 aircraft which flew less than half the 200 hours requested.

²⁰ Margesson, R., 'Humanitarian crisis in Haiti: 2004', CRS report to Congress, updated 5 Mar. 2004.

Population Fund (UNFPA) and the UNDP—was established to coordinate emergency relief and negotiate corridors through areas controlled by rebel groups for the safe passage of humanitarian convoys.

On 29 February 2004, President Aristide fled into exile. In Port-au-Prince, Aristide's departure was met with gunfire and looting, while gangs loyal to Aristide patrolled the streets and shot randomly at local residents. The same day, UN Security Council Resolution 1529 authorized the deployment to Haiti of a Multinational Interim Force (MIF-H) for three months to help the provisional government to restore order. President Bush ordered the dispatch of a 2000-strong task force. Its immediate mission was to secure key sites in the Haitian capital, to contribute to a more secure and stable environment, to restore the constitutional political process and to assist and facilitate the delivery of humanitarian assistance. Its medium-term objective was to prepare for the arrival of the multinational force.²¹ By late April, the MIF-H comprised about 3800 troops from Canada, Chile, France and the USA.²²

On 30 April the UN Security Council adopted Resolution 1542, establishing MINUSTAH. The new mission's mandate was to support the constitutional and political process in Haiti, to help maintain a secure and stable environment, and to assist in the protection and promotion of human rights. On 25 June MINUSTAH took over operational responsibilities from the MIF-H. The French and US MIF-H forces left the country on 30 June, while the Canadian and Chilean contingents joined MINUSTAH as UN peacekeepers, alongside a large Brazilian contingent and smaller national contingents, mostly from Latin America.

Military and humanitarian missions

In a complex emergency, troops face a wide range of challenges. The first priorities are force protection and restoring basic security so that humanitarian and other essential work can take place safely. However, both of these tasks entail the risk of casualties, which can be counter-productive when the focus is meant to be performing humanitarian tasks. However, without security, there can be no sustainable relief effort. The MIF-H imposed order mostly by deterrence. There was no widespread or violent opposition to the presence of foreign troops, only sporadic and limited fighting when the force confronted rebels and armed gangs. This meant that the MIF-H could relatively quickly focus on humanitarian work, which included the day-to-day provision of food, water, sanitation, education, healthcare and assistance with community building.²³

²¹ UN Security Council, 'Security Council authorizes deployment of multinational force to Haiti for 3 months, unanimously adopts Resolution 1529', Press release SC/8015, 29 Feb. 2004.

²² The US contingent had expanded into Les Cayes in the south and Hinche in the central plateau. The French expanded their security zone in the northern part of the country.

²³ As an illustration of the humanitarian work carried out by MIF-H, it provided day-to-day food, health, water, sanitation, education and community-building assistance. It delivered more than \$850 000 of excess medical supplies from USSOUTHCOM to hospitals; it distributed hundreds of hygiene kits to schools and families in Port-au-Prince; the Marine Ground Task Force conducted a water distribution programme and cleared drainage canals in the Cité Soleil and Bel Air slums of Port-au-Prince; Chilean forces distributed 12 tonnes of medicine and equipment from Chile to hospitals; French forces repaired schools and public buildings in Cap Haïtien; and Canadian forces were also involved in repairing schools and orphanages.

MINUSTAH continues to face the same dilemma today that the MIF-H faced at this time: using force to pacify insecure areas on one hand and helping local populations on the other. MINUSTAH has succeeded for the most part. In general, response to natural disaster provides an opportunity to gain the trust and the cooperation of local populations. In the relatively benign environment in Haiti, the involvement of foreign militaries in delivering aid and humanitarian assistance during natural disasters was a natural extension of their ongoing tasks. However, because of the UN mandate and national constraints, using military assets for natural disasters was not straightforward.

Haiti's political instability had major consequences for humanitarian assistance. The social unrest throughout the country and the troubled security situation—with ongoing looting and sporadic violence, including gun battles—meant that it was not possible for humanitarian agencies to travel safely to monitor and assess needs. The UN, various NGOs (among them CARE, CRS, Save the Children and World Vision), USAID and PAHO were all seriously hampered in monitoring the situation. There were only 15 Red Cross ambulances in the country at the beginning of May 2004. USAID/OFDA conducted an assessment mission on 9–11 Feb. 2004 and sent a permanent three-person team to Haiti on 24 February. Moreover, the interim government had not yet appointed most elements of the National Committee for Risks and Disasters Management. In the spring of 2004 Haiti was a failed state on the verge of widespread political chaos leading to insurgency. Paradoxically, this helped in the response to the flooding of May 2004 because US and international attention was focused on Haiti.

Disaster response: the floods of May 2004

In the period 18–25 May 2004, unusually heavy rains (exceeding 500 millimetres) fell along the border between Haiti and the Dominican Republic. The worst flooding occurred along a river system that drains the northern flank of the Massif de la Salle and in a poorly drained area along the southern slope of those mountains. The flooding destroyed entire communities, caused massive loss of life and displaced tens of thousands of people on both sides of the border. In Haiti, the flooding affected more than 15 000 people, displaced 1600 families, and damaged or destroyed 3000 houses. According to OCHA data, the flooding in Haiti killed 1059 people and injured 153, affected 6226 families, destroyed 1698 houses, and damaged another 1687. The floods destroyed 50–70 per cent of the agricultural production of five villages in the area of Mapou and approximately 80 per cent of the wells in the area were contaminated.

Severe by itself, the flooding caused immense damage in part because of the already precarious situation. Before the rains, Haiti's Centre d'Operations d'Urgence was not activated, and no warning was issued to local populations. The immediate response of the Haitian Government was to ask for foreign assistance. The first priorities were search and rescue and the delivery of safe water and food. NGOs had to operate in an extremely precarious environment because the local police force was overwhelmed by the event. The MIF-H, which did not hand over full authority to MINUSTAH until the end of June, had to secure entire areas before food and water could be delivered. Port-au-Prince, the point of arrival for aid, was also not secure, and convoys departing from the capital had

to be given protection. Humanitarian corridors were set up to ensure the safety of the convoys. Food depots had to be protected against looting. The dispatch of military assets from abroad, primarily the USA, focused on reinforcing the MIF-H, supplementing air transport capabilities and providing emergency survival kits. At the time of the flooding OCHA had only recently been established in Haiti and its infrastructure was too weak to play a role. Relief efforts were coordinated by direct dialogue between the MIF-H and local and international NGOs. In the insecure situation existing at that time, the MIF-H command rapidly became the sole authority in managing the disaster response. A list of foreign military assets that took part in the flood relief operations is given in table A.2.

The US and international response

On 26 May the US ambassador to Haiti declared a disaster because of the damage caused by the flooding. USAID/OFDA provided the standard \$50 000 in emergency relief finance to support relief activities in Haiti.²⁴ Funds were also provided to the IRFC to support relief activities and to the WFP for air transport of relief supplies and personnel. Total US Government humanitarian assistance to Haiti in response to the flooding amounted to \$1 763 909. The US Department of Defense contributed a total of \$335 209 to the MIF-H for flood assistance in Haiti. This paid for the use of CH-47 Chinook and UH-60 Black Hawk helicopters, flown by the MIF-H, which delivered 155 000 kilograms of relief supplies to affected areas and transported 443 people to the affected areas to conduct damage assessments and give first aid, at a cost of \$258 791. The European Union was also an important contributor of aid. ECHO earmarked €2 000 000 for response to the flooding in the Dominican Republic and Haiti.²⁵

The role of the MIF-H

The floods severely damaged highways and village roads and isolated communities. For the first 36 hours all roads were impassable and the affected area was only accessible by air. It took five days before trucks could reach the devastated zone. The MIF-H used 12 helicopters (Chinook and Black Hawk) to support humanitarian relief in the area of Fonds-Verrettes, a village approximately 50 km south-east of Port-au-Prince. The village of Mapou, some 15 km away from Fonds-Verrettes, was only accessible by air. The MIF-H delivered 18 000 litres of bottled water, 500 boxes of fresh fruit and 500 boxes of bread to residents of Fonds-Verrettes. It also provided transportation to members of the Haitian Government, UN officials and representatives of NGOs to enable early assessment of the situation. Helicopters, the protection of convoys and security on the ground were crucial elements of the humanitarian effort: without the involvement of the MIF-H, it would have been impossible to reach the affected area and deliver assistance.

From 1 to 10 June the MIF-H returned to its primary mission of ensuring the security of Port-au-Prince and ceased its flights to Mapou. The official reasons given for withdrawing this support were linked to the MIF-H's mandate, the availability of other helicopters

²⁴ This included the purchase and distribution of hygiene kits, cooking sets, blankets and water containers, and the direct procurement of fuel for use by the Ministry of Public Works to repair roads in affected areas.

²⁵ This was in addition to the €7 200 000 in response to the Aristide crisis. European Commission (note 17).

from NGOs and the overall security situation—which required the MIF-H to focus on Port-au-Prince. According to the NGOs and the UNDP, delivering assistance became extremely difficult without the support of the MIF. The WFP in particular badly needed these flights, and precious time was wasted finding a civil alternative. Most importantly, the MIF-H's decision was taken unilaterally and the NGOs did not have time to find an alternative immediately. The MIF-H argued that the urgent situation had been addressed and that, from a military perspective, maintaining security in Port-au-Prince was a higher priority for the use of MIF-H assets. However, humanitarian agencies suggested that force protection was the main reason for stopping the flights. OCHA's assessment was that a strong police presence was required in Fonds-Verrettes to ensure the effective distribution of relief supplies. Without national police in Mapou the MIF-H could not guarantee the safety of the helicopters and, as it had a zero-risk policy, it decided to stop using them.

There was also a problem of succession between the MIF-H and MINUSTAH. The Brazilian commander of MINUSTAH at this stage, General Heleno Ribeiro, did not receive an effective transfer of authority from the MIF-H on 1 June, as was originally anticipated in Resolution 1542. This made it impossible to mobilize Canadian and US helicopters under UN authority. As the general stated: 'The U.S., French and Canadian forces suspended helicopter flights and will be taking those machines with them when they leave the country, and I have absolutely no influence on that decision.'²⁶

This episode illustrates the difficulty of coordinating military activities with those of civil humanitarian actors. A dialogue between the MIF-H, the Haitian Government and the NGOs was difficult. The fact that OCHA was not effectively operational in Haiti meant that civil–military coordination was not ensured. In fact, as one official from the UNDP stated, 'the situation was chaotic, including among UN agencies themselves'. Nonetheless, the MIF-H fulfilled 21 of 24 requests either to escort humanitarian shipments or to provide troops to ensure the security of supplies. MIF-H helicopters were used again after 10 June to assist the WFP to deliver 15 tonnes of food assistance to the Mapou area. Subsequently, WFP-chartered helicopters, partially funded by USAID/OFDA, took over this task.

As noted above, the floods of May 2004 occurred in a complex and unstable political and security environment, the country was in a state of emergency, and the international community was already heavily involved in daily humanitarian operations. Even if the security problems should not be overestimated, it seems clear that this was the primary concern of the MIF-H commander. Because assets were limited, and because security in Port-au-Prince was deteriorating, restoring order was deemed a priority. Natural disaster relief was not part of the MIF-H's original mission and could not be allowed to endanger the overall mission. As a USSOUTHCOM officer acknowledged, the MIF-H 'had to make some trade off between order and relief, but ultimately restoring the first conditioned the efficiency of the second'. It is worth noting that, in general, the active involvement of military forces helped to mitigate the consequences of the flooding and enabled the civil humanitarian actors to operate. The problems that occurred were minor compared to the benefits of military participation.

²⁶ 'Brazilian general heading UN forces complains', *Granma Internacional*, Havana, 11 June 2004.

Disaster response: tropical storm Jeanne

Tropical storm Jeanne caused devastating mudslides and floods in northern Haiti on 17 and 18 September 2004, killing some 3006 people and affecting some 300 000 more, leaving thousands homeless, and destroying crops and livestock. Heavy rains totalling about 330 millimetres in the northern mountains of Haiti caused severe flooding and mudslides in the Artibonite region of the country, causing particular damage in the coastal city of Gonaïves, 80 per cent of which was flooded. About 2800 people were reported to have died in Gonaïves, and 160 000 out of a population of 250 000 required food aid.²⁷ This extensive damage occurred even though, when it struck Haiti, Jeanne had been downgraded from a category 1 hurricane to a tropical storm.

The Center for Emergency Operations was activated in advance, and MINUSTAH also spread information and issued timely local warnings. However, because Gonaïves is not usually affected by hurricanes, the region in which it is located was not put on high alert. The security situation in Gonaïves was also strained. The city had been a stronghold of opposition to Aristide and its people and the local gangs openly opposed the authority of the state. At the same time, the security situation had also deteriorated in Port-au-Prince. In September 2004 a wave of violence spread to the capital, and armed gangs began a campaign against the Haitian National Police. Food depots in Port-au-Prince had to be protected and aid convoys escorted. Checkpoints also had to be set up on Road 9, which led to the devastated area in the north, but it was impossible to secure its entire length. Rapidly, however, the military brought in local engineering assistance and made the roads accessible. It took five days for the first truck to reach Gonaïves. In the first week, 61 trucks were escorted by MINUSTAH from Port-au-Prince. The national airport remained under military command. A list of foreign military assets that took part in the response after tropical storm Jeanne is given in table A.3.

The US and international response

On 21 September the US ambassador to Haiti declared the situation a disaster owing to the magnitude of the effects of tropical storm Jeanne in the Artibonite and north-west departments of the country. In response, USAID/OFDA provided an initial \$50 000, through USAID/Haiti, to CARE for the distribution of hygiene kits, cooking sets, blankets, water containers and other relief supplies to those most affected by the floods. OFDA secured an aircraft from the non-profit humanitarian aviation organization Air Serv International to undertake aerial assessments and transport personnel and relief commodities as required. On 23 September USAID/OFDA, using the Air Serv International aircraft, airlifted 300 rolls of plastic sheeting, more than 5000 ten-litre water jugs and 3660 hygiene kits from Port-au-Prince to Gonaïves. Through its partner organizations USAID delivered \$3 million worth of emergency food aid. A USAID Disaster Assistance Response Team (DART) team was dispatched to assist with damage assessment and evaluation. During the emergency phase, the US Government contributed approximately \$11.3 million for

²⁷ Congressional Research Service (CRS), ‘Temporary protected status option for Haitians affected by tropical storm Jeanne’, Memorandum to the House Committee on the Judiciary, Subcommittee on Immigration, Border Security, and Claims, 18 Oct. 2004.

immediate relief items and emergency food assistance. The focus of this first phase of assistance was on saving lives and providing emergency relief to those in greatest need. With the aid of partner organizations, USAID provided logistical and air support through its civil partner, Air Serv International, as well as health, shelter, water and sanitation, and cash-for-work clean-up activities.

The flash appeal issued on 1 October 2004 sought \$32 million to cover emergency relief and early recovery operations related to tropical storm Jeanne until March 2005. Short-term US assistance in response to Jeanne totalled approximately \$2.2 million. In October 2004 the US Congress appropriated \$100 million in emergency assistance for the Caribbean, of which \$38 million was designated for Haiti.²⁸ The EU allocated €1.5 million to the victims of tropical storm Jeanne in Haiti, most of which was to be distributed by the Red Cross. In addition, ECHO earmarked €2.5 million for humanitarian assistance after tropical storm Jeanne. The focus was on long-term reconstruction, primarily water distribution, the rehabilitation of water systems, promoting access to health care, food distribution and agricultural recovery.²⁹

The role of MINUSTAH

In the aftermath of tropical storm Jeanne, MINUSTAH, although still in the early stage of its deployment, fully mobilized its forces in support of the humanitarian effort, relocating them to Gonaïves.³⁰ MINUSTAH mobilized its entire fleet of helicopters in support of the humanitarian effort, ferrying aid and staff to the affected areas and conducting aerial surveys. Communication with the capital was possible only via a satellite used by MINUSTAH and USSOUTHCOM. Local radio was used to deliver messages to the populace. All of the NGO representatives interviewed for this report acknowledged the value of MINUSTAH's work in the first few days after the catastrophe. While there was some local resistance to the presence of military assets, MINUSTAH allowed the creation of a relatively safe humanitarian space and undoubtedly helped to save lives.

The Argentinian MINUSTAH battalion already stationed in Gonaïves was severely hit by the disaster and the decision was immediately taken to send Uruguayan troops to provide humanitarian assistance. The Uruguayan civil–military cooperation (CIMIC) team advised the local population and helped to evacuate people in need of medical assistance. Forty Brazilian soldiers were also sent to reinforce the Argentinian battalion and to help rehabilitate the base. Cuban civilian aid workers were also present in Gonaïves.

The Argentinian battalion regrouped in one of the few usable structures in the city, the local university, transforming it into a field hospital and emergency centre. Médecins Sans Frontières (MSF), Médecins du Monde (MDM) and 14 Cuban doctors ran three other small field hospitals. The use of a university by foreign troops was not welcomed by the

²⁸ Sullivan, M. P., 'Caribbean region: issues in U.S. relations', CRS report for Congress, updated 25 May 2005.

²⁹ European Commission, Directorate-General for Humanitarian Aid (ECHO), 'Continued emergency assistance to flood victims in Haiti', Emergency humanitarian aid decision 23 02 01, Nov. 2004.

³⁰ At the time of tropical storm Jeanne, MINUSTAH was composed of 3092 troops from 5 countries: 552 from Argentina, 448 from Brazil, 129 from Nepal, 128 from Sri Lanka and 573 from Uruguay. This was less than half of the mandated maximum force size of 1622 civilian police and 6700 troops.

local people at the start of the operation, but the field hospital that was set up there saved a substantial number of lives by preventing a major epidemic. The Argentinian battalion, which played a crucial role in early search-and-rescue activities, and was given the difficult task of managing the disposal of corpses. This required balancing urgent public health concerns with the local people's wish to bury their dead with traditional rites. MINUSTAH airlifted body bags to the site and the Argentinians tried to hand over corpses wherever family members could be identified. Nevertheless, common graves had to be used in many cases to prevent disease outbreaks, which offended some local people.

On 23 September a UN Disaster Assessment and Coordination (UNDAC) team, comprising four personnel on site and two in Port-au-Prince, set up an On-site Operations Coordination Centre in the university building secured by the Argentinian battalion.

Aid from the capital sent by road was unable to reach its destination in the first five days after the tropical storm; only MINUSTAH helicopters were able to reach the people in distress. Search-and-rescue operations began almost immediately after the storm. The first massive distribution of food took place on the fifth day when, according to CARE, 40 tonnes of food were delivered to Gonaïves, where the security situation was very tense. Much of the city was under a metre of water and mud, and in the first few days only three dropping points, with few mobile chains of distribution, were available for use. There were almost no police officers on duty in Gonaïves—the local police station had been destroyed—and the food deliveries were assaulted by mobs. Troops from the Argentinian battalion were used to secure the area. After this first attempt the UNDAC team called for 'aid convoys to be escorted by MINUSTAH . . . we recommend that all deliveries be notified to the MINUSTAH Joint Operations Centre in the UN compound in Port-au-Prince'.³¹

The existing security environment in Gonaïves made operating there particularly difficult. For example, former Haitian soldiers were denied entry to Gonaïves, even to deliver humanitarian aid, because they refused to relinquish their arms. Maintaining humanitarian space required neutralizing the threat various armed gangs, political camps and rebels. MINUSTAH greatly facilitated the works of the other humanitarian agencies by securing the convoys and dropping points. At the food distribution points, MINUSTAH deployed additional platoons and civil police units to reinforce the peacekeeping troops. The use of force was not often necessary, and MINUSTAH's presence functioned mostly as a deterrent.

By September 2004 OCHA was far more functional than it had been in May. Every day in the immediate aftermath of the flooding, two meetings took place between MINUSTAH, UN agencies and NGOs. Aid efforts were coordinated, but once it had started providing security for aid deliveries, MINUSTAH had the last word on their timing. Coordination greatly facilitated the relief efforts. At times, MINUSTAH and the UNDP did not agree on the approach to be taken; this was particularly the case regarding the use of helicopters. MINUSTAH largely adopted a sectoral approach and, as an Oxfam official noted, 'by playing along, there was no sense of competition with the military'. For example, a water committee comprising NGOs and the Haitian authorities was set up to avoid looting

³¹ UN Humanitarian Coordinator, Haiti: Situation Report—Gonaïves, 1800hrs, 22 Sep. 2004.

during distribution of bottled water. This was done in close cooperation with MINUSTAH. The Haitian Protection Civile also played a role: in the first five days after the tropical storm it provided four doctors, three generators, 20 000 packets of food and 383 pieces of plastic sheeting to Gonaïves.³²

The military had been instrumental in opening access to and securing locations so that the civil humanitarian agencies could operate. According to the UN special representative and head of MINUSTAH, Juan Gabriel Valdés, ‘This was not part of the original mandate of MINUSTAH, but if MINUSTAH was not there, the situation would have been much worse’.³³

Lessons learned

Tropical storm Jeanne was instrumental in altering the approach to disaster relief in Haiti. First, MINUSTAH has changed. Since 2006 disaster relief has been included as one of its main tasks. An emergency centre created at MINUSTAH’s headquarters in Port-au-Prince will make the mission better able to respond to emergencies. Following recommendations in a November 2004 UN report on MINUSTAH, an engineering company has been added to its military component to undertake repair of roads and bridges and to allow the other forces to focus on peacekeeping tasks.³⁴ In June 2006 MINUSTAH adopted a plan for natural disaster response that, in effect, makes the mission the cornerstone of disaster management in Haiti. Second, OCHA’s presence in Haiti has been strengthened since 2004, and its coordinating role with the military structure is now well established. Although MINUSTAH’s emphasis remains on security and force protection, the cluster approach and coordination with OCHA are now also being emphasized. OCHA has become the necessary interface between the Haitian Government, MINUSTAH, other UN agencies and NGOs.

A cautionary word is in order: Haiti is an unusual case. Since 1995, Haiti has had no national army. Through successive international missions, foreign military assets have been continually present and are likely to remain so. Thus many of the usual questions regarding foreign military assets—whether and when to deploy them, how to use them alongside domestic military assets, and which countries’ troops are acceptable—do not have to be asked. MINUSTAH’s assets offer unique availability, particularly in the emergency phase of a disaster response. With violence and instability still major problems in Haiti, MINUSTAH’s forces play a vital role in securing humanitarian space. MINUSTAH offers a range of other capabilities, particularly transport, that are nearly unique. MINUSTAH also has the unique advantage of having its own resources, giving it a high degree of autonomy. In Haiti the cost and availability of fuel are always a problem.

³² UN Humanitarian Coordinator (note 31).

³³ UN News Centre, ‘Concerned at mounting bloodshed in Haiti, UN envoy urges dialogue’, 4 Oct. 2004.

³⁴ ‘The humanitarian crisis ensuing from tropical storm Jeanne has demonstrated that the vulnerability of Haiti to natural disasters is greater than anticipated at the establishment of the Mission, as is the need for international assistance and capacity-building. In view of this, my Special Representative has recommended a modest strengthening of the humanitarian and development coordination pillar of MINUSTAH’. Report of the Secretary-General on the United Nations Stabilization Mission in Haiti, UN S/2004/908, 18 Nov. 2004.

During the 2004 disasters, the scarcity of fuel was a critical problem throughout the country, particularly in the north, and civilian humanitarian relief operations suffered as a result. MINUSTAH has no such concerns, and the same is true of its communications capacity. All of these factors ensure that MINUSTAH will remain the main disaster relief actor in Haiti.

This raises the question of an exit strategy. Haiti's domestic capacity remains largely insufficient to cope with natural disasters. Even if progress has been made, notably in managing information and knowledge, for the foreseeable future MINUSTAH will remain the main actor that is able to respond to disasters. According to a MINUSTAH official interviewed for this study, 'the government, the population and NGOs will always request military support to solve those problems'. As an adviser to the Haitian president noted: 'It is a catch-22 game. Without MINUSTAH, the government is unable to function properly. But with it, there is no incentive to start essential reforms'.

Civil–military coordination

NGOs in Haiti have learned to work, coordinate and cooperate with MINUSTAH. Such activities are an essential part of their daily routine and are even more so in times of emergency. All the NGOs interviewed for this report consider that MINUSTAH is crucial for assistance. Only one NGO, MSF France, refused to work with the military and chose to leave the country. Nonetheless, there are problems.

NGO staff are sometimes surprised by the way the military operates. Two different and, at times, opposing cultures are involved. Among the most disagreeable of these differences is the hierarchy of missions that the military tends to follow. In the case of disaster relief assistance in a complex emergency, force protection comes first. This militarizes the delivery of aid and tends to antagonize civil humanitarian workers. There is no obvious solution to this dilemma. However, the fact that contingency planning and disaster response are now conducted from a single emergency centre at MINUSTAH headquarters should help to build the necessary trust among various humanitarian organizations and the military. MINUSTAH has learned to work in concert with NGOs and vice versa. The cluster approach has helped, as has the role played by OCHA.

In addition to its force protection imperative, the military tends to adapt the needs of humanitarian missions to meet its own security requirements, using a zero-risk approach. While NGOs are willing to accept that some assistance may not reach its final destination or may fall into the wrong hands, the military will generally not allow convoys to depart in dubious conditions.

The military has its own lists of priorities and NGOs has no say in defining. As noted above, the decision to stop MIF-H flights was taken without consultation with the civil humanitarian actors, although it was well understood that helicopters were crucial to their work. In the same vein, in the military, logistical support is dispatched according to security needs and this is not always well understood by civil agencies.

In Haiti, there is no real competition between the military and civilian actors in operational terms. However, there may be some vying for visibility. NGOs operate in a competitive global environment and visibility is essential for their fundraising. Donors and international organizations also wish to promote their public image. This affects the

national components of MINUSTAH. As one NGO representative ruefully noted, ‘flag posturing is becoming the norm, including with MINUSTAH’. In this desire for visibility, both the civil and the military are to blame.

NGOs are reluctant to see the military become involved in a long-term disaster response extending beyond emergency relief. Infrastructure rehabilitation and engineering activities may be an integral part of a military plan, and in the aftermath of a disaster they may be necessary—especially in a country with such limited domestic capacity. However, NGOs tend to regard these activities as their domain, and the military’s involvement in them as an illegitimate encroachment. An example is the NGO response to USSOUTHCOM’s Caribbean-wide New Horizons programme. This long-term development programme, which involved US military units exclusively,³⁵ carried out a range of humanitarian tasks (referred to as ‘exercises’ by the Pentagon). A four-month component worth \$15 million was agreed between the USA and the Haitian Government, focused on engineering activities such as the drilling of wells. The NGOs operating in Haiti were not consulted at the planning stage and perceived it as an unnecessary ‘militarization’ of humanitarian assistance.

The military and the local population

Soldiers are not humanitarian relief workers, and their weapons are often perceived as threatening—especially in a country where the use of force by the state has not always been legitimate. As previously noted, force protection is the top priority for the military. In keeping with its overall strategy, MINUSTAH has moved cautiously into sensitive areas. MINUSTAH contingents have suffered fatalities while restoring orders in violent areas. In such an environment, it is not surprising that security comes first. However, during its first two years MINUSTAH’s role was questioned. The population had expected more security and dubbed the mission ‘Tourista’. It was not until early 2007 that the Haitian Government was able to restore order to sensitive areas such as Cité Soleil in Port-au-Prince. Natural disaster relief helped MINUSTAH to strengthen its legitimacy on the ground and to build the trust of local people.

Troop rotation remains a problem. Institutional memory barely exists and each new contingent has to relearn many of the lessons of the past. Language, too, is a problem. While Latin Americans dominated MINUSTAH early on, there are now sizeable contingents from elsewhere including, currently, Jordan and Pakistan. Cultural sensitivities in this Catholic country are sometimes difficult to grasp for soldiers from the Middle East. Local traditions have not always been respected, for example in the task of burying the dead after tropical storm Jeanne. In the same vein, the requisition of a university by the military in Gonaïves was perceived locally as an inappropriate, although there was no realistic alternative.

The military sometimes creates its own problems and, because of its relative inflexibility, it cannot always deliver tailor-made aid and assistance. For example, after

³⁵ The units involved were mostly national guards, supported by Helicopter Combat Support Squadron Six and ships of the Saipan Expeditionary Strike Group.

tropical storm Jeanne, five tonnes of food was delivered in one location to feed 200 000 people. This was an invitation to trouble, and deliveries of smaller packages had to be used instead in order to prevent riots, gangs control and violence.³⁶

Haiti lacks domestic assets and foreign troops are heavily represented on its soil. The military cannot replace professional aid workers, but in Haiti MINUSTAH has proved essential for the delivery of humanitarian assistance. For Haiti, the issue of military assets is not one of balancing the choice between civil and military assets but one of capacity and availability. MINUSTAH has a monopoly on capacity, especially transport, and it is essential for security. In these conditions, the question remains not whether to use military assets but how to use them more efficiently.

³⁶ A system using a chain of women, who distributed the food, was later put in place to avoid looting and violence.

Table A.2. Foreign military assets contributed to the flood relief operation in Haiti, May 2004

This list of assets should not be taken as definitive.

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Method of channelling	Date of arrival	Date of departure ^a	Location
Canada	Helicopter	CH-146 Griffon	6		Theatre airlift	MIF-H	24/05/2004 ^b	30/05/2004	Various ^c
France	Helicopter	AS-565 Panther	1	..	Theatre airlift	MIF-H	24/05/2004	30/05/2004	Various ^c
	Helicopter	AS-330 Puma	2	..	Theatre airlift	MIF-H	24/05/2004	30/05/2004	Various ^c
USA	Helicopter	CH-47 Chinook	..	..	Theatre airlift	MIF-H	24/05/2004	30/05/2004	Various ^c
	Helicopter	UH-60 Black Hawk	..	..	Theatre airlift	MIF-H	24/05/2004	30/05/2004	Various ^c
MIF-H ^d	Personnel			..	Various ^f	MIF-H	24/05/2004	30/05/2004	..

MIF-H = Multinational Interim Force-Haiti; WFP = World Food Programme; .. = information not supplied

^a The date of arrival given is the date on which MIF-H forces started flood relief operations. MIF-H forces were withdrawn temporarily from flood relief between 30 May and 10 June 2004 because of the deteriorating security situation in Port-au-Prince. No date of departure is given because international forces remained in Haiti to fulfil their primary missions.

^b Helicopters provided theatre airlift in the areas of Fonds-Verrettes, Mapou and Thiote.

^c MIF-H comprised about 500 Canadian, 330 Chilean, 1000 French and 1900 US troops.

^d MIF-H personnel provided aid distribution, communications, medical, search and rescue and security support.

Source: Combined Joint Task Force, Haiti, 'Accomplishments of the Multinational Interim Force-Haiti', News release, 10 June 2004, <<http://www.southcom.mil/PA/Media/Releases/040610a.htm>>.

Table A.3. Foreign military assets contributed to the tropical storm Jeanne relief operation in Haiti, 2004

This list of assets should not be taken as definitive.

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival ^a date	Location
MINUSTAH	Helicopter	Mi-8	2		Various ^b	MINUSTAH	18/09/2004	Gonaïves
	Helicopter	Bell 212	3		Various ^b	MINUSTAH	18/09/2004	Gonaïves
	Helicopter	UH-1 Huey	1		Various ^b	MINUSTAH	18/09/2004	Gonaïves
	Helicopter	AS-330 Puma	3		Various ^b	MINUSTAH	18/09/2004	Gonaïves
	Personnel				OSOCC	MINUSTAH	18/09/2004	Gonaïves
Argentina	Field hospital		1		Medical	MINUSTAH	18/09/2004	Gonaïves
	Personnel			552	Various ^c	MINUSTAH	18/09/2004	Gonaïves
Brazil	Personnel			448	Various ^c	MINUSTAH	18/09/2004	Gonaïves
Nepal	Personnel			129	Various ^c	MINUSTAH	18/09/2004	Gonaïves
Sri Lanka	Personnel			128	Various ^c	MINUSTAH	18/09/2004	Gonaïves
Uruguay	Personnel			573	Various ^c	MINUSTAH	18/09/2004	Gonaïves

MINUSTAH = UN Stabilization Mission in Haiti; OSOCC = On-Site Operations Coordination Centre

^a No date of departure given because MINUSTAH forces remained in Haiti to fulfil their primary missions.

^b Helicopters provided reconnaissance, search and rescue, and theatre airlift support. Information about which aircraft performed which tasks was not supplied.

^c Personnel contingents contributed through MINUSTAH provided aid distribution, airfield control, evacuation, medical, and search and rescue support. Information about which contingents performed which tasks was not supplied.

Source: Various secondary sources.



Annex C

Case study: Indian Ocean tsunami, Aceh province, Indonesia, 2004

The tsunami that struck the coast of Aceh province in Indonesia on 26 December 2004 created an unprecedented humanitarian challenge and an equally unprecedented international response. Military assets were sent by 16 foreign governments; 14 United Nations agencies, 38 local humanitarian groups and 195 foreign or international humanitarian organizations participated in a three-month relief effort. Foreign military assets played a pivotal role in the response, particularly the emergency relief phase. However, with so many military and civilian actors involved, there were inevitably problems regarding coordination and command.

Background

On Sunday 26 December 2004, an earthquake measuring 9.0 on the Richter scale struck under the seabed of the Indian Ocean, about 200 kilometres off Banda Aceh, Sumatra, Indonesia. The quake caused tsunami waves that hit 12 countries around the Indian Ocean. The tsunamis travelled at 600–800 km per hour in the open sea and were up to 20 metres high when they hit the coasts at speeds of up to 60 km/h. States of emergency were declared in Indonesia, the Maldives and Sri Lanka.

The disaster not only triggered reactions from the usual humanitarian community but also generated enormous public concern and the deployment of an unprecedented number of military forces. Thirty-five states contributed 75 helicopters, 41 ships, 43 fixed-wing aircraft and more than 30 000 personnel, including air traffic controllers, medical teams and engineers, to the affected countries.

The largest tsunamis hit the west coast of Sumatra, affecting a 500 km stretch of coastline of Aceh province and sweeping nearly 5 km inland. According to Indonesian Government estimates, 125 866 people died and approximately 419 682 were displaced.³⁷ An assessment by the Indonesian Government and international donors estimated the damage and losses in Indonesia at US 4.45 billion.³⁸ The roads linking the badly affected town of Meulaboh to Medan and the provincial capital Banda Aceh collapsed. Many local officials were lost in the disaster; those who survived found that their offices had

³⁷ A further 94 000 people were reported missing and are presumed dead. Tentera Nasional Indonesia (TNI), TNI consolidated report on relief and coordination in Aceh, Mar. 2005, obtained during interview with authors.

³⁸ Consultative Group on Indonesia, *Indonesia: Preliminary Damage and Loss Assessment*, 19–20 Jan. 2005.

been destroyed and, in many cases, that family members were dead or missing. In these circumstances, the local government apparatus, right up to the provincial level, was hardly functioning and could do almost nothing to assist the survivors or mount a relief effort. Indonesian President Susilo Bambang Yudhoyono declared a three-month state of emergency.

The initial critical needs and challenges

Following the tsunami, communications networks were compromised and even satellite systems were affected. Access to the coastline closest to the earthquake's epicentre—the west coast of Aceh—was extremely difficult, with bridges and roads washed away and the few airstrips and harbours damaged. The destruction of the main coastal road, which provided the primary arterial transport link along the west coast, prohibited heavy vehicle access to settlements and communities along its route.

The already diminished local infrastructure was overwhelmed by the massive influx of assistance. There was enormous congestion at airports, on roads and across telecommunications and power networks. Relief actors also made huge demands on other resources, taking up any available land, housing, office space, vehicles, drivers and local non-governmental organization staff.

Banda Aceh airport was only partially functional. Witnesses report that the airport was a scene of total mayhem, with relief supplies strewn around the runway. Flights landed, tossed out humanitarian aid supplies wherever they could and took off immediately. There did not seem to be anyone in charge. By the end of December 2004 the airport, whose air traffic control tower was damaged, had to handle an average of 132 flights daily. Under normal circumstances, it had to manage only eight flights per day. The runway of the airport in Meulaboh was cracked, preventing access by aircraft. There were no other landing sites available in Aceh for larger fixed-wing crafts. All the main seaports on the north and west coasts of Aceh were also severely damaged. As a result, most of the disaster relief aid and supplies were channelled through Medan and quickly filled up all available storage spaces at the airports and seaports there.

The relief effort also had to contend with an uncertain security situation. Aceh was still in the throes of conflict between the pro-independence Free Aceh Movement (Gerakan Aceh Merdeka, GAM) and government security forces. Earlier in 2004 there had been reports of gross human rights violations on both sides. Although martial law had been lifted in the province in May 2004, Aceh remained officially in a state of civil emergency. At the time of the tsunami, UN security status for Aceh was Phase III in Banda Aceh and Phase IV for the rest of Aceh.³⁹ The Indonesian Armed Forces (Tentera Nasional Indonesia, TNI) was concerned about the potential for security incidents if agencies were allowed unrestricted access to all areas and so provided escorts for foreign military assets, UN humanitarian agencies and NGOs moving into Phase IV areas.⁴⁰

³⁹ Phase III Security temporarily concentrates all international staff at designated areas within the operations area. Phase IV Security warrants all international staff to be relocated outside the operations area. Phase V Security requires all international staff to leave the operations area.

⁴⁰ The TNI provided security for, among others, International Organization for Migration convoys from Medan to Banda Aceh, Meulaboh and Naganraya. The TNI also escorted the distribution and medical teams of the International Federation of Red Cross and Red Crescent Societies in and around Meulaboh.

The arrival of foreign military assistance, especially air assets, from Australia, New Zealand and Singapore on 28 December provided the local government with the capability to gain access to the affected and remote areas. However, coordination between the providers of these assets and the TNI took a few days to regularize because of the imprecise information available on the situation in Aceh.

The existing domestic disaster management structure

Indonesia's National Coordinating Body for Disaster Management (Badan Koordinasi Nasional Penanggulangan Bencana dan Penanganan Pengungsi, Bakornas PBP) is responsible for the coordination of disaster relief. Its tasks include formulating disaster management policy, preparing and issuing guidelines and directives, and coordinating disaster management before, during and after a disaster. It is also tasked with preparing and issuing guidelines and directives on disaster prevention, mitigation, rescue, rehabilitation and reconstruction.

When the tsunami struck it became clear that Indonesia lacked an appropriate disaster response mechanism. In practice, Bakornas had neither real assets, nor implementation, policy-making or enforcement powers. Furthermore, the existing response structures varied in different areas and there was insufficient communication between the different provincial disaster management offices (Satuan Koordinasi Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi, Satkorlaks).

According to the lessons learned and best practices workshop report:

the legal framework for disaster management in Indonesia emerged as somewhat weak, fragmentary and at times duplicative. Although complex command and control structures were put into place in response to this exceptional event, in practice there appeared to be no clear, unique attribution of roles and responsibilities among various components of the public administration. Ad hoc decrees and regulations were issued to respond to the emergency, creating structures with uncertain power and [resources] which were sometimes duplicative of what already existed.⁴¹

UN preparedness and assessment

The workshop report also found that:

the United Nations did not have an adequate contingency plan. In certain cases, it stepped operations directly, bypassing the government and further weakening the latter's planning and coordinating role. The initial response was also made less effective by the fact that in some cases assessments were not carried out early enough and their results were not shared broadly enough. Certain sectors, such as protection, and special vulnerable groups, such as pregnant mothers, were also reportedly overlooked.⁴²

⁴¹ Government of Indonesia and United Nations, 'Post-tsunami lessons learned and best practices workshop: report and working groups output', Report of workshop, Jakarta, 16–17 May 2005.

⁴² Government of Indonesia and United Nations (note 41).

The national response to the disaster

Given the political and security conditions in Aceh, the Indonesian Government's willingness to open Aceh, to give almost free rein to international and national aid organizations, and to expose itself to international scrutiny were commendable. Similarly, the GAM leadership's decision to declare an immediate cessation of hostilities—while the TNI forces in Aceh were instructed to adopt a more defensive posture—effectively removed one of the largest potential obstacles to an effective disaster response. The TNI's area commander for Aceh, Lt-Gen. Endang Suwarya, reported that half of the 40 000 TNI troops who were already in Aceh for security duties were redeployed for humanitarian duties, to stabilize local conditions and to help prepare for the reconstruction phase.⁴³

On 27 December the Indonesian Government requested the UN to coordinate incoming international relief assistance. A day later, Indonesian Vice-President Jusuf Kalla took the exceptional step of sending the Coordinating Minister for People's Welfare, Alwi Shihab, from Jakarta to take control of the Aceh Satkorlak. Concurrently, President Yudhoyono declared Aceh open to the international community to provide emergency relief. Bakornas became the main interlocutor for donors in Jakarta. There was, however, some confusion as to the line of responsibility and authority. While the Aceh Satkorlak considered itself to be the lead authority in the relief operations, the national government claimed that the Aceh Satkorlak was under its direct authority.

The tsunami response was also unique in that two Satkorlaks were activated—one in Banda Aceh in Aceh province, led by Alwi Shihab, and another in Medan in North Sumatra province, led by the provincial governor, Tengku Rizal Nurdin. With two operating Satkorlaks, foreign NGOs and international organizations had two points of reference and entry. This led to less than straightforward overall coordination and monitoring processes.

According to a March 2005 report by the TNI, 14 UN agencies, the militaries of 16 foreign countries and 195 foreign civilian humanitarian groups were involved in the three-month emergency relief efforts in Aceh.⁴⁴ During the response it became evident that the existing legislation did not allow for the inclusion of national and international NGOs and other elements of civil society in the institutional disaster response mechanisms. As no specific provisions existed concerning the modalities with which international assistance should be requested and received, the Indonesian Government issued ad hoc administrative instructions. While such ad hoc decision making in the middle of a huge relief effort may not be ideal, the measures adopted in this way, including an 'open skies' policy, the waiving of visa requirements for foreign aid workers and exemption from customs duties for relief commodities, were particularly effective.

The TNI was given the task of supporting the local government in reaching the survivors as soon as possible, attending to their needs, evacuating the vulnerable and helping to remove the dead in order to prevent possible epidemics. TNI engineering

⁴³ Lieutenant-General Endang Suwarya, TNI Regional Commander (Aceh) during the tsunami, interview with the authors.

⁴⁴ *Tentera Nasional Indonesia* (note 37).

battalions were redeployed with assets such as amphibious vehicles and excavators. Also at the top of their agenda was the clearing of roads for repair and the construction of emergency bridges to re-establish the link between Banda Aceh and the south-western part of the province.

The decision to request and send foreign military assets

Amid the initial chaos it was hard for any of the actors to gain a coherent and comprehensive picture of needs. However, when the extent of the devastation was clear, the Indonesian Government realized that it needed significant external assistance. General Endriartono Sutarto, the commander of the TNI, directly requested assistance through his counterparts in Australia, Malaysia, New Zealand, Singapore and the USA. Indonesia did not specify the type of assets required, hence the responding militaries only had the TNI's initial observations in Aceh to go by. Military assets from these five countries arrived in Medan and Banda Aceh promptly after the request was made.

The TNI's decision to approach these five countries hinged on its existing ties with their armed forces and on those forces' capabilities. These militaries—especially those of Australia, Malaysia and Singapore—were well acquainted with the Indonesian culture and institutions. Long-standing relationships facilitated early contacts and eased the acceptability of foreign military assistance. The initial contacts were followed by rapid bilateral endorsement through the respective foreign ministries.

High-profile news coverage ensured that there was interest in the disaster from the international community. As a result, other countries offered military assets to the Indonesian Government, mainly through embassies in Jakarta or directly to the TNI.

The government established no criteria for the selection of foreign military assets: the policy was to open the gates for assistance as wide as possible. As a result, there was an oversupply of some military assets and other aid. Without the help of a credible neutral actor such as the UN to broker aid on behalf of Indonesia, it was politically and diplomatically awkward for the government to turn down offers from other countries. However, the government did put a 90-day time limit on the emergency phase, with the understanding that all foreign military assets would withdraw from Aceh by the end of the period. Table A.4 gives a list of foreign military assets contributed to the tsunami relief operation in Aceh.

All foreign military assets involved in the relief operation were sent bilaterally. There were government-to-government negotiations on all force deployments, specifically on rules of engagement and status-of-force agreements. This is notable in large part because it demonstrates respect for Indonesian sovereignty. It also facilitated coordination with host government mechanisms, but may have caused delays in deployment.

The use of foreign military assets

Foreign militaries were initially asked to help the TNI with search and rescue, evacuation and stabilization. The first foreign military assets to arrive played a significant role in supporting the TNI in these tasks. Foreign military contingents were deployed specifically

to assist the local disaster response effort by providing naval and coastguard assets, fixed-wing aircraft and helicopters. Medical evacuation, distribution of essential supplies, provision of shelter, land clearance and prevention of disease outbreaks were top priorities.

The TNI had sole responsibility for liaising with and coordinating the foreign military assets. Most foreign military assets acknowledged the host country's primacy in the relief effort. Daily coordination meetings were chaired by the TNI, which also managed the crucial Air Task Order (a prioritized list of tasks for air assets) for all foreign military assets in Aceh. The Indonesian Ministry of Defence appreciated the solidarity and respect shown to the TNI by the providers of the foreign military assets. Generally, all the foreign military assets worked in consultation with and in support of the TNI, adhering to its requests and commands.

Australian Defence Force

An Australian Defence Force C-130 Hercules landed at Banda Aceh airfield with medical and relief supplies on 27 December 2004. Within a week the main body of the ADF contingent—comprising the headquarters, communications and support capability, and a 34-bed field hospital—was in operations in Banda Aceh, while the combat engineers arrived on the tank landing ship HMAS *Kanimbla* on 11 January 2005

The HMAS *Kanimbla* also provided a range of capabilities such as medical facilities and a sea base for equipment and personnel that would otherwise have had to be based ashore. Sea basing eliminated the requirement to substantially increase the ADF's footprint ashore and minimized the associated logistic support challenges.

The ADF's initial efforts included air distribution of humanitarian aid, air transport of personnel, medical treatment, aero-medical evacuation and clean water production. Roads, drains and other areas were cleared of debris, and large community fishing boats were salvaged. Towards the end of January, the ADF had delivered an estimated 1200 tonnes of emergency humanitarian aid to tsunami victims in the Aceh and North Sumatra provinces, including food, water, medical supplies and shelter equipment.⁴⁵

The main focus of Australia's relief effort was on health, water and sanitation. Most of its assistance was provided to Banda Aceh, while it also gave support on a smaller scale to the relief efforts on the north-west coast, including the outlying islands of Nias, Batu, Banyak and Simeulue. The ADF officially withdrew its assets on 25 March 2005.

Singapore Armed Forces

The first Singapore Armed Forces (SAF) C-130 Hercules aircraft landed in Medan on 28 December carrying medical and relief supplies. The next day, Chinook and Super Puma helicopters arrived in Banda Aceh via Medan, together with an advance medical team. By the end of December, the SAF had deployed a total of three LSTs, six Chinooks, six C-130s and two Super Pumas along with other heavy equipment and engineering plants, 130 medical personnel and 103 engineers to Banda Aceh, Medan and, particularly, Meulaboh to support the TNI's relief efforts. The SAF's helicopters effectively helped

⁴⁵ Hill, R., 'More ADF troops return home from Aceh', Media release 036/2005, 4 Mar. 2005, <<http://defence.gov.au/minister/2005/050304.doc>>.

maintain a constant air bridge between Medan, Meulaboh and Banda Aceh, providing access and transportation of relief supplies and evacuating the injured. Like the HMAS *Kanimbla*, the SAF's LST fleets allowed its personnel and equipment to be based at sea, reducing footprints ashore and minimizing the need for domestic logistical support.

As the situation stabilized and land access was possible to most parts of Aceh, the UN and other civil agencies began moving into the affected area and the core body of LSTs and medical teams withdrew in mid-January. The Chinook helicopters were left behind at the request of the TNI until 25 February 2005.

US Combined Support Group

The US Pacific Command (USPACOM) mounted Operation Unified Assistance to provide post-tsunami assistance in several affected countries, notably Indonesia, Sri Lanka and Thailand. It established its command and control centre and operating base for tsunami relief at the Utapao airbase in Thailand. It listed its priorities as 'macro-level distribution and aid' and to support the host nations and the 'detail-level expertise' of relief agencies.⁴⁶ The US Combined Support Group–Indonesia (CSG-I) was created for the US military contribution in Aceh, with its headquarters in Medan.

The aircraft carrier USS *Abraham Lincoln* arrived off the coast of Aceh on 31 December 2004 and dispatched its first helicopter relief flight that day. Three other ships—the USS *Bonhomme Richard*, the USS *Essex* and the USS *Fort McHenry*—supported the relief operations for a month from early January 2005. Twenty-eight helicopters from the ships flew more than 100 missions daily, dropping relief supplies and evacuating people in need of medical help from the communities on the west coast of Aceh. Two US hovercrafts were also deployed to gain access to communities that had been cut off from the rest of the country by water.

The hospital ship USNS *Mercy* joined the operation on 2 February, relieving the USS *Abraham Lincoln*, which left the area two days later. The last US military assets left on 16 March.

Japan's Self-Defence Force

Responding to a request by the Indonesian Government for transport support issued on 3 January 2005, Japan's Minister of Defence ordered the dispatch to Banda Aceh of airlift units of Japan's Air Self-Defence Force (ASDF), maritime units of the Maritime Self-Defence Force (MSDF) and medical units of the Ground Self-Defence Force (GSDF), as well as the joint liaison officers of the Joint Staff Office. Two C-130 Hercules arrived in Banda Aceh from Utapao bringing relief supplies. A GSDF advance team of 20 personnel arrived in Banda Aceh on 16 January and commenced providing medical treatment three days later. The GSDF's main role was to provide medical and sanitary support, including vaccination and other public health measures to prevent disease outbreaks.

The main Japanese relief force arrived on 24 January and started airlift operations two days later. Three ships supported the GSDF's operations and transported relief materials to areas south-west of the provincial capital. Its hovercraft transported clearing vehicles

⁴⁶ US Pacific Command, 'Operation Unified Assistance', Briefing presentation, undated, <<http://www.pacom.mil/special/0412asia/UnifiedAssistanceBrief.pps>>.

to isolated areas along the coast, supporting the TNI's efforts to clear roads in advance of repair work that would re-establish the road link between Banda Aceh and the south-western districts. The local authorities particularly valued this contribution. The ASDF's Chinook and Black Hawk helicopters transported GSDF health personnel and relief supplies to Meulaboh and the town of Calang. Exactly one month after the arrival of the main body of the GSDF, the Japanese Minister of Defence gave the order to terminate the relief operation.

Other military assets

France and Germany also contributed significant military assets during the earlier days of the relief efforts. Military assets from another 10 countries were also sent to support the TNI during the three-month emergency period. Throughout the deployment of foreign military assets, the TNI provided force protection to the contributors.

Appropriateness

As the air and sea ports were devastated by the earthquakes and waves, helicopters, LSTs and hovercraft were the most appropriate and useful means of transporting goods, equipment and personnel to the affected areas. The Chinook helicopters, with their long range and large payload, moved large quantities of essential emergency supplies from Medan and Banda Aceh to isolated areas in Aceh. In the early days of the response, the most urgent task was to open up additional landing sites that would allow more helicopters to bring aid into the cut-off towns and villages. The LSTs and hovercraft were able to transport people, supplies and heavy equipment ashore without needing wharves and jetties.

Thirteen foreign countries provided military medical assistance. The rapid deployment of this assistance was critical in the early days of the response when trauma victims directly injured by the disaster urgently required treatment. However, as in most emergencies, the need for trauma care diminished quickly and the need for primary health care increased. While primary health care is not a military specialization, the need was well served by the humanitarian community, particularly the NGOs, in close consultation with local medical personnel. Even so, military medics, field hospitals and hospital ships continued to be sent to disaster zones weeks after the tsunami. For example, a Russian field hospital was set up at the camp for internally displaced persons near Mata Ie in Banda Aceh on 14 January, three weeks after the disaster. At that time few trauma cases needing urgent treatment remained and the main hospitals in Banda Aceh were functioning well. While the dedication of military medics is not doubted and the work they did was valuable, it must be questioned whether the substantial deployment of these assets after the first week of the response was vital to the relief effort and represented a unique capability or availability.

The military approach is action oriented and task specific. The usual means by which militaries measure success is comparison between the original task and what was accomplished. The way in which the task was fulfilled is secondary. One example of this approach from the relief effort in Aceh relates to airdrops and distribution. In Calang, food relief dropped on the beach by foreign military aircraft could have caused a dangerous

scramble among the locals had it not been for the presence and effective intervention of the TNI.⁴⁷ One military commander commented that their usual ‘play safe’ approach requires them to anticipate all possible ground needs, resulting in overstocking, both in terms of relief for the locals and of supplies for the military.⁴⁸ Without reliable knowledge and experience, this anticipation may result in irrelevant or excessive aid, which leads to waste.

Coordination

Major General Bambang Darmono, the TNI commander coordinating the foreign military assets, observed that besides logistical resources, the following were equally important for his task: the management and ‘life-support’ systems of the contributing militaries; command-and-control procedures that were understood by all; and the common military language and sense of camaraderie that facilitated and smoothed military-to-military communication and coordination.⁴⁹

OCHA supported the Indonesian Government’s efforts to coordinate the multiple actors involved in the relief effort. OCHA’s principal role during the initial three-month emergency stage of the tsunami response in Indonesia was to provide coordination services to humanitarian responders in Aceh, which was done initially through the UN Disaster Assessment and Coordination (UNDAC) team and then through a relatively successful rapid deployment of core OCHA staff from other offices and the hiring of additional staff on short-term contracts; and to support the UN’s Jakarta-based humanitarian coordinator by strengthening the existing OCHA office to manage with the increased workload generated by the tsunami.

A good example of civil–military coordination operated in Medan. The ADF and the TNI led the daily briefings and coordinated the response operation, working with the UN coordinator. NGOs and UN agencies accepted the military taking this role since the coordination functions had been assigned by the governor of North Sumatra.

Although military assets were placed at the disposal of the humanitarian community, it was not always clear to the humanitarian organizations how to request them. This often resulted in uncertainty of supply. For example, where logistics assets were essential to reach vulnerable communities, a UN agency representative reported having to go from one military to another to ask for help.⁵⁰ In early January several agencies sought access to US air assets to undertake needs assessments along the west coast. These requests, both those made in Banda Aceh and those routed through other channels to Washington, DC, were all turned down on the grounds that dropping off aid and transporting the injured were the priorities and there was no time to carry out assessments.⁵¹

⁴⁷ Lt-Gen. Endang Suwarya, interview with the author.

⁴⁸ Interview with the author.

⁴⁹ Bennet, J., Harkin, C. and Samarasinghe, S., *Coordination of International Humanitarian Assistance in Tsunami-Affected Countries: Evaluation Findings: Indonesia* (Tsunami Evaluation Coalition: London, undated).

⁵⁰ Harkin, C., *Coordination of International Humanitarian Assistance in Tsunami-Affected Countries: the 2004 Tsunami: Civil–Military Aspects of the International Response* (Tsunami Evaluation Coalition: London, undated).

⁵¹ Bennet, Harkin and Samarasinghe (note 49).

The foreign militaries controlling the assets did not generally understand the demand for humanitarian needs assessments. Had the importance of such assessments and the importance of distribution mechanisms in reaching those most in need been explained clearly to military commanders, it is possible that a more coherent and comprehensive picture of needs could have been produced and effective delivery mechanisms developed at an earlier stage. That there were no universal and simple assessment forms that could have been used by the military hampered the systematic collection of basic information of relevance to both the government and the humanitarian community.

While international NGOs generally lacked the logistical assets to provide effective assistance to the worst-affected areas while access was still difficult, international organizations such as the UN Humanitarian Air Service (UNHAS), the World Food Programme, the International Organization for Migration (IOM) and the UN High Commissioner for Refugees were active and effective, both in their own work and in supporting other civilian actors. This is largely because these agencies have better access to civilian or commercial logistical assets from donor states. They also deployed capable and experienced personnel to coordinate the assets appropriately according to needs and requests from other civilian groups. However, as the UN agencies do not own these assets, the timing and efficiency of their activation are still largely dependent on the donor. For example, UNHAS was unable to secure helicopters until three weeks after the disaster due to delays on the part of the donor.

Each UN agency, NGO, and Red Cross and Red Crescent organization followed policy guidance from its own headquarters for dealings with the military, which was confusing for their military counterparts.

There was an apparent lack of awareness among some humanitarian actors of the most basic concerns regarding association with military forces that were perceived by some to be party to a conflict. For example, at a UN meeting in Meulaboh, Oxfam raised the concern that NGOs were giving rides to TNI personnel in their vehicles, without realizing that they might be making themselves targets for GAM forces. This was potentially dangerous, but the UN did not provide guidance to those with little experience, unless it was asked to.

The chair of the Indonesian Forum of Parliamentarians on Population and Development (IFPPD), whose committee was responsible for the post-tsunami review of Bakornas's role and responsibility, commented that the multiplicity of smaller civilian humanitarian actors created chaos in the local system.⁵² At least 233 civilian NGOs were involved during the emergency phase of the disaster, and a substantial number of these lacked resources or experience in relief operations. The UN humanitarian coordinator did not provide strong leadership during the early phase of the tsunami response. This made civil-military cooperation even more difficult.

⁵² Chair, IFPPD, interview with the author.

Conclusions and lessons learned

The scale of the involvement of foreign military assets in the relief operation in Aceh was unprecedented, to the point of arguably setting a new paradigm for future humanitarian assistance. The general consensus from the Lessons Learned Workshop in Indonesia was that foreign military made a substantial and significant contribution during the acute relief phase.⁵³ Alwi Shihab, who was also the civilian coordinator for the relief operations, commented that the overall response to the disaster would have been far less effective had it not been for the support of foreign military assets.⁵⁴ An OCHA official in Jakarta, who was in Aceh during the emergency relief phase, agreed and observed that the foreign military assets managed the lion's share of work for which the civilian humanitarian community lacked the capacity.⁵⁵

While the foreign military assets demonstrated that they had the capacity to respond quickly and efficiently, from the humanitarian standpoint, they still lacked the desired degree of effectiveness in the delivery of assistance. Concerns were also expressed over the level of coordination among the foreign military assets and, in particular, between the militaries and the humanitarian agencies. Particularly in the case of the refusal of needs assessments, it seems that the working culture of the foreign military assets was not flexible enough to take account of the knowledge and experience of the civil community so that assets could be prioritized appropriately and channelled effectively.

It has been noted that the many options for information sharing among responders, both national and international, were not exploited. As a result, some coordination problems were reported, with many actors prioritizing their own programmes based on ease of implementation rather than on a shared understanding of needs. The fact that many organizations arriving in the disaster area in the early days did not have adequate budgets or delivery capacities created false expectations and further strained the already traumatized population. It would have helped to have a single organization—perhaps OCHA—compiling and disseminating up-to-date information to all actors, both military and civil, regarding which organizations were present, what they were doing, what resources they had and what they needed.

The actors involved in the relief effort in Aceh generally did not know of the Oslo Guidelines at the time. Many representatives of foreign militaries involved in the response were later introduced to the guidelines and found them useful. The Singapore Armed Forces has since adopted the Oslo Guidelines as an element of its standard operating procedures. Greater awareness of the Oslo Guidelines and a set of process flows, templates and detailed steps might have mitigated some coordination problems and made it easier and quicker for actors to join the relief effort.

Some foreign military personnel had reservations about the deployment of military assets for disaster relief. Although the SAF had a good public profile and enjoyed goodwill throughout the tsunami relief efforts, the deployment of its assets in Indonesia

⁵³ Government of Indonesia and United Nations (note 41).

⁵⁴ Alwi Shihab, Coordinating Minister for People's Welfare during the tsunami, interview with the author.

⁵⁵ Interview with the author.

⁵⁶ Interview with the author.

meant compromising its primary role of defending Singapore's national security. In addition to air assets, the SAF deployed three of its four naval landing ships to Meulaboh for almost a month. A representative of the Australian Defence Force argued that, ideally, the military should not be involved in humanitarian relief if there are better alternatives.⁵⁶

Similarly, members of the TNI reportedly felt strongly that it should not be playing the lead role in relief operations as it had its own primary role. Indonesian Minister of Defence Juwono Sudarsono agreed that, while the militaries have the assets to respond usefully to disasters, it should be the civilian humanitarian community that takes the lead. However, the strong logistics capacity, complete management and training package, rapid identification of common objectives and priorities that enabled military assets to respond quickly to the humanitarian crisis after the tsunami do not yet appear to exist within the civilian response community. Until the civilian capacity to respond more quickly to disasters increases significantly in Indonesia, the TNI, and perhaps foreign militaries, will continue to have an important role to play.

The confusion and imperfect coordination seen in the tsunami relief effort led the Indonesian Government, with the help of the UN, to draft new legislation, the Disaster Management bill, which was enacted on 26 April 2007. The legislation created the new National Disaster Management Body (Badan Nasional Penanggulangan Bencana, BNPB) to replace Bakornas. The significant difference is that the new body will not only play a coordinating role during disasters but will have command over the resources. The new BNPB undertook its first disaster relief assignment in the wake of the earthquake in Padang in September 2007. Its effectiveness awaits review.

Table A.4. Foreign military assets contributed to the tsunami relief operation in Aceh province, Indonesia, 2004–2005

This list of assets should not be taken as definitive.

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Australia and New Zealand ^a	Fixed-wing aircraft	C-130 Hercules	7		Air	Bilateral	27/12/04	25/03/05	Medan
	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	28/12/04	25/03/05	Medan
	Helicopter	UH-1 Huey	4		Theatre airift	Bilateral	03/01/05	17/02/05	Medan
	Field hospital		1	144	Medical	Bilateral	03/01/05	05/02/05	Banda Aceh
	Tank landing ship (LST) with floating hospital	HMAS Kanimbla	1		Medical and logistical	Bilateral	11/01/05	25/03/05	Aceh offshore
	Ambulance		1		Medical	Bilateral	11/01/05	25/03/05	Banda Aceh
	Helicopter	SH-3 Sea King	2		Theatre airift	Bilateral	11/01/05	25/03/05	Banda Aceh
	Truck	Unimog cargo truck	8		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Truck	Unimog dump truck	2		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Truck	Mack	4		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Truck (recovery vehicle)	..	1		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Crane	Tadano-20	1		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Backhoe	Case 580E	1		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Loader	Hitachi LX20	2		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Personnel vehicle	Land Rover	7		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
					Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Australia and New Zealand	Landing craft, mechanized	..	2		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Bulldozer	TD-15 medium	2		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Welding system	..	1		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
	Excavator	Caterpillar 325, 25 tonne capacity	1		Engineering/clearing	Bilateral	11/01/05	25/03/05	Banda Aceh and Aceh Besar
<i>Total personnel</i>				1 046					
Singapore	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	28/12/04	16/01/05	Medan
	Tank landing ship	RSS <i>Endurance</i>	1		Sea	Bilateral	30/12/04	16/01/05	Meulaboh offshore
	Tank landing ship	RSS <i>Persistence</i>	1		Sea	Bilateral	30/12/04	16/01/05	Meulaboh offshore
	Tank landing ship	RSS <i>Endeavour</i>	1		Sea	Bilateral	30/12/04	16/01/05	Meulaboh offshore
	Helicopter	AS332/AS532 Super Puma	2		Theatre airlift	Bilateral	29/12/04	16/01/05	Banda Aceh
	Helicopter	CH-47 Chinook	6		Theatre airlift	Bilateral	29/12/04	25/02/05	Banda Aceh
	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	29/12/04	16/01/05	Medan
	All terrain vehicle	Bronco	4		Transport/land	Bilateral	29/12/04	16/01/05	Meulaboh
	Bulldozer	..	1		Engineering/clearing	Bilateral	29/12/04	16/01/05	Meulaboh
	Excavator	..	1		Engineering/clearing	Bilateral	29/12/04	16/01/05	Meulaboh
Truck	Unimog	1		Engineering/clearing	Bilateral	29/12/04	16/01/05	Meulaboh	
Truck (5 tonner)	..	1		Engineering/clearing	Bilateral	29/12/04	16/01/05	Meulaboh	
Personnel			103	Engineering	Bilateral	29/12/04	16/01/05	Meulaboh	
Personnel			130	Medical	Bilateral	29/12/04	16/01/05	Meulaboh and Banda Aceh	

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Singapore	Mobile air traffic control tower	..	1		Air traffic control	Bilateral	29/12/04	15/07/05	Banda Aceh
<i>Total personnel</i>				965					
Malaysia	Helicopter	SH-3 Sea King ('Nuri')	2		Theatre airift	Bilateral	30/12/04	26/03/05	Banda Aceh
	Fixed-wing aircraft	C-130 Hercules	1		Air	Bilateral	30/12/04	26/03/05	Banda Aceh
	Fixed-wing aircraft	CN-235	1		Air	Bilateral	30/12/04	26/03/05	Banda Aceh
	Medical team			133	Medical	Bilateral	30/12/04	26/03/05	Banda Aceh
<i>Total personnel</i>				593	Construction	Bilateral	30/12/04	26/03/05	Banda Aceh
USA	Aircraft carrier	USS Abraham Lincoln	1		Air	Bilateral	31/12/04	26/03/05	Aceh offshore
	Helicopter	SH60 Seahawk	10		Theatre airift	Bilateral	31/12/04	26/03/05	Aceh offshore
	Landing helicopter dock	USS Bonhomme Richard	1		Sea	Bilateral	03/01/05	18/01/05	Aceh offshore
	Helicopter	CH-46 Sea Knight	4		Theatre airift	Bilateral	03/01/05	18/01/05	Aceh offshore
	Hovercraft	..	2		Sea	Bilateral	03/01/05	18/01/05	Aceh offshore
	Helicopter	MH-60 Knighthawk	2		Theatre airift	Bilateral	03/01/05	18/01/05	Aceh offshore
	Landing helicopter dock	USS Essex	1		Sea	Bilateral	18/01/05	08/02/05	Aceh offshore
	Helicopter	MH-53 Sea Stallion	4		Theatre airift	Bilateral	18/01/05	08/02/05	Aceh offshore
	Helicopter	MH-60 Knighthawk	2		Theatre airift	Bilateral	18/01/05	08/02/05	Aceh offshore
	Helicopter	CH-46 Sea Knight	4		Theatre airift	Bilateral	18/01/05	08/02/05	Aceh offshore
	Dock landing ship	USS Fort McHenry	1		Sea	Bilateral	18/01/05	08/02/05	Aceh offshore
	Helicopter	SH-60 Seahawk	2		Theatre airift	Bilateral	18/01/05	08/02/05	Aceh offshore
	Hospital ship	USNS Mercy	1		Medical	Bilateral	02/02/05	16/03/05	Aceh offshore

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling date	Arrival date	Departure date	Location
USA	Helicopter	SH-60 Seahawk	2		Theatre airlift	Bilateral	02/02/05	16/03/05	Aceh offshore
	Fixed-wing aircraft	C-130 Hercules	4		Air	Bilateral	02/02/05	16/03/05	Aceh offshore
	Fixed-wing aircraft	C-17 Globemaster III	2		Air	Bilateral	02/02/05	16/03/05	Aceh offshore
Pakistan	Ambulance	..	1		Medical	Bilateral	04/01/05	22/03/05	Banda Aceh
	Personnel				Medical	Bilateral	04/01/05	22/03/05	Lhokseumawe
	Field hospital		1	55	Medical	Bilateral	04/01/05	22/03/05	Lamno
	Personnel vehicle	Land Cruiser	1		Engineering/ construction	Bilateral	04/01/05	22/03/05	Malahayati
<i>Total personnel</i>									219
Germany	Helicopter	SH-3 Sea King	2		Theatre airlift	Bilateral	05/01/05	14/03/05	Banda Aceh
	Medical team				Medical	Bilateral	05/01/05	10/03/05	Banda Aceh
	Multipurpose ship with floating hospital	FGS <i>Berlin</i>	1	310	Medical	Bilateral	12/01/05	18/03/05	Banda Aceh offshore
<i>Total personnel</i>									380
France	Helicopter carrier	<i>FS Jeanne d'Arc</i>	1		Medical	Bilateral	09/01/05	22/02/05	Meulaboh offshore
	Frigate	<i>FS Georges Leygues</i>	1		Support vessel	Bilateral	09/01/05	22/02/05	Meulaboh offshore
Brunei	Helicopter	Super Puma	6		Theatre airlift	Bilateral	09/01/05	22/02/05	Sabang
	Helicopter	HH-65 Dolphin	2		Theatre airlift	Bilateral	09/01/05	22/02/05	Sabang
	Fixed-wing aircraft								
	C-160 Transall	2		250	Air	Bilateral	09/01/05	22/02/05	Medan
<i>Total personnel</i>									250
Brunei	Helicopter	UH-60 Black Hawk	1		Theatre airlift	Bilateral	14/01/05	01/02/05	Sabang
	Fixed-wing aircraft	CN-235	1		Air	Bilateral	14/01/05	01/02/05	Sabang

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Brunei	Medical Team			17	Medical	Bilateral	14/01/05	01/02/05	Panga Aceh Jaya
<i>Total personnel</i>				47					
Russia	Truck	..	1		Transport	Bilateral	14/01/05	19/02/05	Banda Aceh
	Ambulance	..	1		Medical	Bilateral	14/01/05	19/02/05	Banda Aceh
	Field hospital		1		Medical	Bilateral	14/01/05	19/02/05	Banda Aceh
<i>Total personnel</i>				160					
UK	Helicopter	Bell	2		Air	Bilateral	15/01/05	17/02/05	Banda Aceh
	Helicopter	AS332/AS352 Super Puma	3		Theatre airlift	Bilateral		17/02/05	
	Helicopter	Mi-8	2		Theatre airlift	Bilateral		17/02/05	
	Fixed-wing aircraft	An-124	1		Air	Bilateral	23/01/05	17/02/05	Meulaboh
Japan	Fixed-wing aircraft	C-130 Hercules	2	c. 90	Airlift	Bilateral	10/01/05	07/03/05	Sabang offshore
	Personnel			20	Medical	Bilateral	16/01/05	07/03/05	Banda Aceh
	Personnel			20	Liaison and coordination	Bilateral	16/01/05	07/03/05	Banda Aceh and Jakarta
	Personnel			200	Medical and sanitary	Bilateral	24/01/05	07/03/05	Banda Aceh
	LST	JDS Kunisaki	1		Sealift/base support	Bilateral	24/01/05	07/03/05	Aceh offshore
	Cargo ship	JDS Tokiwa	1		Sealift/base support	Bilateral	24/01/05	07/03/05	Sabang offshore
	Destroyer	JDS Kurama	1	c. 640 (crews of 3 ships listed)	Sealift/base support	Bilateral	24/01/05	07/03/05	Sabang offshore
	Helicopter	CH-47 Chinook	3		Theatre airlift	Bilateral	24/01/05	07/03/05	Banda Aceh
	Helicopter	UH-60 Black Hawk	2		Theatre airlift	Bilateral	24/01/05	07/03/05	Banda Aceh

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Japan	Helicopter	SH-60 Seahawk	2		Theatre airlift	Bilateral	24/01/05	07/03/05	Sabang offshore
	Hovercraft	..	2		Sea	Bilateral	24/01/05	07/03/05	Sabang offshore
Switzerland	Helicopter	AS-332/AS-532 Super Puma	3		Air	Bilateral ^b	17/01/05	27/02/05	Medan
<i>Total personnel</i>				51					
Spain	Fixed-wing aircraft	CN-235	2		Air	Bilateral	06/02/05	27/02/05	Banda Aceh
	LST	SPS Galicia	1	300	Medical and logistical	Bilateral	06/02/05	23/03/05	Aceh offshore
	Helicopter	.. (Bell)	3		Theatre airlift	Bilateral	06/02/05	23/03/05	Banda Aceh
	Personnel vehicle	..	12		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Truck and dump truck	..	13		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Tractor	..	10		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Grader	..	2		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Vibra	..	1		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Bulldozer	..	3		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Excavator	..	2		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Loader and scoop loader	..	4		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Concrete mixer	..	1		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	Crane	..	1		Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
	..	Minicax	4	250	Construction	Bilateral	06/02/05	23/03/05	Lihokseumawe
<i>Total personnel</i>				250					
Netherlands	..	..		8	Construction	Bilateral	06/02/05	25/02/05	Banda Aceh

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling date	Arrival date	Departure date	Location
Mexico	Ship	ARM Zapoteco	1		Medical	Bilateral	07/03/05	26/03/05	Aceh offshore
	Ship	ARM Usumacinta	1		Medical	Bilateral	07/03/05	26/03/05	Aceh offshore
	Helicopter	(Bolkow)	1		Theatre airift	Bilateral	07/03/05	26/03/05	Banda Aceh
	Helicopter	Mi-17	2		Theatre airift	Bilateral	07/03/05	26/03/05	Banda Aceh
	Medical team		-	44	Medical	Bilateral	07/03/05	26/03/05	Banda Aceh and Lihokseumawe

^a These assets were offered specifically to support the operations of the World Food Programme (WFP).

^b These assets were offered specifically to support the operations of the UN High Commissioner for Refugees (UNHCR).

Source: Indonesian Armed forces (TNI), contributing countries, and secondary sources.



Annex D

Case study: South Asia earthquake, Pakistan, 2005

When a devastating earthquake struck Pakistan-administered Kashmir in October 2005, the Pakistan's rudimentary disaster-management mechanisms were unprepared; the only domestic institution capable of managing a response was the army. The massive international humanitarian response brought both domestic and foreign military assets close to the tense Line of Control between the Pakistani- and Indian-administered portions of Kashmir. In the days following the disaster, the government approached NATO for assistance. NATO thus became involved in disaster relief outside the Euro-Atlantic area for the first time in its history. The role of NATO as a multilateral coordinator of assets is one of the factors that make the South Asia earthquake relief effort an interesting and unusual case.

Background

A major earthquake struck Afghanistan, India and Pakistan at 3.50 a.m. GMT (8.50 a.m. local time in Pakistan) on 8 October 2005. The shallow earthquake registered a magnitude of 7.6 on the Richter scale. Its epicentre was close to the city of Muzaffarabad in Pakistan-administered Kashmir and 105 kilometres north-north-east of the Pakistani capital, Islamabad. By 29 October there had been 978 aftershocks, some with magnitudes as great as 6.1, sufficient to cause significant damage to well-constructed buildings on sound foundations and to cause landslides. Since its creation in 1947, Pakistan had not suffered from any comparable natural disaster.

According to official statistics, 73 338 people died in Pakistan as a result of the earthquake, more than half of them children. Another 69 412 people were seriously injured and 3.2–3.5 million people were directly affected; some 2.3 million were without adequate food. In addition, around 2.5 million people were left homeless. The area affected in Pakistan was about 30 000 square km, much of it remote, rugged and mountainous. Initial estimates put the economic damage at over 300 billion Pakistani rupees (US\$5 billion). There were also casualties and destruction in Afghanistan and India, although on a significantly smaller scale.

The disaster occurred at the beginning of winter in an already harsh environment. It immediately became clear that if shelter, food, water and medical aid were not provided, there was the danger of 'a second, massive wave of death'.⁵⁷ Two weeks after the earthquake, United Nations Under-Secretary-General for Humanitarian Affairs and

⁵⁷ United Nations Secretary-General Kofi Annan, quoted in Philp, C., 'Thousands at risk of starving in quake aid shortfall', *The Times* (London), 21 Oct. 2005.

Emergency Relief Coordinator Jan Egeland commented that the logistical challenges were even greater than those for the 2004 Indian Ocean tsunami,⁵⁸ a view shared by many in the humanitarian community. For these reasons some consider that the earthquake required an even greater humanitarian response than the Indian Ocean tsunami of 2004.

Pakistan in 2005

The Islamic Republic of Pakistan shares borders with Afghanistan and Iran in the west, India in the east, China in the north-east and the Arabian Sea in the south. In 2005, Pakistan had been under military rule for six years, following a coup led by General Pervez Musharraf, which overthrew the civilian government of Nawaz Sharif.

Pakistan's relations with India have long been difficult. The tensions centre on a long-standing dispute over Jammu and Kashmir. On the Pakistani side of the Line of Control (LOC) dividing the territory are Pakistan-administered Kashmir (called, in Pakistan, Azad Jammu and Kashmir), of which Muzaffarabad is the capital, and the Federally Administered Northern Areas. The much larger part of Jammu and Kashmir is administered by India. The LOC is supervised by the UN Military Observer Group in India and Pakistan (UNMOGIP). Sporadic fighting has continued in Kashmir since a ceasefire agreement in 1972. The earthquake struck at a time when India and Pakistan were seeking a peaceful resolution to the Kashmir dispute, the most recent ceasefire along the LOC having been agreed in November 2003. The epicentre of the 2005 earthquake was barely 25 km from the LOC, and avoiding accidentally crossing the line became a consideration in planning and carrying out the disaster response. The two countries quickly established a hotline at the outset of the response allowing them to report and quickly rectify accidental incursions by the relief actors.

Since the 11 September 2001 terrorist attacks on the United States Pakistan has moved to the forefront in the 'global war on terrorism', particularly against the Taliban and al-Qaeda. As an ally of the USA, it supports the ongoing international military actions in Afghanistan. At the time of the earthquake there were substantial NATO military assets nearby in Afghanistan. Pakistan also granted US forces operating in Afghanistan access to Pakistani airbases, and Pakistani security forces were committed to fighting the Taliban and international jihadists along the Afghan border.

Existing disaster management arrangements

At the time of the earthquake there was no central authority to manage disasters in Pakistan. The only national disaster contingency plans related to maintenance of the Emergency Relief Cell (ERC), a warehouse facility that stockpiled emergency supplies.⁵⁹ The ERC's supplies were primarily intended for flooding, a frequent occurrence in Pakistan. Local civilian authorities were expected to organize their own responses, and could call on supplies from the ERC. No planning had been done or preparations made for earthquakes. The only other national entity involved in disaster relief was the National

⁵⁸ Philp (note 57).

⁵⁹ The situation in Pakistan is now very different because of the establishment, in December 2006, of the National Disaster Management Authority and the drafting of national and provincial contingency plans.

Crisis Management Centre of the Ministry of Interior, but it was set up to address security crises, not natural disasters. Additionally, Pakistani law allowed district and provincial administrations to request the military to assist civilian authorities in times of disaster.

The response

In the hours after the earthquake the initial response consisted mainly of moving emergency supplies from the ERC and of deploying military assets to support civilian authorities, including provincial and district administrations. Pakistan was offered international humanitarian assistance, including military assets, almost immediately. Eight US helicopters based in Afghanistan arrived just eight hours after the earthquake.⁶⁰ Several other nations quickly made bilateral offers of relief supplies and military assets, primarily heavy-lift helicopters, medical aid and air assets for delivering humanitarian supplies directly from donor countries or as directed by the Pakistani Government or the UN.

The Government of Pakistan made its first formal calls for international assistance on 10 October. These included official requests to the European Commission and NATO's Euro-Atlantic Disaster Response Coordination Centre (EADRCC). The main assets requested were search-and-rescue teams and relief assistance (tents, blankets, stoves, food and medicines). However, it took the Pakistani Government some weeks to identify the extent of the damage from the earthquake and thereby the specific needs, and time was also needed to develop an appropriate organizational body to create and execute a national plan of action.

The initial assessment of needs was hampered by the difficulty of accessing some of the more remote areas that had been affected by the disaster. Large areas of devastation were still being discovered almost two weeks after the earthquake. Reviews by some international humanitarian actors indicate that their initial assessments had greatly underestimated the number of casualties and people left without shelter, the difficulty of accessing affected communities and the need to act before the onset of winter.⁶¹ Pakistan made continued requests for assistance, which became more specific as the scale of the disaster became apparent.

New structures

While local authorities were customarily responsible for disaster management, it soon became apparent that the scale of the disaster following the earthquake warranted a national response, including the establishment of a national body to plan and coordinate the relief effort. To that end, Pakistan established the military-led Federal Relief Commission (FRC) on 10 October to 'streamline relief operation in collaboration with the provincial government, relevant ministries, non-governmental organizations, Red Crescent and other international agencies'.⁶²

⁶⁰ There were 5 CH-47 Chinooks and 3 UH-60 Black Hawks. Details from records held at the UN Office for the Coordination of Humanitarian Affairs (OCHA) Civil-Military Coordination Section.

⁶¹ These actors included NGOs such as Oxfam

⁶² Office of the Press Secretary to the President of Pakistan, 'Government sets up Federal Relief Commission', Website of President Pervez Musharraf, 10 Oct 2005, <<http://www.presidentofpakistan.gov.pk/NewsEventsDetail.aspx?NewsEventID=1909>>.

The FRC cooperated with the UN Disaster Assessment and Coordination (UNDAC) team, which arrived in Pakistan on 9 October 2005 (and subsequently became a support office for the UN Office for the Coordination of Humanitarian Affairs, OCHA). ‘Humanitarian hubs’ (essentially UN offices) with civil–military liaison officers were also established. Government of Pakistan personnel commented that the UN played a pivotal role in the response, making it more rapid and effective than it would otherwise have been.⁶³ Particularly useful was the UN’s guidance in policy, planning and implementation—which meant the FRC could work effectively with donors, humanitarian actors and foreign military assets. The UNDAC team’s daily meetings were essential for coordination. The observation made by many of the contributors of foreign military assets that the UN was ‘not visible’ in the response probably reflects the fact that the UN was properly carrying out its role of supporting an already strong government.

The FRC drew up a national plan of action for managing the relief operation. Its main elements were the Strategic Oversight Group (SOG), the use of the ‘cluster approach’ (see below) at the strategic and field levels, and a principle of ‘non-interfering coordination’, meaning that non-governmental organizations (NGOs) and civilian agencies were allowed to work within their mandates, choosing their area of operations, within the scope of the plan; the military would then fill any gaps. The FRC set high standards, even in the early phase of the disaster. For example, provisions for tracking and accounting for all single females throughout most of the relief period were part of the national plan. Generally, contributors said that the Pakistani Government’s plan was clear and that it adhered to its priorities despite considerable pressure from external actors at times. The government’s strong leadership and flexibility in adapting to the situation encouraged NATO and the bilateral providers of foreign military assets to coordinate their efforts.

Nine clusters were established based on the model proposed in the Humanitarian Response Review paper commissioned by the UN Emergency Relief Coordinator in August 2005: food and nutrition, water and sanitation, health, emergency shelter, early recovery and reconstruction, logistics, IT and telecommunications, and camp management and protection.⁶⁴ A tenth cluster, education, was added. The cluster approach had not yet been internationally approved and had never been used before in a disaster response, but the FRC saw it as a logical and economical means of coordinating humanitarian activities. A review of the response suggests that the cluster approach was relatively successful in some areas (logistics, food and shelter) and less so in others.⁶⁵ Importantly, NATO, which became one of the main contributors of military assets, was readily able to use the cluster system. Nevertheless, the cluster approach was generally perceived as being little different from the UN’s previous sectoral approach and inadequate for gathering and sharing data. Also, the British Department for International Development commented that NATO might have been better represented at the cluster meetings and at other UN-led meetings.⁶⁶

⁶³ Interview.

⁶⁴ Action Aid, ‘The evolving UN cluster approach in the aftermath of the Pakistan earthquake: an NGO perspective, action aid international’, <http://www.actionaid.org/docs/un_cluster_approach.pdf>.

⁶⁵ Action Aid (note 64).

⁶⁶ DfID (note 43, main text).

The purpose of the SOG was to ensure that the various groups represented (the FRC, foreign militaries, the UN and key donors) understood priorities and acted in a coordinated manner. The weekly (sometimes bi-weekly) SOG meetings enabled these groups to gain an overview of the response and served as a forum for discussion of the response. The NATO Disaster Relief Team commander reported that he would have preferred these meetings to happen even more frequently. Other participants commented that, although the SOG was a useful forum, too much time was spent on formal briefings and more time should have been spent on discussion and problem solving.⁶⁷

The decision to request and send foreign military assets

In requesting and accepting assistance, Pakistan did not favour military, civilian or commercial providers; what was important was the speed with which the appropriate assets could become operational in Pakistan. Pakistan used foreign military assets to fill gaps that its military could not fill and to augment the Pakistani military's contribution in other areas (e.g. aviation and medical).

Many foreign military assets were contributed to the relief operation.⁶⁸ The majority of foreign military assets were deployed in Pakistan by late October 2005 and were withdrawn by early February 2006, with very few remaining to participate in the rehabilitation phase.

Pakistan's initial request for assistance was very general, but interaction with NATO, the UN and bilateral responders led to modifications. Most providers of foreign military assets dispatched liaison and reconnaissance teams, who soon refined the requests and developed working relationships to sustain their operations. The NATO commander for the operation reflected that he would have preferred to have deployed earlier with the NATO Operational Liaison and Reconnaissance Team (OLRT), in order to develop personal working relationships from the outset of the operation

Some foreign military assets were specifically requested by Pakistan, but many came through unsolicited offers. Offers were made for a variety of reasons, some of them political, rather than in response to an identified need in the affected zone. Some nations went to great lengths to ensure that their offers were accepted, even if Pakistan was reluctant to accept the offered assistance. For example, the FRC was encouraged to accept an offer from the UK of a detachment of 75 engineers even though no role for them could, initially be identified. Nonetheless, the engineers did make a useful contribution to the relief effort.

This supply-driven approach caused some coordination problems. The key actors in Pakistan have become aware that, in order to respond to a disaster with greater precision and speed, they must be more specific and insistent about what foreign military assets are needed as well as where, when and how they will be deployed. Strong leadership and direction from the National Disaster Management Authority will be needed to ensure this.

⁶⁷ Interviews.

⁶⁸ For details of foreign military assets contributed to the earthquake relief operation in Pakistan see table A.5.

Many of the bilateral offers of military assets were made through the defence attachés of embassies and high commissions, who contacted personnel in the Pakistani military or Ministry of Foreign Affairs directly. The embassies and high commissions were also helpful in ensuring that foreign military assets operated effectively in the earthquake response. They used their relationships with the Government of Pakistan to provide up-to-date information about the disaster relief operation for foreign military assets and members of the SOG.

The OCHA Civil–Military Coordination Section (CMCS) was not a key player in the channelling of assets. It mainly provided field staff and gathered information regarding the provision of heavy-lift helicopters. It seems to have had little influence. For example, two CMCS requests for heavy-lift helicopters, on 9 and 14 October, were unsuccessful. On 9 October the CMCS contacted some 24 nominated national representatives from 13 nations in order to procure heavy-lift helicopters on behalf of Pakistan. This urgent request received a ‘somewhat muted response’, and a repeat request on 14 October was met with a similar response.

NATO involvement

Some of the foreign military assets deployed under bilateral arrangements were later brought under NATO command. Other contingents deployed under bilateral arrangements stayed under national command but worked together with NATO, coordinated by the Government of Pakistan. By contrast, a French fuel farm provided through NATO to subsequently became a bilateral contribution when France, with the agreement of the Government of Pakistan, extended its deployment period.⁶⁹

At the time of the earthquake, NATO cargo aircraft were deployed to the USA, providing airlift as part of the response to hurricane Katrina. The decision to redeploy these assets to Pakistan appears to have been taken relatively quickly and easily. However, committing NATO forces to land operations in Pakistan was more controversial, not only because of the security aspects but also owing to the lack of a clear NATO policy (see below). Pakistan’s initial request for assistance from NATO suggested that participation in the relief effort might be linked to the ‘global war on terrorism’. This displeased many members of NATO’s North Atlantic Council (NAC) so much that the request was almost turned down. Reportedly, it was an appeal by Jan Egeland encouraging the NAC to be ‘big and bold’ that finally convinced the NAC to send ground forces.

Although the mission of the EADRCC is ‘to coordinate the response of NATO and partner countries to natural or man-made disasters within the Euro-Atlantic area’, not all NATO members accept that the organization should be involved in disaster response or other humanitarian activities in third countries. Consequently, requests for military disaster relief assistance from NATO outside the Euro-Atlantic zone are referred to the NAC for consideration. In the case of the disaster in Pakistan, one state reportedly robustly objected to participation in such relief efforts, but nonetheless complied with the NAC’s majority decision and provided a significant and critical component to the response. Another state flatly refused to participate. In addition, some national delegations insisted that the NAC’s decision be referred to their governments for approval. This

⁶⁹ A fuel farm consists of multiple tanks (above or below ground) that hold varying quantities of fuel. The French fuel farm was used for rapid refuelling of helicopters.

process probably caused further delays in NATO's deployments. Some gaps in the land component of NATO's contributions were filled by states that had no NATO Response Force liability at that time: Italy, Lithuania and the UK.

The NAC made clear that its involvement in the disaster response was purely to save lives and livelihoods and speed up recovery. Accordingly, it established that:

- The duration of NATO's mission would be limited to three months.
- NATO's mission would only encompass emergency relief and recovery, not reconstruction.
- NATO's involvement was not to be linked to the 'global war on terrorism'.
- NATO would work with and for the Government of Pakistan.
- This deployment would not set a precedent for future humanitarian deployments.

Prior to deployment and during the operation, NATO repeatedly and consistently emphasized that it would deploy only for a limited time. This was intended to demonstrate to the people of Pakistan that NATO had no intention of staying in the region and was not using the deployment to cover up military encroachment into Pakistan.

It is questionable what value was added to the response by the involvement of NATO as an organization—as opposed to that of individual NATO member countries. Although the NATO assets were ostensibly under a unified command, some of them still required that all tasks be cleared by their national commands. This created problems of coordination and delays. However, such 'multi-bilateralism' is a common feature of NATO operations. In its report on the response, DfID observed that some of the common benefits of using foreign military assets—rapid deployment, flexibility, strong organization and leadership—were lost when assets were deployed under NATO, but not when they were deployed bilaterally.⁷⁰ It might be expected that channelling foreign military assets through NATO or the UN would lessen some of the political motivation for contributing and thus help to ensure a more demand-led, rather than supply-led, international response. However, several respondents indicated that this was not the case: even assistance channelled through NATO was still perceived as essentially bilateral.

The use of foreign military assets

During needs assessments, it was decided that foreign military assets would be critical in the areas of aviation, health care and medical treatment and, to a lesser extent, engineering. Air assets were needed for logistical purposes—cargo aircraft for transporting supplies and equipment and helicopters for distributing them to the disaster response sites. Logistics experts were also needed to coordinate this process (along with road, rail, river and sea transport). Helicopters were also needed for heavy lifting, for medical evacuations and for transporting materials and personnel.

In the area of medicine and health, the assets needed included field hospitals, medics, mobile medical teams and mortuary facilities. Public health specialists were needed to control contagious diseases and institute immunization programmes. Engineering assets were needed for tasks such as assessing structural damage, building and repairing roads

⁷⁰ DfID (note 43, main text).

and bridges in order to improve road access to the affected areas, clearing and removing rubble, constructing shelters, and filling gaps in power generation and distribution, and in water and sanitation. Unfortunately, it was not possible to interview those involved in coordinating engineering assets. According to the chairman of the FRC, Pakistan mobilized 18 battalions of engineers (approximately 15 000 personnel), and fewer than 1000 foreign engineers were deployed. This section, therefore, looks at the use of foreign military assets—in particular aviation and medical assets—and examines issues related to the coordination and appropriateness of their use.

The coordination of foreign military assets was the prime role of the FRC. Foreign military assets were assigned to specific geographical areas where they could work most effectively and not place undue demands on the Pakistani armed forces for administration and security (see below).

The Government of Pakistan, particularly the FRC, was inundated with foreign offers of advice and assistance in the early days and weeks after the earthquake. This occupied a considerable amount of the senior officers' time, some of whom commented that it distracted them from concentrating on the national plan of action. This example demonstrates the extent to which resources can be diverted because of the lack of preparation and of personnel dedicated to managing international assistance

Aviation coordination

Helicopters were the key assets that Pakistan needed for the relief effort, and whether they were civilian or military was not a matter of concern to the FRC. The initial efforts concentrated on moving all available helicopters and some fixed-wing aircraft, pilots, navigators and ground crews to Chaklala Airbase, near Islamabad. This was done in order to support the national assets in their efforts to locate the affected communities and then deliver aid and move the injured to the Combined Military Hospital at Rawalpindi. Foreign aircrews were required to undergo training to ensure that they complied with Pakistani safety and security procedures. In total some 129 helicopters, including around 60 from foreign militaries, were involved in the relief effort, flying along the narrow valleys to deliver relief supplies and medical assistance and recover the injured for treatment. Helicopters carried out some 17 150 medical evacuations.⁷¹

In time, as the scale of the devastation became apparent, it was necessary to extend the reach of the aviation assets. Thus, two 'main operating bases' were established: one at Chaklala and one at Qasim; 'forward airbases' were established at Abbottabad/Mansehra and at Muzaffarabad; and four 'forward operating bases' (small forward bases with an airfield, used to support tactical operations) were set up at Batagram, Balakot, Bagh and Rawlakot. Aviation was coordinated by the Air Operations Centre in Chaklala. Flights proceeded directly to the affected areas or were staged from one base to another. Crucial to the development and implementation of this new plan was the timely provision of the French fuel farm, under the auspices of NATO.⁷² The fuel farm, which was set up at Abbottabad, acted as a 'force multiplier', extending the range of aviation operations

⁷¹ Pakistan Armed Forces, *The Aviator*, Earthquake Special Edition, Pakistan Armed Forces Aviation, 2006.

⁷² NATO, Briefing by Commander NATO Disaster Relief Team, provided by NDMA, 28 Sep. 2007.

significantly and permitting longer and more frequent sorties to the more remote areas. Despite it arriving some weeks after the operation began, it nevertheless increased efficiency.

All aviation assets, whether military or civilian, were nominally under the authority of the Pakistani general officer commanding aviation. However, it appears that some NATO air assets initially remained under NATO's direction, despite the NAC's declaration that NATO assets should work 'with and for' the Pakistani authorities, and were only released later to work under the direction of UNHAS—which reportedly increased their effectiveness in the disaster response.⁷³

Medical and health cluster

The local health infrastructure was badly damaged by the earthquake: 796 health facilities were destroyed and a further 119 were rendered unsafe. In addition, half of the region's water treatment, storage and distribution systems were destroyed and almost all of the power and communication networks were out of action, creating both coordination problems and a significant public health risk.

The initial treatment of the injured relied on collecting them from areas close to the main existing medical facilities. The Dutch field hospital (deployed under NATO) set up a system of deploying mobile medical teams that travelled to remote areas to identify, treat and collect injured survivors. This process was successfully emulated by the Pakistan military: combined military and NGO personnel were deployed on foot or via helicopters to remote areas and the injured were transferred to appropriate medical facilities.⁷⁴

Military medical and health assets were coordinated under the FRC's medical and health cluster. This cluster was directed by the vice-principal of Pakistan's Army Medical College, who had recently completed three years of work in the affected region. Military leadership was chosen for this cluster because the Pakistani military was the one functioning body with a presence throughout the affected region, and it was thought to be a natural focus for the response because so much of the civilian infrastructure and leadership had become ineffective. The medical and health cluster was formed from a military nucleus but included all the national medical and health agencies, international agencies, donors and many NGOs.

The head of the cluster reported that no formal request was ever made for foreign military medical and health assets. Instead, all foreign medical and health assets were provided as the result of offers. In many cases medical and health teams arrived at Chaklala with little or no notice.⁷⁵ As with aviation, the head of the medical health sector made no distinction between military and civilian assets. Foreign military assets simply had to integrate into the cluster plan alongside civilian assets; interpreters and medical staff came from both military and civilian sources.

⁷³ DfID (note 43, main text).

⁷⁴ DfID (note 43, main text).

⁷⁵ The civilian medical assistance provided by Cuba was not requested and was accepted with some reluctance, although it later proved to be among the best and largest of the foreign medical assets, with the widest range of specializations.

The coordination arrangements in the medical and health cluster were similar to those used in other recent emergencies of similar scale. The participation of foreign military assets was necessary in all sub-clusters,⁷⁶ with the various specialized areas replicated in the two military divisional commands. It was commented that many of the foreign military assets did not have sufficient personnel to serve the range of coordination meetings, leading to less effective action than would have been possible otherwise.

The effectiveness of the foreign military assets

Timeliness

Military assets from some countries did not deploy as quickly as they could have done and were slow to start humanitarian operations. For example, the Italian heavy engineering contingent was badly needed, but it arrived late and worked for only a few weeks—not long enough to complete the tasks it was intended to fulfil. Some officials in Pakistan commented that after having agreed to accept foreign military assets, it was frustrating to then have their deployment delayed.⁷⁷ Such delays in a disaster situation can mean that national or other foreign military assets have to be diverted to provide assistance to communities that are in urgent need of assistance.

In some cases, the delays related to obtaining political clearance to enter the country. For the Italian contingent, the delay occurred because of the need to transport heavy equipment by sea, road and rail. In some cases the deployed troops spent time preparing their operational bases in Pakistan at the expense of humanitarian operations. Some contributing countries commented that the deployment of foreign military assets could have been quicker if status of force agreements or letters of exchange dealing with items such as costs, tasking, accountability and standards in humanitarian work had been prepared in advance.

Appropriateness and coordination of the assets deployed

Most of the assets provided to the Government of Pakistan were readily useable, but some were not. In addition, some of the foreign units offered were so small that the chairman of the FRC sometimes questioned what value they would add to the existing capabilities and whether they were worth accepting.⁷⁸

Coordination problems were created when some countries were not prepared to undertake specific key tasks assigned to them under the national plan, such as digging field latrines, even though these tasks fell within their competency and normal range of work. The reasons for this are not immediately clear, but this was a source of frustration to the FRC and contrary to NATO's criteria for deployment.

⁷⁶ The sub-clusters were aviation, health surveillance, health services, field hospitals, data collection and coordination, convalescent centres, and primary health care.

⁷⁷ Interviews.

⁷⁸ Interviews.

The assignment of tasks was not always done in a coordinated way. In one case a foreign unit was asked to provide potable water. The unit did so quickly and efficiently. However, the absence of a distribution system meant that the communities looked to other agencies to provide water.

No clear distinction was made between relief and rehabilitation work in the earthquake response. Foreign military assets committed to relief found that their enthusiasm, capacity and capability could lead them into undertaking rehabilitation and even development work. The standard of rehabilitation work carried out by NATO seems to have been higher than the usual minimum standards for humanitarian aid, because the organization adopted EU standards for power distribution, water and sanitation, among others. This meant that some engineering work, for example, could not be completed because locally sourced materials failed to meet the standards. NATO has not developed its own standards and is unlikely to do so as long as NATO members disagree about whether the organization should engage in international humanitarian work at all.

Because NATO was following EU standards, there was a danger that the work it was doing would be unsustainable and would raise expectations among the affected population that would not be met when civilian humanitarian actors took over. NATO realized this and sought to collaborate with the appropriate NGOs from the start so that sustainable water treatment, supply and distribution could be established. To some extent this enabled NATO to withdraw its assets in a manner that minimized the detrimental impact on the communities they were supporting.

The standards of medical and health care were also higher during the relief period than they had been before the earthquake because of the intervention of the foreign military assets, the NGOs and international organizations. Consequently, many survivors were reluctant to revert to lower health care standards in the rehabilitation process. These problems played a significant role in shaping the national rehabilitation and reconstruction policy to Build Back Better.⁷⁹

Most humanitarian actors recognized the value of involving foreign military assets in the response. However, they also saw a need to distance themselves from those assets, even as they worked alongside them. This was because if they were too much associated with military assets it might adversely affect their ability to work in other parts of the world, most notably in complex emergencies. Some humanitarian workers also commented that they felt increasingly uneasy that the military was using humanitarian terminology in a manner that undermined humanitarian principles and jeopardized the ability of the NGOs to act. Some NGO personnel expressed relief that the foreign military assets generally did not take it upon themselves to interact with the local population, but left the role of community engagement to the NGOs.⁸⁰

Efficiency and force protection measures

According to NATO, operational efficiency in the relief effort was enhanced by the fact that common doctrines and procedures were used, and because the Pakistani armed forces

⁷⁹ 'Build Back Better' is a principle of Pakistan's Earthquake Reconstruction and Rehabilitation Authority. The concept had been introduced by US President Bill Clinton during the Indian Ocean tsunami response.

⁸⁰ It is worth noting that foreign military assets were providing medical assistance.

and those of many of the contributing countries used English as the working language, thereby enabling easier communication. Six of the nine bilateral contributors were members of NATO or of the ABCA Program.⁸¹ Some of the bilateral partners offered advice on doctrine and encouraged the Pakistani military to adopt their practices, but only those suggestions considered most useful were adopted.

The ongoing security issues in Pakistan were given considerable scrutiny by all parties. It is significant that no foreign military personnel were taken hostage, directly targeted, injured or killed. The Pakistan Armed Forces ascribe this to their own provision of security for all involved in the humanitarian response. Security concerns led to some initial reluctance to deploy foreign military assets, but in fact the constraints on their deployment were minimal.

Some foreign military asset providers insisted on restrictive safety and security measures such as never allowing their assets to fly solo sorties, thus limiting their output. All foreign sorties were supposed to include a Pakistani navigator, usually a junior officer, to ensure that the aircraft kept within their assigned zones and to assist in communication with the local people and military command. In time, as trust and confidence grew, there was some relaxation of this prerequisite, which enabled the number of relief payloads and transfers of casualties to be increased.

Safety was another important concern. There was one fatal accident during the relief effort. However, there were relatively few incidents in spite of the rugged terrain, the long flying hours, the frequency of sorties and, in the early period, the need to fly at night. This good safety record is largely thanks to the efforts of the coordinating body and to the professionalism of the foreign pilots and their readiness to respect the coordinating body.

Lessons learned

Both during and after the earthquake response, the Government of Pakistan was not concerned about whether the foreign assets provided were civilian or military. More important was that they met real needs and arrived in a timely manner. Self-sufficiency a willingness to adhere to the national plan of action were also considered desirable.

The Government of Pakistan observed that foreign military assets sometimes failed to accept locally appropriate working practices or to carry out tasks in a timely manner consistent with local standards and with respect for their culture and social structures.

There was little coordination of requests for, and offers of, foreign military assets in the early stages of the earthquake response. Because of this, some foreign military assets arrived that were not strictly required. Pakistan recognized the need for better coordination in future disaster relief operations. Proper assignment of tasks and linking of deployments and withdrawal dates to objectives would also go some way towards avoiding problems seen in 2005.

⁸¹ ABCA is a programme to enhance interoperability and coordination between the armed forces of Australia, Canada, New Zealand, the UK and the USA.

Many deployments were delayed because of the need for an exchange of letters or equivalent ad hoc diplomatic agreement. These processes were frequently held up by consideration over matters such as whether foreign military personnel should bear arms. Some steps have since been taken to streamline the processes in future.

Many foreign military personnel recognized that their participation in the operation could have been more effective if they had better understood and coordinated with the UN and NGOs. They also saw a need to improve their own capacities in the delivery of humanitarian aid, including and setting and achieving aid standards.

There appears to have been a general lack of awareness of the Oslo Guidelines in the Government of Pakistan and among the foreign military contingents. Although the standing operating procedures for the Euro-Atlantic Disaster Response Unit incorporated key elements of the Oslo Guidelines,⁸² the commander of the NATO Disaster Relief Team was unaware of the guidelines until after the deployment. Several personnel who similarly only came to know of the Oslo Guidelines after their deployment observed that the guidelines would have been useful during the response. It would be informative to discover if and how the contributing countries have since reflected the Oslo Guidelines in their doctrine, education and training.

All the representatives of Pakistan and of contributing countries interviewed for this study called for humanitarian principles to be incorporated into doctrine and education and training curricula, as well as for the development of good practices through training and the open sharing of evaluations. Proper preparation of troops for disaster relief would have greatly reduced their need to learn on the job and thus improved their efficiency and effectiveness in the earthquake response. Military personnel commented that an agreed set of standards for foreign military assets would help to limit operations to disaster relief (rather than going into longer-term rehabilitation and reconstruction), avoid raising unrealistic expectations among beneficiaries, ease the withdrawal of foreign military assets and assist military contingents in working to internationally recognized minimum standards.

The lack of open and independent evaluations of foreign military assets means that lessons from the Pakistan experience have not been identified and knowledge has not been shared. This restricts the potential for developing more effective policies, strategies, and practices for disaster response. Moreover, this lack of transparency and independence in evaluations appears to be the norm for foreign military assistance.

Since the South Asia earthquake, Pakistan has created two national bodies, the Earthquake Reconstruction and Rehabilitation Authority and the National Disaster Management Authority. These are responsible for dealing with the legacy of the 2005 earthquake and for preparing for and responding to future disasters, respectively. In both cases the leadership is military and its members are integral to the prime minister's secretariat. It is clear that a great deal has been learned from the response to the earthquake and that a significant effort is being made to ensure greater resilience in the affected areas and improve responses to future disasters.

⁸² NATO, Standing operational procedures for the Euro-Atlantic Disaster Response Unit, <<http://www.nato.int/eadrcc/sop/sop.htm>>.

Table A.5. Foreign military assets contributed to the earthquake relief operation in Pakistan in 2005

This list of assets should not be taken as definitive.

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling date	Arrival date	Departure date	Location
USA	Helicopter	CH-47 Chinook	5		Theatre airlift	Bilateral	08/10/05	01/02/06	..
	Helicopter	UH-60 Black Hawk	3		Theatre airlift	Bilateral	08/10/05	01/02/06	..
	Personnel			933	..	Bilateral	..	..	..
	Fixed-wing aircraft	C-17	1		Air bridge	Bilateral	10/10/05	01/02/06	..
NATO	Field hospital	Globemaster III	1		Medical	Bilateral	10/10/05	01/02/06	..
	Air bridge (fixed-wing aircraft) ^a	MASH			Air bridge	NATO	14/10/05	..	Various in Europe
Japan	Helicopter	UH-1	6		Theatre airlift	Bilateral	14/10/05	28/11/05	..
NATO	Personnel ^b	Operational liaison and reconnaissance team		..	OSOCC	NATO	14/10/05	01/02/06	..
Japan	Personnel			290	Medical and search and rescue	Bilateral	17/10/05	01/12/05	..
NATO	Air bridge (fixed-wing aircraft) ^c	C-130 Hercules			Air bridge	NATO	21/10/05	08/03/06	Ramstein, Germany and Incirlik, Turkey
NATO	Personnel ^d	NATO Response Force Deployable Joint Task Force		..	OSOCC	NATO	24/10/05	01/02/06	Islamabad

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
France	Fuel farm				Fuel supply for helicopters	NATO ^e	29/10/05	..	Abbottabad
Germany	Helicopter	CH-53 Sea Stallion	4		Theatre airlift	NATO	29/10/05	01/02/06	..
Luxembourg	Helicopter	MD-900 Explorer	1		Theatre airlift and search and rescue	NATO	29/10/05	01/02/06	..
NATO	Field hospital with mobile units ^f	Multinational Field Hospital	1	>177	Medical	NATO	29/10/05	20/02/06	Bagh
Canada	Personnel and equipment ^g	Disaster Assistance Relief Team		..	Engineering	Bilateral	30/10/05	20/02/06	Bagh
Spain	Personnel and equipment ^{g, h}	Light engineering companies		..	Engineering	NATO	10/11/05	01/02/06	Bagh
Lithuania	Personnel and equipment ^{g, h}	Water purification team			Engineering	NATO	10/11/05	01/02/06	Bagh
Poland	Personnel and equipment ^{g, h}	Light engineering company		..	Engineering	NATO	10/11/05	01/02/06	Bagh
Italy	Personnel and equipment ^g	Heavy engineering company		..	Engineering	NATO	10/11/05	01/02/06	Bagh
UK	Personnel and equipment ^g	Arctic engineering squadron		75	Engineering	NATO	10/11/05	01/02/06	Bagh

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling	Arrival date	Departure date	Location
Japan	Fixed-wing aircraft	C-130 Hercules and B-747	4		Theatre airift and air bridge	Bilateral	07/01/06	..	..
Afghanistan	Helicopter	Mi-17	4	20	Search and rescue	Bilateral	..	..	..
	Fixed-wing aircraft	..	1	4	Theatre airift and Air bridge	Bilateral	..	..	..
	Personnel	Medical team			Medical	Bilateral	..	..	..
Australia	Helicopter	UH-60 Black Hawk	4	140	Theatre airift and search and rescue	Bilateral	..	..	..
Canada	Fixed-wing aircraft	..	..		Transport for liaison and assessment	Bilateral	..	..	..
Canada	Helicopter	Ka-32	1		Search and rescue	Bilateral	..	..	..
Canada	Field hospital		1	..	Medical	NATO	..	20/02/06	Garhi Dupatta
India	Fixed-wing aircraft	Ilyushin 76	..		Theatre airift and air bridge	Bilateral	..	..	..
Japan	Helicopter	UH-1H Huey	4		Theatre airift and search and rescue	Bilateral	..	..	..
UAE	Helicopter	UH-1H Huey	1		Theatre airift and search and rescue	Bilateral	..	..	..
UK	Helicopter	CH 47 Chinook	3	4	Theatre airift	UN (UNHAS)	..	..	..

Contributing countries	Asset type	Asset name	Asset quantity	Number of personnel	Type of support	Channelling date	Arrival date	Departure date	Location
USA	Helicopter	Mi-8	3		Theatre airift and search and rescue	Bilateral	..	..
	Helicopter	MH-53 Pave Low	2		Search and rescue	Bilateral	..	..	..
	Helicopter	CH-47 Chinook	11		Theatre airift	Bilateral	..	..	..
	Helicopter	UH-60 Black Hawk	3		Theatre airift and search and rescue	Bilateral	..	..	..

NATO = North Atlantic Treaty Organization; UNHAS = UN Humanitarian Air Service; .. = information not available

^a The first NATO aircraft, a B-707 Training and Cargo Aircraft, arrived in Pakistan with relief supplies donated by Slovenia on 14 Oct. An-124 aircraft, chartered by NATO, landed with supplies on 16 Oct.

^b The NATO operational liaison and reconnaissance team was deployed from NATO Joint Command Lisbon. Its tasks included establishing relations with the Pakistani Government, identifying potential missions and tasks for NATO units, coordinating with officials at Chaklala Air Base regarding future NATO relief flights and preparing for the arrival of further NATO assets.

^c Countries contributing to the second NATO air bridge included Denmark, France, Germany, Greece, Italy, Turkey, the UK and the USA. The air bridge moved relief supplies to Islamabad. Assets include 5 C-130s from the NATO Response Force along with additional aircraft made available from NATO members.

^d Command and coordination elements deployed by NATO included a NATO Signal Battalion Detachment, the headquarters of the air component (led by the French Air Force and located at Chaklala), the headquarters of the land component (led by Spain and located in Arja), and French and Slovenian civil–military cooperation teams.

^e At the request of the Government of Pakistan, the French fuel farm remained under a bilateral arrangement after NATO's withdrawal.

^f Countries contributing to the NATO Multinational Field Hospital included the Czech Republic (23 personnel), France (18 military physicians and possibly other personnel), the Netherlands (mobile field hospital and 130 personnel), Portugal (6 personnel) and the UK. The first to arrive, on 29 Oct., was the Dutch contingent. The field hospital was opened on 9 Nov. Mobile units, using helicopters, road vehicles (4 ambulances) and mules to reach affected communities, were established after the arrival of British, Czech and French medical personnel. Around 200 medical staff were deployed through NATO, including the Multinational Field Hospital and the Canadian field hospital.

^g The engineering assets deployed by NATO included around 1000 personnel and 30 medium-weight and 25 heavy-weight vehicles.

^h The Lithuanian water purification team was augmented by Polish and Spanish engineers. The Canadian Disaster Assistance Response Team started under a bilateral agreement and later became part of the NATO contingent.

Sources: National Disaster Management Authority, Pakistan, data from contributors, and secondary sources.

Annex E

Lists of respondents

This annex provides information about the various respondents who contributed data for this study. The respondents are sub-divided according to the type of affiliation: countries and regional organizations, international organizations, and others, and listed in order of the first response. Three response types are shown. Those listed as 'interview' were face-to-face interviews unless otherwise indicated. The location of the interview is shown in brackets. Those listed as 'telephone' were interviews conducted by telephone. Those listed as 'questionnaire' were written responses to a questionnaire (see annex F). Note that written responses were often followed up with telephone calls to query or supplement the information supplied. The researchers who conducted the interviews or checked the questionnaires are shown in the last column.

Main report

Name	Affiliation	Response type	Researcher
<i>National and regional organizations</i>			
Anita Dwyer, Disaster Risk Reduction Manager	AusAID, Australia	Interview (Geneva) Telephone	JL/TR JL/SW
Alan March, Humanitarian Coordination and Assistant Director-General for Public Affairs	AusAID, Australia	Telephone	JL/SW
Garry Dunbar,* A/g Director	Humanitarian and Emergencies Section, AusAID, Australia	Telephone Questionnaire	JL/SW JL
Maj. Gen. David Morrison	Australian Defence Force	Interview (Canberra)	HA
Col. David Scott	Australian Defence Force	Interview (Canberra)	HA
Marc Devalckeneer	MOD, Belgium	Questionnaire	JL
Gaetan Parmentier	MOD, Belgium	Questionnaire	JL
Rene Wagermalls	MOD, Belgium	Questionnaire	JL
Michael Bonser	DFAIT, Canada	Questionnaire	JL
Anne-Brigitte Albrechtsen*	MFA, Denmark	Questionnaire	JL
Ulla-Maija Finskas	MFA, Finland	Questionnaire	JL
Nicolas Baudouin	MOD, France	Interview (Paris)	JYH

Name	Affiliation	Response type	Researcher
Christian Bernard	MFA, France	Interview (Paris)	JYH
Nisha Manjooran	MFA, Germany	Questionnaire	JL
P.G. Dhar Chakrabarti*	SAARC Disaster Management Centre, India	Questionnaire	JL
Ciara O'Brien	MFA, Ireland	Questionnaire	JL
Mitsunori Nanba,* Director	Overseas Disaster Assistance Division, International Cooperation Bureau, MFA, Japan	Interview (Geneva) Questionnaire	HA/JL/JYH/ TR/SW JL
Takahiro Araki, Assistant Director	International Operations Division, Bureau of Operational Policy, MOD, Japan	Interview (Tokyo) Questionnaire	HA HA
Maj Fujio Ueda	International Cooperation Office, Joint Staff Office, MOD, Japan	Interview (Tokyo)	HA
Minori Ishii	ODA, MFA, Japan	Interview (Tokyo)	HA
Masayuki Ichihara	JICA, Japan	Interview (Tokyo)	HA
Hitoshi Otomo	Coordinator, Disaster Assistance, JICA	Interview (Tokyo)	HA
Brecht Paardekooper	MFA, the Netherlands	Questionnaire	JL
Arne Jan Flølo, Adviser, Humanitarian Affairs	MFA, Norway	Interview Questionnaire	JL/JYH/SW JL
Cap. Daen Ng	Joint Operations Department, MINDEF, Singapore	Interview (Singapore)	HA
Mandisa Kalako-Williams, Senior Manager for Disaster Intervention and Support	Department of Provincial and Local Government	Interview (Pretoria)	SW
Lt Col. Derek Moore	Joint Operations Division, Defence Foreign Relations, SANDF, South Africa	Questionnaire	SW
Col. Theo Ligthelm	School for Military Health Training, SA Military Health Service, South Africa	Interview (Pretoria)	SW
Lt Pieter Potgieter	School for Military Health Training, SA Military Health Service, South Africa	Interview (Pretoria)	SW
José Quevedo Ruiz	MOD, Spain	Questionnaire	JL
Stina Sjölin	SRSA, Sweden	Interview (Stockholm)	JL/JYH/SW
Lars Johansson	SRSA, Sweden	Telephone	SW
Jan Forsberg	MOD, Sweden	Interview (Stockholm)	JL

Name	Affiliation	Response type	Researcher
Eva Larsson	SRSA, Sweden	Email interview	JL
Andreas Schiess	Swiss Agency for Development and Cooperation	Telephone	JL
Katy Atfield, Civil–Military Adviser	DfID, UK	Interview (London) Questionnaire	JL/SW JL
Ian Howard-Williams	DfID, UK	Interview (London)	JL/SW
Christopher Clark	MOD, UK	Interview (London) Questionnaire	JL/SW JL
Benjamin Merrick	MOD, UK	Interview (London)	JL/SW
Peter Tallantire	Cabinet Office, UK	Interview (London)	JL/SW
Tom Dolan	USAID, US	Questionnaire	JL
Col. (retd) Linton Graham,* Representative	CARICOM	Questionnaire Telephone	SW SW/JYH
Mariusz Kawczynski	Civil–Military Cell, EU Military Staff, Council of the European Union	Questionnaire	JL
Johannes Luchner	Directorate-General Environment and ECHO, European Commission	Questionnaire	JL
Günter Bretschneider, Head	Euro-Atlantic Disaster Response Coordination Centre, NATO	Interview (Brussels)	TR
<i>International organizations</i>			
Colin Richards, Humanitarian Affairs Officer, Civil–Military Coordination Section	OCHA	Interview (Geneva)	JYH/TR/SW HA/JL
Phillipe Martou, Deputy Head of Aviation	UNHAS, WFP	Telephone	JL/SW
Andrew Harper, Head	Iraq Support Unit, UNHCR	Interview (Geneva)	JL/SW/HA
Julia Schtivel-Watt, Chief of Emergency Preparedness and Response Capacity	UNHCR	Interview (Geneva)	JL/SW/HA
Quoc Dang Nguyen, Emergency Officer	UNICEF	Interview (Geneva)	JL/SW/HA
Jean-Jacques Graisse, Senior Deputy Executive Director	WFP	Interview (Geneva)	JL/TR/SW

Name	Affiliation	Response type	Researcher
<i>Others</i>			
Roger Yates, Head of Emergencies,	Action Aid	Interview (Geneva)	TR
Laura Walker, Senior Delegate, PA/Team Coordinator, Humanitarian Policy and Partnerships	British Red Cross	Interview (London)	TR
Howard Mollet	CARE International	Interview (London)	TR
Olivier Bangerter, Head	Unit for Relations with Armed and Security Forces, ICRC	Interview (Geneva)	JYH/TR/SW
Simon Brooks	ICRC	Interview (London)	TR
Flemming Nielsen, Operations Coordinator	IFRC	Interview (Geneva)	JYH/TR/SW
Peter Medway, Director of Operations	International Medical Corps (UK)	Interview (London)	TR
Tiziana Oliva	Merlin	Interview (London)	TR
Alain Grall, Transport Coordinator	MSF Belgium	Interview (by email)	JL
Dan Sermand, General Director	MSF Sweden	Interview (Stockholm)	JL/SW
Vickie Hawkins	MSF	Interview (London)	TR
Aurélie Lamazière	Save the Children	Interview (London)	TR
Marcus Oxley, Disaster Management Director	Tear Fund	Interview (Geneva)	TR
Carl Skadian	<i>The Straits Times</i>	Interview (Singapore)	SW
Lola Gostelow, Consultant (former Humanitarian Policy Adviser, Save the Children)		Interview (London)	TR
Richard Luff, Consultant (ex Oxfam)		Interview (London)	TR
Gregg Nakano (former OFDA, USAID)		Interview (by email)	JYH

Case study: Mozambique

Name	Affiliation	Response type	Researcher
Col. Dimas, Liaison Officer to CENOE	Mozambique Armed Forces	Interview (Maputo)	SW
Col. Xavier Cadete, Liaison Officer to CENOE	Mozambique Armed Forces	Interview (Maputo)	SW
Julio Inacio Nunes, Customs Officer	Customs Service	Interview (Maputo)	SW
Emuzima, former Logistics Officer	INGC	Interview (Maputo)	SW
Paulo Zucula, Director*	INGC	Interview (Maputo) Telephone	SW SW
César Manzate	INGC	Interview (Maputo)	SW

Name	Affiliation	Response type	Researcher
Gumercindo, former Deputy Director	INGC	Interview (Maputo)	SW
Manuel Gonçalves	Directorate for International Organizations and Conferences, Ministry of Foreign Affairs and Cooperation	Interview (Maputo)	SW
Lucas Chomera Feremias, Minister	Ministry for State Administration	Interview (Maputo)	SW
Col. Robbie Blake	Joint Operations Division, Defence Foreign Relations, SANDF, South Africa	Interview (Pretoria)	SW
Lt Col. Derek Moore	Joint Operations Division	Interview (Pretoria)	SW
Maj. Prince Masinga	Joint Operations Division	Interview (Pretoria)	SW
Col. Botha	Air Force Command Post, SANDF, South Africa	Interview (Pretoria)	SW
Lt Col. Paul Munday	SA Military Health Service	Interview (Pretoria)	SW
Brig. Gen. John Church	Joint Operations Operational Headquarters, SANDF	Interview (Pretoria)	SW
Ian Howard-Williams	DfID, UK	Telephone	SW
Edoardo Manfredini	Italian Cooperation Office	Interview (Maputo)	SW
Kelly David	OCHA Regional Office for Southern Africa	Interview (Pretoria)	SW
Ndolamb Ngokwey	UN Resident Coordinator, Mozambique	Interview (Maputo)	SW
Angelina Tivane	UN Emergency Coordination Support Officer UN Resident Coordinator's Office	Interview (Maputo)	SW
Melissa Fernandez	UNICEF, Mozambique	Interview (Maputo)	SW
Ken Davies, Country Director	WFP, Mozambique	Interview (Maputo)	SW
Peter Keller-Transburg, Public Information Officer	WFP, Mozambique	Interview (Maputo)	SW
Barbara Vanlogchem, Logistics Officer	WFP, Mozambique	Telephone	SW
George Tomas	IFRC, Mozambique	Interview (Maputo)	SW
Eunice Mucache	IFRC, Mozambique	Interview (Maputo)	SW
Torsten Wegner	Internationale Weiterbildung und Entwicklung	Interview (Maputo)	SW
Fernando B. de Lima, President	Mediacoop	Interview (Maputo)	SW
David Wright, Country Director	Save the Children, Mozambique	Interview (Maputo)	SW
Jaco Klopper, former SANDF Air Force Task Commander		Interview (Pretoria)	SW

Case study: Haiti

Names are not given following an agreement between the researcher and the respondents.

Affiliation	Response Type	Researcher
Direction Protection Civile	Interview (Port-au-Prince)	JYH
Former Minister of Agriculture, Haiti	Interview (Port-au-Prince)	JYH
Former Minister for Planning in charge of tropical storm Jeanne relief operation	Interview (Port-au-Prince)	JYH
USAID, Haiti	Interview (Port-au-Prince)	JYH
USAID, Washington	Interview (Washington, DC)	JYH
USSOUTHCOM, Washington, DC	Interview (Washington, DC)	JYH
US Military and Liaison Officer and official from US Embassy, Haiti	Interview (Port-au-Prince)	JYH
MINUSTAH personnel and advisers, Haiti	Interview (Port-au-Prince)	JYH
OCHA, Haiti	Interview (Port-au-Prince)	JYH
UNDP, Haiti	Interview (Port-au-Prince)	JYH
WFP, Haiti	Interview (Port-au-Prince)	JYH
CARE Haiti	Interview (Port-au-Prince)	JYH
Catholic Relief Service	Interview (Port-au-Prince)	JYH
International Crisis Group	Interview (Port-au-Prince)	JYH
Oxfam-Québec	Interview (Port-au-Prince)	JYH
Oxfam-UK	Interview (Port-au-Prince)	JYH

Case study: Indonesia

Name	Affiliation	Response type	Researcher
Tabrani, Deputy Director, Emergency Management	BAKORNAS	Interview (Jakarta)	HA
Aisyah Hamid Baidlowi, Chair	Asian Forum of Parliamentarians, Population and Development	Interview (Jakarta)	HA
Dr Juwono Sudarsono, Minister	Ministry of Defense and Security, Indonesia	Interview (Jakarta)	HA
Alwi Shihab, former Coordinating Minister, Ministry for People's Welfare	Special Envoy to the Middle East	Interview (Jakarta)	HA
Maj. Gen. Heryandi, Deputy Commander for Aceh Relief Operations	Indonesian Armed Forces (TNI)	Interview (Jakarta)	HA
Lt. Gen. Endang Suwarya, Chief of General Staff (formerly Regional Commander, Aceh)	TNI	Interview (Jakarta)	HA
Hassan Abdullah, 2nd Assistant (Economy and Development)	Regency Office, Western Aceh	Interview (Meulaboh, Aceh)	HA/SW
T. Dadek, Head of Administration	Regency Office, Western Aceh	Interview (Meulaboh, Aceh)	HA/SW

Name	Affiliation	Response type	Researcher
Edizar, Head	Regency Office, Western Aceh	Interview (Meulaboh, Aceh)	HA/SW
Rudi Arfiansyah, Assistant to Head	Health Department, Meulaboh General Hospital	Interview (Meulaboh, Aceh)	HA/SW
Dr Harris M Saputra, Director	Meulaboh General Hospital	Interview (Meulaboh, Aceh)	HA/SW
Dewi, Head	Office of the UN Recovery Coordinator, Meulaboh	Interview (Meulaboh, Aceh)	HA/SW
Rusly	Indonesian Red Cross	Interview (Meulaboh, Aceh)	HA/SW
Edy Aman Saragih, Head	North Sumatra Satkorlak	Interview (Medan)	HA/SW
Maj. Gen. David Morrison	Australian Defence Force	Interview (Canberra)	HA
Col. David Scott	Australian Defence Force	Interview (Canberra)	HA
Garry Dunbar	AUSAID	Interview (Canberra)	HA
Geraldine Gibson	MOD, Singapore	Interview (Canberra)	HA
Takahiro Araki	MOD, Japan	Interview (Tokyo)	HA
Maj Fujio Ueda	MOD, Japan	Interview (Tokyo)	HA
Masayuki Ichihara	JICA, Japan	Interview (Tokyo)	HA
Hitoshi Otomo	JICA, Japan	Interview (Tokyo)	HA
Brig. Gen. Tan Chuan Jin, Commander (Meulaboh), Operation Flying Eagle	Singapore Armed Forces	Interview (Singapore)	HA
Col. Tay Boon Kai, Commander (Banda Aceh), Operation Flying Eagle	Singapore Armed Forces	Interview (Singapore)	HA
Brig. Gen. Goh Kee Nguan, Contingent Commander and Assistant Combined Task Force Commander	Singapore Armed Forces	Interview (Singapore)	HA
Thomas M. Dolan, Senior Regional Director	USAID, USA	Interview (Geneva)	HA
Oliver Lacey-Hall	Head, UNDP	Questionnaire	HA

Case study: Pakistan

Name	Affiliation	Response type	Researcher
Hamid Ahmad Malik, Technical Adviser, Gender, (formerly UNDP)	Establishment Division, Cabinet Secretariat, Government of Pakistan	Interview (Islamabad)	TR
Brig. Akhtar Javaid Warraich, DG TRC, Head of Logistics (formerly Logistic Coordinator, FRC)	ERRA	Interview (Islamabad)	TR
		Interview (Islamabad)	TR/SW

Name	Affiliation	Response type	Researcher
Lt Gen. Nadeem Ahmed, Deputy Chairman,	ERRA	Interview (Islamabad)	TR
Khadija Khan, Knowledge Management	ERRA	Interview (Islamabad)	TR
		Interview (Islamabad)	TR/SW
Andrew MacLeod, Senior Adviser UN Resident Coordinator's Office, and Senior Adviser Deputy Chairman's Office	ERRA/UN Resident Coordinator's Office	Interview (Islamabad)	TR
		Interview (Islamabad)	TR/SW
Lt Col. Ali Haider, Military Attaché to Deputy Chair	ERRA	Interview (Islamabad)	TR/SW
Maj Gen (retd.) Abdul Qadir Usmani, Director (formerly Vice Principal Army Medical College	Human Organ and Tissue Transplant Commission	Interview (Islamabad)	TR/SW
Lt Gen. (retd) Farooq Ahmad Khan, Chairman, Prime Minister's Inspectors Commission, (formerly Head of FRC)	NDMA	Interview (Geneva) Interview (Islamabad)	TR/JL TR/SW
Brig. Kamran Shariff, Response Adviser	NDMA	Interview (Islamabad)	TR/SW
Maj. Gen. Mohammed Yousaf, Vice Chief of the General Staff (formerly Director-General Military Operations)	Pakistan Army	Interview (Islamabad)	TR/SW
Maj. Gen. Nasser, Director- General Military Operations, (formerly Director, Military Operations)	Pakistan Army	Interview (Islamabad)	TR/SW
Maj. Gen. Javed Aslam Tahir, General Officer Commanding	Pakistan Army Aviation	Interview (Islamabad)	TR/SW
Nancy Foster, First Secretary (Development)	High Commission of Canada to Pakistan	Interview (Islamabad)	TR
Olivier Landour, Counsellor	French Permanent Mission to NATO, Brussels	Interview (Brussels)	TR
Satoru Nishikawa, Director for Disaster Preparedness	JICA, Japan	Interview (Geneva)	TR
Bjorn Johannessen, Senior Adviser	Ministry of Foreign Affairs, Norway	Interview (Geneva)	TR
Fredrik Arthur	Norwegian Permanent Mission to the UN/ World Trade Organization	Interview (Geneva)	TR

Name	Affiliation	Response type	Researcher
Katy Atfield, Senior Civil Military Adviser	DfID	Interview (London)	TR
James Perry	Foreign and Commonwealth Office, UK	Interview (London)	TR
Jeremy Birkbeck, Policy Adviser	Directorate of Joint Commitments, MOD, UK	Interview (London)	TR
AVM Walton, Deputy Chief of Joint Operations (Operational Support), (formerly Military Commander for NATO disaster relief operations)	Permanent Joint Headquarters, MOD, UK	Interview (London)	TR
Dr Roger Hutton, Head	Directorate of Joint Commitments, MOD, UK	Interview (London)	TR
Wg Comd. Hamish Cormack, SO1 Joint AIR CBT SPT (also Humanitarian and Disaster Relief Operations)	Development, Concepts and Doctrine Centre, Shrivenham, MOD, UK	Interview (London)	TR
Maj. Damian Gartland	Joint CIMIC Group, UK	Interview (London)	TR
Rex Amos	British Permanent Mission to NATO	Interview (Brussels)	TR
Penny Satches, Emergency Manager	US Permanent Mission to NATO	Interview (Brussels)	TR
Sebastian Rhodes Stampa,	CMCS, OCHA Regional Office for Asia and the Pacific	Interview (Islamabad)	TR
Stefano Santamato, Staff Officer	Civil Emergency Planning, Operations Division, NATO	Interview (Brussels)	TR
Günter Bretschneider	Euro-Atlantic Disaster Response Coordination Centre, NATO	Interview (Brussels)	TR
Amb. Maurits R Jochems, Deputy Assistant Secretary General Planning	Euro-Atlantic Disaster Response Coordination Centre, NATO	Interview (Brussels)	TR
Simone de Manso, Press Office	Press and Media Section, NATO	Interview (Brussels)	TR

* = respondent was a member of the Advisory Group for this study.

Bakornas = National Coordinating Body for Disaster Management; CENOE = National Emergency Operations Centre (Mozambique); CIMIC = civil-military cooperation; CMCS = Civil-Military Coordination Section; DfID = Department for International Development; ERRA = Earthquake Reconstruction and Rehabilitation Authority (Pakistan); FRC = Federal Relief Commission (Pakistan); HA = Hassan Ahmad; INGC = National Disaster Management Institute (Mozambique); JICA = Japan International Cooperation Agency; JL = Josefine Löfgren; JYH = Dr Jean-Yves Haine; MFA = Ministry of Foreign Affairs; MOD = Ministry of Defence; NDMA = National Disaster Management Authority (Indonesia); Satkorlak = Provincial disaster management office (Indonesia); SW = Sharon Wiharta; TR = Tim Randall

Annex F

Questionnaires used in the study

The three questionnaires below were designed for data gathering for this study. Information about how they were used is given in chapter 1. The explanation of military assets sectors given as appendix 2 of the first questionnaire below was also sent with the other questionnaires.



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Provider questionnaire (trend analysis)

Questionnaire

1. General questions

- What is the standard operating procedure for decision-making regarding military assets? When was it adopted?
- Is there any type of interdepartmental/agency MOU regarding the use of military assets in natural disasters?
- What do you define as the immediate disaster relief phase?
- Do/Did the Oslo Guidelines inform the decision making process?
- Do you usually conduct your own needs assessment and impact evaluation?
- Do you generally await a specific request, or do you proactively offer assistance to the stricken country?
- What are your impressions of the role played by the UN Office for the Coordination of Humanitarian Affairs?
- What are the main changes you have noticed in the provision of military assets in natural disasters over the last ten years?
- To which rapid-onset natural disasters has your government contributed military assets since 1998? (See appendix 1 for a list for of disasters. Please also mention any rapid-onset natural disasters to which your government responded that are not on the list).

2. Disaster specific questions

For each natural disaster to which your government contributed military assets, could you please answer the following questions (if required, see appendix 3 for response sheet):

- Were the assets provided bilaterally or through an international agency? Please specify each case if possible.
- For each case, what military assets were provided? Please specify quantities. (Appendix 2 outlines the specifics of each of the below areas).

<input type="checkbox"/> Communications	<input type="checkbox"/> Search & rescue
<input type="checkbox"/> Engineering	<input type="checkbox"/> Transport/Logistics – Air
<input type="checkbox"/> Medical support	<input type="checkbox"/> Transport/Logistics – Road/Rail
<input type="checkbox"/> Military coordination	<input type="checkbox"/> Transport/Logistics – Sea/Inland water
<input type="checkbox"/> Power supply & distribution	<input type="checkbox"/> Water & sanitation
- Did you offer or provide any assets that were not requested?
- Were any of the assets you offered rejected?
- What was the estimated total cost of the military assets you provided in each case? Please specify whether total or marginal costs. (Marginal costs defined as the net additional costs that would not have been incurred had the activity/operation not taken place) From which departmental budget do the funds come?



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Provider questionnaire (trend analysis)

Appendix 1 – List of disasters (by country) occurring between 1997-2006 with minimum 500 fatalities and 75,000 affected.

Country	Year	Disaster type	No killed	No affected	Estimated Cost US\$
Afghanistan	1998 (May)	Earthquake	4,700	116,935	1,650,000,000
Afghanistan	2002 (Mar)	Earthquake	1,000	91,228	No figures
Algeria	2003 (May)	Earthquake	2,266	210,621	5,000,000,000
Bangladesh	2004 (Jun/Aug)	Flood/Flash flood	730	36,000,000	2,200,000,000
Colombia	1999 (Jan)	Earthquake	1,186	1,205,933	1,857,366,000
El Salvador	2001 (Jan)	Earthquake	844	1,334,529	1,500,000,000
Guatemala	2005 (Oct)	Wind Storm/ Hurricane Stan	1,513	475,314	988,300,000
Haiti	2004 (Sep)	Wind Storm/ Hurricane Jeanne	2,754	315,594	21,000,000
Honduras	1998 (Oct/Nov)	Wind Storm/ Hurricane Mitch	14,600	2,112,000	379,360,000
Indonesia	2004 (Dec)	Wave/Tsunami	165,708	532,898	4,451,600,000
Indonesia	2006 (May)	Earthquake	5,778	3,177,923	3,100,000,000
Kenya	1999 (Jun)	Epidemic/Malaria	563	306,352	No figures
Mexico	1999 (Sep/Oct)	Flood	636	616,060	451,300,000
Mozambique	2000 (Jan/Mar)	Flood	800	4,500,000	419,200,000
Nicaragua	1998 (Oct/Nov)	Wind Storm/ Hurricane Mitch	3,332	868,228	987,700,000
Pakistan	2005 (Feb)	Earthquake	73,338	5,128,000	5,200,000,000
Pakistan	2005 (Feb)	Flood	520	7,000,450	50,000,000
Pakistan	2005 (Oct)	Earthquake	73,338	5,128,000	5,200,000,000
Philippines	2004 (Nov)	Wind Storm/ Tropical storm Winnie	1,619	881,023	78,200,000
Philippines	2006 (Nov)	Wind Storm/Typhoon	1,399	2,562,517	66,400,000
Somalia	1997 (Oct/Nov)	Flood	2,311	1,230,000	No figures
Sri Lanka	2004 (Dec)	Wave/Tsunami	35,399	1,019,306	1,316,500,000
Taiwan	1999 (Sep)	Earthquake	2,264	108,664	14,100,000,000
Turkey	1999 (Aug)	Earthquake	17,127	1,358,953	8,500,000,000
Turkey	1999 (Nov)	Earthquake	845	224,948	1,000,000,000
United States	2005 (Aug/Sep)	Wind Storm/ Hurricane Katrina	1,833	500,000	125,000,000,000
Venezuela	1999 (Dec)	Flood	30,000	483,635	3,160,000,000
Viet Nam	1997 (Nov)	Wind Storm/ Typhoon Linda	3,682	1,084,809	200,000,000
Viet Nam	1999 (Oct/Nov)	Flood	622	3,504,412	237,000,000
Zaire/Congo Dem Rep	2002 (Dec)	Epidemic/Resp influenza	2,000	500,000	No figures

Source: EM-DAT: The OFDA/CRED International Disaster Database www.em-dat.net - Université Catholique de Louvain - Brussels - Belgium



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Provider questionnaire (trend analysis)

Appendix 2 – Military Assets: sectors explained

- **Communications**
Cable communications, Satellite communications, Signal communications
- **Engineering**
Bridge construction, Engineer contract management, Field engineers, Road/Airfield construction, Site construction/preparation
- **Medical support**
Field hospital, Medical evacuation and transport
- **Power supply & distribution**
- **Search & rescue**
Aircraft for search and rescue operations, Boats/Ships for search and rescue operations, Fire fighting, Rescue operations, Search operations
- **Transport/Logistics/Coordination – Air**
Airfield control, Airport ground handling, Fixed wing strategic airlift, Fixed wing/helicopter theatre airlift, Flight operation
- **Transport/Logistics/Coordination – Road/Rail**
Cargo road transport, Personnel transport, Rail operations, Transport for liaison and assessment
- **Transport/Logistics/Coordination – Sea/Inland water**
Seaport operations, Transport ships
- **Water & sanitation**
Latrine construction, Solid waste management, Vector control, Wastewater system, Borehole drilling, Hydrogeological survey, Water storage/distribution, Water transportation, Water treatment



Request for military assets

- Was the request for military assets formulated in general or specific terms?
- If the request was specific, what military assets were requested?
 - Communications
 - Engineering
 - Logistics
 - Medical support
 - Military coordination
 - Power supply & distribution
 - Search & rescue
 - Transport – Air
 - Transport – Road/Rail
 - Transport – Sea/Inland water
 - Water & sanitation
- Did the request come through international agencies (please specify agency) or bilaterally?
- How soon after the onset of the disaster was the request received?
- Did you conduct our own needs assessment?

Decision-making process

- What is the standard operating procedure for decision-making regarding military assets? Was it applied to these specific cases?
- Is there any type of interdepartmental/agency MOU regarding the use of military assets in natural disasters?
- Do/Did the Oslo Guidelines inform the decision making process?

Delivery & Offers

- What types of military assets were provided? Please specify types and quantity.
 - Communications
 - Engineering
 - Logistics
 - Medical support
 - Military coordination
 - Power supply & distribution
 - Search & rescue
 - Transport – Air
 - Transport – Road/Rail
 - Transport – Sea/Inland water
 - Water & sanitation
- How were the assets channeled – bilaterally or through an international agency?
- How soon after onset of disaster were the assets in place?
- For how long were these assets deployed/used (please define your understanding of the immediate disaster relief phase)?
- Did you offer or provide any assets that were not requested? What?
- Did you offer any type of military assets that were rejected? What, why?
- Were you unable to provide any requested assets? What, why?



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Provider questionnaire (case studies)

Costs

- What was the estimated cost of the military assets you provided during the immediate relief phase? Please specify if total or marginal costs. (Marginal costs defined as the net additional costs which would not have been incurred had the activity/operation not taken place).
- From which departmental budget/s did the funds come?
- Which agency was responsible for assessing the costs and account for the bill?

Cooperation/Coordination & Effectiveness

- Were there any mechanisms in place for cooperating and/or coordinating your efforts with other provider countries, international agencies or the recipient country?
- If so, how effective do you think this cooperation was?
- Do you think the supply of military assets matched demand on-site?
- How do you evaluate the contribution made by your assets?
- Were any post-action assessment reports produced? Lessons learned?



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Questions for recipient countries

Request

- What are your criteria for requesting international military assets?
- What are your main reasons for choosing to request military rather than civilian assets?
- Did the Oslo Guidelines inform the process?
- What international military assets did you request?
 - Communications
 - Power supply
 - Engineering
 - Medical support
 - Water & sanitation
 - Search & rescue
 - Transport/Logistics – Air
 - Transport/Logistics – Road/Rail
 - Transport/Logistics – Sea/Inland water
- Did you make the request bilaterally (please specify countries) or through an international agency (please specify agency/agencies)?

Assets received

- What military assets did you receive?
 - Communications
 - Electricity
 - Engineering
 - Medical support
 - Water & sanitation
 - Search & rescue
 - Transport – Air
 - Transport – Road/Rail
 - Transport – Sea/Inland water
- Did you receive these assets bilaterally (please specify countries) or through international agencies (please specify agency)?
- Were there any assets that you requested, but did not receive? What? Reasons given?
- Did you reject any specific offers of military assets? What, why and from whom?

Costs & Timeline

- How soon after the disaster struck did you request assistance involving international military assets?
- How soon after the request was made were the assets a) offered b) in place?
- Were you aware of any international requests for military assets (e.g. through OCHA)? Were you kept informed of progress and responses?
- What is your definition of the immediate disaster relief phase?
- What is your figure for the total cost of military assets during the immediate relief phase and as an estimated percentage of the entire disaster response costs?
- Who paid for the military assets received?



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Questions for recipient countries

Coordination & Effectiveness

- Was your government involved in any coordinating efforts with the provider countries and/or international agencies? Which government agency is responsible/in charge of this?
- Were the military assets that were made available during the initial response appropriate and suitable (timing, efficiency, function)?
- Any observations of negative unintended effects/consequences of using international military assets?
- What is your perception of the main advantages and overall contribution of international military assets in the disaster response efforts in this case?
- Did you carry out any post-event evaluation or report regarding the use of international military assets?

About the authors

Hassan Ahmad (Singapore) was lead researcher for the Indonesia case study. He is the chief executive of the Singapore-based humanitarian NGO Mercy Relief. He has extensive field experience in the area of humanitarian relief and has planned, coordinated and led Singaporean civilian relief missions to Afghanistan (2002), Aceh, Indonesia and Sri Lanka (2004); Nias, Indonesia (2005); and Pakistan (2005). He was previously chief executive of the rural development NGO Lien Aid.

Dr Jean-Yves Haine (Belgium) was lead researcher for the Haiti case study. He is a researcher with the Euro-Atlantic, Regional and Global Security Project at SIPRI. He was previously a research fellow at the Government Department, Harvard University, a senior research fellow at the EU Institute for Security Studies in Paris and European Security Research fellow at the International Institute for Strategic Studies in London.

Josefina Löfgren (Sweden) was a researcher for the study. She is a researcher and political analyst working in the fields of emergency relief, international education and conflict prevention. She has worked with several international organizations, government agencies and NGOs.

Tim Randall (United Kingdom) was lead researcher for the Pakistan case study. He is director of the Oxford Disaster Management Group, providing consultancy, research and operational support in the field of disaster management. Prior to this he was director of the Cranfield Disaster Management Centre, and an officer in the British Army. He has also worked for the UN and the British Department for International Development and Foreign and Commonwealth Office in the area of disaster management in around 40 countries.

Sharon Wiharta (Indonesia) was research coordinator for the study and lead researcher for the Mozambique case study. She is a researcher with the SIPRI Armed Conflict and Conflict Management Project at SIPRI, where she leads the project's work on peacekeeping and peace-building.