"आपदा सेवा सदैव सर्वत्र"

NDRF • INDIA

Saving Lives & Beyond...

OPS 'DOST' NDRF OPERATION IN TURKIYE

SPECIAL EDITION


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Director General Foreward

On 6th Feb, 2023 massive earthquakes struck south-eastern Turkiye and northern Syria creating a huge humanitarian crisis. Appreciating the gravity of the incident, the Govt of India promptly responded and lauched operation 'Dost'. Within hours of the first tremor, NDRF Teams from Delhi, Kolkata and Varanasi were activated for deployment. This involved close co-ordination by NDRF with Ministry of Home Affairs (MHA), Ministry of External Affairs (MEA), Ministry of Defence (MoD), Turkish Embassy in Delhi, Indian Embassy in Turkiye and the Indian Air Force through IDS.

With the prompt action by all agencies, the first NDRF Team was airlifted in the early hours on 7th Feb and remaining Teams also followed up in quick succession. A contingent of 60 Para Field Hospital from Agra was also airlifted for assistance to the affected country. Besides this, relief material including medicines was also provided to Turkiye and Syria as humanitarian aid. A total of 152 NDRF personnel including 5 lady rescuers, 11 vehicles and 6 canines in three USAR teams were mobilized to help & save the lives of earthquake-affected people of Turkiye. During the operations, NDRF rescued two girls alive, Beren, a 6-year-old and Miray, an 8-year-old. The teams also recovered 85 deceased victims from the rubble.

On return to India after operating for 10 days, Hon'ble Prime Minister Shri Narendra Modi interacted with all the rescuers on 20th Feb 2023 at his residence. I am sure the appreciation and guidance from the Hon'ble PM will motivate all NDRF Officers and men to make it the best disaster response Force in the world.

Although NDRF wasearlier deployed in the Triple Disaster in Japan - 2011 and Nepal earthquake – 2015, the learning from Operation "Dost" will go a long way in preparing NDRF to face both National & International challenges in Disaster Response with greater efficiency and efficacy. It is therefore very important that all the learning in Op "Dost" are properly discussed, deliberated upon and minuted for future reference and action points for HQ NDRF and field Units are clearly tasked for follow up, with a clear timeline. An interactive session has been planned with Commandants and Officers from all NDRF Units during Annual Training & Ops Conf – 2023 at Vadodara from 16-17 March.

The NDRF response in Turkiye has also brought to light the importance of the INSARAG Certification. Towards this end, two heavy teams have been earmarked for

IEC for which all actions are required to be prioritized. The training and mentoring of our Rescuers with SDC and specialized training of Canines alongwith updragation of the equipment profile to meet the specific needs are some of the burning issues. Efforts are being made to get maximum exposure for the Officers by detailment for various INSARAG related courses and trg programmes.

I am confident that this special edition of NDRF Newsletter will provide a good overview about NDRF response in Turkiye earthquake and trigger action points at various levels. The need of the hour is to put our best foot forward and accelerate action to meet the desired objective.

Jai Hind!

Atul Karwal, IPS
Director General, NDRF

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EARTHQUAKES AROUND THE GLOBE

Why do earthquakes occur

Earthquakes happen all over the world, along both tectonic plate edges and interiors. An earthquake occurs when two blocks of the earth move past one another on a surface, popularly known as the fault plane or simply a fault. An earthquake occurs whenever these plates deviate from their paths and move away from the faults. The area where an earthquake begins below the earth's surface is called a hypocentre and one above the earth's surface is known as the epicentre.

The earth's surface is primarily divided into four layers, the outer and inner core, the mantle and the crust. The upper layer of the earth's surface, the mantle and the crust are divided into tiny pieces known as tectonic plates. The boundaries of these tectonic plates made up of several faults are where most earthquakes occur.

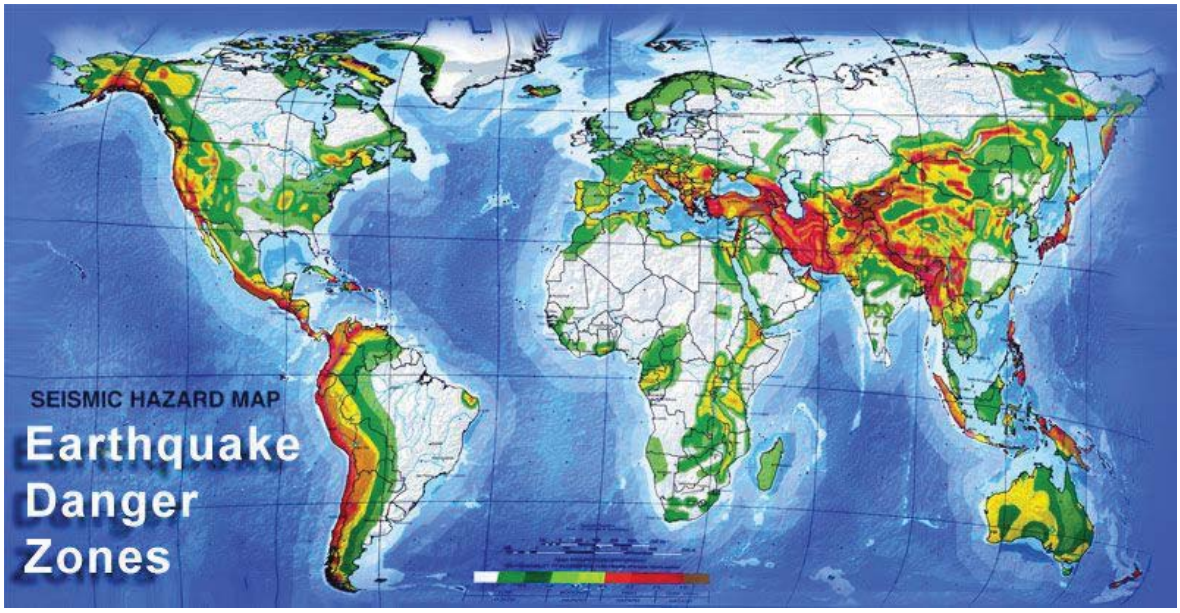
Earthquakes can be classified into the following types:

- **Volcanic Eruptions**

- **Tectonic Movements**

The world's seismically most active zones are:

- ✓ The Circum-Pacific belt,
- ✓ The Alpide belt,
- ✓ The mid-Atlantic Ridge.



If we look at the pattern of where earthquakes occur around the world, it is clear that most of the activity is concentrated in a number of distinct earthquake belts; for instance the edge of the Pacific Ocean, or in the middle of the Atlantic Ocean. Over 80 per cent of large earthquakes occur around the edges of the Pacific Ocean,

an area known as the 'Ring of Fire'; this is where the Pacific plate is being subducted beneath the surrounding plates.

A glimpse of some of the major earthquakes that have occurred since the beginning of the 20th Century will help to give a sound understanding of the catastrophe that they can create and the challenges that they pose for the Disaster Managers & Responders world over.

Sr No	Fatalities	Magnitude	Country	Date
1	2,73,407	7.8	China	16 December 1920
2	2,42,419	7.6	China	28 July 1976
3	1,42,800	8.2	Japan	1 September 1923
4	1,10,000	7.3	Soviet Union	5 October 1948
5	82,000	7.1	Italy	28 December 1908
6	70,000	7.9	Peru	31 May 1970
7	60,000	7.7	Baluchistan	31 May 1935
8	50,000	7.4	Iran	21 June 1990

9	40,900	7.6	China	22 May 1927
10	32,700	7.8	Turkey	26 December 1939
11	28,000	8.3	Chile	24 January 1939
12	25,000	6.8	Soviet Union	7 December 1988
13	23,000	7.5	Guatemala	4 February 1976
14	2,27,898	9.1–9.3	Indonesia, Indian Ocean	December 26, 2004
15	1,60,000	7.0	Haiti	January 12, 2010
16	87,587	7.9	China	May 12, 2008
17	87,351	7.6	India, Pakistan	October 8, 2005
18	51,849	7.8	Turkey, Syria	February 6, 2023
19	20,085	7.7	India	January 26, 2001
20	19,759	9.0–9.1	Japan	March 11, 2011

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INDIA'S VULNERABILITY TO EARTHQUAKES

India is vulnerable to earthquakes due to its location on a seismically active zone and the fact that the Indian landmass is penetrating into the Eurasian plate. Densely populated areas, unscientific constructions, and unplanned urbanization have increased the risks associated with earthquakes in India. The Andaman and Nicobar Islands, as well as regions in the Himalayan foothills, are particularly vulnerable to earthquakes and their related hazards, such as landslides and liquefaction. The use of high-technology equipment and underground utilities has also increased the susceptibility to disruption from relatively moderate ground shaking.

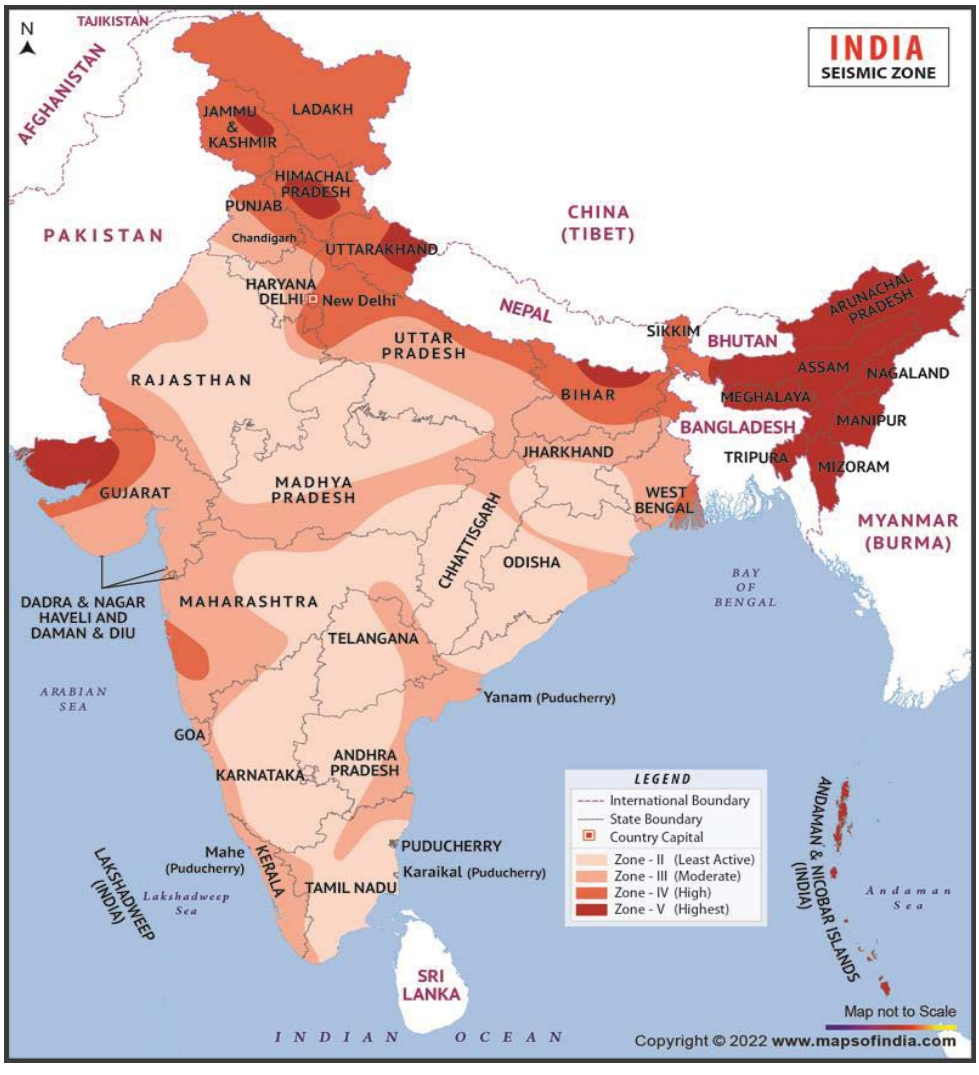
About 59% of India's land mass is prone to earthquakes of different intensities. The area is classified into four seismic zones:

Zone-V (Very High Risk),

Zone-IV (High Risk),

Zone-III (Moderate Risk),

Zone-II (Low Risk).



The seismic zone map of India clearly shows that entire Himalayan belt is considered prone to great earthquakes. In a relatively short span of about 50 years, four such earthquakes of magnitude exceeding 8.0 have occurred in the region: 1897 Shillong (8.7), 1905 Kangra (8.0), 1934 Bihar-Nepal (8.3) and 1950 Assam-Tibet (8.6).

Major earthquakes in India:

- Bihar-Nepal Earthquake (1934) of 8.4 magnitude - (Death toll- Approx 12,000)
- Koyna Earthquake (1967) of 6.5 magnitude- (Death toll- Approx 177)
- Uttarkashi (1991) of 6.6 magnitude- (Death toll- Approx 768)
- 1993 Latur earthquake of 6.4 magnitude- (Death toll- Approx 10,000)
- Bhuj (2001) of 7.7 magnitude- (Death toll- 14,000–20,000)
- Jammu Kashmir (2005) - (Death toll- Approx. 1350 in India)

India has come a long way on earthquake safety, but a lot remains to be done. Creating a system and culture for building safe houses in 21st century India is an absolute necessity. People need to be aware about Disaster Management to reduce the loss of both man and material during disasters.

NDRF is also playing a crucial role in making 'Disaster Resilient India'. The Force is creating awareness among fellow citizens on various disasters including Earthquake Safety to build them as a First Responder. NDRF is also associated with National School Safety Programme and impart training to school children about earthquake safety, rescue techniques, MFR and DO's and DONT's during disasters. Since its inception, NDRF has sensitized about 76,50,000 citizens on Disaster Management.

Various Mock Exercises on different topics of Disaster Management have also been conducted by the Force with various MAH units and sister agencies. Till now NDRF has conducted more than 4,200 mock exercises benefiting about 15,19,000 volunteers.

India is heading towards the right path and with the efforts of all, we will able to minimize the loss during disasters.

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NDRF RESPONSE IN MAJOR EARTHQUAKES

Triple Disaster in Japan - 2011

Japan was hit by a devastating mega-earthquake, tsunami and nuclear disaster on 11th March 2011. One team of NDRF was deployed at Onagawa, Japan on the direction of GoI. NDRF team managed to extricate 07 dead bodies from the rubble after more than two weeks after the disaster struck the area. Team also recovered & handed over cash worth fifty million yen to the local authorities apart from other valuables. Team operated in Japan from 27.03.2011 to 07.04.2011.

Nepal Earthquake – 2015

- Nepal

Severe erathquakes struck near the city of Kathmandu in central Nepal on 25 April, 2015 with a magnitude of 7.8. Many buildings, communication systems got collapsed resulting into massive loss of lives and infrastructure as well. On humatrian ground, NDRF deployed its 16 USAR teams for Humanitarian Assistance and Disaster Response (HADR) comprising of more than 700 rescuers along with 18 dogs trained in USAR operation at various earthquake affected areas of Nepal. NDRF rescued 11 injured persons and retrieved 133 dead bodies from the rubble. Teams also set up 06 medical camps and provide medical assistance to 1,219 persons. NDRF was instrumental in assisting the MHA and NDMA to dispatch 1,176.571 tonnes of relief materials donated by various agencies to quake affected people of Nepal via rail/road/Air route.

- Bihar, India

The effect of Nepal earthquake was also felt across the northern parts of India with very strong tremors being experienced in the areas bordering Nepal in the states of

Bihar and UP resulting in collapse of buildings. 04 NDRF teams were mobilized straightaway to Supaul, Motihari, Darbhanga & Gopalganj in Bihar for immediate response. Teams shifted 180 patients from damaged buildings and 409 persons shifted to safer places.

NDRF's First Overseas Mission

Alok Avasthy, DIG CRPF

It was the month of spring - March. A beautiful weather in India and rest of South Asia, supposedly. While there was a sense of calm sensed everywhere else, **Japan** –the country of mesmerizing Cherry Blossoms got hit by a disaster, **A catastrophic disaster.**

News channels all across the globe were flashing just one news: '**A massive earthquake hits the island country of Japan'**. While earthquakes are not new comers in Japan, this one was much more fatal than anyone could have ever imagined. It was the most powerful earthquake ever recorded in Japan.

Just when the world tried to sink the bad news in, gigantic waves from the Pacific Ocean engulfed the northern islands of Japan. The view was quite dreadful. Within moments, houses, cars, buildings were all floating in the water as if they were made merely of paper. People dying in hands of their loved ones, scenes of separation were commonly visible. The raging waves made destruction of highest degree possible.

No one has heard of major nuclear disasters post the Chernobyl incident but seems like the Japanese island had their dark days all lined up together, unfortunately. Yes, you are guessing right! After 3 days, the water as a result of tsunami seeped inside the Daiichi nuclear power plant in Okuma, Fukushima prefecture. The loss of reactor core cooling led to three **nuclear meltdowns, three hydrogen explosions** and the release **of radioactive contamination**.

In a matter of few hours, Japan the most peaceful and one of the most advanced nations in the world was in ruins.

Indian Team Fastens Their Seat Belts:-

As the catastrophe approached Japan, various disaster relief teams were too approached from different countries. Among them one was a 46 member Indian team led by me. At that time I was Commanding 5th battalion of NDRF, at Pune but the remaining 45 personnel of my team belonged to the 8th battalion of NDRF and I was appointed as their Commanding officer for the mission, in particular.

The team was capable of responding to any natural disaster, CBRN emergencies and was self-sufficient in lodging & boarding. Talking about NDRF, Its concept is one of its kind in the world. India is the only country in the world with a dedicated disaster response force. In coming years, NDRF will be the best in its trade.

Team was flagged off for the mission by Sh. M. Shashidhar Reddy, Vice Chairman, NDMA at Noida. We left for Japan on 27th March 2011 at 1935 hrs. Our team was received by Mr. Sanjay Panda, Dy. Chief of mission, Indian Embassy at Narita airport on 28th March 2011 at 0645 hrs. Our team was joined by interpreters & Japanese representatives.

Men at Work!

After the collection of Cargo, we left for Rifu-Cho by road. We monitored the radiation en route Fukushima. As we pitched in, Japan had already declared it a radiological emergency and majority of other teams had left Japan as they were not trained in this particular field of radiological disasters. Embassies were shutting down and people were fleeing away from Japan.

Our team reached Rifu cho & we set up our base-camp in the parking lot of 'Miyagi stadium'. The weather conditions were not supporting us and were very difficult to face. Arctic tents and portable shelters were erected. When I say, the conditions were difficult, it means that the temperature was at sub zero with, no water, no electricity and no hand wash for ten days straight. But the men were well prepared both mentally and physically to face any kind of situation approaching our way.

We carried ready to eat meal for the personnel, satellite phone for making international calls, VHF sets for communication with the squad and HF sets for communication from operation site to base camp.

On 29th March 2011, the team left for Onagawa where we were briefed by the Mayor. Onagawa town was the worst hit in Miyagi prefecture.

The Scenario in Onagawa:-

- Structures were mostly wooden and composite.
- The tsunami smothered all the structures and flattened the area.
- Vehicles got washed away and were slammed inside the houses.

The scene looked dreadful and horrifying. Our team worked hard in finding missing persons inside the mangled debris and rubble. Many dead bodies were recovered. We also made sure to observe a two minutes silence for the departed soul of the recovered bodies.

The feeling was of immense sorrow to see such a degree of destruction and numerous lives lost to this horrific disaster. Holding back tears used to be tough.

We also recovered Yen worth three Crore Indian Rupees and many other valuables which were handed over to the Japanese authority carefully.

Culmination of the Mission:-

The mission was completed on 6th of April 2011 and we left for Tokyo at 1300 hrs and reached by 2300 hrs. The team was felicitated by President of India - Japanese friendship organization at Embassy of India.

Certificates of Commendation by Ambassador of India to Japan were handed over by Ms. Nirupma Rao, then Foreign Secretary of India to Japan. Ex-Prime Minister of Japan, Mr. Mori also graced the occasion.

The team returned to India after completion of a very successful mission on 8th April. A mission that showcased our heartfelt sympathy and concern for the affected people and generated much goodwill among the people of Japan for our country. Apart from this, the mission added another feather in the cap of the peaceful Indo-Japan relations, making it a heart to heart connection and learning tons of moral values from them.

It was a great learning experience for NDRF to work in such a catastrophic disaster of the century. After working in such conditions and proving our mettle, NDRF has been facing disasters more efficiently since 2011.

Alok Avasthy
DIG CRPF

(Shri Alok Avasthy is presently functioning as DIG (Operations) CRPF Awantipore (J&K). He served as Commandant 5 BN NDRF and was Contingent Comdr of the NDRF Team during response in Japan triple disaster in 2011)

SAFETY OF DISASTER RESPONDERS IN INTERNATIONAL DEPLOYMENTS

Mohsen Shahedi,
DIG (Ops & Trg) NDRF

"Every accident is a notice that something is wrong with men, methods or material."

Safety of the Responders in International USAR deployments is a challenging task. The situation in the aftermath of the massive earthquake and repeated aftershocks in Turkiye presented a similar situation for Search & Rescue Teams which had landed there from different parts of the globe. The sub-zero temperature at ground zero was yet another dampener.

Responders are trained to approach dangerous situations to save lives and avoid becoming additional victims. Understanding how to evaluate risks and responses would therefore, help to save many lives including that of the rescuer. Safety of the responders depends on training, proper equipment and performing a risk assessment on arrival at the incident site. Many a times, specific hazards cannot be immediately identified or assessed as happened when workers responded to the meltdown at the Fukushima Nuclear Power Plant in Japan. Emergencies are often accompanied by widespread communication breakdowns leaving responders to make difficult choices with limited information. To minimize this problem, trained responders need to have specialized and integrated communication system and use command centres to collect and disseminate information.

Our understanding of what risks to prepare for continues to evolve. Few of us comprehended beforehand that the twin towers could collapse. On 9/11 more than 400 responders lost their lives including 343 firefighters, 60 police officers and 15 EMTs. An additional 2000 first responders were injured. During the Kedarnath tragedy of 2013, 19 rescuers lost their lives including nine NDRF bravehearts in a hepter crash. In 2021, in a Siberian Mine crisis, 12 rescuers lost their lives in a secondary methane explosion. Same year in Odisha, one rescuer alongwith a cameraman lost their lives while saving an elephant. The list is unending.

A Disaster environment could include the following scenarios:-

a) CSSR – Collapsed buildings, bridges, flyovers etc
b) Aquatic – Tsunami, flood, cloud burst, drowning etc
c) Confined Space – Mine, sewers, tanks, trenches etc
d) Rail/Road – Crashes, collisions, derailments
e) Rope Rescue – High/low angle rescue from towers, high rise buildings, cliffs

f) CBRN – Explosion, radiation, gas leakage etc

Various factors affect the safety of the responders in a disaster situation.

i. Earthquake aftershocks
ii. Contaminated atmospheres & water
iii. Unstable Structure
iv. Excessive noise, dust, smoke or fire
v. Work in small or confined areas
vi. Presence of hazardous materials
vii. Unknown work scenarios
viii. Adverse weather conditions
ix. Vandalism and theft
x. Heavy lifting, extreme fatigue and stress
xi. Operating tools and equipment in poor condition

Even with all of these safety strategies, trained responders still face substantial risks. The main causes of rescuers fatality include 44% risk of secondary collapse, 15% due to disorientation, 13% due to fatigue/PTSD and 28% due to other unsafe conditions which include inclement weather, fires, faulty equipment and contamination etc. Thus, safe actions and conditions are of primary importance and include the following:-

a) Use of serviceable PPE
b) Working in Teams and using buddy system
c) Using tools and equipment correctly
d) Rotation of men & equipment with availability of back up teams
e) Proper warning (whistle) signals and unhindered communication
f) Regular maintenance of equipment

Safety considerations during various phases of deployment in a disaster are of utmost importance, Hence, the Team Comdr must ensure to have a dedicated Safety Officer 24X7 to exercise close watch and supervision on each and every individual rescuers at work.

(a) Preparation Phases
  (i) Safety Conscious attitude
  (ii) Following safe procedures & protocols
  (iii) High degree of equipment maintenance
  (iv) Training and developing skills
  (v) Up to date information
(b) Activation & Mobilization Phase
  (i) Practice safety procedures and practices
  (ii) Emphasize safety in briefing
  (iii) Ensure PPE for Rescuers
  (iv) Good mental and physical condition
  (v) Ensure safety during movement

(c) Operational Phase
  (i) Correct identification of Base & Worksite
  (ii) Security of Personnel working
  (iii) Proper Comn and alarm system
  (iv) Marking of escape routes and safe zones
  (v) Continuous monitoring of all activities
  (vi) Proper rotation of men and equipment

(d) De-activation & De-mobilization Phase
  (i) Safe retrieval of men and equipment
  (ii) De-contamination if required
  (iii) Measures to reduce fatigue and PTSD
  (iv) Security de-briefing
  (v) Safety while move back

(e) Post Mission Activities
  (i) Highlight safety issues in mission report
  (ii) Re-evaluate all security aspects
  (iii) Treatment for PTSD
  (iv) Replace PPE & Repair Eqpt
  (v) Strengthen Training of Weak Drills

To sum up, the key to safety of the responders lies in not acting instinctively or impulsively. That is to say, if you do try to help or attempt a rescue, first evaluate the risks and understand your limitations—especially in situations involving enclosed spaces, gases and chemicals, swift water, electricity, and moving traffic. Response planning with a well enacted system of mock drills and synchronized exercises will go a long way in reducing the risks and limiting the threats that loom large on a responder each time he steps out to save a life. **The safety of a responder is not so much dependent upon the invention of safety devices as on the improvement of methods of awareness & appreciation of the responder to the ideal of caution and safety.** In that respect, we all have a long distance to travel.

Mohsen Shahedi
DIG (Ops & Trg), HQ NDRF

(Shri Mohsen Sahhedi is functioning as DIG (Ops & Trg) at HQ NDRF. He co-ordinated and supervised all operational movements during deployment of NDRF Contingent Comdr during Op Dost in Turkiye)

HUMANITARIAN ASSISTANCE AND DISASTER RELIEF OPERATION- TURKIYE (2023)

Preparation

- On 06.02.2023 at around 0647 AM (IST), an earthquake of magnitude 7.8 struck Turkiye and North-West Syria, resulting in significant casualties.
- Accordingly, on 06.02.2023, a review meeting held at PMO and directions were issued to mobilized 02 NDRF teams to undertake Humanitarian Assistance and Disaster Relief operations in Turkiye.

Mobilisation

- Subsiquenly 02 teams (01 each from 2nd BN Haringhata, West Bengal & 8th BN Ghaziabad, Uttar Pradesh) with total of 101 rescuers were airlifted on 6th & 7th Feb 2023 respectively to Turkiye after completion of necessary formalities.
- In addition, on 8th Feb third team of 11TH BN with 51 rescuers was also airlifted from Hindon Airbase to Turkiye.

Overall Command Element

Sh. Gurminder Singh, Comdt, Contingent Commander
Sh. Aditya Pratap Singh, 2IC, SO to Contingent Commander
Dr. Pankaj Gaurav, DC (Med), Medical Officer

Team 1 (IND-10) headed by Sh. Deepak Talwar, DC (Team Commander) and Sh. Ravinder Singh Aswal, DC, (Dy Team Commander), total Strength of 51 (Officer - 03, M.O- 01, SOs- 07, ORs - 40 (Including 05 Mahila Rescuers)) with 02 dogs (Honey(M) & Rambo(M)) and 03 vehicles took off from Hindon Airbase on 7th Feb at 0300 AM (IST) and landed Adana Airport, Turkiye on 7th Feb at 1030 AM (IST). Team worked at 14 worksites at various locations at Nurgdagi & Hatay.

Team 2 (IND-11) headed by Sh. Vishwanath Parashar, 2IC (TC), Sh Shashi Deo Prasad, DC (Dy TC), total Strength of 50 (Officers - 03, SOs- 06, ORs - 41) with 02 dogs (Romio (M) and Julie(F)) and 04 vehicles took off from Hindon Airbase on 7th

Feb at 1232 PM (IST) and landed Urfa Airport Turkiye on 7th Feb at 0857 PM (IST). Team worked at 13 worksites at various locations at Nurgdagi & Hatay.

Team 3 (IND-12) headed by Sh Abhishek Rai, DC (TC), Sh Ram Bhavan Singh Yadav, DC (Dy TC), total Strength of 51 (Officers - 02, SOs- 08, ORs - 41) with 02 dogs (BOB(M) and Roxy(F)) and 04 vehicles took off from Hindon Airbase on 8th Feb at 0800 PM (IST) and landed Gaziantep Airport on 9th Feb at 0330 AM (IST). Team worked at 07 worksites at various locations at Antakya, Hatay.

Operational Acheivements

All the 03 teams conducted CSSR ops from 08.02.2023 to 18.02.2023 and rescued 02 victims alive and retrieved 85 dead bodies.

Details of live victims:

1. Beren, 6 yrs, girl on 09th Feb at city center Nurdagi.
2. Miray Karatas, 8 yrs, girl on 10th Feb at Bahceli Evler Mahallesi, Nurdagi

A Medical Camp was also established by NDRF at Nurdagi, Gaziantep and Pre-Hospital Treatment/medical assistance had been provided to the 25 victims of the symptoms of muscular sprain, hypertension, Xeroderma, General Weakness etc.

Apart from search & rescue operation, NDRF sent following relief aids through National Disaster Response Reserve (NDRR) to Turkiye and Syria:

Turkiye	**Syria**		
	i.	Blankets	-840 no
Blankets - 3000 no	ii.	Synth. Sleeping Mat	-3000 No
	iii.	Solar Lamp	-350 No
	iv.	Tarpaulin with eyelet	-130 No
	v.	30 KVA Gen Set	-04 No
	vi.	Lactogen Baby food	-1.5 Ton
	vii.	ECD DW	-1.5 Ton

In addition, a team of NDRF headed by Sh. Manoj Kumar Yadav DIG and Sh. Rakesh Ranjan, 2IC from HQ NDRF was deputed to visit ground zero, interact with the various USAR Teams and other agencies deployed there to gain proper understanding on the functioning, identify grey areas and best practices for future adherence and corrections. Team visited all the worksites, met senior officials of AFAD at Antakya and Manager at ADANA, visited AFAD Training Centre and AFAD Depo at Saricam, Adana to study the systems and procedures in vogue.

De-mobilsation

- Team IND-10 & IND-11 after completion of USAR Ops left the Base of operations for Adana Airport.
- After completion of immigration formalities, both teams took off from Adana Airport on 17 Feb for Hindon Airbase Ghaziabad and landed safely.
- Team IND-12 de-inducted and left for Adana Airport on 18 Feb 2023 and further flown to Hindon Airbase Ghaziabad.

INTERACTION WITH HON'BLE PRIME MINISTER

Hon'ble Prime Minister, Shri Narendra Modi has always been appreciative of NDRFs work in disaster operations. After return of the three teams from Turkiye, an interaction session was arranged with the Hon'ble PM on 20th February involving NDRF Teams and 60 Para Field Hospital alongwith Senior Officials. Shri Atul Karwal, DG NDRF briefed on the work done by NDRF Team in OP "Dost".

Hon'ble Prime Minister lauded the good work undertaken by the teams in challenging situation and keenly listened to the experiences shared by various Rescuers. He was particularly appreciative of the involvement of the Mahilas in the operation in sub-zero temperatures and the effective use of the Canines in making two live recoveries. He enthused all the Rescuers to work with greater zeal and fervour and make NDRF the best Disaster Force in the world.

MEDIA SUPPORT

The operation by NDRF in Turkiye was widely covered in both electronic and print media. The support of Media was very overwhelming in spreading the good work done by NDRF breavehearts among fellow citizens as well as around the globe. A media conference was also organised at National Media Centre on 21 Feb 2023 after the successful completion of the operation in Turkey. Media personnel also interacted with NDRF rescuers who participated in the operation to share their rich and valuable experiences on ground.

DE-BREIFING SESSION

A de-briefing session was organized by NDMA at NDMA Bhawan, New Delhi on 28 Feb 2023. Lt Gen Syed Ata Hasnain, Retd Member NDMA, DG NDRF along with senior NDRF Officers, Officers from DM Division, MEA, MoD attend the session. Achievements, short comings, lessons learnt in the operations were discussed during the session.

HIGHLIGHTS OF THE OPERATION

Inter Agency Coordination: Operation Dost launched by GoI, is an excellent example of Inter-Agency coordination where different Ministeries & Departments came on a single platform to help the sufferers in a big disaster.

Ministry of Home Affairs (MHA), DM Division, National Disaster Management Authority (NDMA), Ministry of External Affairs (MEA), Ministry of Defence (MoD), Turkish Embassy in Delhi, UN INSARAG & the Turkish Govt worked in close co-ordination to deploy the team on ground in a time bound manner.

The Indian embassy in Ankara, Turkiye, provided required co-ordination and logistics support at Adana airport. The CPV division worked non-stop to provide

official passports to NDRF rescuers. The Rapid Response Cell and Secretary (West) MEA provided all information and guidance for deployment and operations. ITBP helped in providing winter gear and clothing items to survive in sub-zero temperatures which were required to operate in Turkiye.

The positive manner and the speed with which all concerned agencies functioned helped to tie up loose ends in a brilliant fashion and it ensured that timely assistance could be provided.

Lady Rescuers: For the first time, 05 Lady Rescuers were part of the NDRF contigents on an international operation. From past few years, Lady Rescuers are being deputed in the Force and they are doing a commendable job at par to their male counterparts.

Canines: The importance of canines in CSSR operations is always crucial. A well-trained Canine can save lives by giving hint of live victim under debris at early stage of an incident. There are total 142 Canines present in NDRF BNs among various field formations. Specific to the Turkiye operations, 02 Canine in each team, a total of 06 Canines were deployed with NDRF USAR teams. These Canines played a very crucial role in identifying the locations of the live victims and assisted NDRF rescuers in saving 02 valuable human lives in Turkiye.

Challenges in International OPS and Future Role of NDRF

Gurminder Singh, Commandant

On 06th February 2023, a massive earthquake of magnitude Mw 7.8 on the Richter scale struck southern and central Turkey and northern and western Syria followed by more than 2100 aftershocks. The earthquake resulted in the loss of over 50,000 lives and left more than 1 million people homeless. India offered all possible assistance to the country and relief measures to the victims of the earthquake. The GoI on 6th Feb (Monday) immediately despatched the SAR teams of the National Disaster Response Force with Army's medical staff, a field hospital, materials, medicines and equipment by airlift into the disaster zone of Turkey under the **"Operation Dost"**.

Natural disasters like earthquakes can have devastating effects on human lives and the built environment. It can cause a significant loss of life and damage to infrastructure. In such a situation, rescue operations play a crucial role in saving lives, treating injuries, and mitigating damages. However, international rescue operations in earthquakes and collapse structures search and rescue pose unique challenges that require specialized skills and resources.

One of the major challenges in international rescue operations is coordination between different organizations and countries. When an earthquake occurs, multiple countries and international organizations may offer to help, leading to a complex web of actors with different capabilities and resources. Coordinating their efforts requires clear communication channels, shared protocols, and efficient use of resources.

Another significant challenge in international rescue operations is the differences in language, culture, and legal systems can further complicate coordination efforts, necessitating the need for well-trained and experienced personnel.

The international rescue operations are the need for specialized equipment and skilled personnel. When a building collapses, survivors may be trapped under the rubble, requiring specialized tools like hydraulic cutters, spreaders, and drills to extricate them. Such tools are often not readily available in developing countries. This can lead to delays in rescue efforts and a higher risk of fatalities.

The logistics of international rescue operations can also be challenging. Deploying rescue teams, equipment, and supplies to a disaster site in remote or inaccessible areas can be logistically complex, requiring extensive planning and coordination.

The safety of rescuers is another significant challenge. Rescuers may face hazards such as unstable structures, debris, and hazardous materials. The risk of aftershocks and secondary collapses can further endanger their lives. To mitigate these risks, rescuers need specialized training, equipment, and protective gear.

Psychological impact: The rescuers had to deal with the psychological impact of working in a disaster zone, including witnessing the devastation and loss of life, and dealing with the emotional trauma of those affected.

Also, international rescue operations require significant financial resources. Building and maintaining a well-equipped and well-trained rescue team can be expensive, and many countries may not have the financial resources to do so.

In conclusion, international rescue operations in earthquakes and collapse structures search and rescue pose unique challenges that require specialized skills, equipment and resources. Despite these challenges, the international rescue teams worked tirelessly to save lives and provide critical support to those affected by the earthquake.

As the world continues to face an increasing number of natural disasters, there is likely to be a growing demand for the expertise and assistance of organizations like the NDRF in international rescue operations. In the future, the NDRF could potentially play an important role in responding to natural disasters in other countries, providing specialized training and equipment to local response teams, and working alongside other international organizations to coordinate relief efforts.

In recent years, our government has been actively promoting greater cooperation and collaboration between the NDRF and other international disaster response organizations. This includes participating in joint training exercises, sharing best practices and resources, and developing partnerships with international NGOs and other organizations involved in disaster response.

Given the NDRF's expertise and experience in responding to natural disasters, it is likely that they will continue to be an important player in international rescue operations in the future. With their highly skilled personnel and specialized equipment, the NDRF could help to save countless lives and provide critical support to communities around the world in times of need.

Gurminder Singh
Commandant
2nd Bn NDRF

(Shri Gurminder Singh, Commandant 2 Bn NDRF was the NDRF Contingent Comdr during Op Dost in Turkiye)

Establishment & Coordination of ICMS/VOSOCC during International OPS

Aditya Pratap Singh,
Second-in Command

Background: The INSARAG was established in 1991 to facilitate coordination between the various international USAR teams for structural collapse primarily due to earthquakes.

Significance: To highlight the role of INSARAG, I would highlight recent example of Turkiye Earthquake where 152 NDRF rescuers participated in three teams. After reaching at Adana airport at 0830 hours on 7th February, first team was registered at RDC. UCC or SCC was not allotted however AFAD referred the team for a place named Noordagi, Gaziantep. Second team was diverted to a place GAP where RDC was not operating. Third Team was registered at SCC at a place named Antakya, Hatay.

On 9th Feb, I accompanied Contingent commander to UCC at Antakya, Hatay where Ms Haruka Ezaki, Asia-Pacific lead, INSARAG Secretariat offered us to run SCC at Noordagi. However, since we did not having adequate resources and trained manpower to run SCC, the task could not be taken up. Subsequently also UCC Manager at Antakya requested to provide trained manpower which we did not have. Most of the time all teams were in contact with AFAD only and we were dependent over AFAD for information & work-sites.

Our experience on ground revealed that in the absence of INSARAG Certification, allotment of worksites was a difficult endeavour and we had to be dependent on the volunteers and AFAD officials working on ground for guidance. Had we been the part of INSARAG system (even as the non-classified team), the co-ordination on the ground would have been more effective. A common misconception is that since we have been deployed on the bilateral agreements hence, we will have to work on our own in isolation of the other classified agencies. The fact remains that without International coordination, search for the probable work-sites in a city of rubbles would be a very difficult task and not yield the desired result. The second myth is of considering “beyond the rubble” tasks as wastage of time & resources. Thus, coordination & management is an integral part of system for which we are expected to provide trained manpower at RDC & UCC.

Present status: NDRF has approached SDC for mentorship and SDC has agreed to conduct an in-depth assessment of two Indian Heavy USAR teams. Preparations for the same is undergoing at 2 & 8 bn NDRF while HQ NDRF is engaged in preparing

the abbreviated Portfolio of evidence (APoE) which is a mandatory requirement for seeking a slot for IEC to be conducted by UN OCHA experts.

Training required for NDRF:

Online Courses (For all rescuers involved in IEC process):
Bsafe
Build better response (BBR)
UN Civil-Military coordination
OSOCC awareness online course
English learning course (customized according to standard of NDRF rescuer)

Offline Courses: (For team leaders/deputy team leaders & other officers)
UNDAC operational partner's course
RDC course
UCC Course
IATA course for Logistics

Other INSARAG Activities which NDRF officials involved in USAR activities must attend:

INSARAG Team Leader's meeting
INSARAG Focal Point's Meeting
Humanitarian Networks & Partners Week (HNWP)
INSARA External Classification (IEC/R)
INSARAG Recognized National Accredited Programme (IRNAP)
INSARAG Earthquake Response Exercise (IERE)
SIMEx

Aditya Pratap Singh
Second-in Command
HQ NDRF, New Delhi

(Shri Aditya Pratap Singh, Second-in-Command (Trg-II) at HQ NDRF was Staff Officer to NDRF Contingent Comdr during Op Dost in Turkiye)

Co-ordination with International USAR Teams - Gaps and Way Forward

Vishwanath Parashar,
Second-In-Command

1. INTRODUCTION:

Turkiye is seismically active area within the complex zone of collision between the Eurasian plate and both the African and Arabian Plates. Seismic hazard in Turkiye is highest along the plate boundaries. As per vulnerability profile following historical earthquakes occurred in Turkiye in past 200 years -

Srl No	Date	Place	Magnitude	Loses of life
01.	02.07.1840	Agri	7.4	10,000
02.	28.02.1855	Bursa	6.7	1,900
03	02.06.1859	Erzurum	6.1	15,000
04.	03.04.1872	Hatay	7.2	1,800
05.	03.04.1881	Chois, Cesmi	7.3	7,866
06.	04.10.1914	Bardur	6.9	2,344
07.	18.11.1919	Bali Kesir	7.0	3,000
08.	07.05.1930	Hakkari	7.5	2,514
09.	26.12.1939	Erzincan	7.8	32,700
10.	20.12.1942	Erbaa	7.0	3,000
11.	19.08.1966	Varto	6.8	2,394
12.	17.08.1999	Izmit	7.6	17,127

A devastating earthquake of 7.8 on the Richter scale hit Southern Turkey in the early hours of 6 February (4.17 a.m.), with epicentre in the Pazarcık district of Kahramanmaras province. The earthquake affected the neighbouring provinces of Adıyaman, Kilis, Osmaniye, Gaziantep, Malatya, as well as Şanlıurfa, Diyarbakır, Adana and Hatay, where around 13.5 million people reside including around 2 million Syria. The earthquakes impacted an estimated 14 million people, or 16% of Turkey's population. Of these, over 50,000 died and two million were left homeless.

It was the deadliest seismic event in the history of Turkiye since the 526 Antioch earthquakes. It was the deadliest earthquake worldwide since the 2010 Haiti earthquake and the fifth-deadliest earthquake of the 21st century.

The earthquakes were followed by more than 2,100 aftershocks. A large winter storm hampered rescue efforts, dropping snow on the ruins and plummeting temperatures. Due to the freezing temperatures in the area, survivors, especially those trapped under rubble, have been at a great risk of hypothermia. Collectively, the earthquakes are estimated to have caused US$84.1 billion worth of damage, making them the fourth-costliest earthquakes on record. It is the deadliest natural disaster in Turkiye's modern history. Development experts from the United Nations estimated about 1.5 million people were left homeless.

2. CO-ORDINATION:

Before departure for Turkiye all the information about the team details was uploaded on Virtual OSOCC so that they would know about our team movement. After reaching we contacted Turkiye's AFAD as well as UCC. When we reached Nurdagi, AFAD provided us all the assistance. Governor Sirnak briefed us personally. AFAD established Vehicle Mounted Control Room for co-ordination with all the Teams. We get support from all agencies working in that area.

The earthquakes which struck South Eastern Turkiye and Northern Syria on 6th Feb 2023 created a huge humanitarian crisis within hours of the first quake, the Govt of India mobilized the NDRF teams for search & rescue operation (SAR).

The Ministry of Home Affairs, National Disaster Management Authority (NDMA), the Ministry of External Affairs, the Ministry of Defence, Govt. UN INSARAG and Turkish Govt. worked closely for immediately mobilized & deployment.

A total 152 rescuers, including 5 lady recurses, with canine team mobilized to help & save the lives of earthquake affected people in Turkiye.

During rescue operation around 2,38,500 rescue workers from 105 countries and 16 International organizations worked in Turkiye.

3. GAPS:

During the operation observed some gaps which are as under:

I. Deployment

a. The flight carrying team was scheduled to land at Adana Airport, Turkiye. When flight reach in the airspace of Adana, Turkiye they did not allow to land and the flight was diverted to Sanliurfa Airport, which took additional approx. 1 to 1.5 Hrs precious time.
b. The distance between Adana airport to Gaziantep is approx. 154 Kms whereas from Sanliurfa airport is approx. 221 Kms.
c. The authorities of Sanliurfa Airport were also not aware about movement of

our team and area of deployment. Thus, we lost 5 to 6 hours precious time after reaching in Turkiye airspace.

d. We are habitual to drive on left hand side whereas Turkiye is following right hand drive which was a hurdle.

e. Language was a barrier for coordination.

f. When the team landed at Sanliurfa airport, the members of AFAD contacted us after a gap of around 2 to 3 hours. After the discussion AFAD provide us required administrative support and translator which took another precious time.

II. Operation

a. The availability of petrol was difficult, whereas our all equipment are petrol based.

b. AFAD control room of Nurdagi was not earmarking properly the area to the teams to carry out rescue ops.

c. Other search teams working there had better technical search equipment i.e., latest thermal imaging sensor.

d. Other teams had Decontamination Stations. In such earthquakes CBRN emergencies cannot be ruled out.

e. Attire of international teams were comfortable and suitable for working in subzero climate conditions.

f. The international teams had light weight battery operated equipment which were very handy to operate in rubble field in compare to generator-based equipment.

g. The information was not updated timely on ICMS (INSARAG) as only one access was provided to us.

h. Status on Virtual OSOCC was not checked very frequently by the team because very few rescuers are trained on same.

III. Administration

a. Ablutions facility was not available.

b. Firewood was not easily available during the initial days.

4. WAY FORWARD:

Followings are suggestive steps/measures to minimize the gaps noticed during

the OP DOST, Turkiye:

a. We must think ways for better coordination among inter agencies involved for deployment of rescue teams during disaster.

b. We may provide training to drivers on right hand driving.

c. We may include diesel/battery-based operated equipment in our inventory.

d. The orange dungaree may be replaced with the attire designed in such a way that rescuers can work easily in high temperature as well as subzero temperature.

e. Digital Translator Equipment may be provided to the teams.
f. INSARAG training must be extended to each and every rescuer.

g. Some Officers may visit INSARAG AP (Asian Pacific) Region HQ for liaison/training.

h. More training and joint exercise with international teams.

i. Latest light weight rescue equipment and drone fitted with thermal sensors may be provided.

j. Mobile lavatories may be provided to the teams.

k. Diesel/Kerosine based Stoves/ Warmer Plates may be provided to the teams for cooking.

Vishwanath Parashar
Second-In-Command
2nd BN NDRF

(Shri Vishwanath Parashar, Second-in-Command was Team Commander of IND-10 during Op Dost in Turkiye)

Medical Challenges – Handling of Victims and Rescuers

Pankaj Gaurav, DC (MO)

A major earthquake of catastrophic magnitude causes massive devastation, high mortality, casualties and protracted health problems.

Overall the most common Earthquake related musculoskeletal injuries are lacerations, fracture, sprains crush injuries, compartment syndrome and gangrene. These injuries are highly mechanical and often with multi system involvement requiring intensive curative medical and surgical care at a time when the local medical response capacities have been disrupted.

After assimilating to all the information perceived regarding the earthquake which striked turkiye in the Wee hours of 6th Feb 2023; the medical wing of team India NDRF had started packing the most essential medical supplies for providing health care services to disaster effected population which is considered to be a vital element among disaster response management.

On arrival at Gaziantep, the disaster hit province of turkiye, one of the several challenging situations NDRF rescuers had to face was the extreme low temperature (sub zero) conditions leading to medical conditions like Hypothermic shock and frost bite. The key factors which played a life supporting and an indispensable role was the extreme low temperature winter clothing and sleeping bags issued to every single rescuer by the Govt. of India. Also, the selection of acclimatized rescuers who had already performed duties in such extreme weather conditions and ensuring of proper daily regular water intake by all rescuers during the operational period kept all medical ailments like Hypothermia and frost bite at bay.

Whenever in need, the medical team of NDRF India with the help of resources like Hemorrhage control bandage, splints, cervical collars, and oxygen support provided medical assistance to disaster victims at the operational sites of Turkiye. Local tertiary and secondary level hospital setups play a critical role in treating injures and medical ailments during disaster emergency responses. Simultaneously, these natural disasters hinder the ability to operate at full capacity and efficiency. Hence to support the local medical healthcare system setting up of a fully fledged medical camp with all essential medicines to treat patients is the best humanitarian disaster response initiative. NDRF India established temporary medical camps where in the medical team not only catered to all the medical needs of disaster victims by treating numerous number of patients rather also dispensed free medicines to them for their medical ailments.

In such disaster response situations, multiple nations are involved where in there is great scope for sharing as well as gaining knowledge at the same time. Team NDRF India learnt about the both ends slightly raised patient carrying spine stretcher boards which not only helps in keeping the patient stable but also in preventing any further complications during transportation.

Pankaj Gaurav
Dy Commandant (MO)
11th Bn NDRF

(Dr Pankaj Gaurav, MO 11 Bn NDRF led the medical assistance from NDRF during Op Dost in Turkiye)

Significance of canine search in CSSR operations- Gaps and way forward

Shashi Dev, DC

"Having a dog will bless you with many of the happiest days of your life and it will also be a blessing on one of the worst days".

Hours after two huge earthquakes and hundreds of aftershocks struck southeastern Turkey and northwestern Syria on February 6, some much-needed rescuers began to arrive in Turkey – The Canine teams from around the world that had come to lend a hand to local rescue teams.The much-welcomed rescuers, who can find victims by scent alone, are needed to help the rescue teams in desperate operations where buildings as high as 14 storeys have collapsed, making it difficult to find survivors by Physical and Technical search.

Dogs are key to the success for rescue operations such as the one we did in Turkey, especially as the hours pass and hopes of finding people alive in the rubble grow dimmer. Dogs are specially equipped to be rescuers and can home in on a buried person in rubble with their amazing sense of smell. With noses that far surpass ours, dogs have more than 100 million sensory receptor sites in the nasal cavity, as compared to 6 million in people. Moreover, the area of the canine brain devoted to analyzing odours is about 40 times larger than the comparable part of the human brain. In fact, it has been estimated that dogs can smell anywhere from 1,000 to 10,000 times better than people.

Canine search is the best and time-tested method of search during CSSR operations. Most of the time it is very difficult to use physical and technical search in devastation as occurred in Turkiye. We tried our best to search physically the damaged structures to find out any alive victim, but didn't get positive results due to large amount of rubble and fear of adjacent unstable structures/ frequent aftershocks. We also used life detectors, but did not get positive results due to use of heavy machinery in nearby areas. By using our dogs we successfully got signals and after removing few layers of rubble, dogs Julie and Romeo clearly indicated a specific patch and we rescued one 06 years old girl **Beren.**

Although all SAR dogs depend on their sense of smell, they are distinguished as either air-scenting or trailing dogs. Air-scenting dogs detect human scent that is airborne and often work off-lead to cover large areas of land. They are usually non-scent-discriminating, meaning that they detect scent from any human as opposed to a specific person.

Air-scenting dogs follow diffused or wind-borne aromas until they find the site where the smells originated. Once they find the source of the odour, these SAR dogs

indicate their handlers by barking. If the handler is far away, the SAR dog may return to the handler and guide him to the scent's origin.

Gaps

1. "Since air-scenting dogs detect air-borne particles, weather conditions affect their job performance."

   Since air-scenting dogs detect air-borne particles, weather conditions affect their job performance. Wind speed, temperature, humidity, and wind direction all impact the dog's ability to work. Amazingly, despite less-than-optimal conditions, these talented dogs can cover a search area that may range from a few blocks to 150 acres and can detect a scent source as far as ¼ mile away.

2. It was very hard for our dogs to search in so much rubble on top of the victims to find them. It was big obstacle for us. We searched same rubble site after removal of some floors of rubble and searched again, to increase the chance to find people alive even if they're buried very deep
3. Our dogs are not adequately trained for SAR ops as per INSARAG standards, as we have only level- B trained dogs. Due to repatriation, we have to change handlers of our dogs, which also adversely affects the dogs efficiency. Maintaining the same handler-dog team is preferred because changing handlers impacts performance by increasing response time, the dog becoming distracted more often, and potentially less accurate.
4. Weather – Our dog had never worked in sub-zero temperature, which also reduced their efficiency. We even don't have proper winter clothing for our dogs.

Way Forward

1. **Training**

A good nose is not enough. A proficient SAR dog needs lots of training, starting with basic obedience skills. Then SAR dogs learn how to track, signal their handlers, and behave appropriately in stressful situations. Their handlers need training, too. Handlers are often trained as law enforcement, fire service, and emergency response professionals. We should train our dogs as per INSARAG standards for effective overseas operations.

2. Selection of best breed/Pups

Although an astute sense of smell is a common canine trait, some dogs perform better than others. Air-scenting SAR dogs are often herding or sporting breeds, such as Labrador, Border Collies, German Shepherds, Golden Retrievers, Springer etc.

3. Selection of best handlers

Good handler is also an important element of canine search. The focus of detection work is typically on the detection dog itself; however, an undeniable bond between the handler and the dog could influence performance. Handlers have the A responsibility to recognize and call the dog's change in behaviour toward an odour, or trained alert, to locate the target source. Failure to call an alert could result in a missed target source which can have detrimental implications for search and rescue dogs. Further, calling an alert when a dog is not showing the appropriate alert behaviour or unintentionally cuing a dog to alert could lead to unnecessary emergency or improper search.

Shashi Dev
Dy. Commandant
2nd Bn NDRF

(Shri Shashi Dev, DC was Dy Team Commander of IND-10 during Op Dost in Turkiye)

USAR OPS- Significance of Training and Technology

Deepak Talwar, DC

Urban search and rescue (USAR) is an expert proficiency to locate, provide medical assistance to and extricate the victims who have been trapped or affected by a collapse structure. NDRF CSSR team comprises of specially trained rescuers having proficiency in hazmat identification, technical search, structural analysis, medical first response, Canine search and other aspects. NDRF have dedicated and integrated Units in most of the states in India into our overall command-and-control structure having flexibility to quick switching over the force to any part of India in minimum possible time. This guarantees a smooth incorporation of resources if ever required for a prolonged structural collapse anywhere and anytime. It was clearly evident in the process of rapid deployment of NDRF teams during "OP-DOST". The NDRF USAR team combines specialist extrication and hazardous material response, stabilizing the collapse structure, breaching and cutting skills of entry, retrieve and MFR skills.

USAR is a significant factor of the nation's capacity to deal with the consequences of an Earthquake and collapse structure disasters response operations. National Disaster Response Force plays a vital role in training, providing quick response and technical support to other states, territories and in the time of any mega disaster worldwide.

Training The training of all NDRF personnel is very important and multi-dimensional. 19 weeks of rigorous basic training prepares a rescuer to effectively counter any form of disaster be it CSSR, MFR, Flood rescue and CBRN threats and gives the ability to deploy expertly trained personnel to counter any disaster scenario. All basic training modules complement each other blending to form the response requirements for almost any form of disaster.

Training deals with the core competency of rescuers, focusing on the necessary skills for long duration rescue operations, including technical search, shoring and concrete breaching, coupled with the ability to operate remotely for prolonged periods as was highlighted during the experiences at the Japan triple disaster, Nepal earthquake, Chamoli Glacial lake outburst Landslide, Various flood responses in recent years, Cyclones ops and recently executed "Operation Dost" at Turkey.

Technology Use of Technology plays a significant role in detecting and locating the trapped victims. During the "Operation-DOST" life detectors, rescue Radars and Canines played a tremendous part in locating the trapped victims. Chances are there that 90% of entrapped victims can be rescued before professional USAR teams

are on-site. The remaining trapped survivors are often difficult to be find since they are unable to give any distress signal. Either they can be unconscious or they are entrapped below so much rubble that their distress calls cannot be heard. Additionally, during operations with numerous teams having various capabilities, prioritization requires coordination. This coordination is possible if communication between responders in the field and the coordination authority – i.e., the UCC/SCC/LIMA is efficiently managed.

Technical search are used to verify the results of the dogs. Standard equipment are acoustic devices, rescue radars and thermal heat signature locating devices. Rescue dogs are proficient to search for alive victims; special inspection cameras are used, before heavy equipment is being implemented. Advanced search methods with the use of modern technologies, such as geographic information system (GIS), thermal vision, modern off-road vehicles or unmanned aerial vehicles are few dimensions which may increase the likelihood of effective execution of a rescue action.

Conclusion Tasks of Urban Search and Rescue teams are challenging for many reasons. Generally actions are carried on an unknown area, in many cases abroad, and the terrain conditions combine with weather phenomenon have a tendency to be complex. In "Ops-DOST" extremely cold climatic conditions were a big challenge and same was negotiated through well practiced drills and high altitude clothing. Given restrictions connected with deployment, new methods and technologies are desired which may significantly affect the effectiveness of rescue missions. Enhancing the effectiveness of activities of USAR teams is strictly connected with performing a quick and precise determination of definitive solutions for search and rescue actions comprises the procedure of specially trained dogs, inspection cameras, thermal signal devices etc. At a time of dynamic technological progress, new possibilities keep appearing. In particular in the case of vast areas, the use of technology may designate the most important areas where assets and means would be sent as priority. This is due to the fact that in such situations, difference of minutes may be detrimental to the survival of the victims.

Deepak Talwar
Dy. Commandant
8th Bn NDRF

(Shri Deepak Talwar, DC was Team Commander of IND-11 during Op Dost in Turkiye)

The Frank Anthony Public School **Communication Challenges in Operation "DOST"**

Deepak Bamoriya, DC

Turkiye, a trans-continental country located at the intersection of Europe and Asia, faces several challenges when it comes to establishing communication networks. Despite being a rapidly developing country with a thriving telecommunications industry, there are several issues that hinder communication establishment in Turkiye. One of the primary issues is the country's diverse terrain. Turkiye is a vast country with varied topography, ranging from rugged mountains to coastal plains. This presents significant challenges for establishing communication networks, particularly in remote and hard-to-reach areas. In such areas, traditional communication methods like radio and telephones may not be effective due to limited coverage and signal strength.

Another challenge is the high incidence of natural disasters in Turkiye. The country is prone to earthquakes, floods, landslides, and wildfires, which can disrupt communication networks and cause widespread damage. In such situations, it becomes crucial to have robust communication systems in place to coordinate emergency response and rescue operations.

Furthermore, Turkey has a diverse population with different linguistic and cultural backgrounds. Although Turkish is the official language, there are several minority languages spoken throughout the country. This linguistic diversity can create communication barriers, particularly in emergency situations where timely and accurate information sharing is critical.

In contrast, India's National Disaster Response Force (NDRF) has a well-established communication infrastructure, including HF and VHF radio sets, satellite phones, and other advanced communication technologies. This helps them to establish effective communication networks even in remote and hard-to-reach areas, enabling them to respond quickly to emergencies.

As we all know that on 6th February 2023 a massive earthquake took place in Turkiye, due to which maximum teams from various countries were reported in Turkiye for Urban Search and Rescue operations. Apart from this different countries have also sent their maximum humanitarian aid to affected country. Government of India also sent, NDRF teams and relief & rescue material to Turkiye and Syria. Due to the coordination of all Indian government department and ministries such as

MEA, MHA, MoD, AF, NDRF etc. India was one of the countries which sent their 4th largest contingent to Turkiye.

National Disaster Response Force having many communication equipment, such as VHF, HF (for small to medium range communication through electromagnetic radio waves) and VSAT/BGAN Terminals and Satellite Phones are used for long rage communication through satellite.

At Disaster site in Turkey HF and VHF communication had been established between NDRF teams and further they used Satellite terminals such as VSAT/ BGAN/Satellite phone to establish communicate directly with HQ NDRF Control room. The National Disaster Response Force has been equipped with a variety of communication tools, including satellite phones, VSAT/BGAN terminals, and HF (for short and long-range communication through electromagnetic radio waves).

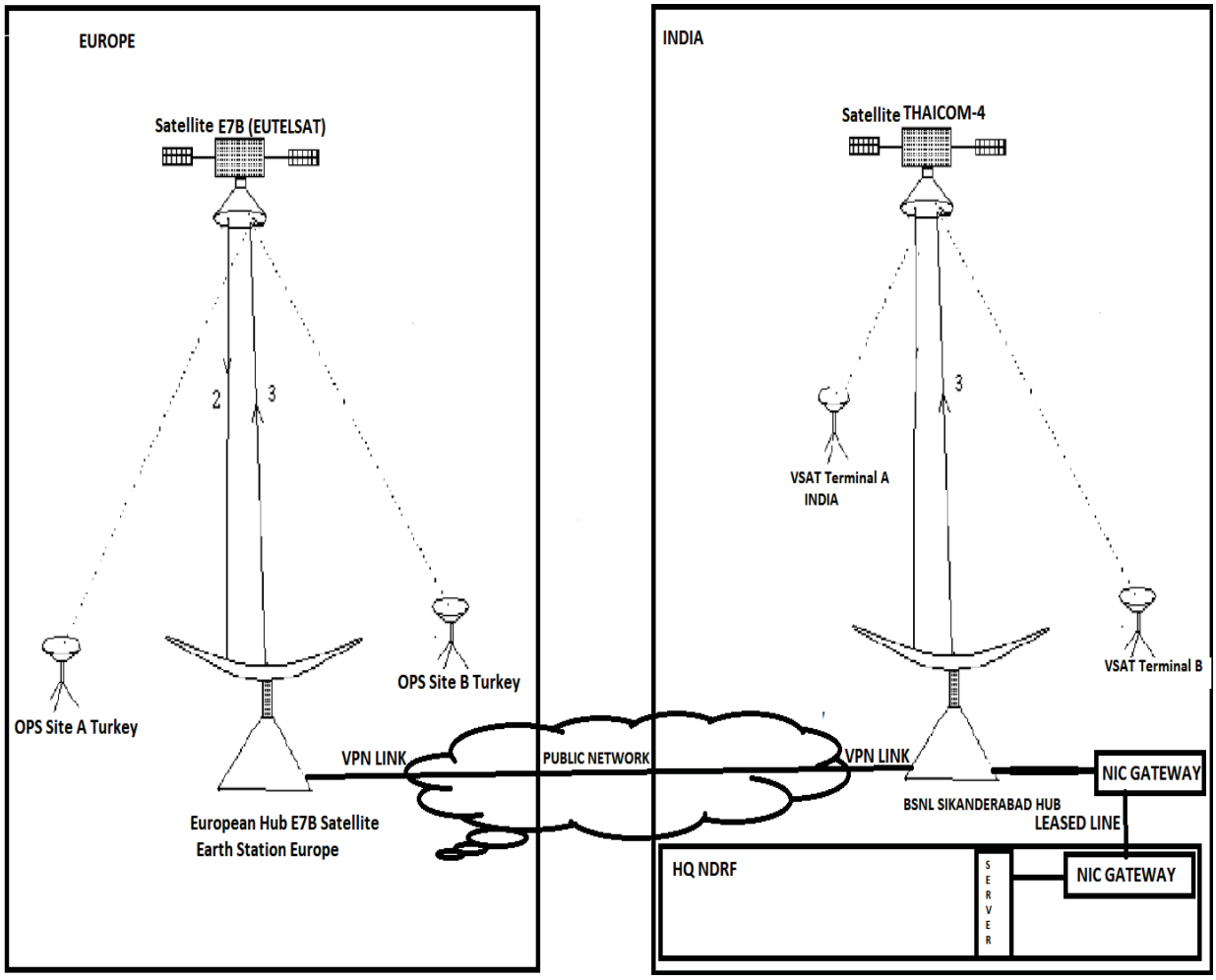
At the disaster site in Turkey, NDRF team had established HF and VHF communication. Additionally, they deployed satellite terminals such as VSAT BGAN/Satellite Phone to communicate with the NDRF HQ Control room simultaneously.

Since the location of the country had been changed, therefore our technical staff initially encountered some difficulties while installing VSAT because all of our satellite terminals (including our modem and antenna) are currently tuned with the THICOM-4 satellite's frequency band. Thicom-4 is a satellite that is operated by IP STAR India and has a total of 18 beam spots (footprints) in India.

Our technical staff have no any issue to use this satellite to establish satellite communication inside the nation. Our technical teams are highly confident in their ability to set up satellite connectivity inside the nation using this satellite. Yet this time, there were no signs of the Thicom-4 satellite in new location. Nonetheless, the European satellite E7B has its footprint at the earthquake location in Turkey, but with a different frequency range/band. To fix this problem, Hq NDRF sent three universal LNBs and a BUCK to Turkiye to align our QDA with European satellite E7B.

But only changing of LNB and BUCK was not the solution to align QDA antenna with satellite but configuration of new SBC and ODU files was also essential to operate Modem. This was not the end to align our QDA. Further HQ NDRF created a virtual tunnel in between BSNL Hub to European Hub with the help of BSNL officials and Hughes Communication pvt. ltd (at European Hub.) As shown in diagram.

Diagram to establish connectivity of our QDA through European Satellite E7B



After creating virtual tunnel (VPN Link) and configuration of software files as well as changing of LNB and BUCK; our NDRF teams were able to establish communication between Turkiye to HQ NDRF. Since over VOIP phone voice communication was easily established and due to lack of bandwidth video communication was an issue.

Apart from above NDRF teams are also having Satellite phone terminals. When the teams of NDRF were ready to departure from Hindon Airbase Ghaziabad at the same time 09 international SIM cards were provided by HQ NDRF to all three teams. Because each teams having three satellite phone terminals for communication. Each team of NDRF is also having one BGAN satellite terminal; In BGAN it has one GSM mobile application which is required to be installed in normal mobile phone. Since in Turkiye temperature was very low due to this battery of BGAN terminals could not sustain for long period of time.

From this operation following lesson are drawn:-

1. At least one universal LNB and BUCK should be available in Bn Hq.

2. Training of SBC & ODU files for configuration and alignment of QDA should be imparted to all communication personnel on regular basis.

3. Battery of all equipment should be changed properly because while carrying of such equipment battery should not be discharged immediately.

4. SOP for carrying all types of communication equipment while moving abroad.

5. Whenever any team of NDRF get order for deployment; trained personnel should be detailed for movement.

In conclusion, Turkey posed several challenges when it came to establishing effective communication networks. The diverse terrain, natural disasters, and linguistic diversity make it difficult to establish robust communication infrastructure. However, with continued investment and innovative solutions, we can overcome these challenges and establish a communication network that is capable of responding to emergencies and serving diverse population.

Deepak Bamoriya
Dy. Commandant/IT
HQ NDRF, New Delhi

(Shri Deepak Bamoriya, DC is presently functioning as DC (IT) HQ NDRF and co-ordinated all Comn & IT requirements during Op Dost)

Experience Gained During OP "DOST" in Turkey

Abhishek Kumar Rai, DC

The earthquakes that hit southern Türkiye and northwest Syria on 6 February 2023 exacerbated difficult conditions in the region and created a large-scale humanitarian crisis. The epicenter of the initial 7.8 magnitude earthquake was just north of the densely populated city of Gaziantep in southern Türkiye, close to the Syrian border. The first shock in the sequence struck at 4:17 a.m. local time on February 6, 2023, with a Magnitude of 7.8 and at a shallow depth of 17.9 km. Numerous aftershocks shook the region for the rest of the morning, including one with a Magnitude of 6.7 just 11 minutes after the first earthquake. Then at 1.24 p.m. local time, a second earthquake occurred with a Magnitude of 7.5, with an epicenter 95 km to the northeast of the first earthquake and at a shallow depth of 10 km.

Immediately the Govt of India moved into action and sent two rescue teams of NDRF to Turkey on 6th Feb. They were deployed at Nurdagi city in Gaziantep province and the third one was flown on 8th Feb 2023 and was deployed in Antakya city of Hatay province. Along with this, a medical team from Indian Army established its field hospital at Iskenderun, Turkey. The Operation was given the name "DOST" as it has a common meaning in both Hindi and Turkish (i.e) Friend. The teams of NDRF were named IND-10 from 8 NDRF Ghaziabad led by Sh Deepak Talwar, DC, IND-11 from 2nd NDRF Kolkata led by Sh V N Parashar, 2IC, and the third IND-12 from 11 NDRF Varanasi was led by Sh Abhishek Kr Rai, DC. The teams which were involved in this life-saving mission in Turkey were self-sufficient in all respect (i.e) they were having all the necessary tools and equipment needed in USAR Ops. We had a full-fledged medical team with a medical officer in the contingent; a canine squad was present, and most important we were carrying our vehicle along. Altogether, the rescue Ops continued for 10 days and the teams returned to the country after a successful mission of saving 02 victims alive and retrieving 85 dead persons. In this way, the rescue mission in Turkey has been a great experience for NDRF since we had never worked in any disaster scenario of this magnitude earlier. Albert Einstein once said, **"**Pure logical thinking cannot yield us any knowledge of the empirical world; all knowledge of reality starts from experience and ends in it**."**

When the move of teams was ordered in the morning of 8th Feb 2023, I being the commander of the IND-12 team from 11 NDRF Varanasi directed the rescuers to load all the items including the required cutting tools in a USAR Ops as per the practice in vogue. The team had a ration of two weeks, we were having winter

clothing with us and were carrying tents for accommodation purposes, but the high-altitude clothing provided to us by the NDRF HQ turned out to be a boon for the rescuers. The team took off for Turkey from the Hindon air base and when the Indian Air Force C-17 flight carrying the IND-12 was about to touch down at the Gaziantep airport, the pilot announced that the temperature outside was -4 degrees celsius. Hearing this, we immediately put on our winter gear since the sub-zero temperature was new for most of us and at Varanasi, the temperature was hovering around 15 degrees Celcius which was in contrast to Gaziantep.

From Gaziantep airport, we left for Antakya, an ill-fated city in the Hatay province of Turkey, which was the most devastated by this earthquake. Crossing the countryside, mountains, and fields and facing a few massive traffic jams enroute, the IND-12 team after nineteen hours of road journey in Turkey covering around 200km distance reached Antakya in the intervening midnight of 9th and 10th Feb 2023. The local disaster management authority (AFAD) helped us with a location for BOO where we started pitching our tents and in this process, we got a rescue call. Half of the team continued with the tentage part and I accompanied the other half to the incident spot along with a local interpreter. On reaching the spot we got a first-hand experience of what happens when an earthquake of Richter scale 7.8 strikes a city. It was a total mess; the city was completely in dark with generators buzzing all around. Most of the residents were leaving their homes, help was pouring in from other parts of the country. The buildings had collapsed in all shapes which we had learned about in our classes. When we reached the spot, the interpreter was the only help in communication. That day we understood that it is immaterial if one knows English, it's equally important for the other guy to understand it too. However, after some discussion, we came to know that we were standing in front of the 12th floor of a 14-story building and we were expected to work on the 3rd floor which had collapsed inside the basement.

Our fight with life and death began at the same moment and applying all the wisdom we had accumulated over the years, the rescuers started their action to save lives. We were in a foreign land with everything devastated around us, the only thing we had in our mind was that we were the ambassadors of our country and it was our sole responsibility to keep the flag of this great country flying high and no act of ours should demean this great feeling. That day, by around 0430 hrs we were able to retrieve the first body and late at night by 2130 hrs, we retrieved three more dead victims. After we were done for the day, we could see the teary eyes of the relatives of the deceased who were expressing their gratitude to us in their local language. The interpreter was translating their meaning but their facial expression and thankfulness were self-revealing. The interpreter told that the man was thanking our nation for its help during this distressful time. That day we realized that service to humanity is the utmost job one can do and we were blessed to be part of one such team.

We continued our journey of life-saving for the next ten days. During this course, we came across several events which shall surely leave a permanent imprint in the life

of each one of us. One such incident happened to me while I was supervising the Ops at a work site and my interpreter who called me 'ABHI' asked me if I knew what was the meaning of my name in Turkish. On my denial of the fact, he told me that in Turkish they call their 'Elder Brother as ABEY' which sounds similar to my name and he told me that we the rescuers were like their elder brother, listening to which I was overwhelmed. He also asked me the reason for our arrival to their country and who had sent us, to which I replied that "**In India, we had a very famous saying of वसुधैव कुटुम्बकम्, which means that the whole world is one family and if something happens to one member of the family, the other members must help".** Listening to this, my interpreter name Turkul (Pronounced as Turul)hugged me. This hug was so contenting that we felt the true meaning and purpose of our service.

While we were returning to our country the heartfelt send-off at the Adana airport by the locals was humbling. We have gathered so much experience and exposure from this Ops that it will be difficult to put it down on paper but as they say that "**An understanding of the successes and failures of the past is important if we are to grow and make progress from now on"** hence the following experiences can help pave the future of our organization.

a) The movement of our teams was considerably swift and all the codal formalities like the issuing of the passport and its entry, custom, immigration clearance, etc were very smooth.
b) Coordination with the Airforce was also well tied up.
c) List of equipment needed in a USAR was prepared beforehand as a team of this unit was very recently involved in similar Ops at Lucknow. The load table and other details were also managed and prepared timely.
d) The winter clothing and kit provided to us by the Hq proved to be a lifesaver since the rescuers were not having ample sub-zero clothing, however, our unit had already arranged some sleeping bags and a cote parka for us.
e) When the going gets tough, the tough get going. These types of long CSSR Ops demand both physical as well as mental strength.
f) The fear of the unknown always lurks around when we are on some foreign soil.
g) This Ops has taught us that if we are determined and have a common goal, we can overcome all the negatives like the sub-zero temperature, the language barrier, Food issues, Water shortage, etc.
h) For most of us, it was our first exposure to an international rescue mission, and, for many of the guys, it was their first-hand experience with a CSSR Ops (Since many rescuers had just completed their basics).
i) We got the know-how of the other agencies working with us in this disaster. It was also an opportunity for us to familiarise ourselves with the equipment, vehicles, and PPEs of the international rescue agencies.
j) The coordination between NDRF, UCC, and the AFAD **(The Disaster and Emergency Management Authority of Turkey)** was excellent.

j) The INSARAG learnings and methodology were implemented in the true sense. All the teams would attend the daily morning and evening meetings at the UCC. Each morning we were allocated new sectors by the coordinating team and debriefing was done in the evening meeting. The daily updates were being reflected on the V-OSSOC.

k) The INSARAG marking was not much successful at many places, since, the day we arrived at Antakya, it was ASR level 3. If at all any team was doing INSARAG marking at some work site, it was being destroyed by the excavators the very next hour.

l) The drivers who had driven on the left side of the Indian roads were now driving on the right side of the Turkish roads. This indeed was a unique experience for them.

m) We were lacking quality tents in that harsh climate and there is a need to review a few of our inventory.

n) We helped one of the teams and some civilians with Indian tents along with providing a few with required medicine. This act of goodwill gesture was well appreciated.

n) The locals were very humble and thankful to us.

o) Last but not least, when we returned, the interaction with the Hon'ble PM was indeed a lifetime experience.

Altogether, the loss to Turkey in form of this huge disaster is repairable but the Op DOST has acted as a healing touch. The exposure and experience gained in this Op will leave a long-lasting imprint in our lives and the bond of humanity and friendship which this Op has created will last forever. It is wise to learn from our mistakes and not to repeat them, hence we must always strive towards incorporating new cutting-edge technologies, and world-class facilities in form of equipment, training, accommodation, and learning.I am sure that, we as flag bearers of our organization will always keep the flag high justifying our slogan.....NDRF...**SAVING LIVES AND BEYOND**...

Abhishek Kumar Rai,
Dy. Commandant
11th Bn NDRF, Varanasi

(Shri Abhishek Kr Rai, DC 11 Bn NDRF was Team Commander of IND-12 in Op Dost in Turkiye)

ऑपरेशन दोस्त भारत सरकार के द्वारा तुर्किये राष्ट्र में भूकंप के दौरान किया गया एक सफल ऑपरेशन है।

उपनिरिक्षक शिवानी अग्रवाल

दिंनाकतीव्रता का भूकंप आया था जिसमें काफी बडे 7.8 सुबह के समय 0417 को 06.02.2023-माल की क्षति हुई थी-स्तर पर जान, एनवीं वाहिनीं से एक 8 मुख्यालय द्वारा 0एफ0आर0डी0 मीडियम टीम कोतुरंत तैयार करने का आदेश मिला | दिं 07.02.2023 .की सुबह बजे 0300, सी-17ग्लोबमास्टर के द्वारा हमें तुर्किये पहुचाया गया, टीम में पाँच महिलायें भी थीं, जिन्होनें सम्पूर्ण ऑपरेशन के दौरान अहम् भूमिका निभाई।

दिंनाक 07.02.2023 -को टीम नूरदाह पहु (तुर्किये)चीं, जहां हमें अपना बैसकैम्प स्थापित करना था | चूंकि वह भूकंप का ऐपीसेंटर था, इस वजह से वहां बैसकैम्प के लिये एक सुरक्षित जगह को चुनना व बैसकैम्प स्थापित करना अपने आप में एक बडी चुनौती थी, लेकिन इस चुनौती को टीम नें बहुत अच्छे से निभाया व रात के समय ही बैसकैंप स्थापित किया गया, जिसमें महिलओं ने पुरुषों के साथ कंधे से कंधा मिलाकर कार्य किया |

अगले दिन दिनांक 08.02.2023-को महिलायें भी रेस्क्यू ऑपरेशन में ऑपरेशन साइट पर रेस्क्यू के लिये गयीं, जहां उन्होंने रेस्क्यू कार्य में चाहें वह बिल्डिंग का असेसमेंट हो या भारी इक्विपमेंट के दौरान मलबे को हटाना, तमाम खतरों के होते हुए भी टीम के साथ अपना योगदान दिया । ऑपरेशन में रेस्कयू के साथसाथ वहां के सीविल लोगों के परिवार--जनों को सम्भालना और उन्हे समझाना । उनके दर्द को समझना भी बहुत महत्वपूर्ण होता है, जिसमें महिलाओं ने विशेषकर अपना योगदान दिया।

भाषा का ज्ञान न होने के कारण टीम को वहां के लोगों की बातें समझ नहीं आ रहीं थीं। चूकिं महिलओं के पास संवेदनाओं को अनुभव करनें की क्षमता जन्म से ही होती है, जिस वजह से वहां के लोगों का दर्द बिना कहे भी समझ पा रहीं थीं।

मैं एक घटना को साझा करना चाहुंगी। दिनांक 09.02.2023-की यह घटना है, ऑपरेशन साइट पर एक महिला के दो बच्चे व उसके पति कोलेप्स बिल्डिंग के नीचे दबे हुए थे, सभी प्रकार से सर्च करने के उपरांत हमें ज्ञात हुआ की वहां पर कोई भी जीवित अवस्था में नहीं बचा है, जिसके उपरांत हमें सीविल अथोरिटी के द्वारा अन्य साइट पर जाने को कहा, लेकिन जब यह बात उस

महिला को ज्ञात हुई तो वह रोने लगी, व अपने शब्दों में कुछ कहने लगी, उसकी भाषा तो हम समझ नही पा रहे थे, परन्तु महिला होने की वजह से हम महसूस कर पा रही थे, जिसके बाद हमने अनुवादक को उसके बारे में पूछा तो उसने बताया की महिला कह रही हैं कि हमारे लिये पहले अल्लाह है उसके बाद वर्तमान समय में आप है | कृपया करके मेरे परिवार-जनों को आप निकाल दीजिये, उसके इन शब्दों को सुन कर हम साइट को नही छोड सके व घंटों के बाद 6-5 बिना हैवी मशीनरी के उसके परिवार-जनों के मृत शरीर को सम्मान के साथ बाहर निकाला ।

जिस भी साइट पर महिला को रेस्कयू किया जाता था, उसमें महिलओं ने अहम् भूमिका निभाई | चूकिं वहां के कल्चर के अनुसार महिलाओं को रेस्क्यू करने के लिये महिला रेस्क्यूअर की ही आवश्यकता होती थी। जिस वजह से वहां पुरुष रेस्क्यूअर काम नहीं कर सकते थे, वहां महिला रेस्क्यूअर ने बहुत ही निष्ठा व मेहनत से काम किया तथा महिलाओं को सम्मान के साथ बाहर निकाला।

महिलाओं के एक अन्य स्वरुप जिसे हम 'अन्नपूर्णा' के नाम से भी जानते है, इसका जीता जागता उदाहरण महिलाओं के द्वारा तुर्किये में पेश किया गया । पूरे दिन तुर्कीए ऑपरेशन में काम करके लौटनें के बाद खाना बनानें में भी महिलायें अपना योगदान देती थीं।

ऑपरेशन के दौरान महिलाओं द्वारा किये गये कार्य को वहां के लोगों व साथ ही विश्व के लोगों द्वारा भी सराहा गया है। आज महिलायें भविष्य में किसी भी प्रकार का ऑपरेशन करने में सक्षम हो चुकी है।

उपनिरिक्षक शिवानी अग्रवाल
8वीं वाहिनी राष्ट्रीय आपदा मोचन बल

(SI Shivani Agarwal was one of the five Mahila Rescuers to accompany the NDRF India Contingent to Turkiye for Op Dost)

Press Coverage of OP "Dost" by NDRF

'INDIA STRENGTHENED IDENTITY AS SELFLESS COUNTRY'

PM hails Indian relief teams' work in earthquake-hit Turkey

OUR CORRESPONDENT

NEW DELHI: Prime Minister Narendra Modi on Monday lauded the Indian assistance and disaster relief teams deployed in quake-hit Turkey and Syria for making India "proud", and said it has in the last few years strengthened its identity not just as a self-sufficient but a selfless country as well. Three teams of the National Disaster Response Force (NDRF) were sent to provide help to the quake-hit region on February 7 following Prime Minister Modi's directive to offer all possible assistance under "Operation Dost".

Addressing these personnel following their return, Modi said, "You have done great service to humanity and made India proud."

"We consider the world as one family and see it our duty to quickly help any member in crisis," he told the relief teams, asserting that India rushes to help in humanitarian crisis irrespective of the country affected by it. India's quick help to Turkey also drew attention as the western Asian country has often in the past backed Pakistan on issues of conflict with India. Highlighting the importance of quick response during a natural calamity, Modi said the speedy response of the NDRF teams in Turkey drew the attention of the entire world. He said that the quick response highlights the preparedness and training skills of the team.

"On the basis of my experiences in these calamities, I can appreciate your hard work, spirit and emotions. Today I salute you all," the prime minister said. The Indian Army's medical team had also been deployed for providing extensive services to a large number of earthquake-hit people.

Modi said India has strengthened its identity in the last few years as a country of not only self-sufficiency but also selfless in rushing to help other countries whenever any crisis hit them. He said India has always found ready as the first responder whenever there is a crisis in the world.

"We have to strengthen our identity as the world's best relief and rescue team," he added.

India's quick response during the earthquake has attracted the attention of the whole world and it is a reflection of the preparedness of our rescue and relief teams, the prime minister said.

Citing Indian help to other countries hit by disasters or any other crisis, be it Nepal, Ukraine or Afghanistan, he said, "Wherever we reach with the 'Tiranga', there is an assurance that now that the Indian teams have arrived, the situation will start getting better."

India was one of the first responders when the earthquake hit Turkey and Syria, he said, underlining India's commitment to humanity.

He gave examples of earthquakes in Nepal and the crisis in the Maldives and Sri Lanka and said that India was the first to come forward to help. He noted that the trust of other countries is also increasing in the Indian forces as well as the NDRF. In a tweet, Modi said their efforts in disaster response and relief measures have been commendable.

Earlier in the day, Ministry of External Affairs Spokesperson Arindam Bagchi said the Indian Army's medical team deployed under 'Operation Dost' in Turkey has touched down in India.

The 99-member self-contained team successfully set up and ran a fully equipped 30-bedded Field Hospital in Iskenderun, Hatay, attending to nearly 4,000 patients round the clock, he said.

Prime Minister Narendra Modi interacts with the human assistance and disaster relief personnel who were a part of 'Operation Dost', in New Delhi, on Monday PTI

Highlights

- Three teams of the National Disaster Response Force (NDRF) were sent to provide help to the quake-hit region on February 7 following Prime Minister Modi's directive to offer all possible assistance under "Operation Dost"
- Addressing the personnel who had returned from quake-hit Turkey, Modi said, "You have done great service to humanity and made India proud"
- India's quick help to Turkey also drew attention as the western Asian country has often in the past backed Pakistan on issues of conflict with India

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प्रधानमंत्री ने ऑपरेशन दोस्त में शामिल कर्मियों से संवाद किया

त्रासदी में तिरंगा लोगों की उम्मीद बना : मोदी

संबोधन

तुर्किए से लौटी मेडिकल टीम

भारत ने चलाया ऑपरेशन

अमेरिकी प्रतिनिधिमंडल से संबंधों को लेकर चर्चा की

भारत की जूली-रोमियो ने 6 साल की बच्ची को बचाया

तुर्किये के नूरदागी में भारत से NDRF की टीम के साथ गए दो स्निफर डॉग्स जूली और रोमियो ने कमाल कर दिया है। जहां मशीनें फेल हो गई, वहां इन दो डॉग्स ने छह साल की बच्ची की जान बचा ली। दरअसल, स्निफर डॉग जूली ने एक जगह मलबे में भौंकना शुरू कर दिया। एनडीआरएफ के जवान समझ गए कि जूली को मलबे में किसी जिंदा व्यक्ति के संकेत मिले हैं। इसके बाद दूसरे डॉग रोमियो को भी उसी जगह भेजा गया तो उसने भी भौंकना शुरू कर दिया। इसके बाद एनडीआरएफ के जवानों को पता चल गया कि यहां कोई जिंदा व्यक्ति मलबे में फंसा हुआ है। जवानों ने उसी जगह सावधानी से मलबा हटाना शुरू किया तो छह साल की बच्ची वहां से जीवित मिली। बच्ची की पहचान छह साल की बेरेन के रूप में हुई है।

भारत ने अपनी पहचान आत्मनिर्भर और स्वार्थरहित देश की बना ली : पीएम मोदी

तुर्किए से लौटे बचाव व राहत दल से मिलकर प्रधानमंत्री ने की प्रशंसा

नई दिल्ली, प्रेट्र: प्रधानमंत्री नरेन्द्र मोदी ने भूकंप पीड़ित तुर्किए से लौटे भारतीय बचाव दल से मुलाकात कर उनके काम की जमकर प्रशंसा की। उन्होंने एनडीआरएफ की टीमों से मुलाकात के दौरान कहा कि पिछले कुछ सालों में भारत ने अपनी पहचान आत्मनिर्भर और स्वार्थरहित देश की बना ली है। विश्व में कहीं भी संकट होने पर भारत हमेशा सबसे पहले मदद के लिए आगे आने को तैयार है।

तुर्किए से लौटे अधिकारियों से सोमवार को बातचीत में पीएम मोदी ने कहा कि आपने मानवता की बहुत बड़ी सेवा की है और भारत को गौरवान्वित किया है। हम विश्व को एक परिवार के रूप में देखते हैं और किसी सदस्य के संकट में आने पर उनकी तत्काल मदद करना हमारा कर्तव्य है। उन्होंने कहा कि भारत ने पिछले कुछ सालों में अपनी पहचान को सशक्त करते हुए एक आत्मनिर्भर देश के तौर पर खुद को स्थापित किया है। अपना देश स्वार्थरहित भी है जो अन्य देशों की मदद करता है। हमें विश्व के सर्वश्रेष्ठ राहत और बचाव दल के तौर पर अपनी पहचान को सशक्त बनाना है।

- बोले- विश्व में कहीं भी संकट होने पर भारत सबसे पहले मदद को तत्पर
- पीएम ने कहा- हम विश्व को एक परिवार के रूप में देखते हैं

भूकंपग्रस्त तुर्किए में 'आपरेशन दोस्त' के अंतर्गत राहत-बचाव अभियान चलाकर स्वदेश लौटे भारतीय दल से सोमवार को नई दिल्ली में प्रधानमंत्री नरेन्द्र मोदी ने भेंट की। प्रेट्र

अमेरिकी सीनेटरों के दल से मिले मोदी

नई दिल्ली, आइएएनएस: अमेरिकी सीनेटर चार्ल्स शूमर के नेतृत्व में नौ सीनेटरों वाले अमेरिकी संसदीय प्रतिनिधि मंडल ने सोमवार को यहां प्रधानमंत्री नरेन्द्र मोदी से मुलाकात की। प्रधानमंत्री मोदी ने भारत आए अमेरिकी सांसदों के प्रतिनिधि मंडल का गर्मजोशी से स्वागत किया। उन्होंने भारत-अमेरिका के द्विपक्षीय संबंधों में पार्टी लाइन से इतर अमेरिकी कांग्रेस के सहयोग और समर्थन की सराहना की। उन्होंने हाल में फोन पर अमेरिकी राष्ट्रपति जो बाइडेन से हुई बातचीत का उल्लेख किया और दोनों देश वैश्विक स्तर पर भारत-अमेरिकी संबंध और बढ़ाने पर भी उम्मीद जताई।

तुर्किये-सीरिया में फिर लगे भूकंप के झटके

अंकारा, रायटर : भूकंप से त्रस्त तुर्किये और सीरिया में सोमवार को फिर से धरती हिली। भयभीत लोग भागकर खुले में आ गए। 6.3 की तीव्रता वाले भूकंप से दोनों देशों के उन सीमावर्ती इलाकों को नुकसान हुआ है जहां छह फरवरी को भी भूकंप ने तबाही मचाई थी। ताजा झटकों से पिछले भूकंप से जर्जर हुई कई इमारतें ढह गईं। इससे राहत कार्य में बाधा आई है। ताजा झटकों से बड़े नुकसान की खबर नहीं है लेकिन इस महीने दैवीय आपदा में रहने वालों की संख्या 47 हजार को पार कर गई है। इसमें से तुर्किये में 41,156 लोग मरे हैं।

भूकंप का केंद्र तुर्किये-सीरिया सीमा पर दो किलोमीटर की गहराई में था और इसके झटके इजरायल, मिस्र और लेबनान में भी महसूस किए गए। सबसे ज्यादा असर तुर्किये के अंताक्या शहर में महसूस किया गया। यहां छह फरवरी को 7.8 की तीव्रता वाले भूकंप के झटके लगे थे और जान-माल का भारी नुकसान हुआ था।

डॉ. सुशील कुमार ने बताया कि उत्तराखंड हिमालय भूकंप के जोन में आता है। लेकिन भूकंप किस जोन में आएगा, इसकी कोई भविष्यवाणी नहीं कर सकता है। जहां तक उत्तराखंड में धरती के नीचे की सतह पर पैदा होने वाले तनाव का सवाल है, तो यह लंबे समय से मुक्त नहीं हुआ है। इसलिए यह तनाव ऊर्जा के रूप में सतह के नीचे लगातार इकट्ठा हो रहा होगा। हमारे हाथ में यही है कि हम भूकंप से निपटने की तैयारी रखें। विकास के जो भी काम हों, उसमें भूकंप की आशंका का खयाल रखा जाए। सड़क काटने जैसे कामों में सुरक्षात्मक दीवार जरूर बनें। इमारतों के निर्माण में भूकंपरोधी तकनीक का इस्तेमाल हो।

तुर्किये में लोगों ने मांगी बचाव दल की निशानियां, कर्मियों ने सौंपे बैज

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नई दिल्ली: NDRF के बचाव अभियान से तुर्किये में लोग इतने प्रभावित हुए कि उन्होंने इस टीम की निशानियां हमेशा अपने पास संजोकर रखने का वादा किया। एनडीआरएफ टीम की अगुआई कर रहे कमांडेंट गुरमिंदर सिंह बताते हैं कि जब ऑपरेशन खत्म करके हम लौटने लगे तो लोगों ने हमारे बैज निशानी के तौर पर ले लिए। यहां तक कि कुछ लोग मेरी पगड़ी भी मांग रहे थे। इस टीम के सेकंड इन-कमांड वी.एन. पाराशर को वहां की एजेंसी में तैनात लोगों ने अपने बैज दे दिए, ताकि तुर्किये की यादें भी भारतीय टीम के लोगों के जेहन में जिंदा रहें।

NDRF के डायरेक्टर जनरल ने कहा कि आपदा में लोगों को महिला सदस्यों की भूमिका

भूकंप से छह और मरे, 700 के करीब घायल हुए

एएफपी, अंताक्या (तुर्किये): तुर्किये और सीरिया सोमवार रात आए 6.4 तीव्रता के भूकंप से एकबार फिर दहल उठे। दोनों ही देशों में इस जलजले ने 6 लोगों की जान ली। वहीं, 700 के करीब घायल हुए हैं। भूकंप का केंद्र तुर्किये के दक्षिणी प्रांत हताय का अंताक्या शहर था। इसके झटके पड़ोसी उत्तरी सीरिया तक महसूस किए गए। स्थानीय प्रशासन का कहना है कि इस भूकंप में कई ऐसी इमारतें गिर गईं, जो 6 फरवरी को आए विनाशकारी भूकंप से कमजोर हो गई थीं। इससे कई लोग मलबे में फंस गए। तुर्किये में 300 से ज्यादा लोगों को अस्पताल में भर्ती कराया गया है। वहीं सीरिया में ऐसे लोगों की तादाद 200 से ज्यादा है।

NDRF को सीख, बचाव टीम में होंगी ज्यादा महिलाएं

आपदा में पांच महिला सदस्यों की बड़ी भूमिका रही।

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नई दिल्ली: तुर्किये के भूकंप में राहत और बचाव मिशन से लौटी नैशनल डिजास्टर रिस्पॉन्स फोर्स (NDRF) की टीमों को वहां पर काफी कुछ सीखने को भी मिला है। एनडीआरएफ वहां की स्थिति और अनुभव के आधार पर अपनी टीमों को बेहतर बनाने में जुट गया है। इस फोर्स के महानिदेशक अतुल करवल का कहना है कि पहली बार विदेश के इस मिशन में 5 महिलाएं भी शामिल की गईं। जिस तरह से इन महिलाओं ने वहां बचाव अभियान में मदद की, उसे देखते हुए NDRF की टीमों में ज्यादा महिलाओं को शामिल करने की तैयारी है। अभी एनडीआरएफ की 16 बटालियन में महज 250 महिलाएं हैं। अब हर बटालियन में इनकी संख्या 108 करने की तैयारी है यानी 16 बटालियन में महिलाओं की संख्या 1800 तक की जाएगी। डायरेक्टर जनरल अतुल करवल ने कहा कि महिला टीम आपदा में फंसी महिलाओं-बच्चों को निकालने, कम्युनिकेशन, पैरामेडिकल और इक्विपमेंट चलाने जैसी भूमिकाओं में अहम भूमिका निभाती हैं। डायरेक्टर जनरल करवल ने कहा कि तुर्किये में 'ऑपरेशन दोस्त' के वक्त टीमों को भेजते समय कई सदस्यों के पास पासपोर्ट नहीं थे। अब कुछ टीमों के लिए पहले से रेगुलर पासपोर्ट बनवाए जाएंगे, ताकि विदेश में ऐसे किसी ऑपरेशन के लिए जाते वक्त समय बर्बाद न हो।

बचाव टीमों के पहले से बनवाए जाएंगे पासपोर्ट

The - Tribune

NDRF rescues 6-yr-old girl, scales up operations

TRIBUNE NEWS SERVICE

NEW DELHI, FEBRUARY 9

A rescue team of the National Disaster Response Force (NDRF) rescued a six-year-old girl from under the debris at Gaziantep in quake-hit Turkey on Thursday. India has sent three teams of the NDRF to Turkey for rescue and relief operations.

"Standing with Turkey in this natural calamity, India's NDRF HQ is carrying out rescue and relief operations at ground zero. Team IND-11 successfully retrieved a six-year-old girl from Nurdagi, Gaziantep, today," the spokesperson of the Ministry of Home Affairs tweeted, along with a video of the girl and how she was rescued.

Union Home Minister Amit Shah tweeted, "In the rescue operations in Turkey, Team IND-11 saved the life of a six-year-old girl, Beren, in Gaziantep city. Under the guidance of PM Modi, we are committed to making the NDRF world's leading disaster response force."

India has launched "Operation Dost" to extend assistance to Turkey as well as Syria following Monday's devastating earthquake that has killed more than 19,300 persons in the two countries so far. Meanwhile, a field hospital set up by the Indian Army in Hatay province in Turkey has become operational with surgical and emergency wards.

HELP UNDER 'OPERATION DOST'

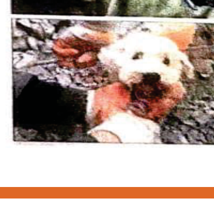
5	135	3	250	7	4
C-17 IAF AIRCRAFT	TONNES RELIEF MATERIAL	NDRF TEAMS	PERSONNEL	FOUR-WHEELED VEHICLES, TRUCKS	CANINES

19,300 TURKEY, SYRIA QUAKE TOLL

Relief material for Turkey being loaded in a military aircraft at Hindon Airbase, Ghaziabad. ANI

SYRIAN PREZ SLAMS WEST FOR POLITICS OVER AID

- Twitter suspended verified account of Syrian President Bashar al-Assad after he criticised West's withholding of aid to his country while generously sending it to fellow NATO member Turkey
- "The West says they didn't send aid because Syria didn't ask for it. Are the pictures not enough? Or do they want Syrian people to beg on broken legs?" he said in a tweet
- India, Iran, Iraq, Algeria, the UAE, Lebanon, Jordan and Saudi Arabia have promptly send aid to both Turkey and Syria. TNS



(From top) An Indian Army doctor attends to a child in Hatay; Israeli forces rescue a 14-year-old girl in Kahramanmaras; and a dog rescued at Iskenderun. PTI/REUTERS

OP Dost in the Social Media

NDRF Retweeted

Narendra Modi @narendramodi · Feb 20

India government official

Glimpses from the interaction with the human assistance and disaster relief personnel who were a part of 'Operation Dost.'

NDRF Retweeted

Amit Shah @AmitShah · Feb 9

Proud of our NDRF.

In the rescue operations in Türkiye, Team IND-11 saved the life of a six-year-old girl, Beren, in Gaziantep city.

Under the guidance of PM @narendramodi, we are committed to making @NDRFHQ the world's leading disaster response force. #OperationDost

Narendra Modi @narendramodi

India government official

Anguished by the loss of lives and damage of property due to the Earthquake in Turkey. Condolences to the bereaved families. May the injured recover soon. India stands in solidarity with the people of Turkey and is ready to offer all possible assistance to cope with this tragedy.

> **Recep Tayyip Erdoğan** @RTErdogan · Feb 6
> Türkiye devlet görevlisi
> Kahramanmaraş'ta meydana gelen ve ülkemizin pek çok yerinde hissedilen depremden etkilenen tüm vatandaşlarımıza geçmiş olsun dileklerimi iletiyorum. İlgili tüm birimlerimiz AFAD koordinasyonunda teyakkuz halindedir.
> Show this thread

NDRF @NDRFHQ · Feb 17

NDRF teams deployed under #OperationDost for #Earthquake #RescueOps in Türkiye returns back.
NDRF worked hard in contributing to alleviate the huge tragedy in Turkey's earthquake.

#TurkeySyriaEarthquake
#SavingLivesAndBeyond

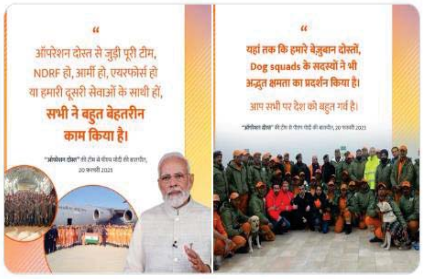
@PMOIndia
@HMOIndia
@MEAIndia
@PIBHomeAffairs

NDRF Retweeted

PMO India @PMOIndia · Feb 20

India government organization

The efforts of entire team involved in rescue and relief measures during #OperationDost is exemplary.



NDRF Retweeted

Arindam Bagchi @MEAIndia · Feb 8

India government organization

MoS @MOS_MEA visited Hindon Airbase today to see off the sixth @IAF_MCC flight under #OperationDost.

Interacted with @NDRFHQ team going to Türkiye to augment the ongoing search and rescue efforts.

Joined by Ambassador @firatsunel @TurkEmbDelhi.

NDRF Retweeted

Dr. S. Jaishankar @DrSJaishankar · Feb 8

India government official

Indian @NDRFHQ teams have now reached Gaziantep and commenced search and rescue operations.

Wish them the very best in their efforts.

#OperationDost

NDRF Retweeted

Sanjay Verma @SanjayVermaIFS · Feb 17

#OperationDost adds a glorious chapter to our effective Humanitarian Assistance & Disaster Relief Diplomacy. India was amongst the first to respond, in strength, and stayed long to help Turkiye. Kudos @NDRFHQ @IndianAirforce and 60 Para Field Hospital @MEAIndia @IndianDiplomacy

> **NDRF** @NDRFHQ · Feb 17
> NDRF teams deployed under #OperationDost for #Earthquake #RescueOps in Türkiye returns back.
> NDRF worked hard in contributing to alleviate the huge tragedy in Turkey's earthquake.
>
> #TurkeySyriaEarthquake
> #SavingLivesAndBeyond
>
> @PMOIndia
> @HMOIndia
> @MEAIndia
> @PIBHomeAffairs

NDRF @NDRFHQ · Feb 6

#आपदा_सेवा_सदैव_सर्वत्र 🙏🙏

> **India in Türkiye** @IndianEmbassyTR · Feb 6
> India government organization
> In light of the Hon'ble Prime Minister's instructions, Search & Rescue Teams of NDRF and Medical Teams along with relief material would be dispatched immediately in coordination with the Government of the Republic of Türkiye.
>
> Read Here: mea.gov.in/press-releases...

NDMA India | राष्ट्रीय आपदा प्रबंधन प्राधिकर... @ndmain... · Feb 28

.@ndmaindia conduct the debriefing session on Humanitarian Assistance and Disaster Relief (HADR) Mission to #Turkiye and Syria #Earthquake disaster.
#OperationDost
#DisasterRelief
Show this thread

NDRF @NDRFHQ · Feb 10

Duty of compassion and humanity 🙏

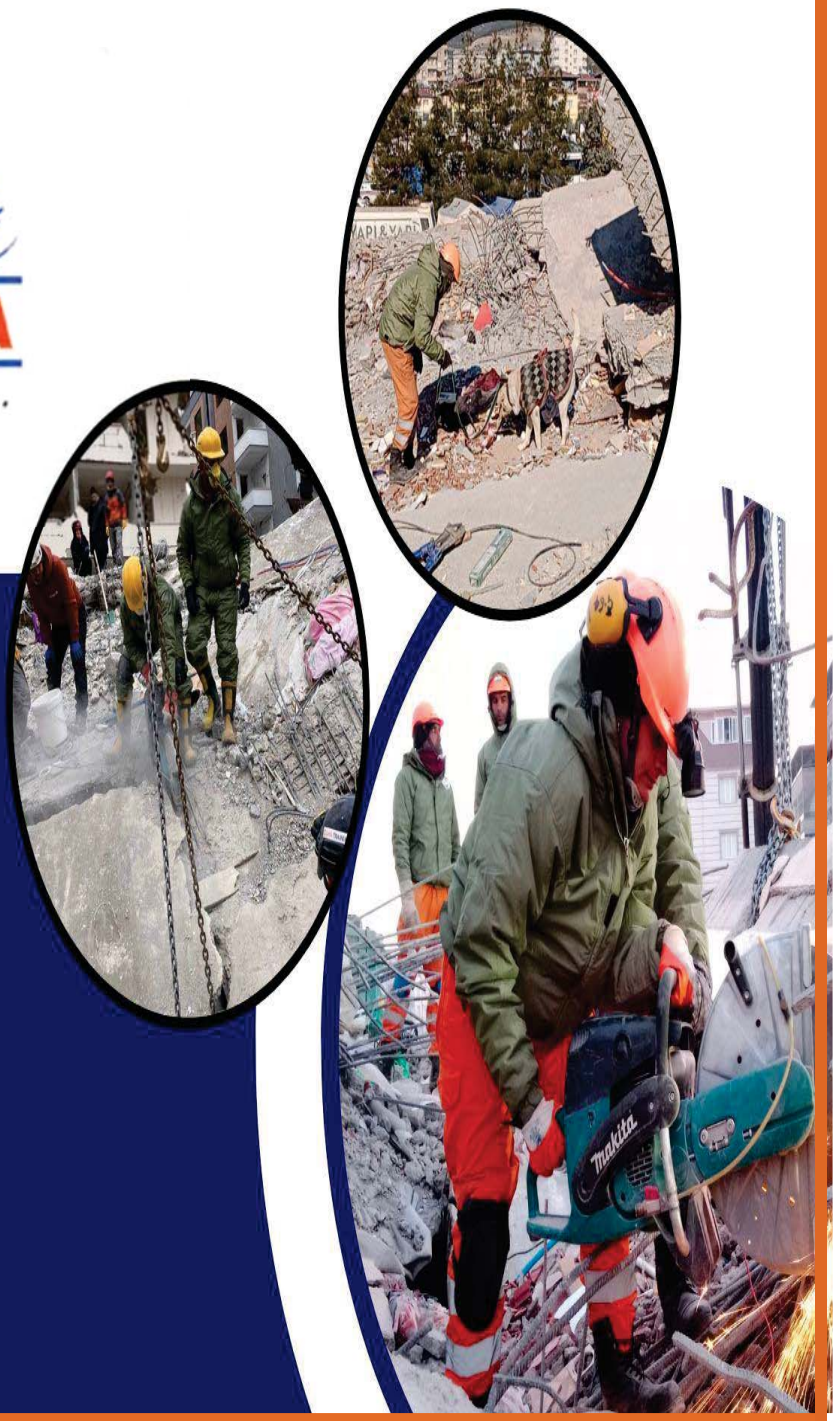
#OperationDost

> **डीडी न्यूज़** @DDNewsHindi · Feb 9
> तुर्किए पहुंचने के साथ ही #NDRF के जवान अपने अदम्य साहस का परिचय देते हुए ,मलबों में फंसी हुई ज़िंदगियों को बचाने में जुट चुके है
>
> @NDRFHQ @HMOIndia @MEAIndia @PMOIndia

GLIMPSES OF OP 'DOST'

NDRF · INDIA

Saving Lives & Beyond...



"We cannot stop natural disasters but we can arm ourseleves with knowledge so many lives wouldn't be lost if there was enough disaster preparedness."