

Japan's Noto Earthquake

Civil–Military Synergy in HADR Operations

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On 1 January 2024, Japan witnessed an earthquake of 7.6 magnitude on the Richter scale off its northwest coast in the Noto Peninsula. As per the reports from US Geological Survey and the Japan Meteorological Agency, the said earthquake triggered a Tsunami warning. Several aftershocks were felt along the western coast in the succeeding hours of the main earthquake. Tsunami waves up to 1.2 meters were witnessed in Kashiwazaki, Wajima, Kanazawa port, Toyama city, Sado Island and Tobishima Island. The aftermath of the quake was followed by rescue and relief efforts synergised by both the civil administration and the Japanese Self Defense Forces (JSDF). Understanding the lessons learnt from such natural disasters, it becomes imperative for India to understand the challenges in the existing framework and take-home lessons in Disaster Management for tackling such national emergencies in the backdrop of such national calamities.¹

SIGNIFICANCE OF CIVIL–MILITARY COOPERATION IN DISASTER RESPONSE

Collaboration between civil and military entities in disaster relief facilitates judicious use of available civil resources and military assets. The same will

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complement and further augment the capabilities of the civil administration.² The United Nations Office for Coordination of Humanitarian Affairs (UNOCHA) has evolved guidelines on the use of Militaries for disaster relief operations world over. It advocates 'The use of Military resources and services—as the last resort in HADR operations'. In other words, Military resources are only to be used when it can be ascertained that no equivalent/alternative civilian infrastructure exists within the country.

- (a) *Role of JSDF*: JSDF was set up in 1954 which collectively includes the Japanese Ground Self Defence Force, the Maritime Self Defence Force and the Air Self Defence Force. The JSDF in Japan is referred to as "The Last Line of Defense".³
- (b) *Principles of JSDF Operations*: HADR operations conducted by the JSDF was based on three guiding principles, mentioned below:
 - (i) *Contribution to Common Good*: The ultimate aim of the JSDF was to provide social and community-based protection to the lives/property of its citizens and maintain law and order.
 - (ii) *Urgency*: This refers to the need to carry out disaster relief operations in quick time and speedy execution during crisis and natural calamities.
 - (iii) *No Comparable Civilian Alternatives*: The idea that military assistance for disasters is a 'last resort' is one of the strict principles around which the SDF bases its disaster relief operations. JSDF's operations are mostly expected for big disasters that surpass these calamities.⁴

PURPOSE OF EXPLORING LESSONS FOR INDIA

India has historically been susceptible to natural calamities due to its distinctive geo-climatic circumstances. Floods, droughts, cyclones, earthquakes and landslides have been recurring phenomena. Approximately 60 per cent of the land area is susceptible to earthquakes of varying magnitudes, while over 40 million hectares are prone to floods.

The term 'Military' according to the National Policy on Disaster Management encompasses the Armed Forces (Indian Army, Indian Navy, Indian Coast Guard, Indian Air Force and Central Paramilitary Forces). The 'Civil' component of HADR operations include Police Forces and Fire Services of respective states, Civil Defence and Home Guards, National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), NCC, NSS and Nehru Yuva Kendra Sangathan (NYKS). Both the civil

administration and the Indian Armed Forces have their own unique working culture, sense of urgency and speed of execution of tasks under various circumstances.⁵

JAPAN'S EXEMPLARY HADR RESPONSE

The sequence of activities carried out by the JSDF since the occurrence of the Noto Peninsula Earthquake 2024 are as follows:

- (a) *Search and Rescue*: Search and rescue operations is the mainstay role in the JSDF efforts to provide disaster relief in earthquakes. The Maritime Self Defence Forces sent their aircraft and ships to conduct search and rescue operations in the seas adjacent to the disaster affected areas. Before the earthquake struck, prefectural offices and schools among other buildings had their numbers marked on their rooftops. This made it easier to locate structures that were crucial for rescue and relief efforts.⁶
- (b) *Securing Staging Areas and Helipads*: During such natural disasters, vehicle activity remains restricted. Therefore, it is necessary to have a helipad in close proximity to the affected areas for emergency patients and relief material, and accommodating helicopters involved in firefighting duties.
- (c) *Equipment and Resources*: In order to help all disaster management organisations, a Disaster Prevention Map was created. It informed all stakeholders involved in HADR operations on the locations of helipads, evacuation zones and other facilities. In addition, the upkeep of helicopter-based aerial firefighting apparatus and the safeguarding of water supplies, including reservoirs was carried out.
- (d) *Earmarking Sites for Liaison and Coordination*: The JSDF created a Response Handbook that included specific aspects that needed to be taken into consideration for each kind of disaster.⁷
- (e) *Transport and Distribution Assistance*: Following the earthquake, transportation of aid and distribution of relief material was carried out using C-130H and C-1 aircraft as well as other air transport resources of the Navy. The JSDF strategically positioned forces to quickly and efficiently deliver significant quantities of relief supplies to the disaster area.
- (f) *Restoration of Government Machinery*: Post the completion of the search and rescue activities, JSDF progressively handed over the roles it had been supporting to local governments and the business sector as they recovered from the initial damage caused by the tragedy.

SUCCESSFUL INSTANCES OF CIVIL–MILITARY COOPERATION

Cooperation between JSDF and Local Government: The JSDF created a 'Response Handbook' that included specific aspects that needed to be taken into consideration for each kind of disaster including marking of important buildings such as schools, hospitals, offices, etc. Copies of this handbook were given to the appropriate local government agencies and district governing bodies. The JSDF has devised protocols and set guidelines to enable the JSDF to deploy units without the need for approval from local authorities, in anticipation of such situations.⁸

Clear Responsibilities: Burying of the dead was another extremely challenging issue during the search and rescue phase of the HADR operations. After much deliberation and discussions with the local governing bodies, it was decided that the dead bodies would be transported by the private sector as part of relief operations.

Removal and Clearing of Debris: The JSDF established a fundamental policy that it would handle debris that obstructed public infrastructure such as highways, airports and city buildings. Restoring facilities to use and clearing areas required for life-saving operations were given top priority.

Liaison and Coordination: Utilising seasoned JSDF troops as liaisons has demonstrated to be a highly efficient approach in enhancing collaboration with the local administration. By conducting disaster management drills, the JSDF also familiarised itself with the personnel of local governments who are in charge of disaster management.

Medical Facilities: The Medical Disaster Assistance System in Japan is established in accordance with the Disaster Countermeasure Basic Law. The Japan Disaster Medical Assistance Team (DMAT), 2005 with the main purpose of addressing immediate trauma and crush syndrome within the first 48 hours following a disaster. The Japanese Red Cross Society (JRCS) and The Kanazawa Red Cross Hospital, made noteworthy contribution in providing medical aid.

SETBACKS EXPERIENCED DURING HADR OPERATIONS

Haneda airport plane crash: On 2 January 2024, Japan airlines flight 516 erupted into flames post collision with a Coast Guard aircraft while landing at Tokyo's Haneda airport which was on relief duties. This mishap resulted in the loss of five crew members on board the Coast Guard aircraft, and about 400 passengers of flight 516 survived due to the efforts of airport staff and

crew. This accident resulted in disruption and temporary shutdown of airport operations. This incident occurred due to lack of effective coordination between the Air Traffic Controller (ATC) trainee and the supervisor at Haneda airport. ATC error resulted in loss of situational awareness and coordination which eventually led to the collision.⁹

Shika Nuclear Power Plant: The nuclear power plant consists of No. 1 and No. 2 nuclear reactors. Both the reactors were non-operational since March 2011. The reactors were however being cooled by an external power supply. The earthquake caused damage to the transformer of No. 1 reactor and No. 2 reactor suffered from various technical issues including leakage of oil from the system. To add to the existing issues, under-reporting of the extent of oil leakage by Hokuriku Electric Power Co. further hampered the restoration process. The aftermath of the earthquake also rendered two of the five external power supply sources unusable.¹⁰

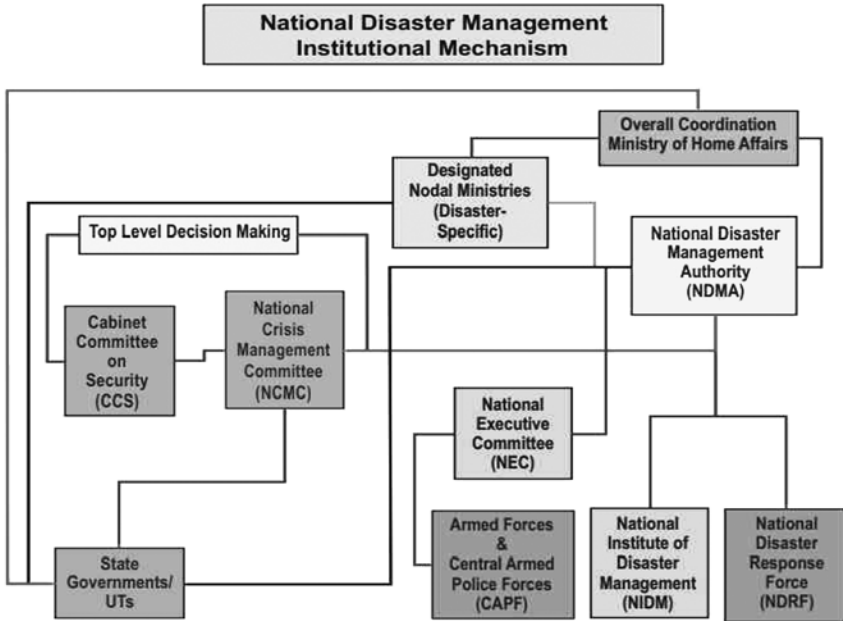
Fake News: In the aftermath of the earthquake, false information and rumours including fake rescue requests began circulating on the internet. Fake news of an impending earthquake/tsunami and criticism of the poor relief efforts by the government made their way quickly to the common man. Fake rescue requests on social media added to the existing search and rescue workload of the overburdened JSDF personnel. The surge in fake news has also been attributed to the relaxed surveillance rules concerning posts on X post takeover by Elon Musk in 2022.¹¹

India's Current HADR Landscape: The enactment of the Disaster Management Act in 2005 put forth the idea of creating the National Disaster Management Authority (NDMA), headed by the Prime Minister. Additionally, it proposed the formation of State Disaster Management Authorities (SDMAs) chaired by respective Chief Ministers and District Disaster Management Authorities (DDMAs) headed by the District Collector/District Magistrate/Deputy Commissioner. The Government of India has moved away from the old relief-oriented approach and adopted a proactive strategy that essentially prioritises between prevention, mitigation and preparedness.¹²

BASIC FRAMEWORK

The overall coordination for Disaster Management is entrusted with the Ministry of Home Affairs (MHA), Government of India. The decision-making rests with the Cabinet Committee on Security (CCS) and National Crisis Management Committee (NCMC). The NDMA approves the

National Disaster Management Plan (NDMP), 2019 and is responsible for its implementation.



Source: Institutional Mechanism, available at <https://www.ddmakangra.org/public/library/Institutional%20Mechanism.pdf>

OVERVIEW OF EXISTING CIVIL–MILITARY COOPERATION

The Indian Armed Forces are called to intervene and take on specific tasks such as HADR operations only when the crisis is out of the capability of civilian stakeholders which includes the local governments.

As part of Disaster Management (DM) preparedness, the Armed Forces provide training to trainers and DM managers, especially in areas of CBRN management, heli insertion, high altitude rescue missions, watermanship and training of paramedics.¹³ The National level NEC includes the Chief of the Integrated Defence Staff (IDS) as one of its members.

BRIDGING THE GAPS: APPLYING LESSONS FROM JAPAN

JSDF: Soft Power—The HADR operations conducted by JSDF will surely go a long way in helping to develop the image of the JSDF as a

reliable and potent force that can be expected to deliver results in times of national emergencies in the future. Similarly, the Indian Armed Forces should capitalise to build its image in the minds of the people of India by conducting its operations with professionalism and with a spirit of effective civil–military cooperation.

Organizations for HADR operations: JSDF personnel were sent to the affected State and District HQ to coordinate relief operations and act as medium of information exchange and planning of relief efforts. Organisations such as State Police and Fire Services were dovetailed into the overall DM plans by the HQ Emergency Disaster Response located at Japanese PM office. Indian Armed Forces, Indian State Police along with Central Paramilitary personnel and Fire services will have to be incorporated in the local DM plans of districts and municipalities to assist in execution of relief activities.

Lack of essential commodities: The time of the year also plays an important role during HADR operations. The Noto Peninsula Earthquake was no exception to this phenomenon. It was winter in Japan and the earthquake only added problems to the already existing snowfall and chilly winds during this time of the year. Lack of fuel was an important barrier in the progress of HADR operations leading to delay in the transport of relief material and moving of injured civilians from the disaster areas to the hospitals. JSDF provided ‘Fuel for free’ to police and disaster management vehicles by utilising its already existing stockpile of fuel reserves held at important bases near the affected area. Similarly, key locations/sites need to be identified within the country for stockpiling of food, fuel and relief supplies in vicinity of disaster-prone areas.

Identification of specific requirements: An ad hoc organisation named as ‘Livelihood Assistance Cell’ was established in JSDF HQ at Toyama. The main purpose of this organisation was to exercise command and control over the coordination and distribution of relief material to various temporary shelters established within the country. JSDF sent its units to inspect such shelters and ascertain requirements specific to such shelters. It is therefore important for the Indian Armed Forces to operate under situations wherein there is a similar disruption/breakdown of the civil administration post occurrence of such natural disasters.

Early Warning—Technology enabled: J-Alert is a system used in Japan to send important information regarding floods, earthquakes and tsunami using a satellite to its citizens.¹⁴ The latest announcements are broadcasted via mobile phones, outdoor speakers, TV and radio systems. India has also developed ‘SACHET’ mobile application towards ensuring citizen

preparedness in times of natural disasters. While the mobile application is a welcome step by NDMA towards ensuring better disaster management and awareness among citizens, it has a long way to go in terms of its proliferation and better user interface in order to meet the unique challenges of India's diverse geography.

DM Plans and Drills: Synergised application of entities such as local administration, private organisations, NGOs and Armed Forces into DM plans will lead to better response in times of natural calamities. Japanese Red Cross Society (JRCS), Peace Winds Japan and various NGOs including private companies played an important role in DM. It is pertinent to note that Japan incorporates NGOs and private companies into its DM drills and rehearsals.

RECOMMENDATIONS TO IMPROVE CIVIL–MILITARY SYNERGY IN INDIA

Armed Forces in Disaster Management Organizations: Officers and men and women of the Indian Armed Forces are known for their professionalism and ability to perform under stress and uncertainty. Veterans may be incorporated into DM organisations such as NDMA, NDRF, State DM agencies in order to use their capabilities in times of need. This will also help to improve synergy, coordination and liaison between civil administration and military to a large extent.

Air Space Control and Management: The Airbus A 350 aircraft of Japan Airlines Flight 516 colliding into Japan Coast Guard aircraft at Haneda airport lays down the importance of effective air space management and control, especially in the aftermath of a national disaster. Preliminary investigations however indicate the need to focus on proper communication between ATC and the aircraft. Errors made by ATC crew may prove to be disastrous to the already scarce resources available for HADR operations. In the Indian context, ATC crew, airport authorities, civil aviation personnel, CISF, fire services and NSG personnel should form part of disaster management exercises and drills to further enhance their professional capabilities while working under stressful circumstances.

Nuclear Safety: Nuclear installations form part of strategic and critical assets of the country. In the aftermath of an earthquake, it becomes extremely difficult to contain the damage and possible radiation leak from nuclear reactors. Presence of trained manpower specialised in damage control and nuclear decontamination are required to be available close to such facilities. The Indian Army possesses personnel specialised in CBRN (Chemical,

Biological, Radiological and Nuclear) safety and decontamination. Earmarking of adequate trained personnel stationed close to such sensitive locations and including them as part of DM drills and exercises will definitely pay huge dividends in protecting our national assets.

Soft Power of Defence Forces: Indian Armed Forces have proven their capabilities in HADR operations during natural calamities such as Operation Maitri, Nepal earthquake, supply of vaccines during COVID-19, floods in Punjab, Haryana and Himachal Pradesh and Operation DOST during Turkey earthquake. 'Civil–Military Synergy' will help in projection of India as a global 'Soft Power' in alignment with national aim of Government of India.

Whole-of-Government Approach: Incorporation of local administration, private organisations, NGOs and Armed Forces into the overall DM plan will only help in better execution of HADR operations at the ground level. DM drills at the State and District levels need to involve the Local Military Authority (LMA) for better coordination and liaison. Intra-government agencies should be able to share information as quickly as possible among each other to assist in HADR operations. This will help in judicious use of civil and military resources such as medical facilities, relief material, manpower, equipment and vehicles.

Media Policy: Control on spread of fake news and misleading information can hamper relief and recovery efforts and lower public morale. Use of digital technology such as algorithms to identify 'Originator Profiles' which are the source of fake information and their timely removal is required to be carried out. Ministry of Information and Broadcasting has constituted a PIB Fact Check Unit (FCU) to combat spread of fake news in 2019.¹⁵ Users can check the veracity of news and social media content regarding the Government of India using this facility. The use of this feature however is required to be incorporated into the DM plans to curb the spread of mis-information by non-state actors. Designated Public Relations Officers (PRO) in civil administration and military need to be identified in advance to relay the actual progress of operations on ground and avoid over-reporting/under-reporting of such natural disasters. Correct and timely reporting of information will foster a harmonious relationship between both civil administration and military authorities.

National Early Warning System: 'SACHET' mobile application needs to be proliferated up to the grassroots level to make its impact as a potential Early Warning System in times of calamities. Meteorological Radars and weather forecasting equipment of Indian Armed Forces used primarily for aviation,

ship safety and artillery will play an important role in augmenting the existing civil infrastructure for Early Warning and Detection of such disasters. TV, radio and social media should be incorporated into the National Early Warning architecture.

Policy and Legislation: National Disaster Management Plan (NDMP), 2019 has laid the roadmap for disaster management. NDMP, 2019 falls short in effectively bringing out the dynamic power and effective utilisation of 'Civil–Military' synergy into the DM framework. Disaster Management in Military parlance should not be confined only towards mobilisation for 'Internal Security duties' but rather dovetailing the local police, fire services, civil medical infrastructure into the drills and exercises is required to be practiced during DM/HADR exercises on a regular basis.

Coordination with International Disaster Relief Agencies: Liaison and coordination with international military and civil agencies require understanding of the capabilities and drills adopted by our friendly countries. The Indian Armed Forces has a wide exposure to the capabilities of our friendly countries due to the regular military exercises carried out from time to time and the ability to communicate with international agencies due to their inherent interoperable communication equipment and jointmanship existing within the services.

CONCLUSION

While it is paramount that the 'Civil–Military Synergy' is required to be harnessed for better disaster management, it will go a long way in enabling government and civil agencies to understand what are the capabilities and limitations of each other while tackling such natural calamities. A natural calamity such as the 'Noto Peninsular Earthquake' in Japan is a gentle reminder for India to harness and improve on DM drills and procedures. Policies and actions on ground require to be in consonance with each other, otherwise they would be left to remain merely on paper. This incident presents India with a challenge to review our existing DM preparedness and to remind us that—'Technology and efficient Civil-Military synergy will go a long way in ensuring a disaster resilient India'.

NOTES

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