

DOCTRINAL APPROACH TO HADR BY INDIAN ARMED FORCES: TIME FOR REORIENTATION FOR EFFECTIVE DISASTER RESPONSE

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INTRODUCTION

Unlike the well-developed traditional war-fighting doctrines, Humanitarian Assistance and Disaster Relief (HADR) missions have been largely underdeveloped from a doctrinal standpoint. HADR missions are carried out as an end in themselves¹ under the 'Aid to Civil Authorities' duty as mandated by Ministry of Defence (MoD) instructions of 1970. There is no developed literature or comprehensive doctrine for undertaking HADR missions by the Indian armed forces unlike the advanced nations such as the USA.² Rapid urbanisation and

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1. For the armed forces, conveying a relief material consignment as a part of HADR mission is an end in itself rather than a means to an end, as the mission ends with the delivery of the consignment to the civil authorities, without any assessment on what impact or effect it would have on the overall disaster situation as opposed to the delivery of a bomb which is preceded by exhaustive appreciation of the intended effect desired and is delivered as a means to produce that result.
2. The US military's joint doctrine, Joint Publication 3-07 establishes the MOOTW doctrine and identifies 16 different missions, one of which is Humanitarian Assistance (HA). No such doctrinal reference exists for the IAF or in the joint doctrine other than a passing reference to 'Aid to Civil Authorities' under which the armed forces undertake HADR missions.

The Indian subcontinent faced 1,860 disasters (894 natural disasters and 966 man-made ones) between 1990 and 2009 alone. The Indian armed forces have traditionally been part of the government's response mechanism for disaster relief during natural disasters.

climate change-induced increase in hydro-meteorological disasters since the 1990s have resulted in the loss of life and property in India. The Indian subcontinent faced 1,860 disasters (894 natural disasters and 966 man-made ones) between 1990 and 2009 alone.³ The Indian armed forces have traditionally been part of the government's response mechanism for disaster relief during natural disasters. The armed forces are called upon to assist the state/local governments when their handling capacity is overwhelmed. In spite of the enactment of the Disaster Management Act in 2005

(hereinafter, referred to as the DM Act, 2005) by the Government of India and subsequent creation of institutions like the National Disaster Management Authority (NDMA), National Disaster Response Force (NDRF), National Institute of Disaster Management (NIDM), etc., the dependence on the armed forces for disaster relief/HADR has not reduced. Headquarters Integrated Defence Staff ((HQ/IDS) is responsible for the participation of the armed forces in HADR, nationally and internationally. The Tri-Service Response Plan promulgated by HQ IDS in the year 2002 acts as the guiding document for the three Services in bringing their special capabilities and capacities to HADR. Since the 1990s, driven by United Nations initiatives, the legislative framework and doctrine development in the civil governance space has showed a definitive transition from a response-centric approach to a holistic one towards HADR⁴. This has had a ripple effect, as many countries (including India)

3. "EM-DAT: The OFDA/CRED International Disaster Database, www.emdat.be—Université catholique de Louvain—Brussels—Belgium, sourced from Jyoti Purohit and C.R. Suthar, "Disasters Statistics in Indian Scenario in the Last Two Decades", *International Journal of Scientific and Research Publications*, vol 2, issue 5, May 2012, p. 1, ISSN 2250-3153.
4. 'HADR' is a military usage while in the civil-governance space, it is referred to as 'Disaster Management' (DM), 'Disaster Risk Reduction' (DRR), 'Disaster Risk Management' (DRM), etc. In the military, however, worldwide reference as 'HADR' is prevalent.

aligned themselves with the International Decade for Natural Disaster Reduction (IDNDR), 1990-99; International Strategy for Disaster Reduction (ISDR), 1999; Hyogo Framework for Action (HFA), 2005-2015; and Sendai Framework for Disaster Risk Reduction, 2015-2030. However, the Indian armed forces remained outside these global and national developments and showed no doctrinal change as the increasingly complex disaster response operations continued to be driven by civil- government agencies. The doctrinal approach by the armed forces towards HADR has, thus, largely remained static and unreflective of the enormous degree of evolution in the legal framework and doctrinal development for disaster management.

Military doctrine lays down the precepts for the development and employment of military power. It guides military planners in devising their respective strategies in support of national interests and national security objectives within the overarching national strategy.

AIM

The aim of this paper is to analyse the doctrines of the Indian Army, Indian Air Force and Indian Navy (IA, IAF and IN) for the approach to HADR and examine the IAF's doctrinal framework in particular, wherein air power employment is undertaken for HADR missions. The paper will also examine these doctrines for their limitations, contradictions and gaps vis-a-vis the national disaster management framework (DM Act 2005). Also, a comparative analysis will be carried out of the doctrines and approach of the US Air Force (USAF), the North Atlantic Treaty Organisation (NATO) and other armed forces that have vast experience in disaster response operations. This study has been undertaken through a review of the "Basic Doctrine of the IAF"⁵ and similar documents of the IA and IN to examine the 'doctrinal treatment' of the aspects of disaster response operations, with special emphasis on air power functions and effects.

5. Declassified for public access in 2012 by the IAF Headquarters.

DEFINITIONS

The word 'doctrine' has originated from the Latin word '*doctrina*⁶', which implies "a code of beliefs" or "a body of teachings". It is also referred to as "a belief or a system of beliefs accepted as authoritative by a group or school". It, thus, provides a framework of beliefs and teachings that guide a group in its actions. Military doctrine lays down the precepts for the development and employment of military power. It guides military planners in devising their respective strategies in support of national interests and national security objectives within the overarching national strategy. Some of the basic definitions of 'Doctrine', 'HA', 'DR', etc. are listed below for consistency and correlation within the framework of this paper:

- **Doctrine:** The Oxford Dictionary⁷ defines the term 'doctrine' as "a set of beliefs or principles held by a religious, political, or other group."
- **Humanitarian Assistance:** Humanitarian Assistance (HA) activities are actions conducted to save lives, relieve suffering, and maintain human dignity. HA is defined to be in response to human-caused disasters (e.g. nuclear accidents and chemical releases) and chronic natural disasters (e.g. droughts and famines). HA is not aimed at addressing the underlying socio-economic factors which may have led to a crisis or emergency as this is defined as development aid.
- **Disaster Relief:** Disaster Relief (DR) activities are actions taken during and immediately after a disaster to ensure that the effects of a natural disaster are minimised, and that the affected people are given immediate relief and support. While some DR activities may occur before a disaster (e.g. public warnings), for the purposes of this paper, those activities are not deemed to be DR activities. The terms 'disaster response' and 'disaster relief' are synonymous. DR activities are divided into three broad categories:
 - **Direct Assistance:** Face-to-face distribution of goods and services.
 - **Indirect Assistance:** Assistance that is at least one step removed from the population, including activities such as the transport of relief goods or relief personnel.

6. The Indian Maritime Doctrine (NSP 1.1).

7. *Oxford English Mini Dictionary*, Seventh Edition. 33rd Impression 2012.

- **Infrastructure Support:** Assistance that involves providing services, such as road repair, air space management and power generation, that facilitate relief but are not necessarily visible to, or solely for the benefit of, the affected population (emergency rehabilitation, restoration or reconstruction of infrastructure, such as road clearing, temporary bridge construction, stabilising damaged bridges, cleaning drains, construction of drainage channels to remove accumulated sea water, port clearance, debris removal from harbours and runways, and provision of potable water).
- **Disaster**
 - **UN Definition:** The International Strategy for Disaster Reduction (ISDR)⁸ 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 resources”. *Natural disasters* are disasters that follow natural hazards.
 - **Disaster Management Act, 2005:** The DM Act defines disaster as a catastrophe, mishap, calamity or grave occurrence affecting any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, the environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

LEGAL FRAMEWORK FOR ARMED FORCES IN DISASTER MANAGEMENT

The armed forces, under the Ministry of Defence (MoD), are called out to assist the civil authorities. The armed forces respond to disasters as a part of their mandate, viz. **Aid to Civil Authorities⁹ or ACA** as specified in the **Instructions on Aid to the Civil Authorities by the Armed Forces, 1970**.

8. The UN International Strategy for Disaster Reduction-ISDR.

9. 'Aid to Civil Authorities' or ACA is a pamphlet issued by the MoD for the armed forces, IAF, IA and IN for their assistance to civil authority.

The key provisions that govern the armed forces' participation in DM are:

- Instructions on Aid to Civil Authorities by the Armed Forces 1970.
- Manual of Indian Military Law, Chapter VII
- Defence Services Regulations—Regulations for the Army, Chapter VII, Paragraphs 301 to 327.

The term “Aid to Civil Authorities” (ACA) is a British imperial usage¹⁰ referring to the process by which local authorities can request the central government to lend assistance in times of emergency. The British legacy framework was focussed on the employment of the armed forces for internal security as the British viewed internal security as a key construct for the continuity of the colonial rule in the light of the nationalist freedom struggle. ACA 1970 lists four types of assistance that the armed forces may be called upon to render in support of the civil authorities, viz.

- Maintenance of law and order.
- Maintenance of essential services.
- Assistance during natural calamities such as earthquakes and floods.
- Any other type of assistance, which may be needed by the civil authorities.

ANALYSING THE RELEVANCE OF ACA IN THE CONTEXT OF THE CURRENT DM FRAMEWORK

ACA has been a British Raj legacy, modified in 1970, at a time when the Ministry of Agriculture was the nodal agency for DM in the country. DM at that time was primarily oriented towards handling of recurrent famines and droughts. The capability in the civilian space was restricted to volunteers of the Civil Defence (CD) organisation¹¹ and there was almost inevitable

10. Brig PK Mallick, “Role of Armed Forces in Internal Security: Time for Review”, *CLAWS Journal*, Winter 2007, p. 68.

11. The civil defence policy of the Government of India, till the declaration of Emergency in 1962, remained confined to making the states and the Union Territories (UTs) conscious of the need for civil protection measures and asking them to keep ready civil protection plans for major cities and towns under the Emergency Relief Organisation (ERO) scheme. However, following the Chinese aggression in 1962 and the Indo-Pak conflict of 1965, the policy and scope of civil defence underwent considerable rethinking, which culminated in the enactment of the Civil Defence (CD) Act 1968. <https://ndma.gov.in/en/capacity-building/civil-defence.html>. Accessed on December 24, 2018.

dependence on the armed forces for all major and minor disasters. The DM Act of 2005 created a new structure of statutory bodies to implement a holistic approach as against the hitherto response-centric approach to accommodate multi-agency participation in DM in the country: the NDRF—the largest stand-alone response force in the world—and the NDMA, NIDM, etc. were established. However, the role of the armed forces has neither been defined nor articulated by the Act and the armed forces continue to operate under the framework of the ACA (1970) while all the other stakeholders operate under the framework of the DM Act (2005). Doctrinally too, the armed forces are in the 1970s mode and continue to function organically and organisationally only as ‘an on-call’ agency which will participate when called for. The lack of role definition in the DM Act 2005 has, in a way, ensured the 1970s’ continuum in the armed forces though practically they are part of almost every major DM crisis. The large ambit of ACA 1970 and how it is inadequate to cater to the complexities that define DM—especially the response segment—is highlighted in Table 1.

Table 1: Ambit of ACA 1970

Provisions of ACA	Roles/Missions	Legal Provisions
Maintenance of law and order.	Flag Marches. Curfew maintenance. Shoot at Sight orders, etc.	Area is declared as ‘disturbed’ by the civil authority
Maintenance of essential services.	Whenever essential services are jeopardised due to strikes or unrest, the armed forces are tasked by the government to provide the same.	Army Postal Service (APS) stepped into providing Post and Telegraph (P&T) services when the postal department went on a long protest strike during the late 1980s. The essential Services Maintenance Act (ESMA) is invoked by the government.

Provisions of ACA	Roles/Missions	Legal Provisions
Assistance during natural calamities such as earthquakes and floods.	Rescue. Evacuation, Medical services. Relief camps. Airlift of supplies and personnel, etc.	All other stakeholders, including the NDRF, who are routinely airlifted and inducted into calamity stricken areas, function under the DM Act 2005.
Any other type of assistance, which may be needed by the civil authorities.	Election duties. Shifting of new currency during demonetisation (2016). Airlift of heavy material for rail and road construction, etc.	Some of these tasks may fall in the ambit of mitigation efforts within the DM cycle, e.g. airlift of heavy machinery for the Kedarnath helipad construction (2016).

It is evident from the above table that ACA 1970 combines tasks and roles that are diverse and need different approaches to each one of them. Participation in the DM response especially entails a swift and effective response that is aimed at saving as many lives as is possible. Given the complexities, frequency of occurrence and ferocity of natural disasters, there is a need to separate assistance during natural calamities such as earthquakes and floods from the ambit of ACA and a redefinition, within or outside, the provisions of the DM Act 2005. The Tri-Services Plan (2002) that guides the armed forces at the ground level is also a pre-2005 document. It is clear that the armed forces have remained outside the post-2005 legal and institutional framework for DM in India, in spite of being key stakeholders, with critical capacities and capabilities.

INSTITUTIONAL FRAMEWORK FOR ARMED FORCES IN DISASTER MANAGEMENT

The institutional arrangement that is functional for the armed forces' participation in DM is the DCMG-Defence Crisis Management Group (RS Ahluwalia 2014) that functions from the Integrated Defence Staff (IDS) Operations Room (Ops Room). The IDS Ops Room is always in direct communication with the Army, Navy, Air and Coast Guard Ops Rooms.

This is the place from where all disasters—whether it was the tsunami, the floods or the recent earthquake—were tackled.

ARMED FORCES AND THE DM ACT FRAMEWORK

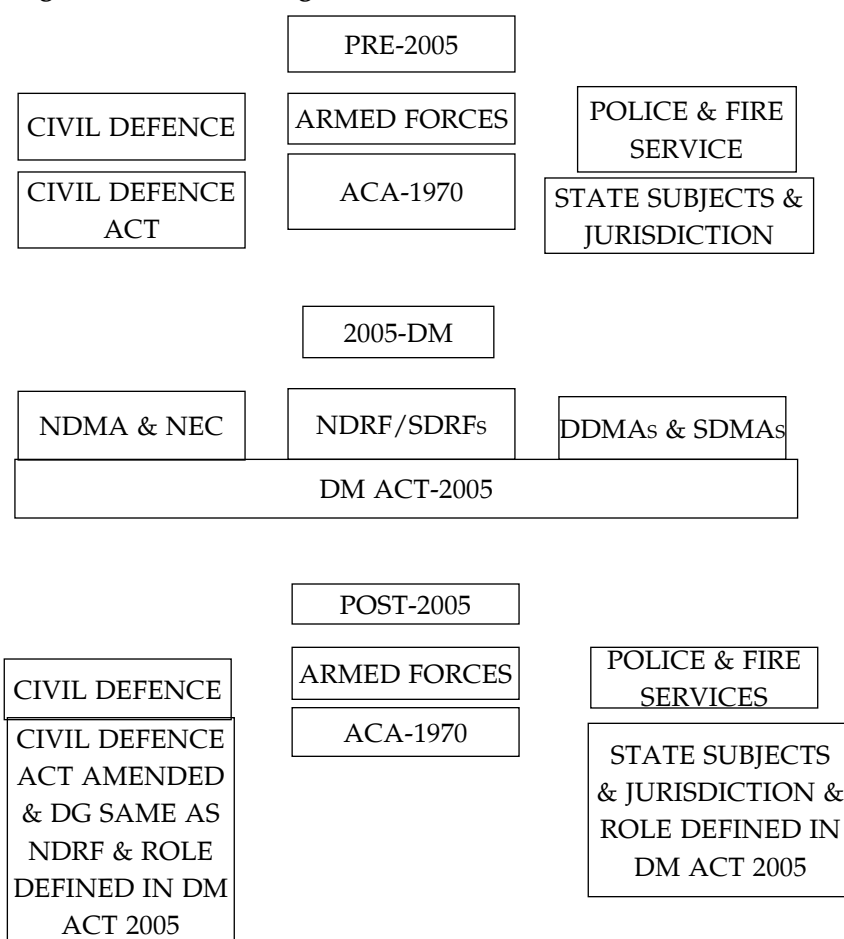
The only institutional arrangement for engagement of the armed forces is the National Executive Committee (NEC) of the NDMA, of which the Chief of Integrated Defence Staff to the Chairman Chiefs of Staff Committee (CISC) is a member. The National Crisis Management Committee (NCMC) in the Ministry of Home Affairs (MHA), a pre-2005 institutional arrangement, is still functional and takes over the functions of the NEC (a post-2005 body) during major disasters. There is no institutional role for the armed forces in the NCMC. However, the Task Force for Review of the DM Act, constituted under Dr PK Mishra, opined that the NEC has been ineffective and recommended its rescinding and incorporation of the NCMC (a pre-2005 institutional arrangement in the MHA) as the premier agency for DM.

Presently, the response scenario represents a complex maze of stakeholders who bring overlapping capacities, diverging command and control structures and different philosophies of operating and information sharing.

Armed Forces Pre- and Post-2005: Prior to the enactment of the DM Act 2005, the armed forces formed the core of the response mechanism of the government. It was to address this dependence and build/strengthen government capacities at national, state and local levels that the union government enacted the DM Act. Post-2005, the number of stakeholders has increased substantially, namely the NDRF, State Disaster Response Forces (SDRFs), civil defence, Non-Governmental Organisations (NGOs), volunteers, etc. The armed forces continue to be called for assistance during calamities. Presently, the response scenario, thus, represents a complex maze of stakeholders who bring overlapping capacities, diverging command and control structures and different philosophies of operating and information sharing. As can be seen from Fig 1, while all other stakeholders work on the basis, and within the framework, of the

DM Act 2005, the armed forces operate on the basis of the provisions of the ACA 1970.

Fig 1: Stakeholders' Legal Basis for DM Pre and Post DM Act 2005



DOCTRINAL ISSUES WITHIN ARMED FORCES FOR DM EMPLOYMENT

Involvement of the armed forces is based on the principle of being the 'last to enter and the first to leave'. However, in practice, in most post-disaster operations, the armed forces have been the first to enter and the last to leave. The enactment of the DM Act 2005 and the subsequent

specialised agencies like NDMA and NDRF has not, in any manner whatsoever, reduced or altered the engagement of the armed forces in DM operations, either in scale or frequency.¹² The DM Act which established specialised agencies, institutions and arrangements for a holistic approach to DM failed to enunciate the role- recognition, the definition of that role and the procedure of engagement of the armed forces in the new post-2005 DM framework. As a result, the armed forces have largely remained outside the capability and capacity enhancement initiatives undertaken under the new framework. They do not figure as stakeholders in the policy and plans evolution either.

Doctrines of Army, Air Force and Navy and DM in India: The three Services, viz. Indian Army (IA) Indian Air Force (IAF) and Indian Navy (IN) define HADR in differing terms and context. The Joint Doctrine for the Indian Armed Forces was published by HQ IDS in 2006. The IAF was the first to declassify its basic doctrine in 2012, followed by the army and navy. Internally, from a doctrinal standpoint, the DM aspects are not as well covered in the doctrines of the IA and the IAF as their war-fighting aspects are due to the lack of clarity, higher direction and role recognition. Disaster relief appears at various places in their respective doctrines and not as a specialised operational concept. This is especially critical with the growing frequency and ferocity of natural disasters and the increasing complexities of post-disaster response operations.

DM and Doctrine of the Indian Army: The Indian Army Doctrine¹³ refers to disaster related operations variously as disaster relief, humanitarian assistance, etc. The following are extracts from the doctrine:

- **Disaster Relief:**¹⁴ *The Indian subcontinent is vulnerable to floods, droughts, cyclones, earthquakes and accidents. Disasters include earthquakes, landslides, floods, cyclones, wildfires, and epidemics, on the one hand, and accidents and man-made disasters, on the other. The impact of these disasters is more predominant*

12. Lt Gen NS. Bawa, "Uttarakhand Disaster 2013: Lessons Learnt". National Workshop, New Delhi, NIDM 2013.

13. The Indian Army lists DR under 'Non-Combat Operations' while other nations like the USA list it under MTOOW.

14. Operations Other than War, Indian Army Doctrine, Chapter V, para 18.

in under-developed and remote areas, where facilities to handle such calamities do not exist.

- **Humanitarian Assistance”:**¹⁵ *These programmes consist of assistance provided in conjunction with military operations and training exercises. Humanitarian assistance should enhance national security interests and increase the operational readiness of units performing such missions. These may include provision of medical care, basic sanitation facilities, repair of public amenities and facilities, education, training and technical assistance.*

DM and Doctrine of the Indian Air Force: Unlike the army doctrine, the doctrine of the IAF makes no distinction between DM or humanitarian relief tasks and refers to disaster-related operations as one of the roles among its primary combat role operations¹⁶ in the following manner:

“Assisting the government in disaster management or humanitarian relief tasks.”

DM and Doctrine of the Indian Navy: The IN treats HADR and aid to civil authorities as two different objectives/missions. The four main roles envisaged for the IN are: military, diplomatic, constabulary and benign.¹⁷ The ‘benign’ role is so named because violence has no part to play in its execution, nor is the potential to apply force a necessary prerequisite for undertaking these operations. Examples of benign tasks include humanitarian aid, disaster relief, Search and Rescue (SAR), ordnance disposal, diving assistance, salvage operations, hydrographic surveys, etc. Table 2 illustrates the Indian Navy’s objectives, missions and tasks in the benign role of the IN.

15. Ibid., para 19. Quoted as given in the Indian Army Doctrine.

16. The IAF lists Disaster Relief under ‘Structure of Air Strategy- Chapter-V/Roles of air power/p. 38’, and not under Chapter VI that deals with ‘Air Campaigns’. In contrast, the USAF lists HA/DR at serial no 16 among various other MOOTW.

17. The Indian Maritime Doctrine (NSP 1.1).

Table 2: Role of Indian Navy

Objectives	Missions	Tasks
Promote civil safety and security.	HADR.	Provision of relief material and supplies infiltration.
Project national soft power.	Aid to civil authorities.	Medical assistance.
	Hydrography.	Diving assistance.
	SAR.	Hydrography assistance.

The IN further defines its doctrinal separation of HADR and ACA, while the IA and IAF consider HADR as part of ACA (as provided by the ACA instructions of 1970)

- **HADR:** Humanitarian Assistance and Disaster Relief (HADR) are most required in the immediate aftermath of natural disasters and devastation. The essence of disaster management is to improve preparedness so as to provide the right item at the right place and at the right time.¹⁸
- **ACA:** Aid to Civil Authorities (ACA) is in addition to HADR assistance during floods, cyclones and other adversities; naval forces provide many other diverse forms of assistance to the civil authorities whenever called upon to do so.

The difference in the doctrinal approach of the IA, IAF and IN with regards to DM/HADR is summarised in the Table 3:

Table 3: Doctrinal Approach of IA, IAF and IN

	HADR		REMARKS
	HA	DR	
IA	Defined as separate functions.		The IA defines DR as the role that needs to be carried out in the immediate aftermath while HA comprises more of the mitigation and support role during non-disaster periods. HADR, however, is defined within the ambit of ACA.

18. The INBR 1920(A) on Disaster Management lays down the procedures in handling various types of disasters.

IAF	No separation	The IAF makes no distinction between DM or humanitarian relief tasks and equates DM with HADR. HADR, however, is defined within the ambit of the ACA.
IN	No separation within the HADR definition but unlike the other two Services, the IN defines HADR outside, and separate from, ACA	HADR is treated as one activity with no separation between HA and DR. However, HADR and ACA are defined as exclusive roles, with ACA representing non-disaster period assistance.

CIVIL-MILITARY RELATIONSHIP AND THE EVOLUTION OF DOCTRINE ON BOTH SIDES

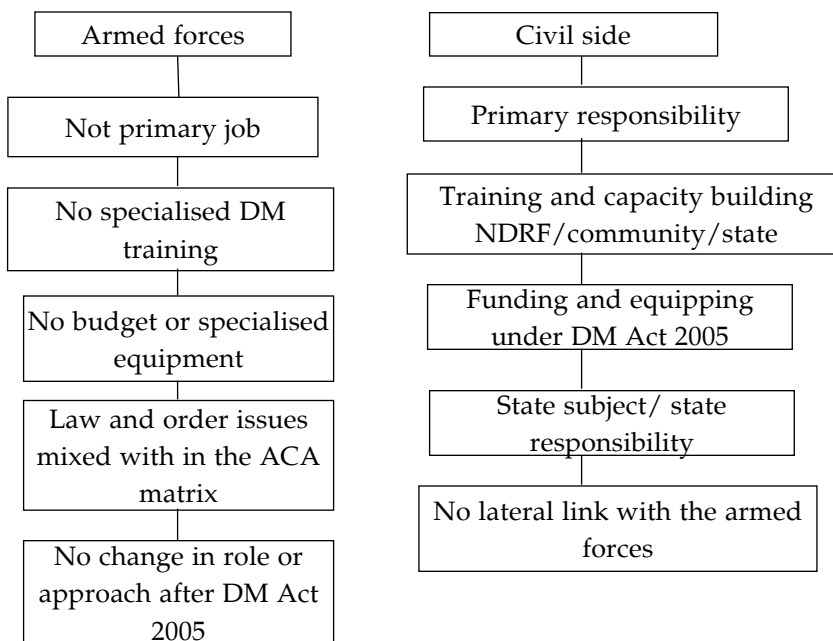
In India, the Latur earthquake (1993), Orissa super cyclone (1999) and tsunami (2004) exposed the gross inadequacies in terms of civil capacities to handle the challenges of mega-disasters. It also exposed the continued over-dependence on the armed forces whose primary role was securing the national borders. This prompted the Government of India to enact the DM Act of 2005 and create specialised structures to holistically address DM, moving away from being 'response-centric'. There are three distinct schools of thought that presently dominate the DM eco-system in India:

- **DM- Primacy of Civil Control:** The very dependence on the armed forces and the need to develop civil capacities led to the enactment of the DM Act 2005 and, hence, any clamour for role definition in terms of budgeting for, or equipping, the armed forces for participation in DM is at variance with the core objective of strengthening civil capacities. This has also been the global approach where NGOs and volunteer organisations have resisted military dominance and control of the DM space. They call it the 'increasing militarisation of DM' and have viewed with suspicion the neutrality and impartiality of the armed forces that are seen as extensions of government instruments—

especially those with a dubious human rights record. While in India, the armed forces enjoy a favourable public opinion and are viewed with trust and respect by the civilian population, the Srinagar floods of 2015 did add a new dimension of rescue and relief of a hostile and uncooperative population, highlighting the need for greater articulation of the engagement framework for the armed forces in such cases.

- **DM-Primacy of Armed Forces:** This school of thought supports primacy for the armed forces, with effective control of the DM space. This is especially common among states that have been plagued with internal and external insurgencies; e.g. the Sri Lankan model where the affected district is placed under the seniormost military commander for the period of relief and rescue. Within the Association of Southeast Asian Nations (ASEAN) framework too, the armed forces are given primacy for disaster relief.
- **DM-Primacy of Civilian Control in a Multi-Agency Framework:** This school of thought is a proponent of the 'balanced approach' which combines 'humanitarian principles' with the unique capabilities that the military possesses. It advocates the primacy of civilian control while providing for operational freedom for the military to execute its rescue and relief missions. While, theoretically, this model is the most 'balanced' as it combines the strengths of varied stakeholders, it is plagued with command and coordination issues due to the multiplicity of actors with differing operating philosophies and command structures.

The summary of the evolution of the doctrine on both the civilian and military sides is illustrated below:

Table 4: Evolution of Doctrine: Civil and Military

THE EVOLUTION OF DOCTRINES OF OTHER NATIONS: USA, CHINA, NATO FORCES AND CANADA

USA

After the initial struggle and doctrinal confusion on the role of the military in 'humanitarian tasks' and the plethora of command, communication and control (primacy) issues, the USA especially has been a trendsetter in terms of formalising the role of the armed forces in the DM space. It perhaps has the most robust legal framework that clearly lays down the process and the procedure for the involvement of the armed forces in DM, though it could not prevent the DM set-up of the USA from being overwhelmed during Hurricane Katrina in 2005. The USA, given the rich and varied expeditionary experience of its armed forces – in both armed intervention and HADR—is best placed to be the global gold standard; especially in the light of the fact that the Government of India has adopted the US model of Incident Response System (IRS) for its DM response. It, therefore, is absolutely essential and

imperative that the US' doctrinal evolution and approach be studied in detail. The USA lists HADR as one of its 16 Military Operations Other Than War (MOOTW)¹⁹ operations. What does this mean for the armed forces? The RoEs—Rules of Engagement—are organically defined and become intrinsic to all MOOTW operations and, hence, to HADR operations. This ensures self-protection for the armed forces which can decline to conduct a particular HADR operation on the grounds of either safety, non-feasibility or undignified labour. Also, clear entry and exit points are defined for the armed forces in HADR. The right to use of force is ingrained in the MOOTW doctrine in the case of an imminent threat to the military or its equipment. Essentially, an HADR operation by the military, when placed under the MOOTW umbrella, ensures that the HADR operation remains a MILITARY operation, albeit under civilian control. Some of the key features of the US framework for HADR are listed in Table 5:

Table 5: US Framework for HADR

1.	Executive Order No. 10427, dated January 16, 1953.
2.	Army responsibility and policy in disaster relief operations are prescribed in Army Regulations AR 500-60, "Emergency Employment of Army Resources, Disaster Relief," dated October 1, 1952.
3.	Department of Defence Directive No. 3025.1, "Responsibilities for Civil Defence and Other Domestic Emergencies," dated July 14, 1956.
4.	Federal Disaster Act of 1950, coordinated by the Federal Civil Defence Administration when the president declares a "major disaster"
5.	Defence Mobilisation Order No. VII-4, Supplement No. 1, Subject: "ODM Policy Guidance on Government-owned Production Equipment," dated August 25, 1955, and amendment thereto dated September 21, 1955.
6.	Defence Mobilisation Order No. VII-7, Supplement 1, Subject: "Emergency Action for Maintenance of the Mobilisation Base under Disaster Conditions," dated August 25, 1955.
7.	The Reserve Forces Act of 1955
8.	Defence Mobilisation Order No. VII-7, Supplement 1, Subject: "Emergency Action for Maintenance of the Mobilisation Base under Disaster Conditions," dated August 25, 1955.

19. MOOTW refer to operations undertaken by the military other than war usually in support of the civilian government and agencies. Operations in support of the UN like peace-keeping, election monitoring in strife-torn states, natural disasters, etc. are examples of MOOTW.

As can be seen from the above table, the US has an extensive legal framework for the US military's participation in HADR. There are many key benefits that accrue in terms of doctrinal clarity and operational focus due to this extensive framework. This clarity has resulted in an independent role for the US Army Engineering Task Forces (ETFs)²⁰ for flood relief directly between the affected states' civil authorities.²¹

NATO

The end of the Cold War brought an existential crisis for the NATO forces. The relevance of maintaining highly sophisticated armed forces in the absence of the reduced/changed 'Russian threat' was being increasingly questioned, especially in the light of budgetary constraints and the reduced salience of the USA in NATO affairs. Hitherto, NATO had never participated in international disaster relief operations. The changed 'role' led to a redefinition, and NATO forces, for the first time, participated in the 2005 Pakistan earthquake relief. Thus, there is now a change in the doctrinal approach that is oriented towards international relief as a core competency and role of the NATO forces.

China

China has a large military and did not regard international disaster relief with any particular interest until a decade ago. Backed by a booming economy and a growing desire for assertion as a global power, China has now doctrinally oriented towards defining a role for its military at both national and international levels in disaster relief. The first legislative document in China's history that defined the People's Liberation Army's (PLA's) participation in emergency rescue and disaster relief was drafted in 2005, the same year that India enacted the landmark DM Act. Since then, in over a decade, China has drafted nearly 100 laws and decrees that relate to disaster prevention and mitigation; these have been enacted from

20. The ETFs are army units that specialise in bridging operations and are commonly employed in flood relief.

21. The US Army's ETF has legislative sanction to be prepared, and participate, independent of whether the US military is involved or not in disaster relief.

1949 to 2010.²² These laws, decrees and the framework helped redefine the role of the Chinese military in disaster relief. It now sees HADR as a tool of international diplomacy. Key features of the framework for the participation of the Chinese military in disaster relief are:

- Article 29 of the Constitution of the People's Republic of China states that the tasks of the armed forces are "to strengthen national defense, resist aggression, defend the motherland, safeguard the people's peaceful labor, participate in national reconstruction, and do their best to serve the people", which provides the Chinese leadership with the constitutional basis for deploying the military for any internal task.
- In January 2009, the Central Military Commission (CMC) issued a document on PLA MOOTW capacity building and to drive the strategic guidance.
- In March 2009, China published *Opinions on Strengthening Political Work in Military Operations other than War*.
- China's MOOTW policy was a contributing factor to the announcement on April 20, 2010, that the PLA would establish state-level, domestically focussed emergency rescue troop units, each specialising in one of eight different types of disasters. The categories include engineering, medicine, transportation, Nuclear Biological and Chemical (NBC), emergency communication, maritime search and rescue, urban search and rescue.
- In November 2010, the CMC released the domestically focussed *Regulations on PLA's Emergency-Response Command in Dealing with Unexpected Events*. These provided regulations on issues, including organisation

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22. https://nidm.gov.in/easindia2014/err/pdf/country_profile/China.pdf. Accessed on March 19/2124H.

and command, force use, and military-civilian coordination relating to the PLA's participation in maintaining social stability and dealing with various unexpected events.²³

- In the 2010 White Paper, seven sets of diversified military missions were defined and the identification of both internal disaster response and HADR in them reflects their continual importance for the PLA. The missions identified vide the White Paper are:
 - Safeguarding border, coastal and territorial air security.
 - Maintaining social stability.
 - Participating in national construction, emergency rescue and disaster relief.
 - Participating in UN peace-keeping operations.
 - Conducting escort operations off the coast of Somalia/Gulf of Aden.
 - Holding joint military exercises and training with other countries.
 - Participating in international disaster relief operations.

Canada

The inclusion of HADR as one of the “eight new core missions” of Canada’s armed forces was, at least in part, a natural outgrowth of the policy document’s analyses of the changing security environment, the changing nature of conflict, and the challenge posed by climate change. The “increased frequency, severity and magnitude of extreme weather events all over the world—one of the most immediate and visible results of climate change—will likely continue to generate humanitarian crises. The effects of climate change can also aggravate existing vulnerabilities, such as weak governance, and increase resource scarcity, which, in turn, heightens tensions and forces migrations.” In the doctrinal evolution of the Canadian military, the traditional security role and the erstwhile sharp differences with other roles such as disaster relief are becoming less and less relevant in the new security environment. The 2010 policy document identified “eight new core missions” for Canada’s armed forces, including the provision

23. “Memorandum of PLA’s Military Operations Other than War,” *People’s Daily Online*, September 7, 2012, <http://english.people.com.cn/90786/7940049.html>. Accessed on December 17, 2012.

of “...assistance to civil authorities and non-governmental partners in responding to international and domestic disasters or major emergencies”. The document further amplifies that in the light of the increase in “frequency and severity” of natural disasters and weather-related emergencies, there is a growing need for the Canadian armed forces to support disaster relief. The Canadian armed forces have subsequently come up with the concept of ‘DART’ (Disaster Assistance Response Teams) towards this newly defined role. Ideologically, philosophically, or politically, there is a favourable consensus on military involvement in HADR. However, some academics and peace activists have, on occasion, expressed reservations over the potential ‘militarisation’ of humanitarian assistance and disaster relief. The Canadian military’s response to the Haitian earthquake of 2010 was criticised by some academics as ‘neo-colonial’. There is also growing concern that the military’s many ‘domestic’ roles, such as disaster relief, could contribute to the ‘militarisation’ of Canadian society. Others, including some emergency and disaster management practitioners like NGOs and Government Organisations (GOs), have more practical objections to the expansion of the military’s role in humanitarian assistance and disaster relief, which pertain to command and control issues during the relief operations.

THE CASE OF INDIA

The Indian military is guided by the ‘Aid to Civil Authority’ document of 1970, while all specialised stakeholders like the NDMA, NDRF, CD, SDRFs, etc. derive guidance from the DM Act 2005. Even the Tri-Service Response Plan adopted by the Indian military is a 2002 document and predates the DM Act 2005. With the increase in stakeholders and institutions—many of them with defined specialist roles—there is a need for the armed forces to reorient their participation in disaster rescue and relief, and align their core response and support functions in accordance with National Disaster Management Plan (NDMP 2016), National Policy on Disaster Management (NPDM 2009), etc.

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to natural and man-made disasters. The response needed for each of these is distinctly different and the underlying principles are so vastly varied.

- The National Disaster Management Policy approved by the Union Cabinet on October 22, 2009, acknowledges the role of the armed forces in disaster management and states that the armed forces are called only when the coping capability of the civil administration has been exhausted. It, however, admits that *“in practice (as has been in the past), the armed forces are deployed immediately and they have responded promptly”*.
- There is no new guidance from the Government of India (the last being 1970 ACA) for the armed forces. The Tri-Services response plan that is the latest guidance document issued by HQ IDS is also a pre-2005 document.
- Therefore, it can be seen that the armed forces, due to a lack of role definition in the DM Act 2005, have not either internally (doctrinally) or externally (by the Government of India—legally speaking) shown any change in the framework for their participation in the DM response.
- As can be seen, prior to the enactment of the DM Act of 2005, the armed forces undertook HADR missions under the ACA. They continue to do so, even after 2005, while all other institutions/agencies at the national, state and local levels function under the DM Act 2005.

SUMMARY

NATO and Canada are prime examples of sophisticated and well-budgeted militaries whose traditional war-fighting roles have seen growing ‘irrelevance’ in recent years; hence, these militaries have doctrinally moved towards a formal definition and institutionalisation of HADR as a key role. China’s global aspirations lie at the core of its redefined approach to HADR. For nations like Australia, Japan and the US, the drivers for a military

role in disaster relief are reinforcing alliances and partnerships, advancing foreign policy agendas and providing knowledge of operational military capabilities.²⁴ India's armed forces are engaged in internal security issues in the insurgency affected states of Jammu and Kashmir (J&K), Jharkhand, the northeast, etc. and also face a continued threat of external aggression/short wars with its neighbours. Therefore, while there is no existential crisis of relevance as in the case of NATO, Canada, etc., the Indian armed forces remain at the core of government's response mechanism for the following reasons:

- Civil institutions created by the Act and institutional arrangements continue to be in a state of transition and development. Both the pre-2005 and post-2005 institutions are functional. An example is the case of the National Crisis Management Committee (NCMC) which is a pre-2005 arrangement that takes over the response management during major crises, even though the DM Act 2005 established the National Executive Committee (NEC) as the highest operational arrangement to manage disasters. The Government of India constituted a task force under Dr. PK Mishra in December 2011 for a review of (the performance of) the DM Act 2005. The task force submitted its report in 2013. It has recommended replacement of the NEC with the NCMC, a pre-2005 institution in the MHA that deals with disaster issues.²⁵

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24. Athol Yates and Anthony Bergin, *More than Good Deeds Disaster Risk Management and Australian, Japanese and US Defence Forces* (Canberra: Australian Strategic Policy Institute, 2011), 1.

25. REPORT OF THE TASK FORCE -A Review of the Disaster Management Act, 2005. Para 8.4.1 The National Executive Committee (NEC) [Para 4.6.3 to 4.6.3.3.3] 'The NEC may be discontinued. The NCMC may be included in the Disaster Management Act.

- The capacities and capabilities of the NDRF and SDRFs are limited. While the NDRF has acquitted itself well in the pre-disaster phase for evacuation and setting up of relief centres, the armed forces have invariably played a larger role during almost all natural disasters in the past decade, often alongside the NDRF and SDRFs.
- The airlift and induction of the NDRF is often by IAF aircraft and, hence, the IAF will always remain relevant whatever be the state of capability/capacity of the NDRF/SDRFs. Also, when normal lines of communication like roads and railways get affected, the IAF is often the first responder either for evacuating the affected people or for air-drop of relief supplies or induction of rescue personnel and medical teams.
- As was seen during Hurricane 'Katrina' in the USA, any disaster management system can get overwhelmed and in such situations, it is only the armed forces that retain the residual capacity to deliver relief. This is due to almost 24 x 7 x 365 days of readiness, disciplined manpower and a command and control structure that retains its integrity at both structural and functional levels.
- In terms of surge capacity to handle the enormity of the rescue effort—whether it is adding 'boots on the ground' or 'birds in the air'—only the armed forces possess the requisite capacity and capability to expeditiously upscale the rescue effort.
- Many parts of the country are remote and unconnected, and are very vulnerable to natural disasters. Often, the armed forces are the only credible government forces/capacities in such areas and automatically become the first responders.

CONCLUSION

The doctrinal reorientation of the Indian armed forces is an inescapable necessity in view of the increasing frequency and ferocity of natural disasters. They represent credible government capacity to handle the response to mega disasters. Given the constitutionally provided civilian supremacy over the military, a role definition that aims to provide greater articulation of their 'role' and 'terms of engagement' in disaster response is critically

warranted. At the same time, as an important and often the only critical instrument of response, the armed forces too need to evaluate, assess and adopt the following doctrinal issues:

- **Training and Capacity Building:** Currently, the armed forces do not have any disaster specific training and bring to the fore their combat training when responding to disasters. Given the complexities of disasters—especially urban flooding and cyclones—they will need a reorientation within the ambit of combat training to train for the challenges of disaster response.
- **Equipment:** While it is usual practice to keep Engineering Task Forces (ETFs)²⁶ ready during the monsoons, or the helicopters in a readiness state, it is more in the realm of ‘we will get in when called for’, than a defined or definitive clarity on when or where they are needed. Hence, there is a need to reevaluate force packaging and mission planning to be effective at the earliest and save as many lives as is possible in the 72-hour golden window.
- **Command and Control:** One of the unique capabilities of the military is its robust command and control structure that works effectively in crisis situations. While it is oriented towards war-fighting and war-management, reorientation to work alongside civilian command and control structures (district administration) and those of other response forces like the NDRF and SDRFs (IRS system) is critically required.
- **Joint Operations with Other Sister Services:** Given the differing operating philosophies and doctrinal approach between the IA, IAF and IN, there is as much a need for ‘jointness’ for disaster response as there is for war/combat scenarios.
- **Re-orienting for Effective Response Operations:** No combat operation would commence without the requisite intelligence and planning, whether it is a ground operation or an air operation. However, given the sudden onset and the coordination issues and lack of a clear trigger mechanism for rescue operations, the armed forces get inducted and have to almost immediately start these. The ensuing damage assessment

26. The Engineering Task Forces (ETFs) are teams of army engineers who comprise a self-contained units with flood relief equipment such as Bailey bridges, BAUTs, Gemini boats, etc.

then results in further accretion of forces and equipment and, often, the golden window is missed alongwith the opportunity to save many lives and property. There is, therefore, a need to holistically address disaster response operations from a doctrinal standpoint to be effective, not just efficient.

The armed forces have been an integral part of the national disaster response. The lack of role definition of the armed forces in the current institutional framework (both the pre- and post-2005 DM Act arrangements) has impacted the optimal utilisation, efficient deployment and effective harnessing of the unique capabilities of the armed forces and especially air power assets in the overall disaster response operations. A doctrinal re-orientation towards harnessing the unique capabilities of each arm of the military to achieve the desired effects of saving lives, reducing damage, etc. will enable the armed forces to be effective response providers and enhance their standing in the comity of stakeholders in the DM firmament.