

Workshop on Higher Education in Disaster Management: Opportunities & Challenges

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DISASTER MANAGEMENT:
A TRANS-NATIONAL APPROACH
TO PROFESSIONALIZE
MILITARY EDUCATION AND TRAINING

Presentation

By

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Disaster Management: A Trans-National Approach to Professionalize Military Education and Training

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Scaling-Up the Military's Knowledge of the Disaster Management Paradigm

The need for formal education and training of the military in the field of DM is universally recognized by almost all countries. Accordingly, some sort of mechanisms already exist in every country to impart DM training to a select percentage. Generally this has been a very small number servicemen. However, the true state of affairs in this regard can be ascertained from some of these questions:

- a) Are adequate number of servicemen being trained in DM aspects?
- b) Is the education & training being imparted institutionalized or ad-hoc?
- c) Is the requisite training infrastructure in place? How good are the trainers, the training material and training aids?
- d) Have training requirements been scientifically deduced and formalized in to a well-structured, realistic and purposeful curriculum?
- e) Is formal certification being provided? If so, how professional is the evaluation? How good is the certification vis-a-vis the best global standards?
- f) Are the training institutes accredited? If so, how does the accreditation compare with the highest standards, world-wide?
- g) What is the quality of the training and what are the real takeaways? Is it realistic and practical or overly pedagogic and academic?
- h) How effective has the training proved in actual disaster operations?

Although answers to these questions differ from country to country, one thing that stands out is that "much more needs to be done". In fact, honest answers to these questions may even bust a commonly held notion: that the Armed Forces possess adequate specialized skills for disaster related operations. As a matter of fact, objective enquiry reveals that a soldier - being 'optimally' trained for combat tasks - is (by self-inference) 'sub-optimally' trained for other types of non-combat duties, including DM. On the other hand, the science of managing disasters has, over the last few decades, metamorphosed itself in to a complex and specialized field encompassing a wide range of subjects. Today, in the field of DM, the focus is clearly on 'specialization and super-specialization', the implication being that 'effective' DM now requires optimally - not generally or casually - trained professionals in each of its specialized domains.

This is not to say that the average military soldier is unfit for DM duties, just that by virtue of his/her current education and training, he / she needs further grooming to become a more efficient DM manpower resource, thereby being able to deliver higher levels of performance when engaged in such duties. In fact, viewed collectively, the militaries of the world represent a humongous pool, a vast untapped potential, of

excellently trained and disciplined manpower that can, with relatively little effort, be converted in to skilled DM professionals. Some scholars even argue that "war is nothing but a man-made disaster". Going by this logic, if one were to look for an 'eminently suitable candidate' to receive specialized DM training, the soldier would perhaps figure right on top of the list.

From the above it can be safely concluded that, globally, a bona-fide need exists to institutionalize DM education and training for the Armed Forces.

Suggested Pathways to Institutionalize Military DM Education and Training

For the purposes at hand, since no two militaries are comparable, a common-sense approach would be to evolve a bouquet of options, leaving each military free to choose which option - or combination of options - suits it best. Some of the macro-options are listed below:

- a) Option - 1: Define a certain percentage, say 10 - 20% of personnel per 'Major Unit' (typically a Battalion or Regiment) and 5 - 15% per 'Independent Minor Unit' (typically a Company or Squadron), to be formally trained in DM tasks.
- b) Option - 2: Within each military 'Formation' (typically a Division or Corps), select 10 - 25% units/sub-units for specialized DM tasks and train each as an entity for a specialized DM role. When deployed for specific DM tasks, this may entail temporary re-organization of the standard military structure, for the duration of the envisaged role. For example, a 'Company' tasked to provide succor to an earthquake affected area may have to reorganize itself in to Rubble Clearance, Trauma Relief, SAR and First-Aid Teams.
- c) Option - 3: Learn from the experts: formalize DM training with UNOCHA, UNHCR, UNDAC, ICRC, INSARAG, etc. and either send servicemen on deputation to these international organizations or organize formal education and training with their expertise. Similarly, the expertise of specialist DM organizations available within each country, could be utilized to train its military personnel in the desired DM functionalities.
- d) Option - 4: Task-based education and training. Each Govt. specifies duties that the military must perform in a DM situation. Accordingly, a "Systems Approach to Training" (SAT) could prove very useful in training the military to deliver optimal performance in the envisaged roles. In this method, the 'formation' level tasks would have to be successively broken down in to unit, sub-unit, sub-sub-unit and even individual tasks, each component being trained in specific relation to its visualized tasks. The task list could include: Setting-up of a Unified Comd HQ, Establishing a Communications Grid in a disaster zone, SAR, Establishment of relief camps and so on.
- e) Option - 5: Hazard-centric approach. Most militaries maintain a presence in every province / sub-region of a country. By linking military locations to hazard-zoning and vulnerability assessments of the regions, military units can be trained to handle specific types of disasters which are more likely to occur in their vicinity. Thus, for example, a unit located in / near a flood plain could be trained specifically in Flood Management, another for Industrial Emergencies and so on. Similarly, specialized competencies could be developed in the military to professionally handle Earthquakes, Cyclones, Avalanches, Tsunamis, CBRN and other emergencies. A corollary to such 'regional hazards' approach

- would be pre-provisioning of DM equipment specific to each hazard, adjacent to the disaster-trained military units, in each of the country's regions.
- f) Option - 6: Formalize training for disaster relief and response by including it in the curriculums of current military training formats like SAT (Systems Approach to Training), ITC (Individual Training Cycles), Collective Training, etc. being already run at their training institutions. The detailed syllabi and content of such training would need to be aligned to particular types of disasters, specific to each country, and the military's envisaged role in them.
 - g) Option - 7: Specialist training, including SAR, in varied contingencies should preferably be institutionalized and conducted at the Tri-Services / Joint Services level under the aegis of Joint Command / HQ like the IDS in India. It should be supported by a sound training philosophy. Another sub-option in this would be to train 'jointly' for common specialist skills (like collapsed building SAR, slithering, etc.) but leave the imparting of Service - specific DM skills to each Service. By way of example, the Navy could conduct disaster related deep-sea-diving and scuba-diving, the Army could take on rescue techniques in snow bound and high-altitude areas while the Air Force could train in aerial re-supply and airdrop of food and aid.
 - h) Option - 8: Another option is to standardize all DM training under one specialist institute (like the Indian NIDM). These institutions have disaster-specific departments, where personnel from various stakeholder organizations (NDRF, Civil Defense, Home Guards, Police, Military, NGOs, Volunteers, etc) are already being imparted training. If their capacities to train large number of military-men are expanded, excellent DM training could be imparted in a systematic and well organized manner. The value addition in this option is that inter-stakeholder pollination would take place, yielding benefits of organizational synergy and interoperability between disparate players in the DM field. Moreover, it would usher-in standardization and formal certification for all trainees as well as accreditation of the training institutes themselves.

Task-Based Subjects of Study

The key issue here is to align DM education and training of the military to its envisaged roles/tasks/duties in such operations. Ensuring such congruence is essential to derive maximum benefit from these efforts. Therefore, as a start point, the training needs have to be assessed or ascertained very realistically, a 'systems approach' followed in shaping the syllabi and effective feedback ensured for continuous improvement. The main training requirements have to be military specific hence must focus on its 'core competencies'. Historically, these have been SAR, provision of communications, establishment of relief camps to provide immediate health and medical succor and logistics involving large-scale relocation / transportation of people as well as relief materials.

Therefore, before the 'training specialists' come in the military will first need to do some homework itself i.e. define its 'tasks-list' for DM operations in-synch with its envisaged roles as well as its core competencies. This will allow the trainers to deliver a more specialized and focused training package to ensure that the training effort is fully optimized to obtain a highly efficient disaster response from the military during actual relief operations. Full freedom must be allowed to each military to draw up its own task-list, based on its unique operating environment. Nonetheless, when viewed

from a global perspective, realization dawns that significant commonalities exist, across nations, in the tasking of military forces for disaster response.

Key Areas of Focus

1. *Make Training Dynamic and Inter-Agency* - Constant advancements in DM related equipment, techniques and training methodologies makes it imperative for the military establishment to make its DM related training dynamic so that its efficiency during such operations is not only maintained but is, in fact, enhanced. This cannot be done in a 'stand-alone' manner, involvement of the other stakeholders in DM is essential. With the onset of the 'knowledge age', in which knowledge is 'exploding' at an astounding pace, the Armed Forces have no option but to stay abreast and keep themselves updated at all times in all their employment domains, including the field of DM.
2. *Evolve a 'DM Training Doctrine' based on each country's philosophy of employment of its military* - There is a need to evolve and enunciate a doctrine for the military's DM training. This must include aspects like aim of training, the end-state visualized on completion of training, training objectives, methods, concepts, drills, procedures and so on. All these must conform, and not be at variance with, the formally articulated role of the Armed Forces in DM. In doing this there is a need to share wisdom across organizational and national borders.
3. *Categorize Skills and Expertise using a database and maintained by all militaries, of their personnel trained in various aspects of DM* - This will enable digital categorization of the skill-sets available within the Armed Forces, thus facilitating better Human Resource Management and HR Development of their workforce. It will allow a Commanding Officer to assign the right man for the right job in a disaster-relief operation. The same will hold true at formation and higher levels also where this HR database can be co-related to different types of terrain as well as disasters to optimally compose forces and exploit the available expertise. Categorization of DM related skills and expertise is, therefore, a must and such databases can prove to be very handy for the Armed Forces to sharpen their response to disasters.
4. *SAR* - Across the globe, the military is invariably utilized to execute the 'Search and Rescue' (SAR) function in a disaster situation. However, not much formal training is being done in this field by most militaries. This shortcoming can be easily corrected by a two stage process; Step - 1 would involve taking stock of the existing SAR capabilities of the Army, Navy and Air Force while Step - 2 would seek to upgrade the same by incorporating newer concepts, skills and technologies in this field. Gaps in the military's SAR capabilities can thus be plugged by laying down pragmatic training objectives and acquiring the desired capabilities.
5. *Incident Command System* - Every nation has some sort of an early-warning system to alert the general public of an impending disaster. When integrated with a nation-wide disaster response mechanism it can be called an 'Incident Command System (ICS)'. There is a need for the Armed Forces to participate in such nation-wide efforts so that their disaster response is synergized with all other participants, as per the ICS. Joint education and training with the other stakeholders can iron out all the niggling interoperability/compatibility issues before hand, thus promoting the efficiency of the overall, coordinated disaster response.

6. *Formulation of SOPs and Training / Operating Manuals* - Other than the occasional lecture, mock-drill or short capsule, most militaries do not carry out much long-term (more than six months) structured training in DM, neither do they provide formal certification for the same. Similarly, military SOPs and Training Manuals on Disaster Response offer considerable scope for improvement. This state of affairs can be greatly improved by introducing systematic, long-term and specialized education-cum-training courses specifically oriented to the Services. Aspects that could be included are : mobilization for DM, composition of response teams, distribution of specialist equipment, damage assessment, induction in to the disaster affected areas, establishing communications and logistics, interaction with other agencies, dealing with the civil administration, visualized contingencies and so on. Finally, the learning from such training endeavors must be captured, by way of objective feedback, in to periodic revision and updating of the relevant 'Operating and Training Manuals' for each type of disaster role.
7. *Joint Training* - One 'big' lesson that emerges from all major disasters is that a coordinated, rather than fragmented, response by all stakeholders is, by far, the most effective. Similarly, within the military, the Army, Navy and Air Force need to coordinate amongst themselves to accrue greater synergies in DM. Consequently, 'Joint Training' is no longer an option, it is now an operational necessity - be it for war-fighting or for DM. The number of stake-holders in the field of DM being large, there is a need to promote this integration, through sustained education and training, embracing the para-military forces, civil-defense organizations, Home Guards, fire and rescue services, voluntary aid agencies and the police. While this concept is well understood by most nations, there is a need to now graduate from 'theory' to 'implementation' in order to strengthen the unified / combined response to future disasters.
8. *Performance Audit* - There is a need to put in place a formal mechanism to assess the performance of military units / teams participating in disaster relief. This will reveal shortcomings and 'grey' areas which can then be addressed during training with a view to overcoming the same. Experiential learning shows that inefficient and poorly trained personnel involved in disaster response often turn out to be a liability rather than an asset. Their lack of education and training in DM can therefore prove to be counter-productive to the relief effort. The military, with its penchant for promptness, reliability and efficiency, would be the last agency to be identified in such a manner. To obviate such an eventuality it is imperative that the military ensures continuous monitoring of its own efficiency for DM tasks and takes its DM training seriously.
9. *Archiving, Record keeping and Learning from Experience* - The Armed Forces need to 'learn the right lessons from past mistakes' in the execution of DM operations. The ground reality is that professional documentation, archiving of records and critical after-action appraisals of employment of most military forces, relating specifically to DM duties, are - more often than not - prepared and maintained in a rather cavalier fashion. This frustrates attempts to seriously study and critically analyze such operations with a view to ensure that our future responses are more efficient and the same mistakes are not repeated. Formal education and training in the DM discipline, especially by way of real life 'case studies', can greatly assist in overcoming this lacuna and ensuring that lessons of past disasters do not stay 'un-learnt'.

10. *New Management Techniques* - Like every other field, the science of DM has also been swamped by a host of new management 'mantras', techniques, concepts and tools. PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method) are but two examples of these. Such techniques and processes, if applied correctly, can significantly enhance decision-making and contribute towards greater efficiencies in disaster response, mobilization and allocation of resources. To master these new management tools, long-term education specific to DM is required. These techniques hold enormous potential to assist the decision maker during disaster relief operations and the Armed Forces, could benefit hugely from them to further upgrade their efficiency in DM.
11. *Application of MIS and IT* - Besides modern management techniques, recent advances in the fields of 'Information Technology' and 'Management of Information Systems' hold great promise in the context of rescue and relief operations. Through classroom learning as well as practical usage, the Armed Forces can use these technologies to make a major contribution towards improved DM practices.
12. *Mock Up Drills and Simulation Exercises* - It is a truism that simulation exercises, mock-drills and rehearsals are the best form of any practical training in DM. Structured education, including practical training, can help to build-in realism as well as inter-organizational synergy in to such preparations. A powerful new 'gaming' tool is disaster simulation/modelling, including immersive and interactive experiences in 'virtual reality' environments and scenarios. Such Artificial Intelligence based applications can go a long way in up-skilling the military's disaster responses.

Conclusion

This paper, based on the author's extensive study of how various militaries engage in DM, makes a case for taking a trans-national view of the subject with a view to substantially upgrade the military's efficiency in disaster response. Putting in place an institutionalized system of DM education and training for the militaries of the world, as broadly outlined in this paper - making due allowance for individual variations and idiosyncrasies - will, it is felt, significantly enhance their effectiveness in DM operations.