NDRF • INDIA

Saving Lives & Beyond...

THE SAVIOUR

Special Edition-2025

NATIONAL DISASTER RESPONSE FORCE

Landslide in Wayanad, Kerala -2024

Himachal Pradesh Flash Floods - 2024

सत्यमेव जयते

आपदा सेवा सदैव सर्वत्र

The Saviour

NDRF Annual Newsletter

(Special Edition)


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Message From
Director General

Piyush Anand, IPS
Director General, NDRF

It is a matter of immense pride and honour to be part of this elite force, a dedicated force of professionals committed to safeguarding lives and property during disasters. Over the years, NDRF has established itself as a beacon of promptness, professionalism, and unwavering commitment in managing both natural and man-made disasters.

In the year 2024, NDRF remained at the forefront of numerous challenging operations, demonstrating unparalleled resilience, competence and dedication in every operation. Noteworthy among these were the Wayanad Landslide Ops in Kerala, Aizawl landslide in Mizoram, massive flood responses in Manipur, Tripura, Gujarat, Bihar, West Bengal and Andhra Pradesh. The Cloudbursts and landslides in Himachal and Uttarakhand posed yet another challenge. NDRF also executed critical collapsed structure search and rescue (CSSR) operations and successfully carried out borewell rescues in Vijayapura in Karnataka, Amreli & Dwarka in Gujarat and Dausa in Rajasthan. Cyclones Dana and Fengal also saw large scale pre-emptive deployment of NDRF to ensure minimum loss of lives. These operations highlight the unwavering commitment of the Force in safeguarding lives and property during disasters.

Beyond operational excellence, the NDRF also plays a vital role in fostering synergy among stakeholders to strengthen the Nation's disaster management capabilities. In this regard, the Force successfully co-hosted the Annual Conference of Relief Commissioners/Secretaries (Disaster Management) & SDRF Chiefs in June 2024 in co-ordination with MHA. This pivotal event provided a platform for State Disaster Response Forces (SDRFs), Civil Defence, Home Guard and Fire Services to collaborate and enhance capacity-building efforts for an integrated response mechanism.

The community remains the first responder to any disaster and the NDRF is steadfast in its mission to empower and prepare them through comprehensive capacity development programs. These initiatives are aimed at building resilience and ensuring that communities are better equipped to face adversities with confidence and effectiveness.

As we reflect on our achievements, it is equally important to look ahead with renewed commitment. NDRF continues to embrace technological advancements, refine its training methodologies, and strengthen partnerships with diverse agencies to remain at the forefront of disaster management.

On behalf of all ranks of the NDRF, I assure our countrymen of our unwavering dedication to serving the nation with zeal and professionalism. Let us continue to uphold our guiding principle, "AAPDA SEVA SADAIV SARVATRA"—effective disaster response service everywhere and at all times.

As we move forward, I urge every member of this elite Force to uphold our values of courage, compassion and commitment, ensuring that we remain a cornerstone of India's disaster resilience framework. Together, let us strive to make our Nation safer and more prepared for the challenges ahead.

With sincere appreciation for your tireless efforts and dedication, I extend my best wishes for another year of impactful service in disaster response, prevention and management.

Jai Hind !

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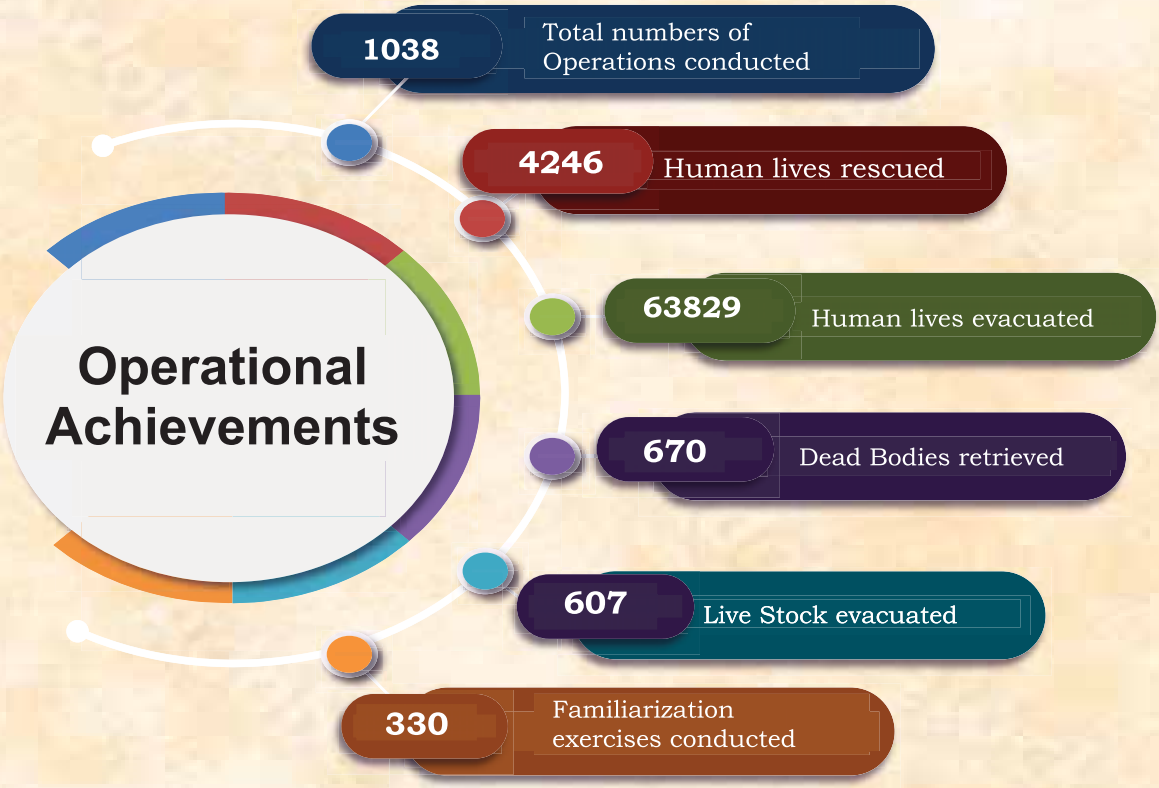
CHANGE OF NDRF COMMAND

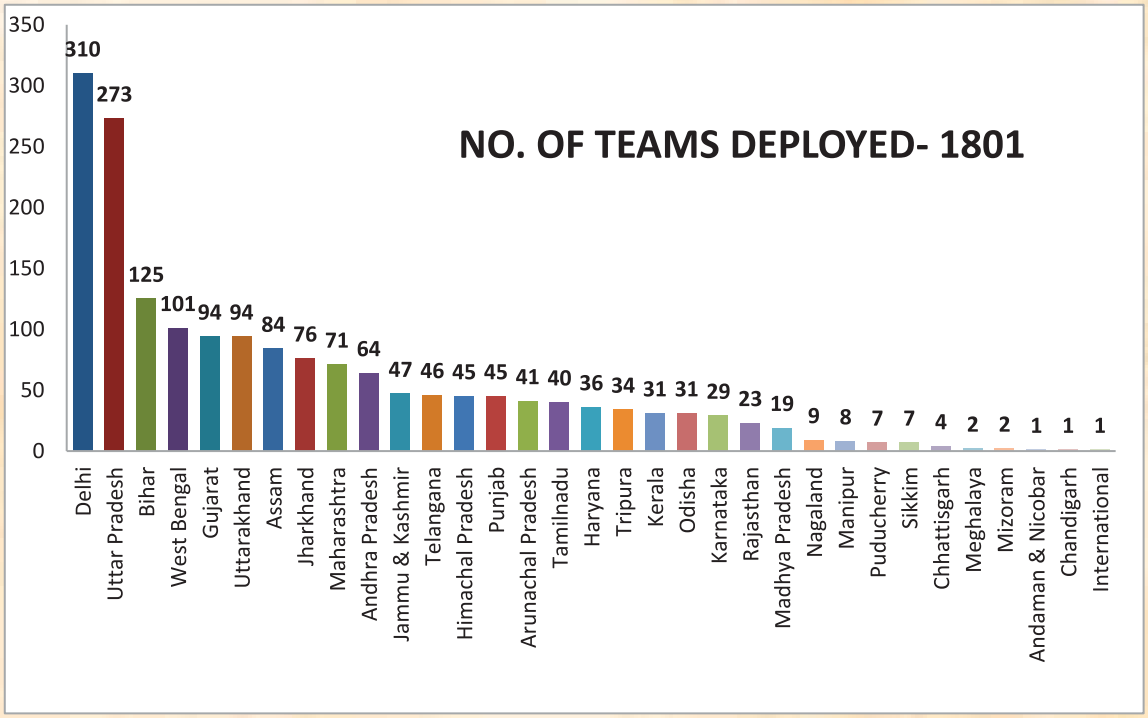
Shri Piyush Anand, IPS (1991 UP Cadre) took over the charge of Director General NDRF on 31st March 2024 from Shri Atual Karwal, IPS upon his superannuation. A B.Tech in Mechanical Engineering from IIT Delhi and Post Graduate Diploma in Public Policy and Management from MDI Gurugram, Shri Piyush Anand has a rich experience of serving in UP State as SP/SSP in 11 districts, IG Range Moradabad & Kanpur and ADG Railways & Establishment, in CBI for more than 7 years and in CRPF and CISF as well before joining NDRF. He has been conferred with the Police Medal for Meritorious Service and President's Police Medal for Distinguished Service besides numerous other awards.

DISASTER RESPONSE-2024

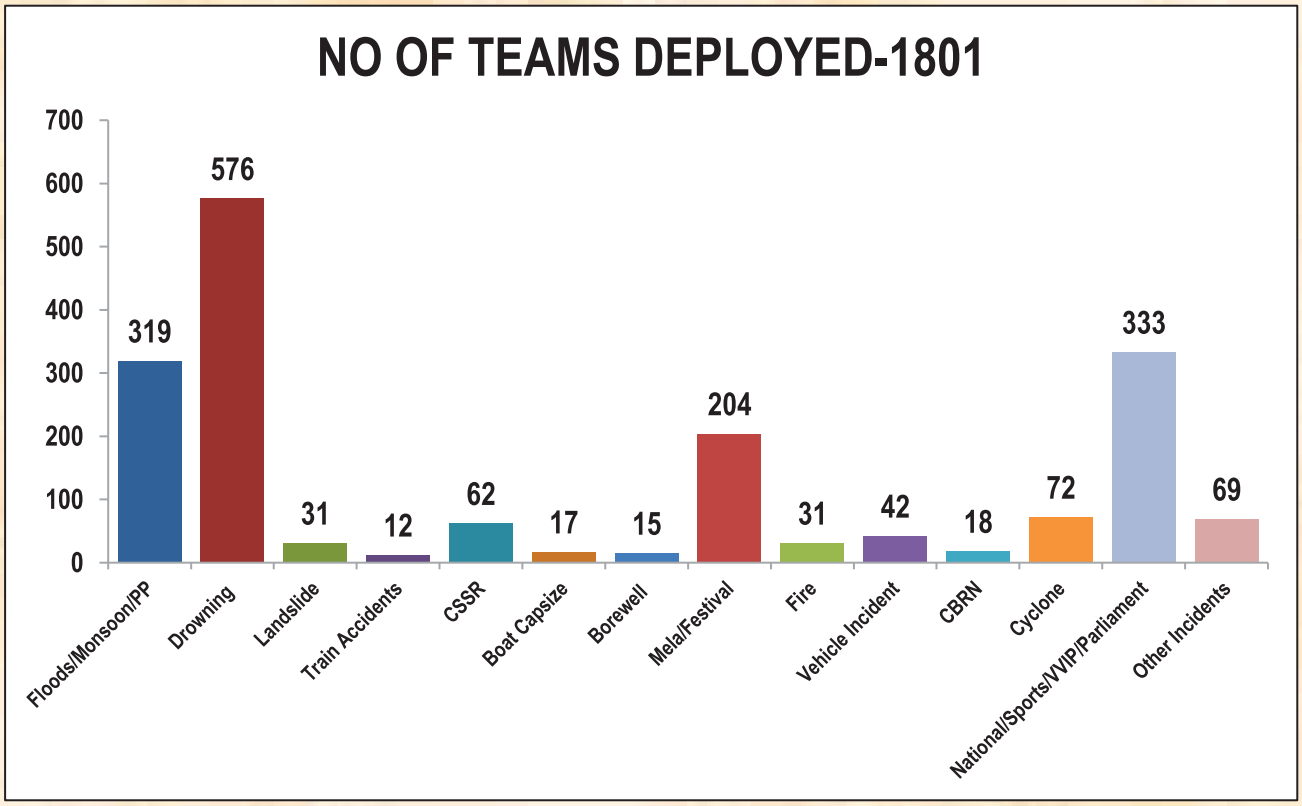
OPERATIONAL ACHIEVEMENTS - 2024



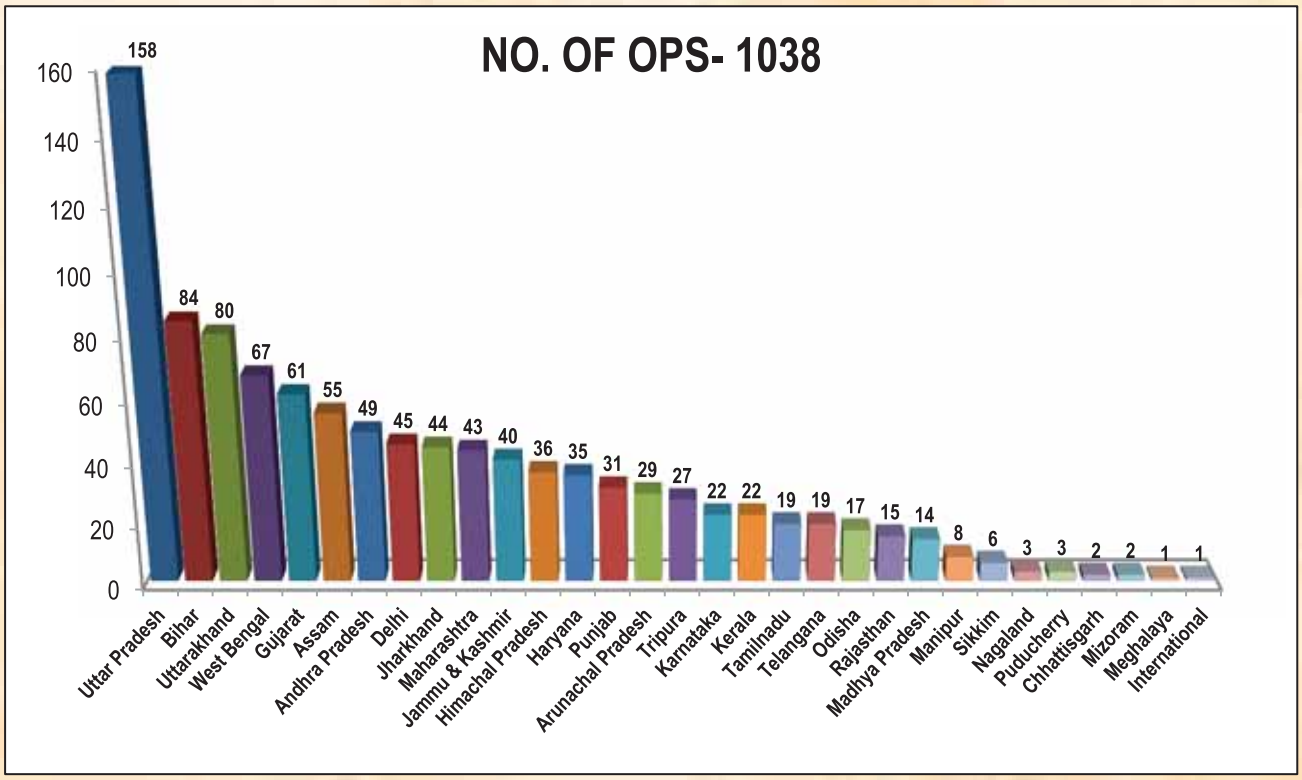
STATE-WISE TEAMS DEPLOYED - 2024



EVENT-WISE TEAMS DEPLOYED - 2024

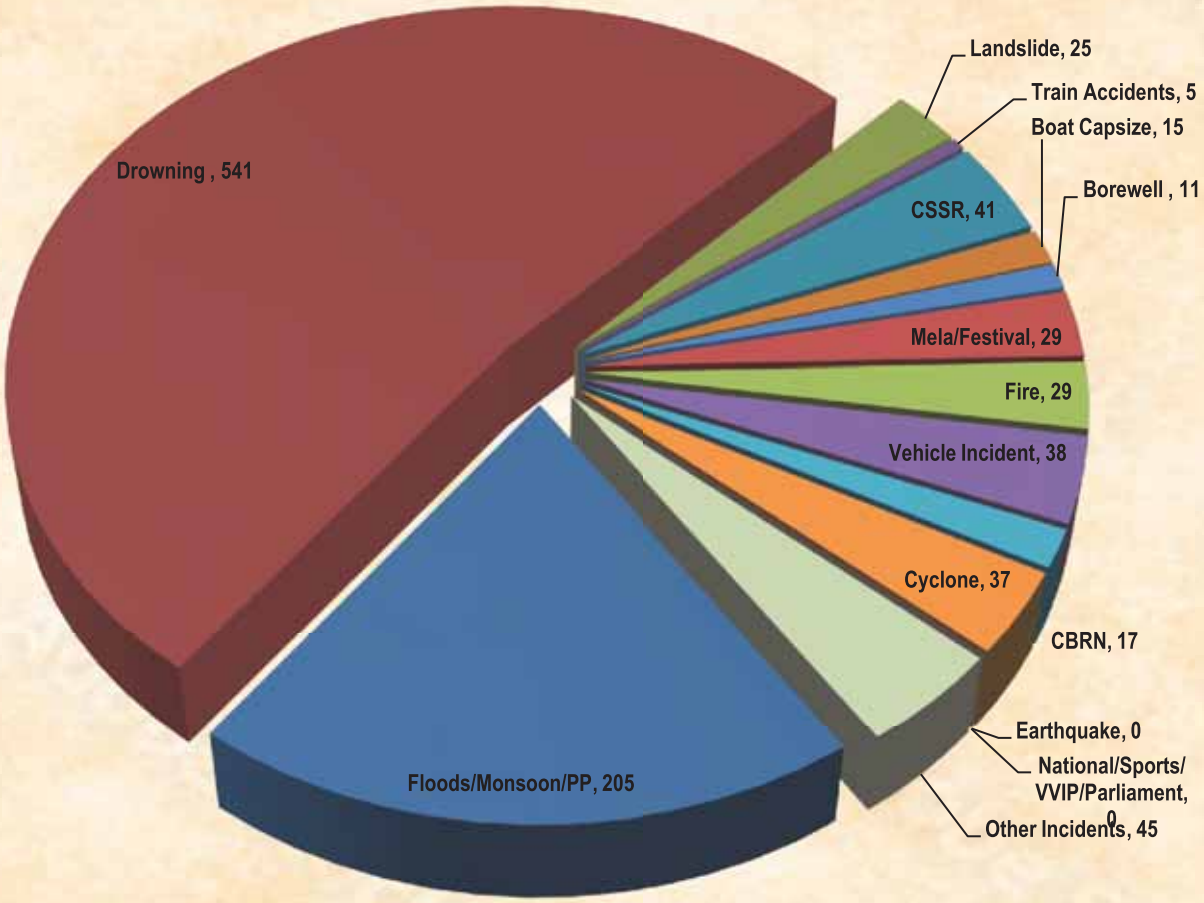


STATE-WISE NO. OF OPERATIONS - 2024



EVENT-WISE NO. OF OPERATIONS - 2024

NO. OF OPS - 1038



MAJOR OPERATIONS

COLLAPSED STRUCTURE SEARCH AND RESCUE OPERATION IN RUPNAGAR, PUNJAB

On April 18, 2024, a team of NDRF, in coordination with other agencies, conducted a search and rescue operation near Preet Colony, opposite Gandhi School, Bela Chowk, in District Rupnagar (PB). This operation was in response to the collapse of an old house undergoing renovation, which left five people trapped under the debris. In a non-stop rescue operation, NDRF team saved two victims alive.

NDRF RESPONDS TO BILLBOARD COLLAPSE IN GHATKOPAR, MUMBAI:

On May 13, 2024, a catastrophic incident occurred in Ghatkopar, Mumbai, when a massive 250-tonne advertisement hoarding collapsed onto a petrol pump during a severe dust storm. The collapse caused extensive destruction, with several individuals either refuelling or engaged in their duties at the time.

The NDRF team stationed at RCC Mumbai promptly responded to the emergency, working tirelessly alongside other agencies in a coordinated rescue operation. The team successfully rescued three individuals trapped beneath the debris and recovered 13 bodies

FLOOD RESCUE OPERATION IN MANIPUR

On May 28, 2024, Cyclone "Remal" unleashed its fury over the North-East region, triggering heavy rains and widespread devastation in Manipur. The incessant downpour, coupled with a breach in the Imphal River, led to severe flooding in the Imphal Valley, affecting areas such as Maibakhul, Khabam, Heingang, Achambigei, and Kairang.

To cope with the flood situations, NDRF was called to assist the administration on rescue and evacuation work. NDRF promptly swung into action to bring normalcy to the affected state and deployed its teams in various affected districts for flood rescue operations. During the operation, NDRF teams rescued more than 2025 and 172 persons were evacuated to safer places.

TRAIN COLLISION NEAR CHATTER HAT RAILWAY STATION, DARJEELING

On 17th June 2024, a tragic train collision occurred near Chatter Hat railway station, Darjeeling, when a goods train collided with the Sealdah-Sabroom Kanchenjunga Express, causing the derailment of 4-5 coaches. A team from RRC Siliguri was mobilised for the site. Team conducted search and rescue (SAR) operations. The team worked tirelessly under challenging conditions, successfully retrieving three deceased from the wreckage.

BUILDING COLLAPSE IN JHARKHAND

On 6th July 2024, a two story building collapsed in Shivganga Muhalla, near Baba Baidyanath Dham Temple in Deoghar, Jharkhand, trapping seven people under the debris. In response, two NDRF teams were swiftly mobilised to the site. The teams conducted search and rescue (SAR) operations with precision, successfully rescuing all seven individuals. The operation was completed without any casualty underscoring the effectiveness of NDRF's rapid response and urban disaster management capabilities.

LANDSLIDE IN KEDARNATH

In response to a devastating landslide triggered by heavy rainfall on August 1, 2024, at the Gauri Kund axis, Kedarnath, Uttarakhand, in the non-stop search operation, NDRF teams successfully evacuated 14,563 stranded pilgrims, providing them with critical assistance amidst challenging conditions. Additionally, two deceased were retrieved during the operation. This operation underscored NDRF's dedication and capability in responding to emergencies in remote and hazardous terrains.

BUILDING COLLAPSE RESCUE OPERATION IN VARANASI (UP)

On 6th August 2024, an old three-story building collapsed in Kashi Mandir, Varanasi, trapping eight people inside. In response, two NDRF teams from the nearest base in Varanasi were promptly mobilized to the site. The teams conducted search and rescue (SAR) operations, successfully rescuing seven individuals from the debris. Additionally, one deceased person was retrieved. The operation demonstrated the NDRF's swift response and effectiveness in handling urban disaster scenarios.

NDRF RESPONSE IN KAROL BAGH, DELHI BUILDING COLLAPSE

On 18th September 2024, two NDRF teams were mobilized to Karol Bagh, Central Delhi, following the collapse of a building at Bapa Nagar. The teams conducted search and rescue (SAR) operations, successfully rescuing five individuals trapped under the debris. Additionally, two deceased were retrieved. The swift and coordinated efforts of the NDRF teams ensured maximum lives were saved.

ANDHRA PRADESH FLOODS

In response to flood-like situations across Andhra Pradesh, 43 NDRF teams were deployed in the districts of East Godavari, Konaseema, Krishna, Alluri Sitharama Raju, Eluru, NTR, Visakhapatnam, Srikakulam, and Guntur. The teams conducted extensive rescue and evacuation operations in the affected areas. 382 people were rescued and 20,693 persons were safely evacuated.

RESPONSE BY NDRF DURING BIHAR FLOODS

Heavy downpour and water released from Nepal during this monsoon, overflowed several rivers that led to flood like situation in Bihar. In response 25 NDRF teams were deployed across 17 districts, including Bhagalpur, Patna, Muzaffarpur, and East Champaran. The teams carried out extensive rescue and evacuation operations in affected areas. A total of 67 persons were rescued, 2,691 people were evacuated to safety, and 47 livestock were also saved. NDRF's swift action ensured timely relief and minimized the impact on vulnerable communities.

BOREWELL RESCUE OPERATION IN DAUSA, RAJASTHAN

On 18th September 2024, an NDRF team was mobilized to Jodhpuria village, Bandikui Taluka, Dausa district, Rajasthan, following a report of a child trapped in a borewell. In a joint operation with SDRF, the team successfully rescued the child alive. The operation was carried out with precision, ensuring the child's safety despite the challenging conditions.

GUJARAT FLOODS

In response to widespread flood-like conditions in Gujarat, 23 NDRF teams were deployed across 17 districts, including Vadodara, Rajkot, Surat and Kutch. The teams conducted extensive rescue and relief operations, saving 639 persons and evacuating 1,269 people to safety. NDRF's prompt action mitigated the impact of the floods and provided critical support to the affected communities. This large-scale deployment demonstrated the Force efficiency and commitment in addressing natural calamities.

56 NDRF TEAMS PRE-POSITIONED FOR CYCLONE "DANA"

In preparation for Severe Cyclonic Storm "Dana," a total 56 NDRF teams were pre-positioned across Odisha, West Bengal and Jharkhand. Of these, 19 teams were deployed in Odisha, 14 teams in West Bengal and 7 teams in Jharkhand to mitigate the storm's impact. During the operation, the teams cleared 570 uprooted trees, 2 electric poles, and 237.5 km of road, showcasing their readiness and efficiency in disaster management. ***No casualty was reported due to the Cyclone "Dana".***

SEVERE CYCLONIC STORM 'FENGAL'

NDRF deployed 25 teams across Puducherry, Tamil Nadu, and Andhra Pradesh in response to Severe Cyclonic Storm 'Fengal.' In Puducherry, 2 teams focused on Karaikal and Puducherry, while 7 teams in Tamil Nadu and 5 teams in Andhra Pradesh were actively engaged in the worst-hit areas. The teams successfully rescued 485 people and evacuated 2,087 people to safer places. Additionally, 17 livestock were saved.

OVER 1800 PERSONS EVACUATED BY NDRF DURING TRIPURA FLOODS

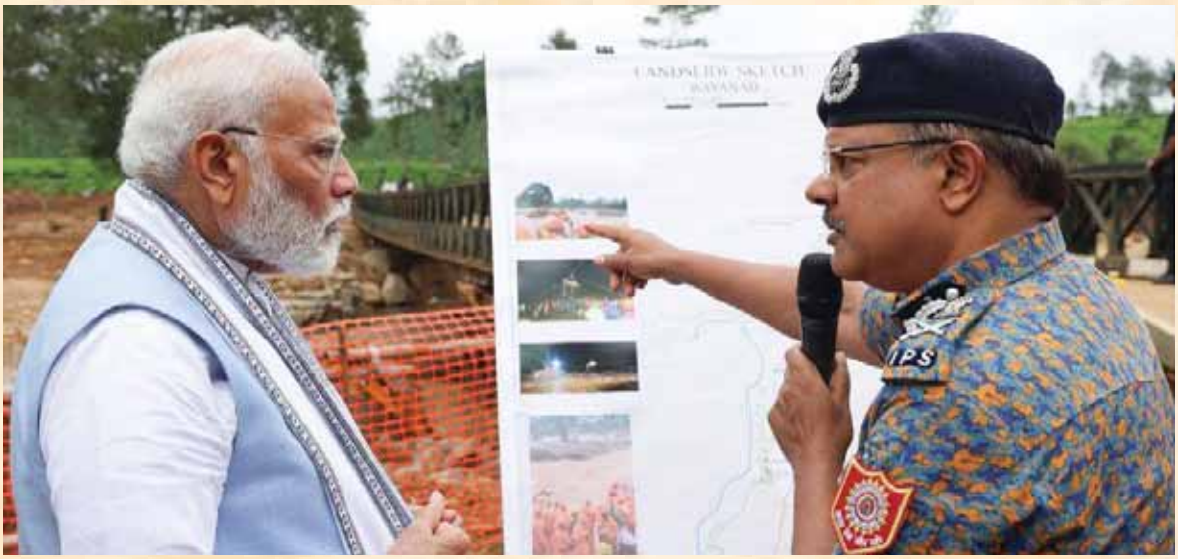
On August 20, 2024, the state witnessed severe flooding caused by prolonged and intense monsoon rains, triggering an extensive flood rescue operation. NDRF teams successfully rescued a live victim and evacuated 1,855 persons including children, the elderly and persons with medical needs, ensuring their safe transport to secured shelters.

In addition to safeguarding human lives, the teams relocated 38 livestock to safer areas. NDRF also played a pivotal role in distributing essential relief materials such as food, water, and medical supplies, effectively addressing the immediate needs of the affected population.

LANDSLIDE IN WAYANAD, KERALA

On 30th July 2024, a devastating landslide struck Mundakai, Chooral, and Mala in Wayanad, Kerala, causing widespread destruction and loss of life. Upon receiving the information, four teams of NDRF immediately rushed to the site and swiftly coordinated with local authorities to conduct search and rescue operation.

During the search and rescue operation, the NDRF teams faced significant challenges due to heavy rainfall and sludge that obstructed their movement.



Despite these obstacles, they demonstrated exceptional passion, devotion, and commitment in their relentless efforts to locate victims, resulting in rescue of 14 individuals, evacuation of 352 people, and the retrieval of 111 deceased persons and 38 livestock.

Hon'ble Prime Minister Shri Narendra Modi also visited the incident site of the Wayanad landslide and took stock of the situation. Shri Piyush Anand, IPS, DG NDRF briefed the Hon'ble PM at the incident site.

Cloudburst Response in Shimla, Mandi, and Kullu Districts, H.P

Between 1st and 13th August 2024, NDRF teams remained deployed in Shimla, Mandi, and Kullu districts of Himachal Pradesh following devastating cloudbursts. Six teams rescued 178 individuals, evacuated 8, recovered 25 bodies, and assisted 710 people, showcasing prompt and effective disaster response.

AMARNATHJI YATRA: NDRF RESCUED 09 YATRIS AND PROVIDED PRE-HOSPITAL TREATMENT (PHT) TO OVER 7000 NEEDY PILGRIMS

The NDRF played a crucial role during the Amarnath Ji Yatra 2024 in Ganderbal, Jammu & Kashmir (UTs), where several lakhs of pilgrims visited the Holy Cave. Seven self-contained NDRF teams were deployed at various locations along both the Baltal and Pahalgam axis for emergency response from June 14, 2024, to August 19, 2024. In addition, the NDRF established multiple medical camps to provide primary healthcare to the sick and needy. During the deployment, the teams rescued nine pilgrims and provided pre-hospital treatment (PHT) to over 7,000 pilgrims in need.

PREPARATIONS FOR MAHAKUMBH 2025

Mahakumbh Mela – 2025 is scheduled at Prayagraj (UP) from 13 Jan to 26 Feb 2025. This is a mega event of National/International significance wherein an estimated 40 crores devotees are likely to take dip at Sangam, the confluence of river Ganga and Yamuna. Considering the excessive large gathering, NDRF has deployed 20 trained and specialized Teams to provide Flood Water Rescue, Collapsed Structure Search & Rescue and CBRN cover for the event. The Teams are equipped with latest equipment and state of the art Hazmat vehicle to deal with various contingencies, if any. Shri Piyush Anand, DG NDRF and other Senior Officers from NDRF HQ have visited the event venue to take stock of the situation and ensure co-ordination at various levels. TTEx and Mock Ex have been conducted on gound alongwith soft skills & behavioural training for the Rescuers.

TRAINING

IN-HOUSE

As a 100% deputation Force, NDRF is a confluence of different organizational cultures and expertise, with its workforce drawn from different paramilitary Forces. To become an efficient & professional disaster responder, NDRF Rescuers undergo Basic First Responder Course (BFRC) of 18 weeks on induction and are subsequently put to various Disaster Response (DR) courses by the premier institutions & agencies of the country like DRDO, DAE, BARC, INMAS, DMI, NIMS as well as with International agencies like ADPC, SDC, USFS, OPCW, INSARAG and others.

TRAINING WITH OUTSIDE INSTITUTIONS

Mountaineering Courses

For augmenting NDRF preparedness in mountaineering search and rescue and avalanche rescue, 104 NDRF Rescuers have been trained by J&K Police.

Mountaineering Training

Deep Diving Trg

Deep Diving Course

During 2024, 165 NDRF Rescuers have been trained by SEA-Kolkata and IRA-Kolad.

Forest Fire Course

Based on recommendations made by expert committee under NDMA, MHA has assigned the additional role of handling forest fires to NDRF. Accordingly, it has been directed to train and equip 03 teams of NDRF i.e. 01 team each from 15th Bn NDRF, Uttarakhand, 1st Bn NDRF, Guwahati and 10th Bn NDRF, Andhra Pradesh to deal with forest fire on a pilot basis. All 3 Teams of NDRF have been trained by CASFOS at Coimbatore and Dehradun.

Forest Fire Response by NDRF

Heli-Slithering Training with NSG

INSARAG Training

NDRF TRAINING ACADEMY

The NDRF Academy at Nagpur is in the process of getting established in a 153 acre campus. It is envisioned as a training institution for all specialized and advanced courses for its own Rescuers as well as those of SDRF and other stakeholders at Regional & International level.

Training is imparted with the aim "to promote and maintain highest standards of fitness and professional competence of individuals to carry out allotted role efficiently and effectively during rescue and relief operations in disasters".

BFRC for NDRF Officers

Training for SDRF officials

Bhutan Police Training

Civil Defence Training

Courses conducted by NDRF Academy, Nagpur during 2024

S.No	Organisation	No. of batches	Trained Personnel
1	NDRF	22	647
2	SDRF	05	118
3	CD	26	722
4	Bhutan Police	01	22
TOTAL		54	1509

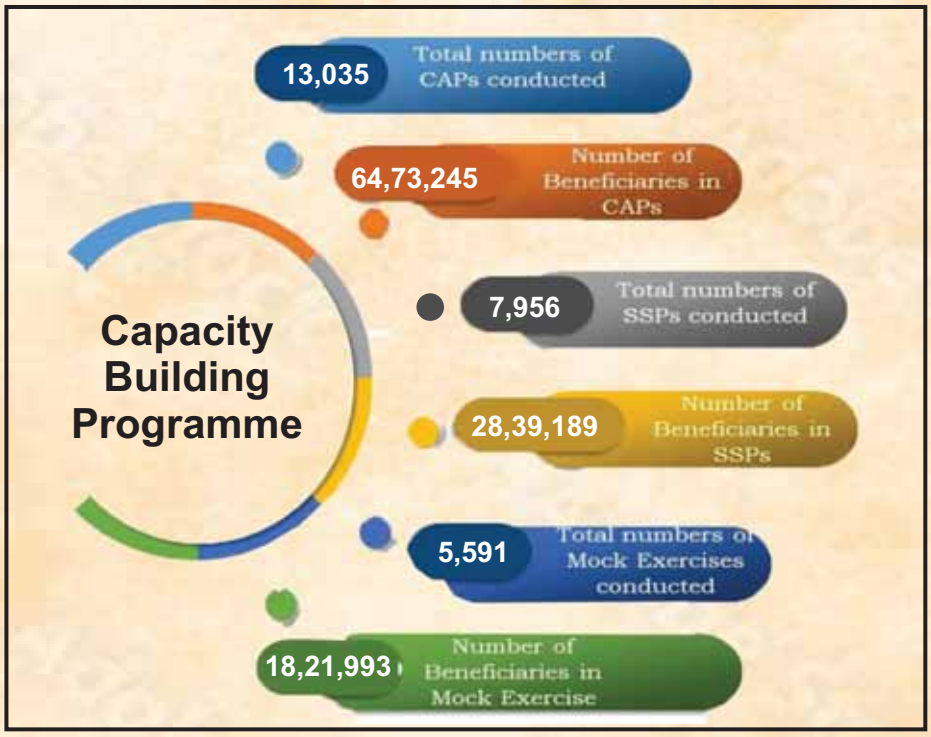
CBRN Training for CAPF Officials

K-9 (CANINE) TRAINING

In order to save valuable lives during golden hours during Urban Search and Rescue (USAR) Operations, canines are being trained at 3, 4, 6 and 8 Bn NDRF. The dogs undergo a rigorous training of 56 weeks to achieve "B" Level and after a field exposure are again put to advanced trg to achieve "A" Level certification.

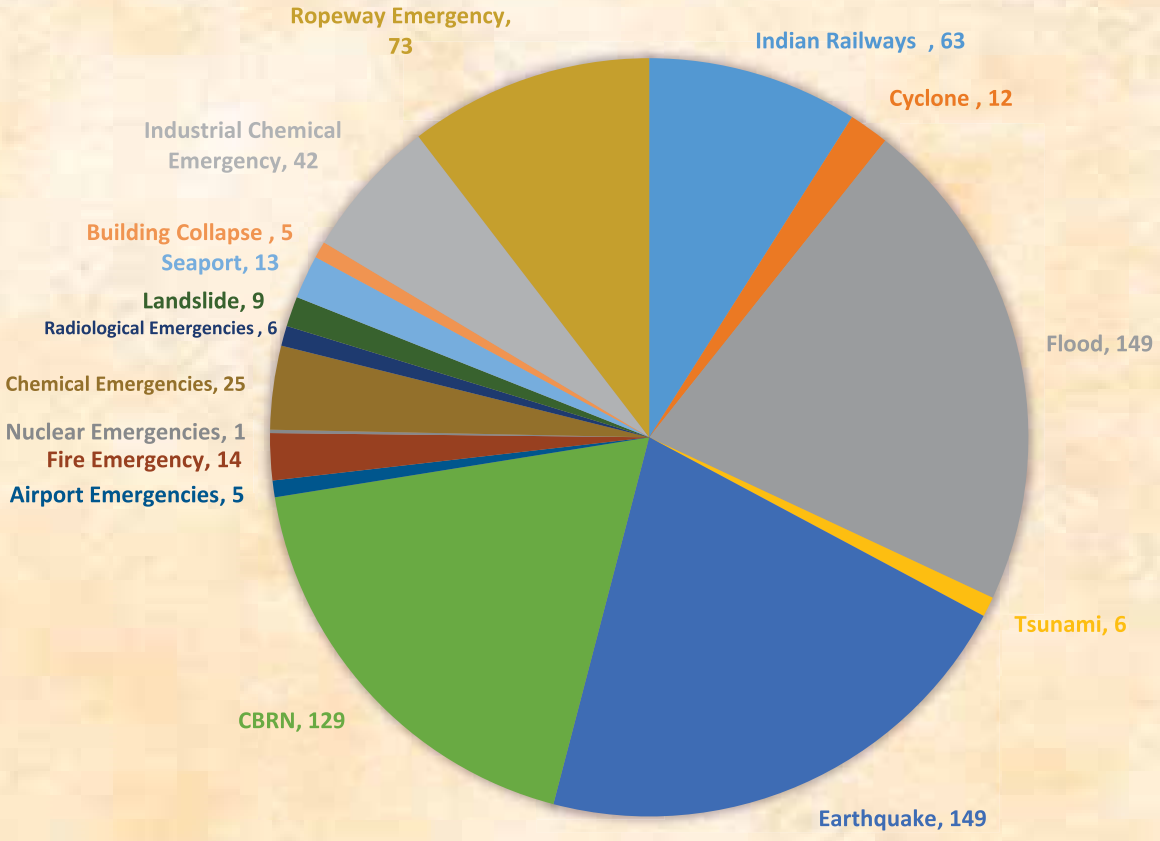
Keeping in view the specific requirements felt during landslide operations in recovery of dead bodies, now NDRF has started an initiative to train dogs in Cadaver Search. This will enhance operational effectiveness of NDRF.

SCHOOL SAFETY & COMMUNITY AWARENESS PROGRAMS

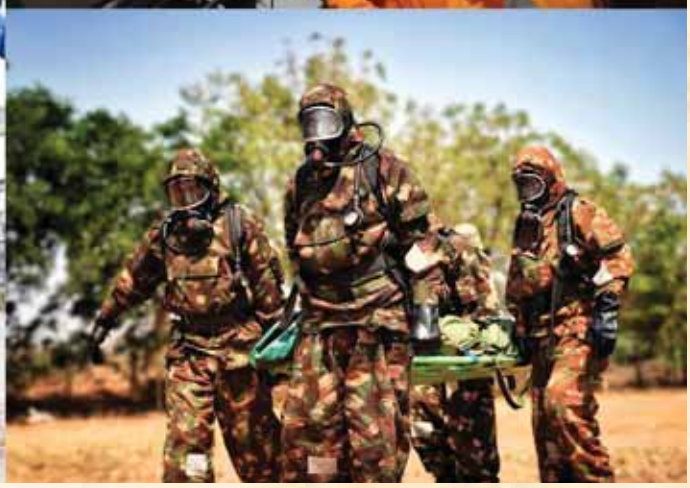


MOCK EXERCISES

To strengthen public awareness and preparedness for CBRN emergencies, rail accidents, earthquakes, ropeway incidents, airports, seaports etc., the NDRF, in collaboration with various stakeholders, conducted a series of comprehensive mock drill exercises.



2024- THE YEAR OF CBRN



NDRF declared 2024 as The Year of CBRN to focus its attention on enhancing preparedness for Chemical, Biological, Radiological and Nuclear (CBRN) emergencies. As part of this initiative, the NDRF has undertaken several measures including specialised training programmes, acquisition of advanced equipment and conduct of mock drills to strengthen its response capabilities.

WORKSHOP ON CBRN PREPAREDNESS: COLLABORATIVE STRATEGIES FOR DISASTER RESPONSE

"Year of CBRN." In order to bring all the stakeholders on a common platform to brainstorm on CBRN-related issues and chalk out an action plan to deal with various contingencies, a workshop on CBRN was conducted on 5th March 2024 at Conf Hall, HQ NDRF, New Delhi, under the chairmanship of Sh. Atul Karwal, IPS, then DG NDRF, in hybrid mode. The workshop was attended by senior officials from various institutions and agencies including NDMA, Ministry of Health, DAE, DRDO, INMAS, NACWC and State representatives.

ANNUAL CONFERENCE ON TRAINING AND OPERATIONS AT HQ 8TH BN NDRF AT GHAZIABAD (UTTAR PRADESH)

A two-day Annual Conference on Training and Operations was organised by NDRF at 8th Battalion NDRF Ghaziabad (Uttar Pradesh). The main objective of the conference was to plan and prepare a framework for effective and advanced training of NDRF personnel and to discuss how the community awareness programmes conducted for common people and students across the country can be improved.

Apart from this, an introspection of NDRF operations was also done by the Think Tank of the Force headed by DG NDRF, IG NDRF all DIsG, Unit Commandants and other officers present during the conference who shared their valuable inputs to take NDRF forward. NDRF organises such Annual Conferences every year in various NDRF battalions to identify the gaps in training and operations and take corrective actions and upgradation wherever required.

ANNUAL CONFERENCE OF RELIEF COMMISSIONERS/SECRETARIES (DISASTER MANAGEMENT) AND STATE DISASTER RESPONSE FORCE (SDRF), CIVIL DEFENCE, HOME GUARDS & FIRE SERVICES OF STATE/UTs-2024

National Disaster Response Force (NDRF) and DM Division, Ministry of Home Affairs, jointly organised a two-day Annual Conference of Relief Commissioners/Secretaries (Disaster Management) and State Disaster Response Forces (SDRFs) for Disaster Response 2024 ***on 11th and 12th June 2024 at Bharat Mandapam, New Delhi.*** The conference was attended by eminent speakers, Relief Commissioners and Secretaries, DsG/ADsG of SDRFs, Home Guards, Civil Defence, and Fire Services of all States/UTs.

WORKSHOP ON FOREST FIRE

A bilateral workshop on forest fires was conducted by French Experts at HQrs NDRF on 14th & 15th May, 2024 in hybrid mode. The workshop was attended by Field Officers of NDRF involved in forest fire handling and Senior Officers from HQ NDRF. The workshop was conducted with the objective to share best practices in forest fire handling, use of latest technologies in early warning systems, equipment, clothing and gear used in the disasters and discussion on relevant case studies.

FRENCH DELEGATION ENGAGES IN CRISIS MANAGEMENT DISCUSSIONS AT NDRF HQ, NEW DELHI

A high-level delegation from France concerned with "crisis management," visited the National Disaster Response Force (NDRF) Headquarters in New Delhi. The delegation comprised the spokesperson for the French government, 30 senior civil servants from the French Ministry of the Interior, senior managers from private security companies, and other officials from the Embassy.

The purpose of the visit was to discuss the management of major crises in India. This collaborative effort signifies a step forward in strengthening international relations and enhancing crisis management strategies.

संसदीय राजभाषा समिति की पहली उप-समिति की निरीक्षण बैठक

दिनांक 21 नवंबर 2024 को दिल्ली में संसदीय राजभाषा समिति की पहली उप-समिति की निरीक्षण बैठक सफलतापूर्वक संपन्न हुई। इस बैठक की अध्यक्षता माननीय श्री दिनेश शर्मा, संसद सदस्य, राज्य सभा ने की। बैठक में राष्ट्रीय आपदा मोचन बल (NDRF) के कार्यालय में राजभाषा हिंदी के प्रगामी प्रयोग में हुई प्रगति पर गहन चर्चा की गई। इसके साथ ही आगामी राजभाषा कार्यान्वयन समिति की बैठक के लिए महत्वपूर्ण लक्ष्य निर्धारित किए गए, जिससे हिंदी के अधिकतम उपयोग को सुनिश्चित किया जा सके।

MEMORANDUM OF UNDERSTANDING

On July 22, 2024, a significant Memorandum of Understanding (MoU) was formalised between the National Disaster Response Force (NDRF) and Engineering Projects India Limited (EPIL), a public sector undertaking under the Government of India. This agreement marks a pivotal step in enhancing the infrastructure at key NDRF facilities. Under the MoU, EPIL will undertake the construction of boundary walls, main gates, and sentry posts at 07 Battalion Headquarters in Ludhiana and 15 Bn NDRF Regional Response Centre (RRC) in Dehradun.

ENHANCING NDRF RESPONSE CAPABILITIES IN DISASTERS SCENARIOS

NDRF got Customized Emergency Rescue Vehicle fabricated for Ops

Underwater Surveillance Camera

Telescopic Lighting Tower

IRB Lighting System

Steel Safety Cover Around The Propeller of OBM

Multiway Air Filling System For Inflatable Rubber Boat

Duffle Bag and Rucksack Bag

Helmet Mounted Headlight

Portable Breathing Air Compressor Trolley Stand

OBM Trolley-cum-Stand for Flood Operation

BEEKEEPING IN NDRF: A SUSTAINABLE INITIATIVE UNDER GOI

NDRF, known for its life-saving efforts during disasters, embraces beekeeping as a sustainable initiative aligned with the Government of India's vision for environmental conservation and community resilience. This forward-thinking program enhances biodiversity, supports eco-friendly practices, and provides sustainable livelihoods for disaster-affected communities. By integrating beekeeping into its community outreach, NDRF promotes pollination, boosts agricultural productivity, and reinforces its holistic approach to disaster management.

MILLETS INTO DAILY MEALS FOR BETTER NUTRITION

Dr. Khadar Vali, the renowned **"Millet Man of India,"** recently visited 08 BN NDRF, Ghaziabad, delivering an insightful lecture on the importance of incorporating millets into daily diets. In his session, he emphasized upon the nutritional benefits of millets, highlighting their role in combating lifestyle diseases and promoting overall health. To further encourage the adoption of millets, the NDRF organized a 'Millets Mela' at various NDRF locations across the nation. This initiative aims to raise awareness and promote millets as a sustainable and nutritious food choice for all.

DG's VISIT

General NDRF, conducted comprehensive visits to several NDRF battalions. During these visits, DG NDRF engaged directly with the rescuers, gaining insights into their operational needs and the latest equipment utilised by the battalions.

His visit included a thorough review of the advanced tools and technologies at their disposal, followed by invaluable discussions where he provided strategic guidance and feedback to enhance their effectiveness.

Additionally, each battalion organised demonstrations showcasing their specialised rescue techniques, offering a first-hand look at their capabilities and operational readiness.

FIELD VISITS OF SENIOR OFFICERS OF NDRF

Shri Narendra Singh Bundela, IPS, Inspector General, NDRF,
conducted field visits to 4th and 7th Bn NDRF

Shri Gambhir Singh Chauhan, DIG North Zone, NDRF, visited 7th Bn NDRF, Bathinda Punjab.

Shri Mohsen Shahedi, DIG WC Zone, NDRF, conducted an insightful inspection of
16 Bn NDRF, Dwarka, Delhi, emphasizing upon operational readiness,
training excellence and welfare of the personnel

FIELD VISITS OF SENIOR OFFICERS OF NDRF

Shri Bharat Bhushan Vaid, DIG East & North East Zone, Visited 1st Bn NDRF Guwahati (Assam) & 2nd Bn NDRF Haringhata (W.

Shri Anil Verma, DIG (Prov/Proc), NDRF, visited 5th Bn NDRF, Pune, Maharashtra.

Dr. Hari Om Gandhi, DIG South & South Central Zone, NDRF, conducted a comprehensive visit to the field formations.

SPORTS AND PROFESSIONAL ACTIVITIES

Mountaineering Expedition- "VIJAY" – NDRF Rescuers successfully scaled Mt Manirang (6593 metres)

NDRF excels at IRONMAN 70.3 GOA, secures all podium positions in Medley Category

Annual Inter-Battalion Sports Competitions

Events	Hosting Bn	Duration	Position		
			First (Gold)	Second (Silver)	Third (Bronze)
Swimming	16th Bn	18-19 Nov 24	E & N.E Zone	North Zone	West Cent. Zone
Football	11th Bn	25-27 Nov 24	13th Bn	03rd Bn	12th Bn
Basketball	07th Bn	09-10 Dec 24	02nd Bn	14th Bn	16th Bn
Volleyball	10th Bn	11-12 Dec 24	14th Bn	10th Bn	16th Bn
Yoga	01st Bn	16-17 Dec 24	02nd Bn	11th Bn	07th Bn
Badminton	04th Bn	16-17 Dec 24	North Zone	S & SC Zone	E & N.E Zone
H/Marathon	08th Bn	23 Dec 2024	North Zone	E & N.E Zone	West Cent. Zone

Annual Inter-Battalion Professional Competition

Events	Hosting Bn	Duration	Position		
			First (Gold)	Second (Silver)	Third (Bronze)
Deep Diving	02nd Bn	21-23 Nov 24	02nd Bn	07th Bn	16th Bn
CSSR Compt .	06th Bn	02-04 Dec 24	02nd & 06thBn (Jointly First)	15th Bn	05th Bn
K-9 Competition	03rd Bn	05-07 Dec 24	03rd Bn	06th Bn	07th Bn
Drill of QDA, HF, VHF	05th Bn	13-14 Dec 24	02nd Bn	05th Bn	14th Bn
OneMinute Drill	09th Bn	18-19 Dec 24	14th Bn	02nd Bn	16th Bn

INTERNATIONAL YOGA DAY

On June 21, 2024, the "International Day of Yoga" was celebrated with great enthusiasm by NDRF across all its field formations. This year, the theme for Yoga Day was 'Yoga for Humanity,' promoting the idea of holistic well-being and unity. NDRF rescuers actively participated by practicing various 'Yoga Asanas' and postures at their units, and many also joined in from their homes along with their family members, reinforcing the message of 'One World-One Family' through the practice of yoga.

On the occasion, NDRF also conducted free medical checkups and consultations for the general public.

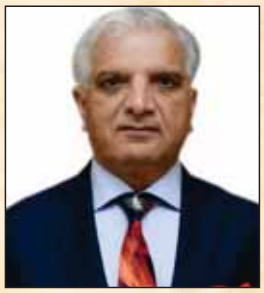
NDRF HONOURS ITS VALIANT HEROES WITH HEARTFELT TRIBUTES

The brave-heart Martyrs of the National Disaster Response Force were remembered with pride & reverence on the occasion of 'Police Commemoration Day' at NPM, Chankyapuri, New Delhi. Shri Govind Mohan, Union Home Secretary, graced the occasion as Chief Guest and conveyed gratitude to our valiant heroes who sacrificed their lives at the altar of duty. Shri Vivek Srivastava, Director General of Fire Services, Civil Defence, and Home Guards, holding additional charge of DG NDRF also expressed his heartfelt gratitude to the families of Martyrs and NDRF's resolve to keep serving the Nation with same dedication & commitment.

16 NDRF Bravehearts have made the ultimate sacrifice in the line of duty.

A TRIBUTE TO MOTHERS: 'EK PED MAA KE NAAM' PROMOTES ENVIRONMENTAL CONSCIOUSNESS

In an inspiring initiative, NDRF organized the "Ek Ped Maa Ke Naam" campaign where NDRF rescuers planted trees to honour mothers, symbolizing nurturing, care, and resilience. This initiative highlighted the connection between environmental conservation and the values embodied by mothers, while showcasing NDRF commitment to sustainability and social responsibility. The tree plantation drive was a tribute to both mothers and nature, emphasizing the importance of preserving the environment.



EMPOWERING THE NEXT GENERATION FOR A DISASTER-RESILIENT FUTURE

Shri Rajendra Singh,
Member and HoD NDMA

Disaster management is a critical aspect of governance for any nation. Over the past few decades, the world has witnessed an alarming increase in natural disasters. According to the United Nations Office for Disaster Risk Reduction (UNDRR), the frequency of disaster events has significantly risen, with devastating effects on population worldwide. Climate change, urbanization, deforestation, and unplanned infrastructure growth have exacerbated risks from disasters such as floods, droughts, cyclones, earthquakes, and wildfires.

India is particularly vulnerable to a range of natural hazards. More than 60% of the country's land area is prone to earthquakes, floods, and cyclones. Rapid urbanization in disaster-prone areas, coupled with inadequate infrastructure, has further increased community vulnerabilities. However, despite these challenges, there is growing recognition that effective disaster management depends not only on government actions but also on the collective efforts of communities, especially the youth.

Disaster management involves planning, organizing, coordinating, and implementing measures to reduce the destruction caused by disasters and ensure efficient response and recovery. This process comprises four key phases: preparedness, response, recovery, and mitigation. Each phase is vital in shaping community resilience and preserving human dignity during adversity. Empowering young people to become agents of change in disaster risk reduction (DRR) and resilience-building is essential. Key areas for such empowerment include education, technology and innovation, and fostering a culture of resilience.

Role of Education

Education serves as the cornerstone of empowerment, equipping individuals with the knowledge and skills necessary to address complex challenges. A forward-thinking educational framework can prepare young people to understand and tackle future challenges. Integrating sustainability into curricula can foster an awareness of environmental issues from an early age, encouraging students to become stewards of the Earth. To create a resilient future, educational systems must prioritize inter-disciplinary learning, critical thinking, and problem-solving skills.

Leveraging Technology and Innovation

The integration of technology into disaster management offers immense potential for empowering the next generation. Social media platforms, mobile applications, and data analytics are essential tools for building resilience. Young people, often more tech-savvy, can leverage these technologies to communicate effectively during disasters, as well as engage in data collection, analysis, and dissemination. Innovative solutions, such as

Geographic Information Systems (GIS) for risk mapping and predictive modeling, can empower youth to visualize data and make informed decisions. Hackathons and

competitions focused on developing technologies for disaster preparedness can inspire creative problem-solving among young minds.

Building a Culture of Resilience

Empowering the next generation goes beyond providing education and resources; it requires fostering a culture of resilience. Communities must promote values such as collaboration, solidarity, and forward-thinking in disaster preparedness. Young leaders can develop initiatives to engage peers in discussions about community vulnerabilities while emphasizing the importance of collective action in disaster management. Storytelling and sharing experiences from previous disasters can cultivate empathy and understanding among youth. Real-life testimonies from survivors and responders can motivate young people, instilling a sense of urgency and purpose to take proactive steps toward building resilience in their communities.

Role of Governments and Institutions

Governments and institutions play a pivotal role in empowering the next generation. By formulating policies that prioritize disaster resilience education, investing in youth- led initiatives, and creating platforms for young people to engage in decision-making, governments can foster a culture of preparedness and resilience. India's National Disaster Management Authority (NDMA) has already taken steps to involve young people in disaster management initiatives. The National Disaster Response Force (NDRF) regularly conducts training programs, workshops, and mock drills to engage youth in disaster response. Scaling up such initiatives can provide valuable hands-on experience and leadership opportunities for young people.

Local governments and schools can collaborate to organize disaster preparedness drills, community outreach programs, and volunteer opportunities for young people. These activities help build a sense of responsibility and belonging, empowering youth to take active roles in ensuring their communities safety and well-being.

Conclusion

The next generation holds the key to a brighter tomorrow—a future where they are empowered to create positive change, confront adversity with courage, and inspire generations to come. Investing in the potential of our youth lays the groundwork for a future that is resilient, inclusive, sustainable, and hopeful. Effective disaster management and youth empowerment not only protect communities but also inspire a proactive and engaged society. By empowering young people today, we secure a better future for all of humanity. This collective investment in youth empowerment is a crucial step toward building a sustainable, just, and resilient world.

Brief profile of author:-

Shri Rajendra Singh prior his appointment as member NDMA, was at the reins of the Indian Coast Guard (ICG) from 29 Feb 2016 to 30 Jun 2019. He was conferred with the Tatrakshak Medal on 15 Aug 1990 and subsequently President's Tatrakshak Medal on 15 Aug 2007. In his capacity as Member NDMA, he has been instrumental in enforcement of various schemes aimed at minimizing the loss of property and life during foods and multiple cyclones on the east and west coast of India. His contribution towards preparing a trained volunteer Force in Aapda Mitras for the States has been particularly praiseworthy.

Lt Gen Syed Ata Hasnain,
PVSM, UYSM, AVSM, SM, VSM &
BAR (RETD) Member NDMA

NDRF: A HUMANITARIAN FORCE PAR EXCELLENCE

If it had not been for my entry into the National Disaster Management Authority (NDMA) in the capacity of a Member I may well have missed the opportunity of learning about the full landscape of disaster management (DM) as a domain of administrative responsibility. Even more I may also have missed working alongside one of the finest organizations in India – the National Disaster Response Force (NDRF). Knowledge is something I seek at every stage of life but the DM domain opens up a horizon unmatched and in that the NDRF stands out as one of the shining beacons of India's experiments with public safety and the saving of lives and livelihoods. Ordinarily, people in India do witness some personnel in orange suits racing past them at great speed to attend to an emergency somewhere; nothing is too small or too big for them and many times their feats are published by media and they even extend a helping hand to nations abroad; that is the NDRF for them. Its personnel deserve the public's basic respect of giving them way whenever they seek it, learning more about the way they work, the challenges they encounter and the travails they undergo in the performance of their extremely risky duties.

As a soldier I consider two domains of human existence as the most challenging. The first is war, completely avoidable and unnecessary but always demanding great focus if we have to achieve anything. The second is disasters, something we cannot completely prevent but we can mitigate through application of modern science and technology. If disasters get past all the preventive measures, then there are other means by which the effect is mitigated. And, if by chance, the fury of the elements or overkill of unplanned development activity, brings disasters our way we have to have the means to respond and assist those afflicted by the effects. Broadly, the NDRF's responsibility extends to the last but it is not that simple. Response has a range of considerations which makes the work of NDRF much more professional and challenging than any other stakeholder in the business of DM.

How did the NDRF get raised?

It was not just a hare-brained idea to have raised a force specifically for response to disasters. Although India is a disaster-prone country with many hazards threatening at different times, there was never a professional approach to DM. We awaited a disaster and when it came, we responded as best as possible by no scientific or professional ways. The principle was – some relief for those affected and more often than not, just the counting of fatalities that occurred. The succession of mega disasters – Odisha super cyclone 1999, Bhuj earthquake 2001, and the Indian Ocean Tsunami 2004, forced a complete rethink on the concept of DM in India and the National Disaster Management Act was finally enacted in Dec 2005. The NDRF was set up by this Act of legislation with the nascent knowledge that existed about the domain of DM in India. Incidentally the Agriculture Ministry was earlier responsible for DM. The responsibility shifted to Ministry of Home Affairs only in 2002. The NDRF is tasked with preparation to meet the challenges of, and responding to the effects of disasters. These include floods, earthquakes, cyclones, and man-made disasters such as chemical spills, industrial accidents, and nuclear incidents. The NDRF is specifically mandated to carry out search and rescue operations in the aftermath of a disaster. This includes rescuing survivors, providing immediate medical aid, and setting

up temporary shelters. Capacity building in terms of training and readiness is one of its major responsibilities which executes in a variety of ways.

We can recall the time when all uniformed forces carried out DM in one form or the other as a secondary and subsidiary duty without passion and the involvement of head and heart which is always so necessary when dealing with death, destruction and public safety. There was no training involved since DM was deemed as a secondary or subsidiary responsibility. Some sector stores were maintained for flood relief by some military stations and a moth-eaten file with the label – 'Flood Relief Scheme' was handed and taken over by Army units with a one-off meeting between the Commanding Officers and the Deputy Commissioners. An entire domain of administrative support which was so direly needed was given short shrift because there had been no focused national commitment towards disaster related situations. The Armed Forces and the Central Police Forces did an outstanding job under the prevailing circumstances but clearly that was insufficient. Although the Bhuj earthquake and the Tsunami were both brilliantly responded to by these organizations, yet, retrospectively one can imagine that the resources, focus and commitment present today may have then been completely absent.

Initially eight battalions of NDRF were raised and then enhanced to 12 before coming to today's figure of 16. It is only after my entry into NDMA that I realized how brilliantly the concept had been thought through. The founding fathers which included General Nirmal Vij, the former Chief of the Army Staff and Vice Chairman NDMA, and Shri KM Singh, Member NDMA, adopted the very successful model of a specialist force that was in existence – the Rashtriya Rifles (RR). The RR, as the counter insurgency and counter terrorism force of the Army is manned by personnel on deputation and each Unit or group of units is based upon personnel from a single Army infantry regiment, such as the Sikh Regiment of the Garhwal Rifles, as the core strength. Additional personnel were deputed from one more arm of the Army. This left the system with single ownership by the core regiment which was responsible for the state of personnel management and very importantly of reputation management. The NDRF adopted this and made it even better. Four units each today are manned entirely by Border Security Force (BSF) and Indo-Tibetan Border Police (ITBP), three by the Central Reserve Police Force (CRPF), two each by Central Industrial Security Force (CISF) and Sashastra Seema Bal (SSB) and one of Assam Rifles (AR). Two excellent decisions have further contributed to the effectiveness of NDRF and the building of a pool of human resources trained in the onerous skills of disaster response. First was the decision to have units with 18 teams, equivalent to six companies. I mention this because in government run systems savings to the state is a usual phenomenon and by having just four company equivalent units there would have been substantial saving to the state but very questionable reach and efficiency of the NDRF units. The second decision was to institute a system of seven-year deputation from the mother force to NDRF. It could well have been three to five years which is the usual period of detailment. The seven-year period which is the maximum extended time a civil official spends in one department, office or organization as per DOPT rules, was applied to all NDRF personal. This afforded them the chance to develop high quality skills while having a full understanding of a difficult domain of administration, quite different to normal policing duties. In addition, it has helped create a pool of disaster related specialist responders in the CAPF units to which these personnel return after their deputation. The NDRF indirectly contributes to the rising strength of disaster professionals in India who in the years to come will contribute much more to the understanding and appreciation of grass root disaster management in India.

Deployment of the NDRF

With a strength of 16 Units the NDRF is deployed across the country at locations which have been identified after extensive disaster risk mapping. To cover a larger area and afford minimum response time the units deploy Regional Response Centres and teams in their areas of responsibility. These teams remain in close touch with the State and District Disaster Management Authorities through regular liaison. While unengaged they execute training

at district level ensuring focused DM programs for schools and hospitals in particular. However, it is rare to find a unit unengaged as disaster contingencies mostly come as emergencies except in those hazards where early warning (EW) is now scientifically available. An NDRF team normally consists of about 50 personnel.

Each NDRF team is equipped with a range of specialized tools and resources to handle different disaster scenarios. This includes rescue equipment, life-saving gear, medical supplies, fire-fighting equipment, foam extinguishers, and chemical extinguishers, communication equipment and mobile communication equipment. While there is specialist training to provide experts in individual domains each individual is required to be proficient enough to assist in any sub domain of responsibility.

There are several core competencies of the NDRF. Its training therefore involves various aspects of disaster management.

- Basic Disaster Management: awareness of different types of disasters, their effects, and response protocols.
- Search and Rescue: techniques for urban search and rescue (USAR), wilderness rescues, and water-based rescues.
- Medical Emergency Response: trauma care, disaster medicine, and emergency medical services.
- Fire Safety and Hazard Management: handling fires, explosions, and hazardous materials.
- Survival Techniques: survival and safety techniques during extreme conditions, such as earthquakes, floods, or chemical spills.
- Recently the hazard of forest fire has also been handed over to the NDRF which has in its typical flexible approach quickly adapted itself into producing the required specialist teams and is procuring the equipment for it.

In widespread disasters and mass casualty events NDRF provides the specialist advice and execution on ground, especially in collapsed structure search and rescue operations (CSSR) for which it is in the process of acquiring international certification. Its international footprint came to the fore when it responded to the Nepal earthquake 2015. Before that it had already made an impact. In 2011, it was given the key to the city of Sendai, Japan, in recognition of its invaluable efforts during the aftermath of the Great East Japan Earthquake and Tsunami. An NDRF team assisted in search and rescue operations, providing much-needed support in the tsunami-affected areas. Their efforts were highly appreciated by the Japanese

authorities, and as a gesture of gratitude, the city of Sendai, one of the worst-hit areas, presented them with the symbolic key to the city. The 8th Battalion of the NDRF also provided a core strength of personnel to assist in the relief operations under command of Shri Alok Avasthy, then Commandant 5 Bn NDRF when the Fukushima nuclear power plant was seriously threatened by malfunctioning due to the tsunami.

During the earthquake in Türkiye an NDRF group of 154 personnel was deployed to Gaziantep, a city in southern Türkiye, for relief and rescue operations following the devastating earthquake that struck the region on February 6, 2023. The earthquake, which had a magnitude of 7.8, caused massive destruction in Türkiye and Syria. The NDRF team, which included specialized personnel such as search and rescue experts, engineers, and medical staff, worked alongside Turkish authorities and other international teams to search for survivors, provide medical care, and assist in relief efforts. The NDRF's role in the earthquake response was part of India's broader assistance to Türkiye, reflecting international solidarity in times of disaster.

With the ongoing review of the Disaster Management Act in India’s Parliament, the

raising of the State Disaster Response Forces is going to be a compulsion for each state. The NDRF has its job cut out in contributing even further in the domain of building disaster expertise, training and advice to the SDRFs. A high quality of training achieved in this sphere is going to transform DM all over India. The NDRF's contribution towards training the Aapda Mitras (Friends in Disaster) or community volunteer first responders has already contributed greatly to community response. The creation of well trained SDRFs will exponentially enhance the human resource elements in the entire response system all over the country.

The NDMA is thankful to have a national level resource, such as NDRF available with it to work on all aspects of the Disaster cycle. The NDRF leaves no stone unturned through the phases of Prevention, Preparation, Mitigation, Response, Recovery and Build Back Better which embody the complete concept and strategy of Disaster Management and Disaster Risk Reduction in India.

The Hon'ble Prime Minister of India in his Ten Point Agenda for Disaster Risk Reduction (DRR) mentioned the role of women in DM, bringing gender sensitivity to the domain in no small way. As a result now 108 women rescuers are authorized to each NDRF unit, six to every team. Before a disaster, women and girls usually have the primary responsibility for caring for a home and the people in it including children, older family members and people with disabilities. Their caregiving responsibilities may prevent their ability to evacuate. Women rescuers especially focus on this aspect and bring greater sensitivity to the job which requires tremendous human empathy.

Lastly, 8th Battalion of the NDRF located at Ghaziabad, and is responsible for responding to disasters and coverage of potential disasters in the National Capital Region with 16 Bn NDRF. In 2020. 08 Bn was awarded the Subhash Chandra Bose Aapda Prabandhan Puruskar (SCBAPP) for its relentless and high-quality response to a large number of disaster situations in this high-profile area. The Unit received the award from the hands of the Hon'ble Prime Minister Narendra Modi in Jan 2022.

With climate change upon us and the rapid industrialization that the government has initiated the possibility of threat of disaster related hazards is only likely to increase. NDRF has remained updated with modern technologies, to enable their absorption in all its units, cultivate the highest standards of individual and collective training and continue to build upon the outstanding reputation that it has developed with the people of India, and increasingly with the rest of the world. I wish the DG NDRF and his team of officers, men and women, God Speed in the achievement of all they set out to do and achieve.

Jai Hind.

Brief profile of author:-

Lt Gen Syed Ata Hasnain served in the Indian Army for 40 years, spending most of his career in turbulent and crises ridden areas. A former Commander of Indian Army's famous Srinagar based 15 Corps, the General Officer is today, a much sought after speaker and writes for major Indian newspapers. He is associated with the Vivekanand International Foundation and Centre for Joint Warfare Studies, as Distinguished Fellow and is on the Governing Council of the Indian Council of World Affairs (ICWA) and Institute of Peace & Conflict Studies (IPCS). The President has appointed Lt Gen Hasnain as Chancellor of the Central University of Kashmir.

NDRF .....NATION'S PRIDE

LT GEN N C MARWAH,
PVSM, VSM, (RETD)

It is indeed a matter of great pride for me to be associated with the evolution of the Elite Force and be part of its glorious journey of the last two decades. I interfaced with the NDRF during its Raising (2005-2007), in terms of facilitating their initial training in Watermanship with BEG Roorkee, CBRN Training with CME Pune and response during Kosi Floods (2008), while being DDG & ADG with Military Operations Directorate (Army HQ), much before my appointment as Member NDMA in Dec 2014.

My five years tenure as Member NDMA, was a period of consolidation and achievement of many important milestones for India in the field of Disaster Management. NDRF is a dynamic and evolving organisation and it has come a long way. I wish to recall and enumerate some of the significant steps which were steered and initiated during the period of 2014-19, paving the path for NDRF to continue to achieve high level of all round professional excellence.

International Response: Nepal Earthquake (2015)

Though NDRF Team had been deployed in Fukushima (Japan), post Tsunami/Earthquake in 2011, India's immediate response culminating in commitment of 16 Teams in the challenging environment in Nepal was a hallmark of speedy mobilisation and coordination with numerous agencies and international entities.

Regional Initiatives

As per directions of the Hon'ble PM, concept and framework was prepared for conduct of the First SAARC Exercise for Earthquake scenario in Nov 2015. This initiative continued with graduating into two Exercises for BIMSTEC Nations (2016, 2017) and culminated into SCO Joint Exercise in 2019. These Joint Exercises conducted in very professional manner significantly raised the stature of NDRF in the international fora.

Capacity Building of other Stakeholders

Considering the huge capacity and professional acumen of NDRF, it was conceived that NDRF Bns due to their geographical spread should impart training to SDRF, CAPFs, Civil Defence, Home Guards, Fire Services, NCC. This initiative has indeed led to enhancing local capacity of many First Responders.

Community Interface and Training of Aapda Mitra

Likewise, as part of structured pre-disaster familiarisation cum Reconnoitring Exercises, especially in seasonal cyclone and floods prone areas, NDRF adopted the role of undertaking Awareness Programmes with local community. This was organised through pro-active interface with State / District Administration and local NGOs. Training of Volunteers during such programmes, led to conceiving the Concept of Aapda Mitra Volunteers and NDRF played a stellar role in their training.

Progressive Enhancement of the Scope of Mock Exercises

During early years, NDRF Teams used to conduct stand alone Mock Exercises in selected Districts particularly in disaster prone areas. A broad Framework was prepared for conduct of State Level Exercises which included

involvement of State Govt Officials of all relevant Departments, all Stakeholders including Armed Forces, Coast Guard and CAPFs (where available). These Exercises included Presentation of Disaster Preparedness Plans at State and Dist level, conduct of Table Top Exercises with Joint Steering by Chief Secretary and Member NDMA and finally culminating into full-fledged Mock Exercise in the State with full involvement of all Stakeholders. Seeking presence of Chief Minister and Minister responsible for Disaster Management of the State led to this initiative proving to be a grand success. NDRF admirably steered & coordinated participation of all response elements.

Multi State Mock Exercises.

Considering the success of State level Exercises, keeping in mind the fact that disasters often affect more than one State, Multi State Mock Exercises were conducted. The Annual Calendar included conduct of Multi State Exercise along Eastern Coast (covering five Cyclone prone States), Earthquake Scenario Exercises in the North Eastern States (grouping three States at a time), Floods Scenario in UP and Bihar and Earthquake Scenario in the NCR involving Delhi, Haryana and UP.

Specialized Theme Based Exercises.

Continuing effort to further support the needs of the State and hone the specialisation achieved by NDRF Bns -

- Exercises were conducted in all the Major Nuclear Power Plants with full involvement of State and Dist authorities and relevant Stakeholders.
- Another initiative widely appreciated was conduct of response to Chemical / Hazardous Material related incidents in certain major industrial hubs / refineries in Gujarat, Dadra Nagar Haveli, Daman, Diu.
- CBRN related incidents in major Airports.
- Rail Accidents.
- Forest Fire. SOPs were formulated and the first deployment was undertaken in Uttarakhand.
- Bore Well Rescue operation.

Preparedness to Respond to Major Events in Pilgrim Places.

It is pertinent to mention that major events e.g. Kumbh which entail Mass Gathering require effort of an extra ordinary level to prepare for response to varied type of incidents such as accidental drowning, fire incidents, explosions, possibility of chemical leaks, collapse of structures besides other natural disasters. Preparedness for such events involving all Stakeholders was done in a very systematic manner, generally as per framework for State Level Mock Exercise. It is to the credit of NDRF that some of the major events of National importance like Prayagraj and Ujjain Kumbh and Annual Ganga Sagar Mela were conducted without any major loss of life.

Strengthening of NDRF

It is indeed a matter of great happiness and satisfaction for me that during my tenure as Member NDMA, accretion of four Bns took place which enabled greater and more efficient response to disasters. Besides, phenomenal effort was made in ensuring that NDRF could acquire State of the Art technologically savvy equipment and enhance their specialized skills.

Stupendous effort made to establish NDRF Academy to meet the much awaited demand of the environment too fructified during this period.

Needless to add that the NDRF has come up to be a truly Pride of the Nation due to effort of galaxy of dynamic Director Generals and their conscientious Team of ADG, DIGs and most importantly Bn Cdrs .... I cherish memories of my association with them with intense nostalgia.

I wish to convey my greetings to all ranks of NDRF and best wishes for continued success in all future endeavours to achieve many more laurels in times to come.

Brief profile of author:-

General N C Marwah in his career spanning over 40 years held various coveted Command & Staff appointments, with vast operational experience of handling insurgency / terrorism in the Eastern Theatre and J&K. Commanded the prestigious and challenging Srinagar based 15 Corps in Kashmir. The General Officer superannuated from the appointment of Chief of Integrated Defence Staff (CISC) in May 2013. While at NDMA from Dec 2014-2019, he was intimately involved in response to all major disasters including Nepal Earthquake. He has steered numerous initiatives of capacity building of NDRF and harmonized efforts of all stakeholders, especially conduct of State / Multi-State level Mock Exercises.

NATIONAL DISASTER RESPONSE FORCE (NDRF): INDIA's PRIDE

Prof (Dr) Muzaffar Ahmad
Former Member, NDMA

Disaster response refers to the actions taken directly before, during, or immediately after a disaster. The objective is to save lives, ensure health and safety, and meet the subsistence needs of the people affected. It includes warning and evacuation, search and rescue, providing immediate assistance, assessing damage, continuing assistance, and the immediate restoration or construction of infrastructure. An example of this would be building provisional storm drains or diversion dams. Effective disaster response is crucial because it aims to provide immediate help to keep people alive, improve their health, and support their morale. This can involve specific but limited aid, such as helping communities with transport, temporary shelter, and food, or establishing semi-permanent settlements in camps and other locations. It may also involve initial repairs to damaged infrastructure. The level of disaster response depends on several factors and particular situational awareness. At the household level, a disaster could result in a major illness, death, or substantial economic or social misfortune. At the community level, it could be a flood, a fire, a collapse of buildings in an earthquake, the destruction of livelihoods, an epidemic, or displacement through conflict. When occurring at the district or provincial level, many people can be affected.

Disaster response refers to decisions and actions taken in accordance with the strategic, tactical, and operational objectives defined by emergency responders. At a high level, these will be to protect life, contain and mitigate the impacts of the emergency, and create the conditions for a return to normality. Response encompasses the decisions and actions taken to deal with the immediate effects of an emergency. In many scenarios, it is likely to be relatively short and to last for a matter of hours or days—rapid implementation of arrangements for collaboration, coordination, and communication are, therefore, vital. Response encompasses the effort to deal not only with the direct effects of the emergency itself (e.g., fighting fires, rescuing individuals) but also the indirect effects (e.g., disruption, media interest).

Preparedness is equally important. Well-conceived emergency preparedness and response plans not only save lives and property, but they also contribute to resilience and post-disaster recovery by lessening the impact of a disaster. Preparedness efforts, early warning systems, and communication systems will help ensure that cities, communities, and individuals threatened by natural or other hazards can act in sufficient time and appropriately to reduce injury, loss of life, and damage to property and fragile environments. Sustainability can be achieved if the community itself and responsible authorities understand the importance of and need for local emergency preparedness and response.

What is required to be done is to:

- Create and regularly update contingency and preparedness plans, prepared, and communicated to all stakeholders. These may include disaster management authorities at state and district levels, providing vulnerable and affected populations with food, water, medical supplies, shelter, and other essential goods.
- Hold regular training, drills, and exercises for all aspects of the wider emergency response system, including community elements and volunteers.
- Strengthen early warning systems
- Develop and install detection, monitoring equipment, early warning systems, and effective associated communication systems

to all stakeholders and community groups.

- Ensure interoperability of emergency response systems at district, state, and national levels, between agencies, and also with neighbouring and adjacent countries.
- Upgrade and revise plans for metros, cities, and urban areas by municipal corporations and local bodies, keeping in view the impacts of climate change and urban flooding, which have been occurring on a frequent basis in cities like Mumbai, Chennai, Hyderabad, and other places.
- Integrate risk reduction and emergency response with groups such as engineers, outsourced agencies, government departments responsible for drainage and sewage, water supply, electricity, and public health. Response agencies like the National Disaster Response Force, State Disaster Response Force (SDRF), etc., should be effectively engaged in preparedness, response, and recovery operations.

The Disaster Management Act of 2005 established the National Disaster Response Force (NDRF), a specialized force for a special response to a threatening disaster scenario or disaster. The NDRF has grown from 8 to 16 battalions over the years, recognizing its dedicated and effective response in saving lives in various states. The deployment of NDRF by the Ministry of Home Affairs, being the nodal ministry, at the request of state governments, has built people's confidence and faith. By conducting highly skilled rescue and relief operations, regular and intensive training and re-training, and familiarization exercises within their respective areas of responsibility, the NDRF has augmented states' response capabilities by training SDRF and other stakeholders' and shown excellence in their areas of operation by conducting mock drills, simulations, and exercises with various stakeholders, including major accident hazard units, metros, airports, malls, and other vital installations. This has played an important role in preparedness and building capacities for meeting challenges during disasters and emergencies.

The NDRF has demonstrated its significance through the professionalism shown during rescue operations in floods, cyclones, earthquakes, industrial accidents, and collapsed structures. Their competence and capability for effective search and rescue operations have made the NDRF a life-saving force fully trained for response to any emergency or disaster, including CBRN emergencies. The personnel of NDRF have been continuously playing a crucial role in the country's commitment to meeting any challenge due to disasters, both natural and human- induced, not only by their effective response but also by preparing communities through continuous awareness and training for Disaster Risk Reduction (DRR). The NDRF training centre being established at Nagpur is set to be a state-of-the-art institute with global recognition.

The force has earned its name not only at the national level but also globally during its deployment in countries like Nepal, Japan, and Turkey. Their performance was acknowledged by various dignitaries, including the Prime Minister of Japan, which is a matter of pride for our country.

The NDRF's dedication and professionalism have not only saved countless lives but also instilled a sense of security and trust among the people. Their relentless efforts in disaster management and preparedness have set a benchmark for excellence. The NDRF's commitment to continuous training, community engagement, and international cooperation highlights their pivotal role in making India resilient to disasters. Their exemplary service is a testament to their unwavering dedication to protecting and serving the Nation, earning them accolades and respect both nationally and internationally.

Brief profile of author:-

(Prof) Dr. Muzaffar Ahmad, MD, FRCP (Edinburg, Glasgow & London), Former Director of Health Services & Member, NDMA is a medical expert with more than 28 years of experience having worked in various positions in the field of Health and Medical Education and Disaster Management, National Health Mission, Mass Casualty Management during emergencies and disasters

NDRF: GENESIS AND EVOLUTION

Shri K M Singh,
Former DG CISF & Member NDMA

It is heartening to note that the National Disaster Response Force (NDRF), the youngest Central Police Organization (CPO) in the country has, in a short span of two decades, acquired a niche for itself for its professionalism, humanitarian touch and visionary initiatives in dealing with multiple disaster situations in the country and abroad.

GENESIS OF NDRF:

Going back to the genesis of this Force, it is relevant to note that the idea and the need of having a well trained professional force to handle major disasters in the country first dawned on the authorities at the national level after witnessing the professional search and rescue teams from advance countries retrieving victims from the huge debris in the earthquake ravaged city of Ahmedabad in 2001. It led to constitution of a Steering Committee in the MHA under the Chairmanship of the then Union Home Secretary Shri Gopalaswamy in 2003 to decide the format of disaster response mechanism in the country. As the then DG CISF, I had the privilege of being a member of this Steering Committee along with DsG of BSF, CRPF and ITBP. The credit for envisioning the concept of having 8 Bns of disaster response force drawn from four CPOs (BSF, CISF, CRPF and ITBP) goes to Shri RK Singh, the then Joint Secretary (Disaster Management) in MHA. He not only conceived the concept of what later came to be known as NDRF, but also sought the approval from the Union Cabinet for Rs 290 crores to acquire 310 disaster response related equipment for each of the proposed 8 Bns of this force. He was also actively associated in drafting the Disaster Management Act, 2005 which enjoined upon the National Disaster Management Authority (NDMA) the responsibility of superintendence, direction and control of the NDRF.

LUKEWARM RESPONSE OF CPOs TO PROVIDE MANPOWER:

Notwithstanding the fact that the manpower and equipment etc for the NDRF were already sanctioned in 2004, the entire exercise of putting in place the NDRF Bns on ground and making it operational was a steep uphill task with numerous impediments and overcoming the same had been a daunting experience. Shortly after its constitution in 2005, the NDMA came across the first impediment when a meeting of the four DsG (BSF, CISF, CRPF & ITBP) was convened by the then Vice Chairman , NDMA Gen NC Vij in October 2005 to seek their support to set up the Force (later named as NDRF) by providing the personnel already sanctioned. The lukewarm response of the DsG to spare the manpower on account of non-availability of personnel made us to realise that establishing this force would be a difficult task.

ARMY STAKING CLAIM FOR NDRF:

While the efforts to elicit the support of the DsG were on, a missive from the Army Hqrs came as yet another spanner in the wheel. It was a cogently drafted proposal received in the NDMA through MOD and MHA staking claim for all the 8 Bns of NDRF being given to them. The argument was that since Army has vast experience of handling disasters, it would be able to provide experienced personnel from all disciplines to establish fully functional NDRF within six months. I argued the case vehemently in support of the CPOs at every level including the Vice Chairman, a former Army Chief. After prolonged deliberations for months, this issue was finally clinched in favour of CPOs with the argument that NDRF is a statutory force under Sections 44 and 45 of the DM Act and if NDRF is given to Army, it will be the first instance of Army

being given a statutory role in matters relating to internal security. It was further contended that even after constitution of NDRF, Army will still be requisitioned in any major disaster as aid to civil authorities.

NON-AVAILABILITY OF SPECIFICATIONS OF AUTHORISED EQUIPMENT:

The next major challenge that I came across was various problems related to procurement of 310 equipment. There was neither any QR (specifications) nor wherewithal with the NDMA for procurement of these equipment worth Rs 290 crores. Since most of the 310 equipment were new items for which no specifications were available with any organisation, NDMA engaged the services of Maj Gen (Retd) Anjan Mukherjee (former ADG, Weapons & Equipment, Army Hqr) and constituted a committee under his chairmanship. This committee produced a voluminous document with detailed specifications of all the 310 equipment after a painstaking efforts of six months.

PROCUREMENT OF EQUIPMENT: A MAJOR CHALLENGE:

Thereafter, we were confronted with the next major problem related to actual procurement of these equipment. The procurement Division of MHA expressed its inability to take up this huge responsibility. The DG, who was holding the additional charge of NDRF, was handicapped in undertaking this responsibility as there was no sanctioned staff for NDRF Hqr. The four CPO Chiefs also declined to take up this additional responsibility. After exhausting all options, we engaged the services of Ms Somi Tandon, former Secretary (FA) Ministry of Defence, who had vast experience in the field of procurement. After detailed deliberations, the Committee constituted under Ms Somi Tandon, distributed the 310 items under two categories of low value and high value. It recommended that the low value items may be procured by the Commandants of respective Bns under their delegated powers. The remaining high value items were distributed under four heads and the four DsG were persuaded to accept this responsibility which they accepted grudgingly. Realising that procurement of all the equipment was critical towards effective operationalisation of NDRF, we monitored the process closely and ensured that most of the procurement was completed by around 2008.

CONSTRAINTS OF AVAILABILITY OF MANPOWER & NDRF RULES, 2008:

At this stage the key problem in effectively operationalising the force was availability of manpower and their proper training. On account of CPOs having their own priorities, availability of manpower in each of the NDRF Bns remained abysmal. This problem got further compounded because the skeletal manpower in NDRF was being regularly diverted for law & order and Internal Security duties. To overcome this problem, NDMA prepared draft of NDRF Rules with concurrence of the then Home Minister mentioning the force to be dedicated for disaster response only. This draft of NDRF Rule was, however, later amended in MHA mentioning that 50% of manpower may be, at any point of time, used by MHA for law and order duties. This would have been a catastrophe for NDRF. At this stage I approached the then NSA Shri MK Narayanan and persuaded him to join the proposed meeting of NDMA with the Prime Minister on 25th October 2007. Based on my briefing, the NSA made a very strong case for NDRF suggesting that it should be a stand-alone force on the lines of NSG adding that NDRF should be a dedicated force for disaster response only and personnel of NDRF must not be diverted for any other duties. This suggestion was approved by the PM leading to Gazette notification of NDRF Rules on 14th Feb 2008.

CONCEPT OF PRE-POSITIONING & PRO-ACTIVE DEPLOYMENT OF NDRF:

Another teething problem in the initial years was related to deployment of the NDRF during disasters. Having been used to requisitioning the Army during any disaster, the state governments continued with this practice as they had confidence in their capabilities. As such, state governments used to pay no heed to NDRF, being an unknown force. To overcome this mindset of state governments, we came up with two concepts related to deployment. Firstly, 'pre-positioning' of NDRF based on IMD forecast and secondly, 'pro-active' deployment of NDRF at disaster sites with utmost promptitude without any requisition or approval.

KOSI FLOOD, 2008: A TURNING POINT FOR NDRF:

While above mentioned initiatives contributed significantly towards effective operationalisation of the force, the devastating Kosi flood in Bihar in Aug 2008 provided a major breakthrough for NDRF. The limited resources in terms of manpower and boats were mobilized most expeditiously from the two Bns at Mundali (Odisha) and Guwahati. The commendable work of NDRF in rescuing over one lakh victims in the next few days earned accolades from state to national levels with the the Chief Ministers of Bihar and Andhra Pradesh formally writing to the PM complimenting the NDRF and requesting for sanctioning NDRF Bns for their states as well. In the long run, these two letters led to increasing the strength of this new force from 8 to 12 Bns, but in short term these complimentary letters from two CMs brought the NDRF to limelight for its professionalism and it has never looked back since then.

FUKUSHIMA NUCLEAR LEAKAGE: A SHINING EXAMPLE OF TRANS-NATIONAL, COOPERATION IN DISASTER RESPONSE:

As the founder Member of NDRF entrusted with the responsibility of raising this force from scratch, it gives me immense satisfaction to see that this force has earned a niche for itself for its professionalism and commitment in handling disasters not only within the country, but also abroad. Commendable work done by the NDRF in the Fukushima nuclear leakage in Japan in March 2011 has been a shining example of trans-national cooperation in disaster response and certainly a matter of great pride for the NDRF in its first international deployment.

PROGNOSIS:

NDRF is now poised for a high trajectory growth. To achieve this it has to constantly strive to maintain a high level of professional efficiency towards discharge of its mandated role of specialist response force by keeping itself abreast of the latest state of the art equipment, particularly in the field of CSSR and CBRN emergencies. This may be best achieved by having R&D units at the NDRF Hqr and at NDRF Academy, Nagpur comprising technically qualified professionals.

Brief profile of author:-

Shri KM Singh, a former IPS Officer was the Director General of CISF and two-time Member, NDMA from 2005-14. He is the first recipient of the 2020 Subhash Chandra Bose Aapda Prabandhan Puraskar. He played a key role in setting up of NDRF and in guiding establishment of many SDRFs. Presently, he is associated with Policy Perspectives Foundation (PPF), a Delhi-based Think Tank where he has taken pioneering initiative in the field of Management of Animals in Emergencies.

Two Decades of Service: NDRF's Journey From Resilience To Leadership

SHRI O. P. SINGH,
FORMER DG NDRF

As the National Disaster Response Force (NDRF) approaches its 20th Raising Day on January 19, 2025, it makes me think that much water has flown under the bridge. Looking back at the last two decades, I truly say that joining NDRF was one of the most momentous decisions of my life. I never knew how this force would impact me personally or shape the way India responds to disasters. We started small, built on limited resources and visions, and yet, here we are, two decades later, with NDRF forming an integral part of India's disaster management efforts. It is just unbelievable how far we have travelled and at what level we have impacted, not only in terms of the scale of the operations but impacting lives and shaping how disaster response and preparedness functions all over the country.

Looking back on this journey, I have realized how much I have learned and grown through my experiences with NDRF. It is not only the technical skills we have gathered over years or the high-end life-saving equipment that we now possess. Instead, it is the lessons on leadership, teamwork, and resilience that have moulded us to be what we are today. The most important lesson I learned over these two decades is probably that disaster management is not a case of preparing to react after disaster strikes. It's about being mentally, emotionally, and physically prepared for whatever comes your way. It's about having a team that's committed, ready, and willing to face the toughest situations, no matter how overwhelming they may seem.

Looking back on my journey with NDRF, I realize the growth has been as much personal as it has been professional. We began with very rudimentary equipment and manpower but in the years developed our capability and also had to nurture our culture of resilience, compassion, and preparedness. Yet, the deepest lesson, however, had been that regarding teamwork. As

good a person as anybody is, one cannot do a disaster management activity on his own; every mission needs team of cooperation and individuals meshing in nicely. I have directly experienced how the power of teamwork, even when it has to overcome very overwhelming challenges, makes the difference between success and failure.

One experience that sticks out to me and defines much of what NDRF represents is what happened in 2015 with the devastating earthquake which struck Nepal. It's not easy to forget that day, April 25, 2015, when a powerful earthquake of magnitude 7.8 hit Nepal, killing almost 9,000 people and injuring thousands more. Entire cities were demolished, and the level of destruction seemed unimaginable. It was like the world had shifted, literally. And when we were called to go, that was going to be one of the toughest missions that we would face, but we were all ready for it. There wasn't any other option.

I can well remember that sense of urgency as we made our way to Nepal. We knew the situation there was critical, and time would play a big role. It was, however more than this. There was a great responsibility that drove us on. We were not just a team heading towards another disaster zone; we were going to help people whose lives have been shattered. The moment we arrived in Nepal, the scale of devastation was hard-hitting. Buildings had collapsed everywhere, roads had been blocked, and dust was dense in the air. A weird silence punctuated by the screams of people trapped under debris was what all there was, but in that chaos, something extraordinary happened: for the first time in their lives, perhaps, the NDRF team came together like never before.

We were all focused on one thing: helping people. There was no scope for ego and hierarchy here. We were all working together, side by side-from the senior-most officers to the youngest recruits-all with the same aim: to save lives. In the first few hours, we had to quickly get our bearings, figure out the best ways to help, and coordinate with local authorities and medical teams to rescue people. It was completely overwhelming at times, but out of the chaos came a sense of clarity. Everyone knew their role and kept moving forward inspite the emotional toll of seeing so much suffering.

What struck me most, though, was just how fluid our team could be. It wasn't about the technology or the equipment we had; it was about being prepared— physically and mentally. We were trained for this kind of scenario, but it was our mental strength and the way we supported each other that made all the difference. Disaster response is an undersold emotional engagement as much as it is of a technical nature. It allows us to stay focused, calm, and compassionate to work together in having the job get done. It was a testament to the power of our training and our preparation, but more importantly, to the deep sense of purpose that we felt.

I learned from that experience in Nepal that managing disasters is as much about people as it is about equipment and training. It is having a team that not only acts at the moment but is also prepared for the emotional and psychological strain of the moment. We were fit in the body but tough in mind and emotionally resilient. But most of all, we knew we could rely on each other in whatever circumstance.

As I look back over the last 20 years, I realize how much NDRF has changed and grown. We have gone through so many challenges and each has taught us something new - from the floods in Uttarakhand to the cyclones in Odisha, from landslides in Himachal Pradesh to chemical spills in industrial areas, we have been there, doing what we could for those in need. The scale of the disasters may vary, but our mission remains the same: to provide rescue, relief, and hope. Along the way, we've not only built our capabilities but also learned the importance of being ready for anything. Preparedness is what sets us apart and what makes us effective when disaster strikes.

It is not just in terms of the size of the force or the technology we now have at our disposal. It's in how we have evolved as an organization. The NDRF today is not just a technical rescue force; it is a force that values empathy, compassion, leadership, and teamwork. These values are what set us apart. For me, every operation and mission serves to shape my methodology by trying out better ideas while trying to learn from one mistake, while for the team, preparation focuses on having the right tool along with the right attitude toward becoming responsive, feeling less stress, thinking clearly, and compassion through leadership.

Looking at how far we've come, it's truly amazing to see the transformation. From a small, resource-constrained group of personnel with

minimal equipment to a well-equipped and highly trained force, NDRF has become one of the foremost disaster response teams in India. We've faced numerous challenges, each one helping us grow and refine our strategies, and each one driving us to be better. The scale of our missions has increased, our capabilities have improved and the core values of NDRF remain unchanged.

But what I am proud of the most is that NDRF has turned out to be a hope in times of disasters. We have shown time and again that we are not just a technical force but a compassionate one. Our actual impact is not in the number of lives we've saved or the disasters we have responded to; it's the moment our presence brings to people who lost everything. The survivors, the victims, the families that went through the worst day of their lives—our arrival brings them a ray of hope. That is what makes us, that is what inspires us to move forward, to push forward.

With the NDRF inching closer to its 20th Raising Day, I am feeling proud and thankful for all that we have achieved. At the same time, however, I realize there's so much more that's to be done. Challenges would await us in the future. More effects of climate change are now showing up, and more and more natural disasters are happening. The population is increasing and, with it, the stakes also go higher. But that's not going to scare NDRF. We've learned so much in these 20 years and always continue to evolve and prepare for the next challenge." We have to keep innovating, keep learning, and most importantly, keep caring for the people we serve.

It has been two decades full of hard work, sacrifice, touching countless lives, but at the same time, it is a journey of growth-both as an organization and as people. But I know we will witness more disasters and more challenges and moments of uncertainty when we look ahead to the future. I also know that NDRF will be there, ready to act, ready to lead, and ready to make that difference. This work has just begun. As we look ahead to the future, I am confident that we will continue to rise to the occasion, one mission at a time, one rescue at a time.

The last 20 years have been a testament to the resilience and strength of the NDRF. We've made a difference, and we will continue to do so for years to come. Not just a day to look into the past but something yet to be done, Raising Day is the commitment that shows promise towards the people you serve. It reminds the society of your presence irrespective of the disaster or any form of challenge. As you continue with this and provide lasting hope for the hardest moments

Brief profile of author:-

Shri O P Singh, a 1983 batch IPS Officer of UP Cadre is renowned for his exceptional leadership and has the rare privilege of having headed three prestigious police organizations namely CISF, NDRF and UP Police. Notably, he pioneered the introduction of the Police Commissionerate system in Uttar Pradesh.

Disaster Response in Time of Covid-Baptism of Resilience For NDRF

SHRI S. N. PRADHAN,
Former DG NDRF

Handling a pandemic is akin to handling a medical disaster. For a disaster response agency like the National Disaster Response Force (NDRF) the situation is like a double whammy because it has to handle other disasters both natural and man-made within the context and limitations of the pandemic itself. When COVID-19 struck the world in the beginning of 2020, the response in India started in January with the first

evacuations of Indians by special flights from Wuhan, China. The NDRF was pressed into action right away. NDRF conducted the first COVID briefing on 30th January 2020 for Airport Staff at IGI Airport, New Delhi prior to the landing of the first flight from Wuhan carrying passengers who were likely to be Covid infected. From this point onwards till the eventual remission of Covid cases, NDRF continued to be in the thick of disaster response while still tackling the Covid pandemic in multifarious ways. From a broader perspective every time the NDRF was deployed to handle a flood situation, a cyclone, a landslide or even man-made disasters like a building collapse or a borewell disaster the operations were tantamount to handling a disaster within a disaster. The responses had to be calibrated in such a way as to effectively cater to certain vital considerations which can be shortlisted as the following :

A. The NDRF, as a disaster response agency had to respond to all kinds of disasters in spite of the risk of contamination during the Covid pandemic. For example, if there were floods in any part of the country, the NDRF had to be pressed into service, even while running the risk of, contamination during the rescue of flood affected victims. It had to respond to cyclones and rescue stranded people. In other words, non-response or sub optimal response was not an option inspite of the risks of Covid.

B. The obvious second consideration thus, was the fact that the NDRF needed to take the COVID-19 in its preparatory stride and prepare sufficiently to counter the risk of contamination while performing its disaster response duties.

C. The third consideration for the NDRF was to efficiently deliver on its Covid specific tasks that were assigned to it by the government or which were natural fallout of its organisational responsibilities, rank and file in the time of COVID-19.

D. The fourth consideration was to step up its role as a nodal capacity building agency for sister organisations like the state police, the CAPFs, other government agencies, both at the central and the state level et al. As a follow-up of this consideration, NDRF trained thousands of personnel from the above agencies as part of its duty to train and serve.

E. The fifth consideration was the sustenance of mass awareness drives among the citizens across India about the dangers and risks arising from both COVID-19 as well as other disasters.

F. The sixth consideration was that despite the above five perspectives that had to be kept in purview the NDRF nevertheless had to continue apace its routine but fundamental organisational tasks like training, human resource management, equipment, maintenance, keeping

up the morale of personnel and their families in these challenging times while ensuring most minimal loss of life or limb.

Staying mindfully relevant of the above considerations the following is a list of initiatives undertaken by NDRF during the Covid pandemic with the dual objectives of handling its Covid specific duties, even as it responded to all other disasters that happened across the country during this phase.

1. Establishment of infrastructure to maintain hygiene standards for COVID-19 Pandemic including contactless Hand-wash, Drinking water points, Sanitation, Thermal Screening, Showering facilities, Regular Health Checkup, Quarantine, Daily update on Pandemic, Follow-up on Ayush Protocol, Aarogya Setu app, Stocking of essential medicines, Fabrication of face-masks, Preparation of sanitizers etc.

2. In order to ensure safety of responders during flood situations necessitating close contact with community, a special PPE with full body protection including face shield was devised & procured for all NDRF units.

3. Special Covid Hospitals were set up at 4 & 8 Bn NDRF in co-ordination with CBRI, Roorkee which was inaugurated by Sh. Harsh Vardhan, Union Health Minister.

4. Vaccination drive was carried for NDRF personnel & their family members and achieved 100 % vaccination status.

5. Physical & Mental fitness was given top priority by participating in Brahamputra Amantran, Cycle Rally & 200 Km Walkathon in Jaisalmer.

6. Online training of units was upgraded including webinars, DG Aapke Dwar & Commandants' Conference.

7. Major Ops conducted – Cyclone Amphan, Cyclone Nisarg, Cyclone Nivar, Cyclone Burevi, Cyclone Tauktae, Vizag Gas leak, Chamoli Flash Floods.

8. Community Awareness Programme was conducted at various levels including community, police personnel, govt. institutions, Supreme Court, High Court, Airport, Seaport.

9. Signages were prepared & placed at various important points including DO's & DON'T's.

10. Migrant workers handled sensitively in co-ordination with local administration/ police throughout the country.

11. Relief material & Dignity Kits were distributed to the poor & needy.

12. International Humanitarian Assistance was provided to friendly foreign countries affected by disasters during this period including Beirut, Nepal, Cambodia, Vietnam and Haiti.

13. Oxygen plants & accessories received from foreign countries were transported to various hospitals in the country & installed. NDRF provided assistance in smooth movement of the equipment.

14. Massive tree plantation drive was carried out by all units.

15. NDRF established a Covid helpline for assistance. NDRF Control Room was also established in co-ordination with MHA.

As a result of the initiatives above, NDRF emerged from the Covid pandemic as a much more efficient, stronger and resilient disaster response agency ever reliable and prepared to serve the country and its citizens. While it was akin to a baptism by fire, NDRF delivered on all fronts, establishing itself as a dependable asset to the country whenever the country needs it the most.

Brief profile of author:-

Shri Satya Narayan Pradhan, a Jharkhand cadre IPS Officer of 1988 batch, served as Director General NDRF from Jan 2019 – Nov 2021. Prior to this, he served as JS in Ministry of Development of North Eastern Region (MDoNER). He also served as DG, NCB from Nov 2021- Aug 2024 He has been awarded the Queen's Award 2008 for Innovation in Policing by Govt of UK.

DISASTER RESPONSE FROM NATIONAL LEVEL TO LOCAL LEVEL

SHRI SANDEEP RAI RATHORE, IPS
DGP Tamil Nadu Police Academy, FORMER IG NDRF

I had the privilege of serving as the 2nd Inspector General of National Disaster Response Force (NDRF) from the year 2012 to 2015, where I led many rescue operations during major national calamities.

My Journey in Rescue Operations: Kedarnath and Chennai

During my service, I had the opportunity to lead some of the most challenging rescue missions on the onset of some of the worst disasters ever happened. During the Kedarnath disaster in 2013, I led NDRF operations in an extremely difficult terrain, rescuing thousands of stranded pilgrims and locals. Also, ensured timely medical aid and relief measures. Similarly, during the year 2014 in Chennai, I played a pivotal role in coordinating the city's response during the Moulivakkam building collapse. These events tested our resilience, but they also underscored the importance of quick, coordinated action. These experiences deepened my commitment to disaster response and the critical role of coordination and preparedness in such operations.

Based on my field experience, lessons learnt and requirement, I took an initiative and launched the DDRT and VEERA projects in Greater Chennai Police to mitigate the disaster risks.

Innovations of District Disaster Response Team (DDRT) Project

One of the most rewarding aspects of my career has been the ability to introduce innovative systems which has significantly improved the disaster response. As the Commissioner of Police in Avadi Police Commissionerate and Greater Chennai Police, I worked on the creation and formation of the District Disaster Response Team (DDRT), a specialized force designed to handle a varied range of emergencies, including natural and man-made disasters. The DDRTs have been instrumental during critical events such as floods, where they successfully carried out large-scale rescue and relief operations across the affected districts in Greater Chennai Police. The DDRTs are equipped with the latest and sophisticated rescue tools, such as inflatable boats, chainsaws, stretchers, hydraulic machineries and medical kits, enabling them to conduct rapid rescue operations, evacuations and provide medical assistance when every second counts.

Innovations of Vehicle for Extrication in Emergency Rescue and Accidents (VEERA) Project

The Hon'ble Chief Minister of Tamil Nadu, had introduced a scheme "INNUYIR KAAPOM-NAMMAI KAAKKUM 48" which drastically improved the response time in road accidents. Following up on the said scheme another major achievement in disaster management came in 2023, with the launch of VEERA (Vehicle for Extrication in Emergency Rescue and Accidents) first of its kind in the country, which was a significant step forward in road safety and emergency response and it received full support from the Hon'ble Chief Minister of Tamil Nadu, who inaugurated the vehicle on 08.09.2023. VEERA has been deployed across Tamil Nadu which is an integral part of the scheme "INNUYIR KAAPOM-NAMMAI KAAKKUM 48". Its real-time tracking system ensures it reaches the scene without delay, enhancing the effectiveness of rescue operations and reducing fatalities.

VEERA was developed to address the critical issue of road accident rescues, where victims are often trapped in mangled vehicles equipped with state-of-the-art tools, onboard medical supplies for first aid and victim stabilisation and integrated with 108 Emergency Care Services for real time response. VEERA allows emergency teams to extricate victims during the "Golden Hour"—the critical first hour after an accident when lives can be saved with timely intervention.

Effective Outcomes of Leadership

My leadership had profound impact on disaster management and public safety in Tamil Nadu. DDRT has become a highly effective and well-coordinated unit capable of responding to a wide range of emergencies. The successful implementation of VEERA has revolutionized road accident rescue in Tamil Nadu, significantly improving response times and reducing fatalities. My approach to disaster response has set a new standard for multi-agency coordination, timely intervention, and the use of advanced technology in rescue operations.

Brief profile of author:-

Shri Sandeep Rai Rathore, is an IPS Officer of 1992 batch from Tamil Nadu Cadre. He served as DCP Coimbatore City, DCP Traffic (North Chennai), and the first Commissioner of Police of Avadi Commissionerate. He served as the Inspector General of Police in the NDRF from Oct 2012 to Oct 2015 and is presently DGP Tamil Nadu Police Academy.

Memoir of My Tenure in NDRF as Inspector General

Shri Ravi Joseph Lokku, IPS
Additional Director General, BPR&D

My tenure as Inspector General at NDRF Hqrs spanned over 02 years, a period that would come to define my career in ways I never expected. When I first joined NDRF on deputation in 2017, I was filled with a mix of excitement and trepidation. The role was different from normal policing —a chance to see the humanitarian aspect of Police as well as Central Armed Police Forces. The weight of that responsibility was exciting. I often found myself excited and enthusiastic about the challenges that traversed through my tenure.

The first few months were a blur of learning. There were meetings with senior dignitaries, late nights drafting reports, and countless interactions with colleagues who quickly became trusted mentors. But amid the overwhelming tasks, I felt the sense of achievement.

In those early days, I was tasked with shifting the NDRF Hqrs from CGO Complex to NDCC Building where the present NDRF Hqrs is located. There is a sense of fulfilment designing the entire office in an aesthetic and functional format. In those days Joint Secretary, Disaster Management office and National Institute of Disaster Management office were co-located in the same NDCC building which made the coordination and collaboration more easy with JS office and NIDM office for smooth functioning of NDRF Hqrs.

As NDRF was establishing itself in terms of infrastructure. Overseeing the constructions project of different battalions was quite an experience and it was here that I first began to realize the depth of my potential. The project was a challenge, yes, but also an opportunity to make my mark. The rubble field collapse structure for the purpose of training was constructed in 8th Battalion at Ghaziabad with the collaboration of SDC Swedish Development Cooperation.

New Battalions

Raising of 4 new NDRF battalions in 2018 – 13 NDRF (Assam Rifles) – Ludhiana, 14 & 15 NDRF (ITBP) – Uttarakhand and 16 NDRF (BSF) – Delhi was big achievement which increased the strength of NDRF from 12 battalions to 16 battalions.

At the same time 5 new RRCs are approved/ established

i. R K Puram, Delhi
ii. ii. Panchkula, Haryana
iii. iii. Ranchi, JH
iv. iv. Bhopal, MP
v. v. Noida, UP

Operations

NDRF operations were so efficient and timely that brought laurels across from the different sections of the society.

I. **Kerala Floods** -2018 was one of the most challenging and it was largest deployment of NDRF in any single state. NDRF deployed its 58 teams in 10 severely affected districts of Kerala to carry out the rescue and relief operations. 52 teams airlifted from various locations of NDRF.

ii. **Cyclone Titli** – Odisha was another great experience in terms of preparedness. NDRF has pre-positioned the teams to evacuate people from the vulnerable areas and lots of public awareness programs have been conducted which resulted into minimum loss in terms of human life.

iii. **Kumbh Mela** – 2019 was a great exposure in terms of handling large gathering. During this event I learnt about coordination, communication and quick response mechanism.

NDRF water rescue team was par excellent in its performance.

During my tenure, International exercises - BIMSTEx DMEx – 2017 and SCO Urban search and rescue exercise – 2019 brought the Disaster Response Capabilities of NDRF into forefront among the international community of Disaster Response. I learnt so may good practices during the interactions and discussions during these exercises.

Some of my proudest moments came not from success but from the way I handled the tough times, learned, and adapted.

The people I worked with during my tenure are those I will never forget. Shri R K Pachnanda, IPS, Shri Sanjay Kumar, IPS, Shri S N Pradhan, IPS, who were DG, NDRF during my tenure and whose guidance shaped my approach to leadership. I also foundly remember my colleagues, who taught me the importance of collaboration even when under pressure, played crucial roles in my growth. Through them, I learned that leadership wasn't just about making decisions—it was about listening, empowering, and understanding those around me.

Looking back, I see my tenure not just as a series of tasks completed or projects launched, but as a deeply personal journey. I learned about resilience, the importance of empathy, and the art of knowing when to step back and reflect. What I didn't know when I started was that the role would ultimately be a mirror, revealing not just my professional capabilities, but my values, my character, and my purpose.

As I moved toward the end of my tenure in NDRF, there was a quiet satisfaction that came with knowing I had given my all. I left behind a legacy of professionalism, team work and resilience, but perhaps more importantly, I left behind a part of myself in the lessons I passed on to others.

Brief profile of author:-

Shri Ravi Joseph Lokku is an IPS officer of 1995 batch from Uttar Pradesh Cadre. He has served as Superintendent of Police in various districts of UttarPradesh Police and DIG of Azamgarh and Prayagraj in Uttar Pradesh. He also served as Inspector General in BSF as well as NDRF. He served as Additional Director General of Police in various capacities in Uttar Pradesh. He has been awarded Police Medal for Meritorious Service in 2011. He has also been awarded from Utkrisht Sewa Padak in 2020 and President's Police Medal for Distinguished Service in 2021. At present he is serving as Additional Director General, BPR&D, MHA, New Delhi.

NDRF AND CHEMICAL EMERGENCY RESPONSE IN INDIA - PRESENT STATUS AND RECOMMENDATIONS FOR ENHANCING CAPABILITIES

Dr. Asit Patra, Deputy Director
Disaster Management Institute, Bhopal

Chemical emergency comes under the category of CBRN disasters as per Disaster Management Act, 2005, and its overall management involves several stakeholders under the major regulations of Ministry of Environment, Forests and Climate Change, GoI and various state rules. Primarily the local administration and SDRF are the major state level agencies for overall response management of off-site chemical emergency. However, with the present status of the strengths of local and state level agencies, the state machineries are frequently seeking the involvement of NDRF along with their state agencies during the response of off-site chemical emergencies arising out from the industrial/chemical installations across the country. In this context the present article is formulated to give some insights with the objective of strengthening the capacity of NDRF while responding off-site chemical emergency effectively and save lives in turn. Some of the following domains on which NDRF can act upon to enhance their capabilities are highlighted here:

1. Stress on industrial chemicals under the three broad categories of toxic, flammable and explosive: The NDRF responders are getting enough training and exposures on CBRN emergency management both from in-house facilities and overseas countries. Primarily focusing contents on war chemicals through these initiatives and with the present strengths of NDRF, the responders actually need customised training on industrial chemical-specific response steps, procedures and approaches embedded with scenario-specific resources, coordination strategy with other stakeholders etc. Response strategies associated with the major industrial chemicals (having sufficient storages) under the three broad categories of toxic/neuro-toxic, flammable and explosive are to be developed at RRC or at least Bn levels across the country. It will definitely enhance the capabilities of NDRF to handle off-site chemical emergency and thereby reducing the loss of lives because the release outcomes associated with these three categories of industrial chemicals are creating the most susceptible off-site chemical emergencies in our country. Examples of some chemicals causing off-site chemical emergency widely in our country are: Chlorine, ammonia, carbon monoxide, sulphur dioxide, hydrogen sulphide, ethylene oxide, LPG/propane etc.

2. Hazard, Vulnerability and Capability (HVC) Assessment by NDRF at RRC/Bn level: The information on chemical hazards, vulnerability and damage impacts due to chemicals/industries in each Bn AOR along with their resource capabilities will be the pre-cursor to develop an effective response centric plan by the NDRF. Through this assessment, NDRF can get an idea about chemicals and industries susceptible for creating off-site emergency in their Bn AOR, resources on emergency control and safety systems available in those industries etc. This information database will help NDRF to respond at operational level especially when multi-agencies are involved at the site and additional resources are required. A suggestive template on HVC for NDRF is hereby exhibited to frame action plans:

Introduction	
• The legends in this Template (Worksheet) are designed to get a full response-centric information database on chemical emergency in work zones of each Bn. • Based on the worksheet, you have to formulate action-oriented steps and procedures in coordination with local authorities for each Bn.	
Section 1: Identification of Chemical/Industrial Hazards (H) and their Vulnerabilities (V) Industry-Wise Chemical Details In Each Battalion (Use separate sheet for chemicals)	
Battalion/Zone	
I: Industry name and its location details	
Name of Industry: Type: MAH Non-MAH Address: Contact of Plant head/Safety head: Mob.:..... e-mail..... Latitude (Deg./Min/Sec): Longitude (Deg./Min/Sec):	
II: Details of chemicals and associated emergency scenarios	
Chemical Name	.....
NFPA rating	
If toxic/neurotoxic	Concentration in ppm: IDLH Fatal
If Flammable/ Explosive	LFL/LEL (%): UFL/UEL (%):
Storage Quantity	Total (MT/KL) Capacity of a single container (MT/KL)
State of storage (tick)	Liquefied Refrigerated Cryogenic Ambient
Liquid to vapour expansion ratio (for liquefied storage)	1:
If Heavier/Lighter than air	Heavier times
Any special hazard	Asphyxiant Carcinogen Neuro-toxic Emits poisonous gas on fire Water sensitive
Emergency scenarios/MCLS (Most credible loss scenarios)	Release of poisonous gas BLEVE VCE Jet Fire Pool Fire
III: Vulnerability/Calculation of Impact Zones	
In case of toxic/ poisonous gas release for catastrophic failure of a single container (10 times IDLH level is used as representative one)	#Maximum Downwind impact distances (in metre) for a. D class and 2 m/s wind speed IDLH level 10 times of IDLH level b. (b) D class and 5 m/s wind speed IDLH level 10 times of IDLH level c. F class and 1.5 m/s wind speed IDLH level 10 times of IDLH level d. (b) A class and 3 m/s wind speed IDLH level 10 times of IDLH level
	#Projection of results on real time maps and making safety zones

In case of fire/explosion (wind speed of 3 m/s is representative one)	a. For BLEVE in D class and 3 m/s wind speed, Maximum impact distances (in metre) 37.5 kW/m2 ☐ 12.5 kW/m2 ☐ 4.5 kW/m2 ☐ b. For Jet fire in D class and 3 m/s wind speed, Maximum impact distances (in metre) 37.5 kW/m2 ☐ 12.5 kW/m2 ☐ 4.5 kW/m2 ☐ c. For VCE in D class and 3 m/s wind speed, Maximum impact distances (in metre) 5 psi ☐ 3 psi ☐ 1 psi ☐
	#Projection of results on real time maps and making safety zones

SECTION 2: Mapping of Emergency Resources (Capability) in the Industry

I: Resources available to combat emergency (mention No./quantity)

due to release of poisonous gases	due to fire/explosion
• PPE: Level A and B ☐ • Mobile BA sets ☐ • Gas detectors/sensors ☐ • Leak arresters ☐ • Leak control systems ☐ • Neutralising chemicals ☐ • Antidotes ☐ • Technical manpower ☐ • Doctors and nurses ☐ • Oxygen dosing facility ☐ • Ambulances ☐ • Beds ☐ • First Aid Kit ☐ • Hospital/health centre ☐	• Foam tender ☐ • Water Tender ☐ • Foam Pouring System ☐ • Fire Proximity Suit ☐ • Fire Entry Suits ☐ • Gas detectors ☐ • Explosive meters ☐ • Non- sparking tools ☐ • Aerial ladder & Elevating Platform ☐ • Hose Couplings ☐ • Hose reel ☐ • Nozzles ☐ • Reducers/adapters for connecting hose lines ☐ • Standpipe System ☐ • Fire Extinguishers (CO2 and DCP) ☐ Inert gas- based Extinguishers ☐ • Health centre/Burn ward ☐

II: PPE and Rescue Equipment (mention No./quantity)

Personal protective equipment (PPE)	Rescue equipment and related resources (General)
○ *Respiratory Protection:* • General Purpose dust Respirators ☐ • Self- Contained Breathing ☐ • Apparatus (SCBA) ☐ • Emergency Escape Respirator ☐ ○ *Head Protection:* • Safety Helmets ☐ • Caps ☐ ○ *Eye Protection:* • Safety spectacles ☐	• Folding, attic, roof and ☐ • extension ladder ☐ • Hydraulic Rescue tools (Spreader and Cutter) ☐ • Hydraulic Drill ☐ • Air bags for heavy lifting ☐ • Salvage covers ☐ • First Aid Kit ☐ • Rope ☐ • Laser Concrete cutters ☐

• Handheld or free stand screens ☐ ○ *Face Protection:* • Face Shields (hand held or fixed with helmets) ☐ ○ *Hearing Protection:* • Ear Plugs ☐ ○ *Body Protection:* • One-piece or two piece overalls ☐ • Aprons ☐ • Warehouse Coats ☐ • Donkey jackets ☐ ○ *Hand and Arm Protection:* • General Purpose Fibre Gloves • PVC fabric gloves and sleeves ☐ ○ *Leg and Foot Protection:* • Safety Boots ☐	• Thermal Imaging cameras ☐ • Emergency Lighting System ☐ • Rescue tents ☐ • Hydraulic Rams ☐ • Safety Torches ☐ • Multi-purpose search camera system (Snake Eye) ☐ Confined space monitoring and display systems ☐ • Mobile BA sets ☐ • Communication systems (for coordination among members of rescue team) ☐

Note: Include the following industries/plants/set-ups in each AoR/Bn:

- All Major Accident Hazard (MAH) units and also dangerous operations factories notified under clause 2(cb) of Factories Act, 1987.
- All industries where poisonous/flammable/explosives chemicals (in liquefied or refrigerated forms) with sufficient storage are used.
- All types of plants/units (other than industries) where liquid chlorine is used (Example: Water treatment plants in municipals etc.).
- All types of plants/units where refrigerated Ammonia is used (Example: Fertiliser units, soft drink plants, Cold Storage etc.).
- Details of set-up having bulk storages of explosive materials in urban local bodies.
- All plants/units with ownerships of pressurised Gas/liquid hydrocarbon Pipeline.

Section 3: Action Points at RRC/Bn Level

After the completion of templates, prepare a sheet incorporating the following tasks:

Task #1: List out the hazardous chemicals under the category of Toxic (poisonous), Flammable and Explosive in your Bn/zone, which are having sufficient storage.

Task #2: List out the chemicals susceptible of causing off-site emergency situations.

Task #3: Collect MSDS/SDS of all such chemicals identified in Task #1 and #2.

Task #4: List out industries susceptible of causing off-site emergency situations.

Task #5: List out all the industries having adequate resources (including detectors, sensors etc.) to combat emergency due to release of poisonous gases.

Task #6: List out all the industries having adequate resources ((including detectors, sensors etc.) to combat emergency due to fire and explosion.

Task #7: List out all the industries having adequate PPE (specially Level A and B)

Task #8: List out all the industries having adequate rescue related equipment

Task#9: Prepare Chemical/agent specific action plan for command, control and containment of emergency scenarios

Task #10: Keep Contact details (Name, Mobile and E-mail) of experts from leading national and state level organisations (Can be grouped as work zone-wise) at your RCC/Bn level.

3. Enhancing Hazard-specific Resources at RRC: Based on the HVC, a rigorous procurement of sufficient number of detectors, sensors, PPEs etc. (as mentioned in Section 2) are to be made for timely response. In addition to portable detectors, NDRF can go for AI-based detection systems with area monitoring facilities through drones/UAVs. It will give them a real picture of say concentration levels during the release of a poisonous gas, which will in turn help them to prioritise specific actions in Hot/Warm/Cold zones, declaration and closure of emergency at site etc.

4. IoT based platform integrating information from various sources and augmenting situational awareness: Responding off-site chemical emergency at site involves active participations and coordination among several agencies including NDRF. An initiative can be taken by the NDRF in coordination with Ministry of Science and Technology and leading institutions in our country to develop an IoT based platform to facilitate integration of real-time information from multiple sources (like social media, satellite, drones, detectors etc.) and emergency communication during the response operation. Through this platform, NDRF can integrate various information and enhance their capabilities by increasing coordination at operational level, augmenting situational awareness and also by improving safety of responders during response.

5. Preparation of India-specific training materials on chemical emergency: During the training and capability enhancement programs for the NDRF responders, it is a common practice to share the materials and videos (primarily in English) on chemical emergency from other countries. In continuation to share such best practices, NDRF Academy in Nagpur can take an initiative to prepare India-specific audio-visual training materials, simulation exercises, database and videos (in Hindi and English) on chemical/industrial emergency response. NDRF team was recently involved in various chemical emergency response operations viz., during gas leak at Ludhiana (30 April 2023), Styrene vapour leak at LG polymer Ltd. in Visakhapatnam (07 May 2020) etc. The materials and videos to be prepared can incorporate their experiences on response by highlighting the nature of hazards/risk associated with the chemical, requirement and adequacy of PPEs/equipment/detectors, efficacy of operational coordination with local administration and agencies, best practices/approaches followed/to be followed, problem faced and recommended steps and procedures etc. Definitely these materials will enhance the knowledge and confidence of NDRF while responding chemical emergency.

6. Addressing chemical hazards in urban areas: Our urban areas and municipals are having storages of chemicals capable of creating emergency situations. Some examples are: Storage of liquid chlorine in water treatment/purification plants; storage of refrigerated/liquefied ammonia in cold14140 storages, frozen food units, soft drink manufacturing units etc.; bulk storages of LPG and petroleum products; transportation of pressurised flammable gases (NG, PNG etc.) through pipelines; storage of explosive materials under approval of district administration/PESO, fire situations in hospitals etc. Recently there is a rapid increase in frequency of occurrence of number of chemical emergencies in urban/city outskirts. Though management of chemical emergency in urban areas is the responsibility of urban local bodies and SDRF, the present status of their capabilities forces the state authorities to seek the involvement of NDRF very frequently. A provision of creating Urban Disaster Management Authority (UDMA) has been made as per recent amendment (2024) of DM Act, 2005. NDRF can coordinate with UDMA or UDRF (Urban Disaster Response Force) if created and also equip them to respond these urban chemical emergencies.

Brief profile of author:-

Dr. Asit Kumar Patra, DD, DMI has about thirty years of research and professional experience in the domain of dispersion modelling and its application in chemical disaster management. Since 1999 he is placed at DMI Bhopal and is actively engaged in imparting specialised training, consultancy and research activities on chemical/industrial disaster risk management and planning (CIDRMP) across the country.

AFTER THE YEAR THAT WAS PUT

Mohsen Shahedi
DIG (Operations) NDRF

"The only easy day was yesterday..."

Disasters are becoming more unpredictable with more intense events and new forms. Climate change is exacerbating the risk of disasters and the consequences are felt more by those who are less prepared or more vulnerable. The number of people affected by disasters continues to rise. New hotspots are evolving and risk of specific disasters like cyclones, drought, floods, heatwaves, infectious diseases, sea level rise and wildfires is on the rise.

The year saw major floods in Tripura, Gujarat, Bihar, West Bengal and in Andhra Pradesh necessitating airlifting of additional NDRF teams and movement by road as well. In Tripura, A record-breaking 288.8 mm of rainfall was recorded in a single day on August 20, triggering the collapse of already fragile river systems and causing widespread destruction. The districts of South Tripura, Khowai, West Tripura, and Gomati were hit hardest, with South Tripura bearing the brunt of the catastrophe. The intense rainfall led to rivers like Howrah/Haora, Dhalai, Muhuri, Manu, and Khowai breaching their banks. The Manu river in Kailashahar, for instance, surged past the critical level of 23.05 meters, causing alarm among local communities and the administration. The most severely affected areas included Bagafa and Belonia in South Tripura, and Amarpur in the Gomati district. Bagafa recorded an astounding 375.8 mm of rainfall, while Belonia received 324.4 mm, and Amarpur 307.1 mm, inundating low-lying regions and destroying homes and agricultural land.

Vadodara in Gujarat was grappled with its worst-ever floods in recent history after the flooding Vishwamitri River, passing through the heart of the city, overflowed into the city, leaving every nook and corner of the city deluged and crocs reported in the flood waters.

The river breached the 35.25-foot mark, nine feet above the danger level, breaking the 19-year record when the city had recorded one of its worst-ever floods in 2005. Several parts of Vadodara remained under 8 to 12 feet of water for nearly three days, leading to power outage and collapse of the cellphone network following heavy rains. A large part of the NDRF camp too remained submerged in water for a few days.

Heavy rainfall and Nepal's release of water from the Kosi barrage led to severe floods in North Bihar. Embankments were breached in several districts, affecting 11.84 lakh people. The Birpur barrage released 6.6 lakh cusecs of water, the highest in six decades.

In early September 2024, Vijayawada, in Andhra Pradesh, experienced severe flooding triggered by exceptionally heavy rainfall that began on August 31, 2024. The floods resulted in at least 35 deaths in NTR district and significantly impacted approximately 2,70,000 people in Vijayawada alone. The disaster was characterized by over 29 cm of rainfall in a single day, which overwhelmed the Krishna River and Budameru Rivulet. The flooding caused extensive damage to infrastructure, homes, and agricultural land.

In Himachal Pradesh and Uttarakhand, cloud bursts posed a major problem causing flash floods and landslides. In Himachal, Kullu, Mandi and Shimla district were most affected with the locals and tourists either stranded or missing in the intervening night of 31 July-01 Aug. Six NDRF Teams were mobilized in arduous terrain for rescue and relief op. Landslides were triggered by incessant rains in Kedarnath and

Rudraprayag stranding Yatris in Char Dham Yatra at many places. Special Operation was launched with support from IDS and IAF for evacuation of the victims.

Cyclones on the west and east coast are a regular phenomena. This year the focus remained on the eastern coast with Cyclone Remal in its post landfall move affected Tripura causing heavy rains, Cyclone Dana hit Odisha and Cyclone Fengal impacted Tamil Nadu and AP. However, the close follow up from IMD and the timely placement of troops on ground helped to prevent major casualty and it was mainly

restricted to damages to infrastructure. Urban flooding due to heavy rains remained a problem with Chennai facing the woes.

In the early hours on 31st July a major catastrophe occurred at Wayanad due to massive landslide precipitated by heavy rains. Between July 29–30 the total rainfall in Wayanad was 140 mm. The rain gauge in Puthumala measured 572 mm in 48 hours. Mundakkai received 572 mm of rainfall, with 200 mm in the first 24 hours and 372 mm in the second 24 hours. The heavy rainfall was the third heaviest on record in Kerala. It occurred on soils that were already saturated from two months of monsoon rains. NDRF Teams responded alongwith state machinery and Army columns comprising its Engineering Wing besides hundreds of volunteers.

CSSR Ops is a major challenge in monsoon. Some of the major incidents attended by NDRF were the building collapses at Garden Reach, Kolkata, Janset in Muzaffarnagar, Rupnagar in Punjab, Deoghar in Jharkhand, Karolbagh in Delhi, Hannur in Bangalore Urban and the billboard collapse in Ghatkopar in Mumbai in all of which lives were saved by professional intervention by NDRF with good assistance from the local administration.

The situation required timely intervention at various levels at the Centre and in the States. Over the years the institutional mechanism has grown robust and this is reflective today in the prompt deployment of response agencies and close monitoring of the situation. NDRF deployment is being supervised & monitored at the highest level at Force HQ with the presence of Unit Commandants and other officers in the field. The good practices and drills in monsoon preparedness including pre-positioning, Alert Teams, maintenance of equipment, airlift of Teams, de-briefing on Ops, preparation and sharing of case studies & comprehensive compendiums, innovations for field, conduct of FAMEx, CAP, SSP and Mock Ex and above all close coordination with stakeholders at various levels with field visits by senior functionaries helped to shape up effective and timely response. During Monsoon 2024, 107 NDRF Teams were earmarked for pre-positioning deployment and additional teams were also deployed including airlift of 23 teams from outside affected States/UTs.

The massive mobilization and deployment was not without challenges on various fronts. In some instances, accommodation for incoming teams could not be identified well in advance due to which teams on arrival had to wait for a long duration especially in the night and often changed locations due to unsuitability. In major ops, local guides were often not provided during movement of teams on arrival from outside due to which action was delayed and problem was faced in the absence of local language knowing personnel in the team. The absence of police guides, Aapda Mitras, NYKS etc during relief distribution at times created law and order problems and also posed considerable threat to the NDRF Rescuers. In some overwhelming situations, very often directions were received from multiple authorities like SEOC, DM office, police and local political entities which created hindrance in smooth action on ground and adversely affected priority response. In many instances, mobile number of the Team Commanders were circulated by SEOC/DEOC to all functionaries who kept calling & issuing directions to the Team Comdrs causing continuous interference in the performance of

their duties. It was observed that many a times instead of rationalization/ movement of idle teams from within the districts, additional teams were demanded from outside citing Red Alert in the districts even though ground situation was normal with no rains or flooding. Comdts in such scenarios must impress upon the DCs/DMs not to construe the temporary placement of teams as permanent for the whole of the monsoon season as they are national assets and can be mobilized anywhere on need basis. The green corridor is a necessary requirement during urgent ops and needs to be implemented as a system for rapid deployment

The years ahead are going to be more challenging for NDRF with new focus areas in mountain rescue and forest fire handling. Imbibing and consolidation of learnings in swift water rescue, night ops for live rescue and confined space intervention are significant areas for improvement. CBRN response remains the critical aspect which needs continuous technological upgradation. The learnings in CBRN must be more than action mandated on ground. NDRF alone cannot handle the enormity of the disaster situations. Hence capacity building of the community and the first responders are bound to become more relevant in future response. Developing of more and more e-content seems a viable solution. Needless to say, close coordination with stakeholders remains the key element. It has to be continuous, focussed and one to one. This is obvious from the fact that even with the active involvement of NDMA and MHA, of late NDRF is being looked upon as a major co-ordinating Force at the Centre. Considering the overall scenario, the onus is on leadership at various levels to bring about the desired change and upgradation in our mission of saving lives and beyond. Together we will succeed.

Brief profile of author:-

Mohsen Shahedi, DIG, is a CRPF Officer who joined NDRF in Nov 2019. He is presently functioning as DIG (Operations) at NDRF HQ. He is an Ultra Marathoner.

SAVING LIVES ON THE TRACKS: NDRF'S RAILWAY RESCUE OPERATION

Vishwanath Parashar,
Second-In-Command, 2 BN NDRF

Role of NDRF in Train Accidents:

Since its inception, NDRF has actively participated in 59 rescue operations related to train accidents, with the highest number occurring in 2010. Uttar Pradesh and West Bengal have witnessed the most rescue operations. Over the years, NDRF teams have saved 93 individuals from railway accident sites, evacuated 84 people, and recovered 388 dead bodies.

The NDRF plays a crucial role in responding to train accidents, minimising the impact, and saving lives. Their tasks include risk assessment and mitigation, swift response and rescue operations, search and rescue, evacuation and relief, crisis management, and environmental protection. Here are the key tasks carried out by NDRF teams:

- Risk Assessment: Upon reaching the accident site, NDRF teams promptly evaluate the situation. They evaluate damage, identify risks (such as unstable structures or hazardous materials), and prioritise response efforts.
- Search and Rescue: NDRF teams search train wreckage and surrounding areas for survivors, ensuring prompt evacuation.
- Evacuation and Relief: NDRF assists in evacuating passengers, provides pre-hospital treatment, and establishes incident command posts for coordination.
- Environmental Protection: NDRF teams assess environmental impact (e.g., fuel spills, hazardous materials) and take measures to prevent further damage. It cooperates with environmental agencies to tackle pollution.

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- Environmental Protection: NDRF teams assess environmental impact (e.g., fuel spills, hazardous materials) and take measures to prevent further damage. It cooperates with environmental agencies to tackle pollution.

Equipment Required During Rescue Operations

In the event of train accidents, NDRF carries an array of tools, equipment, and accessories (TEA) to ensure safety and enhance effectiveness during rescue operations. These TEA items include rescue tools, extrication equipment, hydraulic cutters, metal-cutting saws, lifting and stabilisation equipment, rope and rigging gear,

illumination devices, search and detection tools, firefighting equipment, decontamination gear, miscellaneous equipment, support supplies, documentation materials, personal protective equipment (PPE), medical gear, and communication devices.

Comprehensive Training for NDRF Rescuers: Ensuring Effective Response to Railway Train Accidents

NDRF recognises the importance of rigorous training for its rescuers to handle train accidents effectively. To ensure seamless execution of rescue operations, NDRF rescuers undergo comprehensive training that covers a wide range of aspects. Basic life support and first aid are essential components of this training, enabling rescuers to provide immediate medical assistance to the injured, including CPR, bleeding control, and stabilisation of fractures.

The training also focusses on Search and Rescue Operations, including Technical Search and Rescue, Damage Racks Search and Rescue, and High-Angle Rescue. These specialised skills enable rescuers to navigate complex scenarios, locate and extricate victims trapped in train wreckage, and rescue individuals from elevated, confined or difficult-to-reach locations.

Regular mock exercises are conducted in collaboration with railways to refine the skills of rescuers and ensure they are prepared for any situation that may arise during a train accident. By investing in the comprehensive training of its rescuers, NDRF demonstrates its commitment to minimising the impact of railway train accidents and ensuring the safety of passengers and crew.

Leveraging Advanced Technology for Enhanced Rescue Operations

The use of advanced technology equipment is crucial in rescue operations, as it significantly improves efficiency and effectiveness. With the help of cutting-edge tools, rescuers can complete tasks quickly and efficiently, ensuring the best possible outcomes even in complex operations.

Heavy lifting and stabilisation equipment, such as Paratech Multiforce Air Lifting Bags and ResQJack TL-9, enable rescuers to lift and stabilise heavy train carriages with precision, ensuring a safe working environment. Thermal imaging cameras like the FLIR K-Series and the Dräger UCF 9000 provide high-resolution images to locate trapped victims and assess hazardous areas, even in low-visibility conditions.

Drones (UAVs) like DJI Matrice 300 RTK and Parrot Anafi USA, equipped with thermal imaging and high-resolution cameras, quickly survey accident scenes, locate victims, and provide real-time data to rescuers. Robotic rescue systems, such as Pack Bot by Endeavour Robotics and Inuktun Versatrax 150, navigate through debris, search for victims, and relay real-time video and data back to rescuers, rendering them indispensable in search and rescue operations.

By harnessing the power of advanced technology, rescue operations can be significantly enhanced, ensuring the safest and most effective response to emergencies.

Conclusion

The National Disaster Response Force (NDRF) stands as a shining example of dedication, expertise, and compassion in the face of disaster. As India's railway system continues to evolve, the NDRF remains a vital force in safeguarding lives and minimising the impact of train accidents. Their unwavering commitment to disaster response, risk assessment, and effective rescue operations is a testament to their unrelenting pursuit of safety and well-being for all.

As we look to the future of Indian Railways, we honour the legacy of this remarkable transportation system that binds our Nation together. We recognise the challenges that lie ahead, but with the NDRF at the forefront, one can rest assured that the safety of passengers and crew is in capable hands.

Brief profile of author:-

Shri Vishwanath Parashar, Second-in-Command, is a BSF Officer on deputation to 2 Bn NDRF since Feb 2021. He was part of the NDRF USAR Team deployed during OP "DOST" in Turkiye in the aftermath of the massive earthquake in Feb 2023.

WAYANAD LANDSLIDE 2024- NEW TECHNOLOGIES AND BEST PRACTICES IN RESPONSE

Kapil K,
Dy Comdt, 4 Bn NDRF

Introduction:

Wayanad District is situated at the southern tip of the Deccan Plateau. This district is part of the Western Ghats. The topography of Wayanad is characterized by steep slopes, hilly terrain and dense forest cover, making it particularly vulnerable to landslides during heavy monsoons.

The Wayanad- Kozhikode border has been identified by National Centre for Earth Science and Studies (NCESS) as one of the most landslide prone areas in the state.

On 30.07.2024, a massive landslide occurred in Vellarimala hills of Wayanad District at around 0140 hrs and subsequently escalated at around 0330hrs. It slid down the entire slopes along the Chooralmala river, a tributary of Chaliyar river. It affected Chooralmala, Mundakkai and Punchirimattam in Vythri Taluk of Wayanad. The incident resulted in significant loss of life and property.

Response of NDRF: -

As part of South West Monsoon 2024 prepositioning, 9 teams of 04 NDRF were already placed in 9 districts of Kerala (as shown below) and one team 4D was prepositioned in Wayanad district.

Team 4D began rescue operations in the Government Vellarimala Higher Secondary School area. The school area was completely filled with uprooted trees and knee-deep mud. Team evacuated stranded victims, removed surface victims and dead bodies. With the help of fire services, stranded victims in the rooftop of houses including male, female, aged and children were evacuated.

Team 4D was then tasked to evacuate nearly 250 civilians including the wounded along with few dead bodies, stranded on the opposite side (Mundakkai side) as the connecting Chooralmala Bridge was completely washed away. Bracing heavy rainfall, heavy water current and poor visibility, Team 4D established a zip line using rope rescue technique, created a line of hope.

Dead bodies and body parts were found in the Chaliyar river in downstream district of Malappuram about 40 km from incident site which was retrieved by Team 4J. Team 4K retrieved body parts on the river banks 26 Km downstream from the Ops site and Team 10H

successfully traced and evacuated 18 volunteers (who entered the jungle area from Malappuram district and trekked upstream to retrieve dead bodies) trapped near Soochipara Waterfalls. A total of 14 victims were rescued, 352 evacuated and 111 dead bodies were retrieved during the entire operation

Technologies used:-

- Drones – Drones were used by police and civil administration extensively to understand and assess the extent of damage and plan the response.

- Targetted search using KML file and mapping it with Google Earth - KML file of all the houses (which were completely or partially destroyed in the landslide) in the affected area was provided by the district administration and

Google Earth mapping was done, targeted search was conducted on ground where the houses previously stood.

- RECCO – It is used to locate people buried in avalanche or lost outdoors. Two reflectors (one on the arm and the other on the thigh) are fitted diagonally opposite which is then detected using the hand held receiver.

The below picture shows the use of RECCO in Punchirimattam area where search was conducted at 6 suspected sites (it also detects electronic gadgets, watches, etc.) but the device produced a BEEP sound at only one site (by producing a BEEP SOUND) where a buried wire was found. No other items were detected by this device in other areas.

XAVER – 400 Radar

It is used by Indian Army to locate people buried in avalanche and also in other calamities like earthquakes, landslides etc. by detecting the heat from the human body.

In Wayanad Landslide Ops, this equipment was used by the Army in the Mundakai area (as shown in the above picture), but reportedly nothing was detected.

Radar Detector RD-400

The RD-400 is portable radio detection system designed to locate survivors buried under rubble or debris by either movement or breathing.

Best Practices

- The formation of a makeshift zip line, anchored to a JCB, enabled the swift movement of rescuers and victims across the rope. The vertical movement of the JCB allowed for the rapid and safe evacuation of trapped victims.
- Placement of locals at SEOC, DEOC, Command Posts and teams helped for effective communication and to overcome the language barrier.
- Use of local civilians and forest personnel as guides.
- With 4 NDRF teams on the ground, manpower rotation was effectively carried out.
- Regular medical checkup of the team members was also carried out to avoid any kind of infection.
- Establishment of IRS and nomination of Incident Commander (IC) was hugely helpful in multi-agency coordination and cooperation.
- Division of the Ops area into 6 zones (as mentioned above) and allocating the same to various rescue teams to avoid overlapping was done by the IC.
- Use of cadaver dogs by Kerala Police was found to be effective as one of the dog detected the buried dead bodies.

Brief profile of author:-

Shri Kapil K, Deputy Commandant (Executive) joined CISF on 27.07.2013 as an Assistant Commandant (Executive). He is presently on deputation with the NDRF since 10.10.2022. The officer was part of the operations team in Wayanad Landslide Operations-2024.

PREPARING FOR WORST-CASE SCENARIO: SPECIAL REFERENCE TO AP FLOODS – 2024

Sukhendu Datta
Dy Commandant, 10 Bn NDRF

Introduction

Between August 29 and September 3, Andhra Pradesh experienced an extraordinary 95.6 mm of rainfall, far exceeding normal averages, with the NTR district recording a staggering 345.6 mm in a single day. This caused the Krishna and Godavari rivers to overflow, leading to widespread flooding that severely impacted urban areas, agricultural lands, and transportation networks. The severe waterlogging in 179 locations across Vijayawada further complicated emergency response efforts, underscoring the necessity for a comprehensive disaster preparedness and resilience-building strategy.

Risk Assessment: Vulnerable Areas

a) Krishna and Godavari rivers are the most important rivers in the state which carry most of

the water flow and pass them to the Bay of Bengal. The rainwater from Maharashtra, Chhattisgarh, Northern Karnataka, Telangana all pass through these two rivers and even a minor excess in rain pattern could wreak havoc in the major parts of Andhra Pradesh.

b) The Budameru River, a tributary of the Krishna River, plays a significant role in the water management of the Vijayawada region. Budameru originates in the Khammam district of Telangana, and flows through the NTR district of Andhra, before draining into Kolleru Lake in Eluru district. Kolleru is connected to the Bay of Bengal through the Upputeru river. Along its path, excess water from agricultural fields and streams flows into the Budameru, making it a vital water channel and, traditionally, a cause of floods in monsoon months.

Key challenges during the flood and approach

i) Impact of Personnel Reallocation on Health Services During Floods

During flood disruptions, the emergency responses of PHCs were severely impacted as due to floods many healthcare facilities were rendered inoperable or faced shortage of staff, as many were unable to reach their workplaces due to flood related disruptions, road closures, personal crises etc. This aspect may be taken into consideration in planning stage and additional manpower from other areas may be mobilized.

ii) Logistical Challenges in Distributing Essential Items During Natural Disasters

Rescue operations and traffic congestion along access routes delayed the delivery of supplies,

creating bottlenecks in relief efforts. Inaccessibility of certain regions due to extreme conditions or lack of information led to unequal distribution of essential items, leaving some areas underserved. Different bases of operations may be made and different agencies should work in coordination to improve overall relief efforts.

iii) Crowd Control Issues During Aid Distribution

Crowds posed significant challenges during the distribution of essential items. Supplies in easily accessible areas were rapidly exhausted, causing disparities in aid distribution and increasing frustration among underserved communities. Manpower from other unaffected areas may be mobilized to avoid large crowds in key distribution areas, and to ensure unhindered traffic movement for orderly aid delivery.

iv) Communication & Power Challenges Faced During Rescue Operations

Rescue operations during the flood were severely hampered by disruptions to communication and power systems. The health of restoration staff, exposed to continuous rain and waterlogged conditions, was another concern, with many personnel falling ill. In addition, resource mobilization was complicated by persistent flooding, leading to shortages in emergency equipment. Secondary power supply, mobile medical posts in various important points and ensuring availability of emergency equipment should be planned ahead, ideally incorporated in the DM plan of the district.

V) Law-and-Order Challenges in Flood-Affected Areas

Flooding significantly disrupted normal routines, leaving many individuals stranded. This emotional strain made law enforcement duties more challenging, as officers had to face public unrest at some places. Risky behaviors of desperate residents, led to unnecessary confrontations with law enforcement and endangered lives.

More Law Enforcement officers need to be deployed from nearby areas so that incidents like looting and vandalism may not become an additional burden while managing emergency responses.

vi) Debris Clearance and Waste Management

Challenges

The limited availability of sanitation vehicles of the Vijayawada Municipal Corporation (VMC), posed significant health risks and requirement of enhanced protective measures for the sanitation workers, lack of waste disposal sites, disrupted garbage transfer operations etc. were highlighted. Such facilities may be mobilized from nearby areas, so that such issues are taken care of promptly, without

affecting the hygiene-sanitation of the flood-affected areas.

vii) Water Contamination and Sanitation Issues

Authorities encountered significant challenges to prevent drinking water contamination. Floodwater introduced harmful pathogens into water supplies, increasing health risks for affected communities. The flooding also damaged pipelines and caused power outages, disrupting tap water services and leaving many areas without clean water. The floods overwhelmed existing sanitation systems, leading to sewage overflows and infrastructure damage. Provision of distribution of clean and healthy water/food is to be provisioned to the people of the affected areas. For this, sufficient budgetary provisions need to be kept in the DM planning.

Viii) Water Flow Management Challenges at Prakasam Barrage

The floods in September 2024 revealed significant challenges in managing water flow at the Prakasam Barrage on the Krishna River. The outdated inflow forecasting methods, and monitoring systems in the local catchment areas are important aspects for attention.

ix) Challenges in Accessing Affected Areas

Flooded transport routes significantly hindered relief personnel from delivering timely aid, highlighting the critical need for more resilient infrastructure and comprehensive emergency access planning. The skills and effectiveness of SDRF, Fire Services etc. and their reaction time can be improved further.

x) Coordination and Knowledge Gaps

Efficient coordination among relief personnel was hindered by inadequate knowledge of the local geography, leading to inefficient resource distribution, delays, and uneven aid delivery. Enhanced planning, and seamless cooperation between various relief teams coupled with logistical complexities was required for timely and systematic distributions. Every team reacting to the situation should be accompanied by persons with knowledge of local languages and complexities and provided with proper maps of the area.

PREPARATION FROM THE NDRF PERSPECTIVE

i) Teams should be in possession of sufficient MREs, foldable tents, search lights etc., so that there wouldn't be any difficulty during the initial days of operational activities which is expected to continue without any break.

ii) Mobile toilets are very much essential, and they may be placed strategically, without compromising the hygiene-sanitation of the area.

iii) All teams should have adequate number of people knowing the local language and traditions. It improves the acceptability of the NDRF team, as a whole. Teams should try to get maximum possible relevant information about the area and populace. The local map should be available to the team.

iv) They should deal with people with utmost empathy. They should ensure the people stranded are brought to safety without loss of time with assistance from local police and administration.

v) Coordination with all the stakeholders is very much required and NDRF may take a proactive role in this regard.

CONCLUSION

During a severe flood like the AP-Flood, 2024, the existing infrastructure fails to manage the overwhelming water volume, resulting in widespread property damage, infrastructure collapse, and disruption of essential services like electricity, water supply, and transportation.

Communities become isolated, with emergency services overwhelmed and unable to reach those in need.

Public health crises emerge due to contaminated water and displacement, while economic losses soar as businesses shut down and recovery efforts may stretch on for months or even years. The social and psychological impact on affected populations is profound, with long-term consequences for mental health and community cohesion. In preparing for potential floods, it's crucial to adopt a proactive and collaborative approach that involves the community, local government, and emergency services. Continuous evaluation and adaptation of strategies will enhance resilience against future flooding events.

Brief profile of author:-

Shri Sukhendu Datta, Deputy Commandant, 10 Bn. NDRF, Vijayawada (AP) joined NDRF on deputation from CRPF in 2020. He has undergone various professional courses like RSO from BARC, Mumbai; CIEM from DMI, PEER series of courses by ADPC/USAID/NDRF, and is MT in CBRN. He has actively participated in various operational activities and was part of the NDRF response teams during AP Floods – 2024.

LIFE SAVING MISSION: A CRITICAL ANALYSIS OF FAILED BOREWELL CASES & WAY FORWARD

Insp/GD Sagarmal Kulhari
06 Bn NDRF

Introduction:-

Borewells are an essential source of water in rural and semi-urban areas of India, but their deep depths and narrow openings present significant risks, especially when children or animals accidentally fall into them. The rescue of individuals trapped in borewells has become an alarming and tragic phenomenon in India over the years. Despite significant media attention and efforts by rescue teams, many borewell rescue operations have failed or resulted in fatalities, highlighting the systemic issues that hinder timely and effective rescues.

1. CHALLENGES IN BOREWELL RESCUE CASES:-

1.1 Narrow and Deep Borewell Shafts:-

The primary obstacle in rescuing victims trapped in borewells is the narrow diameter and extreme depth of many borewells. A typical borewell is around 4-6 inches wide, which makes it difficult for rescue teams to physically access the victim. In some cases, victims are trapped as deep as 100-200 feet, further complicating rescue operations. The narrow space also limits the use of specialized equipment.

1.2 Risk of Collapse:-

The soil around the borewell is often loose or unstable, especially in rural areas where the borewell may not be properly lined or sealed. This poses a significant risk of the borewell shaft collapsing during the rescue operation, potentially burying the victim further or trapping the rescue workers. Rescue teams often have to reinforce the shaft or create a parallel pit, but this process is time-consuming and risky.

1.3 Time Sensitivity:-

The longer a person remains trapped in a borewell, the higher the risk of suffocation, dehydration, or injury. In many cases, victims are children, which further intensifies the urgency of the rescue. However, the time required to mobilize the right equipment, create a safe access route and execute the operation often results in delays. Even if the rescue operation is successful, the victim may suffer from long-term health complications due to prolonged entrapment.

1.4 Lack of Specialized Equipment:-

Despite technological advancements in rescue operations, many rural areas in India lack the specialized equipment and trained personnel required for swift and effective borewell rescues. Common tools used in such rescues include cranes, suction devices, and earth-excavation machines. However, these machines are often unavailable or inappropriate for the specific challenges presented by the narrow borewell shaft. In some cases, manual digging is the only option, which is extremely slow and labour-intensive.

1.5 Poor Coordination and Communication:-

Rescue operations are often hindered by poor coordination between local authorities, rescue teams, and emergency services. In several cases, the initial response may lack an effective action plan or fail to mobilize resources promptly. The lack of clear communication channels and standard operating procedures between various agencies often leads to confusion and delay, which may increase the chances of failure.

1.6 Media Pressure and Public Expectations:-

High media visibility of borewell rescues, especially when children are involved, adds to the pressure on rescue teams. The intense media scrutiny may force authorities to act quickly, but this can sometimes lead to hurried, uncoordinated, or poorly planned operations. Public pressure can also lead to emotional decisions that compromise the safety of both the victim and the rescue personnel.

1.7 Psychological and Health Impacts on Victims:-

Trapped victims, especially children, face extreme psychological distress during the ordeal. They often experience anxiety, fear, and a sense of helplessness, which can worsen their physical condition. Additionally, prolonged entrapment in dark, confined spaces can lead to injuries, breathing difficulties, or dehydration. Such factors require not only rescue operations but also post-rescue medical interventions.

2. FAILED BOREWELL RESCUE CASES IN INDIA:-

2.1 The Tragedy of Sujith Wilson (2019)

In one of the most tragic and widely covered borewell rescue cases, Sujith Wilson, a three-year-old boy, fell into an open borewell in Tamil Nadu. Despite an extensive 2-day-long rescue operation, which involved digging parallel tunnels and using heavy machinery, the child could not be saved. He died after being trapped for nearly 48 hours. The incident highlighted several issues, including inadequate preparation and the failure of excavation methods, which ultimately led to a collapse of the rescue shaft.

2.2 The Case of 2-Year-Old Divyansh (2018)
Divyansh, a 2-year-old boy from Uttar Pradesh, fell into an uncovered borewell. Despite significant rescue efforts, including the digging of a parallel shaft and sending down oxygen, the rescue operation failed after over 18 hours. The failure was attributed to the collapse of the rescue shaft and the lack of timely action.

2.3 The Death of 7-Year-Old in Telangana (2018)

A 7-year-old girl in Telangana fell into a 50-feet deep borewell while playing near her home. A rescue operation was initiated but was unsuccessful, as the borewell's narrowness made it difficult to get the child out in time. The operation took nearly 18 hours, and the child died due to asphyxiation before the rescue team could reach her.

3. ROOT CAUSES OF FAILED BOREWELL RESCUE OPERATIONS

3.1 Inadequate Training and Resources

Many rescue teams, especially in rural or remote areas, lack the necessary training and expertise to deal with complex borewell rescues. While urban fire departments may have specialized teams for such tasks, rural teams often lack experience in handling narrow, deep shafts, and they may not have the necessary equipment to carry out quick and effective rescues.

3.2 Poor Planning and Pre-emptive Measures

In some cases, the rescue teams begin their operations without proper preparation, such as mapping the borewell's geology or understanding the specific constraints posed by the location. The lack of a clear action plan often leads to confusion and delays in execution.

3.3 Poor Regulation and Monitoring of Borewells

A significant problem is the lack of regulation regarding the construction and abandonment of borewells. Open and unsealed borewells are a major hazard, particularly in rural areas. Inadequate monitoring or enforcement of regulations regarding the closure of abandoned borewells increases the likelihood of such accidents.

3.4 Delayed Response and Initial Mistakes

In some cases, the initial response from local authorities has been slow, either due to a lack of awareness or inefficient mobilization of resources. Delayed rescue efforts can further complicate the operation and increase the risk of failure.

4. WAY FORWARD

4.1 Enhanced Training and Specialized Teams

The creation of specialized borewell

rescue teams, equipped with advanced training and the right tools, is essential. Fire departments, disaster management units, and local police should regularly conduct mock drills and build expertise in handling such situations. Investment in rescue technologies, such as remotely operated vehicles (ROVs) and specialized excavation equipment, is also needed.

4.2 Stronger Regulations for Borewell Construction and Maintenance

The State Governments need to enforce strictly the guidelines issued by the Hon'ble Supreme Court of India in this regard wrt the construction, maintenance, and closure of borewells and punitive action should be taken by concerned DCs/DMs to prevent lax behaviour.

4.3 Faster Response Mechanisms and Better Coordination

Developing a faster response mechanism by integrating local authorities, disaster management teams, and rescue professionals can ensure a more coordinated and swift rescue operation. Communication systems should be streamlined to allow real-time data sharing and coordination among all agencies involved.

4.4 Use of Technology

Advanced technology, including drones, robots, and sensor-equipped devices, should be incorporated into borewell rescue operations. For example, drones can be used to assess the terrain and monitor the progress of rescue efforts, while robots equipped with cameras can be sent down the borewell to assess the victim's condition and provide real-time updates.

4.5 Public Awareness and Preventive Measures

Extensive awareness campaigns about the risks of open borewells, particularly in rural areas, should be prioritized. Local governments should encourage communities to take preventive measures, such as capping borewells and fencing off dangerous areas. Communities should also be educated on the importance of keeping children away from such risks.

4.6 Medical Support During and After Rescues

Trapped victims, especially children, need to be given immediate medical attention, including oxygen support and treatment for psychological trauma, after being rescued. Ensuring that medical teams are part of the rescue operations can save lives and improve outcomes.

Conclusion:-

While Borewell rescue operations in India have seen some success stories, the tragic failures underscore systemic issues in rescue planning, regulation, and technology. A more proactive approach—focused on prevention, training, and better coordination—coupled with advanced technologies and stricter regulatory enforcement, is necessary to minimize the loss of life and enhance the effectiveness of response in future.

Brief profile of author:-

Insp Sagarmal Kulhari, joined NDRF on deputation from CRPF in March 2020. At present he is posted at 06 BN NDRF, Vadodara (GJ). He has the rich experience of having attended many borewell rescue operations in Rajasthan and Gujarat.

Create a force that is first in the field of disaster management, says Shah

Samriddhi Tewari
NEW DELHI

Amit Shah being felicitated by NDRF Director General Piyush Anand during the flag in ceremony of a mountaineering expedition, in

Union Home Minister Amit Shah on Saturday said disasters such as avalanches, landslips, floods, and storms are going to increase everywhere in the future due to climate change. Keeping this in mind, governments and society at large should move firmly towards the goal of zero casualty by using scientific principles for the development of the National Disaster Response Force (NDRF) as its budget has increased from ₹66,000 crore to ₹2 lakh crore in 10 years.

Mr. Shah, who was speaking at the successful return of the second mountaineering expedition 'Vijay' of the NDRF in New Delhi, said that the government still has to increase its efficiency in many areas of disaster management, such as forest fires. "Saving human lives is not our only objective during forest fires, but we have to bring experiments happening all over the world on how to save forests and what we can do so that there is no fire on the ground. We need to prepare ourselves more for the floods caused by cloudburst," he added.

"We should create a force in India that is first in the field of disaster management in the entire country. The PM himself is very concerned and aware of disaster management and the success achieved by India in this field is the result of this. He said that between 2004 and 2014, a total budget of ₹66,000 crore was allocated to the SDRFs and NDRF for disaster relief, which increased to ₹2 lakh crore in 10 years from 2014 to 2024," he said.

"There was a demand for risk and hardship allowance for NDRF personnel for a long time and the Government of India under the leadership of PM has accepted this demand yesterday. Now, 16,000 personnel of NDRF will get risk and hardship allowance at the rate of 40%," he said.

Mr. Shah said the Centre has decided that a team of the Central Armed Police Forces will participate in sports competitions. He said that the government will come up with a model for its implementation.

ददाहू कॉलेज में एनडीआरफ ने प्राकृतिक आपदा के प्रति छात्रों को किया जागरूक

रेणुकाजी। राष्ट्रीय आपदा टीम ने ददाहू कॉलेज में आपदाओं पर जागरुकता कार्यक्रम आयोजित किया। टीम के प्रभारी निरीक्षक प्रवीण कुमार ने बताया कि छात्र-छात्राओं व शैक्षणिक व गैर शैक्षणिक स्टाफ को आपदाओं के प्रकार व उनके प्रभाव, एनडीआरएफ के कार्य व जिम्मेदारियां, भूकंप से पूर्व, दौरान व बाद में किए जाने वाली क्रियाओं जैसे कि रुको-झुको व ढको, प्राथमिक बचाव व उपचार, क्षमता निर्माण, तीव्र रक्त को नियंत्रित करने वाली तकनीको व सीपीआर व अग्नि सुरक्षा व आधुनिक स्ट्रेचर बनाने की प्रक्रिया को विस्तृत रूप से बताया गया। उन्होंने बताया कि कार्यक्रम में 220 के लगभग लाभार्थियों ने भाग लिया।

एनडीआरएफ टीम का माउंट मनिरंग पर सफल आरोहण

स्टाफ रिपोर्टर – रामपुर बुशहर

14वीं एनडीआरएफ न्यूरी की टीम द्वारा हिमाचल प्रदेश की 8वीं सबसे ऊंची चोटी माउंट मनिरंग पर 14 व

Body parts recovered from accident site in Kinnaur

THE TRIBUNE

Imphal Free Press SUNDAY | JUNE 2 | 2024

NDRF rescue thousands in Manipur flood

By A Staff Reporter
IMPHAL | Jun 1

In continuation of the rescue operation carried out at several flash flood affected areas of Imphal, a combined team of National Disaster Response Force (NDRF) along with locals have rescued over thousands of stranded people from different areas so far.

The teams of 12 battalion NDRF under the supervision of its deputy commandant Ahanthem Bobol Singh along with locals conducted rescue operations at different areas including Mahabali, Achanbigei, Khabam, Leipham Khunou, Lairang, Sangaiprou Avenue, Nagaram, Raj Medicity, Dewlaland and Nambulmapal.

The NDRF team has rescued more than 1,000 people till date, including women, children, infants, ... taking part in the distribution of relief materials.

Besides, relief materials and essential items were distributed to the people and essential items were given to Leiphan Khunou Flood Committee from the state government.

... lief materials and essential items to the affected people of Laiphal Khunou where chief minister N Biren Singh is also their la...

NDRF gets ready to tackle flood in Morigaon

CORRESPONDENT

MORIGAON, May 12: A familiarization exercise was carried out across all revenue circles of Morigaon district from May 6 to May 12 by the 1st Bn NDRF from Patgaon, Guwahati, in collaboration with the District Disaster Management Authority (DDMA), Morigaon.

The exercise comprised demonstrations and mock exercises regarding various scenarios, including floods and fires... The NDRF personnel also

The exercise comprised demonstrations and mock ex-

...pals, teachers, students, and staff from the respective schools were present at the programmes concerned. Moreover, the NDRF personnel ventured into flood-prone villages of Morigaon district, along with circle officers, the DPO of DDMA, Morigaon, field officers (DM), LMs, and gaon pradhans during the same period.

Their interactions with villagers shed light on past flood experiences. Additionally, a

तिनसुकिया में भूकंप पर जिलास्तरीय मॉक ड्रिल का अ

← Post

Amit Shah
@AmitShah

Given the flood situation in Tripura, the central govt, under the leadership of Modi Ji, has approved the release of ₹40 crore in advance, as the central share from SDRF, to provide relief to the affected people. The 11 NDRF teams, 3 columns of the Army, and 4 helicopters of the Air Force deployed by the Centre are already assisting the state govt. in relief and rescue operations.

No matter what, our sisters and brothers in Tripura will find the Modi govt standing shoulder-to-shoulder with them to battle these difficult times.

12:32 PM · Aug 23, 2024 · **79.4K** Views

94 866 3.2K 8

Prof.(Dr.) Manik Saha
@DrManikSaha2

আজ ইন্ডিয়ান এয়ার ফোর্সের ৩টি বিমানে NDRF দলের ১২০ জন সদস্য ইতিমধ্যেই মহারাজা বীর বিক্রম বিমানবন্দরে অবতরণ করেছে। তারা কিছুক্ষণের মধ্যেই বন্যা কবলিত স্থানে উদ্ধার কাজ শুরু করবেন। এই কঠিন পরিস্থিতিতে রাজ্যবাসীর পাশে দাঁড়ানোর জন্য, ত্রিপুরাবাসীর পক্ষ থেকে মাননীয় প্রধানমন্ত্রী শ্রী নরেন্দ্র মোদিজী এবং মাননীয় গৃহমন্ত্রী শ্রী অমিত শাহ জী'কে অশেষ ধন্যবাদ জানাই।

1:13 PM · Aug 22, 2024 · **1,906** Views

← Instagram

yochitha_angara

56 likes

yochitha_angara Pradeep sir who gave my hubby another life, he holded my hubby for 2hrs that he will not drown in water untill i bring boat all the officers of ndrf responded very quickley,really big salute to him 🫡, he also got many injuries Thank you NDRF 🙏🙏🙏

9 NDRF PUNE reposted

NDTV @ndtv Follow

#Maharashtra | A three-storey building collapsed in Belapur, Navi Mumbai. Rescue operations are underway.

8:14 am · 27 Jul 24 · **9,996** Views

07 NDRF BATHINDA reposted

Press Trust of India @PTI_News · 03 Sept

VIDEO | Andhra Pradesh Floods: "There has been great coordination between the Centre and state government. Our 26 teams have been deployed here and working day and night. We have provided relief to many. Right now, our main operation is to distribute food packets to people and Show more

1 9 35 4.8K

NDRF
@NDRFHQ

- @14NDRF team deployed for #ManiMaheshiYatra
- Evacuated few yatris facing breathing difficulties from Shivkund
- Administered oxygen during the rescue
- Transported them to Gaurikund Helipad for further treatment

#Committed2Serve #NDRF4U

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HONOURS AND AWARDS

PRESIDENT'S POLICE MEDAL FOR DISTINGUISHED SERVICE


HC/GD P. KUMARA VELU

POLICE MEDAL FOR MERITORIOUS SERVICE


SH. ABUJAM BIJOY KR. SINGH, COMMDT.


DR. AMIT MURARI, COMMANDANT,


SH. PANKAJ KAVIDAYAL, 2IC


SH. RAJ KR. SHARMA, SECOND-IN-COMMAND


INSP/RO. PRAKASH CHAND

So far, 14 NDRF officers/personnel have been awarded with the President's Police Medal for Distinguished Service and 96 personnel with the Police Medal for Meritorious Service.

CNN-News18's Indian of the Year award was awarded to the NDRF team for their remarkable contribution at Silkyara Tunnel in Uttarkashi, wherein, in a successful and challenging rescue operation, 41 trapped workers were brought to safety through joint efforts with other agencies.

MASTERS SWIMMING COMPETITION

No. 973120056 Insp/GD Pardeep Kumar of 10 Bn participated in Masters Swimming Competition conducted by Sports federation of India at Bhopal (M.P.) and secured medals as under:

1. Gold- 400 mtrs Freestyle
2. Silver- 200 mtrs Individual medley
3. Silver- 100 mtrs Buttelfly
4. Silver- 50 mtrs butterfly

NDRF showcased exceptional talent at the IRONMAN 70.3 Goa Championship on 27th October 2024 at Miramar Beach, Goa. This globally renowned triathlon featured a gruelling 1.9 km swim, 90 km cycling, and 21.1 km run.

Among the participants, CT Asit Jordar of 2 Bn NDRF, competing in the Solo event in the 40-44 age category, achieved a remarkable feat by qualifying for the esteemed World Ironman Championship in Madella, Spain in 2025.

आपदा सेवा सदैव सर्वत्र

NDRF • INDIA
Saving Lives & Beyond...

National Disaster Response Force
6th Floor, NDCC-II Building,
Jai Singh Road, New Delhi-110 001
Website: www.ndrf.gov.in