



Second Meeting of National Platform for Disaster Risk Reduction

15-16 May 2017

Vigyan Bhawan, New Delhi

THEME:

**Disaster Risk Reduction for Sustainable Development –
Making India Resilient by 2030**

PROCEEDINGS

Organized by

Ministry of Home Affairs, Government of India

In collaboration with

**National Institute of Disaster Management, and
National Disaster Management Authority, Govt. of India**

BACKGROUND

As a part of ongoing efforts for participatory decision making in the field of Disaster Management, the Government of India constituted a multi-stakeholder National Platform for Disaster Risk Reduction (NPDRR) vide Government's Resolution No.47-31/2012-DM-III dated 26th February 2013. NPDRR is chaired by the Union Home Minister and Minister of State in- charge of Disaster Management in the Ministry of Home Affairs is the Vice Chairperson of NPDRR. The other members of NPDRR are 15 Cabinet Ministers, Vice Chairman, NITI Aayog, Minister of each State Government/ UT dealing with the subject disaster management, representatives of Local Self-Governments and Parliament, ex-officio members, Heads of institutions of national importance, persons representing industry, media representatives, civil society organizations and international representatives.

NPDRR aims to bring together the whole range of India's disaster risk community from Government, Parliamentarians, Local Self Governments, Media, International Organizations, NGOs, local community representatives, scientific and academic institutions and corporate businesses etc. NPDRR provides a national platform for sharing of experiences, views and ideas, present findings of research and action and explore opportunities for mutual cooperation in the field of Disaster Risk Reduction (DRR). The output from NPDRR will offer a strategic direction and a road map for the formulation of our future national action plans on DRR.

The first meeting of NPDRR was organized on 13-14 May 2013 in New Delhi on the theme, "*Mainstreaming DRR in Development: From Risk to Resilience*". The meeting was inaugurated by the then Hon'ble Prime Minister.

The 2nd meeting of NPDRR was held on 15-16 May 2017 at Vigyan Bhawan, New Delhi, on the theme "Disaster Risk Reduction for Sustainable Development: Making India Resilient by 2030". It was inaugurated by the Union Home Minister Shri Rajnath Singh. Along with the members of the NPDRR, about 1000 experts /delegates including representatives from central ministries, state governments, institutions of national importance, academia, universities, civil society, UN Organizations, elected representatives from urban local bodies and Panchayat and media participated in the meeting. The meeting deliberated on emergent issues, with special focus on Prime Minister's Agenda 10 on Disaster Risk Management and its relevance in integrated implementation of Sendai Framework for Disaster Risk Reduction (SFDRR), Paris Climate Agreement and Sustainable Development Goals (SDGs).

Conference Proceedings

The 2nd meeting of the NPDRR was held on 15-16th May 2017 at Vigyan Bhawan, New Delhi on the theme 'Disaster Risk Reduction for Sustainable Development: Making India Resilient by 2030' under the chairmanship of Union Home Minister, Shri Rajnath Singh.

I. Inaugural Session

The inaugural session was presided by the Union Home Minister Shri Rajnath Singh. Dr. Harshwardhan, Union Minister of Science and Technology, Union Ministers of State for Home Affairs, Shri Kiren Rijiju, and Shri Hansraj Gangaram Ahir, Additional Principal Secretary to Prime Minister Dr. P. K. Mishra, Union Home Secretary Shri Rajiv Mehrishi, and Member of National Disaster Management Authority Shri R. K. Jain, were other dignitaries of the session.



Fig. 1: Hon'ble Minister Shri. Rajnath Singh presiding Inaugural Session

Speaking on the occasion, Shri Rajnath Singh said that NPDRR is a multi-stakeholders National Platform for sharing the experiences in disaster management and for making a collective effort for disaster risk reduction. He emphasized the role of prevention and mitigation in reducing disaster losses. He pointed out that 1 extra rupee spent on disaster preparedness and mitigation could save 10 rupees of disaster loss. He recollected global agreements like Sendai Framework, Sustainable Development Goal and Paris Agreement on Climate Change (COP21) for disaster risk reduction. He highlighted the ongoing efforts of Governments in disaster risk reduction like preparation of disaster management plan and policy, development of early warning systems, construction of cyclone shelters and saline embankments, raising disaster response forces at national and state levels and capacity building of communities through continuous training and awareness programme.



Fig. 2: Hon'ble Minister Shri. Rajnath Singh during Inaugural ceremony

He also shared the recent initiatives of Government of India (GoI) for increasing the regional co-operation, like launching of dedicated satellite for South Asian Countries, Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) 2016 and setting up of SAARC disaster management centre. He appealed to the stakeholders to prevent "preventable death" caused by disasters and also prepare an action plan for vulnerable

communities of societies. As sustainable developments are closely related with better disaster management, he urged all stakeholders to make all development initiatives disaster resilient. He informed that 14 pre-events were organized as build up to this meeting.

Shri Kiren Rijiju, Union Minister of State for Home Affairs, informed that India is a disaster prone country and stressed the need to continuously enhance our preparedness and risk reduction measures. He referred to 10 point-agenda for disaster risk reduction given by Hon'ble Prime Minister of India during AMCDRR 2016 and urged the participants to draw concrete plans to implement this agenda into reality. He requested the disaster managers to give proper consideration to geo-physical condition of the particular State/UT, while making any action plan for disaster risk reduction.

Shri R. K. Jain, Member, National Disaster Management Authority (NDMA) in his address highlighted the achievements of Government of India in disaster risk reduction.

A film emphasizing the theme that Disaster Management is Everybody's Business was screened. The film was prepared by Disaster Management Division, MHA highlighting the consultative spirit of NPDRR.

Further, version 3.0 of National Database on Emergency Management (NDEM) was launched by Shri Rajnath Singh. This version of 3.0 is device independent and browser independent and equipped with latest resource mapping tools and audio and video conference facilities.

2. Ministerial Session

Ministerial Session was chaired by the Union Home Minister Shri Rajnath Singh. The Union Minister of Women and Child Development Smt. Maneka Sanjay Gandhi, Union Minister of Agriculture and Farmers Welfare Shri Radha Mohan Singh, Ministers of State for Home Affairs, Shri Hansraj Gangaram Ahir & Shri Kiren Rijiju and Ministers from States of Haryana, Jharkhand, Maharashtra, Rajasthan, Tamil Nadu and Uttar Pradesh. Prof Jagdish Mukhi, Lt. Governor of Andaman and Nicobar Islands also participated.



Fig.3: Ministerial Session chaired by Union Home Minister.

At the outset the Hon'ble Home Minister, Shri Rajnath Singh welcomed all the participants and hoped that the session would bring forth actionable points for DRR. The major points from his address were:

- India is very vulnerable to disasters. Areas hitherto considered safe are now being ravaged by disasters. High population growth, rapid urbanization and flawed development practices have increased people's vulnerability. As a nation, we should take all measures to minimize risks.

- For the nation to be resilient, no state can remain at the background. All technical assistance and guidance will be given to the states from the Centre as we feel that DRR should be taken up in the spirit of partnership for a resilient nation at all levels.
- State Disaster Management Authorities (SDMAs) need to play a more proactive role in DRR. A dedicated disaster risk force needs to focus on capacity building at all levels including the community. The Aapda Mitra is good initiative, so is the National Cyclone Risk Management Project of the NDMA. An Earthquake Risk Management Project is also being designed.
- Disaster Risk Reduction (DRR) should be inclusive, to understand and deal with risks faced by women, children, disabled and others.
- According to the first priority of Sendai Framework, for understanding risk, a database of risk needs to be developed and upgraded continuously.
- A national DM Policy has been notified. States are requested to frame their policies keeping with the ethos of the national policy. DRR mechanism should be strengthened to include all stakeholders for a resilient nation.

Union Minister of Women and Child Development, Smt. Maneka Sanjay Gandhi highlighted the need to promote the landscape approach in disaster risk management and made following suggestions to improve DRR:

- There are four major disasters that have a pan-nation impact viz. flood, earthquake, drought and cyclone. Underlying factors of risk need to be identified and subsequently reduced.
- For cyclones, identify areas prone to cyclones and plant and nurture mangroves. Countries like Malaysia, Philippines have done it. About 87% of mangroves are lost in Gujarat in the last decade. States like Kerala, Andaman & Nicobar and Mumbai can fight sea water ingress and impact of cyclones by protecting mangroves.
- For floods, stabilization of watershed is imperative. Managing the upper catchment is important to prevent river bank erosion and meandering (leading to change in courses).
- Stabilization of river banks from the upper catchment to the lower estuarine regions is important.
- Rescue of animals is not factored in the rescue protocols after disasters strike. Animal rescue is left to NGOs and community. Animals are livelihood option for facilitating recovery. So factoring in animal rescue is important for community recovery.

Union Minister of Agriculture and Farmers Welfare, Shri Radha Mohan Singh in his comments made following major suggestions:

- Natural calamities are the primary responsibility of the states, with the Government of India providing assistance in material and financial resources.

- Policy support to states is also provided. Financial support has been increased from Rs 33, 000 crores in 2010-15 to 61,000 crores during 2015-2020.
- Food security needs to be inbuilt into natural disaster management through programmes like Employment Guarantee Schemes and Pradhan Mantri Fasal Bima Yojana.
- Agricultural research should be tailor-made to assist farmers in adopting innovative agricultural practices.

Captain Abhimanyu, Minister of Finance, Revenue & Disaster Management etc. in Haryana flagged the following points

- All DRR initiatives in Haryana taken up as per Sendai Framework. Plans for all districts are already prepared.
- Social media application platforms are used for capacity building, disaster information and warning.
- Drought mitigation techniques in agriculture are made available to farmers. Fastest remuneration and cash assistance to farmers ensured after last disaster.
- There has to be an integrated approach to DRR through technology. However, digital platforms have to be robust and resilient to cyber attacks for it to be effective.
- Resource pooling is required in a Public Partner Partnership (PPP) mode to pool in rescue equipment for use during disasters. Haryana is ready to pool in its resources, private sector entities are also ready to contribute.

Shri Chandreswar Prasad Singh, Minister from Jharkhand, in his address flagged the following issues:

- In Jharkhand, National Disaster Response Force has taken up mock drills in schools and communities.
- In the State, lightning arresters have been made mandatory for every building of G+2 and above.
- There is need to increase farmers' compensation after disasters.
- Lightning, heat waves, climate change adaptation are issues that need to be taken up in earnest.
- A National Mine Disaster Management Institute should be set up in Dhanbad for reducing risks of coal mine disasters
- A centre of IMD also needs to be established at Dhanbad

Shri Chandrakant Patil, Minister of Revenue, Rehabilitation and Relief, Public Works in Maharashtra expressed following views:

- Geographical location, increasing population and rapid urbanization makes Maharashtra one of the most vulnerable states. However, Maharashtra was the pioneer in preparing Disaster Management plans at all levels.

- Maharashtra is now conducting mock drills at the community level and creating community level capacity for resilience.

Shri Gulab Chand Kataria, Minister of Home and Justice, Disaster Management and Relief, Prison, Home Guard & Civil Defense in Rajasthan made following points:

- Drought is the most recurring disaster in Rajasthan. Drought proofing methods like water harvesting are being taken up.
- Compensation of farmers for crop loss needs to be revised.
- National Mitigation Fund should be created.

Shri Thiru R.B. Udhayakuma, Minister of Revenue in Tamil Nadu, in his speech, flagged the following issues:

- Current norms of relief assistance do not provide for compensation of damage to certain structures like high tension wires, buildings, roads, electrical transformers etc. During cyclone Vardaaah, requests for assistance in restoration were turned down. Change in guidelines is requested.
- There is unprecedented drought in Tamil Nadu now. Assistance for providing drinking water may be given.
- Mobile and landline communication require to be upgraded to create resilient communication systems.
- National Mitigation Fund needs to be notified.

Minister from Uttar Pradesh in his speech, flagged following issues:

- Uttar Pradesh is vulnerable to flood, drought, hailstorms, heat and cold waves on regular basis.
- Based on the Disaster Management (DM) Act, 2005, a state act has been notified. A dedicated body for relief distribution has been constituted. State DM Plan has been prepared. Disaster Management Authorities have been constituted in all districts and district DM Plans have also been prepared.

Prof. Jagdish Mukhi, Lt. Governor, Andaman and Nicobar Island in his remarks highlighted the following:

- A Directorate of Disaster Management is functioning in the Andaman and Nicobar Islands. State Emergency Operation Centre (EOC) and nine local EOCs are functioning 24x7. 140 relief centres have been identified.
- Disaster Management will be a part of the curriculum from next session onwards. School safety programmes involving all schools are underway.
- A programme on Urban Risk Mitigation shall shortly commence in Port Blair.
- Tsunami sirens have been deployed all over the islands.

- Automated tsunami warning systems are linked to State EOC. Doppler Radars and other automated early warning systems are being set up.

Shri. A.U Singh Deo, Member of Parliament (Rajya Sabha) made following suggestions:

- A time-frame approach should be taken for immediate response to disasters. In Japan, a Committee meets within 30 minutes of a disaster. Similar mechanism needs to be set up in India at the highest level.
- Disaster Mitigation Fund should be notified.
- There should be separate allocation for reconstruction and rehabilitation.
- National Disaster Response Force (NDRF) should be upgraded and better equipped. Territorial Army should be trained and equipped to become a part of the Response mechanism.
- River regulation Zone Policy should be notified.

In his closing remarks, Shri Kiren Rijju, Minister of State of Home Affairs made following suggestions for improving DRR in the country:

- Local level mobilization of resources and mechanisms are required for effective DRR.
- There should be seamless coordination between centre and states for DRR.
- Relaxation has been given to all states for spending up to 10% of annual allocation of State Disaster Response Fund for disasters, which are not covered under 14th Finance Commission.
- Assistance from State Disaster Response Fund (SDRF) and National Disaster Response Fund (NDRF) are only given for immediate relief and restoration. For medium and long term restoration and rehabilitation, States should utilize its own resources or seek central support under different Central schemes.

Key Recommendations of the Ministerial Session:

- For the nation to be resilient, all the State/UTs have to be disaster resilient and need to address issues of climate change and sustainable development at the same time, while fostering the process of inclusive growth. State/UTs, thus, need to incorporate DRR at all levels of developmental planning, for which respective Central agencies/Ministries may take up measures for capacity building and guidance.
- SDMA's need to play a more proactive role in DRR, by establishing and promoting an effective coordination mechanism with relevant departments/agencies, academic institutions/experts, field agents and community based organizations.
- DRR should aim to foster inclusive, sustainable and safer growth, and ensure differential risks faced by women, children, disabled and others.
- According to the priority-1 of the Sendai Framework, i.e. Understanding Risk, it is fundamental to promote research and knowledge creation at all levels, sectors and

geographies, and ensure the database on factors of risk, vulnerability and mitigation aspects to be developed and upgraded on continuous basis.

- Ministries, Departments, States and other respective agencies need to revisit their developmental, disaster management and other plans, to bring greater synergy with the DM Policy, National / state DM plans and to align with integrated approach to SFDRR, Paris Climate Agreement and SDGs, through the principles laid down in Prime Minister's 10 points Agenda .
- Cyclone prone areas need to integrate ecosystem and livelihood based approaches to harness the best benefits with dunes, mangroves, etc. for reducing the impact of cyclone, sea water ingress, etc.
- For fighting floods, drought and desertification related risks, watershed, landscape and natural resource based approach which promotes community resilience and livelihood security is imperative. Managing the upper catchment is important to prevent river bank erosion and meandering (leading to change in courses).
- Animals are a livelihood option for facilitating recovery. So factoring in animal safety is important for disaster response, relief and community recovery.
- Food security needs to be inbuilt into disaster management through programmes like Employment Guarantee Schemes and Pradhan Mantri Fasal Bima Yojana, etc.
- Environmental and agricultural research should be tailor-made to assist communities in adopting innovative agricultural practices.
- Lightening arresters can be made mandatory by States for every building of G+2 and above in lightning prone areas.
- An Institute to address Mine Disaster Management may be set up for research and capacity building on mine related disasters and safety aspects.
- There is a need for revising the norms of relief of damage to certain structures like high tension wires, buildings, roads, electrical transformers etc.
- Environmental legislations, for example, Coastal Regulation Zone, River Regulation Zone, Waste management, Wetlands, etc and related policies at national and states, should be integrated into DRR framework especially for risk mitigation, greening response and relief, and post-disaster sustainable reconstruction and recovery framework.
- Territorial Army need to be trained equipped and integrated into the disaster response mechanism.
- Social media application platforms can be used for capacity building, disaster information and warning.
- There is a need for resource pooling by States/Centre immediately after a disaster strikes. PPP mode can be explored for building resource pool.
- There should be seamless coordination between centre and states for DRR.
- Disaster Mitigation Fund should be created at National and State levels.

3. Plenary Session on “National Perspective on Disaster Risk Reduction: Sendai Framework and Beyond”

Plenary Session, on “National Perspective on Disaster Risk Reduction: Sendai Framework and Beyond” was chaired by Dr. P. K. Mishra, Additional Principal Secretary to Hon’ble Prime Minister. He reiterated government’s commitment to the goals of Sendai Framework for DRR in a coherent and sustainable manner. Dr. V Thiruppugazh, JS (PP), NDMA gave insight covering Sendai Priority Areas, Government of India’s initiatives in DRR and the Prime Minister’s Agenda 10 on DRR.

The major recommendations of the session were following:

- There is a need to sensitize the people about the types, complexities and magnitude of risk in the backdrop of development, environment and socio-cultural settings, to promoted and facilitate risk informed decision.
- For making proper analysis of risks, there is a need to develop a national disaster loss database. Disaster statistics need to be mainstreamed into the established system or environmental and social statistics.
- For enabling risk sensitive perceptions, decisions and actions, the approach need to include immediate, short-term and long-term issues of risk and mitigation concerns.
- Social aspects of risk, particularly the gender, social structure, cultural settings, access to education and health, psychosocial issues, aged and inequity, need to be addressed with special emphasis.
- There is need of strengthening risk governance through institutions, policy instruments, finance, human resources and capacity strengthening, local community’s involvement, etc.
- Many laws and regulation are in place across social, law & order, environmental, and technological domain, however, there is need to synergize a balance between the laws and address the challenges arising due to lack of their implementation.
- There is a need for strengthening of State and district level institutions, building local capacities and techno-legal regime.
- The potential of advancement in Science and Technology specially in the field of space technology and telecommunication may be harnessed
- The resilience and sustainability as integral components of disaster risk reduction have to focus broadly and beyond physical structures and should include livelihood, social security, access to education and health, human resource, research, technology, knowledge generation and sharing.
- Financial arrangement for pre and post disaster actions is required to be strengthened.

4. Plenary Session: Outcomes of the Pre Events of Second meeting of NPDRR

The Session was chaired by Shri Kamal Kishore, Member, NDMA and co-chaired by Shri Bipin Mallick, Additional Secretary (DM), MHA. There were presentations made by NDMA and NIDM in the session. List of prevents organized by NDMA and NIDM is at Annexure –A. The recommendations from the session are following:

- States should conduct multi-hazard Hazard Risk and Vulnerability Mapping and Analysis.
- Science & Technology applications, Geographical Information Systems (GIS), geological-geographical and hydrological research capacities for assisting and improving risk and vulnerability assessments and mitigation measures of natural hazards need to be promoted.
- Funding for new infrastructure project need to ensure that it doesn't create or aggravate risk but helps in reducing disaster risk.
- Private sector core competencies, strength/assets and niche areas for DRR and mitigation need to be leveraged in partnership with local government to reduce disaster risk for vulnerable community.
- Standards, codes and manuals need to keep pace with state-of-the-art engineering technologies for disaster resilient infrastructure.
- Some risks that emanates from low-frequency, high impact events, have to be covered through mechanisms that diversify these risks.
- More viable building technologies that are in harmony with community for building safer school buildings may be promoted
- An inventory of the best practices on National School Safety Programme should be developed.
- There is a need for forming inclusive DRR alliance for collective action at community level, so that special needs of women, disabled, transgender, children and elderly persons can be taken care of.

Technical Session 1: Understanding Disaster Risk

The Session was chaired by Dr. Shailesh Naik, Ex-Secretary, and Ministry of Earth Science and co-chaired by Shri R. K. Bhandari, Member, Advisory Group, NDMA. The panelists Shri Aromar Revi, Director, Indian Institute of Human Settlement, Dr. Anant Maringanti, Director, Urban Labs, Shri D. D. Sharma, Special Secretary, Government of Himachal Pradesh, and Shri Tikender Singh, Deputy Mayor, Shimla made presentations.

Shri Aromar Revi, Director, Indian Institute of Human Settlements, presented on “Multi-Hazard, Risk and Vulnerability Assessment” in India. He suggested to build a real time responsive network and to prepare a digital settlement composite Hazard Risk &

Vulnerability Atlas of India. He reiterated on the need for efficient coordination, connection between the states.

Dr. Maringanti, Director, Urban Labs, focused on the social aspects of risk and called for understanding the history of risk and disasters, which can only be possible by collecting more and more data.

Shri D.D. Sharma, Special Secretary (Revenue), Government of Himachal Pradesh shared experience on the Risk Assessment of Himachal Pradesh. He suggested that roads should be built after modeling of flood risks, especially the valley areas and bridges. Both structural as well as non-structural measures should be adopted to ensure infrastructure resilience. Early warning systems based on surface deformation in landslide prone area shall be set up. Also, structural safety of old bridges should be monitored. The mobile applications can be used to divert traffic to subsidiary roads and prioritizing the traffic.

Shri Tikender Singh, Deputy Mayor, Shimla, presented on the “Risk Atlas- A User’s Perspective”, and emphasized on ensuring disaster management and justice. He called for integrated approach of environment, urban planning and development & livelihood in dealing with disasters and climatic risks in Himalayan states.

Key Recommendations of the session:

- There is a need for mainstreaming of disaster risk reduction (DRR) through probabilistic loss assessment before any developmental activities are undertaken.
- They should be coherence among existing institutional laws and policies, so as to enable transparency and clarity on disaster risks.
- The disaster management plan of the Cities may be given legal sanctity to synergize with the developmental actions.
- Social, cultural, environmental and spatial dimensions are important to estimate disaster impacts.
- Risk reduction due to landscape changes in urban and countryside and ecological factors are critical areas in understanding risk levels.

Technical Session 2: Strengthening Disaster Risk Governance to Manage Disaster Risk

The session was chaired by Shri R. K. Jain, Member, NDMA and co-chaired by Shri V. K. Pipersenia, Chief Secretary, Assam. The panelists were Dr. Vyasji, Vice Chairman, BSMMA, Ms. Sushma Iyengar, Founder Kutch Nav Nirman, Abhiyan and Prof. Ravi Sinha, IIT, Mumbai.

Dr. Vyasji, Vice Chairman, Bihar State Disaster Management Authority (BSDMA), presented on the Strengthening of State and district level institutions, and expressed that the States are still functioning in “response mode” as no specific financial mechanism on mitigation has been operationalized. He called for more clarity and avoidance of overlapping of roles and responsibilities of State Disaster Management Authority and Relief/Disaster Management Department. He called for provision of full

time staff for state/district authorities and institutions working in Disaster Management sector. He also asked for institutional capacity building within the States, including Universities, Research institutions, Engineering Colleges and Polytechnics etc.

Ms. Sushma Iyengar, Founder Kutch Nav Nirman Abhiyan, presented on “Building Local Capacities and Role of Civil Society Organizations”. She highlighted about the deep contradiction and challenges which are constantly putting us more at risk.

Prof. Ravi Sinha, IIT, Mumbai, spoke on the compliance of Techno-Legal Regime, and stressed on the need of enforcing building by-laws for ensuring quality construction. He stated that better construction requires scientific approach as use of best knowledge, implementation of best practices and engagement of competent professionals along with the policy and legal framework.

The key recommendations of the session:

- Dedicated full time disaster management professionals at state/ district and local levels would help in effective implementation of disaster risk reduction programmes.
- There should be clarity of roles among different organizations at state level dealing with different aspects of disaster management.
- There is need to enhance institutional capacity within States through collaboration with universities and research institutions.
- Traditional practices of disaster resilience and adaptation should be promoted through mainstreaming, replication and policy integration.
- Women should be trained in disaster preparedness measures at community level.
- States should update their bye-laws in line with Model Building By-laws 2016 and ensure its compliance.
- Professionals engaged in construction of buildings shall be trained in structural safety measures so as to ensure safety of building.

Technical Session 3: Investing in Disaster Risk Reduction for Resilience

The session was chaired by Shri N. S. Vishwanathan, Deputy Governor, Reserve Bank of India (RBI) and co-chaired by Prof. C.V.R. Murty, Director, IIT, Jodhpur. Ms. Ila Patnaik, Professor, National Institute of Public Finance and Policy (NIPFP), Ms. Alpa Sheth, Managing Director, VMS Consultants, and Shri Binoy Acharya, Director, Unnati were the panelists for the session.

The chairman of session Shri N.S. Vishwanathan, Deputy Governor, RBI highlighted that Gol has planned to make heavy investment in the creation of critical infrastructure. He emphasized that building infrastructure resilience should be the key for disaster risk management framework. He informed that RBI has introduced green financing for promoting environmental friendly investments. He called for actions to bring resilience within the banking sector. He suggested that banking and financial institutions, while supporting the large projects, should examine whether DRR measures such as Environment Impact Assessment (EIA), structural safety auditing, risk auditing and Site clearance etc. have been taken into consideration while preparing the proposal.

Prof. C.V.R. Murty highlighted that protecting investment is inevitable and not a choice. He called for roles of institutions like IITs, IIMs, Universities and other institutions in facilitating knowledge building through research and training in areas of disaster and climate resilience.

Ms. Ila Patnaik, NIPFP, made a presentation on financing arrangements for DRR. She pointed on the gaps in disaster funding. She cited example from other countries where mitigation funds are limited.

Ms. Alpa Sheth, Former Seismic Advisor, Gujarat, while speaking on “Planning Urban Infrastructure” flagged issue of increasing population, immigration in the big cities, and concurrent ecological degradation, leading to severe pressures in urban areas. She stated that impact of climate change and the growth of industries are posing new challenge for resilience of urban infrastructure.

Shri Binoy Acharay, UNNATI, emphasized on the Role of Panchayats in local risk reduction, and emphasize the need to document what the Panchayat Raj Institutions (PRIs) have done in the area of DRR. He stated that there is a need to create a virtual learning space for PRIs to share and learn on building community resilience.

The major recommendations from the session:

- Mainstreaming DRR measures into banking sector is essential to ensure effective investments in resilient infrastructure.
- Mitigation funds have provided incentives worldwide. India is a diverse country with specific issues for states. Therefore, the scope and distribution of mitigation fund needs to be worked out.
- Possibility of tapping of private relief funds through Corporate Social Responsibility (CSR) for DRR purposes may be explored, besides enabling active participation of industry/businesses in promoting DRR culture and practice.
- Role of Urban Local bodies (ULBs) and PRIs should be institutionalized in disaster prevention and mitigation.
- Risk Perception needs to be communicated more effectively to all stakeholders. Approaches to Risks must be robust but flexible to unknown and uncertain risks rather than “fixed and optimal engineering approach”.
- The concept and practice of risk audits should be introduced in all departments for mainstreaming of DRR.
- Guidelines for involvement of PRIs in DRR at village levels should be developed.

Technical Session 4: Enhancing Disaster Preparedness for Effective Response and to Build Back Better in Recovery, Rehabilitation and Reconstruction

The session was chaired by Lt. Gen. N. C. Marwah, Member, NDMA and co-chaired by Shri Aurobindo Behera, IAS (Retd.) from Odisha. Dr. M. Mohapatra, Additional Director General, India Meteorological Department, Sh. N.M. Desai, Deputy Director, Space Application Centre, ISRO, Shri Prakash Mishra, DG (Fire Services, Civil Defence and Home Guards), Shri R.K. Pachnanda, Director General, NDRF and Shri Krishna Vatsa, UNDP were the panelist.

Dr. M. Mohapatra, in his presentation on the Preparedness (Early Warning System) emphasized to invest in development of multi-sectoral forecasting and early warning systems, emergency communication mechanisms, social technologies and hazard-monitoring telecommunications systems.

Shri Nilesh Desai, discussed issues relating to the Integration of Communication Technologies (ICT) in Disaster Management, and focused on communications during emergency and post emergency scenario and the role of satellite and their images.

Shri Prakash Mishra presented on the need of strengthening of capacities of Civil Defence, Home Guards and Fire Services in evacuation planning and training of volunteers. He also highlighted for a strengthening local response and effective use of fire services and civil defence volunteers.

Shri R. K. Pachnanda discussed on issues such as strengthening of response systems with National Disaster Response Force (NDRF) and State Disaster Response Force (SDRF), evacuation planning, mock drills. He highlighted several challenges in emergency response such as adverse geo-climatic conditions; frequency and magnitude of disasters; urban flooding, colliery collapse, forest fires; uncontrolled urban development, chemical and radiological accidents, deforestation and environmental degradation.

Shri Krishna S. Vatsa, discussed on the issues of Disaster Recovery and Rehabilitation: Post-disaster needs assessment, Psycho-social Rehabilitation, and gave international examples on long term recovery. He mentioned that the recovery programmes undertaken so far has not much stronger monitoring mechanism for the implementation or their sustainability of results.

The major recommendations from the session:

- There is a need for international collaboration and research & development for improvement in accuracy and skills in early warning system.
- Latest ICT and mobile applications shall be used to enhance last mile connectivity of Early Warning System.
- Fire stations can directly become the hub for trainings, mock drills and capacity building initiatives for their own work force as well as volunteers.

- NDRF should continue with its programme for training to community on disaster management.
- There is a need for enabling mechanism to support recovery, such as assessment of damage and losses, setting institutional capacity for recovery planning, financial allocations and guidelines on recovery framework.
- A Central Department / Ministry may be earmarked for taking lead role in assisting State/UTs in disaster recovery and reconstruction.
- India can explore taking lead role in recovery and reconstruction by supporting neighboring and other countries.
- There is a need for pooling of resources through central government programmes and roping in private sector for financing recovery.

Technical Session 5: Monitoring the Implementation of the Sendai Framework for Disaster Risk Reduction

The session was chaired by Prof. Ramesh Chand, Member, NITI Aayog and co-chaired by Prof. T. C.A. Anant, Secretary, Ministry of Statistics and Programme Implementation. The panelists were Sh. Kamal Kishore, Member, NDMA, Dr. Saurabh Dalal, Consultant, NDMA, Shri P. K. Mohapatra, Managing Director, OSDMA, and Shri Satya Gopal, Central Relief Commissioner, Tamil Nadu.

Mr. Kamal Kishore classified Sendai targets into two sections namely: loss reduction and capacity enhancement. In loss reduction, he highlighted reduction of mortality due to disasters, number of people affected, reduction of economic losses and bringing down the infrastructure losses. For capacity enhancement targets, he highlighted need of plans and strategies, international cooperation and access to early warning systems. He stressed that targets might be difficult to be monitored. However, adoption of a systemic approach will help in monitoring these targets.

Dr. Saurabh Dalal, NDMA highlighted on Chemical Biological Radiation Nuclear (CBRN) - DRR mainstreaming. Shri P K Mohapatra, shared views on the Setting-up of Targets: State Perspective, and highlighted the Sendai framework priorities and targets undertaken by Odisha State Government. He insisted that the States must develop disaster database that would help in measuring output and targets and that should be considered as one of the most important activity for Disaster Risk Reduction framework.

Shri Satya Gopal presented on the aspects of National Disaster Database: Need and Challenges, and explained about “known to unknown” and “unknown to known” risks.

The major recommendations from the session:

- States should prepare their roadmap for achieving the objectives of Sendai Framework considering their development targets and the actionable points conveyed by the Ministry of Home Affairs in 2015 for compliance with Sendai Framework.

- States may develop own monitoring matrix for implementation of Sendai Framework in co-ordination with their Statistical Office.
- State should initiate data readiness review for monitoring of Sendai Framework and take steps to bridging the data gap.

Valedictory Session

The 2nd meeting of the NPDRR was concluded on 16th May 2017. The Minister of State for Home Affairs Shri Kiren Rijiju addressed the Valedictory Session. Shri Piyush Goel, Hon'ble Minister of State (Power) was the chief guest for the occasion. Speaking during the Session, Shri Piyush Goyal referred to the Prime Minister's 10 point agenda for drafting the roadmap leading to the reduction of disaster impacts. If we cannot prevent disaster, we must work on reducing their detrimental impacts. We need to make investments in preparedness and risk reduction measures. He also emphasized that the field of Disaster Management should not be seen in isolation and calls for a holistic integrated approach in all developmental planning. It has linkages with poverty and all development schemes of the Government too. Poverty has direct impact on vulnerabilities, so we have to work simultaneously. He quoted Benjamin Franklin, "*if we fail to prepare, we are preparing to fail*".

Shri Kiren Rijiju, who is also the Vice-Chairman of the NPDRR, reiterated the Prime Minister's 10 point agenda for drafting targeted and time bound action plan for making India resilient by 2030. He emphasized on investment in higher education, research & development and building partnerships with the universities and research institutions. Highlights of his deliberation are as under:



Fig. 4: Hon'ble Minister of State, Shri Kiren Rijiju during Valedictory session

- Implementation of integration planning and action of SFDRR, Paris Climate Agreement and SDGs, through PM's Agenda 10, need greater role of the Universities, research institutions and other related agencies at national and state level.
- Resilience and DRR approach need to have consideration for the economically poor, socially marginalized, people with disabilities etc. These sections should be addressed adequately in the risk assessment process.

- Exposure of risk should not be measured or assessed only in terms of physical exposure rather it should be inclusive of socio-economic, environmental and service sector's and systems vulnerability also.
- Since the complex process of risk assessment is not easily understood by the common people and hence, simple and cost effective representation of the outcome in form of risk characterization may be encouraged.



Fig. 5: Hon'ble Minister of State, Shri Kiren Rijju and Hon'ble Minister of State (Power), Shri Piyush Goyal felicitating start-up organizations

- As there is huge gap in the policy and action, it is critical to motivate various development stakeholders for enhancing techno-legal implementation and accountability.
- Capacity building, with promotion of cadre of professionals on various aspects of DM functions needs to be created and institutionalized.
- Women have shown courage and wisdom everywhere but DRR process has not yet been able to optimize their potential. Leadership role of women in community level need to be taken as priority.
- Sharing of knowledge on innovations and innovative solutions is necessary for the benefits, for example on the Effective utilization of flexi funds – 25 % of the development funds, etc.
- Focus on the post disaster recovery alone, i.e. Build Back Better, would not be adequate but it still needs more of sustainable and safer long-term recovery that takes care of systems, resources and people for their resilience to disaster impacts.

Shri Sanjeev Kumar Jindal, Joint Secretary, MHA presented the summary outcomes of the sessions. Prof. Santosh Kumar of the National Institute of Disaster Management proposed the formal vote of thanks.

Way Forward: Action Points and Responsibilities

Central and States/UTs governments are expected to develop and implement an action plan for the period of 2017-2030 on the lines of Prime Minister's 10 points agenda on DRM (2015-2030), involving all concerned Ministries/agencies and institutions, considering the action contexts and recommendations of 2nd meeting of NPDRR.

The recommendations emerged from various sessions/discussions in the 2nd meeting of NPDRR have been, therefore, synthesized into the action points aligned with the Prime Minister's 10 point Agenda in the backdrop of SFDRR, Paris Agreement, SDGs, and the outcome of AMCDRR 2016, as under:

(i) All Development Sectors must imbibe the principles of Disaster Risk Management

The process of mainstreaming DRR into development planning needs to utilize appropriate tools and methodologies along with political commitment, public understanding, scientific knowledge and expertise. National and state level schemes and programmes play a crucial role for the socio-economic development of the community. Safety of animals is not yet factored in the DRR protocols which is needed to protect livelihood, health and socio-cultural settings as well. There is tremendous potential for reducing vulnerability & risks through integration of DRR in national and state schemes through structured framework and operational measures. *Rule of business for MHA is more at high-end emergency management and, hence, the medium and long term restoration and rehabilitation need to be taken up by the related ministries. Mainstreaming DRR through four major themes of vulnerability reduction, viz. (i) Socio-economic and community issues (ii) Geological-hazard risk mitigation (iv) Engineering & technology applications and (iii) Environment and climate change adaptation, has to be undertaken across the plans, programmes and schemes, including Disaster Management Plans, of various Ministries/Departments/agencies etc. Guidance notes for the sectors clusters, viz. (a) Infrastructure and trade Cluster (b) Environment/natural resources Cluster, and (c) Social welfare and Voluntary Sector Cluster, need to be developed for mainstreaming DRR at national, sub-national, organizational and local levels. This would include tools, methods, case examples, project management cycle, action-planning and review mechanisms.*

Agencies Responsible: Central Government –National Disaster Management Authority (NDMA), National Institute of Disaster Management (NIDM), Indian Institute of Corporate Affairs (CA), all Concerned Ministries, NITI Aayog; State/UT Government – SDMAs, Planning Board/Department, Concerned State/UT Departments.

(ii) Work towards Risk Coverage for All

Due to increase in the intensity and frequency of natural disasters worldwide, greater emphasis is on financial tools and mechanisms of risk transfer. Insurance schemes are increasingly playing visible role as a means of providing economic security against disaster risks. Risk Transfer is a tool that enables a concerned party to share/transfer a portion of the disaster risk to another party, for a certain fee. This party can be the government itself or the microfinance institutions. *Enhancing relief and compensation mechanisms, risk insurance, and financial strategies for DRR programmes at national and sub-national level, therefore need to be worked out and executed as a priority action. For this, detailed brainstorming and research is needed to evolve effective mechanisms along framework of institutions to support the process. A time bound initiative is required to be undertaken. Private sector core competencies, strength/assets and niche areas for DRR and mitigation need to be leveraged upon in partnership with local government for reducing disaster risk.*

Agencies Responsible: Central Government -NDMA, Insurance Regulatory and Development Authority (IRDA), Concerned Ministries, NIDM, Indian Institute of Corporate Affairs, National Institute of Public Finance and Policy (NIPFP), National

Insurance Academy (NIA), State/UT Governments – SDMAs and Planning Board / Department.

(iii) Participation and Leadership of Women in Disaster Risk Management

During any disaster, women are mostly considered as victims and vulnerable along with children and elderly people. The increased vulnerability of women is primarily due to biological, social and cultural factors. Lack of awareness, capacity, technology access and financial strengths have been known impediments. Participation of women in the planning, designing, implementing and monitoring emergency programs and rehabilitation projects is still on a low key profile. Women have historically played a significant role in all stages of disasters and risk reduction. The Sendai Framework for Disaster Risk Reduction (SFDRR) recognizes that “women and their participation are critical to effectively managing disaster risk and designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programmes; and adequate capacity building measures need to be taken to empower women for preparedness as well as build their capacity for alternate livelihood means in post-disaster situations.” *There is need of specific guidelines on the theme, and to implement the process through an action plan involving all key stakeholders across Government, academia and non-government actors.*

Agencies Responsible: Central Government -NDMA, Ministry of Women & Child Development, Ministry of Social Justice and NIDM, State/UT Governments – SDMAs, Planning Board/Department, Concerned State/UT Departments.

(iv) Invest in Risk Mapping

Disasters are the coincidences between hazardous events, elements at risk, and conditions of vulnerability. Vulnerability reduction integrates social and environmental systems to reduce the intensity and frequency of such risks. By categorizing regions according to their level of vulnerability, it is possible to design and redesign/modify the developmental plans and activities over land. Detailed hazard and vulnerability maps for key disaster risks like earthquake, flood, drought, cyclone, windstorm, need to be developed at Taluka / Tehsil and further at panchayat / village level, and for industrial-chemical, fire, landslide, avalanche, urban flooding, man-animal conflicts for particular region of impact need to be developed. Vulnerability maps already developed, for example, by the Building Materials & Construction Technologies (BMTPC), States, and other agencies, and may be utilized as appropriate baseline for further study. *Integrated multi-hazard vulnerability maps need to be developed using specific hazard maps and vulnerability maps, at appropriate geographical scales, for which effective management of disaster risk and vulnerability database is fundamental. A concerted and coordinated effort is needed to organize databases and repository of such maps for easy access and use for timely decisions and actions. India’s demographic profile is changing rapidly. We need to see how many and where population at risks are located. Risk is not homogeneous. It varies from region to region, state to state, district to district, community to community and individual to individual.*

Agencies Responsible: Central Government - NDMA, NIDM, Ministry of Science & Technology (Natural Resource Database Management System Programme, Climate Change Programme), Indian Space Research Organization (ISRO) /National Remote

Sensing Centre (NRSC) and Indian Institute of Remote Sensing (IIRS), National Informatics Centre (NIC), Ministry Of Statistics and Programme Implementation (Central Statistics Office), Geological Survey of India (GSI), Forest Survey of India, Survey of India, Research Councils. State/UT Government – SDMAs, Planning Board / Department, State Environment, Science & Technology Council, Remote Sensing Application Centre, Concerned State/UT Departments.

(v) Leverage Technology to Enhance the Efficiency of DRM Efforts

Sendai Framework has the principle to “Promote the mainstreaming of disaster risk assessments into land-use policy development and implementation, including urban planning, land degradation assessments and informal and non-permanent housing, and the use of guidelines and follow-up tools informed by anticipated demographic and environmental changes”, which clearly spelt the need of multiple science-technology disciplines to be on board in the framework of DRR. It is important to ensure that people have rapid access to information that encourages preventive measures and enables quick response to protect lives and livelihoods. Minimizing the sufferings by proper risk communication and early warning systems is crucial. Technology plays a crucial role with satellite based GIS and computer simulations. Effective actions when combined with right forecasting and prompt warnings can definitely avert large scale damages and destructions. Cyclone Phailin is one of the successful examples. The IDRN is a nation-wide electronic inventory of specialist and essentials resources for disaster response. *The primary focus is to enable the decision makers to get details of readily available and updated information about equipment and human resources required to combat any emergency situation. However, focus of harnessing technology in addition to the space technology has to widen its horizon covering the role of modeling/simulation, geo-technology, eco-technology –medical technology, plastic engineering, eco-bio-technologies, food and agro-technologies, environment, water and health sciences, etc. National Action Plan on Climate Change under its 8 mission taps on technological advances and the framework of multiple science-technologies may be roped in for DRM. Equally important is integrate the potential of traditional, local or indigenous knowledge, which may offer many cost effective solutions.*

Agencies Responsible: Central Government -NDMA, NIDM, Ministry of S&T (DST, CSIR, NRDMS Programme, Climate Change Programme, DBT), MoEFCC, MOWR, Ministry of Earth Science, ISRO / NRSC / IIRS, GSI, Indian Council of Agricultural research (ICAR), Indian Council of Medical Research (ICMR), Indian Council of Forestry Research and Education (ICFRE), Defence Research and Development Organization (DRDO) etc. State / UT Governments – SDMAs, Planning Board/Department, State Environment, S&T Council, Remote Sensing Application Centre, Concerned State/UT Departments.

(vi) Develop a Network of Universities to Work on Disaster Risk Management Issues

Time and again, role of academia in general and in particular of the Universities in disaster research and professional advancement, has been reiterated. However, disaster management being a discipline not purely of conceptual or doctrine research but of action and practice research, needs to be accustomed for University education

and research. Some of the Central Universities under their School of Environmental or Interdisciplinary Studies envisage for disaster management centre. Thus, looking to need, a network of Universities, Indian Institute of Management (IIMs), Indian Institute of technology (IITs), National Institute of Technology (NITs), Indian Institute of Science Education and Research (IISERs), and All Indian Institute of Medical Science (AIIMS), etc. need to be established at zonal / state level, as coordination consortium, for which the Ministry of Human Resource Development, Universal Grant Commission (UGC), NIDM and NDMA should take initiative for integrating DRM modules primarily across 3 major interdisciplinary schools – Environment Studies, Social Work and Development Studies, and into the professional streams, viz. Medical/health science, Engineering, Planning & Architecture, Management Studies and Legal Studies. States/UT should establish a consortium with Universities/Institutes located in the State/UT, accordingly.

Agencies Responsible: Central Government –NDMA, Ministry of Human Resource Development/University Grants Commission, NIDM, Medical Council of India, AICTE, ICAR, ICFRE, ICSSR, etc. State /UT Government – SDMA, Central/State University in the State, IITs, IIMs, NITs, State Environment, S&T Council, State/UT Department of Higher Education.

(vii) Utilize the opportunities provided by social media and mobile technologies

With disasters becoming much more frequent, the world is witnessing increasing and more pertinent role of social media in times of disasters and crisis. It has become a vital tool in helping government agencies and other rescue organizations by disseminating information to wider audience. Each disaster finds its space on social media for information exchange and plays an important role in DRR by informing and raising the public awareness to the forecasting of disasters. However, there is a need to monitor and regulate social media activities, which can be used for spreading wrong information and malpractices. *Effective steps, therefore, need be taken by Government and other agencies to tackle the use of social media at the time of disaster. A strategic plan and coordination mechanism for the purpose needs to be established. Risks need to be communicated more effectively to all stakeholders. Approaches for risk reduction must be robust but flexible to unknown and uncertain risks rather than “fixed, optimal engineering approach”.*

Agencies Responsible: Central Government –NDMA, Ministry of Communications (Department of telecommunication), Broadcasting & Information, NIDM, NIC, Vigyan Prasar, National ISCAIR, etc. State/UT Government – SDMA, State/UT Department of Higher Education, etc.

(viii) Build local capacities and initiatives

Developing capacities and skills of the community is the need of the hour so that they can deal with disaster risks as a way of life instead of a curse. Local capacities in DRM would need to be steered largely by the District Disaster Management Authorities (DDMAs), ULBs utilizing the following suggestive framework, guided by national and state plans or advisories:(a) Developing district wide institutional network involving University/college, research institute, Non-Governmental Organizations, independent experts, Krishi Vikas Kendra (KVK), Industrial Associations, Housing Societies /Resident Welfare Association Federation, media, etc. in the district as Disaster Risk

Management Knowledge Forum,(b) Understanding on disaster risk and sensitive land use and revisit on development plans at Taluka/Tehsil/Block, Panchayats and Urban local bodies, and develop their DM plans, with clearly spelt mitigation measures plan, indicating time and resources, (c) Maintain roster of volunteers, ex-defense personnel, NSS, NCC, NYK and other resources, besides Military establishments, police, fire and para-military/home guards, etc for emergency response capacity, with necessary coordination/training, and (d) Special emphasis on integrating climate change adaptation and capacity building measures focusing on safe and resilient infrastructure, public assembly buildings, people's livelihood resources (agriculture, ecosystems and forests/plantation based occupations) and business establishments. *Developing mechanisms for monitoring the progress through continuous feedback mechanisms from various stakeholders is imperative to build partnerships to accomplish our objectives. It will be crucial to engage communities to deal with future challenges meaningfully and effectively by identifying very inclusive action points for action during 2017-30. Besides this, dedicated full-time DM professionals at district and local levels would help in effective DRR implementation.*

Agencies Responsible: Central Government –NDMA, Ministry of Urban Affairs, Panchayati Raj, NIDM, Rural Development, Industry & Commerce, NITI Aayog, etc. State/UT Governments – SDMAs, Planning Board/Department, Concerned State / UT Departments, etc.

(ix) Ensure the opportunity to learn from a disaster is not wasted

Major disasters occur time and again, necessitating emergency measures. Comprising success stories as well as failures, the relief, reconstruction and rehabilitation measures hold valuable lessons for the future. However, much of the experiences, insights and lessons are lost as time passes because they are not documented in a way that can be retrieved and utilized when needed the utmost. There have been several disasters in past decades and every disaster brings surprises and important lessons to learn and adapt. Experiences show that in many cases the system appears unprepared and starts from the beginning. It has been observed that the same problems arise and similar mistakes are committed when a major disaster occurs, though with some exceptions. Each disaster is different in its occurrence and intensity and needs to be understood with insight. Disaster disrupts progress as well as destroys the developmental efforts often pushing nations, in quest for progress back by several developmental years. There may be comprehensive media accounts, official reports and even research papers which needs adequate attention, documentation and implementation for policy and guideline framing etc. But systematic documentation which can guide and facilitate disaster response and recovery is rare. *Thus, documentation of case studies, success and failure stories, best practices, and lessons of past events and incidents, therefore, need to be imperative and taken up involving researchers, NGOs, freelancing experts/authors, analysts, responders and other associated role players, etc.*

Agencies Responsible: Central Government –NIDM, NDMA, Ministry of S&T, Higher Education (UGC), Environment, Forests & Climate Change, Water Resources, Agriculture, Railways, Aviation, Surface Transport, Mines, Earth Science, Central Universities, and Research Councils – ICAR, CSIR, ICMR, etc. State/UT Government –

SDMA, Environment and S&T Council, Remote Sensing Centres, Concerned State / UT Departments, etc.

(x) Bring about greater cohesion in international disaster response

India's geophysical location is such that it gets affected with the disasters of neighboring nations as well. We need to also look very specifically towards strengthening regional cooperation for addressing issues related to disasters without or overlooking borders. In case of a disaster event either in the neighborhood of the country or in case of trans-boundary nature of a disaster, the response from different sides need to be coordinated, collaborated and integrated appropriately. These are the times when all, particularly in the neighborhood and those who are resourceful have to lead and lend support as appropriate. However, such international response does not come in isolation, but either simultaneous or followed by other agencies like United Nations organisations, inter-governmental agencies, NGOs or from other nearby or distant nations. *Therefore, the international response may have an organized structure to function under a designated command system during such disaster events. It is important that the resources are properly assessed and inventories updated so the capacity at particular time is known with full confidence. Strategic action plan and initiatives accordingly on regular basis are important and, therefore, needed. This also calls for disciplined inter-coordination amongst various related organizations.*

Agencies Responsible: Central Government –NDMA, Ministry of External Affairs (MEA), Home Affairs (Border, Foreigners, Policy Planning), Research & Information System for Developing Countries (RIS), NIDM, Indian Institute of Public Administration (IIPA), etc.

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Pre – Events of the 2nd Meeting of NPDRR

Second meeting of NPDRR organized by Ministry of Home Affairs, Government of India in collaboration with National Institute of Disaster Management (NIDM) and National Disaster Management Authority (NDMA) had following pre-events on the contemporary issues.

- (i) **Workshop on preparation of Heat Wave Action Plan, Hyderabad, 22-23 February, 2017-** The goal of the workshop was to guide States / Agencies in the making and operationalizing of heat wave action plans.
- (ii) **Conference on Capacity Building in Disaster Management, NDMA, 3 March, 2017 –** The objectives of the workshop was to discuss on revamping of capacity building program of first responders (SDRF, Civil Defence, Home Guards, ANOs (NCC), NYKS Volunteers and explaining possibilities of integration of training and deployment of Civil Defence Volunteers with Fire Services as first responders.
- (iii) **Hospital Disaster Resilience Meeting, New Delhi, 29 March 2017 -**The meeting was organized for contextualizing the need for hospital safety as a national priority in the overall scheme of Disaster Risk Reduction (DRR) initiatives and the need to coordinate with all stakeholders to make public health infrastructure risk resilient and implementation of concerned NDMA guidelines.
- (iv) **Round Table on Disaster Resilient Infrastructure, New Delhi, 1st April 2017–** The meeting was organized to discuss various aspects relating to disaster resilient infrastructure including assessing risk and vulnerability of systems, role of planning tools, designs and engineering technologies in resilient infrastructure, financial mechanisms for risk cover and mechanism for recovery.
- (v) **Sharing of best practices and lessons learnt under National School Safety Programme (NSSP), NDMA, 7th April 2017 -** Objective of the workshop was to update on project implementation and insights into good practices, challenges and lessons learnt from the Project States for planning any up-scaling of school safety programme in the country.
- (vi) **Workshop on National Disaster Management Plan at New Delhi on 12-13th April 2017 -** The objective of the workshop was to seek views and suggestions of all stakeholders on National Disaster Management Plan for improvisation. Based on the deliberations of the Workshop and Suggestions received in writing, the NDMP is being reviewed and updated.
- (vii) **Training Workshop on Disaster Risk Reduction & Heritage Sites (Natural and Cultural) 14-19th April 2017 -**The key objectives of the workshop were to validate the guidelines on cultural heritage and museum and mainstream DRR training in the museum capacity building training.

- (viii) **National Summit on Climate Change & Disaster Risk Reduction “Forging Partnerships for Readiness, Relief and Recovery” at Chennai on 11 – 12th April 2017** – The objective of the National Summit was to bring together the policy makers, industry leaders, bi/multi-laterals and representatives from NGOS, civil society and allied agencies on a common Platform.
- (ix) **Consultation on “Revisiting School Safety and Security” at New Delhi on 17th April 2017** - The concept of school safety has been enlarged recently to include safety, security and environmental risk contexts both inside and outside the school premises. It has been defined as the creation of safe environments for children starting from their homes to their schools and back.
- (x) **Workshop on Socially inclusive DRR-Leave no-one behind. New Delhi, 20th April 2017** – The event aimed to sensitize participants on initiatives at global and national level on DRR on addressing various components of Inclusive Disaster Risk Reduction in Indian context with development perspective on building resilience communities and nation.
- (xi) **Workshop on Multi Hazard Local Community Capacity Building and DRR Planning at New Delhi on 24th April, 2017** - The aim of the workshop was to sensitize the participants about initiatives undertaken at various levels for capacity building of the communities and addressing different components of community based DRR planning for building resilient communities.
- (xii) **Programme on Unfolding Disaster Management & Challenges for Disaster Risk Reduction for Resident Commissioners of States and Union Territories at New Delhi on 8th May 2017** – This programme was organized at the request of Resident Commissioners of State & Union Territories (UTs) on their role during emergencies in terms of coordination with all stakeholders.
- (xiii) **Risk and Resource Mapping - Role of GIS and Databases, at NIDM, 11th May 2017** – Objectives of the multi-agency, multi-stakeholder national level brainstorming workshop included – review of tools and strategies on promotion of GIS application, space technologies and disaster statistics/databases for related assessments, planning and decisions in disaster risk management, including role of environmental and social statistics, census, land-use, impact assessments, audit, data repository and coordination, etc.

Further information on pre-events is available at: www.npdr2-mha.net.in/
